

1450 CWS CIS and 1550 CWS CIS

(Serial No. 060063-)

Combines

OPERATOR'S MANUAL 1450 CWS CIS and 1550 CWS CIS Combines

OMCQ70816 Issue A7 (ENGLISH)

CALIFORNIA Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

John Deere Brasil
CIS Edition
LITHO IN BRAZIL



Introduction

Foreword

READ THIS MANUAL carefully in order to learn how to correctly operate and service your machine. Bodily injury or damage to the machine may occur if this procedure is not followed. This manual as well as the safety signs on your machine may be available in other languages (contact your John Deere dealer for more information).

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and it should accompany the machine if sold.

Measurements in this manual are presented both in the metric system and in the commonplace measurement system used in the United States. Only use system the correct replacement parts and attaching accessories. Bolts and screws in inches and millimeters may require a drive tool in inches or millimeters.

RIGHT-HAND AND LEFT-HAND sides are determined with reference to the direction of forward travel.

WRITE DOWN THE P.I.N.'s (Product Identification Numbers) in the Specifications or I.D. Numbers section. Note down all numbers precisely in order to aid in the location of the machine in the case of theft. Your John Deere dealer shall also require that these numbers are provided when you request parts. Archive the I.D. numbers in a safe place, exterior to the machine.

SETTING FUEL INJECTION BEYOND PUBLISHED factory specifications, or any other modification made

with the purpose of increasing engine power, will result in loss of warranty cover for the machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection. The machine was first used operationally after the dealer had carried out the Technical Delivery. The dealer monitored the machine during its first few hours of operation. Before completing 600 operating hours or 12 months of use, schedule a post-sales inspection by your dealer to tune the machine to perform at its best.

This machine was designed solely for use in regular agricultural operations or similar such operations ("INTENDED USE"). Its use in any other way is deemed contrary to the intended use. The manufacture accepts no liability for damage or injury resulting from misuse, such risks must be borne solely by the user. Compliance with and strict adherence to the operating, service and repair conditions specified by the manufacturer also constitute essential elements of the intended use.

THIS MACHINE SHOULD BE OPERATED and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). Accident prevention regulations, all other generally recognized regulations on safety and occupational medicine as well as road traffic regulations must always be complied with at all times. Any arbitrary modifications carried out on this machine will release the manufacturer of all liability for any resulting damage or injury.

Interpreting the Serial Number of Your Machine

Interpreting the Serial Number of Your Machine		
1	Code of producing unit	CQ — Machines produced at JD Horizontina NW — Machines produced at JD Catalão BM — Machines produced at JD Montenegro
2	Machine model	
3	Serial code of Machine	A, B, C...
4	Year of production of the machine	06, 07, 08, 09, 10...
5	Sequential number	0001, 0002, 0003, 0004...

Each model has its own “sequential number”. The sequential number restarts at 0001 with the first machine produced each year.

Each model has its “Serial code of Machine”. This code will change whenever there is a significant change of the machine’s configuration.

CQ1450B060001

1 2 3 4 5

CQ0600A060001

Serial number examples

CQ266870 –UN-06MAF06

Contents

	Page		Page
Identification Views			
Identification Views	00-1	Header Drive Tumbler Switch (With Operating Lock)	15-10
Safety	05-1	Unloading Auger Swing Rocker Switch (With Center Position)	15-10
Safety Decals		Windshield Demoisturizer Rocker Switch	15-11
Pictorial Safety Decals	10-1	Reel Speed Control Switch (DIAL-A-SPEED™)	15-12
Operator's Manual	10-1	Reel Speed Adjustment	15-13
Repair and Service	10-1	Head Lateral Tilt and Reel Horizontal Adjustment Rocker Switch	15-14
Trailer Hitch	10-1	Gearshift Lever	15-14
Front Access Ladder and Operating Platform	10-2	Cab Fan Rotary Switch	15-15
Fire Extinguisher	10-2	Cooling Compartment Rotary Switch	15-15
Grain Elevator Shield	10-2	Rotary Switch — Air Conditioning/Heater	15-16
Feeder House Drive Shields	10-2	Windshield Washer Rocker Switch	15-16
Under the Feeder House	10-3	Windshield Wiper Rocker Switch	15-17
Unloading Auger	10-3	Throttle Lever	15-17
Left-Hand Side Shield, Straw Walker Drive and Fan	10-3	Concave Clearance Adjustment Rocker Switch	15-17
Straw Chopper and Chaff Spreader	10-4	Threshing Cylinder Speed Rocker Switch	15-18
Straw Chopper	10-4	Fan Speed Rocker Switch	15-18
Access to Rear Ladder and Service Platform	10-5	Unloading Auger Engage Switch (With Operating Lock)	15-19
Right-Hand Side Shield	10-5	Horn Knob	15-19
Reverser Shield	10-5	Starter Switch	15-20
Front Inspection Window	10-5	Feeder House/Header Reverser	15-21
Jacking Points	10-6		
Front Wheel Attaching Nuts	10-6		
Rear Wheel Attaching Nuts	10-6		
Controls and Instruments		Indicator Lights and Monitors	
General View of Controls and Instruments	15-1	Indicator Lights	20-1
Main Console	15-2	Emergency Stop Indicator Light	20-2
Armrest Console	15-3	Engine Oil Pressure Indicator Light	20-2
Functions of Multi-Function Control Handle		Coolant Temperature Indicator Light	20-2
Buttons	15-4	Parking Brake Indicator Light	20-2
Corner Post	15-5	Hydrostatic Transmission Oil Temperature Indicator Light	20-3
Overhead Console	15-6	Slugging Indicator Light	20-3
Steering Column	15-7	Straw Chopper Speed Indicator Light	20-3
Types of Switches	15-8	Tailings Elevator Indicator Light	20-4
Road Safety Switch (Red)	15-8	Straw Walker Indicator Light	20-4
"EMERGENCY STOP" Switch	15-9	Fuel Level Indicator Light	20-4
Separator Drive Rocker Switch (with Operating Lock)	15-9	Clean Grain Elevator Indicator Light	20-4

Continued on next page

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A John Deere ILLUSTRATION® Manual

	Page		Page
Fan Indicator Light	20-5	Rocker Switch for Work Lights on Operator's Platform and Outside Mirror Arms	25-3
Hydraulic Oil Filter Indicator Light	20-5	Work Lights on Operator's Platform And Mirror Arms	25-3
Threshing Cylinder Indicator Light	20-5	Intermittent Indicator Light Rocker Switch	25-4
Engine Air Filter Indicator Light	20-6	Grain Tank Lighting Rocker Switch	25-4
Alternator Indicator Light	20-6	Engine Compartment Lighting	25-5
Grain Tank 3/4 Full Indicator Light	20-6	Cleaning System Interior Lighting	25-5
Grain Tank Indicator Light (Full)	20-7	Hazard Warning Light Rocker Switch	25-6
Unloading Auger Indicator Light	20-7	Turn Signal Lever	25-6
Air Conditioner Indicator Light (High Pressure)	20-7	Rear Turn-Signal Lights, Tail Lights and "STOP" Lights	25-6
Fuel Gauge	20-7		
Coolant Temperature Gauge	20-8	Operator's Cab	
INFOTRAK™ Monitor	20-8	Cab Access Ladder	30-1
INFO-TRAK Monitor Functions	20-9	Mechanical Adjustment of Seat Position	30-2
Setting and Displaying Time	20-10	Adapting Seat to Operator's Weight	30-3
Tire Rolling Radius Code	20-10	Lumbar Support (Only Mechanical Seat)	30-3
Input of Machine-Specific Data	20-12	Adjusting the Armrest	30-3
Threshing Cylinder Alarm Adjustment	20-13	Right-hand Armrest	30-4
Fan Alarm Adjustment	20-13	R.H. Armrest — Fore-And-Aft Adjustment	30-4
INFO-TRAK™ Monitor Service Information	20-14	Air Comfort Seat	30-5
Preliminary Adjustments On Combine	20-14	Instructional Seat	30-5
Switching on Harvest Performance Monitor	20-14	Document Pack Compartment	30-5
Protected Shaft Speed Monitor	20-15	Cooling Compartment	30-6
Harvest Performance Monitor	20-16	Steering Column Tilt and Height Adjustment	30-6
Adjusting Harvest Performance Monitor Sensor Sensitivity	20-17	Fire Extinguisher	30-7
Adjusting Harvest Performance Monitor Potentiometers	20-17	Operating Foot Brakes	30-7
Adjusting Ground Speed for Harvest Performance Monitor	20-18	Parking Brake	30-8
Operational Check of Harvest Performance Monitor	20-19	Releasing Parking Brake	30-8
Hectaremeter	20-20	Sun visor	30-8
Functions of Keys	20-21	Outside Rear View Mirrors	30-8
Change Language and Measurement System	20-21	Cab Interior Lighting	30-9
Checking Area Harvested	20-22		
Adjustment of Tire Radius	20-22	Preliminary Checks	
Adjust Header Width	20-23	Daily Checks	35-1
Adjust Pulses	20-24	Engine Oil Level	35-1
Adjust Date and Time	20-25	Hydraulic System Oil Level	35-1
Deleting Harvested Area	20-26	Hydrostatic System Oil Level	35-2
Change Password	20-27	Engine Coolant Level	35-2
		Fuel Level	35-2
Lighting System and Lights		Brake Fluid for Brake System	35-2
Parking Light and Headlight Rocker Switch	25-1	Windshield Washer Reservoir	35-3
Full Beam Rocker Switch	25-1	After Long Storage Period	35-3
Full-Beam Indicator Light	25-1	Tires	35-3
Headlights	25-1	Fuel System	35-4
Work Lights Rocker Switch—Cab Roof and Unloading Auger	25-2	Combine Lubrication	35-4
Work Lights on Cab Roof and Unloading Auger	25-2		
		Operating the Engine	
		Breaking In The Engine	40-1

Continued on next page

	Page		Page
Safety Rules For Starting Engine	40-1	Loss Measurements and Loss Percentage	
Before Starting the Engine	40-2	Calculation	55-10
Starting the Engine	40-2	Grain Loss Reduction	55-12
Engine Oil Pressure Indicator Light	40-3	Evaluating Grain Quality	55-12
Warming Up Engine	40-3	General Information on Combine	
Starting the Engine by Means of a Booster		Adjustments	55-13
Battery	40-4	Basic Combine Adjustments Chart	55-14
Shutting Off the Engine	40-4	Adjusting Concave-to-Cylinder Clearance	55-15
Stalling of Engine	40-5	Preparing for Different Crop	55-16
		Preparations for Harvesting Grain Crops	55-16
Operating and Transporting Combine		Preparations for Harvesting Corn	55-16
Transporting The Combine on a Truck	45-1	Preparations for Harvesting Oil Seed Crops	55-17
Steering and Driving	45-1	Cut Position for 600 Series Rigid Headers	55-18
Forward and Reverse Travel	45-2	Return to Cut (AHC) for 600 Series	
Avoid Overheating of Hydrostatic System	45-2	Rigid Headers	55-19
Transport Information	45-3		
Trailer Hitch	45-3	Feeder House	
Towing Trailer	45-4	Safety Stop	60-1
Transporting Under Own Power	45-4	Coupling Header to Feeder House	60-1
Towing the Combine	45-5	Multi-Coupler for 600 Series Feeder House	60-1
Operating the Combine	45-5	Checking Header Leveling	60-3
		Adjusting Floating Drum Height of	
Wheels, Axles and Counterweights		Feeder House	60-3
Tightening Wheel Nuts	50-1	Adjusting Feeder House Front Face Angle	60-4
Tire Maintenance	50-1	Tension of Feeder House Conveyor Chains	60-4
Tubeless Tires	50-1		
Mounting Tires	50-2	Threshing System, Separation and Cleaning	
Installing Front Wheels	50-3	Threshing Cylinder Front Inspection Cover	65-1
Installing Rear Wheels	50-5	Threshing Cylinder Side Inspection Ports	65-1
Changing Tires	50-5	Opening Stone Trap	65-2
Support Points for Raising Combine	50-6	Threshing Cylinder Rasp Bars	65-2
Rear Axle Toe-In	50-6	Rotating Cylinder By Hand	65-3
Tire Inflation Pressures	50-7	Operating Threshing Cylinder Speed	
Counterweights	50-7	Reduction Gear	65-3
		Concave And Cylinder Alignment	65-4
Setup and Operation		Adjusting Concave Extension	65-4
Combine Operation	55-1	Special Beater Wear Plates	65-4
Grain Separating Process	55-2	Cylinder Baffle	65-5
Grain Cleaning Process	55-2	Tooth Concave Closure Plates	65-5
Grain Recovery Process	55-3	Rice Harvesting Attachment	65-6
Identifying Problems	55-3	Adjust Lateral Spacing between	
Adjusting Threshing Cylinder and Concave	55-4	Threshing Cylinder Teeth and Concave	
Adjusting Fan Speed	55-5	Teeth	65-7
Adjusting Sieves	55-6	Tooth Concave Closure Plates	65-7
Inadequate Tailings	55-6	Straw Walker Types	65-8
Slope Master System	55-7	Straw Walker Fishbacks	65-8
Causes of Grain Loss	55-7	Straw Walker Curtain	65-9
Head Losses	55-7	Adjusting Straw Walker Bearings	65-9
Threshing System Losses	55-8	Cleaner Arms And Connecting Rods	65-10
Separating System Losses	55-8	Cleaning System	65-10
Cleaning System Losses	55-8	Chaffer Extension	65-11
Prevention of Grain Loss— General	55-9		

Continued on next page

	Page		Page
Adjusting The Chaffer Extension Angle	65-11	Grease	80-10
Slope Master System for Hilly Terrain	65-12	Lubricant Storage	80-10
Removing Chaffer Extension	65-12	Alternative and Synthetic Lubricants	80-11
Removing Chaffer	65-12	Use Genuine John Deere Parts	80-11
Removing Grain Sieve	65-13		
Cleaning The Chaffers And Sieves	65-13	Periodic Servicing and Lubrication	
Adjusting Grain Retention Plate	65-13	Service Points—Daily	85-1
Opening The Pan	65-14	Service Points—First 10 hours	85-3
Adjusting Fan Air Flow Direction	65-14	Service points—Every 10 hours	85-5
Special Kit for Corn	65-14	Service Points—First 50 hours	85-9
		Service points—Every 50 hours	85-11
Straw Chopper and Chaff Spreader		Service Points—First 100 hours	85-15
Straw Chopper	70-1	Service points—Every 100 hours	85-17
Straw Chopper Deflector Sheet	70-1	Service points—Every 200 hours	85-19
Precautions for Engaging Straw Chopper	70-2	Service points—Every 250 hours	85-21
Disengaging Straw Chopper	70-2	Service points—Every 500 hours	85-23
Replacement of Straw Chopper Knives	70-3	Service points—Over 750 hours	85-25
Adjusting Straw Chopper Counterknives	70-3	After Each Harvesting Season	85-27
Replacement of Straw Chopper		Belts	85-28
Counterknives	70-4	Chains	85-29
Reducing Straw Chopper Rotational Speed	70-5		
Straw Distributor Operating and Transport		Service—Engine	
Position	70-6	Avoid High-Pressure Fluids	90-1
Adjusting Straw Distributor Baffles	70-6	Do Not Modify Fuel System	90-1
Chaff Spreader Drive	70-7	Tool Box	90-2
Chaff Spreader Speed Adjustment	70-7	Access to Engine	90-2
Chaff Spreader Operating Position	70-7	Engine Compartment	90-3
Chaff Spreader Transport Position	70-8	Checking Engine Oil Level	90-3
Lateral Swing of Chaff Spreader	70-8	Changing Engine Oil Filter and Oil	90-4
Chaff Spreader Spread Angle Adjustment	70-9	Fuel System in 6.8 L Engines—1450	
		CWS CIS	90-5
Grain Tank Loading and Unloading		Fuel System in 8.1 L Engines—1550	
Grain Tank Inspection Hatch	75-1	CWS CIS	90-6
Tailings Elevator and Clean Grain Elevator	75-1	Fuel Tank Cap	90-6
Tailings Elevator Conveyor Chain Tension	75-1	Cleaning Primary Fuel Filter	90-7
Adjusting Clean Grain Elevator Conveyor		Bleeding off Water from Primary Fuel Filter	90-7
Chain Tension	75-2	Replacing Primary Fuel Filter	90-8
Elevator Augers	75-2	Replacing Fuel Filter—1450 CWS CIS	90-8
Grain Tank Lower Auger Cover Plates	75-3	Replacing Fuel Filter—1550 CWS CIS	90-9
Grain Tank Extension	75-3	Checking Injection Nozzles	90-9
		Bleeding the Fuel System	90-9
Fuel, Lubricants and Coolant		Cooling, Exhaust and Air Intake	
Handle Fuel Safely—Avoid Fires	80-1	System—1450 CWS CIS	90-12
Filling Fuel Tank	80-1	Cooling, Exhaust and Air Intake	
Diesel Fuel	80-2	System—1550 CWS CIS	90-13
Bio-Diesel Fuel	80-3	Changing Engine Coolant	90-14
Diesel Engine Coolant	80-4	Replacing Thermostat	90-17
Diesel Engine Break-In Oil	80-5	Checking Alternator Belt Tension	90-18
Diesel Engine Oil	80-6	Replacing Alternator Belt	90-19
Testing Diesel Fuel	80-7	Cleaning Rotary Screen, Oil Cooler,	
Lubricity of Diesel Fuel	80-7	Condenser and Radiator	90-19
Gear Oil	80-8		
Hydraulic System Oil	80-9		

Continued on next page

	Page		Page
Replacing (Engine) Cooling Fan Belt	90-20	Adjusting Grain Tank Upper Auger Drive Chain	100-13
Replacing Rotary Screen Drive Belt	90-21	Opening Grain Tank Unloading Auger Drive Shield	100-13
Adjusting Rotary Screen Rake Bar	90-21	Adjusting Grain Tank Unloading Auger and Feeder Auger Chain Tension	100-13
Replacement of Rotary Screen Knife Comb	90-22	Adjusting Belt Guide of Unloading Auger Drive	100-14
Removing Engine Air Filter	90-23	Adjusting Unloading Auger Drive Chain	100-15
Cleaning and Inspecting Filter Insert	90-24	Tensioning Straw Chopper Intermediate Drive Belt	100-15
Installing Engine Air Filter	90-25		
Turbocharger	90-26		
Crankshaft Damper Inspection	90-26		
Engine Grounding	90-26		
Service—Compressed Air System		Service—Electrical System	
Compressed Air System Reservoir	95-1	Prevent Battery Explosions	105-1
Compressed Air Hose and Using Compressed Air	95-1	Removing Battery	105-1
Adjusting Compressor Drive Belt Tension	95-1	Cleaning the Battery	105-1
Air Compressor Oil Change	95-2	Battery Charging	105-2
		Storing and Handling Battery	105-2
Service—Drives/Shields		Battery Switch	105-2
Opening the Side Shield	100-1	Installing and Connecting the Battery	105-3
Opening the Fan Shield	100-1	Using a Booster Battery	105-3
Opening the Straw Chopper Idler Pulley Shield	100-1	Alternator	105-4
Opening the Head Drive Shield	100-2	Starter Motor Relay	105-4
Drive Chains Tension	100-2	Starter Motor	105-4
Adjusting Hydraulic Pump Belt Tension	100-3	Removing Main Electrical Box	105-5
Adjusting Feeder House Slip Clutch	100-3	Electronic Circuit Boards	105-6
Feeder House Drive to Head	100-3	Fuse and Relay Board	105-7
Replacing Feeder House Drive Belt	100-4	Fuse Tester	105-8
Adjusting Feeder House Hydraulic Reverser Chain Tension	100-5	Access to the Relay and Diode Board	105-8
Replacing Threshing Unit Drive Belt	100-5	Relay and Diode Board	105-9
Adjusting Threshing Unit Drive Belt Guide	100-6	Solenoid Valves (Main Hydraulic Block)	105-10
Adjusting Hydraulic Variable Speed Drive	100-6	Solenoid Valves (Secondary Hydraulic Block)	105-11
Preparing for Replacement of Cylinder Variable Speed Drive Belt	100-7	INFO-TRAK™ Monitor Error Codes	105-12
Removing Cylinder Variable Speed Drive Belt on Combines without Reduction Gear	100-8	Automatic Header Control System Error Codes	105-13
Removing Cylinder Variable Speed Drive Belt on Combines with Reduction Gear	100-9	Header Test Procedures	105-14
Adjusting Straw Walker Belt Tension	100-9	Preliminary Head AHC Calibration Procedures	105-17
Adjusting Straw Walker Drive Belt Tension	100-10	600 Series Header AHC Calibration Procedure—Step by Step	105-19
Adjusting Straw Walker Slip Clutch	100-10	Position of Dipswitches on Reel Speed Control Board	105-21
Adjusting Fan Variable Speed Drive Belt	100-10	LEDs on Reel Speed Control Board (Error Codes)	105-21
Replacing Fan Variable Speed Drive Belt	100-10		
Adjusting Tailings Elevator Drive Belt	100-11	Service—Hydraulic System	
Adjusting Tailings Elevator Clutch	100-11	Avoid High-Pressure Fluids	110-1
Adjusting Tailings Auger Drive	100-11	Access Points Behind Rear Ladder	110-1
Adjusting Clean Grain Elevator Slip Clutch	100-12	Description of Hydraulic System	110-2
Clean Grain Elevator Drive Belt	100-12	Triple Hydraulic Pump	110-3

Continued on next page

	Page		Page
Hydraulic Valve Block Relief Valves	110-3	Serial Numbers	
Functions of Hydraulic Control Block Valves . . .	110-4	Type Plates	135-1
Adjusting Header Raise and Lower Speed . . .	110-5	Combine Serial Number	135-1
Changing Hydraulic Oil and Filter	110-5	Engine Serial Number	135-2
Changing Hydraulic Oil	110-6	Three-Speed Transmission Serial Number . . .	135-2
Accumulators	110-7		
Service-Hydrost. Variable Speed Drive/Brakes		John Deere Keeps You On The Job	
Brake System	115-1	John Deere Parts	IBC-1
Adjusting Foot Brakes	115-2	The Right Tools	IBC-1
Parking Brake	115-2	Well-Trained Technicians	IBC-1
Hydrostatic Drive Components	115-3	Prompt Service	IBC-1
Changing Hydrostatic Drive Oil and Filter . . .	115-4		
Changing Final Drive Oil	115-5		
Changing Transmission Oil	115-5		
Adjusting Play of Final Drive Shaft End			
Bearings	115-6		
Service—Air Conditioning			
Air Conditioning System Components	120-1		
Heater Components	120-2		
Adjustable Air Louvers	120-3		
Air Conditioning Compressor Belt Tension . . .	120-4		
Refrigerant Level	120-4		
Low Pressure Switch	120-5		
High Pressure Switch	120-5		
Cleaning Condenser	120-5		
Cab Filters	120-6		
Removing Cab Air Filter	120-6		
Cleaning Cab Air Filters	120-6		
Removing Cab Recirculating Filter	120-7		
Air Intake Opening	120-7		
Condensed Water Drain Hose	120-7		
Storage			
At Season's End	125-1		
At Season's End— Engine	125-2		
At Season's End — Air Conditioning System . .	125-2		
Removing Combine From Storage	125-3		
Before Harvesting—Engine	125-3		
Removing Combine From Storage — Air			
Conditioning System	125-4		
Specifications			
Specifications	130-1		
Operating Speeds	130-3		
Wheel Configurations	130-3		
Combine Dimensions	130-4		
Safety Note Regarding the Subsequent			
Installation of Electrical and Electronic			
Appliances and/or Components	130-6		
Metric Bolt and Screw Torque Values	130-7		
Unified Inch Bolt and Screw Torque Values . . .	130-8		

Identification Views

Identification Views



CQ203751 -UN-29AUG06

This manual provides information on **1450 CWS CIS**
and 1550 CWS CIS Combines.

References in this manual:	Refer to the following models:
1450 CWS CIS	1450 CWS CIS only
1550 CWS CIS	1550 CWS CIS only
Information without reference to a model	All combines

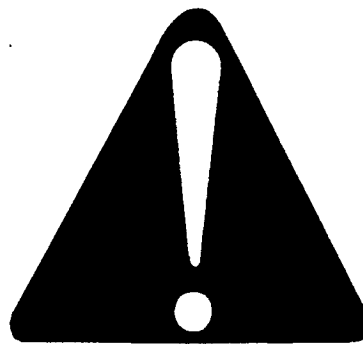
ML70882,0000A20 -19-23JAN07-1/1

Safety

Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



DX,ALERT -19-29SEP98-1/1

T81389 -JUN-07DEC88

Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.



DX,READ -19-03MAR93-1/1

TS201 -JUN-23AUG88

Understand Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



DX,SIGNAL -19-03MAR93-1/1

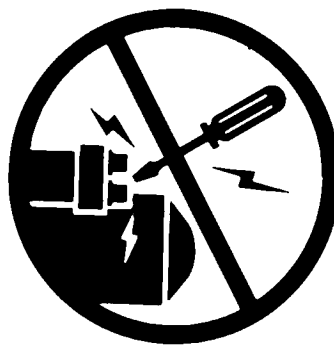
TS187 -19-30SEP88

Prevent Machine Runaway

Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.



TS177 -UN-11JAN89

DX,BYPAS1 -19-29SEP98-1/1

Check the Safe Operation of the Combine

Always remember to service the combine to ensure its safe operation and running, and also regarding the traffic regulations.

AG,GG05155,9 -19-22JAN99-1/1

Observe the Traffic Norms



CAUTION: Always observe local road traffic regulations when driving the machine on public roads.



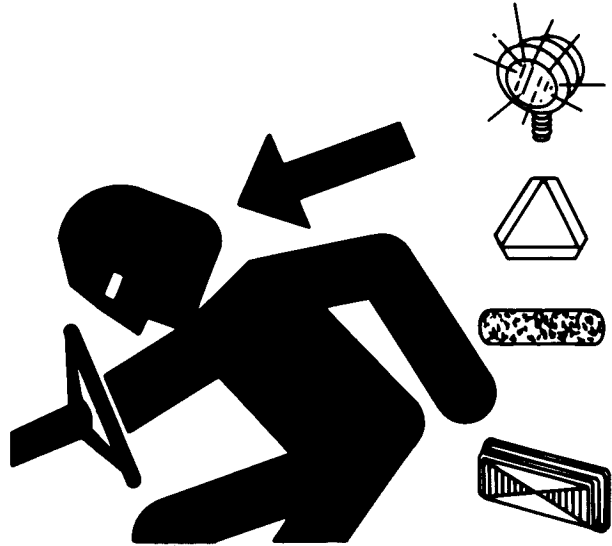
H28930 -UN-30JUN89

AG,GG05155,8 -19-13MAR02-1/1

Use Safety Lights and Devices

Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere dealer.



TS951 -UN-12APR90

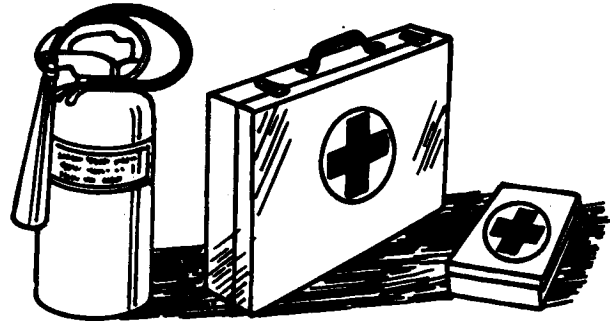
DX,FLASH -19-07JUL99-1/1

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



TS291 -UN-23AUG88

DX,FIRE2 -19-03MAR93-1/1

Handle Fuel Safely—Avoid Fires

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



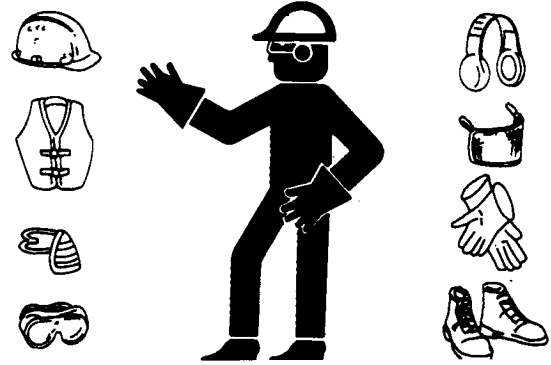
TS202 -UN-23AUG88

DX,FIRE1 -19-03MAR93-1/1

Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



DX,WEAR2 -19-03MAR93-1/1

TS206 -UN-23AUG88

Keep Riders and Children Off Machine

Only allow the operator on the machine. Keep riders off the machine except for periods of training or short periods of observation.

Riders are subject to injury such as being thrown from the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

Children should never be allowed on the machine or in the combine cab when the engine is running.

The extra seat should only be used for training purposes or short periods of observation.

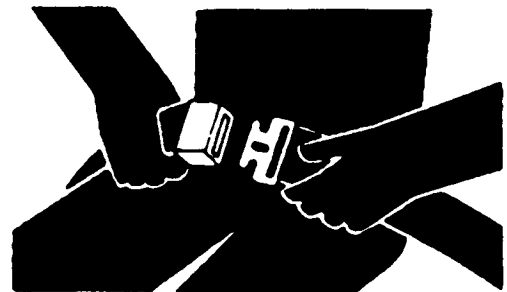


ML70882,00004A3 -19-19JUL04-1/1

TS253 -UN-23AUG88

Use Seat Belts

Use the seat belt whenever you operate the combine or ride as an observer.



H47137

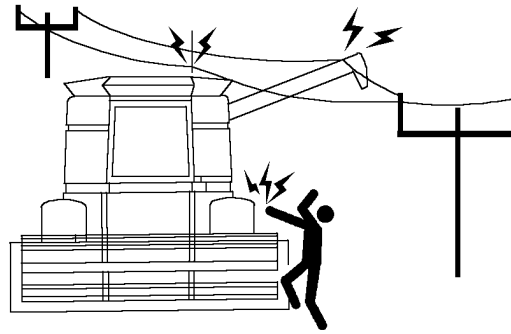
HX,STSSA,I -19-22JUL99-1/1

H47137 -UN-25OCT95

Avoid Power Lines

Put the grain tank unloading auger in transport position and lower the grain tank access handrail before driving on public roads.

Fasten the radio aerial in its transport position before driving on public roads, it may come into contact with low-hanging power lines. This would result in the operator suffering a severe electrical shock.



H52022 -UN-14APR99

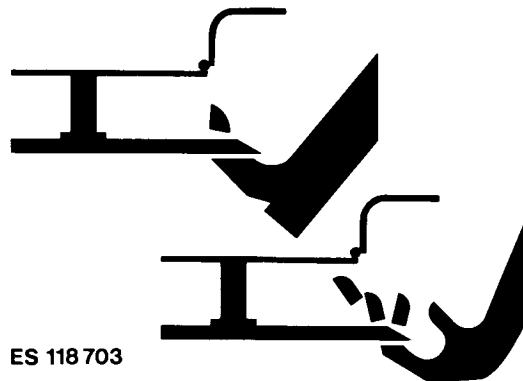
HX,STSSA,D -19-22JUL99-1/1

Protection Device

Keep guards in place at all times. Ensure that they are in good condition and installed correctly.

Always disengage the threshing, shut off the engine and remove key switch before removing any guards.

Keep hands, feet and clothing away from moving parts.



ES 118 703

ES118703 -UN-21MAR95

CQ,SGCADISP -19-13MAR02-1/1

Stay Clear of Harvesting Units

Cutterbars, auger, reel and rollers cannot be completely armored due to their function. Stay away from these elements during operation. Always disengage the threshing, shut off the engine and remove key switch before removing any guards.



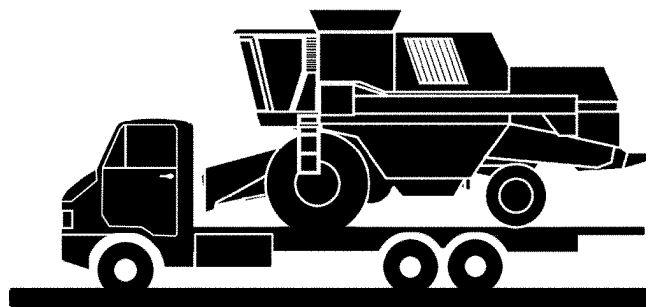
ES 118 704

ES118704 -UN-21MAR95

CQ,SGCAPLATA -19-13MAR02-1/1

Transport on a Truck

When transporting the combine on trucks, make sure the side shields are well fastened and cannot open accidentally during transportation.



CQ203970 -UN-09APR01

CQ203970

CO03622,0000061 -19-13MAR02-1/1

Transport Combine Safely

Whenever setting the machine in movement look around for children. Ensure good visibility.

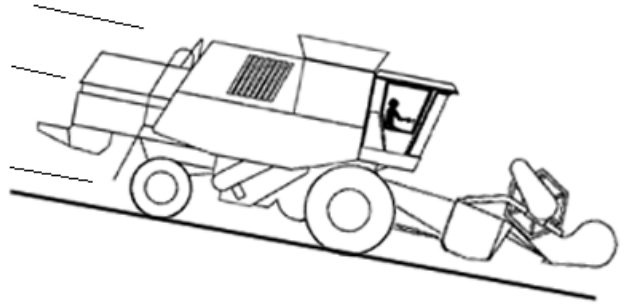
Always adapt the travel speed according to the ground. Avoid sharp turns when going uphill or downhill.

Check that the attachments are properly coupled and that they do not disconnect accidentally.

When driving with assembled trailers, be very careful.

Reduce the gear speed when driving on hillsides or rough grounds and before performing risky maneuvers. Reduce to a lower speed when driving steep downhill slopes. Never drive downhill in neutral.

Avoid holes, ditches, and obstructions which may cause tractor roll-over, especially on hillsides.

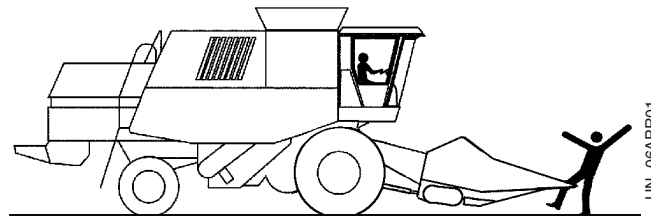


CQ221200 -UN-27NOV03

ML70882,00003F8 -19-28NOV03-1/1

Transport with Head Installed

Before driving combine on public roads, head must be raised. It must not obstruct the operator's view of the road. Head height control must be in the locked position.



CQ203760 -UN-06APR01

CQ203760

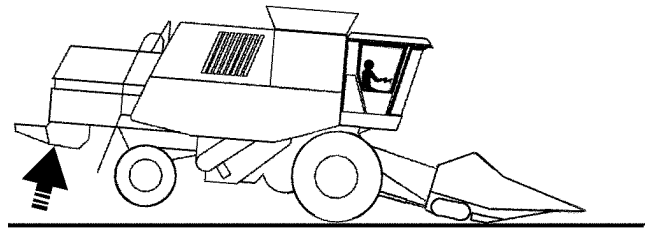
MB03730,0001BD6 -19-01AUG05-1/1

Use of Counterweights

Operating, steering and braking performance of the combine may be affected by the header used because its weight can alter the center of gravity of the combine.

To maintain stability, the use of counterweights may be necessary on the rear part of the Combine.

Observe the maximum axle weight and total weight allowed.



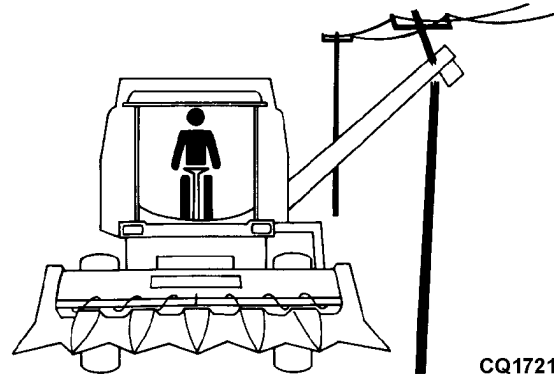
—UN-06APR01
CQ203770

CQ203770

MB03730,0001BD7 -19-20AUG02-1/1

Swing in Grain Tank Unloading Auger

Swing in the grain tank unloading auger to its transport position before driving on public roads. Thereby avoiding collisions with roadside installations, such as telegraph poles, street lights, etc.



—UN-11SEP98
CQ172140

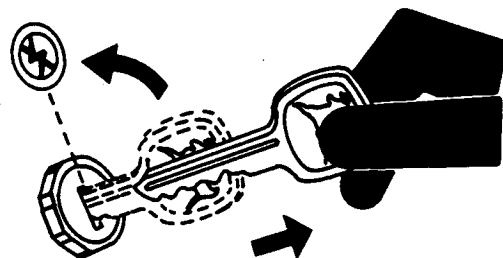
CQ172140

CQ,SGCATQ -19-13MAR02-1/1

Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



—UN-24MAY89
TS230

DX,PARK -19-04JUN90-1/1

Work In Ventilated Area

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area



DX,AIR -19-17FEB99-1/1

TS220 -UN-23AUG88

Practice Safe Maintenance

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



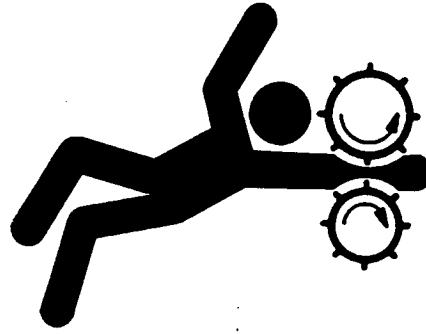
DX,SERV -19-17FEB99-1/1

TS218 -UN-23AUG88

Service Machines Safely

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



TS228 -UN-23AUG88

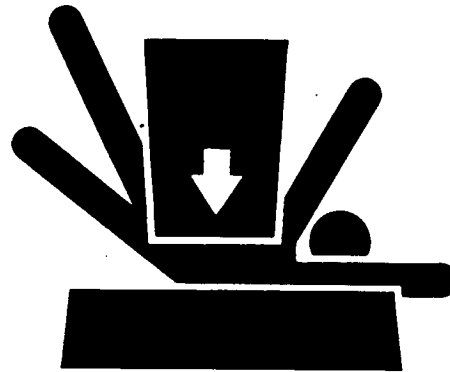
DX, LOOSE -19-04JUN90-1/1

Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.

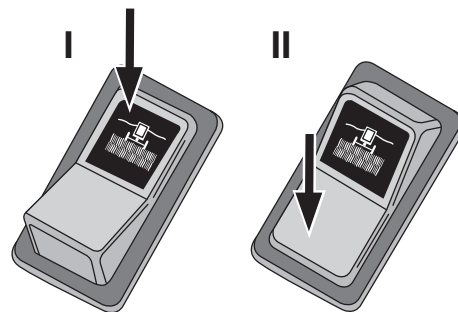


TS229 -UN-23AUG88

DX, LOWER -19-24FEB00-1/1

Road Safety Rocker Switch

IMPORTANT: For road travel, the road safety switch must be in the transport position (II). Before driving on public roads move the head and unloading auger to the transport position. This switch ensures that all hydraulic functions — with the exception of the steering system — are disconnected. With the road safety switch in the transport position, it is also not possible to engage the separator and head drives.



I—Field position
II—Transport position

CQ245130 -UN-29JUL05

AG, CO03622, 1361 -19-01AUG05-1/1

Remove Built-up Crop Debris

The build up of chaff and crop debris in the engine compartment, on the engine, and near moving parts is a fire hazard. Check and clean these areas frequently. Before performing any inspection or service, shut off the engine, set the park brake and remove the key.



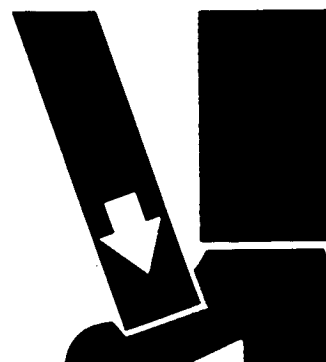
HX,STSSA,N -19-22JUL99-1/1

TS227 -UN-23AUG88

Use Proper Lifting Equipment

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.



DX,LIFT -19-04JUN90-1/1

TS226 -UN-23AUG88

Engine Maintenance

Always use the rear header to perform maintenance work on the engine. Do not climb on any other part of the Combine for there is a risky of falling off.

AG,GG05155,11 -19-25JAN99-1/1

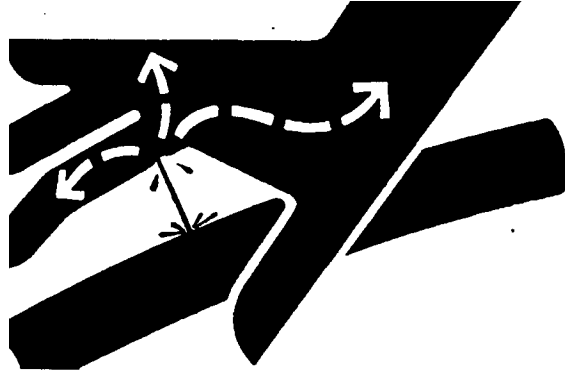
Avoid High-Pressure Fluids

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 -UN-23AUG88

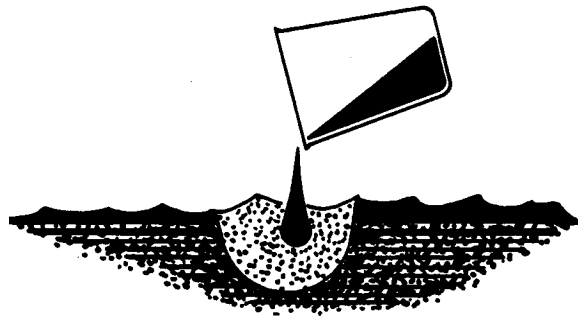
DX,FLUID -19-03MAR93-1/1

Observe the Environment Protection Laws

Be conscious of ecology and the environment.

Before draining any fluid, learn about the correct way to dispose of it.

Observe the environment protection norms when disposing of oil, fuel, coolant, filter and batteries.



TS222 -UN-23AUG88

CQ,SGCAMEIO -19-13MAR02-1/1

Prevent Battery Explosions

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).



TS204 -UN-23AUG88

DX,SPARKS -19-03MAR93-1/1

Handle Batteries Safely

Sealed batteries

Combines are equipped with sealed batteries, this type of batteries does not need maintenance.

An indicator on top of the battery shows charge level.

Lead-calcium batteries do not need water.

ML70882,00004A4 -19-19JUL04-1/1

Prevent Acid Burns

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

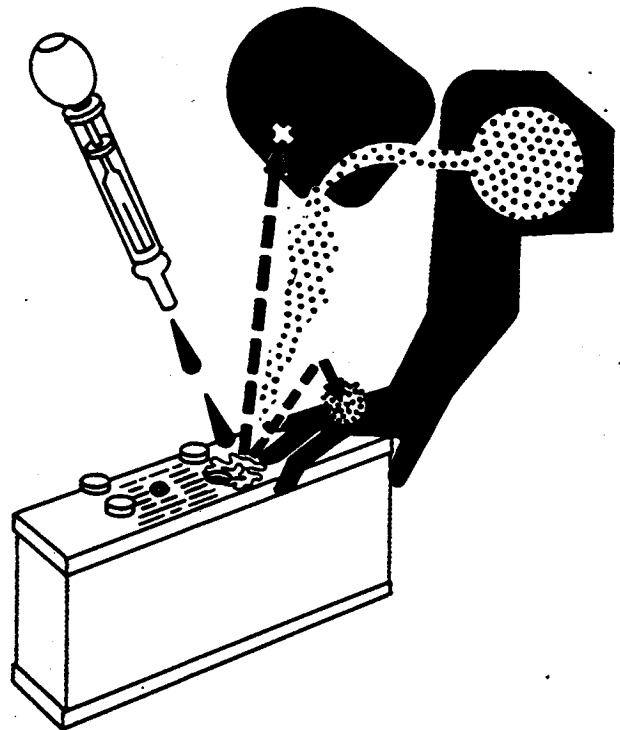
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 quarts).
3. Get medical attention immediately.



TS203 -UN-23AUG88

DX,POISON -19-21APR93-1/1

Cleaning the Grain Tank and Removal of Obstructions

Avoid serious injury or death from entanglement in the grain tank cross augers. For functional reasons the cross augers cannot be completely covered. Do not enter the grain tank when the engine is running. Before entering the tank to clean out residual grain, always shut off the engine, set parking brake and remove the key

If the grain bridges over and fails to flow into the cross augers, shut off the engine, remove the key and, positioned from the engine compartment door use a rod, broom or shovel to break up the bridge and restore grain flow.



TS256 –UN-23AUG88

HX,STSSA,M –19-22JUL99-1/1

Care with the Cutter Blades

Never attempt removing any obstructions from the header unless the threshing and the engine are shut off and the key switch removed.

Make sure no one is standing nearby before moving the Combine.

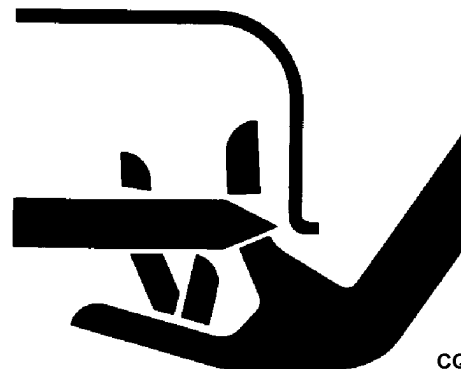


TS254 –UN-23AUG88

AG,SGCALAMIN –19-13MAR02-1/1

Safe operation of Straw Chopper

The straw chopper has safety guards that surround the rotating blades. The blades may continue to rotate for some time after drive has been switched off. Stay clear of moving components during operation of the straw chopper. Disengage drive, shut off engine, remove starter key and wait until drive parts have stopped moving prior to servicing straw chopper.



CQ172130

CQ172130 –UN-11SEP88

MB03730,0001BD2 –19-01SEP04-1/1

Service Tires Safely

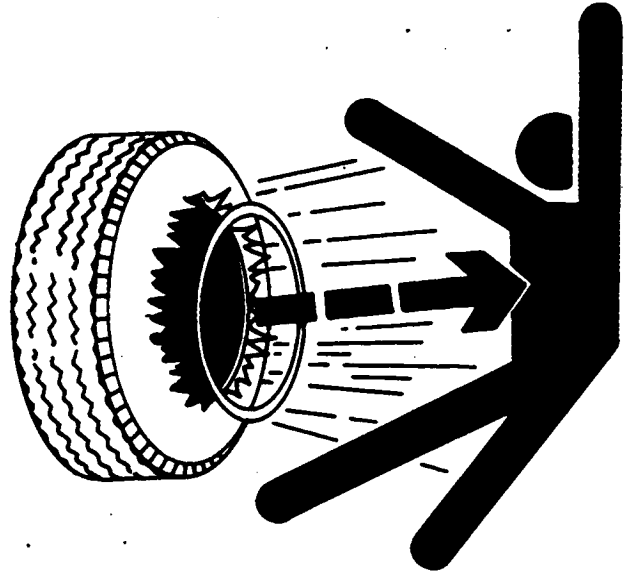
Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.



TS211 -UN-23AUG88

DX,RIM -19-24AUG90-1/1

Engine Coolant



CAUTION: Danger of scalding! Do not loosen or remove the radiator filler cap when coolant temperature is near or above boiling point. Always loosen cap slightly to relieve pressure before removing cap completely.

Add coolant via uncapped opening only when the engine is shut off.

IMPORTANT: Regardless of the season, use only John Deere COOL-GARD coolant in cooling system.



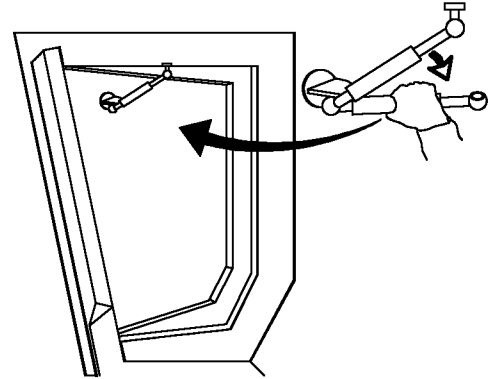
T6642EK -UN-01NOV88

ML70882,00004A5 -19-19JUN06-1/1

Emergency Exit

The right-hand cab window may be used as an emergency exit. Disengage the gas spring and open window.

ZX 006004



ZX006004 -JUN-03APR95

AG,CO03622,1362 -19-01SEP04-1/1

Remove Paint Before Welding or Heating

Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

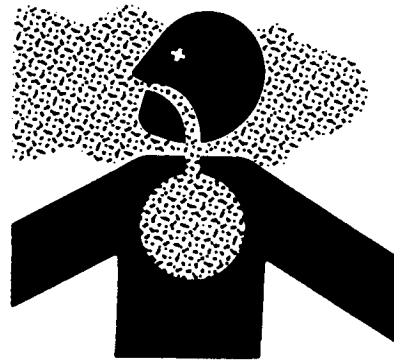
Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.



TS220 -JUN-23AUG88

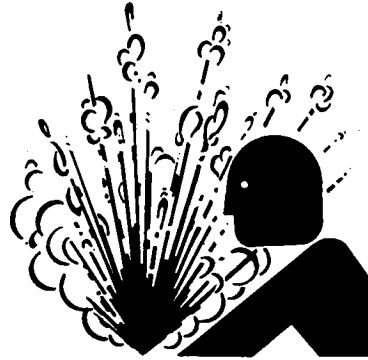
DX,PAINT -19-24JUL02-1/1

Service Accumulator Systems Safely

Escaping fluid or gas from pressurized hydraulic accumulator systems can cause serious injury. Extreme heat can cause the accumulator to burst, and pressurized lines can be accidentally cut. Do not weld or use a torch near a pressurized accumulator or pressurized line.

Relieve pressure from the hydraulic system before removing accumulator. Never attempt to relieve hydraulic system or accumulator pressure by loosening a fitting.

Accumulators cannot be repaired.

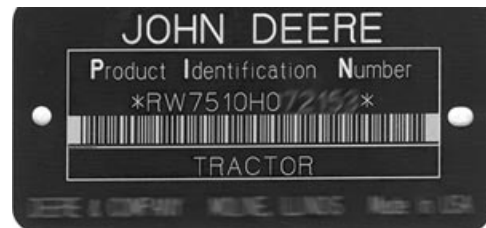


TS281 -UN-23AUG88

DX,WW,ACCLA -19-15APR03-1/1

Keep Proof of Ownership

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
 - Mark your machine with your own numbering system
 - Take color photographs from several angles of each machine

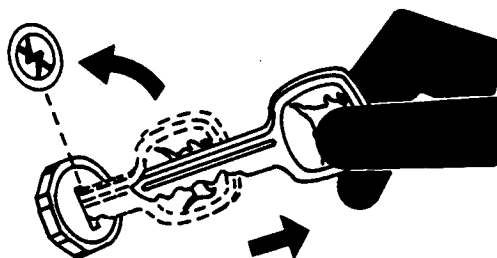


TS1680 -UN-09DEC03

DX,SECURE1 -19-18NOV03-1/1

Keep Machines Secure

1. Install vandal-proof devices.
2. When machine is in storage:
 - Lower equipment to the ground
 - Set wheels to widest position to make loading more difficult
 - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



TS230 -UN-24MAY89

DX,SECURE2 -19-18NOV03-1/1

Safety Decals

Pictorial Safety Decals

Safety signs warning of potential accident risks are affixed in a number of different locations on the machine. Danger is indicated by a triangular-shaped symbol. Besides this symbol is another providing information on how to avoid accidents. These safety signs, their location on the machine and a brief explanatory text are shown below.

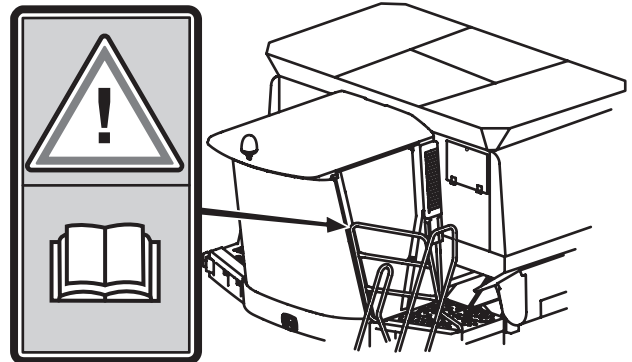


TS231 -19-07OCT88

AG,CO03622,1363 -19-13MAR02-1/1

Operator's Manual

This operator's manual contains all important information necessary for safe machine operation. Carefully observe all safety rules to avoid accidents.

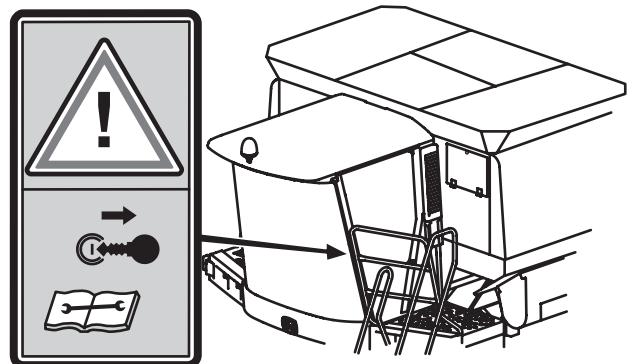


CQ275330 -UN-11JUL06

AG,CO03622,1364 -19-11JUL06-1/1

Repair and Service

Before carrying out repair and maintenance work, shut off engine and remove the starter key.



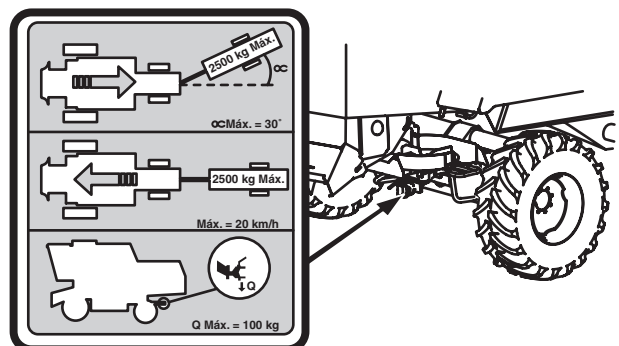
CQ275340 -UN-11JUL06

AG,CO03622,1365 -19-11JUL06-1/1

Trailer Hitch

Make sure maximum load and maximum angle of lateral tilt are within specification.

DO NOT exceed these values.



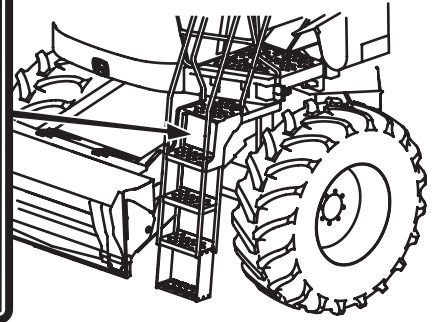
CQ275480 -UN-11AUG06

ML70882,0000949 -19-11JUL06-1/1

Front Access Ladder and Operating Platform

Do not allow passengers on access ladder or service platform.

There is an extra seat in the cab for this purpose.

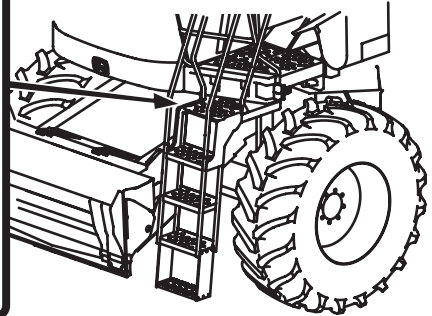


CQ275350 -UN-11JUL06

AG,CO03622,1366 -19-11JUL06-1/1

Fire Extinguisher

The machine must not be operated unless a full, operational fire extinguisher is installed at this point.

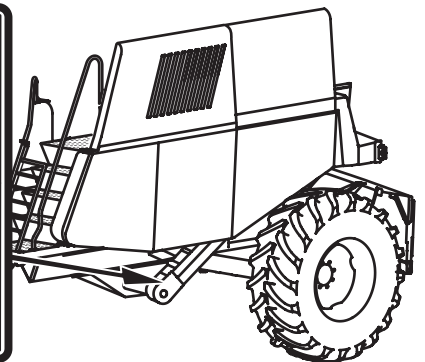


CQ275380 -UN-11JUL06

AG,CO03622,1367 -19-11JUL06-1/1

Grain Elevator Shield

DO NOT open or remove shields when the engine is running.

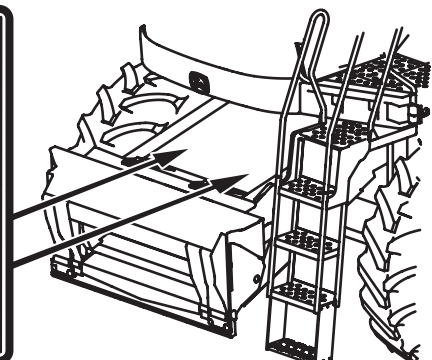


CQ275680 -UN-12JUL06

ML70882,00004D2 -19-11JUL06-1/1

Feeder House Drive Shields

DO NOT open or remove shields when the engine is running.

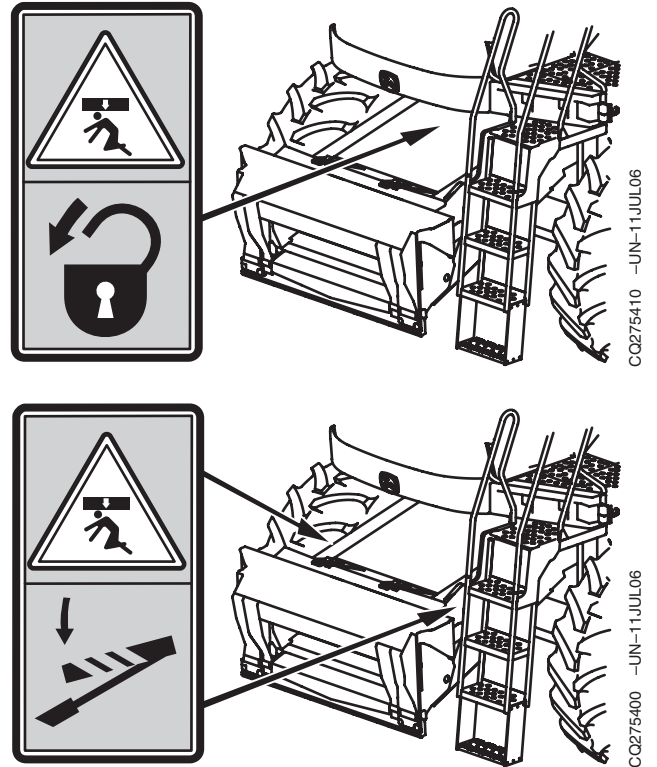


CQ275390 -UN-11JUL06

AG,CO03622,1368 -19-11JUL06-1/1

Under the Feeder House

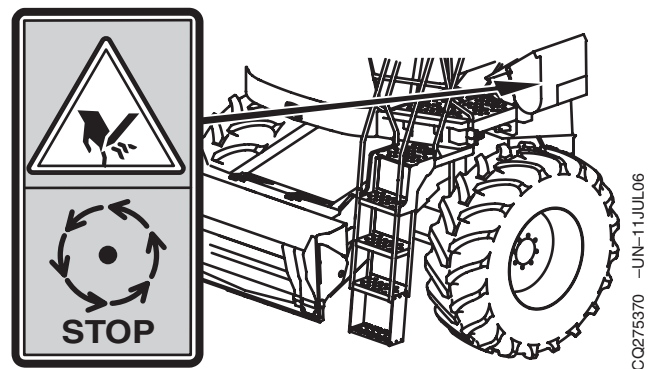
Before carrying out any kind of service under the feeder house ensure that the feeder house cylinders are locked in place by the safety stops.



AG,CO03622,1369 -19-11JUL06-1/1

Unloading Auger

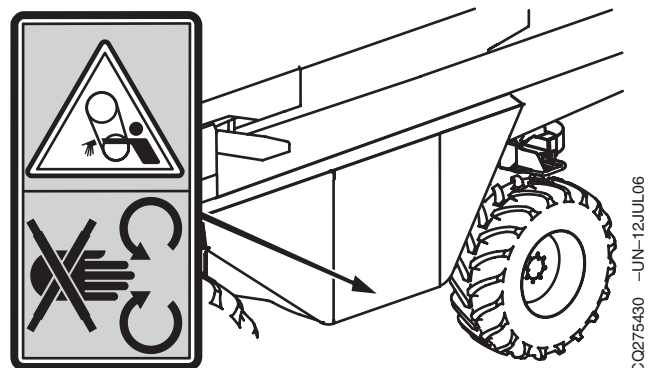
DO NOT open or remove shields when the engine is running.



CO03622,0000062 -19-11JUL06-1/1

Left-Hand Side Shield, Straw Walker Drive and Fan

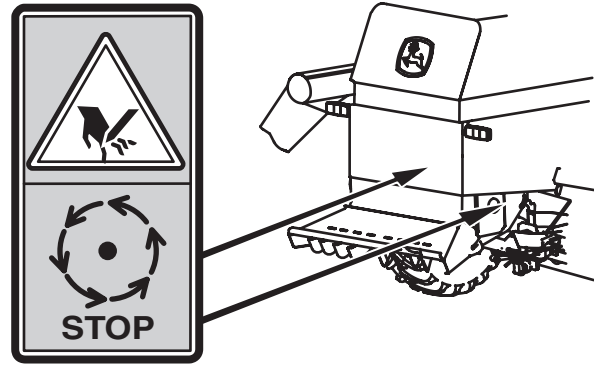
DO NOT open or remove shields when the engine is running.



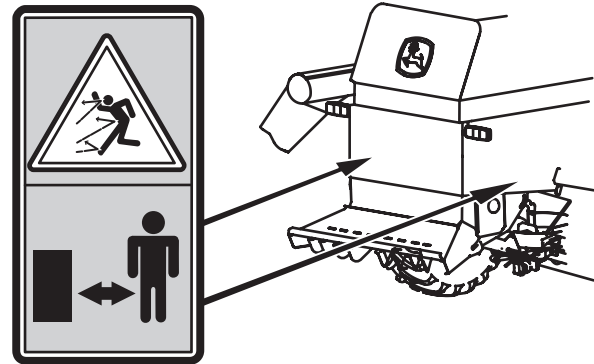
AG,CO03622,1371 -19-11JUL06-1/1

Straw Chopper and Chaff Spreader

Stay clear of these components when the engine is running. Do not touch any moving machine parts. Wait until all moving parts have stopped.



CQ275490 -JUN-11JUL06

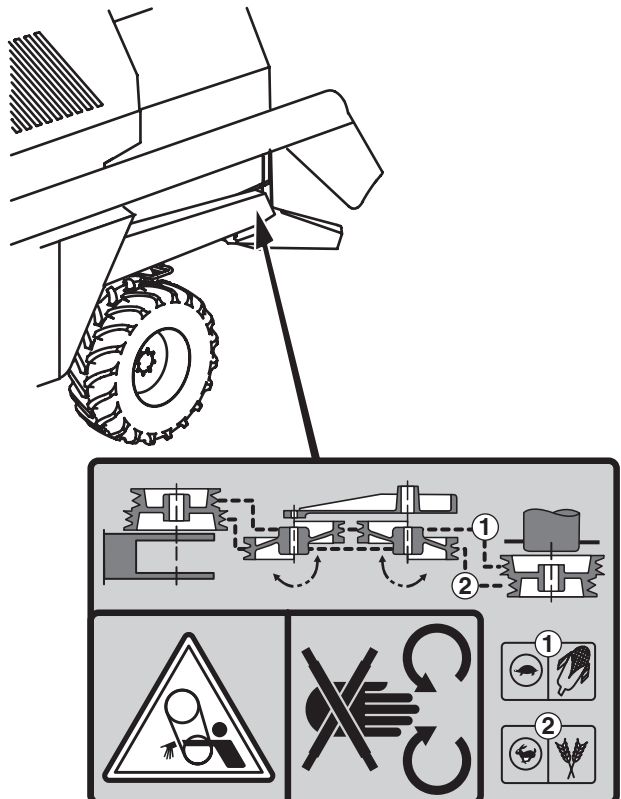


CQ275630 -JUN-11JUL06

AG,CO03622,1372 -19-11JUL06-1/1

Straw Chopper

ALWAYS shut off engine and remove starter key before servicing or adjusting speed of straw chopper.

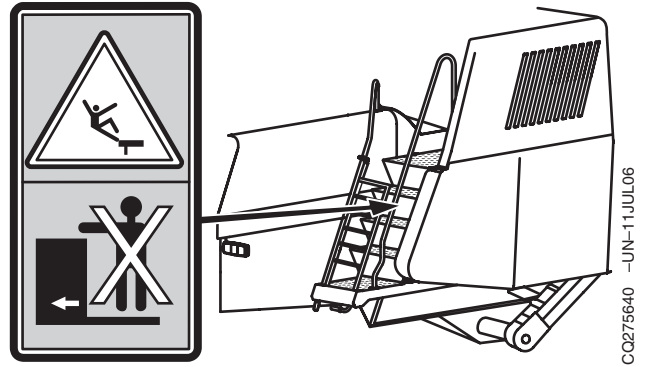


CQ275420 -JUN-12JUL06

AG,CO03622,1373 -19-11JUL06-1/1

Access to Rear Ladder and Service Platform

Do not allow passengers on access ladder or service platform.

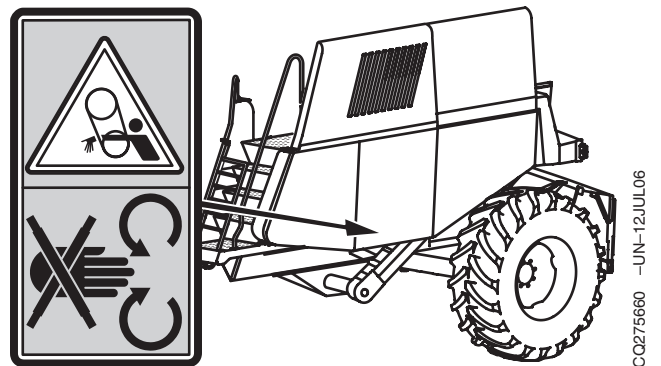


CQ275640 -UN-11JUL06

AG,CO03622,1374 -19-11JUL06-1/1

Right-Hand Side Shield

DO NOT open or remove shields when the engine is running.

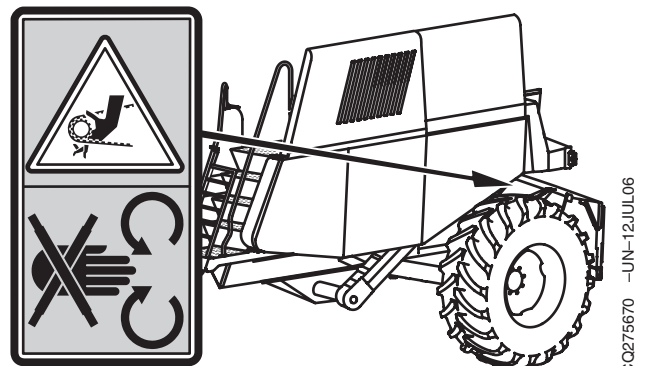


CQ275660 -UN-12JUL06

AG,CO03622,1375 -19-11JUL06-1/1

Reverser Shield

DO NOT open or remove shields when the engine is running.

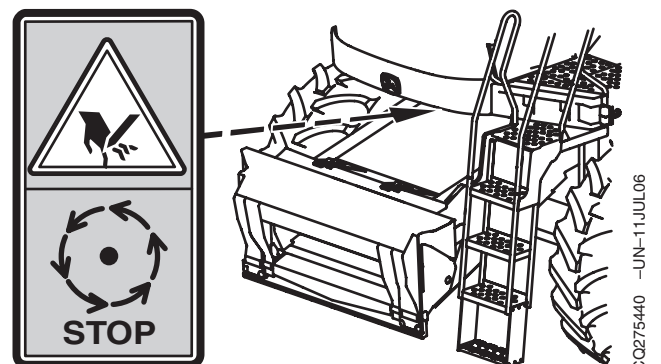


CQ275670 -UN-12JUL06

CO03622,0000063 -19-11JUL06-1/1

Front Inspection Window

NEVER open or remove inspection windows while the engine is running.

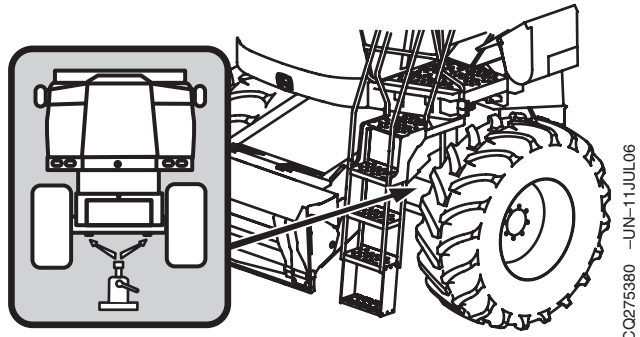


CQ275440 -UN-11JUL06

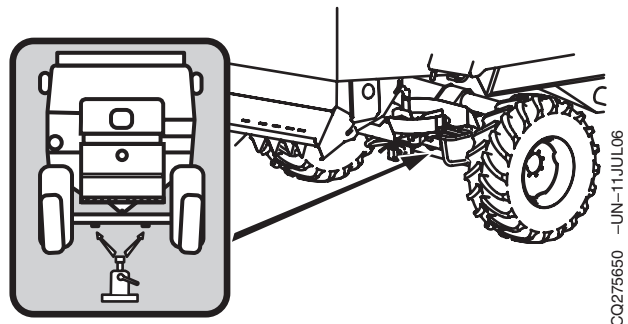
ML70882,0000A21 -19-11JUL06-1/1

Jacking Points

Jack up machine positioning jack at specified points at the front and rear axles. The points can be found by their stickers.



Jacking points - Front axle

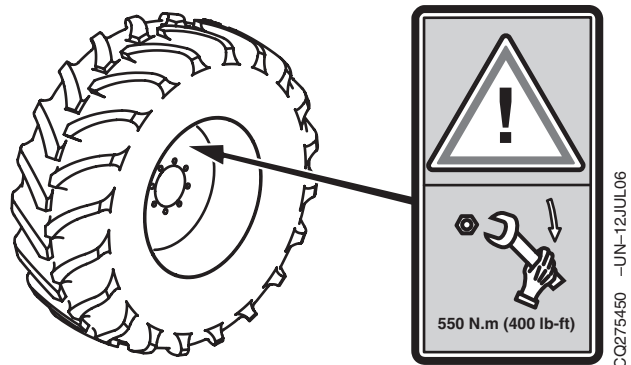


Jacking points - Rear axle

OU83340,000041F -19-11JUL06-1/1

Front Wheel Attaching Nuts

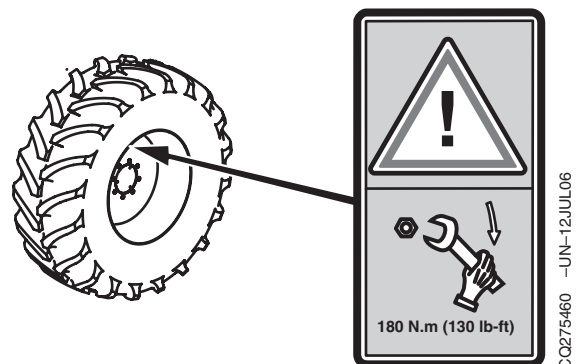
Retighten front wheel attaching nuts at specified intervals.



AG,CO03622,1376 -19-11JUL06-1/1

Rear Wheel Attaching Nuts

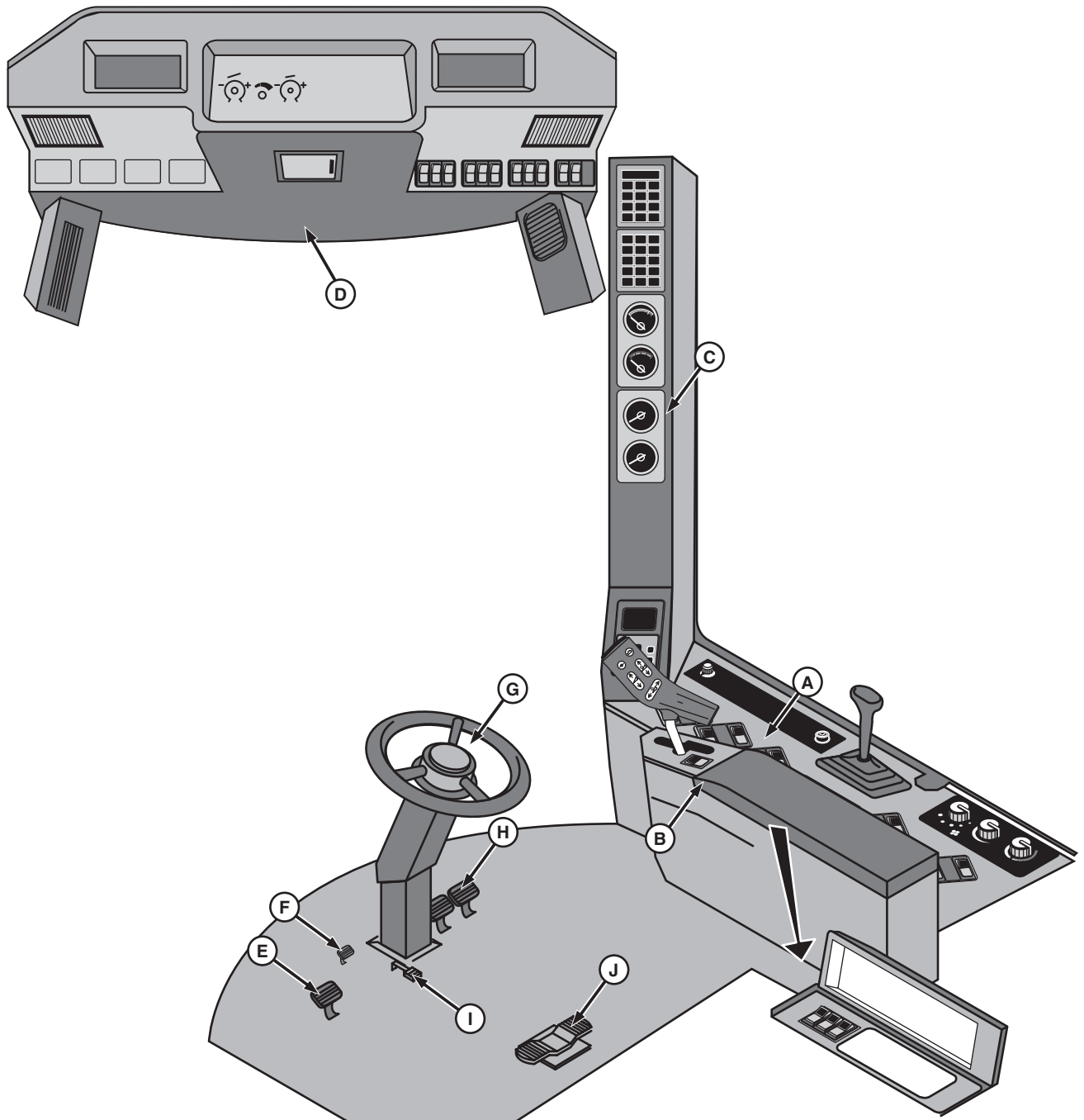
Retighten rear wheel attaching nuts at specified intervals.



AG,CO03622,1377 -19-11JUL06-1/1

Controls and Instruments

General View of Controls and Instruments



A—Main console
B—Armrest console
C—Corner Post

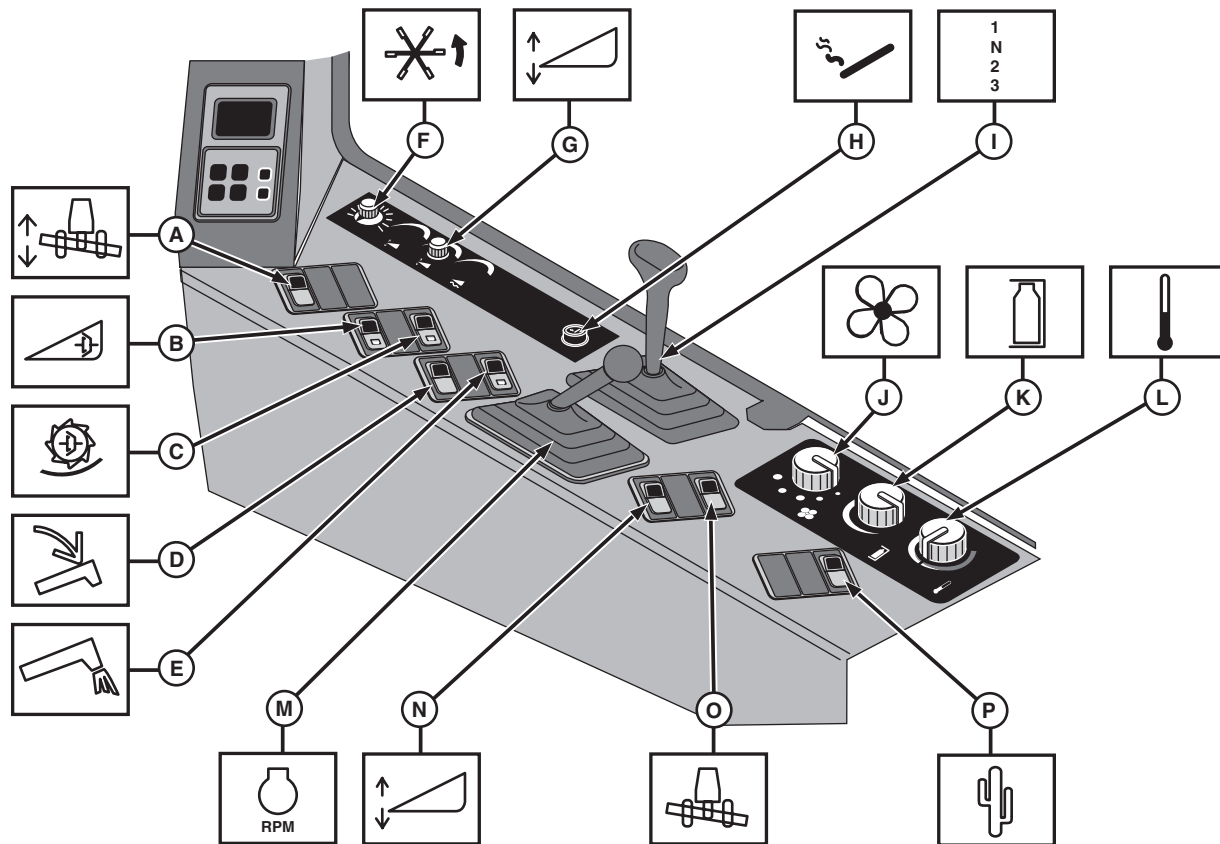
D—Overhead console
E—Parking brake
F—Parking brake disengage
pedal

G—Steering column
H—Foot brakes
I—Steering column adjustment
pedal

J—Feeder house reverser

CQ249190 -UN-30AUG05

Main Console



A—Header tilt/reel horizontal position commuting switch (manual mode)
 B—Header engage switch
 C—Separator engage switch
 D—Unloading auger swing switch

E—Unloading auger engage switch
 F—Automatic reel speed control switch
 G—Header height potentiometer
 H—Cigarette lighter socket

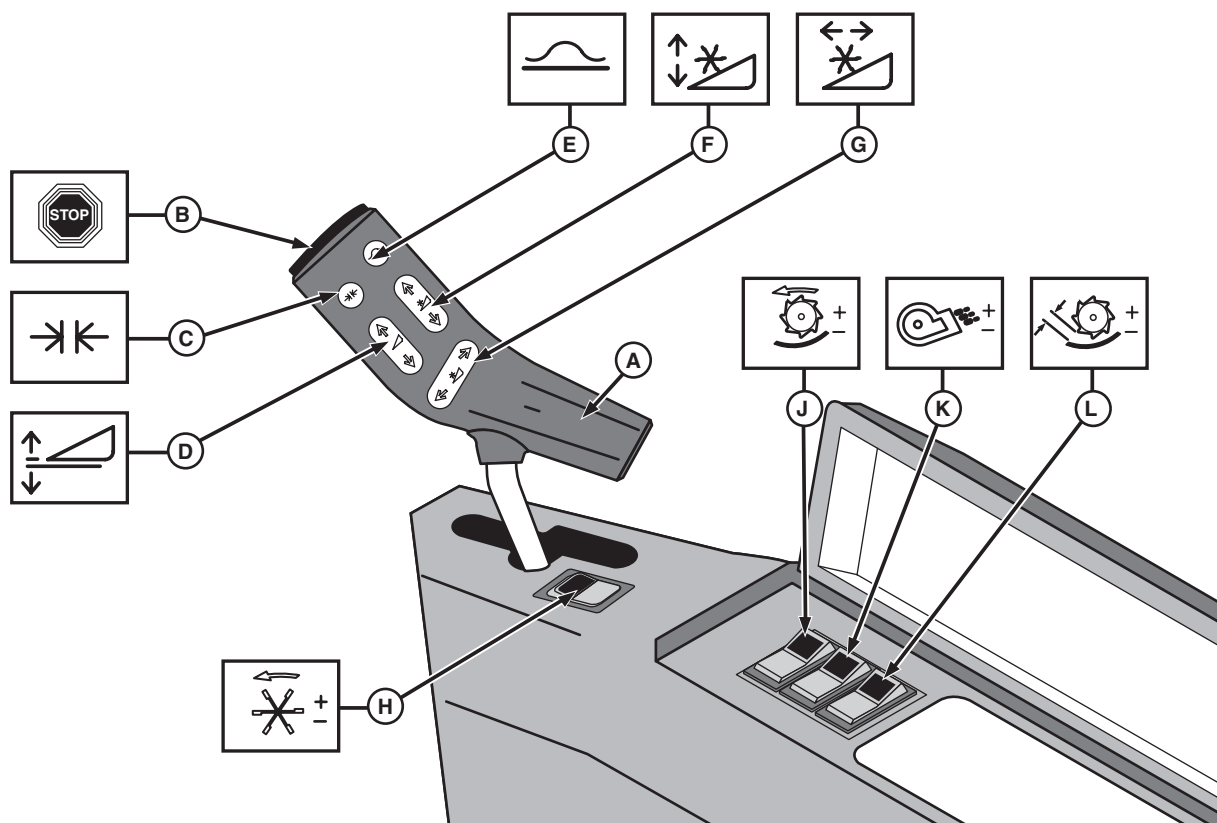
I—Gearshift lever
 J—Cab fan switch
 K—Cooling compartment temperature control switch
 L—Air conditioner/heater switch and temperature knob

M—Throttle lever
 N—AHC enable switch (Active Header Control)
 O—Header tilt enable switch (Automatic mode)
 P—Demoisturizer switch

CQ275690 -UN-29AUG06

ML70882,0000A24 -19-29AUG06-1/1

Armrest Console



A—Multifunction control handle
 B—Emergency stop switch
 C—Knob*
 D—Head raise/lower switch (2 speeds)

E—Knob*
 F—Reel height adjust switch
 G—Head tilt (manual mode) or reel horizontal adjustment switch

H—Reel speed switch
 J—Threshing cylinder speed rocker switch

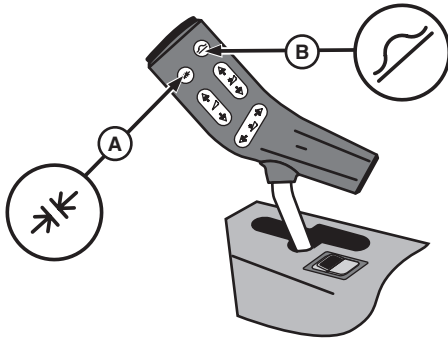
K—Fan speed rocker switch
 L—Concave clearance adjustment rocker switch

* See "Functions of Multifunction Control Handle Knobs" for more details.

AG,CO03622,1385 -19-01AUG05-1/1

CQ244730 -UN-29JUL05

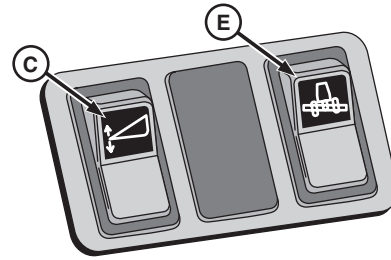
Functions of Multi-Function Control Handle Buttons



A—Button

B—Button

CQ222671 -JUN-29JUL05



C—AHC engage switch (Active Header Control)

E—Header lateral tilt enable switch (automatic mode)

CQ272670 -JUN-26MAY06

IMPORTANT: AHC enable switch (C) must be engaged to enable header lateral tilt (automatic mode) using switch (E).

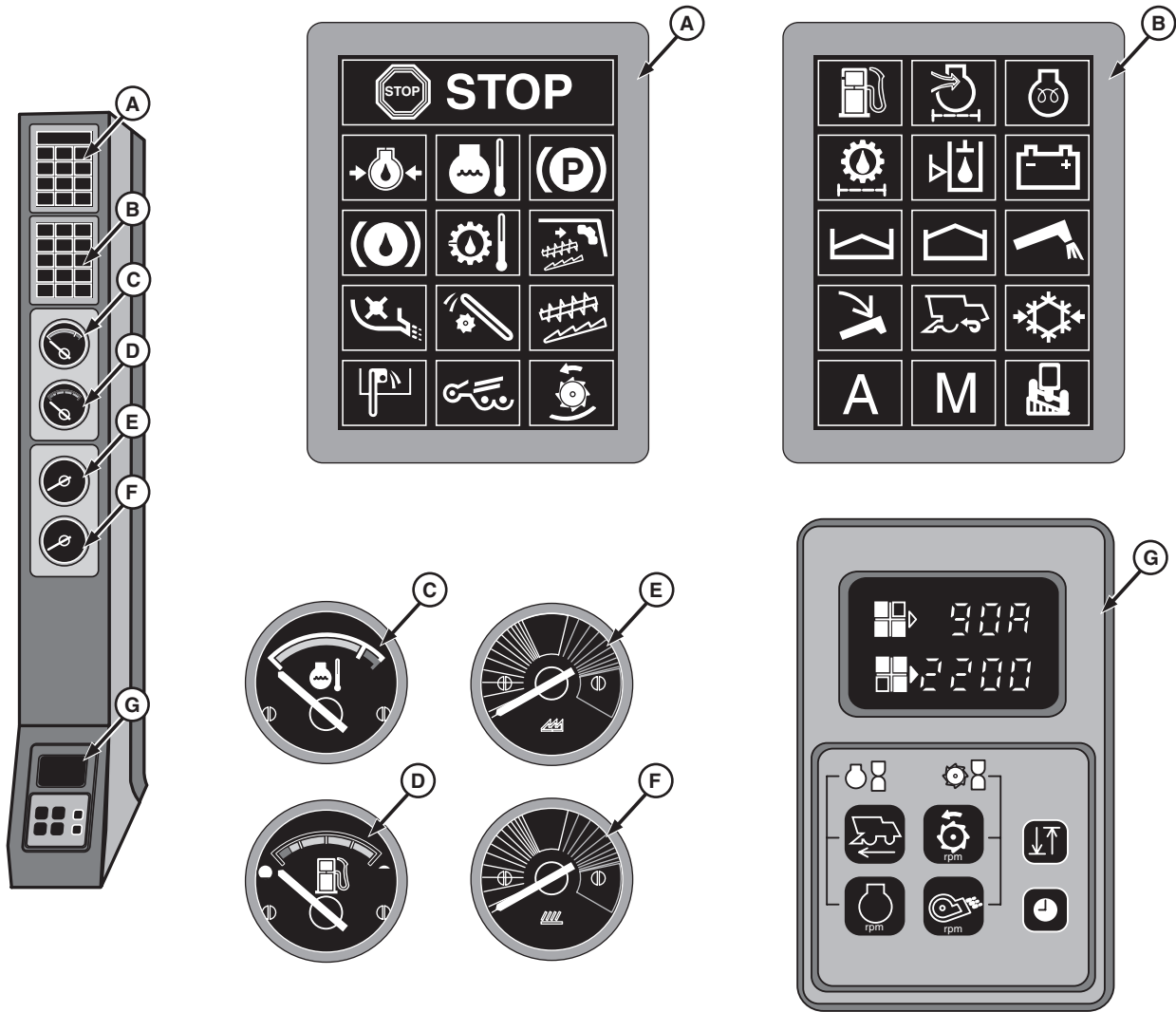
NOTE: Press the symbol on switch to enable this function.

Functions of Multi-Function Control Handle Buttons

	With AHC disabled		With AHC enabled	
	Button A	Button B	Button A	Button B
600 Series rigid header without automatic header height control sensor	Cut Position*	No function	No function	Break Off Cut
600 Series rigid header with automatic header height control sensor	Cut Position*	No function	Return to cut (AHC)**	Break Off Cut
* The combine takes the feeder house sensor reading.				
** The combine takes the header sensor reading.				

ML70882,0000A25 -19-12JUL06-1/1

Corner Post



A—Indicator lights
B—Indicator lights
C—Engine temperature gauge

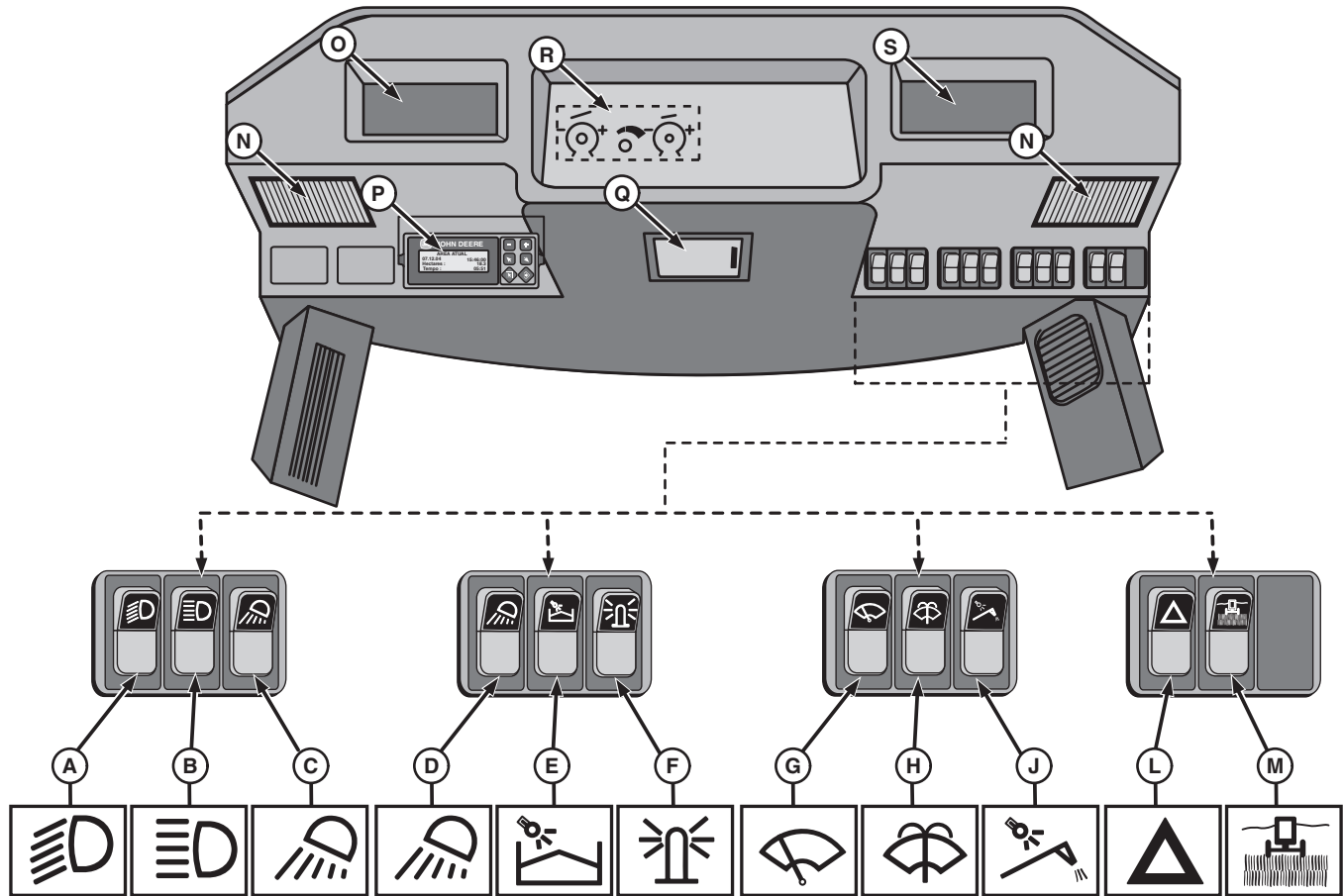
D—Fuel gauge
E—Harvest performance monitor gauge - Straw walker
F—Harvest performance monitor gauge - Sieves

G—INFO-TRAK Monitor

CO249110 -UN-29AUG05

ML70882,00009A5 -19-25MAY06-1/1

Overhead Console



A—Clearance lights and headlights switch
 B—Full and low-beam switch
 C—Cab auxiliary work light switch
 D—Operator's platform/rear work lights (optional on mirror bracket)

E—Grain tank lighting switch
 F—Beacon lights switch
 G—Windshield wiper switch
 H—Windshield washer switch
 J—Unloading auger light switch

L—Hazard warning lights switch
 M—Road safety switch
 N—Loudspeakers
 O—Equipped for mounting of radio

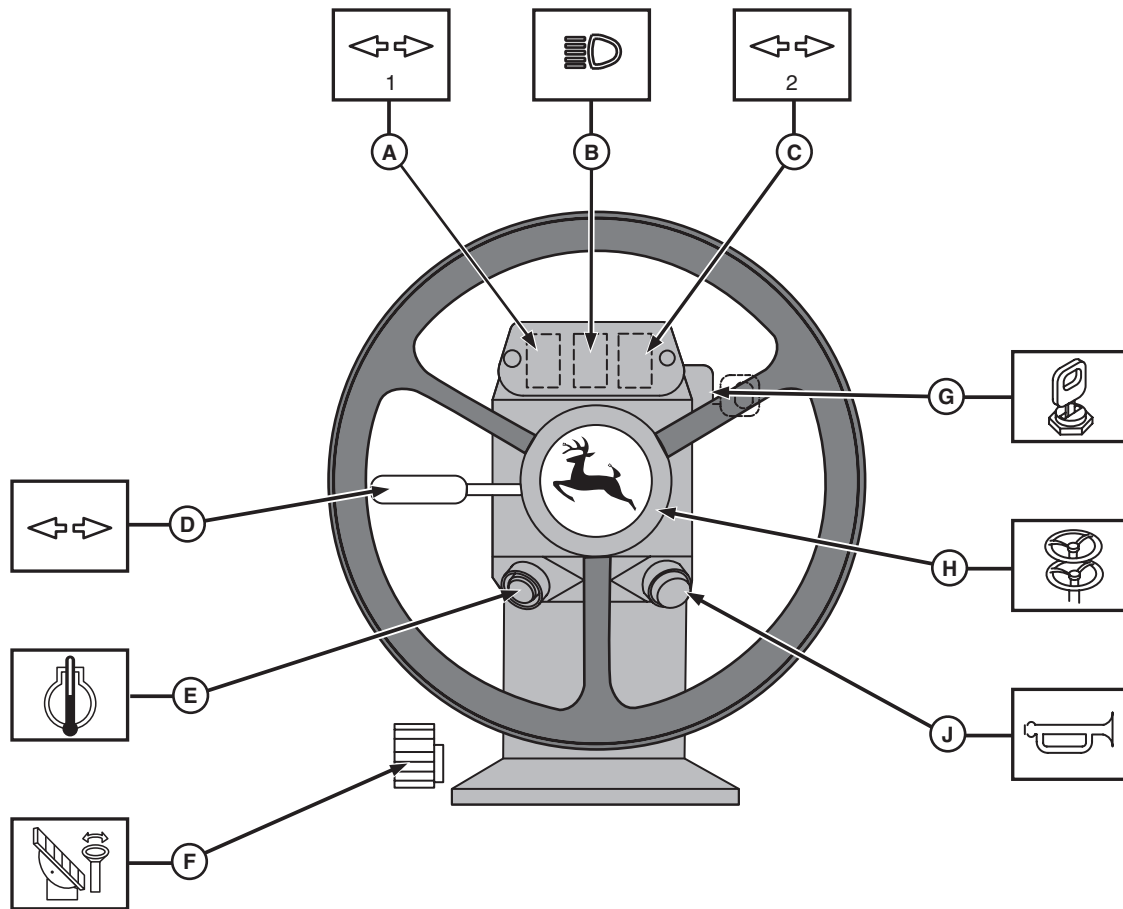
P—Hectaremeter
 Q—Cab interior lighting
 R—Performance monitor
 S—Equipped for mounting of radio/cassette/CD player

NOTE: Dimensions for the installation of (O) and (S) are standard: 182 mm (7.17 in.) wide by 53 mm (2.1 in.) high.

CO272650 -UN-25MAY06

ML70882,00009A6 -19-25MAY06-1/1

Steering Column



A—Turn-signal indicator light
 B—Full-beam indicator light
 C—Turn signal indicator light
 (trailer)

D—Turn signal lever
 E—Not used
 F—Steering column horizontal
 adjust pedal

G—Starter key
 H—Steering wheel hub

J—Horn knob

AG,CO03622,1388 -19-01AUG05-1/1

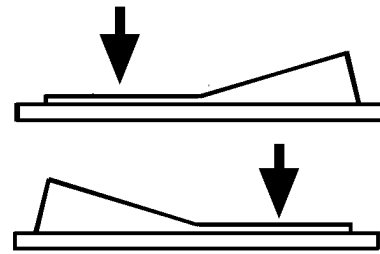
CO244750 -JN-29JUL05

Types of Switches

There are two types of switches on the combine console.

- Two-position Switch
- Three-position Switch

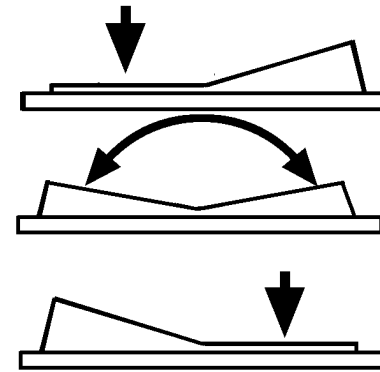
Carefully abide by the switch positions consistent with the instructions provided in this manual.



CQ187960

—UN-14JUL99

Two-position Switch



CQ187970

—UN-14JUL99

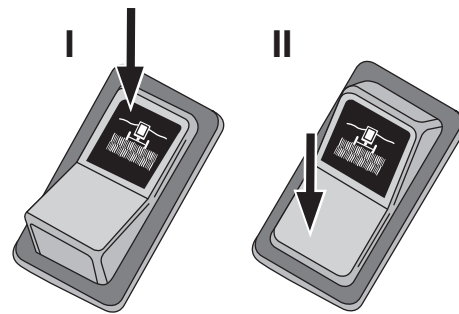
Three-position Switch

AG,CO03622,1392 —19-14JUL99-1/1

Road Safety Switch (Red)

IMPORTANT: For road travel, the road safety rocker switch must be in the transport position (II). Before driving on public roads move the head and unloading auger to the transport position. This rocker switch ensures that all hydraulic functions — with the exception of the steering system — are disconnected. With the road safety rocker switch in the transport position, it is also not possible to engage the separator and head drives.

NOTE: If this switch is accidentally disengaged while any one of the transmissions is in motion, it is necessary to turn the selected function(s) off and on to re-engage the transmission.



I—Field position
II—Transport position

CQ245130 —UN-29JUL05

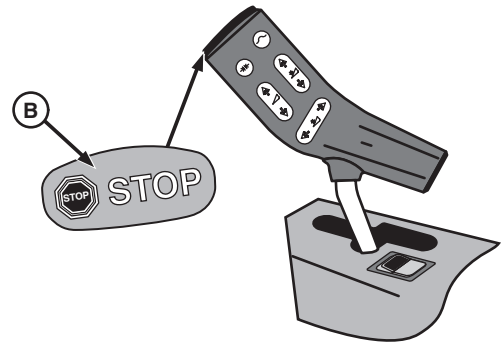
AG,CO03622,1394 —19-01AUG05-1/1

“EMERGENCY STOP” Switch

IMPORTANT: Head, reverser and unloading auger drives can be disengaged instantaneously by means of this switch in the event of malfunction.

The reel is also disengaged when the emergency stop switch (B) is enabled.

To re-engage any of the functions, turn the correspondent switch OFF and ON. Before doing so, make sure that the malfunction has been corrected.



CQ245120 -UN-29JUL05

AG.CO03622,1651 -19-01AUG05-1/1

Separator Drive Rocker Switch (with Operating Lock)

NOTE: With this rocker switch enabled, the engine starter system is blocked.

Requirements:

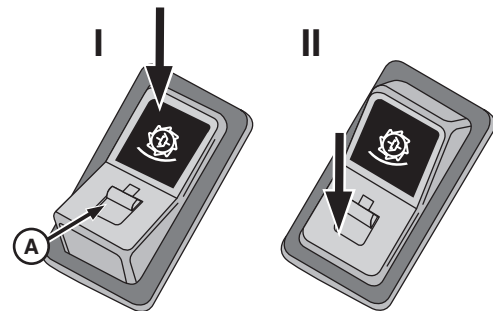
- Engine at low idle.
- Road safety rocker switch in field position.

To engage separator drive (i):

Push operating lock (A) upwards and depress upper part of rocker switch (symbol).

To disengage separator drive (ii):

Depress lower part of rocker switch.



I—Separator engaged
II—Separator disengaged

CQ244860 -UN-29JUL05

AG.CO03622,1547 -19-01AUG05-1/1

Header Drive Tumbler Switch (With Operating Lock)

NOTE: With this switch in the ON position, the engine start-up system is blocked.

Requirements:

- Engine idling.
- Road safety switch in field position.
- Separator engaged.

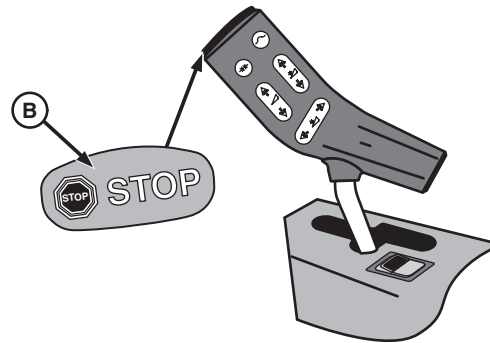
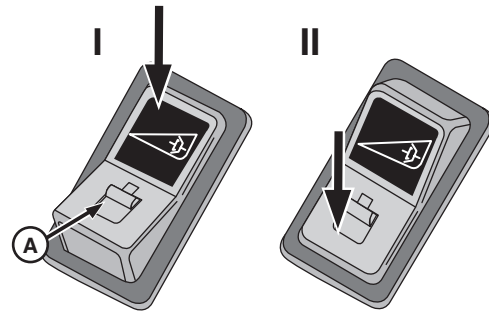
Engaging Header Drive (I):

Push up operating lock (A) and depress top part of switch (symbol).

Disengaging Header Drive (II):

Depress lower part of switch.

NOTE: For emergency stop, use quick “STOP” switch (B) on multi-function control handle. In this case, header disengages with header drive switch in ON position, to reactivate this function, it is necessary to turn header drive switch OFF and ON again.



CQ244830 -JUN-29JUL05

CQ245120 -JUN-29JUL05

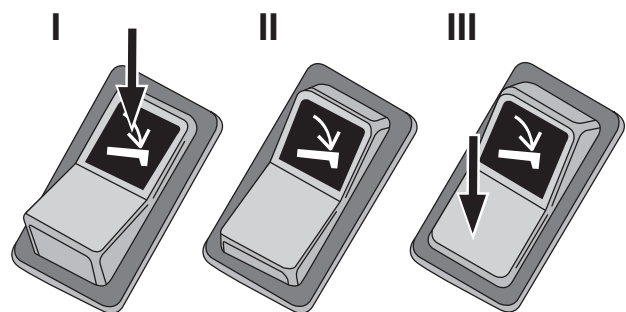
ML70882,0000826 -19-15AUG05-1/1

Unloading Auger Swing Rocker Switch (With Center Position)

Requirements:

- Engine running.
- Road safety rocker switch in field position.

NOTE: The swing drive is shut off automatically as soon as auger end positions are reached (after approx. 20 seconds). Auger swing can be halted in any position by shifting rocker switch back to center position.



I—Unloading auger swings outwards
II—Disabled
III—Unloading auger swings inwards

CQ244850 -JUN-29JUL05

AG,CO03622,1548 -19-01AUG05-1/1

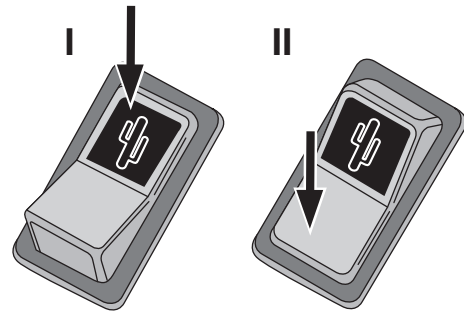
Windshield Demoisturizer Rocker Switch



CAUTION: Prevent possible compressor damage. Only keep the demoisturizer engaged the time necessary to demoisturize the windshield.

IMPORTANT: Only engage the demoisturizer when the heater is switched on.

With heater switched on, cab air can be demoisturized by pressing the “demoisturizer” switch.



I—Demoisturizer engaged
II—Demoisturizer disengaged

CQ244960 -UN-29JUL05

AG,CO03622,1390 -19-01AUG05-1/1

Reel Speed Control Switch (DIAL-A-SPEED™)

Reel speed-to-ground speed ratio may be preselected. Turning switch (A) clockwise changes ratio from 0.8—2.2 (shown on switch as 1—11). Turning switch all the way counterclockwise will de-activate reel speed control system.

NOTE: Reel speed control system will only operate within a ground speed range from 1.2 km/h (0.75 mph) to approx. 10 km/h (6.25 mph).

Operation:

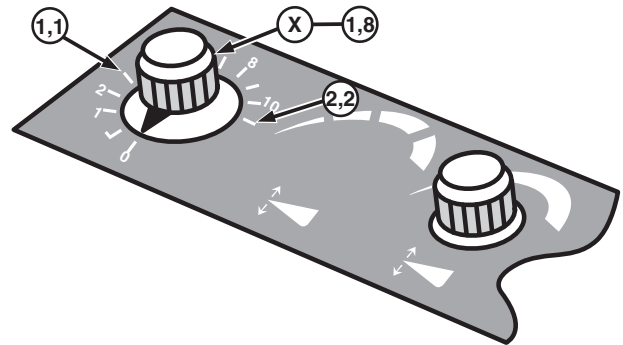
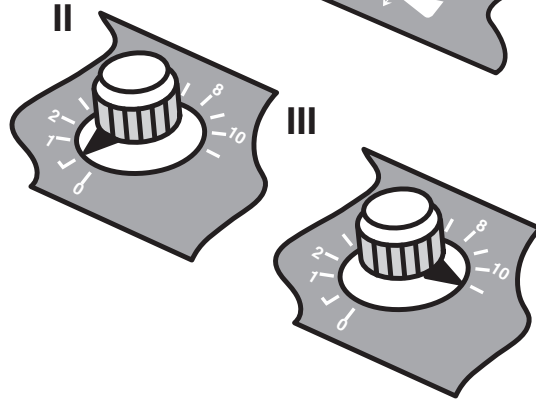
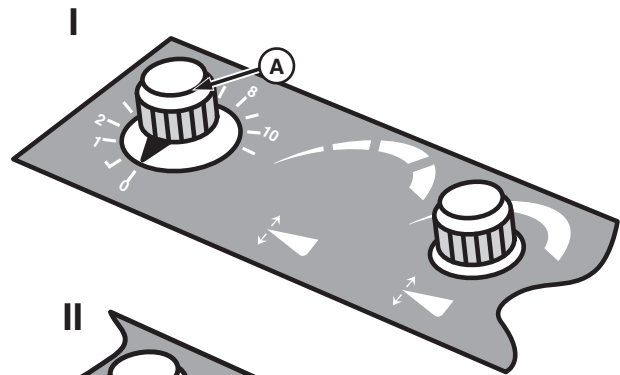
During operation, reel speed can be adapted to harvesting conditions.

When working in down and tangled grain crops and a reel speed faster than ground speed is desired, move switch (A) to area (X) (for a ratio of between 1.1 and 2.2; shown on switch as 3—11).

NOTE: With reel speed control system activated, reel will continue to rotate at the slowest speed when ground speed drops below operating range.

For more information on diagnostics/manual reel speed position (Refer to “Service—Electrical System”).

- I—Reel speed control off
- II—Switch position for diagnostics/manual reel speed
- III—Reel speed is 2.2 times faster than ground speed



CQ249200 -UN-15JUN06

CQ244940 -UN-15JUN06

Reel Speed Adjustment

IMPORTANT: Reel speed adjustment can only be performed while reel is running.

NOTE: When rotary switch (A) indicates (0), speed adjustment is not possible.

Manual Mode

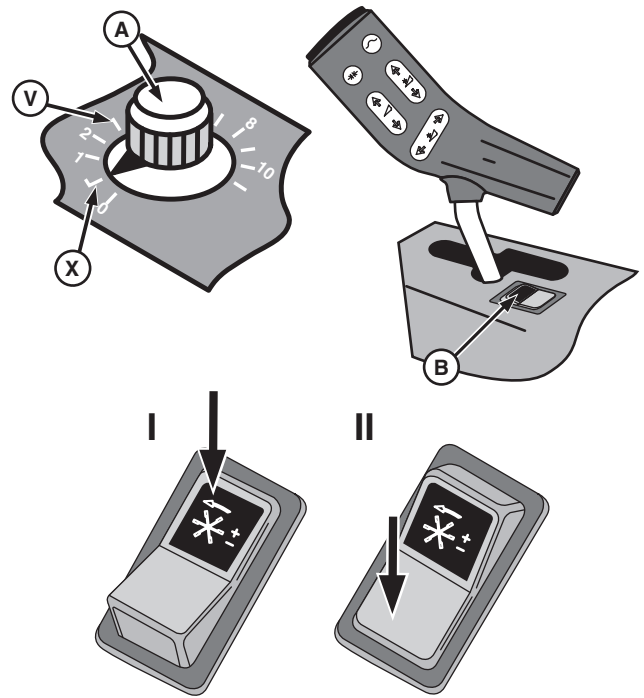
- Start engine.
- Turn rotary switch (A) to position "X".
- Engage separator.
- Engage head.
- Multifunction control handle in forward travel position.
- Adjust reel speed by means of rocker switch (B), as required.

Automatic Mode

- Start engine.
- Turn rotary switch (A) to position "V".
- Engage separator.
- Engage head.
- Multifunction control handle in forward travel position.
- Watch reel speed and adjust rotary switch (A) to a position between 1 and 11 until required ratio with combine ground speed is achieved.

NOTE: Reel will now speed up or slow down according to ground speed.

This system does not work if ground speed is lower than 1.2 Km/h (0.75 mph).



I—Increase reel speed
II—Reduce reel speed
A—Rotary Switch
B—Rocker Switch
X—Position
V—Position

CQ244970 -UN-29JUL05

The minimum reel speed can be raised:

1. Turn rotary switch (A) to position "X".
2. Press rocker switch (B) for 2 to 3 seconds to get required minimum reel speed.
3. Turn rotary switch (A) to position "V".
4. Observe system operation and readjust, if necessary. This minimum speed is maintained until the engine is shut off.

Head Lateral Tilt and Reel Horizontal Adjustment Rocker Switch

This function may be enabled with the road safety rocker switch in the field position and engine running.

Rocker switch (A) on the console selects the function of switch (B) on the multifunction control handle as follows:

Manual Lateral Tilt Adjust

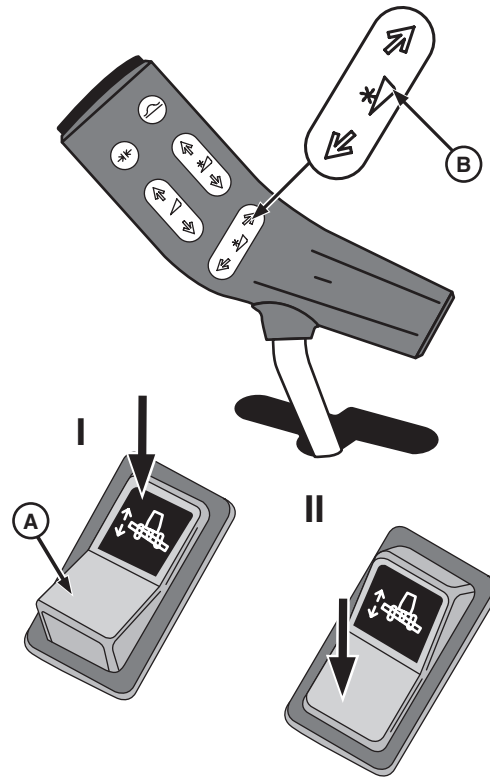
With rocker switch (A) in position (I), switch (B) adjusts head lateral tilt.

NOTE: If the automatic mode is engaged, using the manual tilt mode by means of switch (B) disengages automatic mode. Engage return-to-cut switch to reactivate automatic mode. See "Functions of Multifunction Control Handle Knobs".

Reel Horizontal Adjustment

With rocker switch (A) in position (II), switch (B) controls the horizontal adjustment of the reel.

- I—Head lateral tilt adjust
II—Reel horizontal position adjust



CQ244980 -UN-29JUL05

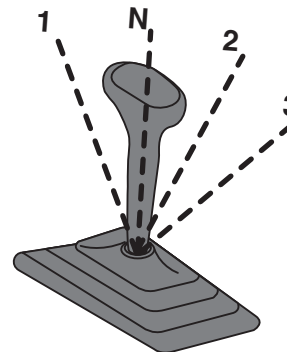
AG,CO03622,1389 -19-01AUG05-1/1

Gearshift Lever

Shift into desired gear with combine stationary (Multi-function control handle in neutral position).

Engage 3rd speed for road travel.

Engage preferentially 1st speed for rice harvesting.



CQ245020 -UN-29JUL05

ML70882,000084C -19-17SEP05-1/1

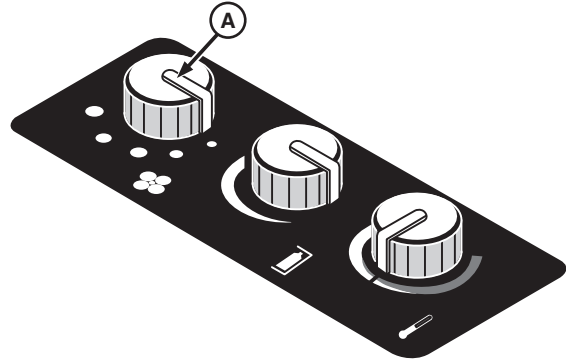
Cab Fan Rotary Switch

IMPORTANT: Always switch on fan before heating or air conditioning system is engaged.

A four-speed rotary switch controls the fan, which slightly pressurizes the cab. To switch on fan (only possible with ignition turned on), turn rotary switch clockwise.

Illustrated position — Fan disengaged

Fan speed increases by turning rotary switch (A) clockwise.

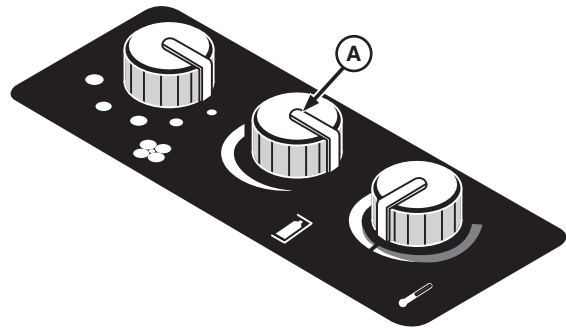


CQ245040 -UN-29JUL05

AG.CO03622,1642 -19-01AUG05-1/1

Cooling Compartment Rotary Switch

A cooling compartment is located below the instruction seat. To increase cooling effect, turn rotary switch (A) clockwise.



CQ245050 -UN-29JUL05

AG.CO03622,1643 -19-01AUG05-1/1

Rotary Switch — Air Conditioning/Heater

IMPORTANT: When ceasing the day's operation, disengage the air conditioning system and leave the fan engaged for a further 10 minutes. This will help prevent the system from generating odors at a later date.

I — Air Conditioning System

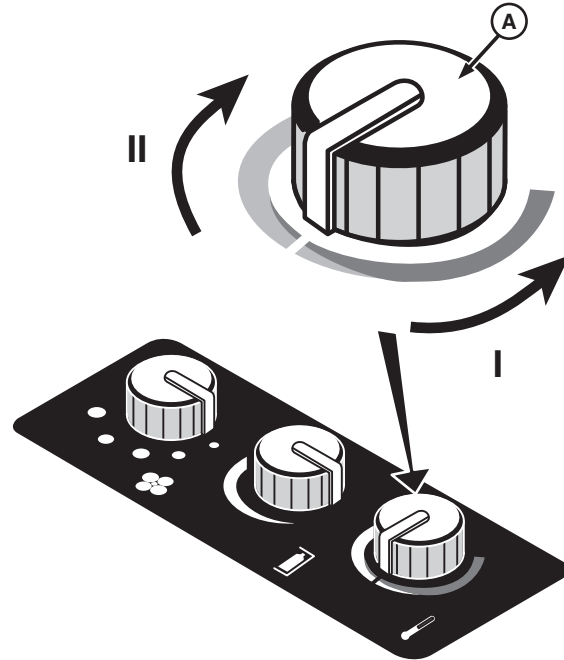
Before switching on the air conditioning system, the fan must be operating. Turn rotary switch (A) counterclockwise to engage air conditioning. Turning switch all the way counterclockwise will provide maximum cooling.

IMPORTANT: Operate air conditioning system several times a year — even in winter — to lubricate all moving parts of the system.

II — Heater

Before switching on the heater, the fan must be operating. Turning rotary switch clockwise will open heater valve. Turn switch all the way clockwise for maximum heating effect.

Also refer to “Demoisturizer Rocker Switch”.



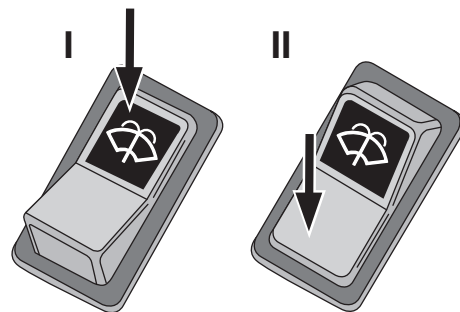
CQ245060 —UN-29JUL05

AG,CO03622,1644 —19-01AUG05-1/1

Windshield Washer Rocker Switch

Ignition must be engaged for windshield washer operation.

- I—Windshield washer engaged
- II—Windshield washer disengaged



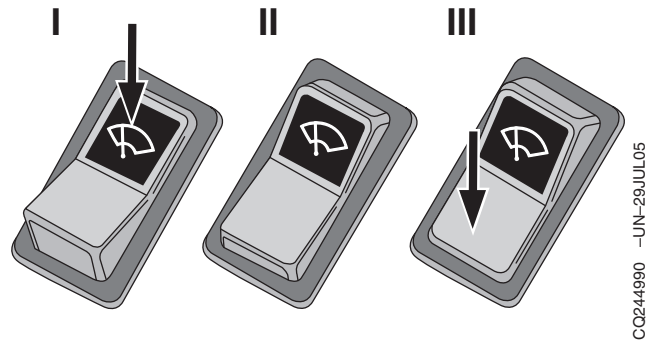
CQ245000 —UN-29JUL05

AG,CO03622,1393 —19-01AUG05-1/1

Windshield Wiper Rocker Switch

Ignition must be engaged for windshield wiper operation.

- I—Windshield wiper operates continuously
- II—Windshield wiper disengaged
- III—Windshield wiper completes one cycle (briefly touch switch to enable this function)



—UN-29JUL05
CQ244590

AG,CO03622,1391 —19-01AUG05-1/1

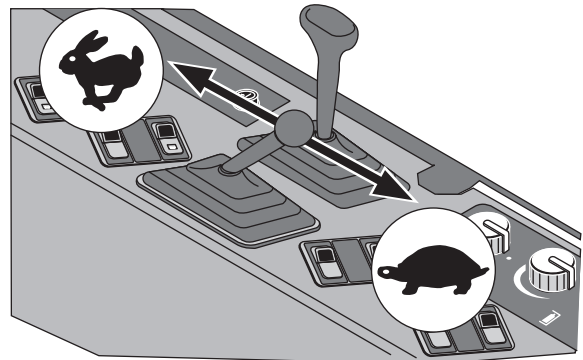
Throttle Lever

Push throttle lever forward to:

Increase engine rpm to full load speed (hare).

Pull throttle lever to the rear:

Run engine at slow idle speed (tortoise).



—UN-20JUN06
CQ273890

ML70882,00009DB —19-16JUN06-1/1

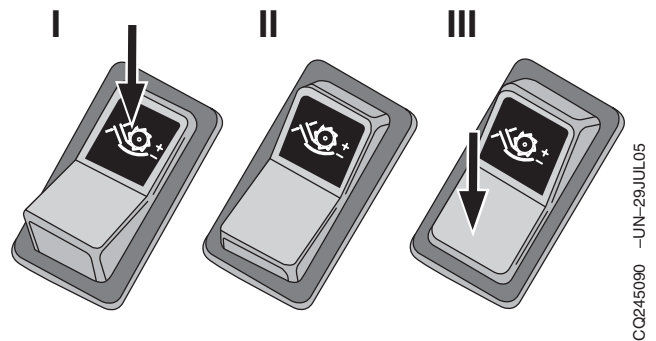
Concave Clearance Adjustment Rocker Switch

To adjust concave clearance, the starter switch must be in position I or II.

NOTE: The current concave clearance is displayed on the infotrak™ monitor. Briefly touch rocker switch (top or bottom part) to display actual setting for 5 seconds.

The number 4 indicates minimum and number 51 maximum concave clearance.

With manual adjustment, concave clearance is likewise shown on the INFO-TRAK™ monitor.



—UN-29JUL05
CQ245090

- I—Increase concave clearance
- II—Disabled
- III—Reduce concave clearance

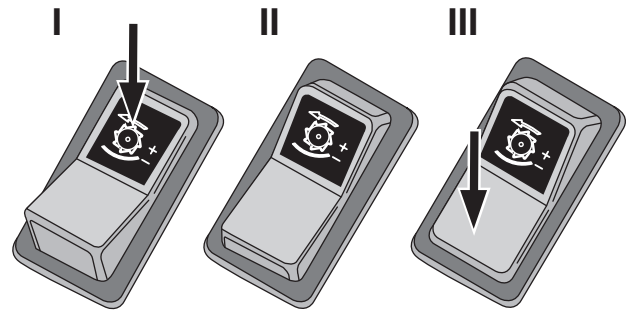
AG,CO03622,1649 —19-01AUG05-1/1

Threshing Cylinder Speed Rocker Switch

Cylinder speed adjustment is only possible with the engine running, the road safety switch in the field position and the separator engaged.

IMPORTANT: After altering cylinder speed the alarm must also be adjusted. For details see the “Warning Devices and Monitors” section.

NOTE: The current cylinder speed can be displayed on the INFO-TRAK monitor.



I—Increase cylinder speed
II—Disabled
III—Reduce cylinder speed

CO245070 -UN-29JUL05

AG,CO03622,1647 -19-01AUG05-1/1

Fan Speed Rocker Switch

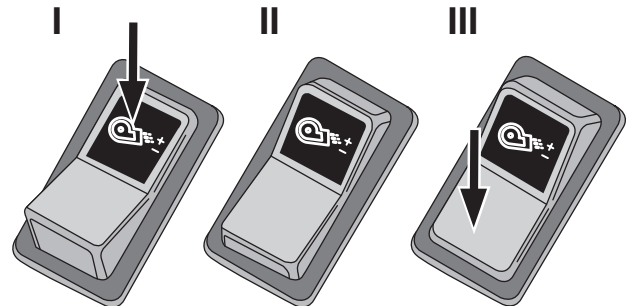
The fan speed can be increased or decreased by pressing the rocker switch as illustrated. It is only possible with the engine running, threshing engaged and the road safety switch in the field position.

IMPORTANT: After altering fan speed the alarm must also be adjusted. For details see the “Warning Devices and Monitors” section.

NOTE: The current fan speed can be displayed on the INFO-TRAK™ monitor.

The fan speed mechanism is protected by course limiter switches. The speed can range from 550 to 1150 rpm.

Changes to fan speed normally occur at a much slower rate than in other speed variation devices because the fan is electrically and not hydraulically driven.



I—Increase fan speed
II—Disabled
III—Reduce fan speed

CO245080 -UN-29JUL05

AG,CO03622,1648 -19-01AUG05-1/1

Unloading Auger Engage Switch (With Operating Lock)

NOTE: With this switch in the ON position, the engine start-up system is blocked.

Requirements:

- Engine running.
- Road safety switch in field position.

Engaging unloading auger drive (I):

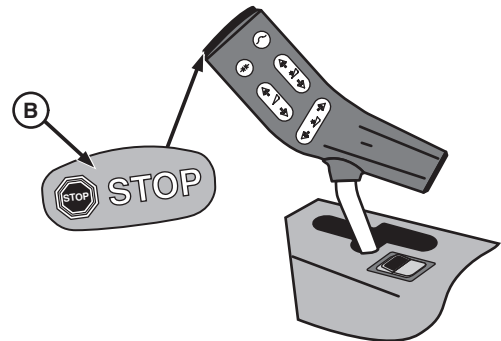
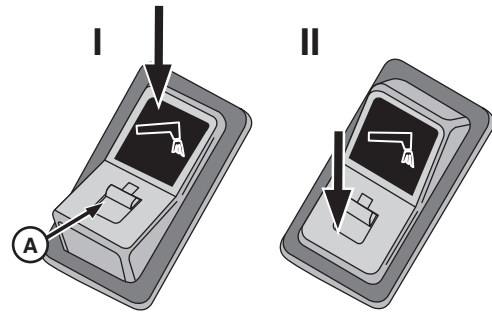
Push up operating lock (A) and depress top part of switch (symbol). The indicator light comes on as soon as the drive is engaged.

NOTE: The system engages the unloading auger drive in any position, including when it is totally swung in.

Disengaging unloading auger drive (II):

Depress lower part of switch.

NOTE: For emergency stop, use quick "STOP" switch (B) on multi-function control handle. In this case the unloading auger disengages with the unloading auger drive switch in ON position; to reactivate this function, it is necessary to turn unloading auger drive switch OFF and ON again.



CQ245100 -UN-29JUL05

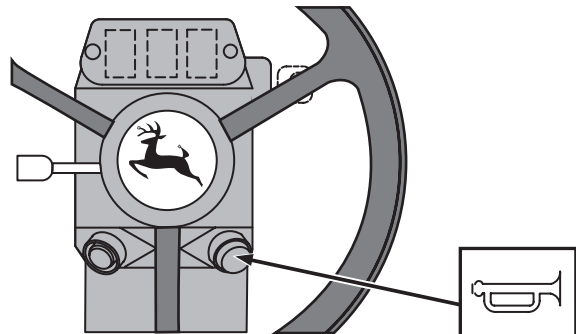
CQ245120 -UN-29JUL05

ML70882,000082A -19-15AUG05-1/1

Horn Knob



CAUTION: For safety reasons, sound horn before starting the engine or operating the combine.



CQ245140 -UN-16SEP05

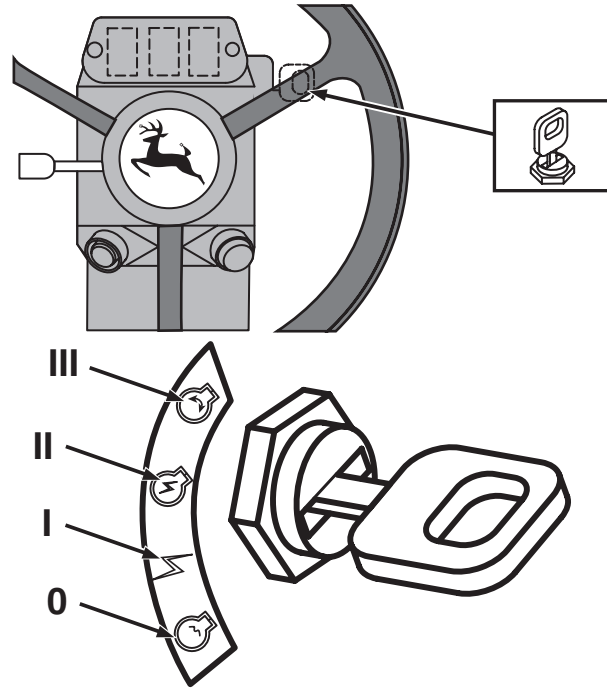
AG.CQ03622,1395 -19-01AUG05-1/1

Starter Switch

NOTE: If one of the three drive switches (yellow) on the side panel is activated or the multi-function control handle is not in neutral position it will not be possible to start the combine.

The starter switch has 4 positions:

- 0—Off
- I—Circuits for radio/cassette player/CD player/Citizens' Band radio and INFO-TRAK all ON
- II—Operating position
- III—Starting the Engine



CQ245170 -UN-16SEP05

AG,CO03622,1397 -19-12JAN06-1/1

Feeder House/Header Reverser

IMPORTANT: During reverser operation, never attempt to force “slugs” through combine by repeated cycling of reverser drive.

Raise reel before engaging reverser. Backing out a crop “slug” into a turning reel may damage it.

1. I — Disengage header drive (using header engage switch) and back up combine 1—2 m (3—6 ft).
2. Run engine at slow idle speed.

CAUTION: High engine speed can cause damage to reverser and feeder house.

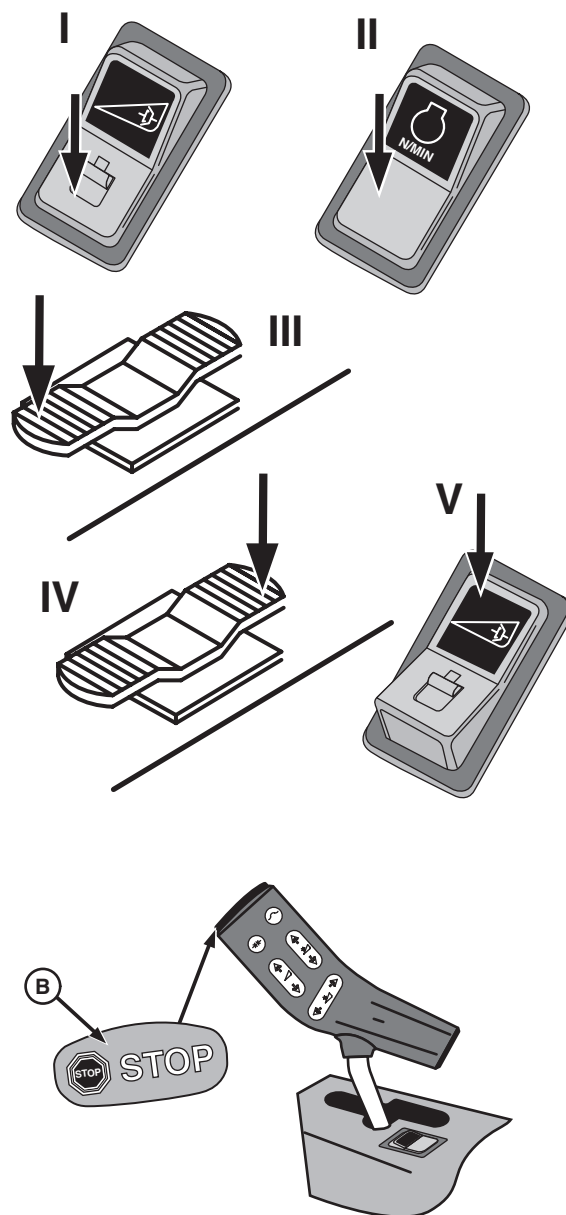
3. Step on left-hand side of reverser pedal and hold pedal down to engage reverser and header.

NOTE: The pedal must be held down. Otherwise reverser will not engage.

4. Step on right-hand side of reverser pedal to disengage reverser function.
5. Engage header again.
6. Increase engine speed and resume harvesting.

IMPORTANT: For safety reasons the reverser works only with threshing engaged and header disengaged.

NOTE: For emergency stop, use quick “STOP” switch (B) on multi-function control handle. In this case, the reverser disengages with the pedal activated; to reengage the reverser, the pedal must be deactivated and then activated again.



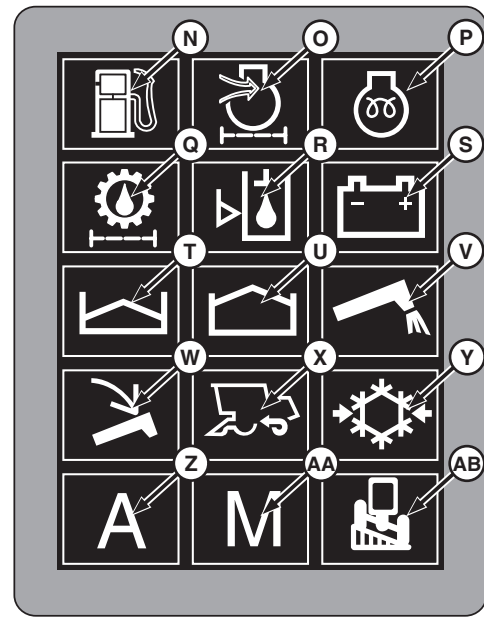
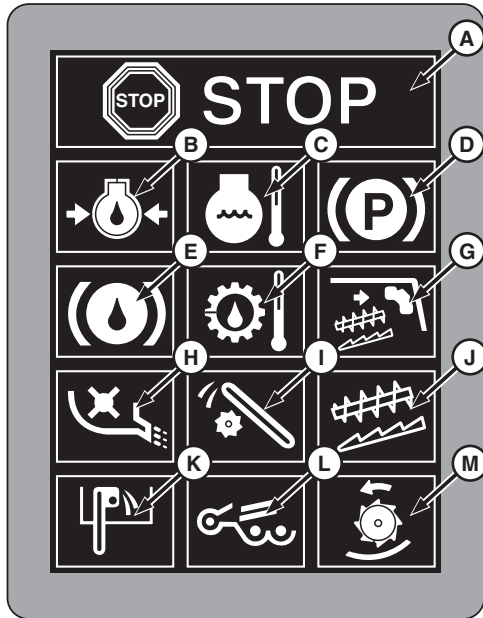
CO245310 —UN-29JUL05

CO245120 —UN-29JUL05

ML70882,000082B —19-25MAY06-1/1

Indicator Lights and Monitors

Indicator Lights



- A—Emergency stop
- B—Engine oil pressure
- C—Engine coolant temperature
- D—Parking brake
- E—No function
- F—Hydrostatic drive oil temperature
- G—Slugging
- H—Straw chopper speed
- I—Tailings elevator
- J—Straw walker
- K—Clean grain elevator
- L—Fan
- M—Threshing cylinder
- N—Fuel level

- O—Engine air filter
- P—No function
- Q—Hydraulic oil filter
- R—No function
- S—Alternator
- T—No function
- U—Grain tank 3/4 full
- V—Grain tank full
- W—Unloading auger engaged
- X—No function
- Y—Air conditioning (high pressure)
- Z—No function
- AA—No function
- AB—No function

These lights monitor the most important combine functions (road travel, field operation and engine).

Priority 1 (Lights A—M):

Red warning lights enable an acoustic warning signal.

As soon as one of the indicator lights glows, the "STOP" light will also glow and the buzzer will sound (intermittent tone).

NOTE: The acoustic warning signal is activated only with the engine running.

Priority 2 (Lights N—S and V):

Yellow warning lights with acoustic warning signal (5-second signal).

Priority 3 (Lights T, U and W—AB):

Yellow warning lights and green warning lights without acoustic warning signal.

CQ249130 -UN-12SEP05

ML70882,0000A26 -19-12JUL06-1/1

Emergency Stop Indicator Light

Lights up when the emergency stop is engaged.
Disengage all drives and check fault.

See ““EMERGENCY STOP” Rocker Switch” for more details.



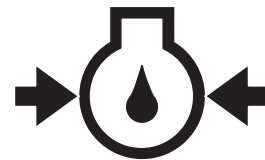
CQ247470 -UN-29JUL05

ML70882,000080E -19-22JUL05-1/1

Engine Oil Pressure Indicator Light

Lights up if engine oil pressure drops below 80 kPa (0.8 bar = 11.6 psi).

- Stop engine immediately.
- Remedy the fault



CQ244150 -UN-29JUL05

AG.CO03622,1400 -19-16AUG05-1/1

Coolant Temperature Indicator Light

Lights up if coolant temperature exceeds 108°C (226°F) and/or if the charge air temperature exceeds 88°C (190°F).

- Run engine without load for a short period. If temperature will not drop, stop engine and remedy the fault.



CQ244160 -UN-29JUL05

AG.CO03622,1401 -19-16AUG05-1/1

Parking Brake Indicator Light

Lights up if parking brake is applied and multifunction control handle is not in neutral position.

With this light on a intermittent warning signal will be heard.



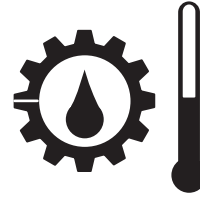
CQ244170 -UN-29JUL05

AG.CO03622,1402 -19-16AUG05-1/1

Hydrostatic Transmission Oil Temperature Indicator Light

Lights up if oil temperature exceeds 95 °C (203 °F).

- Check reservoir oil level. Clean oil cooler, if necessary.
- Select a lower gear.



CO244190 -UN-29JUL05

AG,CO03622,1404 -19-16AUG05-1/1

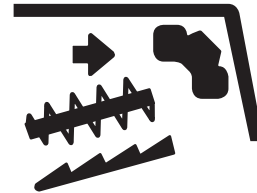
Slugging Indicator Light

This indicator light will come on if any exaggerated accumulation of material occurs in rear hood area.

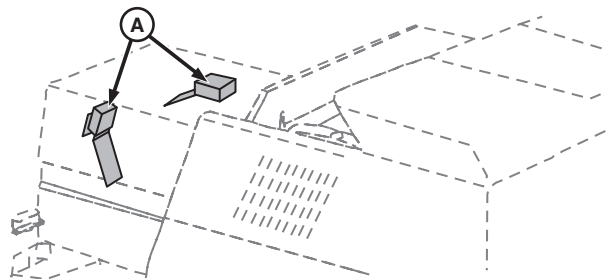
IMPORTANT: In addition to buzzer, horn will also sound (continuous tone) until accumulated material has been removed.

- Disengage threshing unit immediately.
- Shut off engine and wait until all moving parts have stopped, then remove accumulated material.

NOTE: Check slugging alarm function daily by pushing manually on plate of sensor (A), before operating combine. Starter key must be in position I.



CO244200 -UN-29JUL05



CO244890 -UN-30JAN06

ML70882,00008FA -19-18FEB06-1/1

Straw Chopper Speed Indicator Light

Lights up if straw chopper speed drops more than 25% below rated speed.

With engine shut off and separator stopped:

- Check belt tension.
- Check straw chopper for plugging.



CO244210 -UN-29JUL05

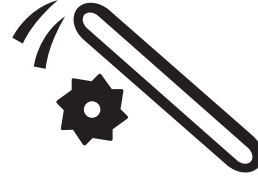
AG,CO03622,1406 -19-16AUG05-1/1

Tailings Elevator Indicator Light

Lights up if tailings elevator shaft speed drops more than 25% of the rated speed.

With Engine Shut Off and Separator Stopped:

- Check drive.
- Check elevator and augers for plugging.



CQ244220 -UN-29JUL05

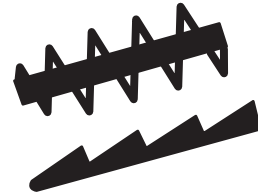
AG.CO03622,1407 -19-16AUG05-1/1

Straw Walker Indicator Light

Lights up if straw walker shaft speed drops more than 25% below rated speed.

With engine shut off and straw walkers stopped:

- Check drive (belts).
- Check for plugging.



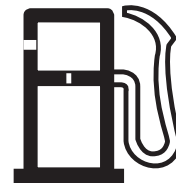
CQ244230 -UN-29JUL05

ML70882,00009AA -19-25MAY06-1/1

Fuel Level Indicator Light

Lights up if fuel in tank is on reserve - approx. 50 L (13.2 U.S. gal.).

—Refill fuel tank. Consult tank capacity in the “Specifications” section.



CQ244270 -UN-29JUL05

AG.CO03622,1416 -19-16AUG05-1/1

Clean Grain Elevator Indicator Light

Lights up if clean grain elevator shaft speed drops more than 25% of the rated speed.

With Engine Shut Off and Separator Stopped:

- Check drive.
- Check elevator and augers for plugging.



CQ244240 -UN-29JUL05

AG.CO03622,1409 -19-16AUG05-1/1

Fan Indicator Light

Lights up if fan speed drops more than 25% of the adjusted speed.

With Engine Shut Off and Separator Stopped:

- Check drive.
- Check for plugging.
- Check alarm speed. Readjust, if necessary (see instructions in this Section).



CQ244250 -UN-29JUL05

AG,CO03622,1410 -19-16AUG05-1/1

Hydraulic Oil Filter Indicator Light

Lights up if cleaning action of filters is not sufficient.

- Change hydraulic oil filter.



CQ244300 -UN-29JUL05

AG,CO03622,1418 -19-16AUG05-1/1

Threshing Cylinder Indicator Light

Lights up if threshing cylinder speed drops more than 25% of the adjusted speed.

- Reduce ground speed.

With Engine Shut Off and Separator Stopped:

- Check drive.
- Check for plugging.
- Check alarm speed. Readjust, if necessary (see instructions in this Section).



CQ244260 -UN-29JUL05

AG,CO03622,1411 -19-16AUG05-1/1

Engine Air Filter Indicator Light

This light comes on if air cleaner primary element is clogged and air flow restricted.

- Clean air cleaner elements.

For details see “Removing Engine Air Filter”.



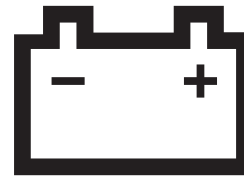
CQ244280 –UN–29JUL05

AG,CO03622,1417 –19–18FEB06–1/1

Alternator Indicator Light

Lights up if alternator output voltage is not sufficient to charge the batteries.

- Check cables and connections at alternator and batteries.
- Check V-belt.
- Check voltage regulator of alternator.



CQ244320 –UN–29JUL05

AG,CO03622,1420 –19–16AUG05–1/1

Grain Tank 3/4 Full Indicator Light

Lights up when grain tank is 3/4 full.

The intermittent indicator light is enabled at the same time as the “tank 3/4 full” indicator light. See “Intermittent Indicator Light Switch” for further details.



CQ245680 –UN–29JUL05

AG,CO03622,1422 –19–01AUG05–1/1

Grain Tank Indicator Light (Full)

Lights up when grain tank is completely filled. This will be indicated by a five-second warning signal.

— Empty the grain tank.



Q0244350 -UN-29JUL05

AG,CO03622,1424 -19-16AUG05-1/1

Unloading Auger Indicator Light

Lights up whenever the unloading auger drive is engaged.



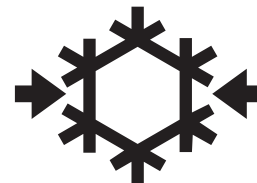
Q0244380 -UN-29JUL05

AG,CO03622,1425 -19-01AUG05-1/1

Air Conditioner Indicator Light (High Pressure)

Lights up if system pressure exceeds 2400 kPa (24 bar = 350 psi)

— Switch off air conditioning system and remedy the fault.

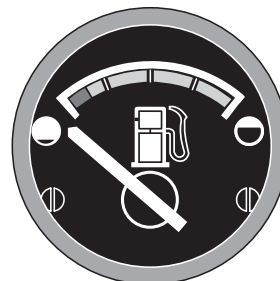


Q0244380 -UN-29JUL05

AG,CO03622,1427 -19-16AUG05-1/1

Fuel Gauge

With ignition engaged, fuel level in tank is shown (0 — 1/1).



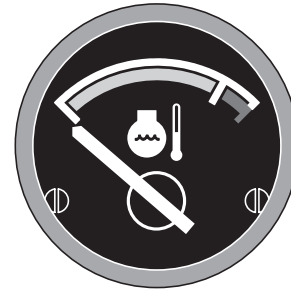
Q0244310 -UN-29JUL05

AG,CO03622,1432 -19-16AUG05-1/1

Coolant Temperature Gauge

With ignition engaged, engine coolant temperature is shown. During operation, needle should be in the yellow/green zone (40°C — 105°C) (140°F — 221°F).

If needle is in orange zone (105°C — 120°C) (221°F — 248°F), run engine without load for a short time. If necessary, shut off engine and correct fault.



CQ244330 -UN-29JUL05

AG,CO03622,1433 -19-16AUG05-1/1

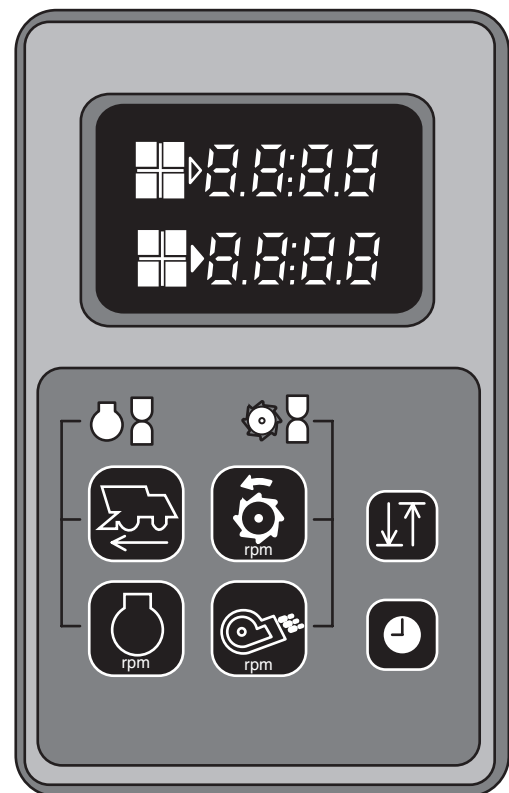
INFOTRAK™ Monitor

The INFO-TRAK™ monitor displays:

- Ground Speed (km/h):
- Speed:
 - Engine (rpm)
 - Threshing Cylinder
 - Fan
- Time:
 - Engine
 - Separator
 - Hours
- Spacing:
 - Concave and cylinder
- Header failure diagnostics.

By inputting certain machine-specific data, the INFO-TRAK™ monitor is adjusted to the requirements of the combine and combine data center (depending on combine equipment).

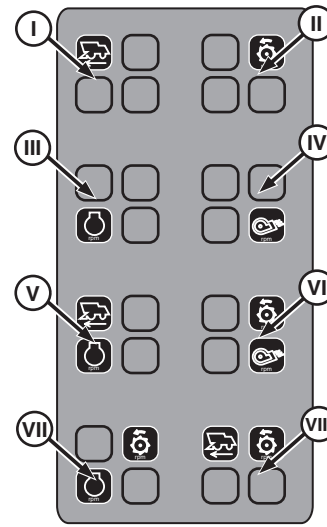
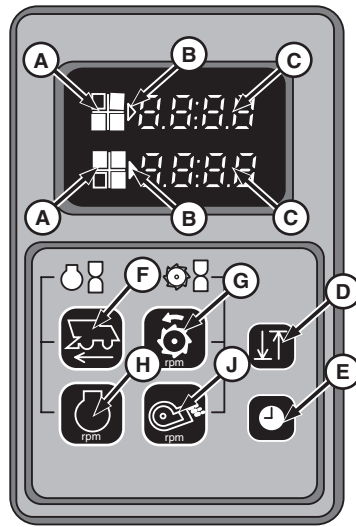
In addition, error codes and service intervals are displayed.



CQ244540 -UN-12SEP05

AG,CO03622,1437 -19-30SEP05-1/1

INFO-TRAK Monitor Functions



A — Position Indicator: indicates relationship between the (digital) display and the key or key combination (I—VII) pressed. When enabling the INFO-TRAK™ monitor (start up from position I or II), the position indicator will be in upper left-hand position.

B — Line Indicator: specifies the selected display where the cursor (A) indicates the corresponding function.

C — Display (4 digits): Displays the element previously called up.

Possibilities:

Ground and other speeds, operating or working hours.
Additional display: SERVICE information “SEU” and concave clearance.

Error codes:

In the event of a malfunction or operator error during combine operation or when running an automatic function, a two or three-digit number followed by an **E** (Error) is displayed. For example: 234 **E**.

D — Line Selector: Selects the display

E — Clock: Press this key to display the time.

F — Ground speed display key (I).

G — Cylinder speed display key (II).

H — Engine speed display key (III).

J — Fan speed display key (IV) and enter key for calibration modes.

F + H — Key combination to display operating time (engine) (V).

G + J — Key combination to display operating time (cylinder) (VI).

G + H — Key combination to delete “SEU” SERVICE information (VII).

F + G — Key combination to enable input status (VIII).

D + and engine start up — ContourMaster diagnostic mode enabled.

E + ignition on — Setting clock

CQ244390 -UN-12SEP05

Setting and Displaying Time

Make sure the keyswitch is OFF. Hold down button (A) and, while holding it, turn the keyswitch to position (I). In the display will initially appear "12Hr". If you continue to hold the button down, it will alternate every 3 seconds between '12Hr' and '24Hr'. Release button when the desired format is displayed.

Press switch (B) to increase "hours". The longer you hold it switch down, the faster "hours" will increase.

Once you have the hours displayed properly, depress and release switch (A) and the display should show minutes along with hours. Press switch (B) to increase "minutes". When "minutes" is set correctly, depress switch (A) one last time and the clock is set.

IMPORTANT: Hour and minute values can only be increased.

NOTE: Clock must be readjusted whenever battery has been disconnected or battery switch has been in the "Off" position.



CO244580 -UN-12SEP05

AG.CO03622,1440 -19-27MAR06-1/1

Tire Rolling Radius Code

New Tire Rolling Radius

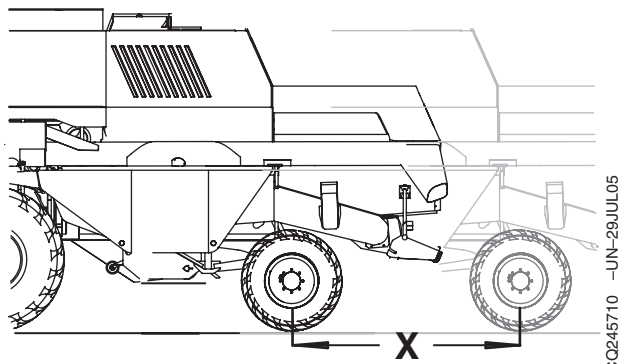
Drive Tire	Tire Rolling Radius (mm)	Tire Rolling Radius (in)		Drive Tire	Tire Rolling Radius (mm)	Tire Rolling Radius (in)
28.1 - 26 (750/65 R26)	756	29.7		28L26 R1 12L	767	30.1
18.4 - 30	741	29.1		23.1/18 - 26 R2 10L	780	30.7
18.4 - 38	805	31.6		23.1/18 - 30	804	31.6
24.5 - 32	849	33.4		800/65R 32 (Radial)	861	33.8
620/75R 30 (Radial)	810	31.8		30.5L32 R1	857	33.7
(650/75 R32)	863	33.9		STEEL TRACK	315	12.4
28.1/18 - 26 R1 14L	761	29.9				

Continued on next page

AG.CO03622,1445 -19-14JUL06-1/2

Determining Rolling Radius of Used Tires

- Combine on solid ground.
 - Cutting platform connected.
 - Correct tire pressures.
 - Combine steering wheels in straight-ahead position.
1. Place mark on tire and ground. Marks must be in contact with each other.
 2. Drive combine until marked tire has completed one revolution.
 3. Transfer mark on tire to ground.
 4. Measure distance (X) between ground marks. The distance (X) must be measured in inches for combines with machine code 83. The distance (X) must be measured in millimeters for combines with machine code 103.
 5. **Divide measured distance (X) by 6.28.**
Include value shown on INFO-TRAK monitor.

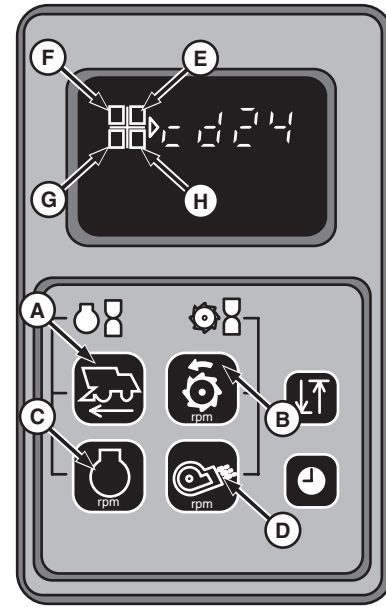


AG,CO03622,1445 -19-14JUL06-2/2

Input of Machine-Specific Data

IMPORTANT: Each time different size drive wheels are installed or the tire radius changes due to wear, the INFO-TRAK™ monitor must be calibrated accordingly.

Activate Input Status	Press key combination (A + B) and simultaneously turn starter switch from position (0) to position (I). Position indicator will move to upper left-hand position (F).
Modify/Include Data	Press key (A): displayed value increases. Press key (C): Displayed value will decrease.
Data Storage	Press key combination (B + D). At the same time the position indicator will move to another field (upper right-hand (E), lower right-hand (H), lower left-hand (G) field).
Deactivate Input Status	After input and storage of all data, turn starter key to position (0).



CQ244510 -UN-12SEP05

Software Version	Press keys for ground speed (A) and threshing cylinder speed (B) and at the same time turn starter key from (0) to (I). The version of the software installed on INFO-TRAK™ monitor is displayed, e.g. "cd24". All four display fields light up at the same time.
Transmission Speed Ratio Code (E)	00— Final drive (85/11)
Machine Code (F)	Input code for mph (miles per hour): 83 — Combine Input code for km/h: 103 — Combine
Engine Impulse Code (G)	1450 CWS CIS (Engine 6068) — Code 30 1550 CWS CIS (Engine 6081) — Code 27
Tire Radius Code (H)	See "Tire Radius Code" and use correct tire radius code to include it in INFO-TRAK™ monitor. For machines with machine code 83, the radius must be keyed in inches. For machines with machine code 103, the radius must be keyed in millimeters. <i>NOTE: Rear tires radius must be entered in INFO-TRAK Monitor to measure the traveled distance. This is necessary because the combine movement sensor is located on rear axle.</i>

Threshing Cylinder Alarm Adjustment

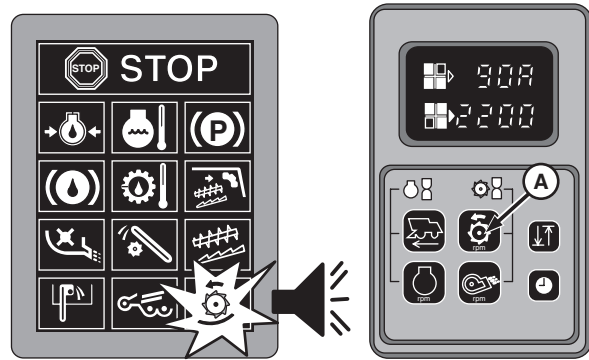
With engine running, engage separator.

Press key (A) to display cylinder speed. Continue to press key (A) (for approx. 2 seconds) until an "A" appears at the last digit of the displayed speed. Now alarm speed is 75% of the displayed speed.

If cylinder speed drops below alarm trigger threshold during operation, the cylinder speed indicator light will come on and a continuous warning signal will be heard.

IMPORTANT: When the threshing cylinder has been operating more than 2 seconds with the speed below the adjusted limit, the threshing system turns off the platform drive. To enable this function, consult your John Deere dealer.

IMPORTANT: If threshing cylinder speed continues to fall and reaches 30 rpm, the threshing cylinder will be disengaged.



CQ244420 -UN-12SEP05

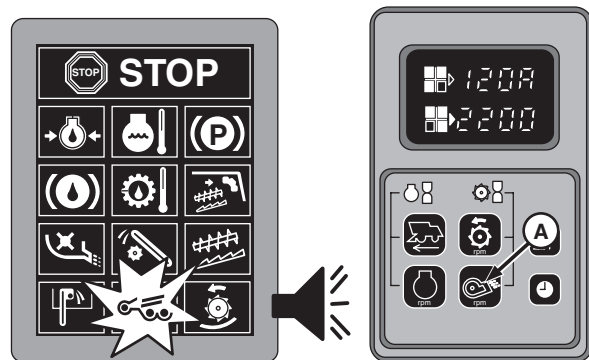
ML70882,0000A29 -19-12JUL06-1/1

Fan Alarm Adjustment

With engine running, engage separator.

Press key (A) to display fan speed. Continue to press key (A) (for approx. 2 seconds) until an "A" appears at the last digit of the displayed speed. Now alarm speed is 75% of the displayed speed.

If fan speed drops below alarm speed during operation, the fan speed indicator light will come on and a continuous warning signal will be heard.



CQ244430 -UN-12SEP05

AG,CO03622,1449 -19-16AUG05-1/1

INFO-TRAK™ Monitor Service Information

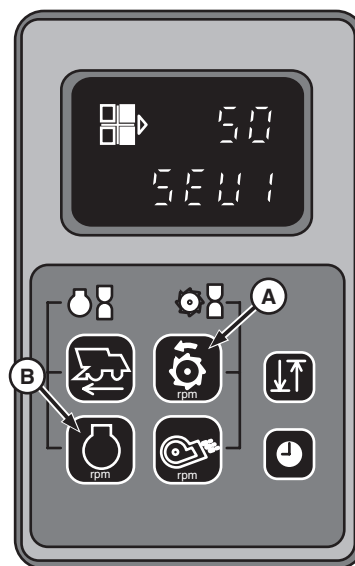
Every 50 hours of operation the INFO-TRAK™ monitor will display SERVICE information (SEU).

IMPORTANT: Perform necessary service referring to “Service Points—Every 50 Hours”.

Press any key to hide SERVICE information (it will reappear when ignition is engaged next time).

To remove SERVICE information until next 50 operating hours are completed, press keys (A+B) simultaneously while engaging ignition.

IMPORTANT: Only deactivate SERVICE information after performing periodical service.



CO244590 -UN-12SEP05

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AG.CO03622,1450 -19-18FEB06-1/1

Preliminary Adjustments On Combine

Before performing any adjustments on the harvest performance monitor, adjust the combine so that it is operating at peak efficiency. The adjustments must correspond to the relevant crop and field conditions.

For further information, see the “Setup and Operation” section.



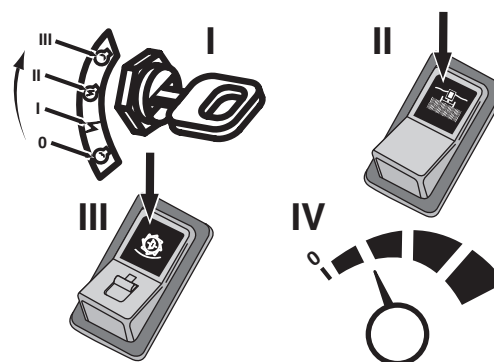
Z109503 -UN-22MAY95

AG.CO03622,1453 -19-20AUG04-1/1

Switching on Harvest Performance Monitor

The system can only operate when:

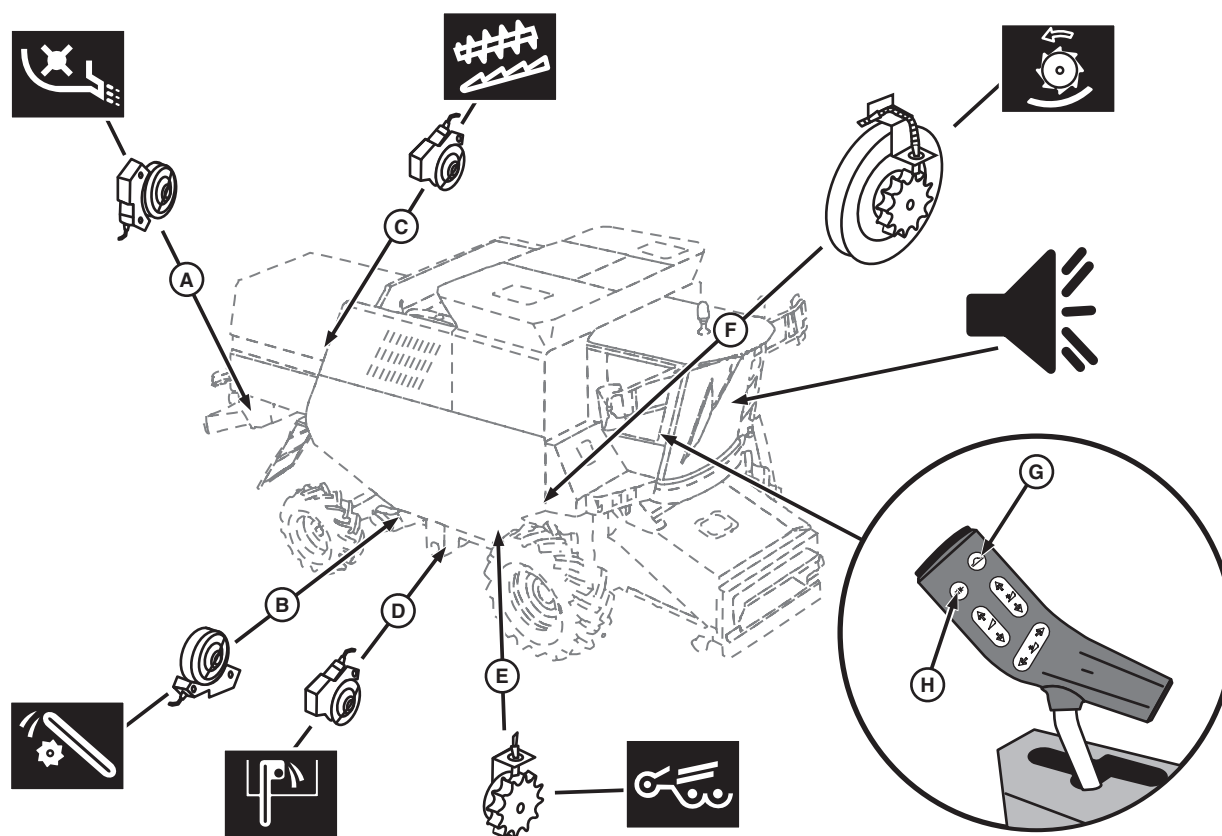
- The engine is running (I).
- The road safety rocker switch is in field position (II).
- Separator running (III).
- The harvest performance monitor is ON (IV).



CO248260 -UN-29JUL05

AG.CO03622,1454 -19-01AUG05-1/1

Protected Shaft Speed Monitor



A—Straw chopper
B—Tailings elevator

C—Straw walkers
D—Clean grain elevator

E—Fan
F—Threshing cylinder

G—Button
H—Button

With engine shut off, electrical circuit on and threshing unit engaged, all five or six indicator lights must glow and buzzer must remain silent. With engine running (at fast idle) and threshing unit engaged, all indicator lights should go out and buzzer must remain silent.

In the event of a malfunction, the monitoring system activates the corner post indicator lights and an intermittent acoustic warning signal.

NOTE: Reset INFO-TRAK™ monitor alarm threshold every time threshing cylinder and/or fan speed is adjusted.

Use the following procedure:

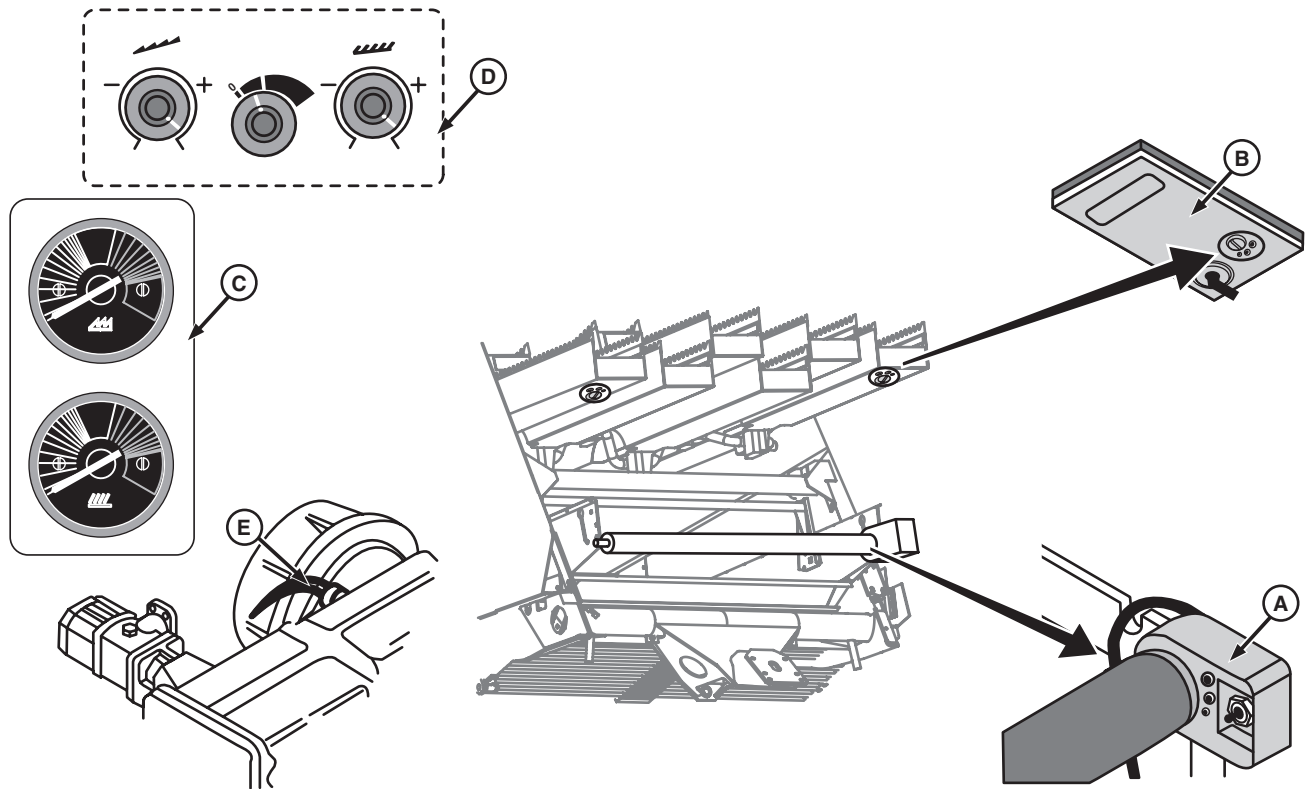
1. With engine running and threshing unit engaged, set engine to maximum rpm.
2. Press buttons (G and H) on multi-function control handle simultaneously for 3 seconds. An intermittent warning signal will be heard 3 times and indicator lights will also flash 3 times. When this occurs, the 5 shafts have been reprogrammed for the new condition.
3. To go back to the default factory setting, press the two switches for 6 seconds. Confirmation is given through an intermittent warning signal that will be heard 6 times and indicator lights will also flash 6 times.

CQ273960 -UN-20JUN06

NOTE: The other shafts are adjusted in factory to pre-set speeds.

ML70882,00009DC -19-12JUL06-2/2

Harvest Performance Monitor



A—Cleaning shoe sensor
B—Straw walker sensors

C—Analog gauge

D—Adjusting/selecting unit

E—Ground speed sensor

General Description

The harvest performance monitor records the amount of grain striking the cleaning shoe (A) and straw walker (B) sensors. Ground speed is measured via sensor (E). Once this factor has been determined, the loss rate appears on analog gauge (C). Analog gauge (C) indicates acceptable grain loss level to the user in relation to the area harvested.

The performance monitor enables the operator to use maximum combine capacity within the previously selected performance range. After the operator has

adjusted the combine and header to suit harvesting conditions, the monitor must likewise be set (adjusted) to these conditions by means of the adjusting/selecting unit (D).

Incorrect adjustment and inadequate servicing of the combine always result in higher grain loss and reduced performance. The causes of grain loss are dealt with in detail in the “Setup and Operation” section. Special attention should be paid to the information provided on “Causes of Grain Loss and Examples” and “Prevention of Grain Loss in General”.

CQ264680 -UN-26JAN06

AG,CO03622,1452 -19-21MAR06-1/1

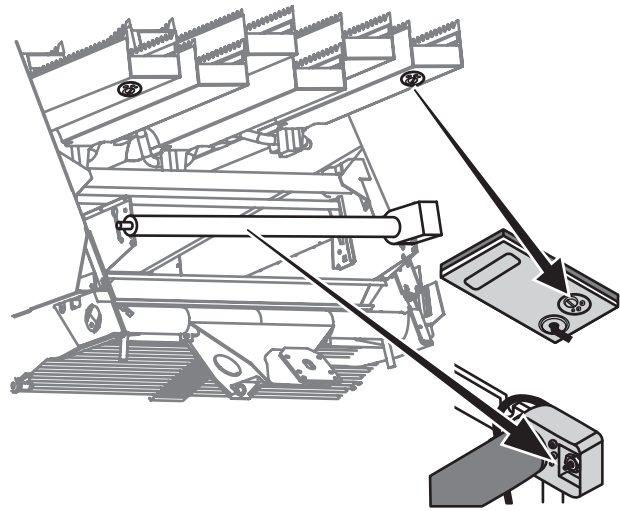
Adjusting Harvest Performance Monitor Sensor Sensitivity

X — Greater sensor sensitivity — For finer grain crops.

Y — Medium sensor sensitivity — for medium grain crops (covers a wide range of standard crops).

Z — Lower sensor sensitivity — for coarse grain crops.

NOTE: Sensor sensitivity should preferably be adjusted to a medium setting.



●	●	●
X	Y	Z

CQ264900 —UN—30JAN06

ML70882,00008FB —19—30JAN06—1/1

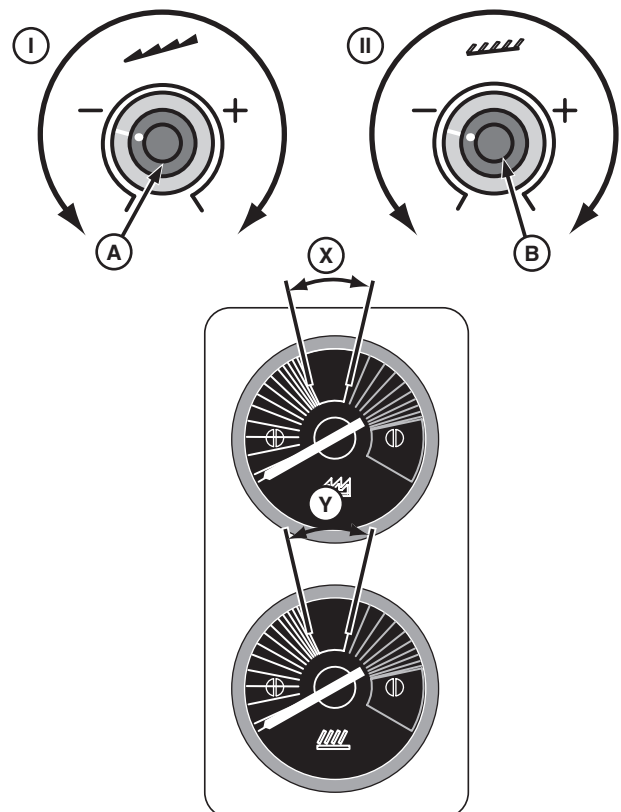
Adjusting Harvest Performance Monitor Potentiometers

NOTE: Set harvest performance monitor potentiometers after carrying out sensor adjustment.

I — To calibrate threshing system grain loss sensors, use potentiometer (A) to bring needle into green sector (X).

II — To calibrate cleaning system grain loss sensors, use potentiometer (B) to bring needle into green sector (Y).

IMPORTANT: If no losses occur (and therefore none are displayed) even at maximum sensitivity, leave the two potentiometers (A) and (B) set no higher than the “two o’clock” position.



CQ250860 —UN—12SEP05

ML70882,0000813 —19—10MAR06—1/1

Adjusting Ground Speed for Harvest Performance Monitor

I — If the needle moves counter-clockwise and stays there for more than 20 seconds:

Ground speed is too low and combine is not working at full performance. In this case, increase ground speed until needle returns to center of green sector.

II — If the needle moves clockwise and stays there for more than 20 seconds:

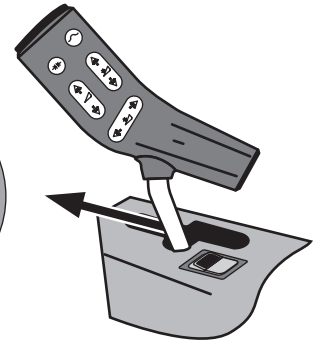
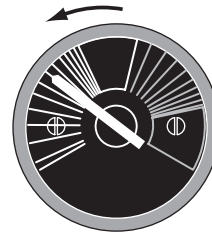
Excessive ground speed and there is elevated grain loss. Reduce ground speed until needle returns to center of green sector.

IMPORTANT: If needle remains in the same position even after ground speed has been reduced, this may be due to plugging. Check and clean, if necessary.

If harvesting conditions change during the course of the day (straw lying down or damp), or if machine adjustment is changed (fan speed), re-adjust performance monitor. The sieve sensors may be moved fore-and-aft to any one of the three cut-outs in the sensor mountings on lateral supports.

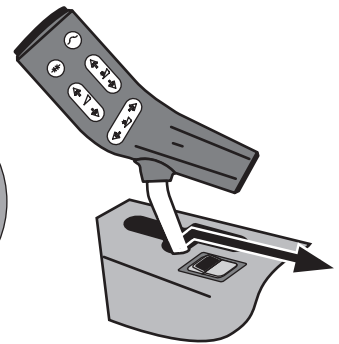
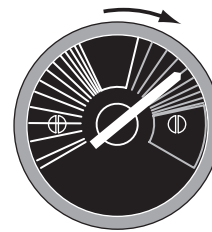
Measure grain losses from time to time to determine whether the combine needs to be re-adjusted.

①



CQ250890 -UN-12SEP05

②



CQ250900 -UN-12SEP05

ML70882,00004BF -19-17SEP05-1/1

Operational Check of Harvest Performance Monitor



CAUTION: Do not start up engine.

Requirements:

- Road safety switch in field position.
- Starter key in position (II).
- Threshing unit switch activated.

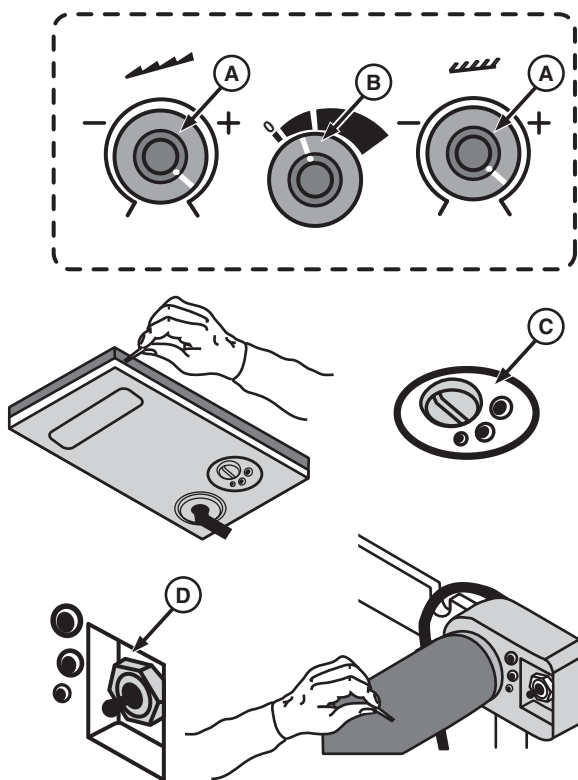
NOTE: A second person is required to observe the needle at the display.

1. Turn potentiometer (A) clockwise as far as it will go.
2. Set rotary switch (B) to medium grain position.
3. Rotary switch (C) and switch (D) should be in middle position.

4. Checking Sensors:

Tap sensors lightly with a hard object or by dropping some kernels on them. Gauge needles should move.

IMPORTANT: If a fault occurs during the check described above, have machine inspected by your John Deere dealer.

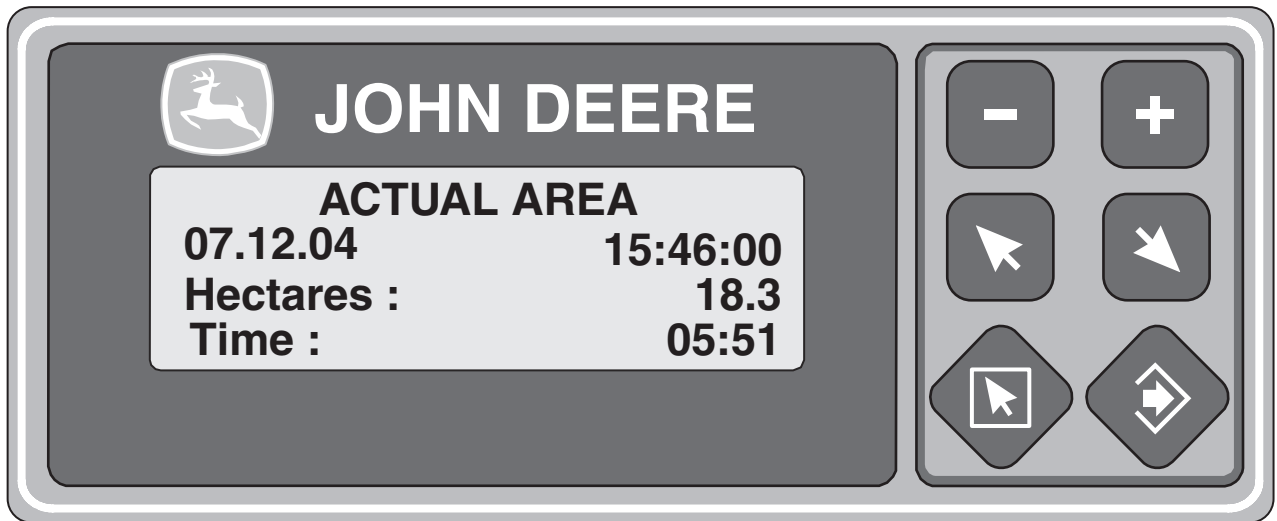


A—Potentiometers
B—Rotary switch
C—Rotary switch
D—Switch

CQ221820 -UN-12SEP05

ML70882,0000870 -19-10MAR06-1/1

Hectaremeter



CQ229010 -19-02FEB05

IMPORTANT: All described procedures assume that the operator is observing the entry screen (Actual Area).

NOTE: This equipment only operates with combine and threshing system engaged and is available in Portuguese, English, Spanish, German, French and Italian.

Two sets of information must be determined by the operator in order to make the system work. It is important that the following is precisely measured:

- Tire radius.
- Operating width of the header used.

Tire radius is determined as follows:

Consult tire rolling radius value in "Tire Rolling Radius Code".

Header width is determined as follows:

1. Obtain header width from decal or measure width using a tape measure.

NOTE: If you are using the metric system the width must be converted into millimeters. If you are using the imperial system, just note down the recorded value.

- Ex: 618R - The header is 18 feet.
- Convert "feet" to "mm" multiplying the amount in "feet" by 304.8.

2. Input header width in the area counter. See "Header Width Adjustment".

Hectaremeter will save data when:

- You change machine parameters.
- Reset partial or actual area.
- Turn starter key OFF.
- Every 1 hour of harvesting.

ML70882,0000536 -19-14JUL06-1/1

Functions of Keys

A — Key “-”:Reduces values and adjusts date and time.

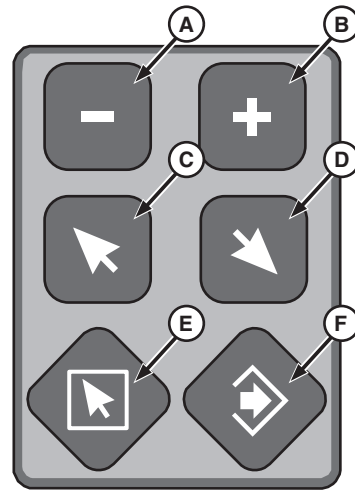
B — Key “+”:Increases values and adjust date and time.

C — Left Arrow:Navigation key that takes the cursor up and to the left.

D — Right Arrow:Navigation key that takes the cursor down and to the right.

E — Escape Key:Return to main menu and cancel adjusted values.

F — Enter Key:Confirm selected option and adjusted values.

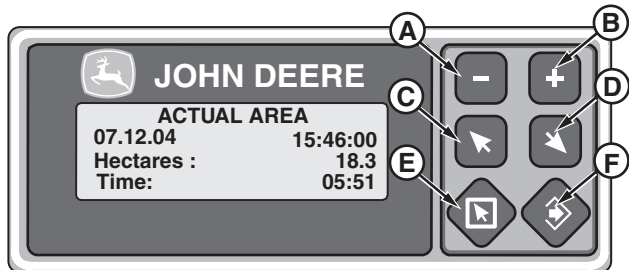


CQ264910 -UN-18FEB06

ML70882,0000537 -19-07MAR06-1/1

Change Language and Measurement System

1. Press escape (E) three times consecutively.
2. Select the language using the - key (A) or the + key (B).
3. Press key (C) or (D) once to select the measuring system.
4. Select the measuring system using the - key (A) or the + key (B).
5. Press enter (F) to confirm. Press escape (E) to cancel.



ACTUAL AREA <-
PARTIAL AREA
TOTAL AREA
OPTIONS

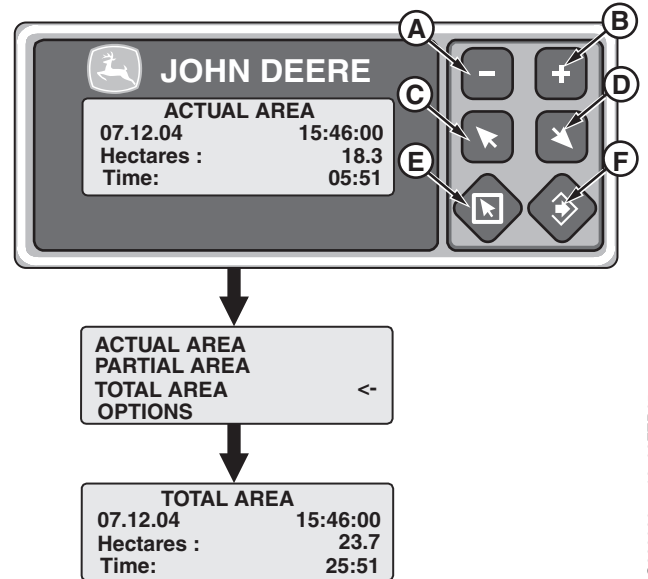
LANGUAGE/UNIT
> LANGUAGE : Portugues
UNIT : Metrico

CQ229090 -19-02FEB05

ML70882,0000539 -19-01FEB05-1/1

Checking Area Harvested

1. Press escape (E).
2. Select "Actual Area", "Partial Area" or "Total Area" as required. Make selection by pressing the (C) or (D) key.
3. Press enter (F).
4. Press escape (E) to exit.

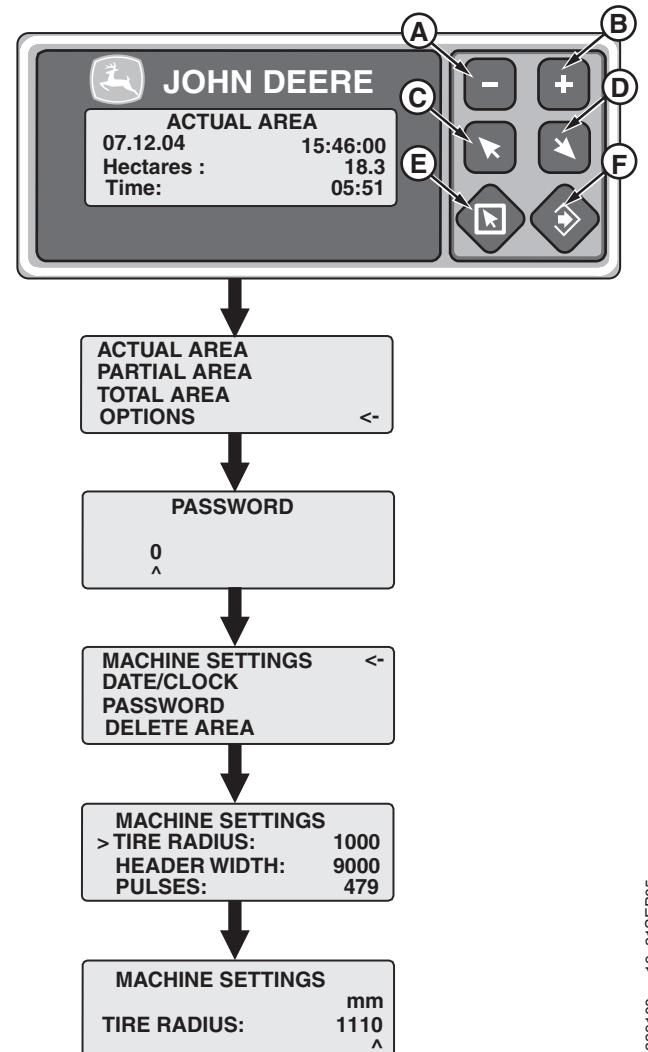


ML70882.0000538 -19-01FEB05-1/1

CQ229080 -19-02FEB05

Adjustment of Tire Radius

1. Press escape (E).
2. Press (C) or (D) key and select "Options".
Press enter (F).
3. Enter password. Press enter (F).
NOTE: The default password is 0 (zero) To change password see "Changing Password".
4. Select "Machine Settings" by pressing the (C) or (D) key.
Press enter (F).
5. Select "Tire Radius" by pressing the (C) or (D) key.
Press enter (F).
6. Adjust tire radius using the (A), (B), (C) and (D) keys.
7. Press enter (F) to confirm. Press escape (E) to cancel.

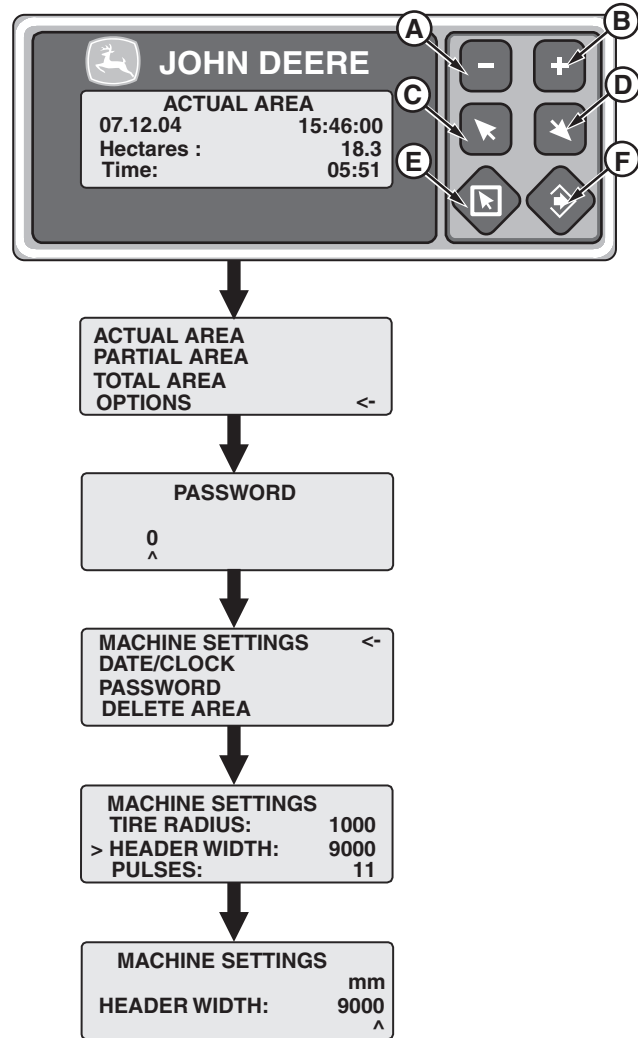


ML70882.000053A -19-01FEB05-1/1

CQ229100 -19-21SEP05

Adjust Header Width

1. Press escape (E).
2. Press (C) or (D) key and select "Options".
Press enter (F).
3. Enter password. Press enter (F).
NOTE: The default password is 0 (zero) To change password see "Changing Password".
4. Select "Machine Settings" by pressing the (C) or (D) key.
Press enter (F).
5. Select "Header Width" by pressing the (C) or (D) key.
Press enter (F).
6. Adjust header width using the (A), (B), (C) and (D) keys.
7. Press enter (F) to confirm. Press escape (E) to cancel.

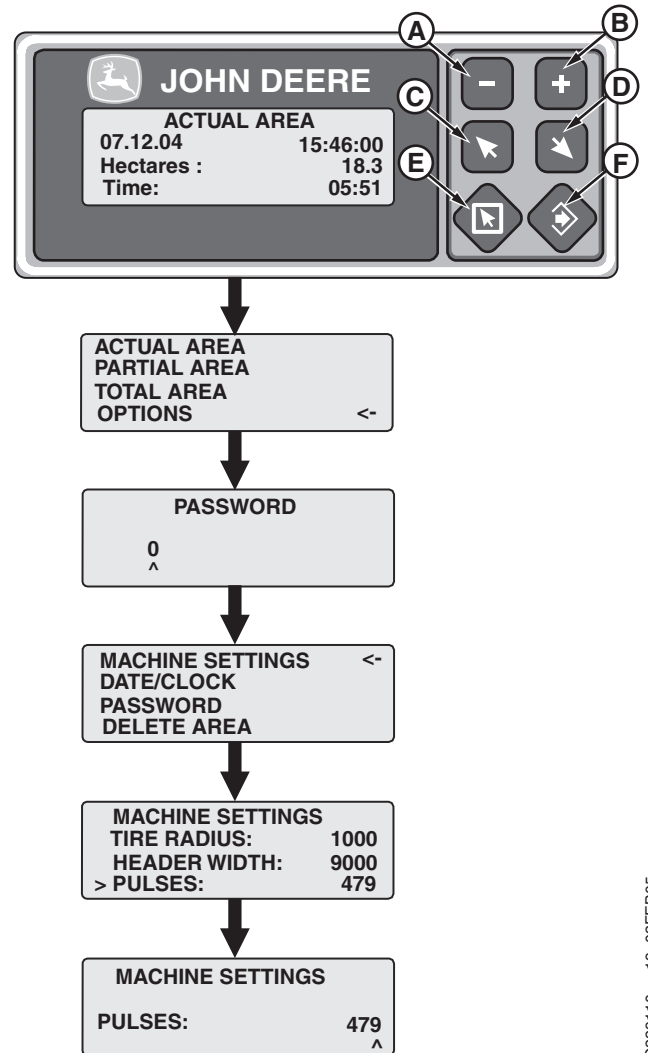


ML70882,000053B -19-01FEB05-1/1

CQ229070 -19-02FEB05

Adjust Pulses

1. Press escape (E).
 2. Press (C) or (D) key and select "Options".
Press enter (F).
 3. Enter password. Press enter (F).
NOTE: The default password is 0 (zero) To change password see "Changing Password".
 4. Select "Machine Settings" by pressing the (C) or (D) key.
Press enter (F).
 5. Select "Pulses" by pressing the (C) or (D) key.
Press enter (F).
 6. Adjust pulses using the (A), (B), (C) and (D) keys.
- IMPORTANT: Pulse value is 479.**
7. Press enter (F) to confirm. Press escape (E) to cancel.

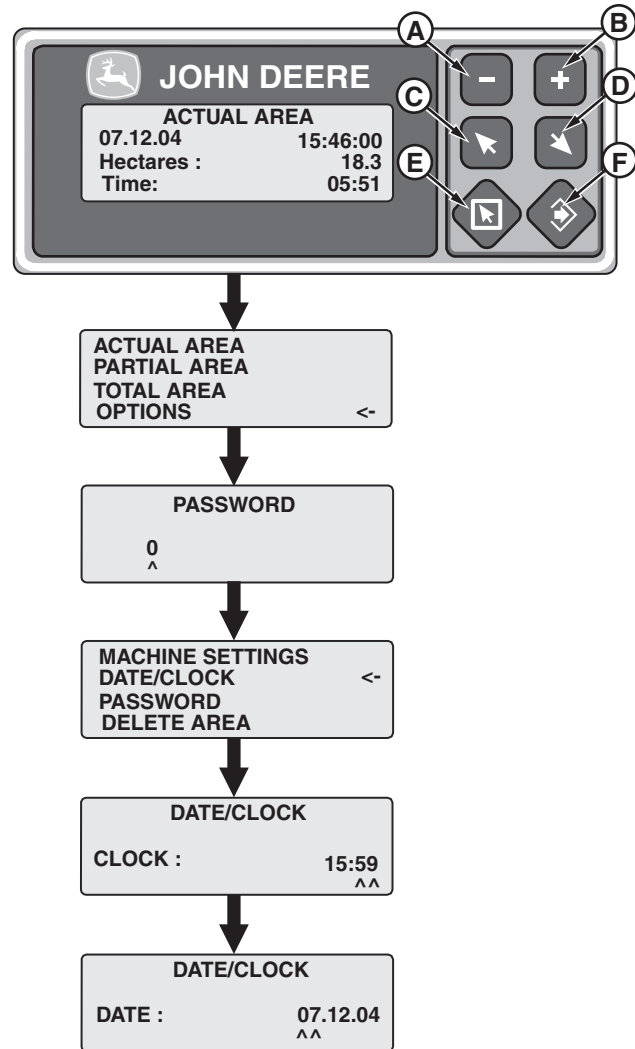


ML70882,000053C -19-01FEB05-1/1

CQ229110 -19-02FEB05

Adjust Date and Time

1. Press escape (E).
2. Press (C) or (D) key and select "Options".
Press enter (F).
3. Enter password. Press enter (F).
NOTE: The default password is 0 (zero) To change password see "Changing Password".
4. Select "Date/Clock" by pressing the (C) or (D) key.
Press enter (F).
5. Adjust time using the (A), (B), (C) and (D) keys.
NOTE: It is not possible to alter the value for seconds.
6. Adjust date using the (A), (B), (C) and (D) keys.
7. Press enter (F) to confirm. Press escape (E) to cancel.



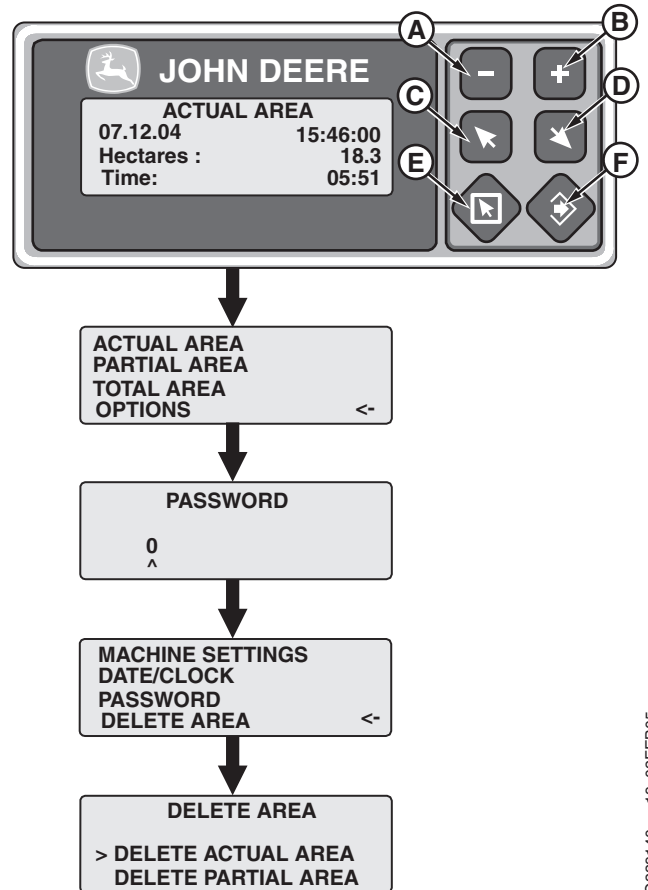
ML70882,000053D -19-01FEB05-1/1

CQ229120 -19-02FEB05

Deleting Harvested Area

1. Press escape (E).
2. Press (C) or (D) key and select "Options".
Press enter (F).
3. Enter password. Press enter (F).
NOTE: The default password is 0 (zero) To change password see "Changing Password".
4. Select "Delete Area" by pressing the (C) or (D) key.
Press enter (F).
5. Select "Actual Area " or "Partial Area" by pressing the (C) or (D) key.
6. Press enter (F) to delete selected area. Press escape (E) to cancel.

NOTE: The "Total Area" cannot be deleted.

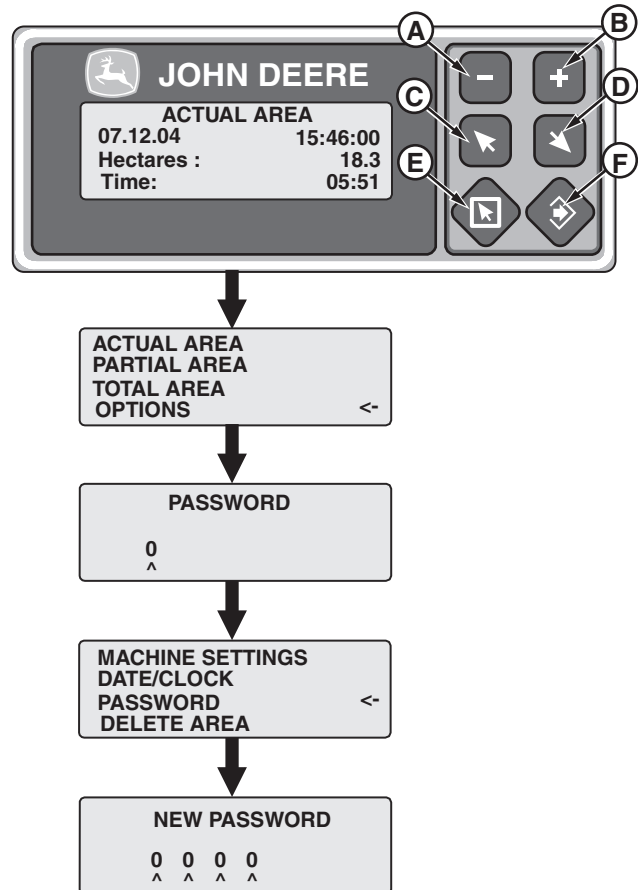


CQ229140 -19-02FEB05

ML70882,000053F -19-01FEB05-1/1

Change Password

1. Press escape (E).
2. Press (C) or (D) key and select "Options".
Press enter (F).
3. Enter password. Press enter (F).
NOTE: The default password is 0 (zero).
4. Select "Password" by pressing the (C) or (D) key.
Press enter (F).
5. Enter new password using the (A), (B), (C) and (D) keys.
6. Press enter (F) to confirm. Press escape (E) to cancel.



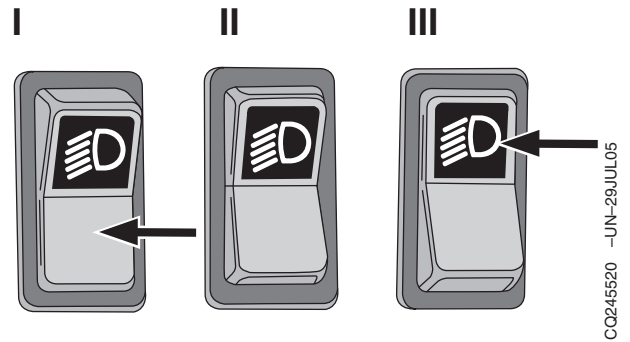
CQ229130 -19-02FEB05

ML70882,000053E -19-01FEB05-1/1

Lighting System and Lights

Parking Light and Headlight Rocker Switch

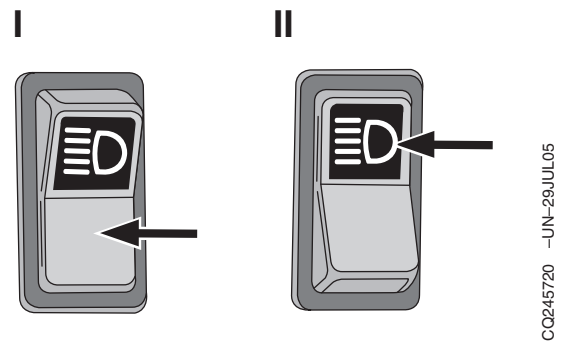
- I—Light functions OFF
- II—Parking lights, indicator and instrument lighting enabled
- III—Headlights enabled (starter key only in positions I and II)



AG.CO03622,1435 -19-01AUG05-1/1

Full Beam Rocker Switch

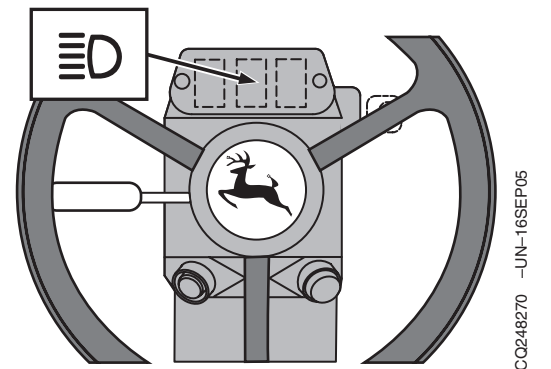
- I—Full beam disabled
- II—Full beam enabled



AG.CO03622,1436 -19-01AUG05-1/1

Full-Beam Indicator Light

The full-beam indicator light comes on when full-beam is selected.



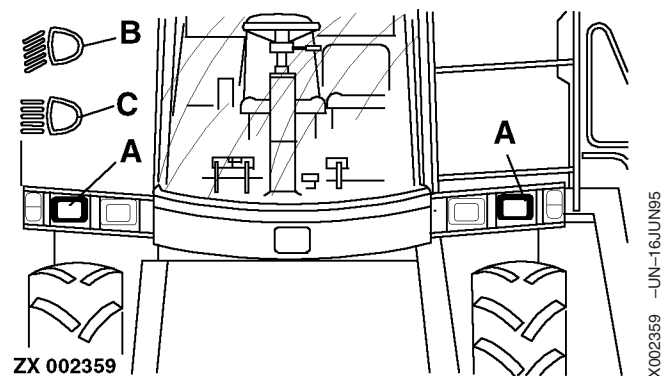
AG.CO03622,1460 -19-16AUG05-1/1

Headlights

Low and full-beam headlights are provided.

Always switch to low-beam when oncoming traffic appears.

- A—Headlights
- B—Low-beam
- C—Full-beam



ZX 002359

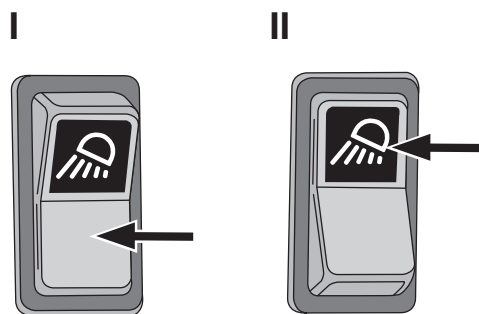
AG.CO03622,1461 -19-02AUG99-1/1

Work Lights Rocker Switch—Cab Roof and Unloading Auger

The work lights can be enabled separately with the starter key in position I or II.

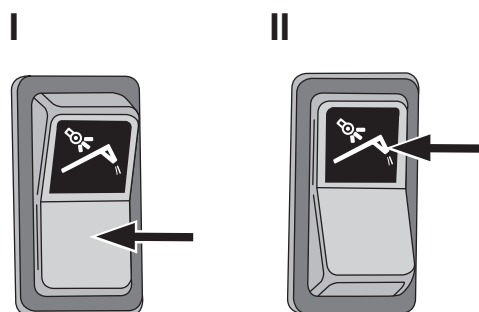
See “Starter Key” for more details.

- I—Work lights disabled
- II—Work lights enabled



Cab Roof

CQ245740 -UN-29JUL05



Unloading Auger

CQ245750 -UN-29JUL05

AG.CO03622.1465 -19-01AUG05-1/1

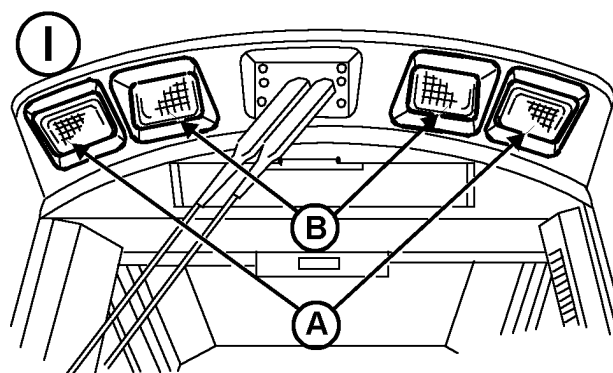
Work Lights on Cab Roof and Unloading Auger

The two outside work lights (A) are factory-adjusted to the width of 6.10 m (20 feet). If necessary, adjust the width according to the head used.

The work lights (B) illuminate the head center.

The work light (C) illuminates the unloading auger.

- I—Work lights on cab roof
- II—Work lights on unloading auger



CQ194030

-UN-06DEC99



CQ246490 -UN-29JUL05

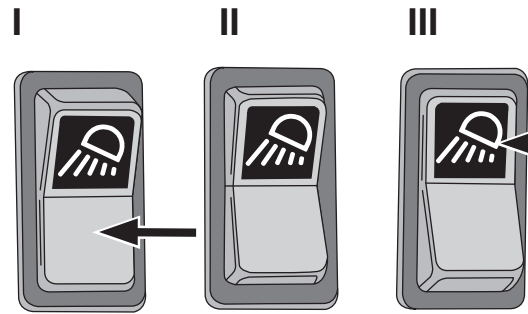
AG.CO03622.1466 -19-01AUG05-1/1

Rocker Switch for Work Lights on Operator's Platform and Outside Mirror Arms

The two additional work lights on the operator's platform (inner lights), the work lights on the mirror arms and the rear lights can only be switched on when the road safety rocker switch is in the field position.



CAUTION: Work lights must only be enabled during field operation.



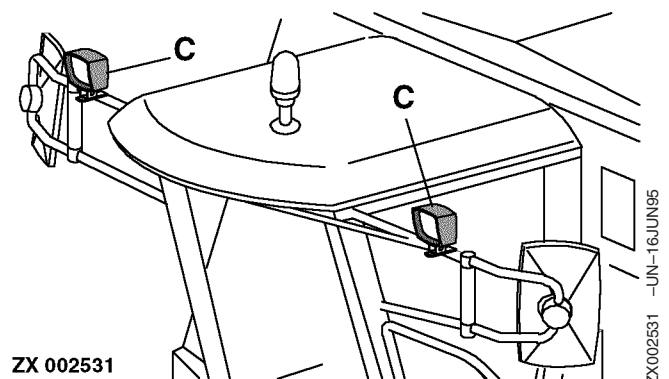
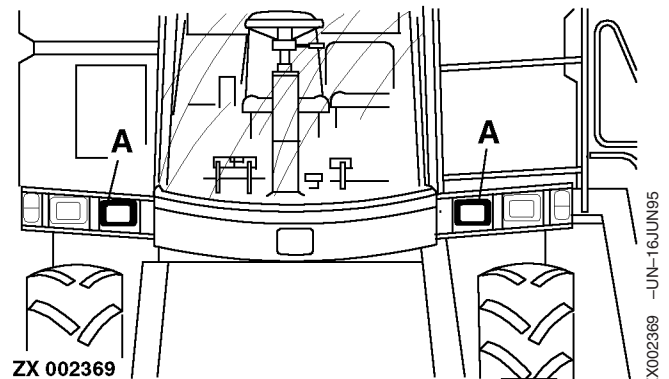
CQ245760 -UN-29JUL05

- I—Disabled
- II—Work lights on operator's platform and rear lights enabled
- III—Work lights on outside mirror arms enabled

AG,CO03622,1487 -19-01AUG05-1/1

Work Lights on Operator's Platform And Mirror Arms

- A—Work lights on operator's platform
- C—Work lights on mirror arms

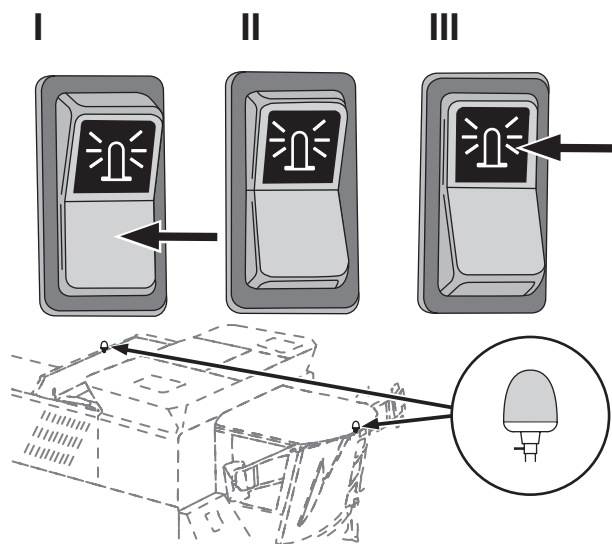


AG,CO03622,1467 -19-13MAR02-1/1

Intermittent Indicator Light Rocker Switch

NOTE: In some countries the intermittent indicator lights must be enabled when traveling on public highways.

- I—Light up when grain tank is 3/4 full
- II—Disabled
- III—Enabled



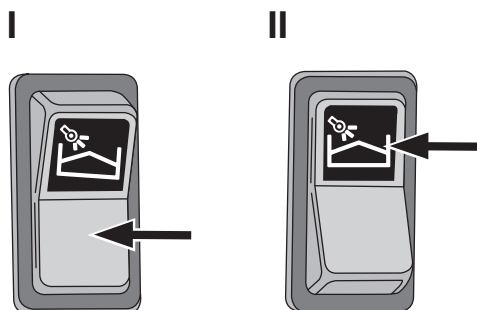
CQ245670 -UN-19MAY06

AG,CO03622,1470 -19-01AUG05-1/1

Grain Tank Lighting Rocker Switch

Grain tank lighting may be switched on whenever the ignition is engaged.

- I—Grain tank light disabled
- II—Grain tank light enabled



CQ245770 -UN-29JUL05



CQ246500 -UN-29JUL05

AG,CO03622,1468 -19-01AUG05-1/1

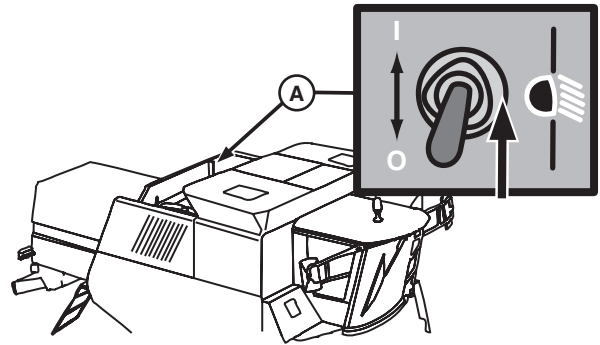
Engine Compartment Lighting

Switch on the engine compartment light through switch (A), located near light.

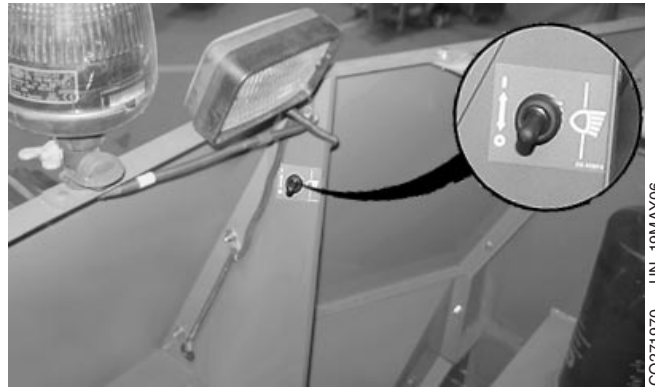
This light also functions as a rear light.

This light is positioned in a support that rotates according to the operator's needs and which may illuminate the engine compartment or the combine's rear hood.

NOTE: When the multi-function control handle is pulled backwards, the engine compartment lighting will turn on.



CQ245810 -UN-29JUL05



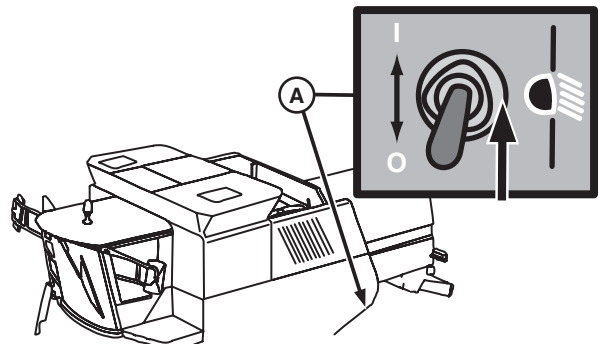
CQ271970 -UN-19MAY06

AG_CO03622,2853 -19-02JUN06-1/1

Cleaning System Interior Lighting

IMPORTANT: Switch on lights only to perform service or maintenance work.

Use switch (A) located outside of shield.



CQ245870 -UN-29JUL05



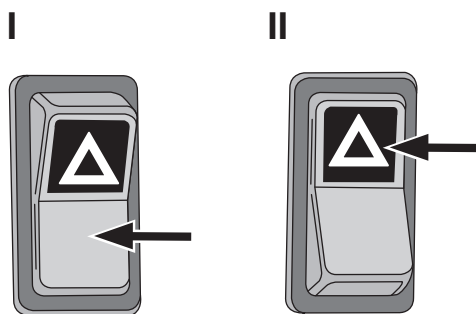
CQ246540 -UN-29JUL05

AG_CO03622,1469 -19-18FEB06-1/1

Hazard Warning Light Rocker Switch

Use the hazard warning lights in accordance with the traffic regulations of your country/region.

- I—Hazard warning lights disabled
- II—Hazard warning lights enabled



CQ245780 -UN-29JUL05

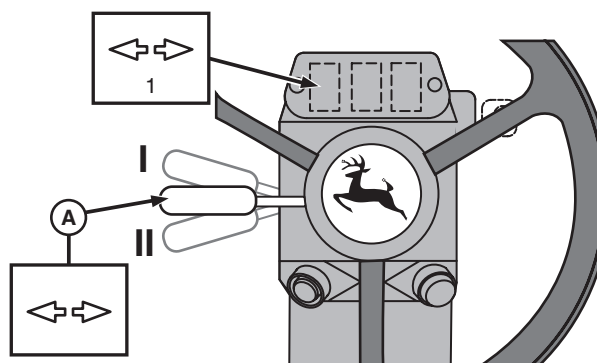
AG,CO03622,1471 -19-01AUG05-1/1

Turn Signal Lever

Use the turn signal lever when driving on public roads.

NOTE: The turn signal lever is not self-canceling.

- I—Right-hand turn
- II—Left-hand turn



CQ246550 -UN-15SEP05

AG,CO03622,1462 -19-01AUG05-1/1

Rear Turn-Signal Lights, Tail Lights and “STOP” Lights

Turn-signal switch

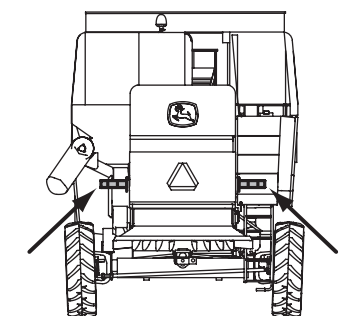
The turn-signals light up when the turn-signal or hazard warning switches are operated.

Tail Lights

The tail lights come on as soon as clearance lights, low-beam headlights or full-beam headlights are turned on.

“STOP” Lights

The “STOP” lights light up when the brake pedals are depressed, provided the ignition is switched on.



CQ275820 -UN-13JUL06

ML70882,000087C -19-02AUG06-1/1

Operator's Cab

Cab Access Ladder

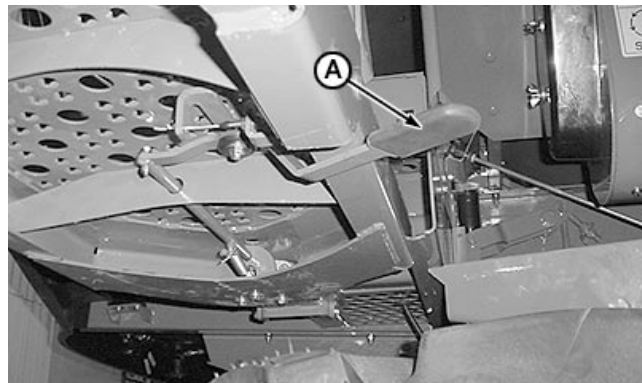
CAUTION: Do not ride on or try to climb up front or rear ladder when the combine is in motion.

NOTE: In very muddy conditions, remove the bottom rung.

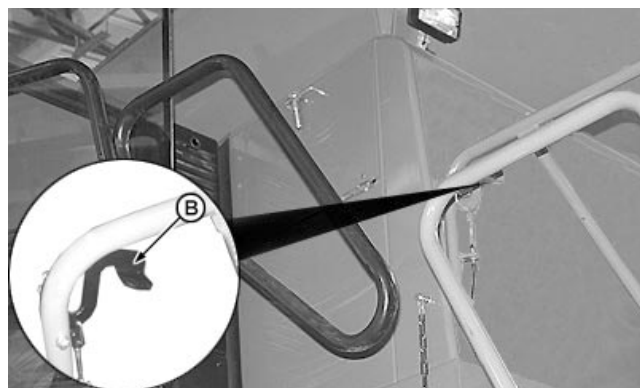
The ladder can be positioned at ground level by means of locking latch (A), or at cabin floor level by means of locking latch (B).

The ladder has 5 positions. The ladder should be positioned as required.

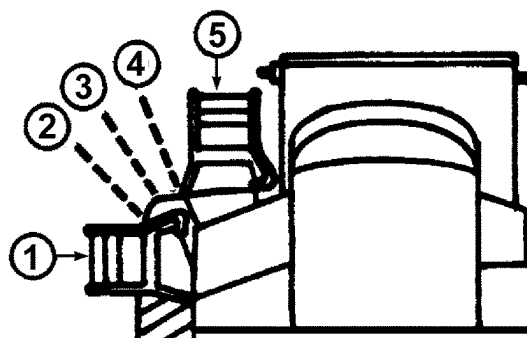
1	Field position
2, 3 and 4	Field position (when width of header is less than that of the combine)
5	Road transport position



CO231680 -UN-27JAN05



CO231670 -UN-21FEB05



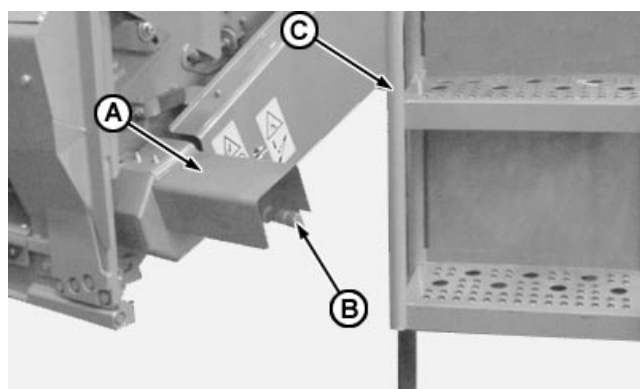
CO222822 -UN-03FEB05

ML70882,0000839 -19-17AUG05-1/3

In road transport position and when ladder has long extension fitted, note the following:

- Raise plate (A) and adjust the feeder house so that axle (B) is positioned between the steps of the ladder (C) before adjusting the ladder to position 5.

CAUTION: Prevent damage to combine. DO NOT raise or lower feeder house when ladder is in road transport position.



CO231860 -UN-04FEB05

Continued on next page

ML70882,0000839 -19-17AUG05-2/3

IMPORTANT: If ladder locking latches seem loose, clean area around ladder positioner (A). Do not use oil or grease in this area.

If you own a combine with single front wheel set and replace this with a double front wheel set, or vice versa, the road transport position must be repositioned by means of ladder positioner (A).

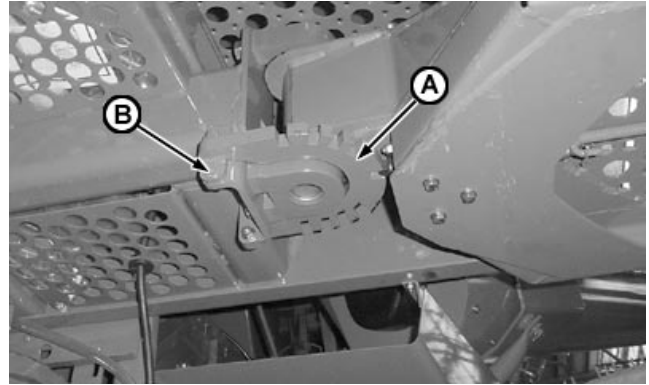
1. Remove 4 bolts (B) and turn ladder positioner.

NOTE: In this situation there will be a small difference (X) in the ladder angle.

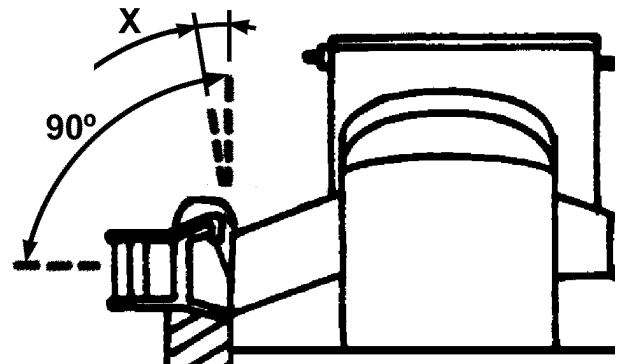
Specification

Altering angle of ladder positioner—Angle $\pm 6^\circ$

The "90°" position is used on single front wheel combines.



CO231840 -UN-04FEB05



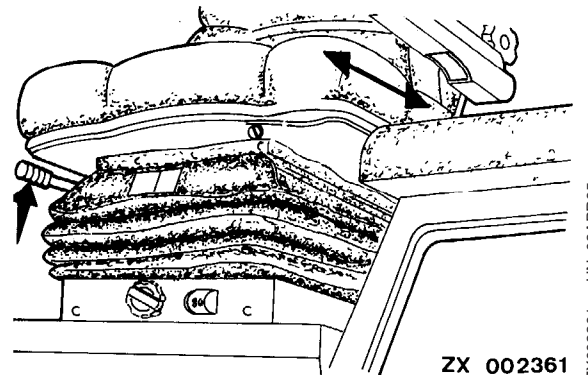
CO222821 -UN-02FEB05

ML70882,0000839 -19-17AUG05-3/3

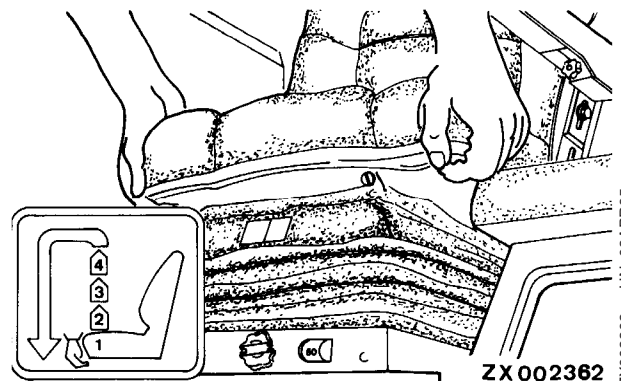
Mechanical Adjustment of Seat Position

Pull locking lever up and slide seat forward or backward.

To adjust height of seat, grip seat with both hands and lift upward (3 detent positions). Should the seat be raised above the third detent position, it will return to lowest position.



ZX002361 -UN-03APR95



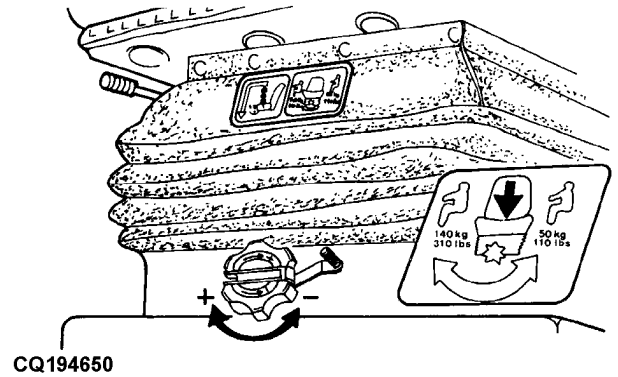
ZX002362 -UN-03APR95

AG,CO03622,1475 -19-04OCT05-1/1

Adapting Seat to Operator's Weight

The seat can be adapted to the operator's weight.

Turn the crank for more weight (+) or less weight (-).



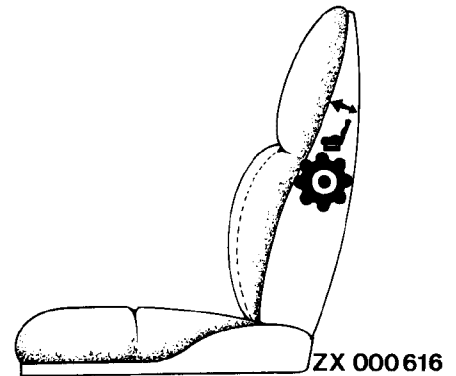
AG.CO03622,1476 -19-01AUG05-1/1

CQ194650 -UN-17FEB00

Lumbar Support (Only Mechanical Seat)

An adjustable lumbar support is incorporated into backrest of operator's seat.

Use l.h. or r.h. hand wheel to adjust lumbar support according to operator's requirements.



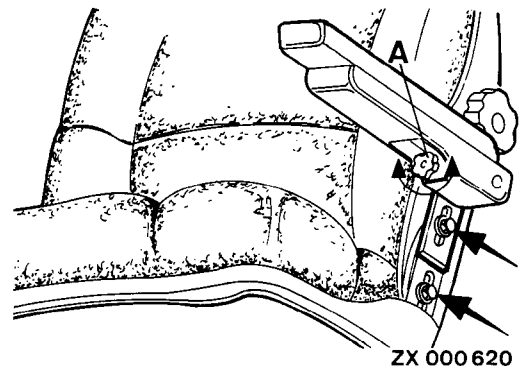
OU83340,00003F1 -19-28JUN06-1/1

ZX000616 -UN-03APR85

Adjusting the Armrest

Adjust armrest angle by means of wheel (A).

Armrest height can also be adjusted at the hinge.



AG.CO03622,1478 -19-14MAR02-1/1

ZX000620 -UN-10APR95

Right-hand Armrest

NOTE: Armrest cover can easily be removed and used to jot down notes.

Remove cover by securing it at the front and pushing rearwards, as illustrated.

Notes must only be written in pencil. These can easily be erased using a pencil eraser.

- A—Right-hand armrest storage compartment
- B—Right-hand armrest cover
- C—Ashtray



CQ246870 -UN-29JUL05

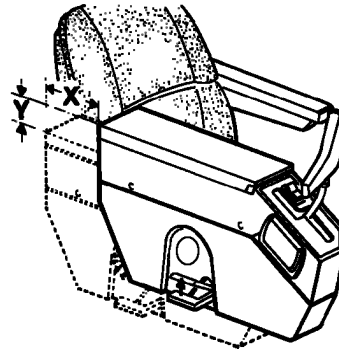
AG,CO03622,1481 -19-01AUG05-1/1

R.H. Armrest — Fore-And-Aft Adjustment

From the rear position, the armrest can be moved approx. 160 mm (6.3 in.) forward (X).

In addition, armrest height can be altered approx. 80 mm (3.1 in.) (Y).

Raise locking lever. Move armrest into desired position and release locking lever.



CQ209030

CQ209030 -UN-28SEP01

AG,CO03622,1479 -19-14MAR02-1/1

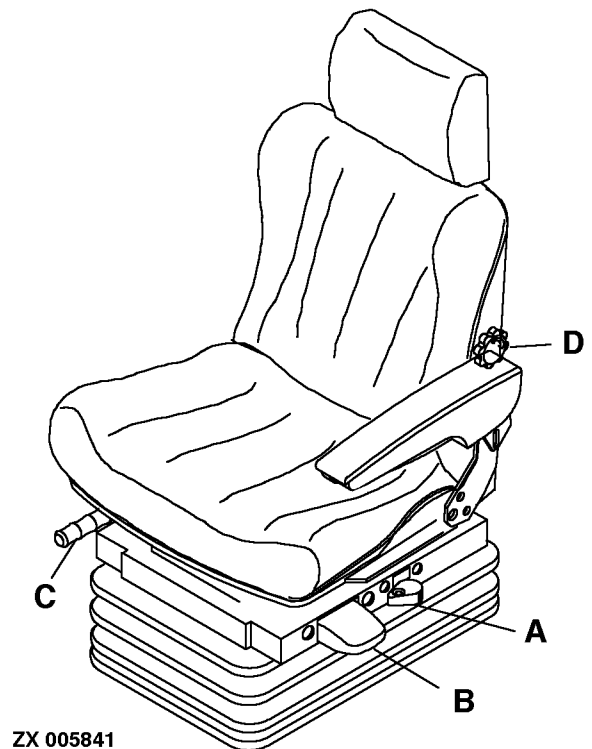
Air Comfort Seat

The seat's spring setting can be varied from soft to hard by means of lever (A).

After starting the engine, release lever (B) briefly to bring seat to its central position.

To adjust height, pull lever (B) upward (raise seat) or push it down (lower seat).

- A—Spring setting adjustment
- B—Height and weight adjustment
- C—Horizontal adjustment
- D—Lumbar support adjustment

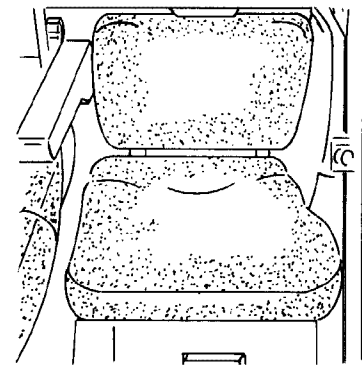


ZX005841 -UN-03APR95

AG.CO03622,1483 -19-19OCT05-1/1

Instructional Seat

During harvesting only the operator and one passenger should be in the combine cab. Passenger should stay inside the cab only during a given time (e.g. training).



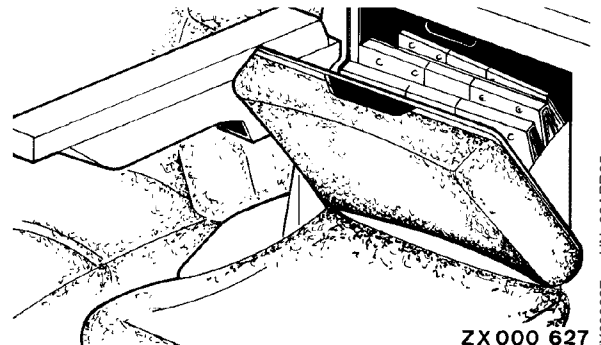
ZX000628 -UN-03APR95

ML70882,000083B -19-17AUG05-1/1

Document Pack Compartment

This storage compartment is located in the instruction seat backrest.

To access the compartment, pull backrest forward.



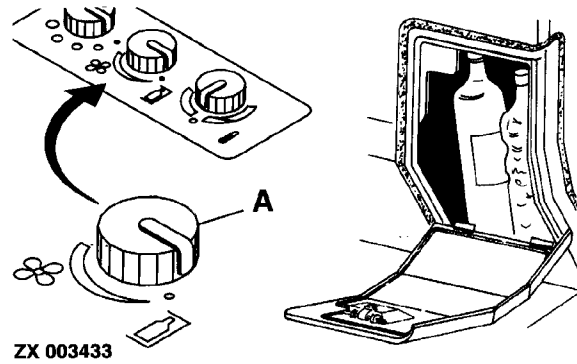
ZX000627 -UN-03APR95

AG.CO03622,1485 -19-01AUG05-1/1

Cooling Compartment

The cooling compartment is located underneath the instruction seat and has sufficient space for bottles etc. (e.g. two 1.5 L bottles).

To increase cooling effect, turn rotary switch (A) clockwise (see also "Controls and Instruments" section).



ZX003433 -UN-19APR95

AG,CO03622,1486 -19-01AUG05-1/1

Steering Column Tilt and Height Adjustment



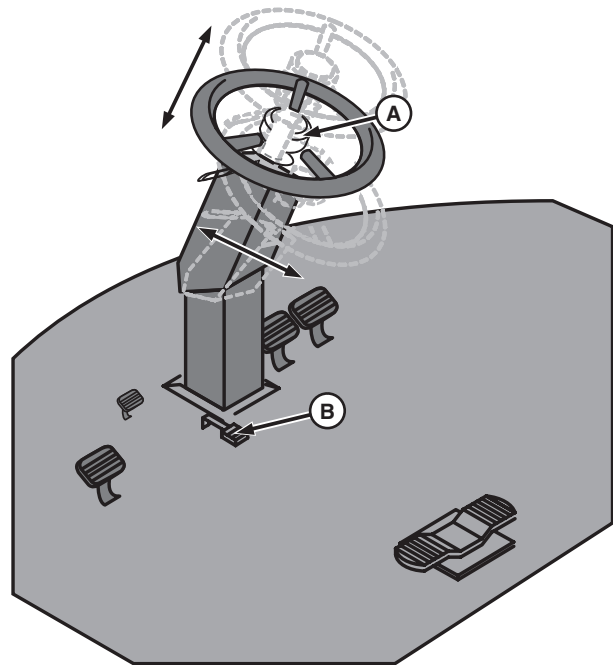
CAUTION: Adjust steering column only when combine is stopped.

Loosen steering hub (A). Raise or lower steering wheel to required position. Tighten hub to fix steering wheel in required position.

NOTE: The hub need only be lightly tightened.

The column is spring loaded to the upright position. Do not step on pedal without securing the steering wheel with both hands.

Press pedal (B) to release steering column lock. Move column to required position. The column locks when pedal is released.



CQ246850 -UN-29JUL05

AG,CO03622,1488 -19-01AUG05-1/1

Fire Extinguisher

An ABC type dry chemical rechargeable fire extinguisher and mounting brackets are installed on your combine.

Read the label on the extinguisher and become familiar with the instructions on how to use and maintain it. Once the extinguisher is discharged, no matter for how long, it must be recharged.

Fire extinguisher is located on platform ladder.



CO231820 -UN-29JUL05

OU83340,00003EF -19-01FEB05-1/1

Operating Foot Brakes

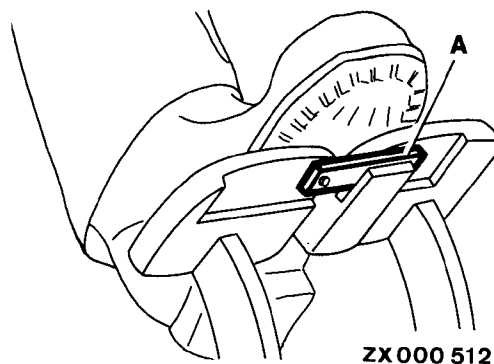
During road travel:

CAUTION: For safety reasons, always couple the two brake pedals by means of pedal coupler (A) when driving on public roads. This ensures the brakes are enabled together.

During field travel:

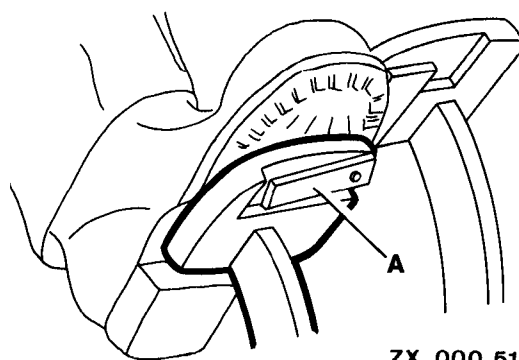
CAUTION: To stop combine, always depress both brake pedals simultaneously.

When negotiating sharp turns, use individual brakes to assist steering. For this purpose, disengage pedal coupler (A).



ZX000 512

ZX000512 -UN-03APR95



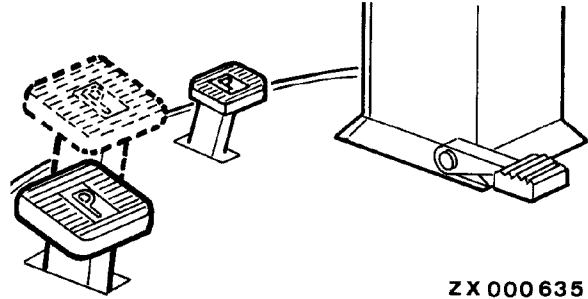
ZX 000 513

ZX000513 -UN-03APR95

AG,CO03622,1526 -19-01AUG05-1/1

Parking Brake

Apply parking brake when stopping combine harvester and/or when starting engine up.



ZX 000 635

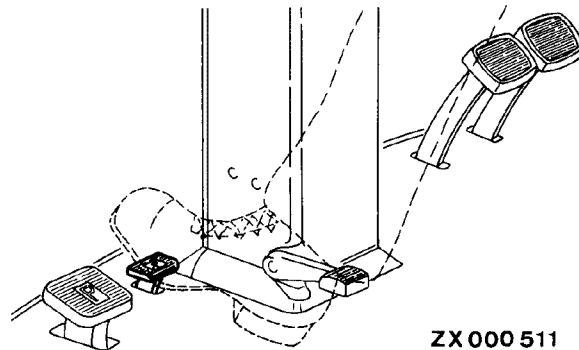
ZX000635 -UN-03APR95

AG,CO03622,1491 -19-01AUG05-1/1

Releasing Parking Brake

CAUTION: Avoid leaving your foot on or around the parking brake pedal when the release pedal is enabled.

To release parking brake, depress release pedal.



ZX 000 511

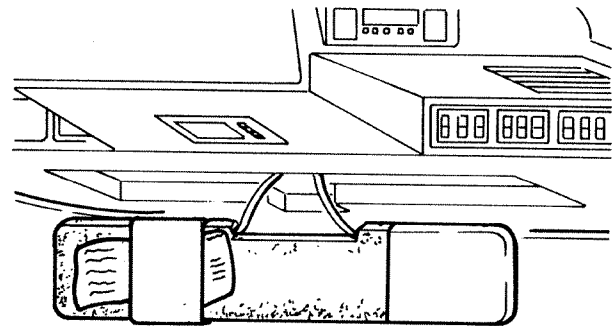
ZX000511 -UN-03APR95

AG,CO03622,1492 -19-01AUG05-1/1

Sun visor

Notes etc. may be stored on back of sun visor.

Adjust sun visor to suit conditions.



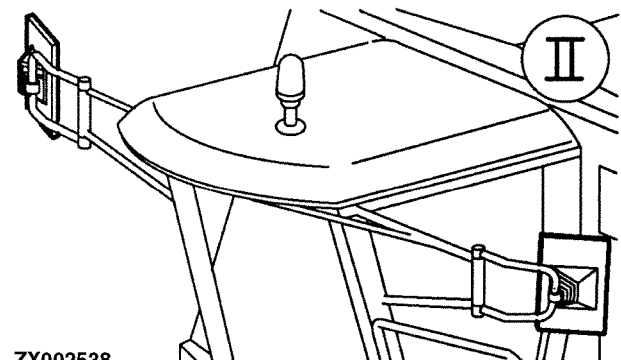
ZX002537

ZX002537 -UN-16JUN95

AG,CO03622,1494 -19-03AUG99-1/1

Outside Rear View Mirrors

Adjust outside rear view mirrors as required.



ZX002538

ZX002538 -UN-16JUN95

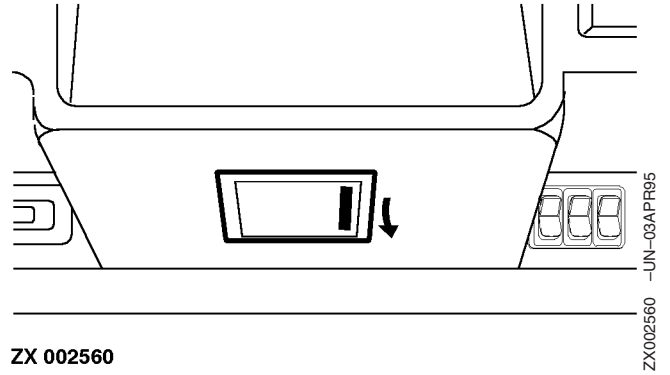
ML70882,0000A10 -19-28JUN06-1/1

Cab Interior Lighting

Switch slid forward — Enabled

Switch in center position — Disabled

Switch slid rearwards — Enabled



ZX 002560

AG.CO03622,1498 -19-01AUG05-1/1

Preliminary Checks

Daily Checks

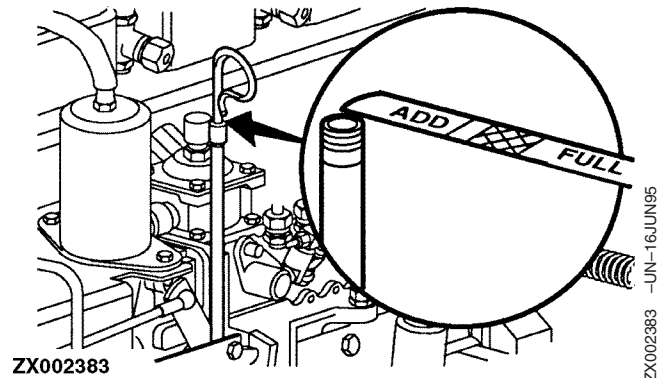
- ☐ Check engine oil level.
- ☐ Air compressor oil level.
- ☐ Hydraulic system.
- ☐ Radiator screen.
- ☐ Cooling system.
- ☐ Tires.
- ☐ Hydrostatic system.
- ☐ Fuel system.
- ☐ Indicator light test.
- ☐ Light functions.
- ☐ Brakes.
- ☐ Shaft speed monitoring alarm.

ML70882,000083D -19-17AUG05-1/1

Engine Oil Level.

Do not operate the engine when oil level is below the low level mark on the dipstick.

The oil level should be between upper and lower marks on dipstick. Check oil level with combine parked on level ground.



AG,CO03622,1501 -19-15NOV02-1/1

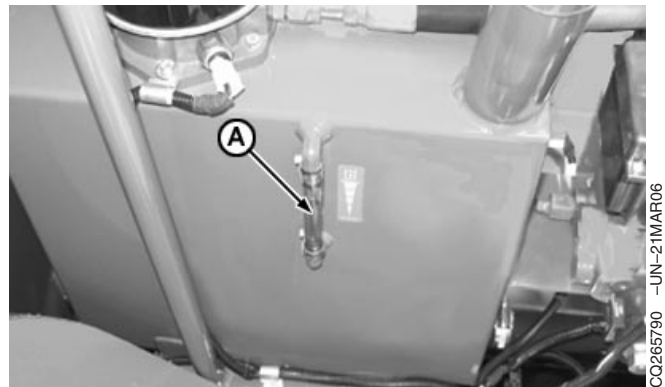
Hydraulic System Oil Level

Check oil level at sight glass (A). Oil must be visible in center of sight glass (A). Top up with the recommended oil as necessary.

Consult capacity in the "Specifications" section.

Recommended oil: John Deere HY-GARD™.

NOTE: Before checking the oil level, lower the header to the ground, place the unloading auger in the transport position and fully lower the reel, so that all respective hydraulic cylinders are totally retracted.



HY-GARD is a registered trademark of the Deere & Company

AG,CO03622,1502 -19-14FEB06-1/1

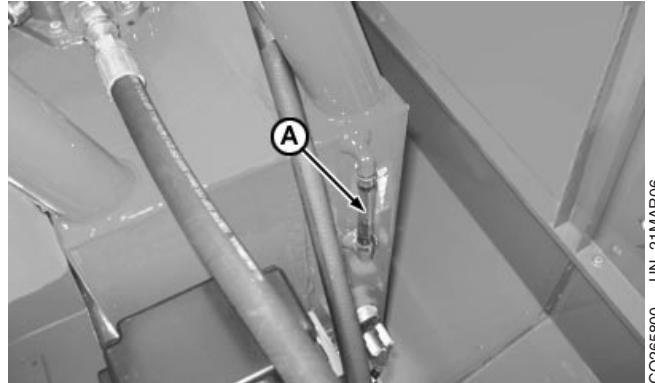
Hydrostatic System Oil Level

Check oil level at sight glass (A). Oil must be visible in center of sight glass (A). Top up with the recommended oil as necessary.

Consult capacity in the “Specifications” section.

Recommended oil: John Deere HY-GARD™.

HY-GARD is a registered trademark of the Deere & Company



CQ265800 -UN-21MAR06

ML70882,0000991 -19-24MAY06-1/1

Engine Coolant Level

Allow engine to cool. Coolant level should be at COLD mark.

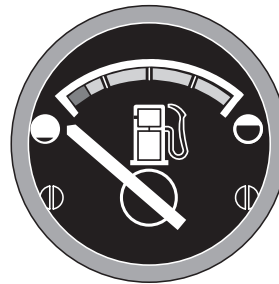


CQ278240 -UN-29AUG06

ML70882,0000A64 -19-29AUG06-1/1

Fuel Level

Turn the ignition on and check fuel level on fuel gauge.



CQ244310 -UN-29JUL05

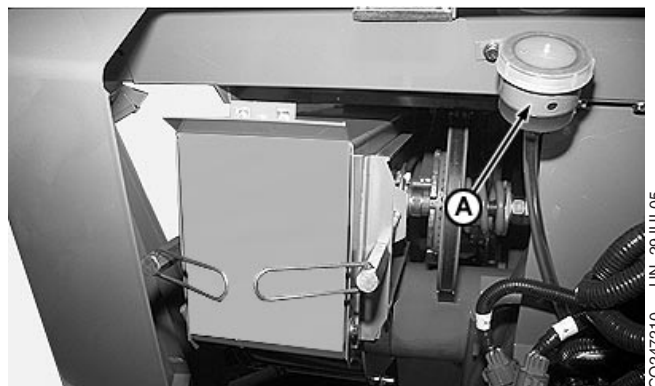
AG,CO03622,1504 -19-16AUG05-1/1

Brake Fluid for Brake System

The brake fluid reservoir (A) is located at the front of the combine next to the tailings elevator.

IMPORTANT: Use only brake fluid that meets the SAE J 1703 (DOT 4) standard.

Consult capacity in the “Specifications” section.



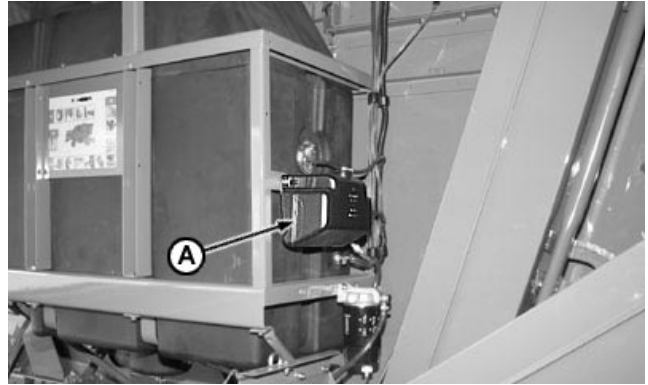
CQ247210 -UN-29JUL05

AG,CO03622,2067 -19-25AUG06-1/1

Windshield Washer Reservoir

Check and refill, if necessary, with clean water or automobile windshield washer solution.

Consult capacity in the “Specifications” section.



CO246580 -UN-29JUL05

CO03622,0000066 -19-16AUG05-1/1

After Long Storage Period

Bleed fuel system.

See “Service — Engine ” section.

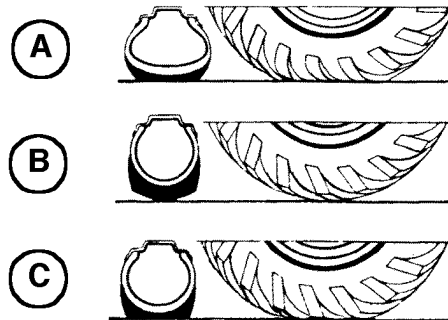
AG,CO03622,1505 -19-20AUG04-1/1

Tires

In addition to wearing rapidly, an under-inflated tire can slip on the rim and cut the valve stem.

See “Tire Inflation Pressure ” table for correct inflation pressure.

- A—Pressure Too Low
- B—Pressure Too High
- C—Correct Pressure



ZCQD1100

ZCQD1100 -UN-26JUN96

AG,CO03622,1506 -19-20AUG04-1/1

Preliminary Checks

Fuel System

If necessary, drain water and sediment deposits from fuel system.

See “Service — Engine ” section.

AG,CO03622,1507 -19-20AUG04-1/1

Combine Lubrication

Proceed according to the lubrication chart.

AG,CO03622,1508 -19-26SEP03-1/1

Operating the Engine

Breaking In The Engine

The engine is ready for normal operation. However, be extra cautious during the first 100 operating hours.

Observe the Following Points:

- Watch engine oil pressure (A) and coolant temperature (B) closely. If needle goes into the orange zone, reduce engine load immediately. Unless needle drops quickly, stop engine and determine cause.

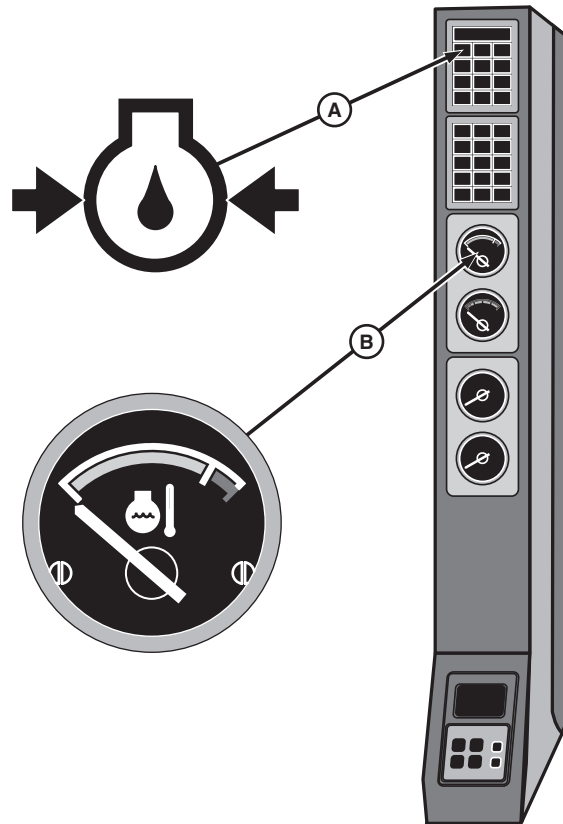
CAUTION: Do not remove radiator filler cap with hot engine. Stop engine and wait until engine has cooled down. Turn filler cap to first stop to relieve pressure before removing cap completely (Refer to “Change Engine Coolant”).

- Check engine oil level periodically, checking for any signs of leaks. See “Checking Engine Crankcase Oil Level”.

- Until you become thoroughly familiar with the sound and feel of your new combine, stay attentive and alert.

- During the first 20 operating hours, avoid high engine loads and do not idle the engine for more than 5 minutes.

Consult recommended type of engine oil under “Diesel Engine Oil”.



CQ250930 -UN-05SEP05

ML70882,0000899 -19-17SEP05-1/1

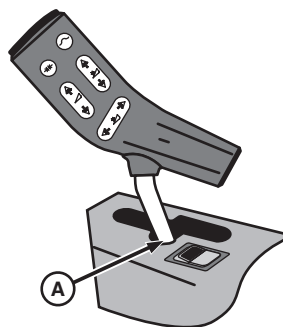
Safety Rules For Starting Engine

CAUTION: Make sure that everybody is clear of the combine harvester. Sound the horn to warn people close by. Never run the engine in a closed space without an effective exhaust system. Make sure there is plenty of ventilation.

AG,CO03622,1511 -19-04AUG99-1/1

Before Starting the Engine

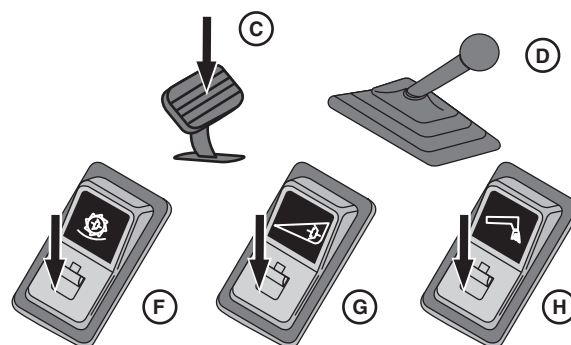
- ☐ The multi-function control handle (A) must be in neutral.
- ☐ Key switch (B) must be ON.
- ☐ Set parking brake (C).
- ☐ Engine idling (D).
- ☐ Separator drive (F), cutting platform (G) and unloading auger drive (H) switched OFF.



CQ246890 -UN-29JUL05



CQ216342 -UN-17AUG05



CQ273920 -UN-20JUN06

ML70882,00009DD -19-16JUN06-1/1

Starting the Engine

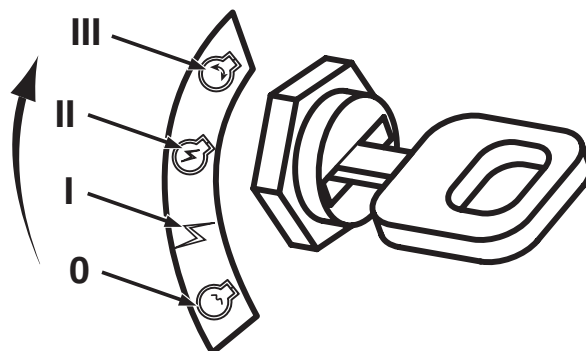
NOTE: With starter switch in “operating position” (position II), emergency stop, engine oil pressure and alternator indicator lights will come on.

CAUTION: For safety reasons, sound horn before starting the engine or operating the combine. Start engine seated in operator’s seat only.

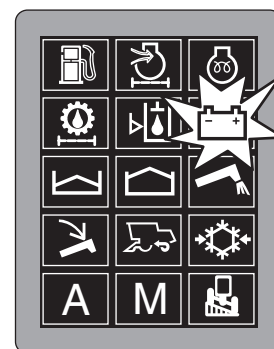
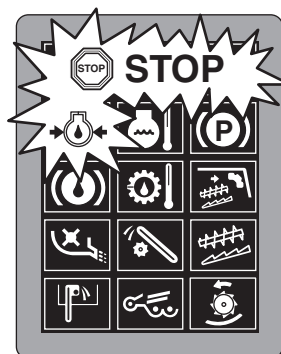
Turn key to position “start engine”(position III). As soon as engine starts, release key.

CAUTION: Never hold key in “Start Engine” position for longer than 20 seconds.

IMPORTANT: If engine does not start within 20 seconds, wait at least two (2) minutes before trying again. Do not try to start engine more than four (4) times.



CQ246950 -UN-29JUL05



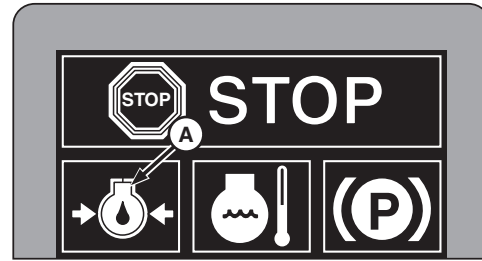
CQ246930 -UN-29JUL05

ML70882,00009DE -19-06JUL06-1/1

Engine Oil Pressure Indicator Light

Immediately after starting the engine, check that this indicator light goes out. If engine oil pressure indicator light (A) does not turn off after starting engine, stop engine immediately and remedy the fault.

The other indicator lights should also go out immediately after starting engine.



CQ246970 -JUN-29JUL05

AG,CO03622,1515 -19-01AUG05-1/1

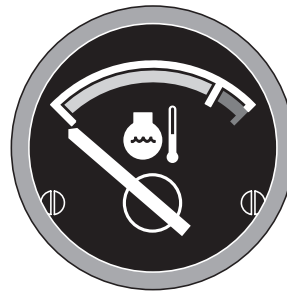
Warming Up Engine

Run engine at low idle.

Run a cold engine for approx. 1—2 minutes at this speed. At ambient temperatures below freezing, extend this warming up period to 2—4 minutes.

IMPORTANT: Never run engine without load for more than 5 minutes.

Do not increase engine speed to maximum rpm unless needle of coolant temperature gauge is in the yellow-green zone.



CQ244330 -JUN-29JUL05

AG,CO03622,1516 -19-01AUG05-1/1

Starting the Engine by Means of a Booster Battery

In very severe cold weather it may be necessary to connect an additional 12-volt battery in parallel with the harvester's batteries.

CAUTION: Gas given off by batteries is explosive. Avoid sparks or open flames near batteries. Make sure batteries are properly connected (ground cable to negative pole and starter cable to positive pole).

IMPORTANT: Reversed polarity between the battery and alternator may result in severe damage to the electrical system. Always connect ground cable to negative pole last.



TS204 -UN-23AUG88

AG.CO03622,1519 -19-14MAR02-1/1

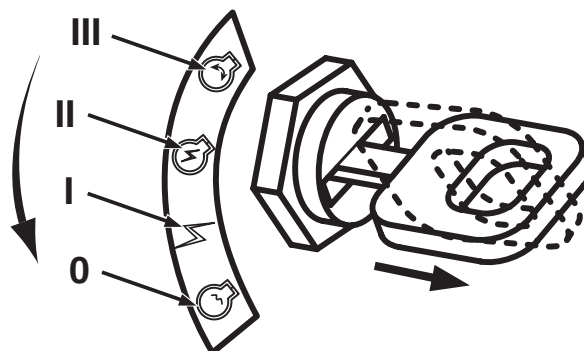
Shutting Off the Engine

CAUTION: Always remove key before leaving operator's cab.

Never run engine without load for more than 5 minutes. Allowing the engine to idle at low rpm uses fuel inefficiently and can cause a build-up of carbon residue in the engine.

IMPORTANT: Before finally shutting off engine, run at slow idle for 1—2 minutes to allow engine to cool down.

- Put multi-function control handle in neutral.
- Disengage all drives.
- Engage parking brake.
- Lower cutting platform to ground.
- Set throttle lever to idle.
- Turn starter key to position "0".



CQ246960 -UN-29JUL05

ML70882,00009DF -19-06JUL06-1/1

Stalling of Engine

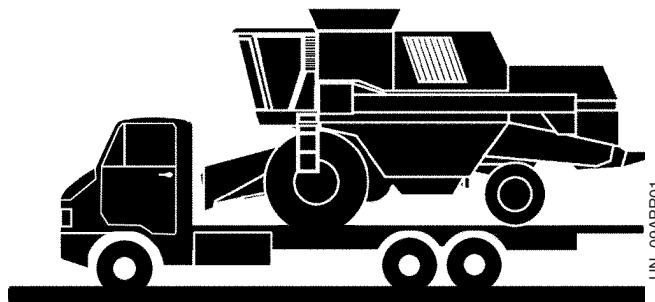
IMPORTANT: If engine stalls at operating temperature, restart it immediately. This prevents engine overheating. Before turning engine off, execute procedures described in “Shutting off the Engine”.

ML70882,0000843 -19-17AUG05-1/1

Operating and Transporting Combine

Transporting The Combine on a Truck

Whenever transporting the combine in a truck, make sure that the side shields are firmly fastened in place so that they may not accidentally open during transport.



CQ203970

CO03622,0000061 -19-04FEB02-1/1

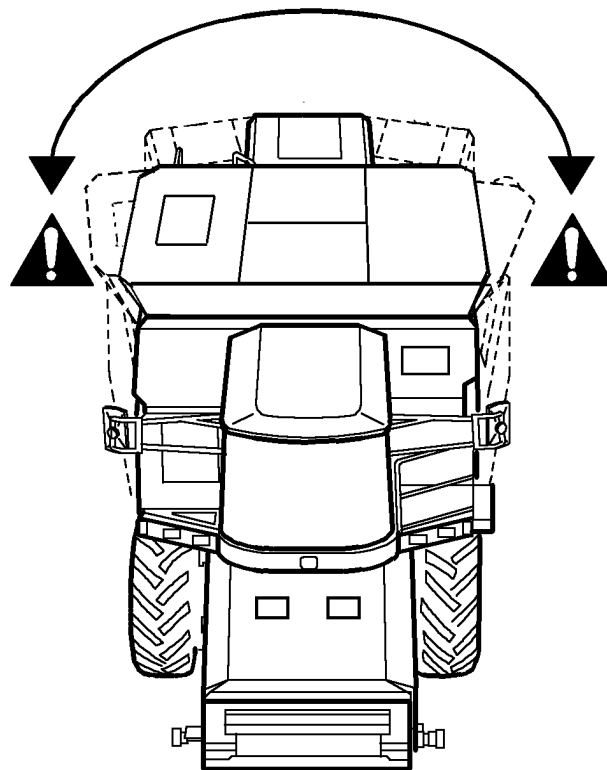
CO203970 -UN-09APR01

Steering and Driving



CAUTION: The rear (tail) of combine harvester swings out when changing direction. Take care on bends.

The steering wheels are located at the rear of the combine harvester. Therefore, familiarize yourself with the different steering characteristics.



CQ192070

AG,CO03622,1524 -19-04AUG99-1/1

CQ192070 -UN-01NOV99

Forward and Reverse Travel



CAUTION: Always adapt combine ground speed to road or field conditions.

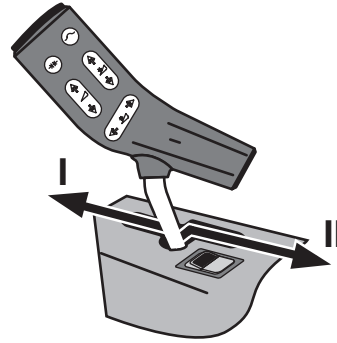
Forward travel (I)

Push multi-function control handle forward.

Reverse travel (II)

Pull multi-function control handle to the rear.

IMPORTANT: It is recommended to select a lower speed. This will provide more efficient hydrostatic drive performance.



CQ246910 -UN-29JUL05

ML70882,000084D -19-17SEP05-1/1

Avoid Overheating of Hydrostatic System

When hydrostatic oil temperature increases, the indicator light and “STOP” warning light glow and an intermittent warning signal sounds.

In this situation, reduce speed in order to increase the efficiency of the hydrostatic system and lower oil temperature.

IMPORTANT: If the hydrostatic drive stalls, never wait more than 5 seconds before shifting the multifunction control handle back to “Neutral”. Reduce speed immediately.

NOTE: Drive wheel torque depends on oil pressure in hydrostatic system. If the pressure requirement exceeds the pressure in the hydrostatic system, a pressure release valve will open and the combine harvester will stop. As soon as the pressure demand drops (i.e. a lower speed range is selected), the combine harvester will travel normally again.



CQ247000 -UN-29JUL05

AG,CO03622,1532 -19-16AUG05-1/1

Transport Information



CAUTION: To reduce risk of electrical shock, no portion of machine should exceed a height of 4 m (13 ft).



CAUTION: Check local governmental regulations regarding driving or towing equipment on public roads. Use auxiliary lights and devices available from your John Deere dealer to warn other road users.

The combine harvester can be transported on a flatbed carrier, on a trailer specifically adapted for this purpose (duly marked as an excessively wide load), or by towing.

Do not exceed a speed of 20 km/h (12.4 mph).

For more information, see "Towing the Combine".

AG,CO03622,1533 -19-11AUG06-1/1

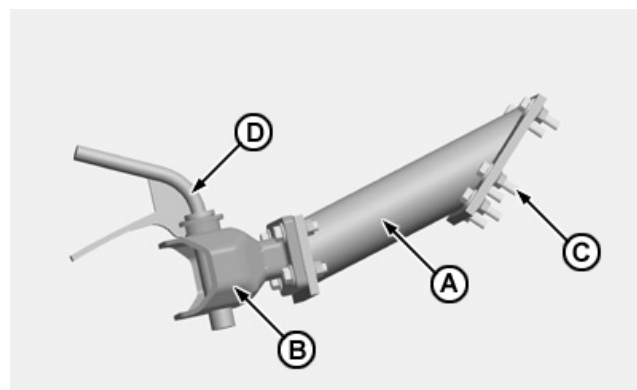
Trailer Hitch

IMPORTANT: Stop machine on a flat surface, shut off engine and set parking brake.

Hitch (A) is used to hook up header trailers to combine. It has a rotating end (B) to facilitate hooking up.

Attach it to combine rear axle by means of four bolts (C). Hook up trailer to rotating end (B) with pin (D).

NOTE: Connect trailer clearance lights connector to combine at point next to hitch (A).



Hitch

ML70882,0000948 -19-06JUN06-1/1

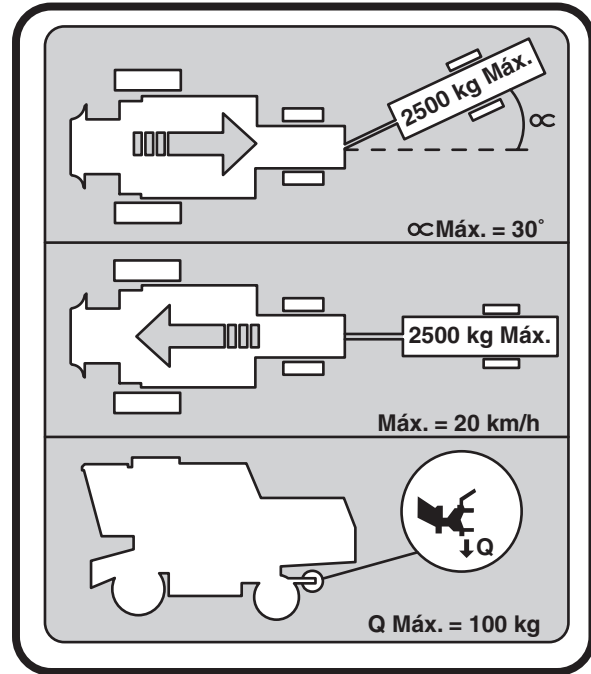
Towing Trailer



CAUTION: DO NOT exceed specified values. Excessive loading or speeding could result in bodily injury or machine damage.

If towing a trailer, make sure maximum draft load and maximum vertical load on hitch are not greater than 2500 Kg (5511 lb) and 100 Kg (220 lb), respectively.

Do not tow trailer at a speed greater than 20 km/h (12.4 mph) and, if the combine reverses with trailer connected, the trailer maximum angle of lateral tilt should not exceed 30°, as shown.



CQ277500 -UN-11AUG06

ML70882,00009C7 -19-11AUG06-1/1

Transporting Under Own Power

Remove **head**, if overall width exceeds legal limits (for details of head removal, see "Head OM"). Move the feeder house to transport position.

Move **straw chopper baffles** to transport position.

Empty the **grain tank**.

Swing in the **unloading auger**.

Raise and secure the **access ladder**.

Switch on **lighting**, if necessary.

For general information on driving, see this section.



CAUTION: For safety reasons, always couple the two brake pedals by means of pedal coupler when driving on public roads. This ensures the brakes are enabled together. See "Foot Brakes", in the "Operator's Cab" section for more details.

AG,CO03622,1534 -19-01AUG05-1/1

Towing the Combine

1. Prepare combine as shown under "Driving Combine on Public Roads".

CAUTION: Never tow combine with a wire rope. Always use a suitable towing bar. Connect towing bar to towing eye on front axle.

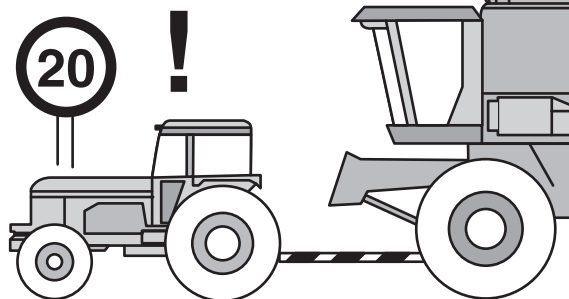
2. Tow combine at a safe and suitable gear, not to exceed 20 km/h (12.4 mph).

IMPORTANT: Towing at speeds above 20 km/h (12.4 mph) may damage tires, transmission and final drives.

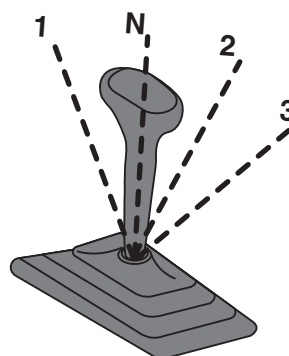
NOTE: Comply with local traffic regulations when towing the combine, e.g. turn on hazard warning lights, display warning signs etc.

3. Release parking brake
4. Place gearshift lever in neutral position.

IMPORTANT: While towing, it is essential that gearshift lever is in neutral.



CQ265860 -UN-16FEB06



CQ245020 -UN-29JUL05

ML70882.0000846 -19-16JUN06-1/1

Operating the Combine

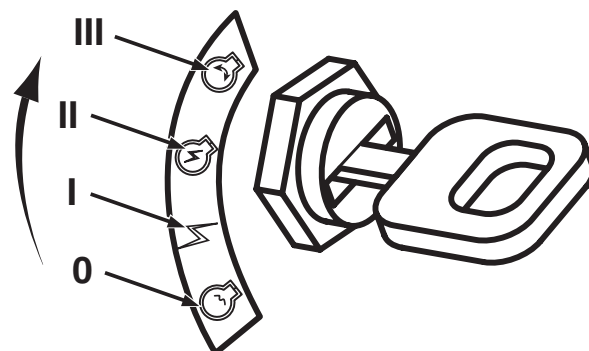
1. Prepare the combine for the type of crop to be harvested.

NOTE: See information on preparation in this section.

2. Prepare and hook up header to combine.

NOTE: See header preparation and coupling information in the Cutting Platform Operator's Manual.

3. Start engine, leaving it running at slow idle.



CQ246950 -UN-29JUL05

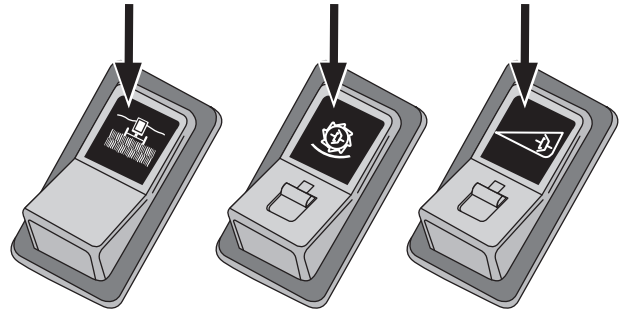
Continued on next page

ML70882.00009E0 -19-16JUN06-1/4

4. Move road safety switch to field position.

IMPORTANT: Always engage separating system with engine in slow idle.

5. Switch on separator.
6. Engage header.



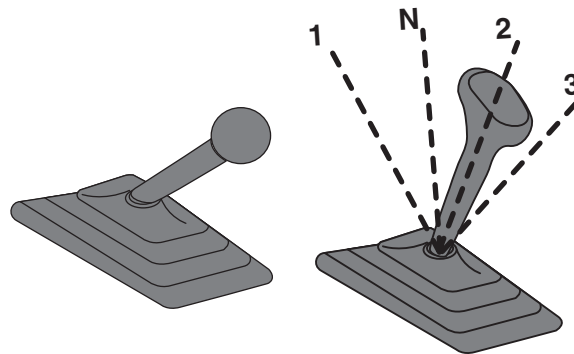
CQ247010 -UN-29JUL05

ML70882,00009E0 -19-16JUN06-2/4

7. Set engine to maximum rpm.

8. Engage a gear.

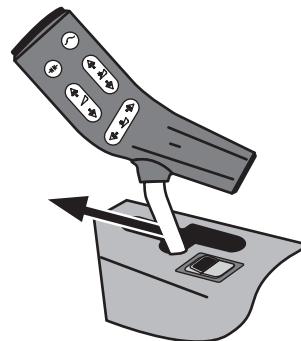
NOTE: Second gear is the most indicated for all-around field performance. Third gear is not recommended for field operations, only for transport.



CQ273930 -UN-20JUN06

ML70882,00009E0 -19-16JUN06-3/4

9. Move multi-function control handle to adapt ground speed to harvesting conditions.



CQ247030 -UN-29JUL05

ML70882,00009E0 -19-16JUN06-4/4

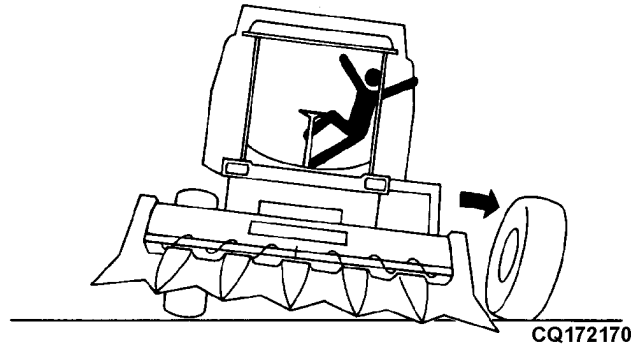
Wheels, Axles and Counterweights

Tightening Wheel Nuts



CAUTION: Avoid accidents. Do not forget to periodically retighten wheel nuts.

Tighten wheel nuts according to the time intervals defined in this manual.



CO172170 -UN-11SEP98

ML70882,00004B4 -19-22JUL04-1/1

Tire Maintenance

Check tires daily for damage and correct tire pressure. Long life and satisfactory performance depend on proper tire inflation.

Have cuts or tears repaired as soon as possible, or replace tire.

Protect tires from unnecessary exposure to sunlight, petroleum products and chemicals.

Drive the combine with care. Try to avoid rocks and sharp objects.

AG.CO03622,1537 -19-05AUG99-1/1

Tubeless Tires

The majority of front wheel tires and all rear wheel tires are tubeless. A small puncture in a tubeless tire can be repaired without disassembling the wheel, thus avoiding down time.

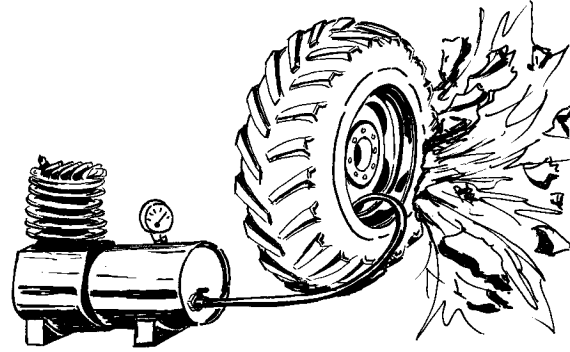
IMPORTANT: A permanent, inside-out repair should be made as soon as possible to prevent any further tire damage.

AG.CO03622,2659 -19-26JAN00-1/1

Mounting Tires



CAUTION: Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified tire repair service. When seating tire beads on rims, never exceed maximum inflation pressures specified by tire manufacturers. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, re-lubricate bead and re-inflate. Detailed agricultural tire mounting instructions, including the necessary safety precautions, are available from your local tire manufacturer agents.



Z 20924

Z20924 -UN-15AUG94

IMPORTANT: Never operate combine harvester with tires at shipping pressure. Keep valve caps screwed down on valve stems to prevent foreign material from accumulating in the valve core. Check tire pressure frequently, referring to tire pressure charts. Required pressure may vary as load changes with the installation of different head units.

AG,CO03622,1541 -19-01AUG05-1/1

Installing Front Wheels



CAUTION: PREVENT accidents. Install safety stop. Without the safety stop (A) in place, the feeder house could fall down without warning, causing serious injury by crushing or even death.

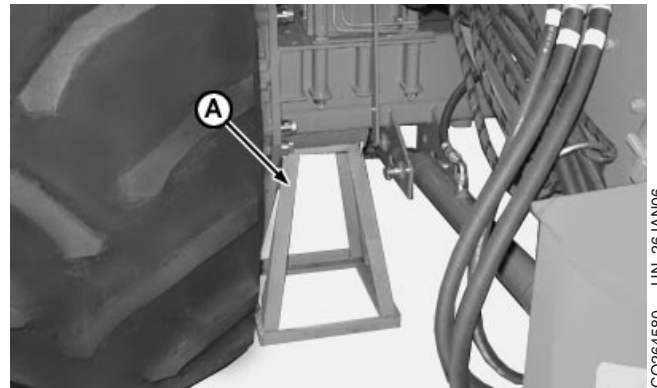
IMPORTANT: Wheel assemblies are heavy, awkward to handle and difficult to control due to offset of tire and rim. Two service technicians are required for wheel removal.



CO222760 -UN-17MAR04

ML70882,00007BE -19-17MAR06-1/6

1. Raise front end of combine using jack, observing combine support points.
2. Support combine on blocks or jackstand (A) under front axle, making sure there is no load shift.



CO264580 -UN-26JAN06

ML70882,00007BE -19-17MAR06-2/6

IMPORTANT: Bolts/nuts must be clean and free of lube before installing. Torque value is for clean, dry bolts/nuts. Lubricating reduces friction and overloads bolts/nuts.

3. Tighten nuts and bolts according to recommended torque sequence.



Torque Sequence

CO221010 -UN-05AUG04

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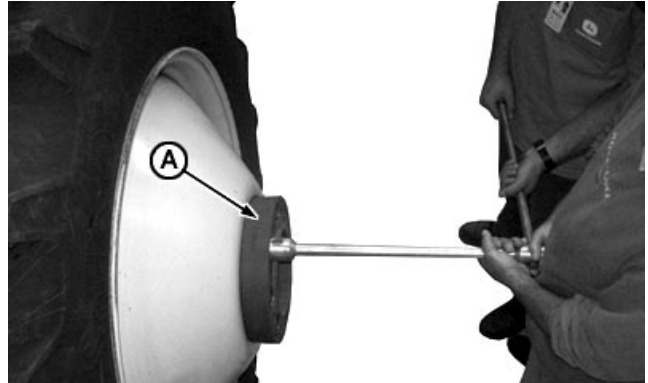
ML70882,00007BE -19-17MAR06-3/6

Double wheel combine:

1. Place inner wheel and spacer (A) on final drive and install nuts.
2. Sustain wrench as shown, tighten inner front wheel nuts.

Specification

Inner front wheel nuts (double wheel)—Torque 550 N•m (405 lb-ft)



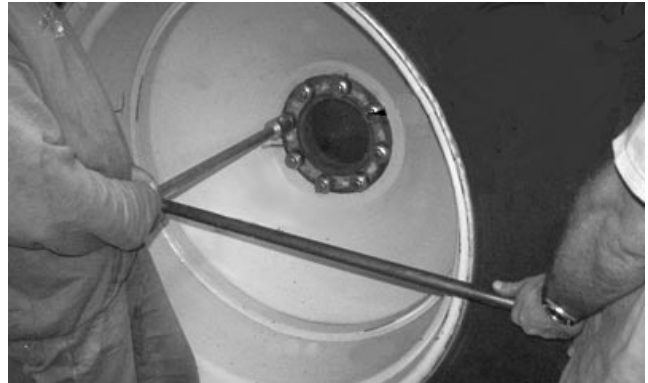
CQ242790 -UN-06JUN05

ML70882,00007BE -19-17MAR06-4/6

3. Position outer wheel and install flanged bolts.(M22x85x1.5 - 10.9).
4. Sustain wrench as shown, tighten bolts to specification.

Specification

Flanged bolts of external front wheels (double wheel)—Torque.....550 N•m (405 lb-ft)



CQ242801 -UN-17MAR06

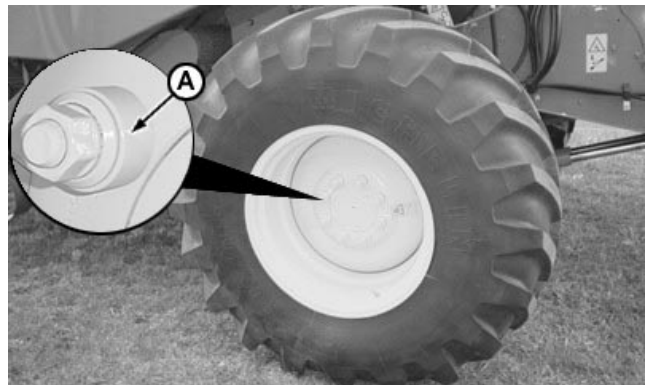
ML70882,00007BE -19-17MAR06-5/6

Single wheel combine:

1. Position wheel and install nuts with bushings (A). Tighten nuts to the specified torque.

Specification

Front wheel nuts (single wheel)—Torque 550 N•m (405 lb-ft)



CQ265810 -UN-16FEB06

ML70882,00007BE -19-17MAR06-6/6

Installing Rear Wheels



CAUTION: PREVENT accidents. Support machine adequately. Machine tipping over can cause serious crushing injuries or even death.

IMPORTANT: Wheel nuts must be clean and free of lube before installing. Torque value is for clean, dry nuts. Lubricating reduces friction and overloads the nuts.

1. Park machine on a flat surface and set parking brake.
2. Install rear tires and tighten nuts to specification.

Specification

Rear Wheel Attaching Nuts—

Torque 180 N•m (133 lb-ft)



CO221000 -UN-21NOV03

ML70882,000099F -19-25MAY06-1/1

Changing Tires

IMPORTANT: When changing drive wheels, tire radius may also change. If so, the Infotrak Monitor must be adjusted to the new tire radius. See “Tire Radius Code” to adjust monitor.

AG,CO03622,1542 -19-20AUG04-1/1

Support Points for Raising Combine

CAUTION: Always empty grain tank before raising the combine.

Always place adequate equipment under support points (A) when you raise combine.

A—Support points (2 points on front axle and 2 points on rear axle)



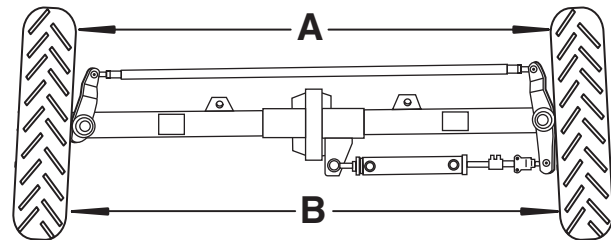
CQ247510 -UN-29JUL05

OU83340,00003F1 -19-01AUG05-1/1

Rear Axle Toe-In

Whenever combine becomes difficult to steer or rear tires begin to wear unevenly, check rear wheel toe-in.

1. On a flat surface, straighten rear wheels.
2. Mark a point at the upper center part of each tire. Measure distance (A).
3. Drive Combine half turn back (180°), that is, marks on tires are now at lowest part of wheel.
4. Measure distance (B). It should be 10 mm (0.4 in.) bigger than distance (A).
5. To adjust, loosen locknuts at both ends of tie rod and adjust tie rod length.



A—Distance
B—Distance

CQ282560 -UN-03JAN06

AG,GG05155,271 -19-06APR06-1/1

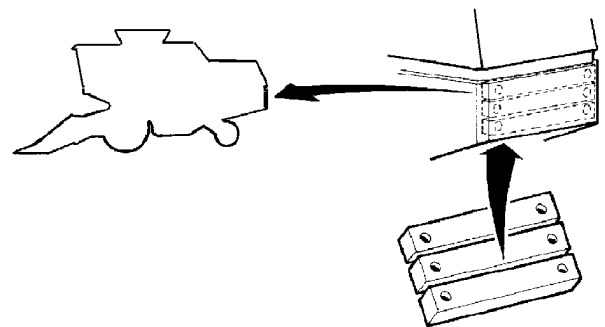
Tire Inflation Pressures

FRONT TIRE INFLATION PRESSURES				REAR TIRE INFLATION PRESSURES		
Size	bar	psi		Size	bar	psi
18.4 -30 R1 10 PR.	2,1	30		10.5/80-18 L1 6 PR.	2,3	32
18.4-30 R1 12 PR.	2,5	36		10.5/80-18 L1 10 PR.	3,8	54
18.4-38 R1 10 PR.	2,1	30		12.4/11-24 R1 6 PR.	2,0	28
18.4-38 R1 12 PR.	2,4	34		12.4 -24 R1 10 PR.	2,8	40
18.4-38 R1 14 PR.	2,5	36		14.9-24 R1 8 PR.	1,6	23
23.1-26 R1 12 PR.	1,7	24		14.9-24 R2 8 PR.	1,8	26
23.1-26 R2 12 PR.	1,7	24		16.9 -24 R1 10 PR.	1,8	26
23.1-30 R1 12 PR.	2,0	28		16.9-24 R4 8 PR.	1,8	26
23.1-30 R2 10 PR.	1,4	20		335-80 R20 *	2,8	40
28.1-26 R1 14 PR.	2,3	32		440/65 R 24 *	1,6	23
28L26 R1 12 PR.	1,8	26		540/65 R 24 *	1,3	18
750-65 R26*	1,6	23				
620/75 R 30 *	1,6	23				
650/75 R 32 *	1,7	24				
800/65 R 32 *	1,4	20				
24.5-32 R1 12 PR.	1,8	26		PR - Ply no		
30.5-32 R1 12 PR.	1,4	28		* Radial Tires		

ML70882,00004AC -19-22DEC06-1/1

Counterweights

Counterweights mounted on the rear shield improve combine stability when harvesting on slopes.



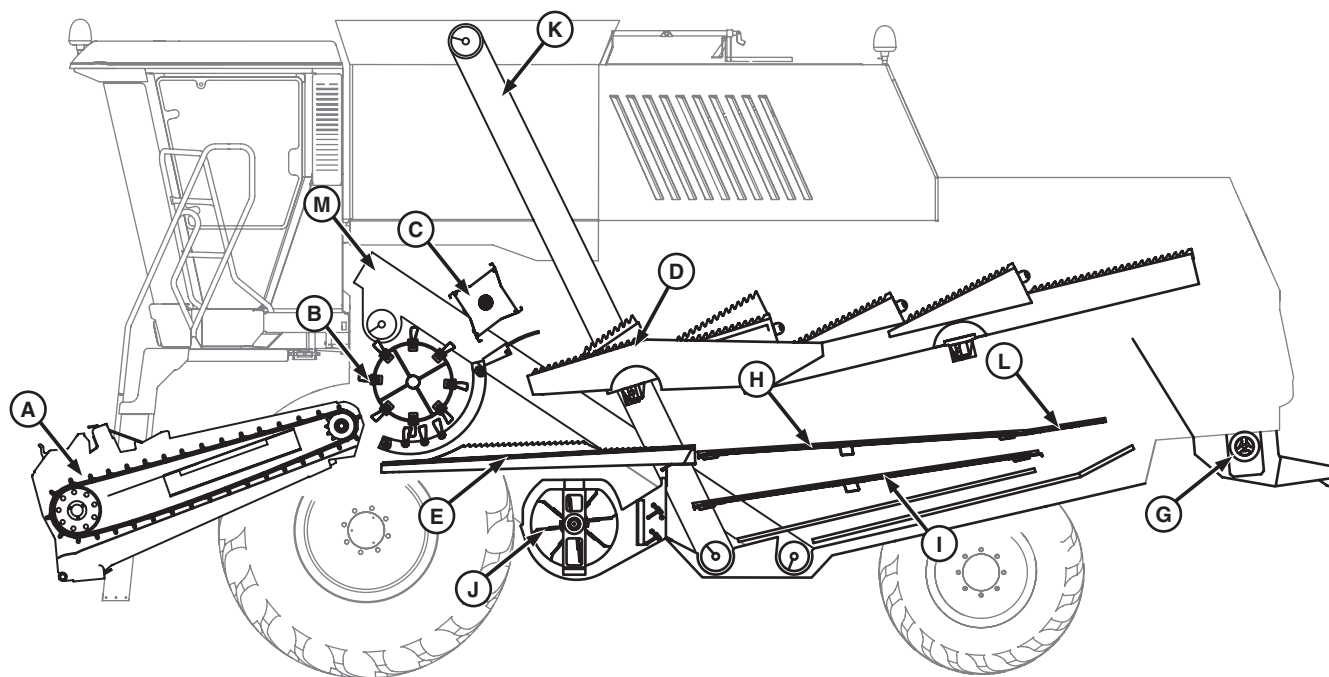
CQ192090

CQ192090 -UN-01NOV99

AG,CO03622,1545 -19-05AUG99-1/1

Setup and Operation

Combine Operation



CQ266370 -UN-02MAR06

Crop cut by header is sent to feeder house (A) that has the function to transport crop into threshing cylinder (B) and concave.

NOTE: *Cutting platform operation is described in the platform's Operator's Manual.*

For feeder house adjustment, see "Service — Feeder House" section.

Threshed grain, fine straw and some tailings (ear tips or husks) fall through openings in concave onto grain pan (E).

The overshot beater (C) receives straw threshed by threshing cylinder and throws it on straw walkers (D).

The straw walkers separate the remaining grain from the straw. Grain falls into pan (E) and the straw leaves the combine via straw chopper (G) where straw is chopped.

Threshed grain and fines are carried to the cleaner which consists of upper (H) and lower (I) sieves and the fan (J). The fan blows out the fines and the clean grain falls through the sieves.

The clean grain elevator (K) transports the grain to grain tank.

Any tailings (ear tips or husks) fall through the upper screen extension (L) and are carried by the tallings elevator (M) for rethreshing.

ML70882,0000911 -19-21MAR06-1/1

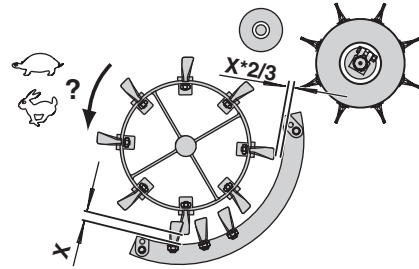
Grain Separating Process

The threshing system is the most important component of the combine.

Adjust threshing cylinder speed and concave spacing according to harvesting and soil conditions.

Fine seeds and normal grain crops	High threshing cylinder speed and narrow concave spacing.
Coarse crop	Low threshing cylinder speed and wide concave spacing.
Front clearance	X
Rear clearance	Approximately $\frac{2}{3}$ of X.

Adjust concave opening as described in “Adjusting Opening between Concave and Threshing Cylinder”.



CQ251670 -UN-21MAR06

ML70882,00008B0 -19-21MAR06-1/1

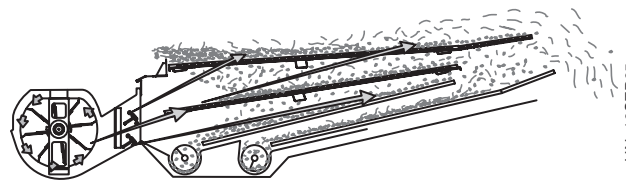
Grain Cleaning Process

The effectiveness of the chaffer and grain sieve separating action is increased by fan blast. Thus the chaff, which is lighter than grain, is blown to the rear.

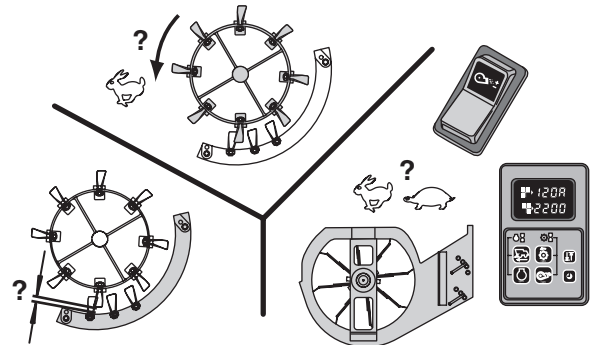
NOTE: Air flow should be as strong as possible and grain loss should be kept to a minimum.

As a result of “overthreshing”, the cleaning unit becomes overloaded, resulting in poor separation of grain from chaff. If there is a considerable amount of grain, it is dragged outside of the combine together with the straw.

- Is there insufficient concave spacing?
- Is there excessive threshing cylinder speed?
- Is intensity of air blast corresponding to sieve load?



CQ251990 -UN-16SEP05



CQ251570 -UN-13SEP05

ML70882,00008B1 -19-19SEP05-1/1

Grain Recovery Process

Clean Grain

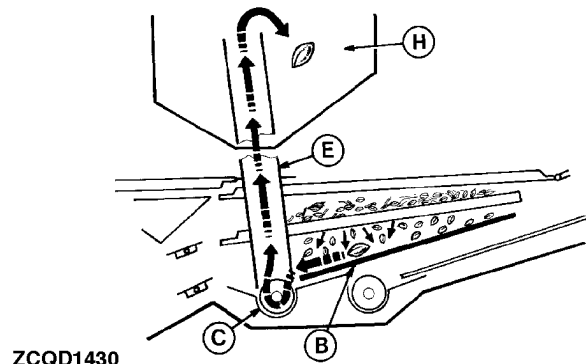
Grain passing through the grain screen falls on the grain collector (B).

From there it is carried to the lower grain auger (C) which transports it via the grain elevator (E) to the grain tank (H).

Rethreshing

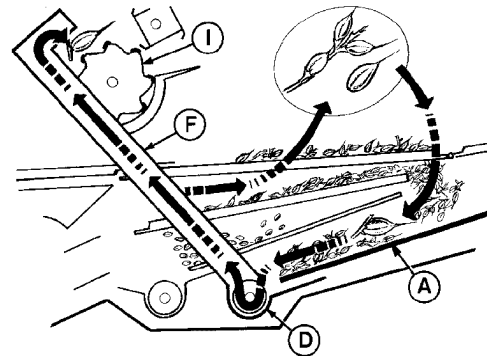
Unthreshed pod, head or ear tips passing via the chaffer extension and carried beyond the end of the grain screen fall on the tailings collector (A). From there they slide to the lower tailings auger (D).

This material is then carried by the tailings elevator (E) to the front of the threshing cylinder (I) where an auger uniformly distributes it in the separator to be threshed.



ZCQD1430

ZCQD1430 -UN-04APR96



ZCQD1440

ZCQD1440 -UN-04APR96

AG.CO03622.1562 -19-17AUG99-1/1

Identifying Problems

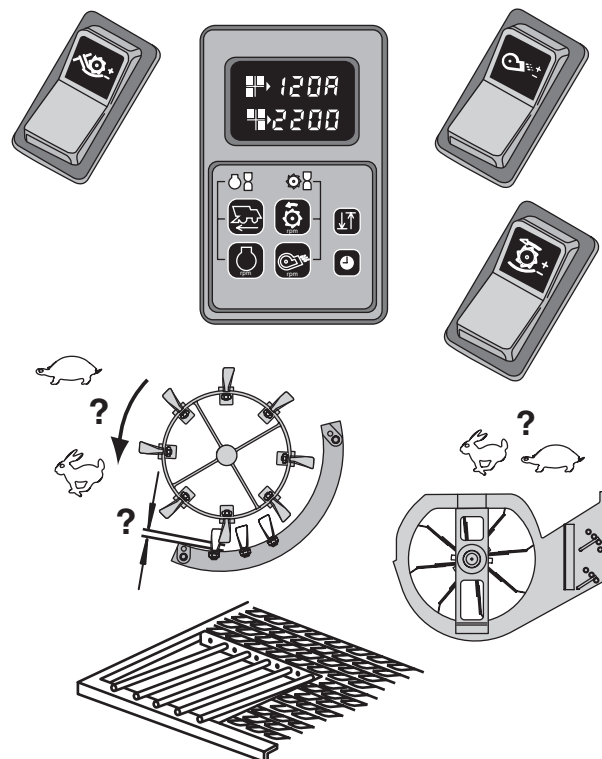
Correct combine operation depends on various factors that should be considered every time you carry out adjustments to combine.

Have a closer look at the following factors:

- Adjusting Threshing Cylinder and Concave
- Adjusting Chaffer
- Adjusting Fan Speed
- Slope Master System

Incorrect adjustments of these and other components of the machine can lead to serious problems and can cause grain damage or loss, for instance.

If threshing is not satisfactory, check if all adjustments are set according to harvesting and soil conditions.



CO252420 -UN-16SEP05

ML70882.00008B2 -19-19SEP05-1/1

Adjusting Threshing Cylinder and Concave

IMPORTANT: Threshing cylinder speed and concave spacing are the two most important factors in obtaining good harvesting results.

Adjust spacing between concave and cylinder in order to obtain **optimum threshing performance**.

Incorrect adjustment:

Threshing cylinder speed too high + Concave spacing at minimum = **Overthreshing**

Insufficient threshing cylinder speed + Maximum concave spacing = **Insufficient threshing**

NOTE: Overthreshing or insufficient threshing are normally caused by inadequate threshing cylinder speed or concave spacing.

Start with threshing cylinder speed adjustment. As a rule, reduce/increase speed by only 5%. Check the result of this change before changing any other settings.

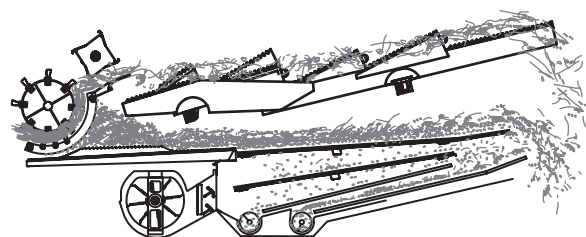
If the problem is not solved by a 10% reduction in threshing cylinder speed, open/close concave spacing slightly. If these steps do not correct improper threshing, try reducing/increasing combine ground speed. **A very high crop volume and very high ground speed can cause underthreshing.**

IMPORTANT: Always check results before attempting further adjustments. Never change any adjustment by more than 5% at a time.

Correct adjustment:

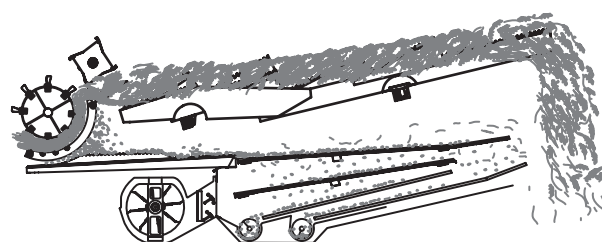
Moist crop: Increase cylinder speed and/or reduce concave spacing.

Dry crop: Reduce cylinder speed and/or increase concave spacing.



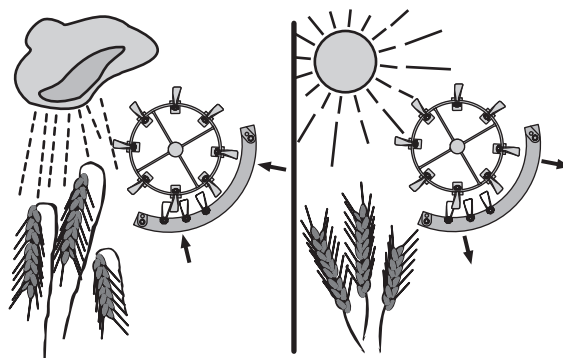
Overthreshing

CQ266380 -UN-21FEB06



Insufficient threshing

CQ266390 -UN-21FEB06



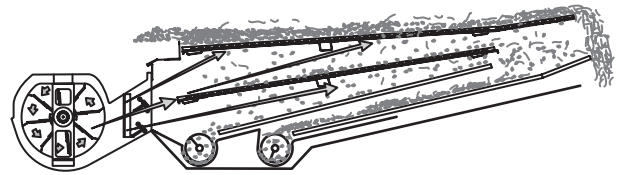
CQ252430 -UN-16SEP05

Adjusting Fan Speed

Before adjusting fan speed, open chaffer and sieve to the maximum recommended openings, as in “Combine Settings” chart). Then start with the lowest fan speed suggested and gradually increase fan speed until the maximum amount of chaff is expelled without blowing grain out of the combine or into the tailings return.

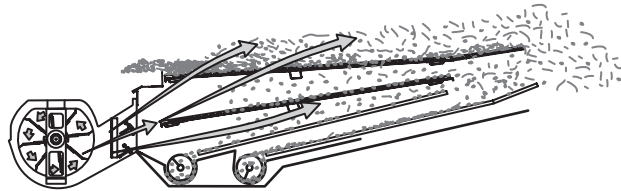
Check the results carefully. After reaching the maximum acceptable fan speed, continue to make minor adjustments to the chaffer (Consult “Adjusting Sieves”). If necessary, change fan speed again, until the best result is achieved.

NOTE: Always check results before attempting further adjustments.



Fan blast too low, insufficient cleaning

—JUN-13FEB06
CQ252040



Fan blast too strong, grain is being lost

—JUN-13FEB06
CQ252030

ML70882.00008A2 —19-17SEP05-1/1

Adjusting Sieves

Open or close chaffer sufficiently to let grain fall through before it passes the whole length of sieve. If chaffer is excessively open, this may overload grain sieve with chaff. If chaffer is not sufficiently open, some grain can be lost.

Final cleaning is done by the grain sieve. It has to be sufficiently open to allow clean grain fall easily and straw and chaff be retained. If grain sieve is excessively closed, grain will move to tailings. There might be grain damage in tailings procedure. If grain sieve is excessively closed, impurities will be conveyed to grain tank.

Grain losses in the cleaning unit may be caused by:

1. Too little fan blast or too narrow chaffer openings, facilitating plugging.
2. Too much fan blast, blowing grain out of combine.

It is important to know which of the reasons above is causing grain losses to be able to carry out correct adjustment.

IMPORTANT: Always check results before attempting further adjustments.

If caused by overthreshing or insufficient fan blast. Check amount and condition of straw. If straw seems excessively broken or chewed, threshing cylinder and concave should be adjusted to reduce overthreshing.

If straw is not broken or cut, more air is required to lift it slightly. Before attempting further adjustments, check results. If the problem is excessive fan blast, there will be little chaff and straw in chaffer. Reduce fan speed and check results.

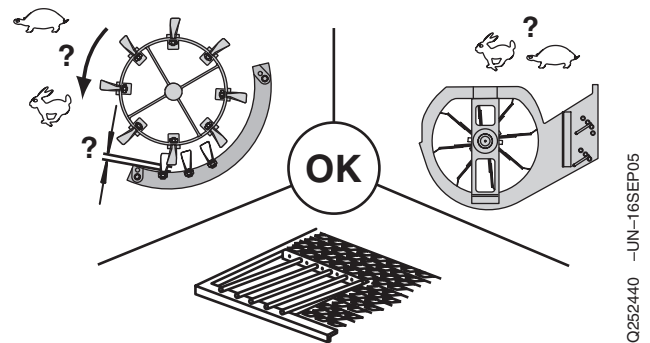
Consult more detailed information under "Cleaning System", in section "Threshing System, Separation and Cleaning".

ML70882,00008A3 -19-17SEP05-1/1

Inadequate Tailings

Check the following:

- Is the chaffer extension correctly adjusted?
- Concave spacing is set according to crop being harvested?
- Is the cylinder speed correct?
- Fan speed is set excessively?



ML70882,00008A4 -19-17SEP05-1/1

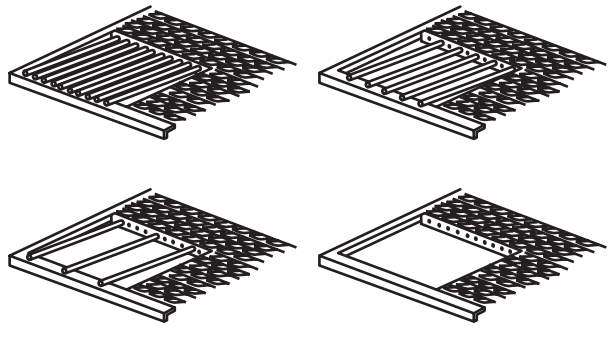
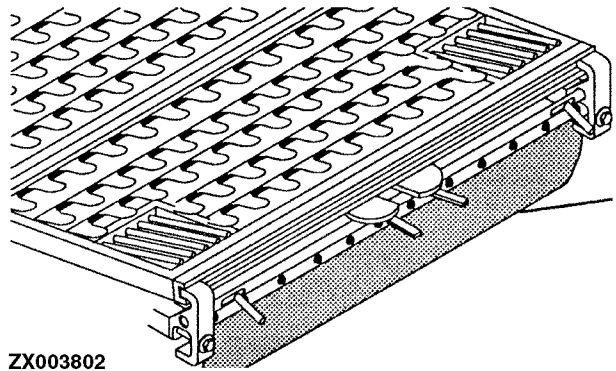
Slope Master System

When operating the combine on a slope, special inserts at the left-hand and right-hand sides of the chaffer extension collect grain rolling across the separator and return it via tailings elevator.

Vary the quantity of tines to suit harvesting conditions, type of crop and combine tilt by adding or removing tines. The combine is delivered from the factory with 11 tines installed on chaffer extension.

Any change in the number of tines primarily affects the amount of tailings; i.e. if no tines or only a few tines are installed, a high percentage of tailings will occur; if all the tines are installed, very little tailings occur.

Consult "Slope Master System for Hilly Terrain" to find out how to remove tines.



AG,CO03622,1573 -19-19SEP05-1/1

Causes of Grain Loss

After adjusting the combine to get the best results, any further loss of grain can be categorized according to the area where it occurs.

Grain losses fall into four groups:

1. Header Losses

2. Threshing System Losses
3. Separating System Losses
4. Cleaning System Losses

NOTE: Reduce ground speed if losses can not be reduced.

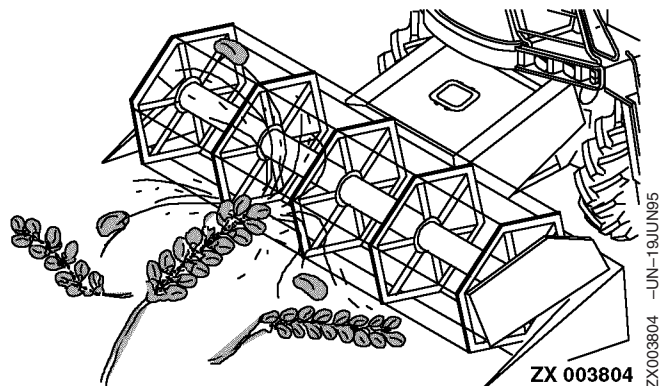
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Head Losses

Head losses include husks, ears and tips which fail to get picked up or grain shattered by reel impact.

Calculating Loss

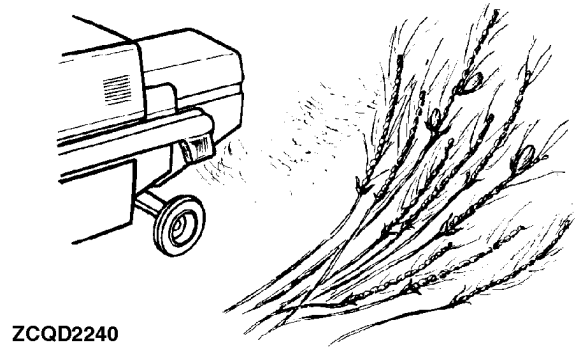
Compare the number of grains in a certain area before and after the head has passed through.



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Threshing System Losses

Grain losses are manifest by grain which is lost in threshing cylinder and concave.



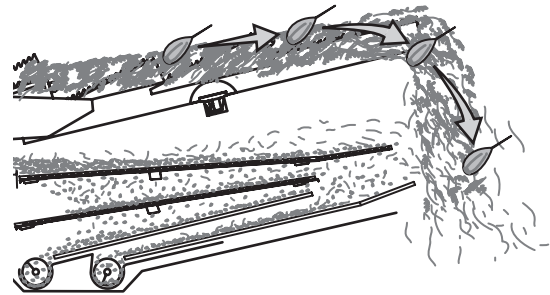
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ML70882,00008A6 -19-17SEP05-1/1

Separating System Losses

These are grains that could not be separated by straw walkers and are carried out of the combine.

NOTE: Avoid insufficient threshing which causes system overload.



CQ266400 -UN-21FEB06

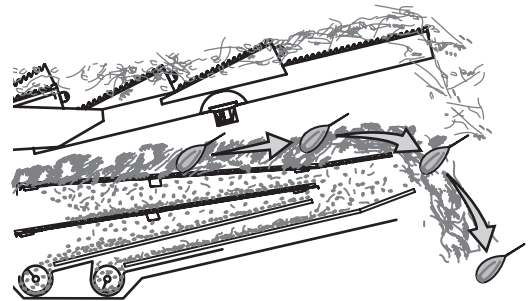
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Cleaning System Losses

Lose grain carried over the sieve and falling onto the ground due to incorrect sieve adjustment. With correct sieve adjustment, losses will be small and remain constant.

Causes of grain loss in the sieves are:

- Incorrect cleaning fan speed.
- Incorrect air direction.
- Sieves incorrectly adjusted.
- Sieves overloaded because of overthreshing.



CQ266410 -UN-21FEB06

ML70882,0000905 -19-10MAR06-1/1

Prevention of Grain Loss— General

There is no patent remedy when it comes to preventing grain losses. The threshing process is so complex that a certain relationship between “adjustment” and “result” must be found.

IMPORTANT: Grain loss increases with the amount of material passing along the straw walkers and therefore can be easily remedied by decreasing combine ground speed. However, do not underestimate the effect of other combine adjustments.

Reduce straw walker grain losses as follows:

- Keep openings in straw walkers clean.
- Reduce weeds and green material (raise platform).
- Avoid material overload (reduce cylinder speed).

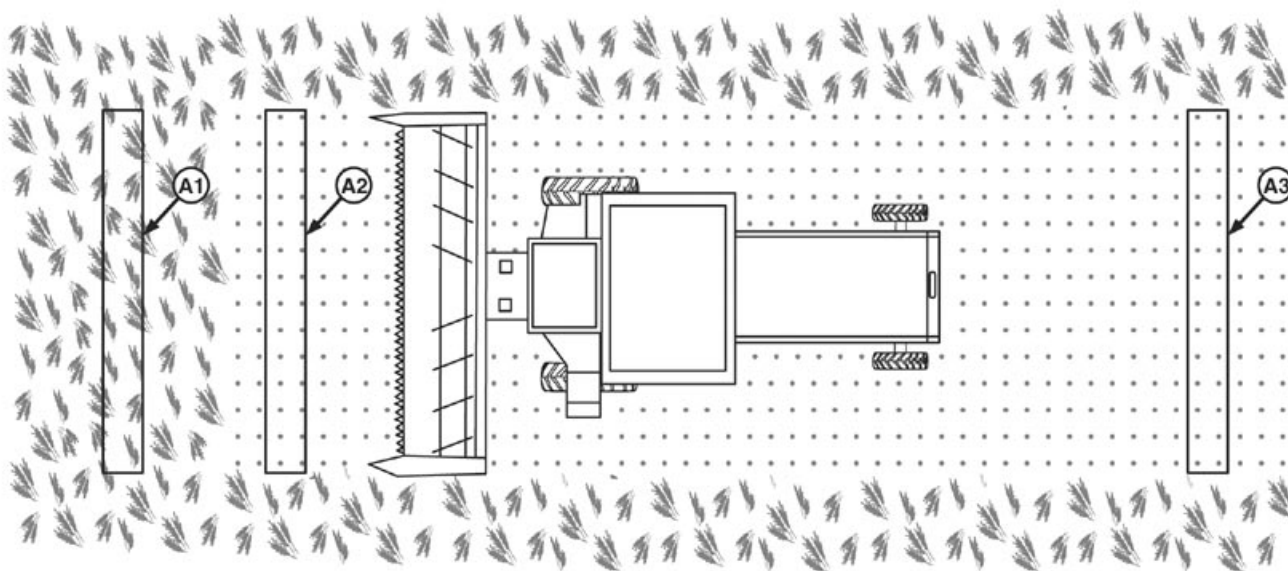
- Avoid overload of straw walkers (reduce ground speed).

Reduce sieve losses as follows:

- Increase air blast from cleaning fan if layers of straw form on cleaning shoes.
- Reduce air blast (fan speed) if grain is blown over the top of cleaning shoe.
- Increase cleaning shoe spacing.
- Keep cleaning shoes clean.
- Add or remove insert fingers to “Slope Master” when working on slopes.
- Reduce amount of chaff on cleaning shoes, avoid overthreshing.
- Avoid overloading cleaning shoes, reduce amount of grain over cleaning shoes (reduce ground speed).

AG,CO03622,1586 –19-01AUG05-1/1

Loss Measurements and Loss Percentage Calculation



CQ269730 -UN-28APR06

IMPORTANT: To obtain higher precision, repeat the procedure at different points of the field and perform a calculation of mean performance and loss.

Crop Losses:

1. Mark an area of 1 m² in the section to be harvested (A1).

IMPORTANT: Larger side of marked area must be equal to header width.

2. Count loose grains and grains in fallen down ear tips or husks inside this area.

Example: Number of counted grains is 20.
Crop losses = 20 grains

Header Losses:

1. Harvest until header passes marked area. Stop combine and keep it operating until all straw comes out.
2. Reverse by a distance equal to combine length. At that point, area (A1) corresponds to area (A2).

3. Count loose grains and grains in fallen down ear tips or husks inside this area.
4. Subtract this value from crop losses.

Example: Number of counted grains is 70.
Header losses = 70 - 20 = 50 grains

Threshing System, Separation and Cleaning Losses:

1. Harvest a distance equal to three times the combine's length. Stop combine and keep it operating until all straw comes out. At that point, area (A2) corresponds to area (A3).
2. Count loose grains and grains in fallen down ear tips or husks inside this area.
3. Subtract this value from crop losses and header losses.

Example: Number of counted grains is 90.
Threshing system, separation and cleaning losses = 90 - 50 - 20 = 20 grains

Total Combine Losses:

Sum of threshing system, separation and cleaning losses.

Example: Total combine losses = 50 + 20 = 70 grains

Crop Performance_

1. Harvest a sample of 100 m² with combine totally empty.
2. Unload harvested grains into a suitable container.
3. Weigh the grains and multiply the weight of the sample by 100 to obtain performance value in kg/ha.

Example: Sample weight was 40 kg. By multiplying the weight by 100 a performance of 4000 kg/ha is obtained.

Percentage of Losses:

1. Weigh quantity of grains corresponding to total combine losses.
2. Calculate crop losses in kg/ha by multiplication of the weight by 10000.
3. Multiply grain loss value by 100 and divide the result by the filed performance to obtain percentage of losses.

Example: Weight of grains corresponding to total combine losses is 0.024 kg.

$$0.024 \text{ kg} \times 10000 = 240 \text{ kg/ha}$$

With a performance of 4000 kg/ha and losses of 240 kg/ha we can now calculate the percentage of losses.

$$240 \times 100 = 24000 / 4000 = 6 \% \text{ losses.}$$

Grain Loss Reduction

Acceptable grain losses currently run at 1—1.5%. How this is calculated depends on the following factors:

- Harvesting conditions;
- Harvesting time;
- Checks of losses.

What Does Loss of Grain Really Mean?

With a yield of 4000 kg per hectare, a grain loss of 1% is equivalent to 40 kg.

When a combine operates with a grain loss of 6% due to incorrect adjustments, this means that up to 240 kg of grain is lost per hectare.

Correct Adjustment = Greater Yield?

The following example shows that the correct adjustment of the machine leads to good results.

Example:

The combine is working with a 6% loss and the mean performance per hectare is 4000 kg. If the combine is harvesting 2.5 hectares per hour, then in 8 hours it will harvest 20 hectares.

$$20 \text{ ha} \times 4000 \text{ kg/ha} = 80000 \text{ kg} \times 6\% = 4800 \text{ kg.}$$

Verify where the greatest grain loss is concentrated (header or threshing, separating or cleaning systems) and start adjustments at that point. Better adjustment

reduces grain loss by 1% to 3%. Let us suppose that with these adjustments we obtain a 2% reduction.

The now reduced grain loss of 4% is still excessive. By reducing ground speed, losses can be reduced by 1% to 3.5%. If, in our example, we reduce the workload to 2 hectares per hour, then in 8 hours the combine shall harvest 16 hectares and we obtain a reduction of 3%.

Then:

$$16 \text{ ha} \times 4000 \text{ kg/ha} = 64000 \text{ kg} \times 1\% = 640 \text{ kg.}$$

Conclusion:

If you have 100 ha:

Harvesting with a 6% loss will result in a loss of 20,000 kg.

Reducing the grain loss by 5% will result in a saving of 16,000 kg (266 sacks of 60 kg).

The operator, or any other person, must check grain loss three times a day, and carry out any necessary adjustments in order to maintain grain losses at a level of 1%—1.5%.

The combine can operate even more economically (especially when several combines are working in one field) if one person is employed specifically to check grain loss on all machines.

ML70882,00004B3 -19-28APR06-1/1

Evaluating Grain Quality

It is possible to evaluate grain quality at different points of your combine. Carry out evaluation at those points where the greatest chance of loss occurs and if necessary readjust combine to adapt it to harvesting and ground conditions.



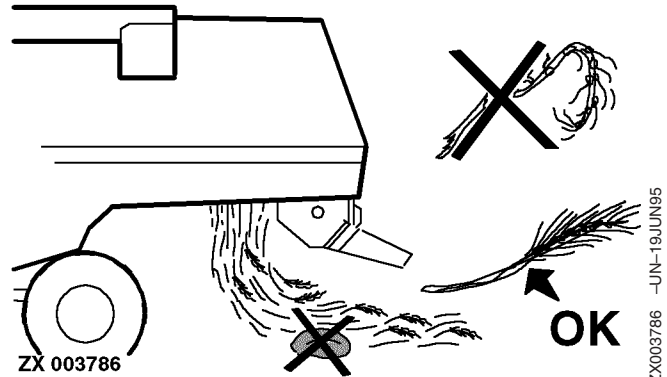
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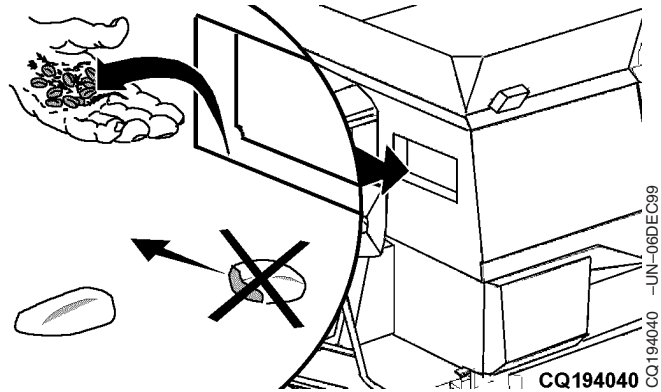
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- At rear of combine.
 - Straw should not be broken or chewed.
 - The amount of grain on the ground should be at a minimum.



ML70882,00008AA -19-17SEP05-2/4

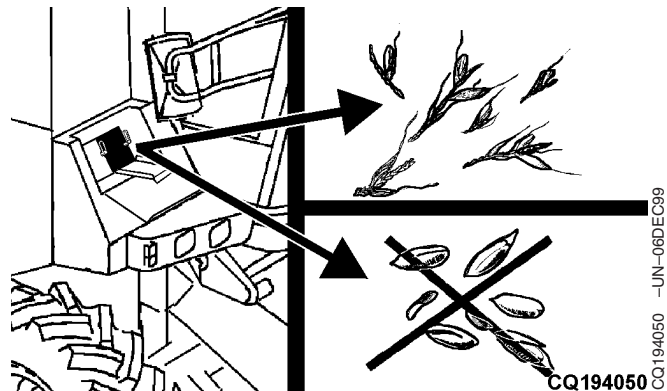
- In grain tank.
 - Open inspection window and extract a sample.
 - Should the grain sample include too many cracked grains, check the following points:
 - a. Excessive tailings?
 - b. Cylinder speed too high?
 - c. Is there insufficient concave spacing?



ML70882,00008AA -19-17SEP05-3/4

- At rethreshing.
 - Normally the tailings will consist of head or ear tips that have not been threshed and very small quantities of loose grains, wet straw and straw residue.
 - The amount of crop contained in two elevator paddles should be less than half a handful.

NOTE: Always close the inspection window after the tailings examination.



ML70882,00008AA -19-17SEP05-4/4

General Information on Combine Adjustments

IMPORTANT: The combine settings chart applies only for average conditions. Varying field and crop conditions may make it necessary to change the settings. Adjustments to cylinder speed and concave spacing are fundamental. They should be adapted to these variations.

Some threshing cylinder speeds will only be reached if the combine is equipped with threshing cylinder drive reduction gear.

NOTE: Use adequate sieves according to harvesting conditions. Consult section "Threshing System, Separation and Cleaning".

ML70882,00008AB -19-17SEP05-1/1

Basic Combine Adjustments Chart

IMPORTANT: This chart indicates initial values.
Different terrain and crop conditions
may need subsequent adjustments.

Adjustments of cleaning shoe extension are not indicated, it is recommended that the extension is adjusted to provide spacing 2mm greater than that of the cleaning shoe or according to the amount of tailings.

The minimum value displayed on INFOTRAK monitor for concave spacing is 4. See concave threshing cylinder distances at "Concave and Cylinder Clearance Adjustment".

NOTE: Always adjust cylinder and fan speed with engine at top speed.

Combine adjustments					
Crop	Threshing Cylinder Speed - rpm	Concave Spacing - INFOTRAK indication	Chaffer Opening - mm (in.)	Grain Sieve Opening - mm (in.)	Fan Speed - rpm
Soybeans	400—800	30—51	11—19 (0.43—0.75)	8—12,5 (0.31—0.49)	800—max.
Wheat	800—1000	12—33	11—19 (0.43—0.75)	3—6,5 (0.11—0.25)	700—1100
Rice	600—900	12—33	16—19 (0.63—0.75)	5—9,5 (0.2—0.37)	800—max.
Corn	200—600	30—51	11—16 (0.43—0.63)	8—14 (0.31—0.55)	800—max.
Beans	200—600	30—51	12,5—19 (0.49—0.75)	9,5—11,5 (0.37—0.45)	850—max.
Herbage	700—1000	4—16	12,5—16 (0.49—0.63)	3—6,5 (0.11—0.25)	min.—700
Sorghum	600—900	12—33	9,5—16 (0.37—0.63)	6,5—12,5 (0.25—0.49)	700—1000
Oats	600—900	12—33	16—19 (0.63—0.75)	6,5—12,5 (0.25—0.49)	600—900
Sunflowers	200—600	30—51	12,5—19 (0.49—0.75)	11—16 (0.43—0.63)	700—900
Barley	800—1000	12—33	12,5—19 (0.49—0.75)	6—12 (0.23—0.47)	700—1100
Rape	700—800	4—16	5—10 (0.2—0.4)	3—5 (0.11—0.2)	min.—800
Peas	200—600	30—51	11—16 (0.43—0.63)	8—14 (0.31—0.55)	800—1000
Linseed	800—1000	4—16	12,5—16 (0.49—0.63)	3—6,5 (0.11—0.25)	540—700

AG,CO03622,1589 -19-23FEB06-1/1

Adjusting Concave-to-Cylinder Clearance

Before adjusting the concave and cylinder clearance by the electrical system from the cab, fine adjustment is necessary.

The electrical actuator (A) should be completely closed so that the clearance between concave and cylinder is a minimum. The INFOTRAK monitor must display a concave clearance of "4".

By means of the pin (B) adjust the rear part of the concave and with pin (C) adjust the front part of the concave.

Rear clearance:

- **RASP BAR CYLINDER:** Allow 4—5 mm (0.16—0.2 in.) of clearance between the highest cylinder bar (the one that projects the most) and the third concave bar from the rear.
- **SPIKE TOOTH CYLINDER:** Allow for a clearance of 8—10 mm (0.3—0.39 in.).

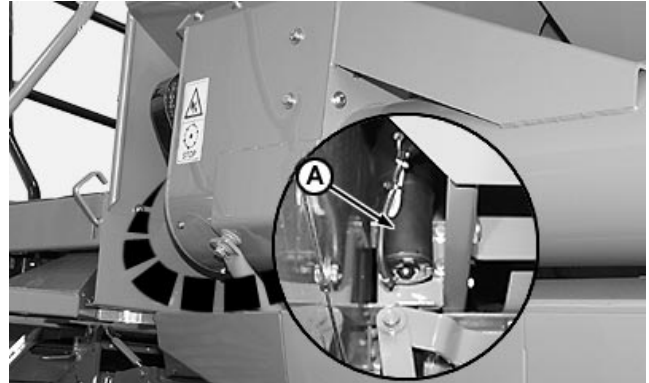
Front clearance:

- **RASP BAR CYLINDER:** Allow 7—8 mm (0.27—0.31 in.) of play between the highest cylinder bar (the one that projects the most) and the second concave bar from the front.
- **SPIKE TOOTH CYLINDER:** Allow for a clearance of 11—13 mm (0.43—0.5 in.).

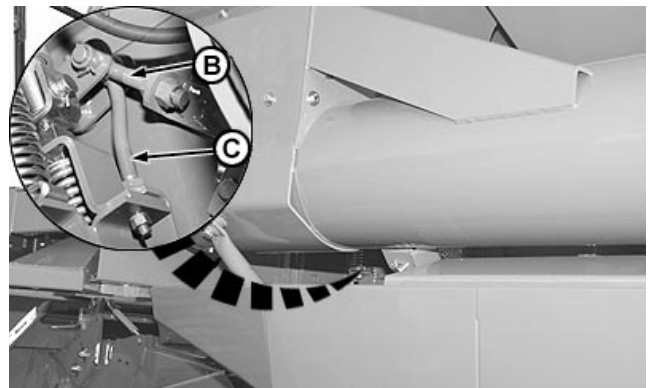
IMPORTANT: Carry out adjustment on both sides of combine.

NOTE: This adjustment should always be done when changing concave.

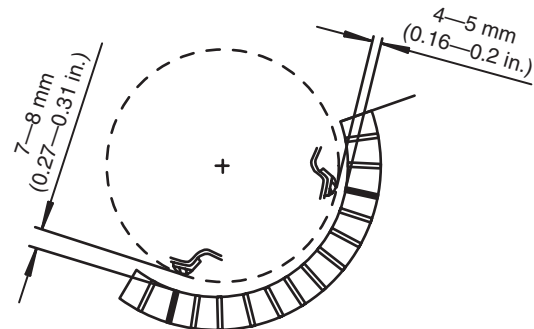
NOTE: All further clearance adjustments must be made via the switch in the cab. See "Concave Clearance Adjustment Switch" for more details.



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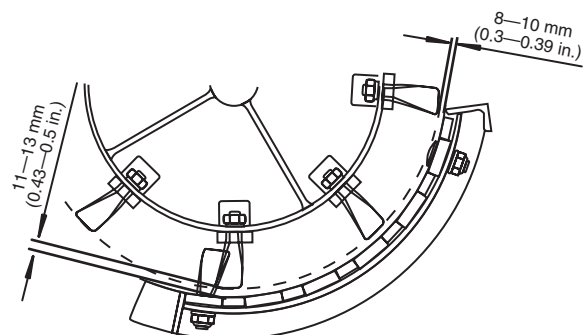


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CQ247560 -UN-29JUL05

Concave and rasp-bar cylinder clearance adjustment



CQ248290 -UN-01AUG05

Concave and spiked-tooth cylinder clearance adjustment

Preparing for Different Crop

Clean and readjust combine for the new crop.

NOTE: Reset the alarm threshold of the INFO-TRAK™ monitor for threshing cylinder and fan speed functions.

IMPORTANT: When changing the header, remember to change required information for area counter and INFO-TRAK monitor according to new header.

INFO-TRAK is a trademark of the Deere & Company

ML70882,00008AD -19-17SEP05-1/1

Preparations for Harvesting Grain Crops

Check the height setting of the bottom feeder conveyor drum.

Install a suitable grain sieve as circumstances require.

Concave: Install a grain-crop concave.

Straw chopper: Install counterknives.

Check straw walker sieves and grids.

Set the combine for grain harvesting according to the values provided by the “Basic Adjustment Chart”.

Install a chaffer and chaffer extension as circumstances require.

AG.CO03622,1591 -19-20AUG04-1/1

Preparations for Harvesting Corn

Change height setting of bottom feeder conveyor drum.

Set the combine for corn harvesting in accordance with the values provided by the “Basic Adjustment Chart” in this section.

Install special kit for corn.

Straw chopper: Remove counterknives.

AG.CO03622,1592 -19-20AUG04-1/1

Preparations for Harvesting Oil Seed Crops

IMPORTANT: When harvesting oil seed crops (e.g.: rape, sunflowers, etc.), clean separator and cleaning unit thoroughly **EVERY DAY**.

AG,CO03622,1593 -19-15NOV02-1/1

Cut Position for 600 Series Rigid Headers

IMPORTANT: Only for rigid header without AHC rods, controlled by feeder house angle sensor.

Requirements:

- Engine running (high speed).
- Road safety switch in field position.
- Threshing unit and header engaged.
- AHC enable switch (E) in position I.

NOTE: Do not adjust the cut position unless the hydraulic oil is at operating temperature to avoid differences in header height that may occur as the oil heats up.

Press button (C) to activate cut position. The distance between platform and ground is adjusted by the potentiometer (A1).

Adjusting Cut Position:

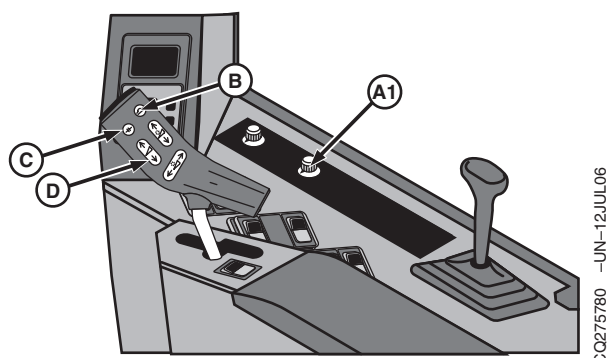
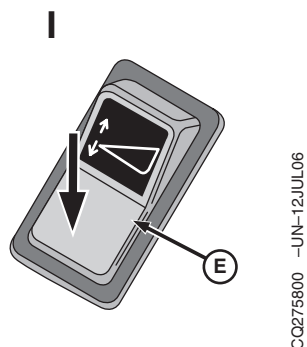
Use potentiometer (A1) to adjust to desired header height.

- Turn clockwise — Increase height between header and ground.
- Turn counterclockwise — Reduce height between header and ground.

Example:

At the end of the field, raise header by activating switch (D). After maneuvering the machine, lower header using button (C) to return to cut position.

NOTE: Cut position control can be disabled by pressing switch (D) or button (B).



- A1—Header height potentiometer
 B—Break off cut—button
 C—Cut position—button
 D—Switch, raise/lower header
 E—AHC enable switch

Return to Cut (AHC) for 600 Series Rigid Headers

IMPORTANT: Only for rigid headers with AHC rods controlled by header sensors.

Requirements:

- Engine running (high speed).
- Road safety switch in field position.
- Threshing unit and header engaged.
- AHC enable switch (E) and header lateral tilt enable switch (F) to position I.

NOTE: Do not adjust the active header control before the oil is at working temperature, in order to avoid variations that may occur to header height as the oil heats up.

Press button (C) to enable return to cut.

Adjusting AHC:

Use potentiometer (A1) to adjust to desired header height.

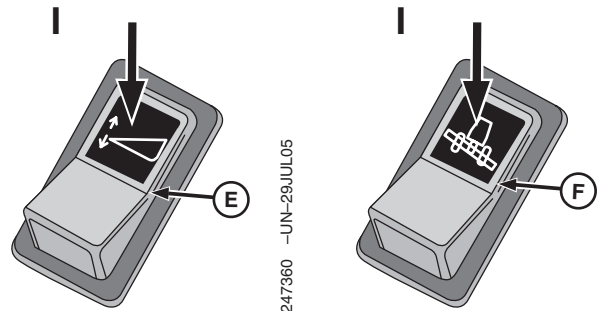
- Turn clockwise — Increase height between header and ground.
- Turn counterclockwise — Reduce height between header and ground.

Calibrating AHC:

Refer to “600 Series Header AHC Calibration Procedure—Step by Step” in “Servicing—Electrical System” section.

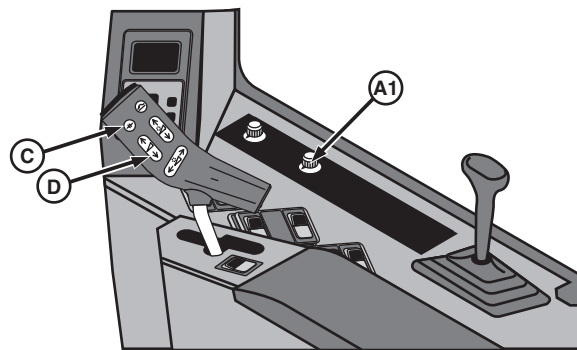
Example:

At the end of the field, raise header by activating switch (D). After maneuvering the machine, lower header using button (C) to enable return to cut (AHC).

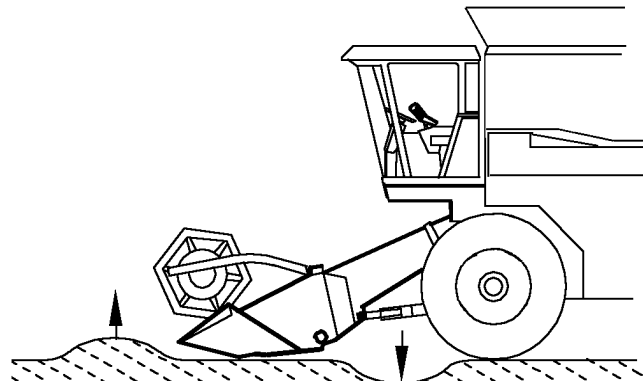


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CQ247350 -UN-29JUL05



CQ275790 -UN-12JUL06



CQ247300 -UN-29JUL05

- A1—Header height potentiometer
C—Return to cut knob
D—Switch, raise/lower header
E—Header automatic height control switch
F—Header lateral tilt enable switch

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Feeder House

Safety Stop



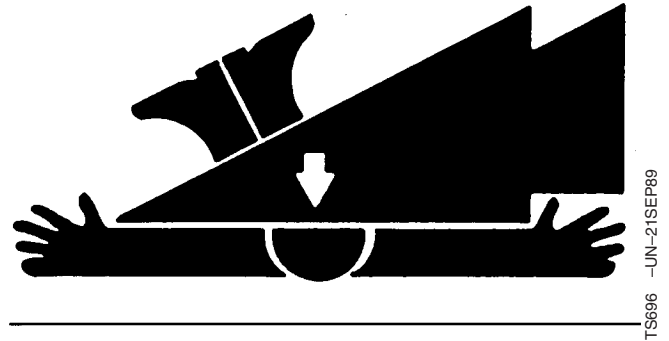
CAUTION: Raise the feeder house and put the safety stop (A) in place before initiating the installation process, in order to avoid serious injury or death. Some assembly stages demand that you work underneath the feeder house.

Without the safety stop (A) in place, the feeder house could fall without warning, causing serious injury by crushing or even death.

Raise the feeder house and insert the safety stop (A), as illustrated.

Then, shut off engine, remove starter key and apply parking brake.

A—Safety stop



OU83340,00004BE -19-17MAR04-1/1

Coupling Header to Feeder House

See more information on coupling up header in Header OM.

ML70882,0000913 -19-01MAR06-1/1

Multi-Coupler for 600 Series Feeder House

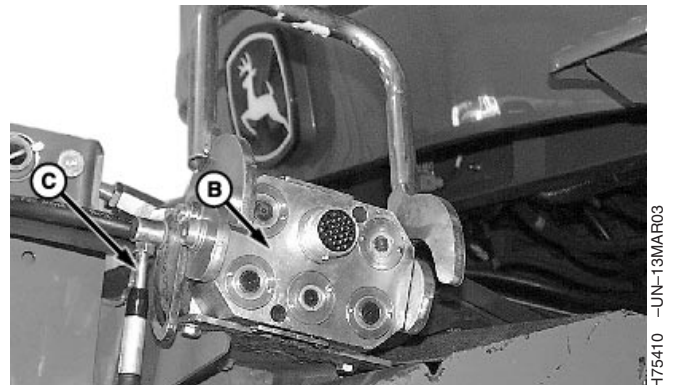
This mechanism automatically locks the header in place by means of the locking cable (C).

NOTE: If the combine is not equipped with locking cable (C), the locking pins must be locked in place by hand.

Procedure:

1. Remove cover and clean surface of multi-coupler (B).

B—Multi-coupler
C—Locking cable



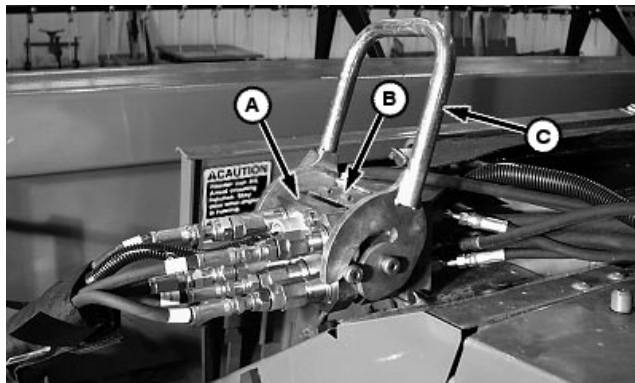
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ML70882,0000982 -19-23MAY06-1/3

NOTE: To prevent damage to the latching cable, a shear bolt is attached to the handle. Attempts to actuate the latching pins with the header on the ground will shear the screw on the handle.

2. Install the multi-coupler (A) on housing (B) of the feeder house and close handle (C).

A—Multi-coupler
B—Housing
C—Handle



H70036 -UN-19SEP01

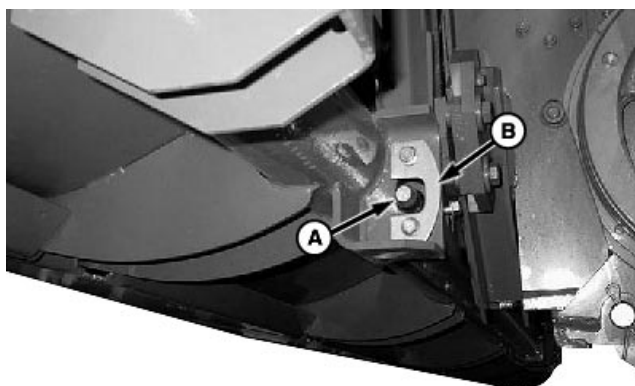
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NOTE: With header attached, latch pins should move freely through receiving holes in header. If latch pins do not extend, make sure that the latching plates on the header are properly adjusted.

3. The locking pins (A) slide through the feeder house locking plates (B) when the multi-coupler is locked in place.
4. Install the multiple connector cover in the header storage position.

NOTE: If the shear bolt breaks, there are three more of them.

IMPORTANT: ONLY use genuine shear bolts because any change in screw quality may damage the mechanism.



H74304 -UN-18NOV02

A—Pin
B—Locking Plates

ML70882,0000982 -19-23MAY06-3/3

Checking Header Leveling

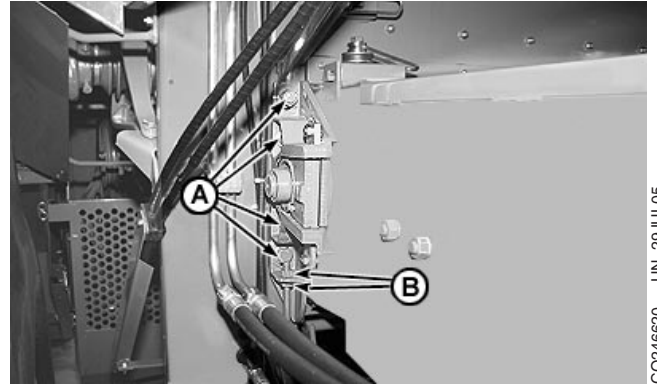
Periodically check header leveling.

1. With combine on level ground raise header to maximum height.
2. Check if front tire pressure is correct (consult "Tire Inflation Pressure").
3. Measure height at both ends. Height should be equal.

Leveling header

NOTE: The adjustment is performed on right-hand side.
For illustration purpose, hydraulic reverser has been removed.

1. Loosen 4 bolts (A).
2. Turn nuts (B) until the header is level.
3. Tighten bolts (A) and nuts (B) firmly.



Hydraulic reverser not illustrated.

CO246620 -UN-29JUL05

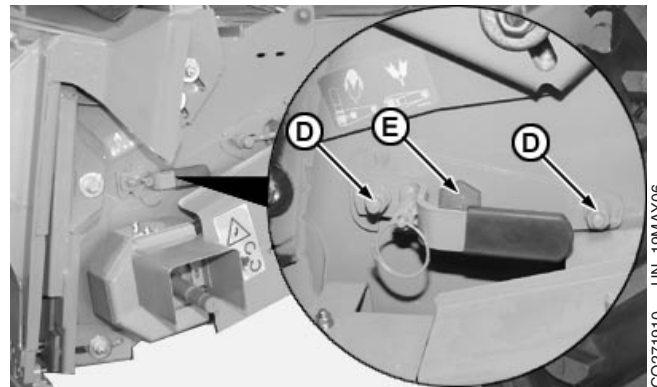
AG,GG05155,285 -19-06SEP05-1/1

Adjusting Floating Drum Height of Feeder House

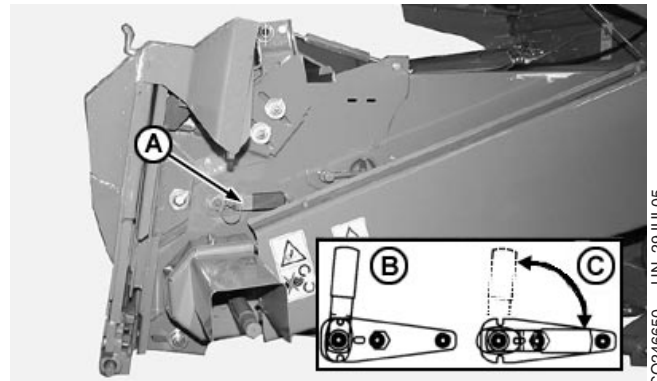
1. Loosen nuts (D) and adjust floating roller height through eccentric nut (E), on both sides of feeder house.
2. Adjust position (B) or (C) through lever (A).

Crop	Lever position:
For large grain	B (vertical)
For medium and small grain	C (horizontal)

A—Lever
B—Position
C—Position
D—Nuts
E—Eccentric nut



CO271910 -UN-19MAY06

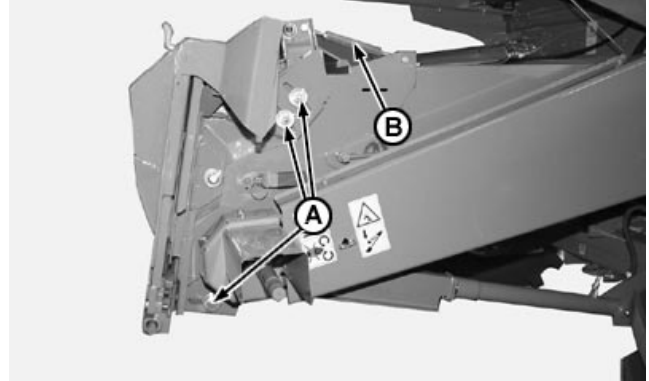


CO246650 -UN-29JUL05

ML70882,0000814 -19-16JUN06-1/1

Adjusting Feeder House Front Face Angle

To adjust feeder house front face angle is necessary loose bolts (A) and make the adjustment with nuts (B) in both sides of feeder house.



MB03730,000037D -19-17AUG05-1/1

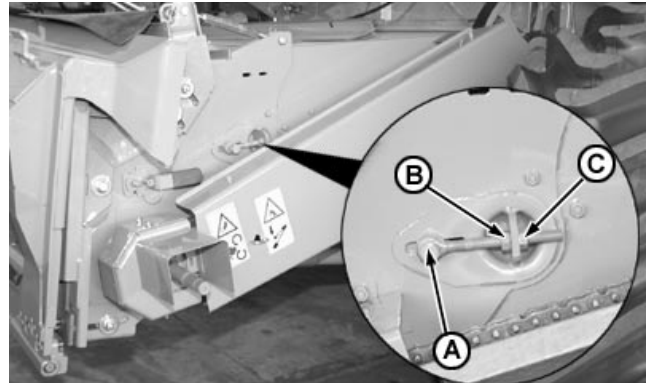
CQ246660 -UN-29JUL05

Tension of Feeder House Conveyor Chains

Loosen nut (B) and locknut (C) on both sides and move bolt (A) as needed to obtain a good tension of the conveyor chains.

Retighten them securely after the adjustment.

IMPORTANT: The chain tension will be ok, when the lowest slat slightly touches the floor of the feeder house.



ML70882,0000816 -19-17SEP05-1/1

CQ247040 -UN-29JUL05

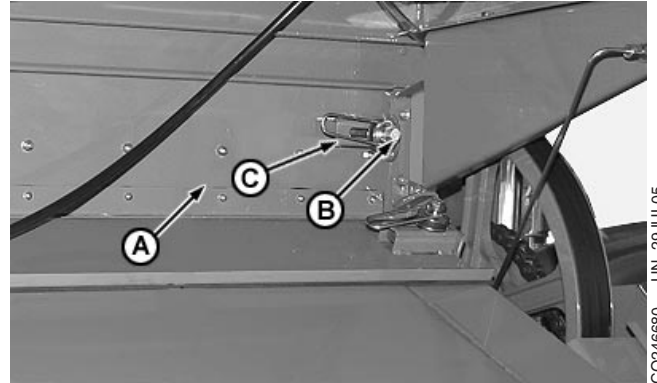
Threshing System, Separation and Cleaning

Threshing Cylinder Front Inspection Cover

CAUTION: Always switch off all drives (separator, unloading auger and header) and shut off engine. Wait until all moving parts have come to a complete halt before adjusting the machine or performing service work.

Remove the two nuts (B) and move pins (C) to open this cover (A).

A—Inspection cover
B—Nuts
C—Pins



CO246880 -UN-29JUL05

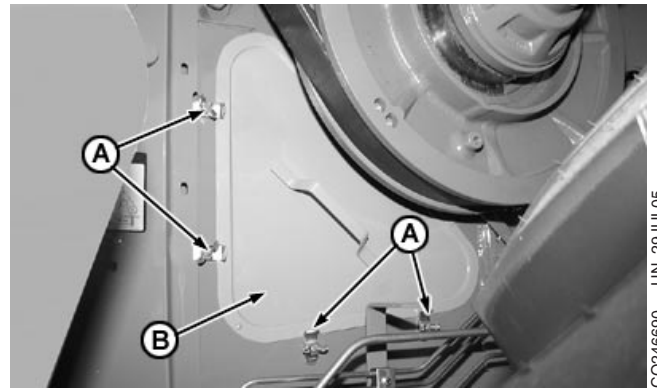
AG,GG05155,306 -19-17SEP05-1/1

Threshing Cylinder Side Inspection Ports

CAUTION: Always switch off all drives (separator, unloading auger and header) and shut off engine. Wait until all moving parts have come to a complete halt before adjusting the machine or performing service work.

Remove the side inspection ports for service work on threshing cylinder and/or concave.

Unscrew wing nuts (A) and pull off cover (B).



A—Wing nuts
B—Cover

CO246690 -UN-29JUL05

ML70882,0000851 -19-17SEP05-1/1

Opening Stone Trap



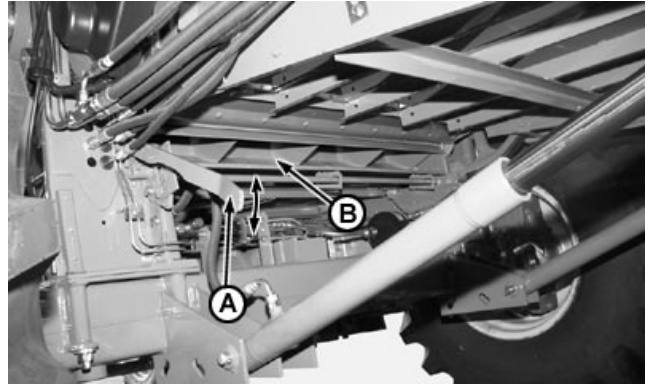
CAUTION: Watch out for falling stones when opening the stone trap.

Periodically clean the stone trap.

When lever (A) is in the “down” position, the stone trap (B) is closed.

— To clean the stone trap, pull lever (A) upwards to swing down bottom plate (B). Stone trap opens downwards.

Pull lever (A) downwards. A spring-loaded bolt holds the lever in this position.



CQ246700 –UN-28JUL05

AG,CO03622,1637 –19-01AUG05-1/1

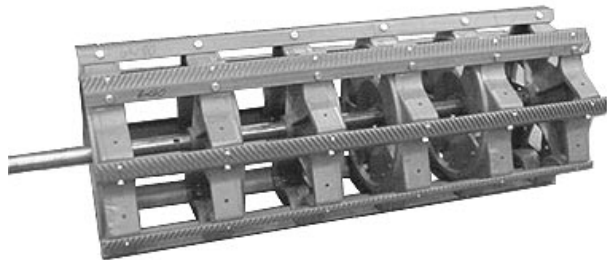
Threshing Cylinder Rasp Bars

Threshing cylinder is equipped with rasp bars with teeth alternately directed to the right and left. If a cylinder bar needs to be changed the opposite bar will also have to be changed in order to avoid unbalancing the cylinder.

Remove attaching bolts to remove bars.

Tighten the bar attaching bolts to 78 Nm (57 lb-ft).

IMPORTANT: After changing bars retighten the mounting bolts after the first five hours of operation and before harvesting.



CQ209020

–UN-28SEP01

AG,GG05155,309 –19-12JUL06-1/1

Rotating Cylinder By Hand

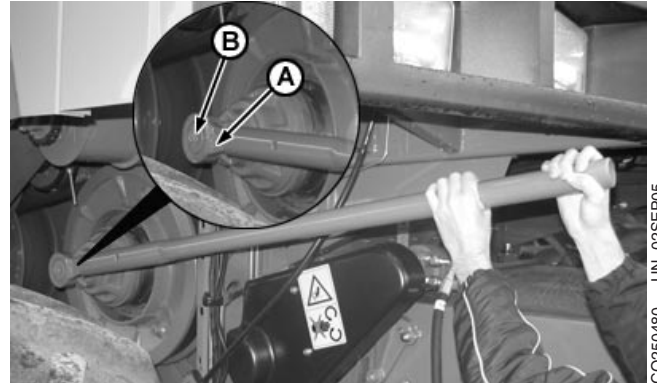


CAUTION: Shut off engine and remove starter key before turning cylinder by hand.

Insert wrench (A) over spline (B) on cylinder shaft.

Turn as required.

NOTE: Wrench is stored in front ladder tool box. Wrench extension is located next to clean grain elevator.



Cylinder drive without reduction gear

CO250480 -UN-02SEP05

ML70882,0000809 -19-17SEP05-1/1

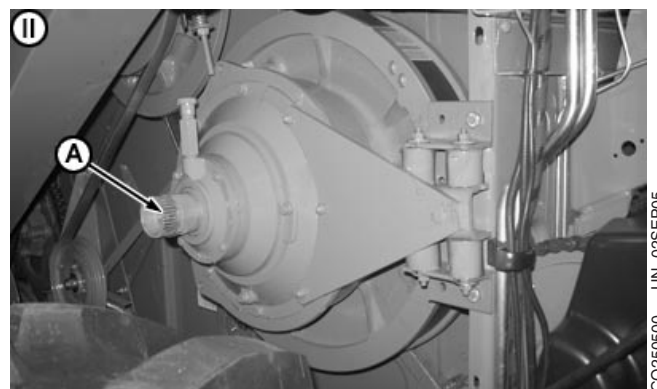
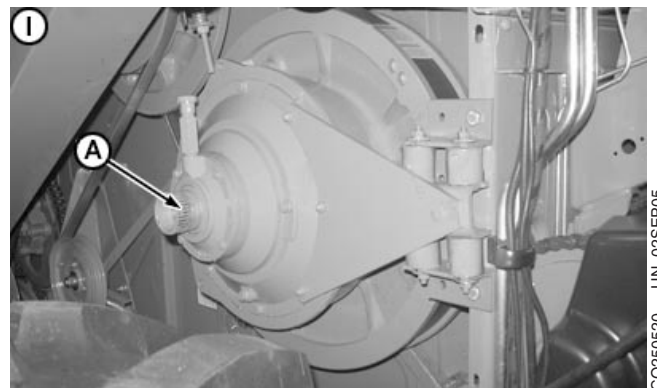
Operating Threshing Cylinder Speed Reduction Gear

IMPORTANT: Adjustments to both sheaves on threshing cylinder and overshot beater variable drive should only be performed by your John Deere dealer. Have the cylinder drive reduction gear serviced every 600 hours or once yearly by your John Deere dealer.

MOBILITH SHC 007 grease recommended. Consult quantity in the "Specifications" section.

Position I — Shifter collar (A) pushed in for speeds of 380 — 1100 rpm.

Position II — Shifter collar (A) pulled out for speeds of 130 — 420 rpm.



CO250520 -UN-02SEP05

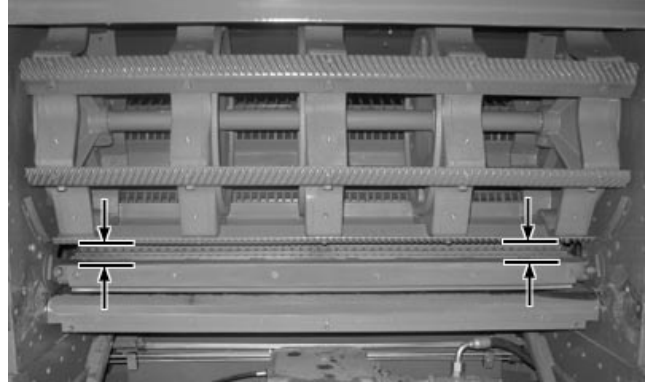
CO250500 -UN-02SEP05

ML70882,000080A -19-01MAR06-1/1

Concave And Cylinder Alignment

At the factory the concave is horizontal and parallel to the cylinder.

Periodically check the concave-to-cylinder alignment so that the threshing unit operates optimally.

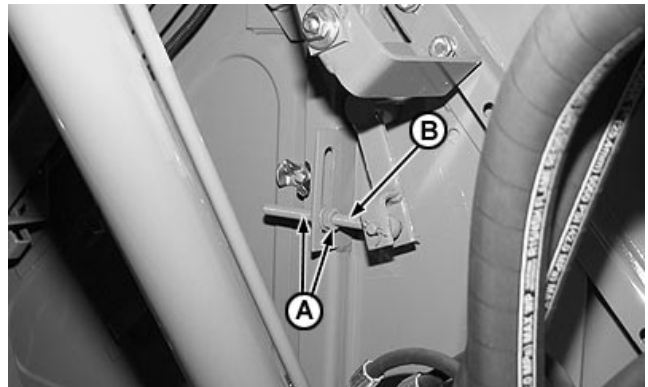
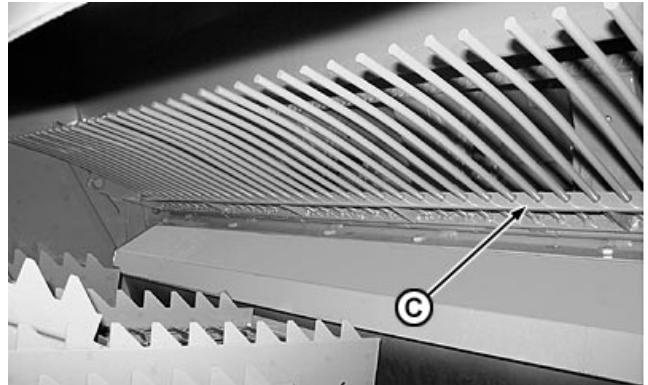


AG,GG05155,315 -19-17AUG05-1/1

Adjusting Concave Extension

Adjust with bolt (B) using nuts (A) on the left of the combine.

The distance between the beater and the finger rake (C) should be at least 70 mm (2.8 in.) in grain crops.

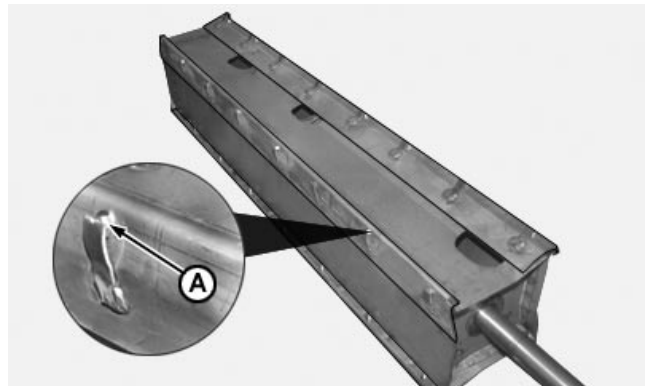


AG,CO03622,1653 -19-17AUG05-1/1

Special Beater Wear Plates

Rice combines are fitted with special wear plates in the beater.

IMPORTANT: Periodically check wear of plate and bolts (A) and replace any excessively worn bolts.

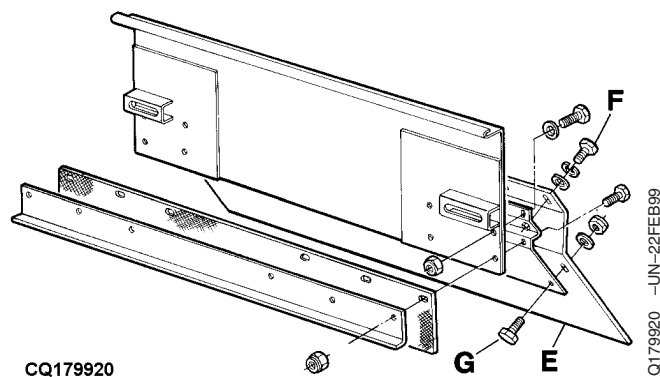


AG,GG05155,318 -19-24SEP05-1/1

Cylinder Baffle

IMPORTANT: Before harvesting corn, remove the cylinder baffle (E) located inside the inspection port.

Baffle (E) is attached by hex bolts (F) and (G).



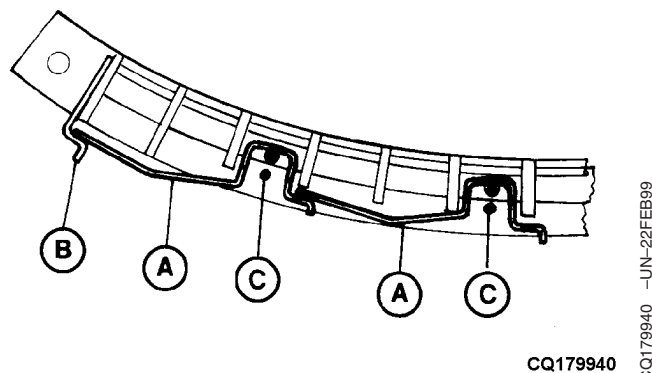
AG,GG05155,319 -19-24FEB99-1/1

Tooth Concave Closure Plates

De-awning plates are recommended for some crops such as: barley, wheat and peas, when these crops present threshing difficulties.

NOTE: It is not necessary to remove the concave to install the plates.

- After harvesting, clean chaff from front support (B) to ensure that de-awning plate fits properly in concave.
- Attach de-awning plate (A) with the mounting bolts (C).
- Use one plate to begin harvesting. Then install the second if needed.



AG,GG05155,320 -19-06MAR06-1/1

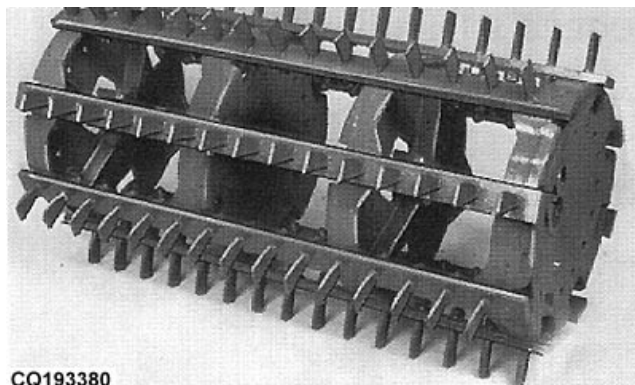
Rice Harvesting Attachment

This attachment consists of rice cylinder and rice concave.

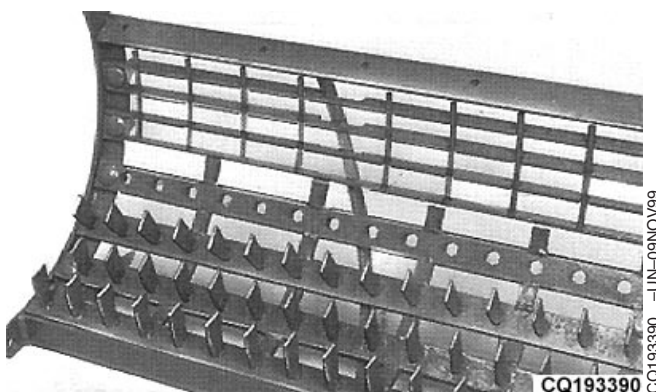
Rice is threshed through friction and by the battering effect of cylinder teeth and spiked concave.

Standard concave is equipped with three bars of spiked teeth. You can add another teeth spiked bar to enhance threshing.

Using a hammer with a piece of hardwood, drive in new teeth. Firmly bolt down teeth. Install teeth with the elongated side to the rear, as seen in direction of rotation.



Spiked-tooth cylinder



Concave with three rows of spiked teeth

ML70882,0000854 -19-17SEP05-1/1

Adjust Lateral Spacing between Threshing Cylinder Teeth and Concave Teeth

The teeth (A) of threshing cylinder must be centered in relation to the concave teeth (B).

If lateral spacing (X) is uneven between teeth (A) and (B) this could cause reduced threshing performance. Crop ears tips could pass through without being threshed on one side and grain crops could be damaged and straw could get very chewed on the other.

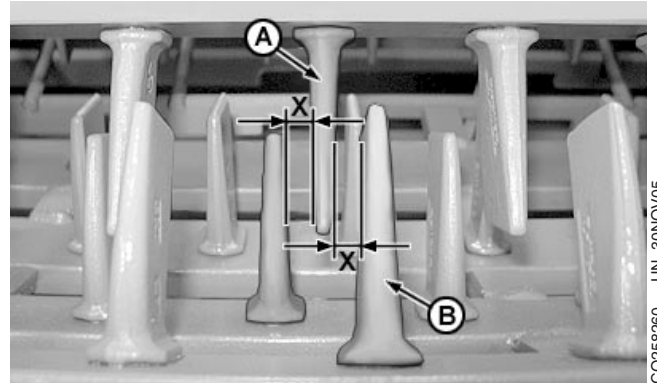
Adjust lateral spacing (X) moving threshing cylinder (C) on its shaft. After adjusting, attach threshing cylinder on shaft, tightening clamp bolts (D) to specification.

Specification

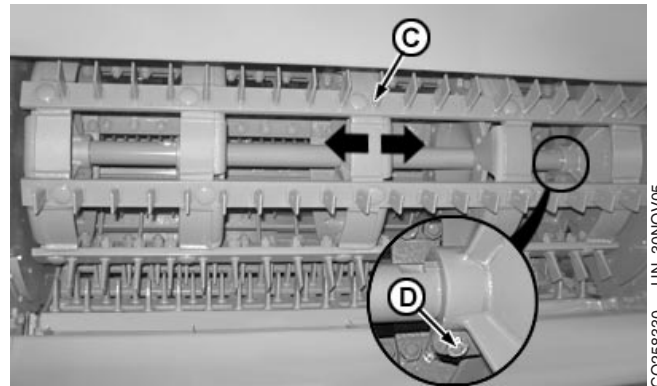
Bolts for attaching brackets of threshing cylinder on shaft—

Torque 78 N•m (56.5 lb-ft)

- A—Teeth
- B—Teeth
- C—Threshing Cylinder
- D—Bolts
- X—Lateral spacing



CQ258260 -UN-30NOV05



CQ258330 -UN-30NOV05

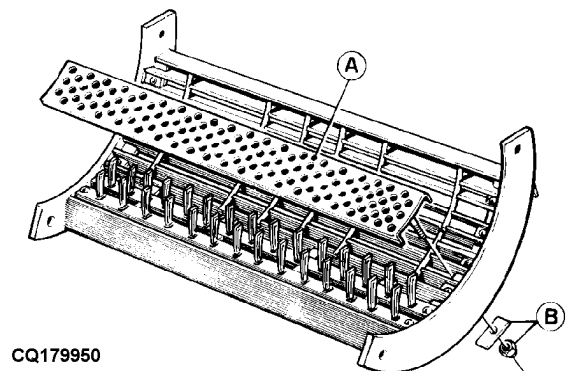
OU64006,0000036 -19-07FEB06-1/1

Tooth Concave Closure Plates

Can be used to harvest soy or other beans.

NOTE: It is not necessary to remove the concave to install the plates.

- Attach the closure plate (A) with tabs and nuts (B).
- Begin harvesting with one plate then, if necessary, install a second plate.



CQ179950

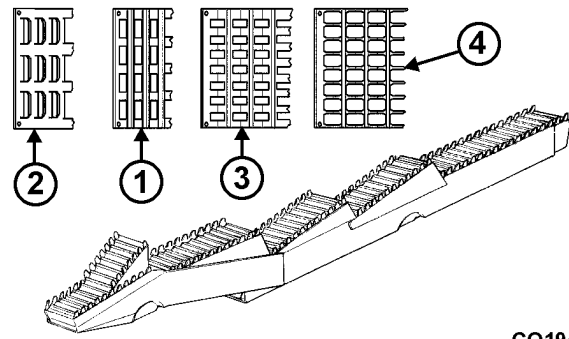
CQ179950 -UN-22FEB99

AG,GG05155,321 -19-24FEB99-1/1

Straw Walker Types

All straw walker sieves are replaceable from the front to the rear, to permit rapid conversion to handle various types of crops.

1. Rectangular transversal sieve openings. Are indicated for rice harvesting.
2. "Frog mouth" sieve openings. Are indicated for all crops.
3. Rectangular longitudinal sieve openings. Are indicated for fine grain harvesting, like wheat.
4. Rectangular longitudinal sieve openings for "high flow rate". Are indicated for high productivity crops.



CQ194060

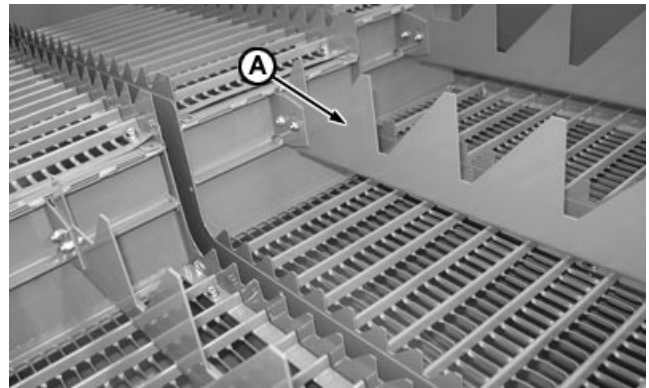
—UN—06DEC09

AG,GG05155,162 —19—20JUN06—1/1

Straw Walker Fishbacks

Fishbacks (A) optimize loose grain separation from chaff by reducing the speed at which straw moves over the straw walkers.

NOTE: To avoid loss, more fishbacks can be installed for conditions in which it is difficult to separate the grain from chaff (e.g., weedy soy beans).



—UN—03JUN05

AG,GG05155,163 —19—03JUN05—1/1

Straw Walker Curtain

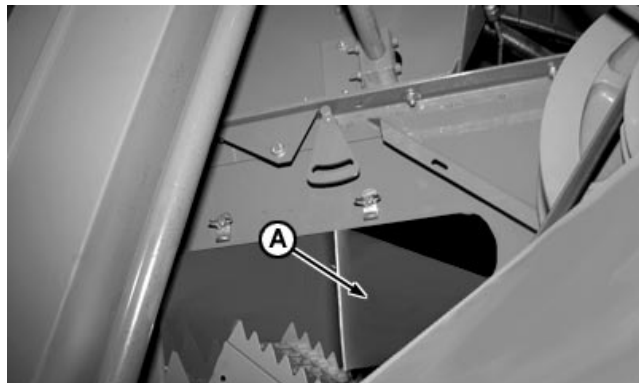
The straw walker curtain (A) helps to slow material flow, providing more time for grain to separate from straw. It also prevents grain from being thrown out of the combine by the beater.

Under normal harvesting conditions, the curtain is free to swing in the slot (I).

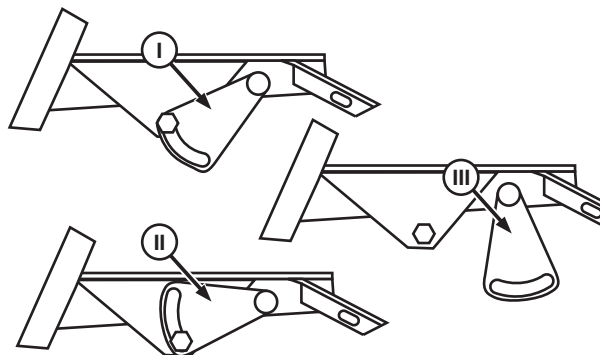
When crops with a heavy straw content are harvested, the recommended position for the curtain is position (II).

IMPORTANT: There are situations in which it is hard to separate grain (for example: corn). In these cases we recommend the use of a second curtain, available as an attachment.

NOTE: There is a third option, which is to let the curtain swing freely (III).



CO247550 -UN-29JUL05



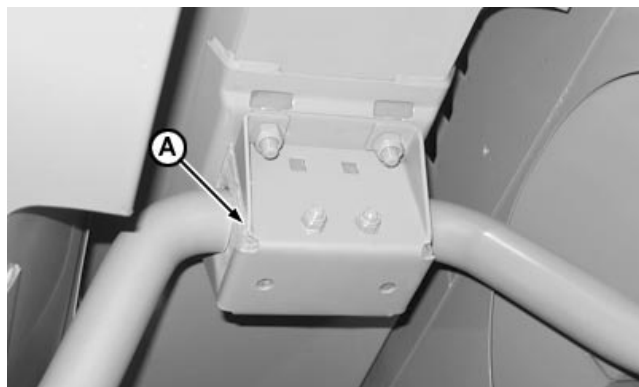
CO247570 -UN-29JUL05

AG.CO03622,1654 -19-01AUG05-1/1

Adjusting Straw Walker Bearings

IMPORTANT: Straw walker bearings may have axial play but they must not have radial play (at diameter).

If there is radial play, consult a John Deere dealer to replace bearing (A).



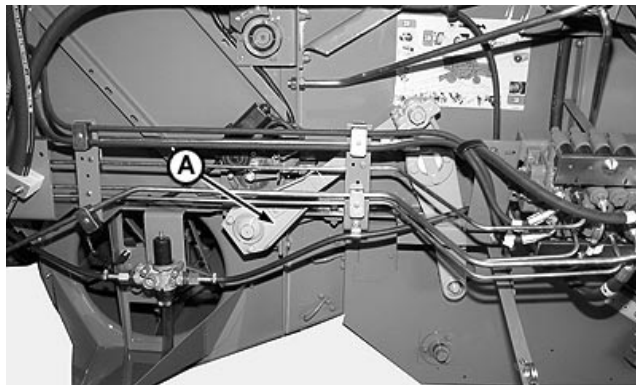
CO272000 -UN-22MAY06

ML70882,000094D -19-22MAY06-1/1

Cleaner Arms And Connecting Rods

Whenever a rubber bushing of the arms and connecting rods (A) is replaced, place these in the center to tighten the bearings. Position them using the template. See your John Deere dealer.

IMPORTANT: While checking the combine after each harvest, inspect the arm and connecting rod rubber bushings and replace any damaged ones. Change the bushings every 500 hours.



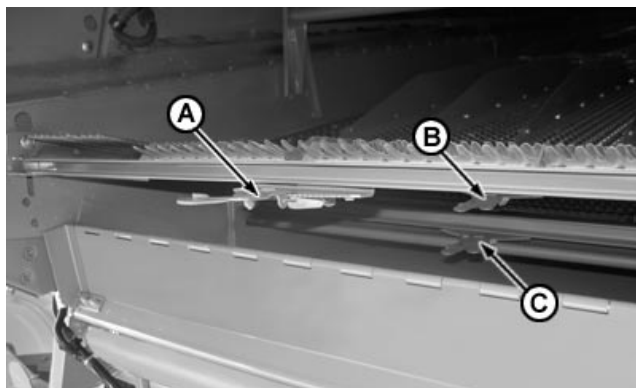
CO246750 -UN-29JUL05

AG,GG05155,325 -19-01AUG05-1/1

Cleaning System

The sieves can be adjusted in the rear of the combine. Adjust combine initially according to the "Combine Settings Chart" and then adapt to harvesting and ground conditions.

- A—Chaffer extension adjustment lever
- B—Chaffer adjustment lever
- C—Grain sieve adjustment lever



CO247050 -UN-29JUL05

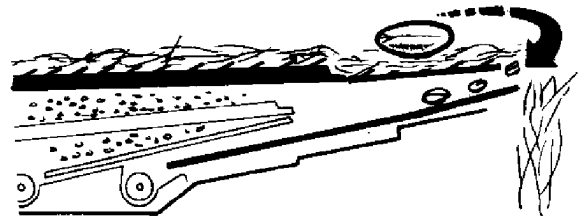
AG,GG05155,164 -19-17SEP05-1/1

Chaffer Extension

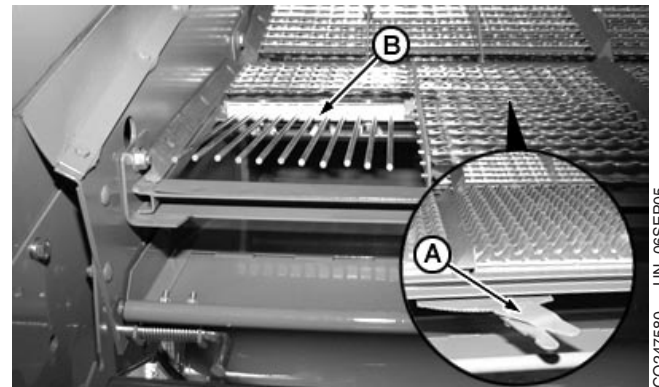
Chaffer extension is used to optimize corn harvesting. Lever (A) is used to adjust fins to minimize plugging caused by cob pieces.

In hilly terrain the opening needs to be larger than normal. Use Slope Master System (B) for this operation. Consult more detailed information in section "Slope Master System".

NOTE: In extremely hilly terrain a chaffer extension for corn may be used.



CQ249510 -UN-22AUG05



CQ247580 -UN-06SEP05

AG,CO03622,1655 -19-17SEP05-1/1

Adjusting The Chaffer Extension Angle

Loosen nuts (A) on both sides of chaffer extension.

Intermediate height: Dry crops and flat terrain.

High: Products that are difficult to shell (crops with weeds) or on hilly terrain.



CQ246760 -UN-29JUL05

AG,GG05155,165 -19-17SEP05-1/1

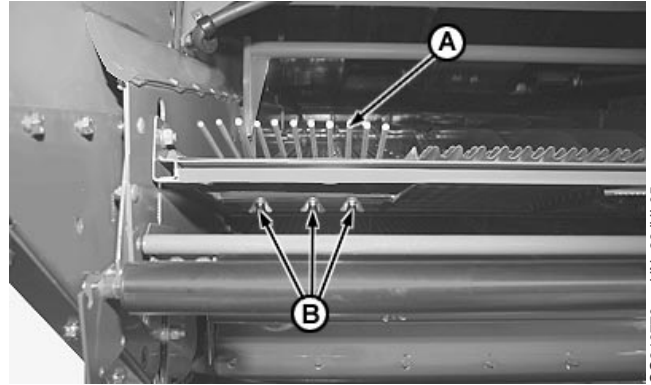
Slope Master System for Hilly Terrain

When operating on hilly terrain a large quantity of material accumulates at the sides of the cleaning shoe and extension. This material exits the combine without being harvested, thereby increasing grain loss.

To avoid loss, openings located on both sides of the rear ends of the cleaning shoe extension collect any material not totally separated.

Depending on the slope and harvesting conditions, regulate openings by adding or removing fingers (A), after loosening winged nuts (B).

NOTE: The combine is delivered from the factory with 11 fingers mounted.



AG,GG05155,166 -19-01AUG05-1/1

Removing Chaffer Extension

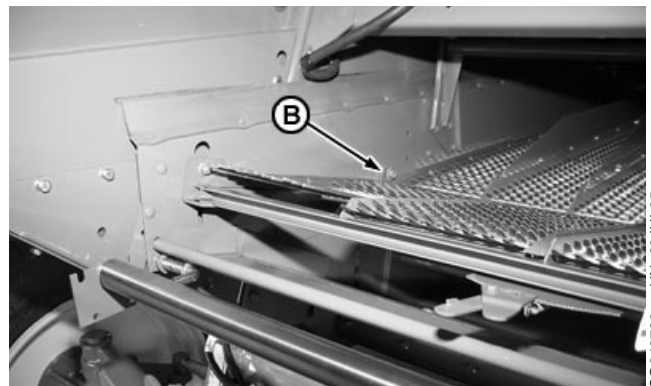
- Remove the mounting bolts (A).
- Pull the extension back to remove it.



AG,GG05155,326 -19-17AUG05-1/1

Removing Chaffer

- Remove the mounting bolts (B).
- Pull the chaffer back to remove it.



AG,GG05155,327 -19-17AUG05-1/1

Removing Grain Sieve

1. Remove the cleaning shoe extension.
2. Remove retaining bolts (C) on both sides.
3. Pull the grain sieve rearwards to remove it.

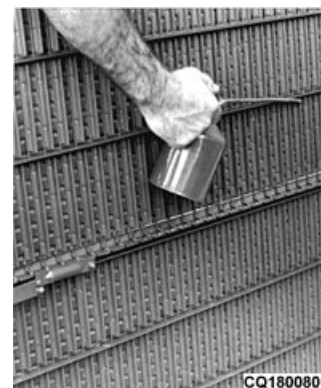


AG,GG05155,328 -19-01AUG05-1/1

Cleaning The Chaffers And Sieves

Use a good steel brush to clean the sieves.

NOTE: Use an oil can to lubricate the fin linkages with medium viscosity oil.



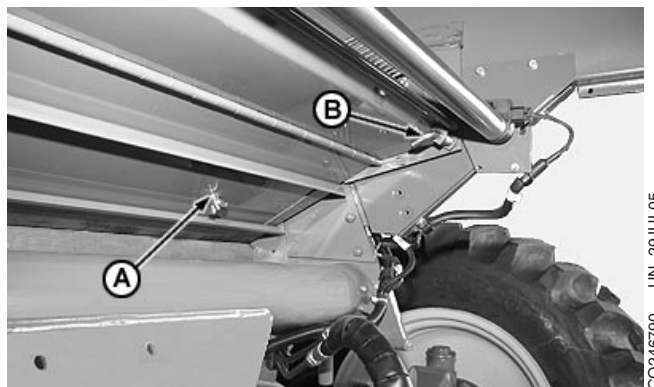
AG,GG05155,329 -19-24FEB99-1/1

Adjusting Grain Retention Plate

Designed to capture head, pod or ear tips that have not been completely threshed and that were not collected by the chaffer extension.

Loosen nuts (A). Release latch (B) on both sides and position as necessary.

- **Forward:** Easily threshed, dry crops; flat terrain.
- **Rearward:** Hard-to-thresh, very moist crops, and hilly terrain.
- **Up:** Collects greater crop quantity.
- **Down:** Collects smaller crop quantity.



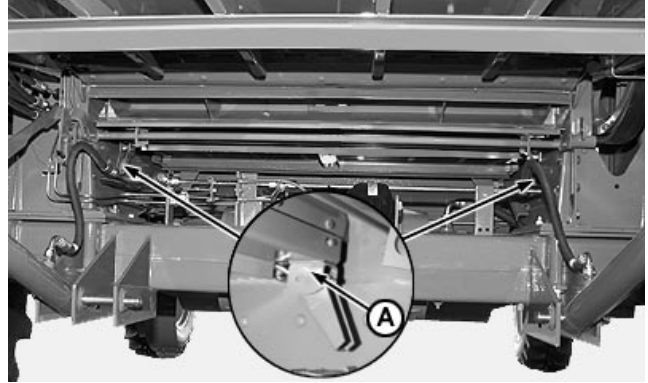
AG,GG05155,168 -19-18FEB06-1/1

Opening The Pan

The front of the pan (under the concave) can be removed for quick and easy cleaning.

NOTE: Clean the pan daily.

- Push latches (A) by hand.
- Pull out the pan to the front and remove it.



CO246800 -UN-29JUL05

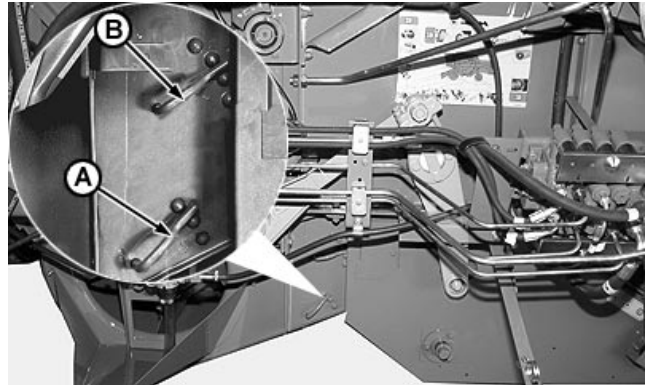
AG,GG05155,330 -19-17AUG05-1/1

Adjusting Fan Air Flow Direction

IMPORTANT: To facilitate adjustment, first adjust the baffles and then regulate fan speed.

NOTE: For soy beans, wheat and corn start with the lower baffle (A) in the first position (from the top) and the upper baffle (B) in the second position (from the top).

A—Lower Baffle
B—Upper Baffle



CO248520 -UN-29JUL05

AG,GG05155,169 -19-17AUG05-1/1

Special Kit for Corn

This is a set of accessories recommended to optimize combine performance when harvesting corn.

Consult your John Deere dealer to obtain specific information and recommendations.

AG,CO03622,2022 -19-30MAR06-1/1

Straw Chopper and Chaff Spreader

Straw Chopper



CAUTION: Always switch off all drives (separator, unloading auger and header) and shut off engine. Wait until all moving parts have come to a complete stop before adjusting the machine for operation. Do not approach straw chopper from behind when it is in operation. **RISK OF DEATH!**



ML70882,00004BE -19-12JUL06-1/1

TS268 -UN-23AUG88

Straw Chopper Deflector Sheet

With deflector sheet (A) in position I, the straw falls on the ground and is not chopped.

IMPORTANT: With deflector sheet (A) in position I, the straw chopper must be disengaged (remove belt) to avoid damage to the sheet by straw chopper knives.

With deflector sheet (A) in position II, the straw from the straw walkers passes into the straw chopper and is chopped.

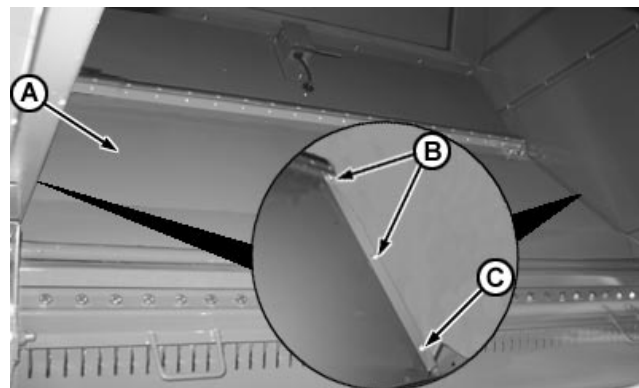
IMPORTANT: With deflector sheet (A) in position II, the straw chopper must be engaged.

Proceed as follows to incline:

1. Remove cap screws (B) and (C) on both sides of machine.

NOTE: Deflector sheet is heavy. Two persons are required to change inclination.

2. Install deflector sheet in position II or position I as required.
3. Tighten cap screws.



Deflector sheet in position I



Deflector sheet in position II

ML70882,00009E2 -19-19JUN06-1/1

CQ247610 -UN-29JUL05

CQ247620 -UN-29JUL05

Precautions for Engaging Straw Chopper

1. Set the engine at idle speed (low rpm).
2. Put road safety switch (red) in field position.
3. Release safety lock and engage threshing unit switch.
4. Increase engine rpm.

ML70882,00003EC -19-18FEB06-1/1

Disengaging Straw Chopper

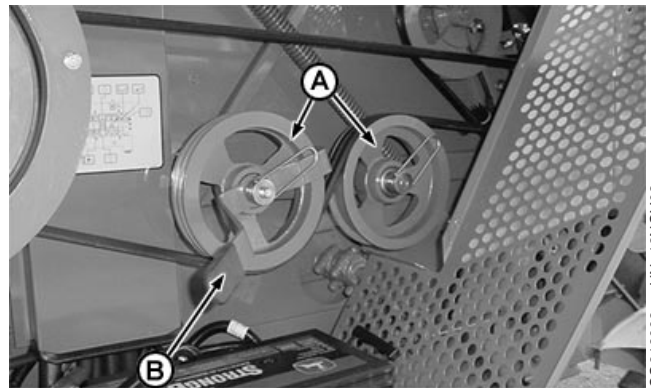
IMPORTANT: When disengaging straw chopper, swing deflector sheet into correct position. This will prevent straw build-up on straw chopper. See “Straw Chopper Deflector Sheet” for swinging.

With the combine turned off, raise idler pulleys (A) by means of lever (B).

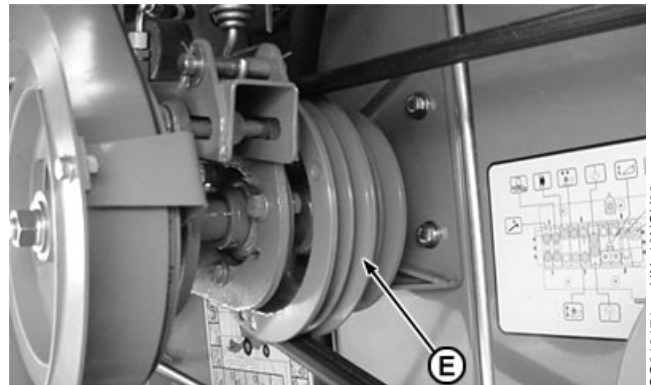
Remove the belt from pulleys (A) and from the intermediate drive pulleys (E).

Secure the belt in such a way that it does not come into contact with the combine's moving parts.

To actuate straw chopper reverse procedure.



CQ212662 -UN-12NOV03



CQ213171 -UN-12NOV03

ML70882,00009E3 -19-16JUN06-1/1

Replacement of Straw Chopper Knives



CAUTION: Always jam the impeller to prevent accidents when replacing knives.

IMPORTANT: Note the following to avoid unbalancing the straw chopper:

Excessive vibration may be caused by broken impeller knives. Immediately remove the broken knife and the knife that is directly opposite, and install replacement knives.

Do not sharpen knives. Replace knives only. This ensures that all the knives on the impeller weigh approximately the same.

Only use grade 10.9 bolts with self-locking nuts.

Specification

Bolt—Torque.....50 – 60 N•m (36 – 44 lb – ft)

Mount bolts from left to right (facing the direction of forward travel).



CO247130 –UN-29JUL05

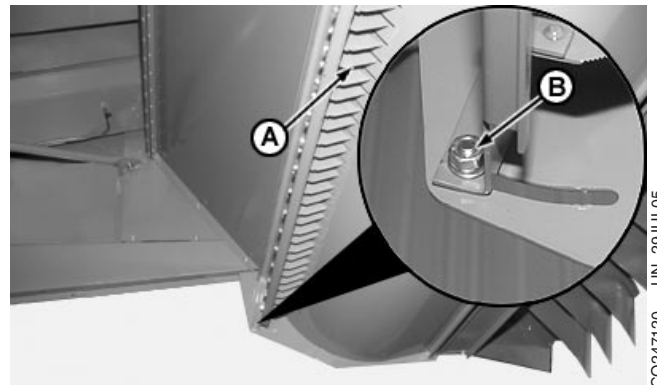
AG.CO03622,2047 –19-01AUG05-1/1

Adjusting Straw Chopper Counterknives

IMPORTANT: Counterknives should only be moved inwards as far as absolutely necessary to prevent wasting engine power.

Positions of counterknives	Utilization in accordance with straw type
Shallow angle	Dry straw
Slightly angled	Wet straw and weeds
Fully angled	Rape and crop straw in general

To adjust the counterknives (A), loosen bolts (B) on both sides.



Fully angled position

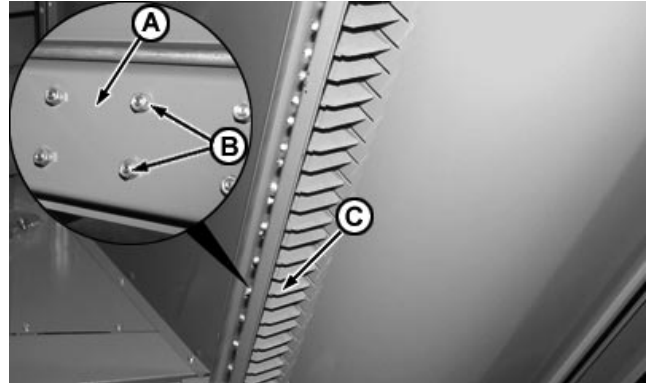
CO247120 –UN-29JUL05

ML70882,0000806 –19-01AUG05-1/1

Replacement of Straw Chopper Counterknives

NOTE: *The counterknives are located at the front of the straw chopper.*

Remove cap screws (B) and withdraw counterknife (C) from its housing (A). Install the new counterknife.



CQ247630 -UN-29JUL05

ML70882,00009E4 -19-16JUN06-1/1

Reducing Straw Chopper Rotational Speed

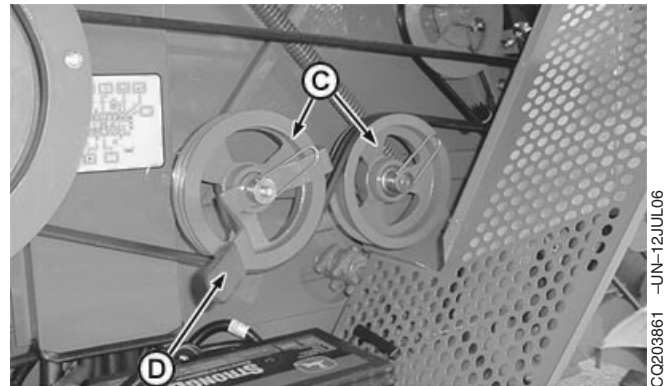
When harvesting corn or sunflowers, impeller speed should be reduced.

1. Open shields (A) and (B). For more details see the "Service—Drives and Shields" section.
2. Loosen and remove pulley belt (C) by means of lever (D). Turn pulley belt (C) inside out, so that the inside is now facing outwards. This permits the correct alignment of the idler pulley wheels with the intermediate pulley wheels and impeller.
3. Insert belt on to intermediate pulley wheel (F). The smaller diameter drive pulley wheel (F) is recommended for corn and sunflowers, while the larger diameter drive pulley wheel (E) is recommended for most other crops
4. Insert belt on to pulley wheel (H). The larger diameter drive pulley wheel (H) is recommended for corn, while the smaller diameter drive pulley wheel (G) is recommended for most other crops.

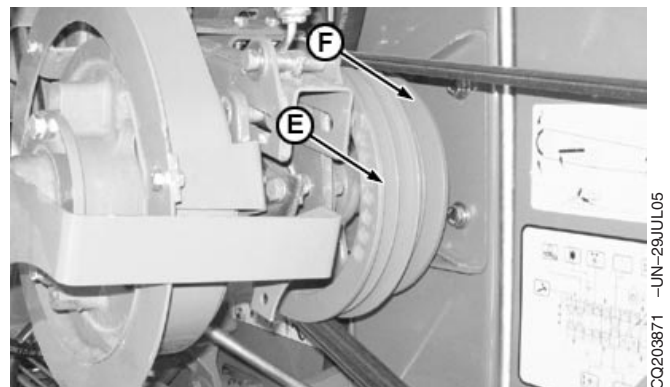
A—Shield
B—Shield
C—Idler pulley wheels
D—Lever
E—Greater intermediate pulley wheel
F—Lesser intermediate pulley wheel
G—Impeller lesser pulley wheel
H—Impeller greater pulley wheel



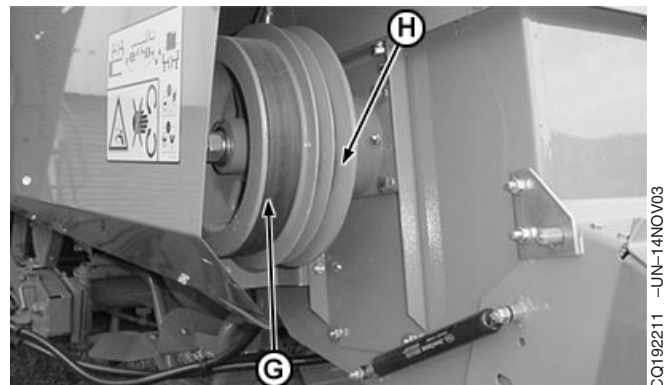
CO247140 -UN-29JUL05



CO203861 -UN-12JUL06



CO203871 -UN-29JUL05



CO192211 -UN-14NOV03

Straw Distributor Operating and Transport Position

Operating Position:

Set the straw distributor as illustrated in the “Operating position” figure and lock it in place with nuts (A), turning them clockwise on both sides.

Transport Position:

Loosen nuts (A) and raise the straw distributor until it touches on combine rear as shown in the “Transport position” figure.

Lock it with latches (C).

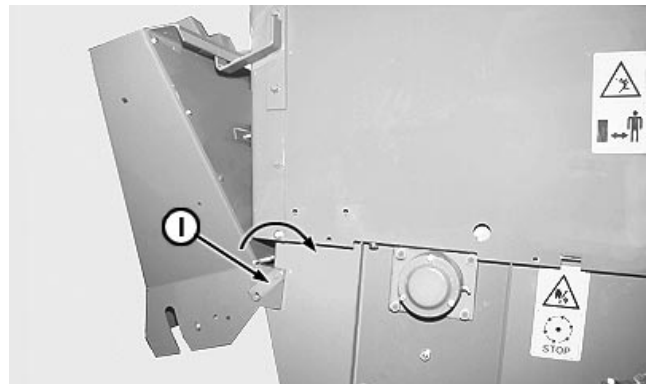
NOTE: Turn locking latch (I) to alternate between field and transport positions. See the illustration “Transport position”.

- A—Straw distributor nut
- C—Straw distributor locking latch
- I—Lock



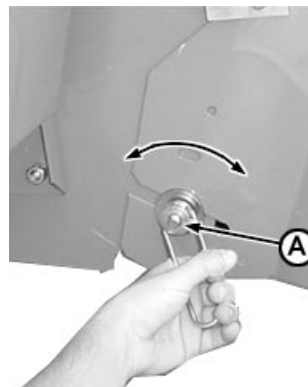
Operating position

CQ273940 -UN-20JUN06

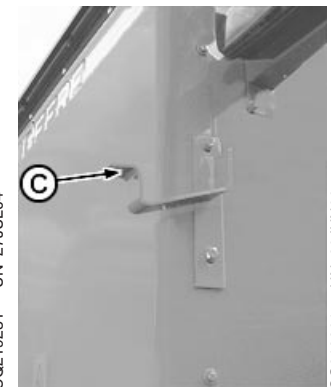


Transport position

CQ247150 -UN-29JUL05



CQ219231 -UN-27JUL04



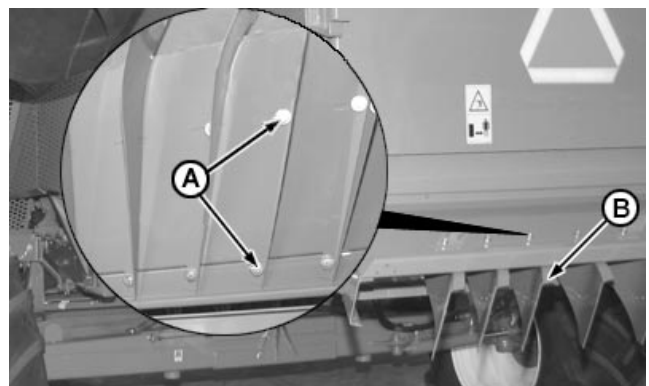
CQ219261 -UN-20JUN06

ML70882,00009E5 -19-16JUN06-1/1

Adjusting Straw Distributor Baffles

Loosen nuts (A) and adjust baffles (B) according to the required distance for straw to be thrown.

NOTE: The greater the angle of the baffles, wider will be the area of straw spread.



CQ247640 -UN-29JUL05

ML70882,0000811 -19-01AUG05-1/1

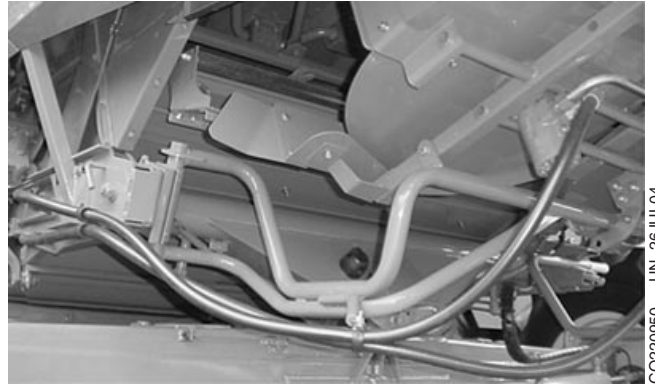
Chaff Spreader Drive



CAUTION: NEVER operate the combine without shields correctly installed.

The chaff spreader is driven by a hydraulic hose on the left-hand side of the combine.

NOTE: The chaff spreader is driven by the hydraulic pump located in the straw walker intermediate drive set.



CQ220950 -UN-26JUL04

ML70882,00004C5 -19-03JUN05-1/1

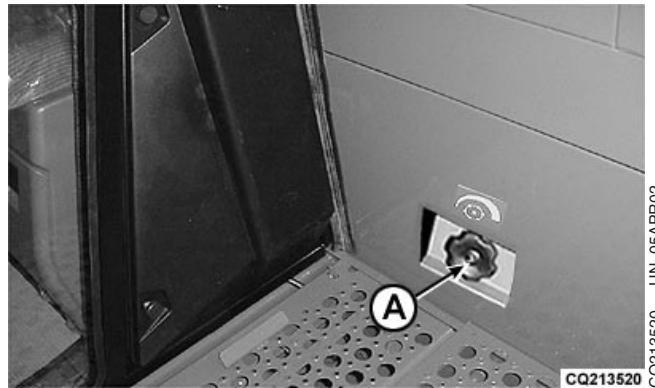
Chaff Spreader Speed Adjustment

Speed adjustment is performed through handle (A) and it depends on the following:

- Moisture of crop
- Amount of chaff
- Desired area of coverage

NOTE: Chaff should be expelled uniformly over rear tires.

It is necessary to reduce chaff spreader speed to avoid excessive dispersion of chaff.



CQ213520 -UN-05APR02

MB03730,0001BB4 -19-03JUN05-1/1

Chaff Spreader Operating Position

Operating position is shown on this photograph.



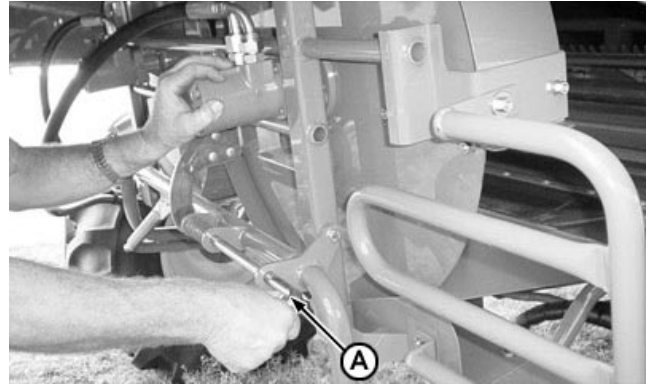
CQ219360 -UN-08SEP03

ML70882,00003FF -19-03JUN05-1/1

Chaff Spreader Transport Position

Use locking pin (A) to change from operating position to transport position and vice versa.

NOTE: In transport position chaff spreader is in a horizontal position.



ML70882,0000400 -19-03JUN05-1/1

CQ219371 -UN-17NOV03

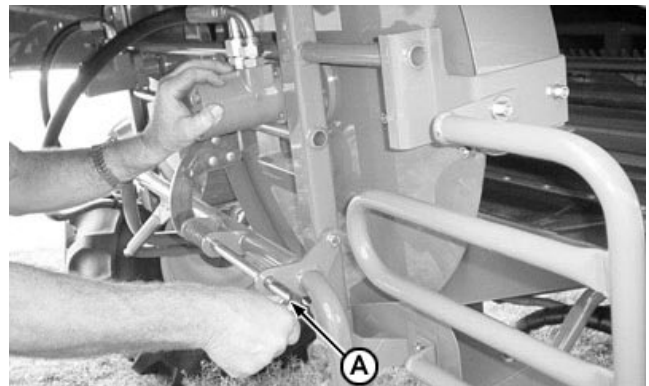
Lateral Swing of Chaff Spreader

Lateral swing allows access to cleaning shoe, making adjustments and service easier.

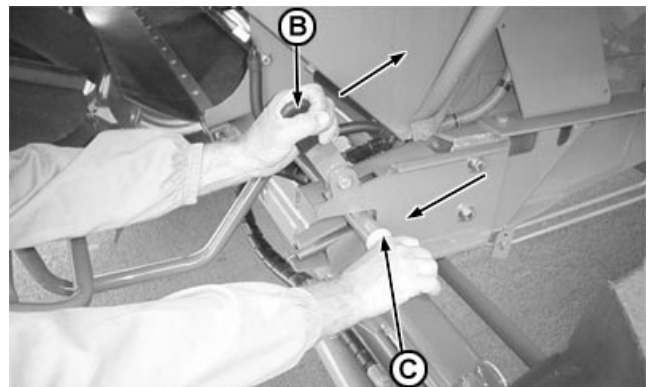
Pull pin (A) so that the chaff spreader may be lowered to its full extent.

Push lever (B) to free arm (C). Pull arm (C) to swing chaff spreader in direction of arrow.

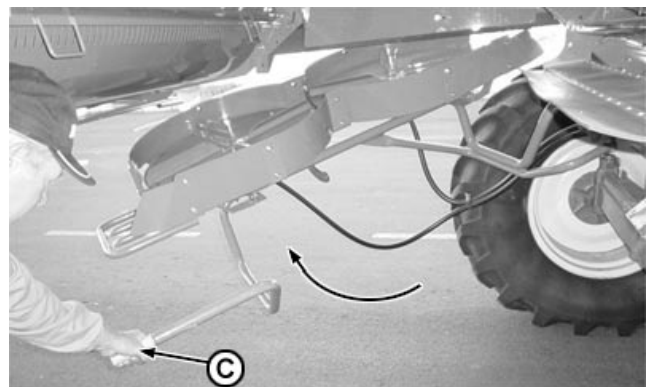
NOTE: At the end of adjustment or service return spreader to operating position, making sure that it is locked in place.



CQ219371 -UN-17NOV03



CQ219341 -UN-17NOV03



CQ219331 -UN-17NOV03

ML70882,0000423 -19-03JUN05-1/1

Chaff Spreader Spread Angle Adjustment

Lateral plate (D) determines the spread angle for the chaff. The plate's spread angle may be adjusted.

I - Increased spread angle:

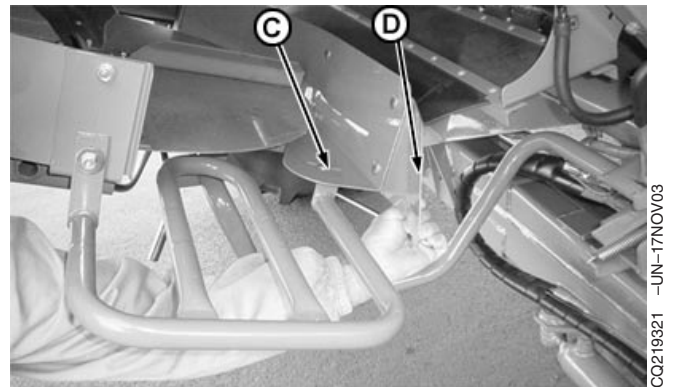
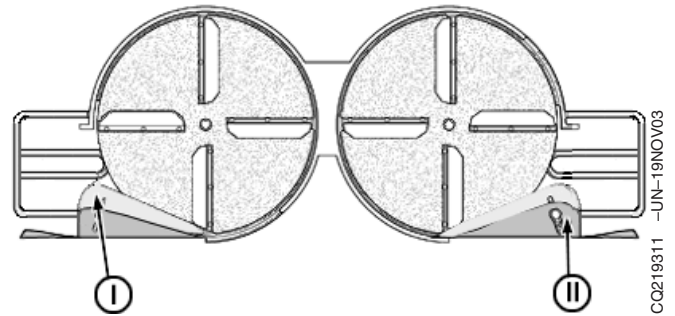
Used for large chaff (e.g. corn straw), or chaff with excessive moisture, or when a combine is using a larger header.

II - Reduced spread angle:

Used for small chaff (e.g. wheat), or chaff with low moisture content, or when a combine is using a smaller header.

Adjustment procedure:

1. Shut down machine.
2. On a flat surface, use correct tool to loosen bolt (C).
3. Adjust spread angle of lateral plate (D).



ML70882.000041B -19-03JUN05-1/1

Grain Tank Loading and Unloading

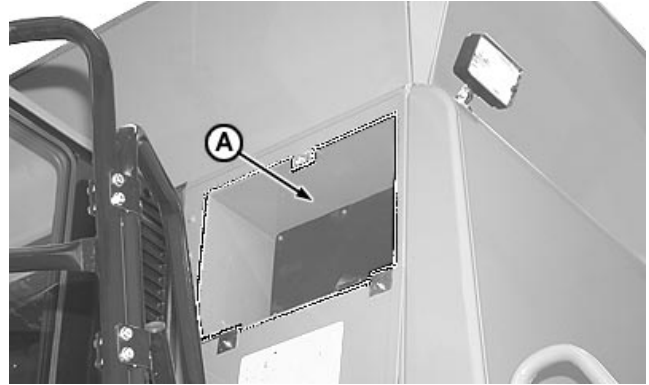
Grain Tank Inspection Hatch

In the grain tank wall there is a hatch (A) to inspect the clean grain and remove samples, located immediately below the main electrical box.

Between the grain tank wall and the main electrical box, there is a space where a hand can be inserted to extract a clean grain sample.

NOTE: *There is also a hatch behind the seat in the operator's cab through which grain in the grain tank can be inspected.*

A—Inspection hatch



AG,CO03622,2027 -19-01AUG05-1/1

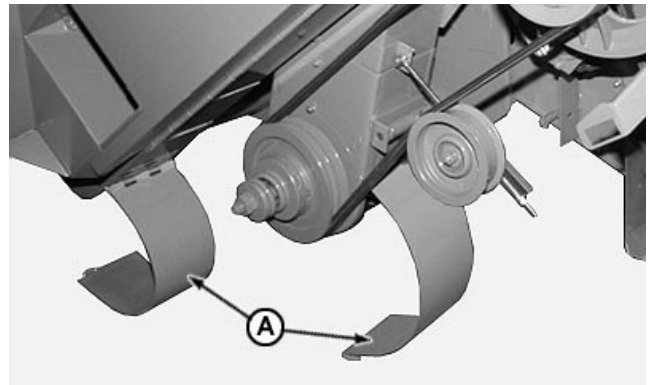
Tailings Elevator and Clean Grain Elevator

Open the elevator doors (A) at the end of each working day and run the elevators to clean them out. Clean them also before harvesting a different crop.

Leave the hatches open when not harvesting.

NOTE: *When closing the lower inspection hatches make sure that they seal perfectly to avoid grain loss.*

Check elevator chain tensioning after the first few hours of operation.

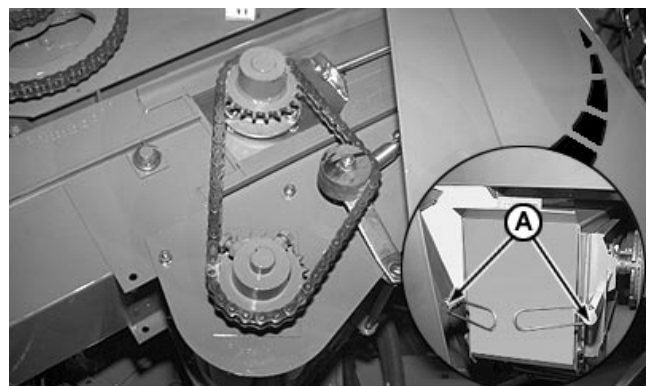


AG,CO03622,2049 -19-01AUG05-1/1

Tailings Elevator Conveyor Chain Tension

The tailings elevator conveyor chain should be tightened so that the first chain link behind the sprocket can be moved 6 to 10 mm (0.2 to 0.4 in.).

To adjust tension, turn both handles (A) at elevator head.



ML70882,0000810 -19-22MAR06-1/1

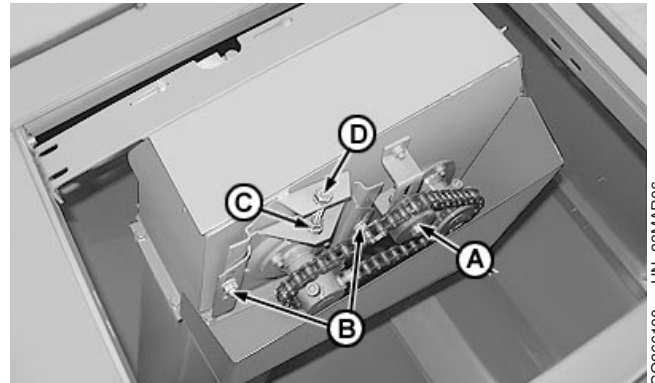
Adjusting Clean Grain Elevator Conveyor Chain Tension

1. Loosen chain tension through idler (A).
2. Loosen nuts (B).
3. Loosen nuts (C).
4. Adjust conveyor chain tension through adjustment screws (D).

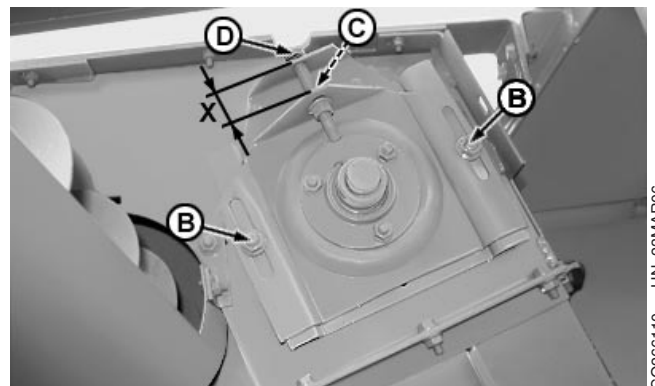
NOTE: Adjust maintaining the same distance (X) on both sides of elevator.

5. Retighten nuts (B) and (C).
6. Adjust tension of upper auger drive chain of grain tank. See "Adjusting Grain Tank Upper Auger Drive Chain".

A—Tensioner
B—Nuts
C—Nuts
D—Adjusting screws
X—Distance



Right-hand side



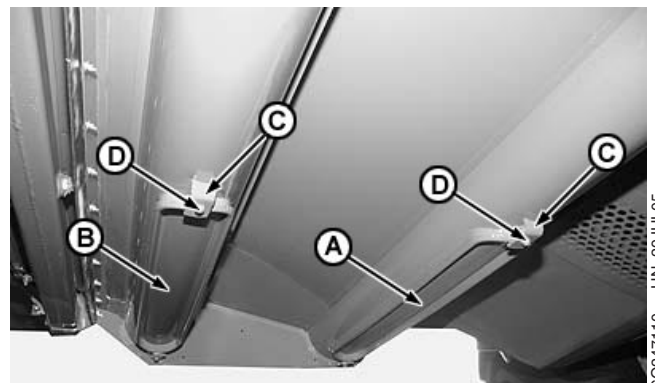
Left-hand side

AG,CO03622,2055 -19-24MAR06-1/1

Elevator Augers

IMPORTANT: Thoroughly clean these areas when harvesting a different crop for seeds and at the end of the harvesting period.

Remove nuts (D) and clamps (C). Remove covers (A) and (B).



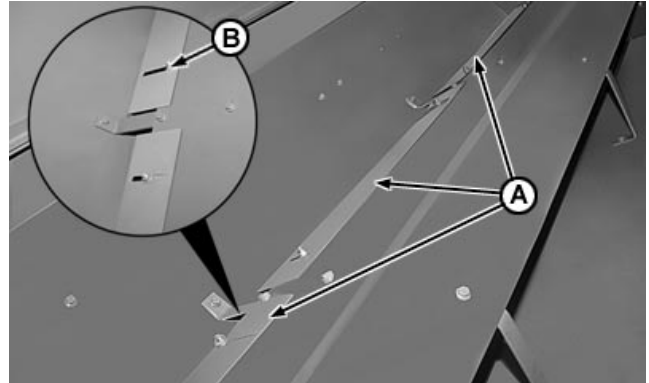
AG,GG05155,335 -19-01AUG05-1/1

Grain Tank Lower Auger Cover Plates

The cover plates (A) can be adjusted as required. Loosen nuts (B) to adjust.

NOTE: It is recommend that the covers are kept in a more closed position for wet conditions and more open for dry conditions.

The covers should be more closed on the right side (the clean grain elevator side).



CO247180 -UN-29JUL05

AG,CO03622,2052 -19-01AUG05-1/1

Grain Tank Extension



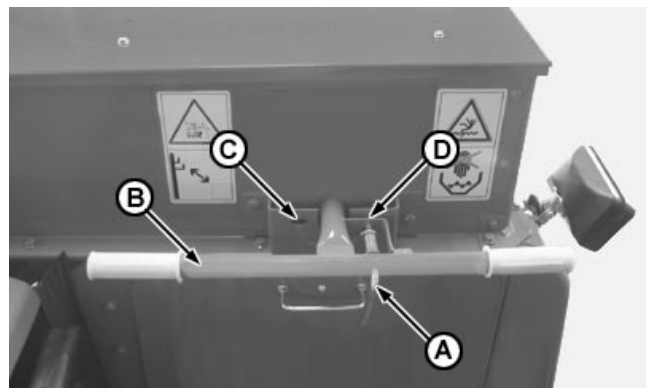
CAUTION: The grain tank extension must be in transport position when the combine is transported on roads, due to the height limit on public roads.

Operating position:

Pull locking lever (A) and turn lever (B) 180° clockwise until locking lever slots into hole (C).

Transport position:

Pull locking lever (A) and turn lever (B) 180° counterclockwise until locking lever slots into hole (D).



Transport position

CO266720 -UN-02MAR06

ML70882,0000988 -19-23MAY06-1/1

Fuel, Lubricants and Coolant

Handle Fuel Safely—Avoid Fires

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



TS202 -UN-23AUG88

DX,FIRE1 -19-03MAR93-1/1

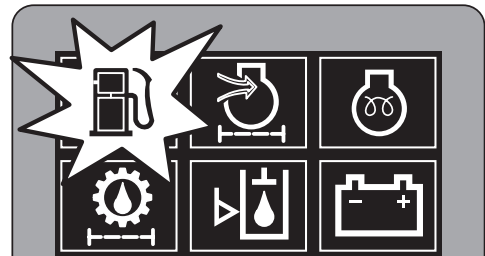
Filling Fuel Tank



CAUTION: Be careful when handling fuel. Stop the engine and, above all, do not smoke!

Fill the fuel tank at the end of each day of operation to avoid moisture condensation. Consult capacity in the "Specifications" section.

Warning light comes on if fuel level in tank has reached reserve (approximately 50 L remaining) (13.2 U.S. gal).



CQ247240 -UN-29JUL05

AG,CO03622,2056 -19-17AUG05-1/1

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended.

Required fuel properties

In all cases, the fuel shall meet the following properties:

Cetane number of 45 minimum. Cetane number greater than 50 is preferred, especially for temperatures below -20°C (-4°F) or elevations above 1500 m (5000 ft).

Cold Filter Plugging Point (CFPP) below the expected low temperature OR **Cloud Point** at least 5°C (9°F) below the expected low temperature.

Fuel lubricity should pass a minimum level of 3100 grams as measured by ASTM D6078 or maximum

scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

Sulfur content:

- Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.
- Use of diesel fuel with sulfur content less than 0.10% (1000 ppm) is **STRONGLY** recommended.
- Use of diesel fuel with sulfur content 0.10% (1000 ppm to 0.50% (5000 ppm) may result in **REDUCED** oil and filter change intervals.
- **BEFORE** using diesel fuel with sulfur content greater than 0.50% (5000 ppm), contact your John Deere dealer.
- **DO NOT** use diesel fuel with sulfur content greater than 1.0%.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

IMPORTANT: Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1 -19-17NOV05-1/1

Bio-Diesel Fuel

Consult your local fuel distributor for properties of the bio-diesel fuel available in your area.

Bio-diesel fuels may be used ONLY if the bio-diesel fuel properties meet the latest edition of ASTM D6751, EN 14214, or equivalent specification.

It is recommended to purchase bio-diesel fuel blended with B100 from a BQ-9000 Accredited Producer or a BQ-9000 Certified Marketer as recommended by the National Bio-diesel Board.

The maximum allowable bio-diesel concentration is a 5% blend (also known as B5) in petroleum diesel fuel. It has been found that bio-diesel fuels may improve lubricity in concentrations up to this 5% blend.

When using a blend of bio-diesel fuel, the engine oil level must be checked daily when the air temperature is -10°C (14°F) or lower. If oil becomes diluted with fuel, shorten oil change intervals accordingly.

IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines.

These oils do not burn completely, and will cause engine failure by

leaving deposits on injectors and in the combustion chamber.

A major environmental benefit of bio-diesel fuel is its ability to biodegrade. This makes proper storage and handling of bio-diesel fuel especially important. Areas of concern include:

- Quality of new fuel
- Water content of the fuel
- Problems due to aging of the fuel

Potential problems resulting from deficiencies in the above areas when using bio-diesel fuel in concentrations above 5% may lead to the following symptoms:

- Power loss and deterioration of performance
- Fuel leakage
- Corrosion of fuel injection equipment
- Coked and/or blocked injector nozzles, resulting in engine misfire
- Filter plugging
- Lacquering and/or seizure of internal components
- Sludge and sediments
- Reduced service life of engine components

Consult your fuel supplier for additives to improve storage and performance of bio-diesel fuels.

DX,FUEL7 -19-14NOV05-1/1

Diesel Engine Coolant

The engine cooling system is filled to provide year-round protection against corrosion and cylinder liner pitting, and winter freeze protection to -37°C (-34°F). If protection at lower temperatures is required, consult your John Deere dealer for recommendations.

John Deere COOL-GARD™ Prediluted Coolant is preferred for service.

John Deere COOL-GARD Prediluted Coolant is available in a concentration of either 50% ethylene glycol or 55% propylene glycol.

Additional recommended coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD Coolant Concentrate in a 40% to 60% mixture of concentrate with quality water.

John Deere COOL-GARD coolants do not require use of supplemental coolant additives, except for periodic replenishment of additives during the drain interval.

Other fully formulated coolants

Other fully formulated low silicate ethylene or propylene glycol base coolants for heavy-duty engines may be used if they meet one of the following specifications:

- ASTM D6210 prediluted (50%) coolant
- ASTM D6210 coolant concentrate in a 40% to 60% mixture of concentrate with quality water

Coolants meeting ASTM D6210 do not require use of supplemental coolant additives, except for periodic replenishment of additives during the drain interval.

Coolants requiring supplemental coolant additives

Other low silicate ethylene glycol base coolants for heavy-duty engines may also be used if they meet one of the following specifications:

- ASTM D4985 ethylene glycol base prediluted (50%) coolant
- ASTM D4985 ethylene glycol base coolant concentrate in a 40% to 60% mixture of concentrate with quality water

Coolants meeting ASTM D4985 require an initial charge of supplemental coolant additives, formulated for protection of heavy duty diesel engines against corrosion and cylinder liner erosion and pitting. They also require periodic replenishment of additives during the drain interval.

Other coolants

It is possible that neither John Deere COOL-GARD nor coolants meeting one of the coolant standards listed above is available in the geographical area where service is performed. If these coolants are unavailable, use a coolant concentrate or prediluted coolant with a quality additive package that provides cylinder liner cavitation protection and protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion.

The additive package must be part of one of the following coolant mixtures:

- ethylene glycol or propylene glycol base prediluted (40% to 60%) coolant
- ethylene glycol or propylene glycol base coolant concentrate in a 40% to 60% mixture of concentrate with quality water

Water quality

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

IMPORTANT: Do not mix ethylene glycol and propylene glycol base coolants.

DX,COOL3 -19-27OCT05-2/2

Diesel Engine Break-In Oil

New engines are filled at the factory with John Deere ENGINE BREAK-IN OIL. During the break-in period, add John Deere ENGINE BREAK-IN OIL as needed to maintain the specified oil level.

Change the oil and filter after the first 100 hours of operation of a new or rebuilt engine.

After engine overhaul, fill the engine with John Deere ENGINE BREAK-IN OIL.

If John Deere ENGINE BREAK-IN OIL is not available, use a diesel engine oil meeting one of the following during the first 100 hours of operation:

- API Service Classification CE
- API Service Classification CD
- API Service Classification CC
- ACEA Oil Sequence E2
- ACEA Oil Sequence E1

After the break-in period, use John Deere PLUS-50™ or other diesel engine oil as recommended in this manual.

IMPORTANT: Do not use PLUS-50 oil or engine oils meeting any of the following during the first 100 hours of operation of a new or rebuilt engine:

API CJ-4	ACEA E7
API CI-4 PLUS	ACEA E6
API CI-4	ACEA E5
API CH-4	ACEA E4
API CG-4	ACEA E3
API CF-4	
API CF-2	
API CF	

These oils will not allow the engine to break-in properly.

PLUS-50 is a trademark of Deere & Company.

DX,ENOIL4 -19-13SEP06-1/1

Diesel Engine Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere PLUS-50™ oil is preferred.

Oils meeting one of the following specifications are also recommended:

- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4

Extended service intervals may apply when John Deere PLUS-50, ACEA E7, ACEA E6, ACEA E5, or ACEA E4 engine oils are used. Consult your John Deere dealer for more information.

Other oils may be used if they meet one or more of the following:

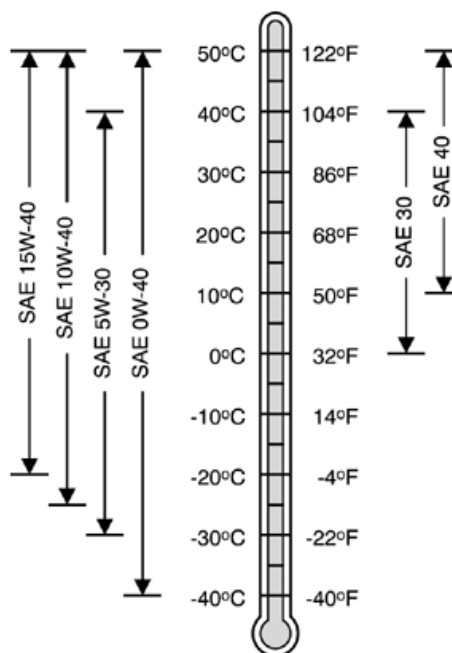
- John Deere TORQ-GARD SUPREME™
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- API Service Category CH-4
- API Service Category CG-4
- API Service Category CF-4
- ACEA Oil Sequence E3
- ACEA Oil Sequence E2

If oils meeting API CG-4, API CF-4, or ACEA E2 are used, reduce the service interval by 50%.

Multi-viscosity diesel engine oils are preferred.

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

If diesel fuel with sulfur content greater than 0.50% (5000 ppm) is used, reduce the service interval by 50%.



Oil Viscosities for Air Temperature Ranges

TS1681 -UN-09OCT06

DO NOT use diesel fuel with sulfur content greater than 1.00% (10 000 ppm).

DX,ENOIL -19-13SEP06-2/2

Testing Diesel Fuel

DIESELSCAN™ is a John Deere fuel analysis program that can be used to monitor the quality of your fuel. The DIESELSCAN analysis verifies fuel type, cleanliness, water content, suitability for cold weather operation, and whether the fuel meets specifications.

Check with your John Deere dealer for availability of DIESELSCAN kits.

DIESELSCAN is a trademark of Deere & Company

DX,FUEL6 -19-14NOV05-1/1

Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.

Fuel lubricity should pass a minimum load level of 3100 grams as measured by ASTM D6078 or a maximum scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

If fuel of low or unknown lubricity is used, add John Deere PREMIUM DIESEL FUEL CONDITIONER (or equivalent) at the specified concentration.

DX,FUEL5 -19-27OCT05-1/1

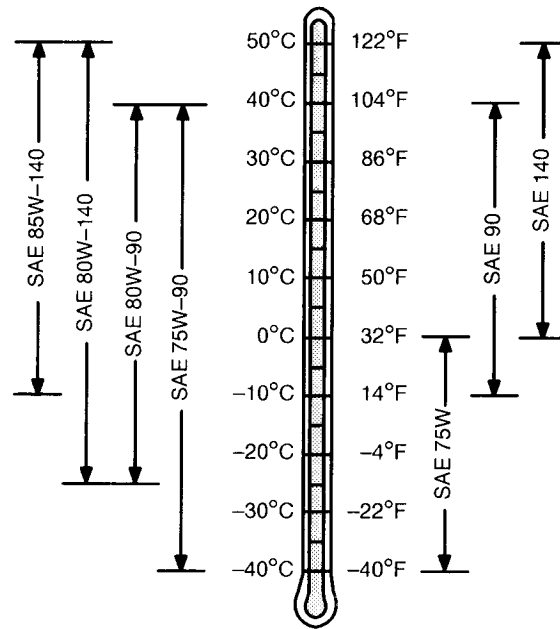
Gear Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere GL-5 GEAR LUBRICANT
- John Deere EXTREME-GARD™

Other oils may be used if they meet API Service Classification GL-5.



EXTREME-GARD is a trademark of Deere & Company.

DX.GEOIL -19-07JUL99-1/1

TS1653 -UN-14MAR96

Hydraulic System Oil

Use an oil viscosity suitable for the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere HY-GARD®
- John Deere Low Viscosity HY-GARD®

The following oils are also recommended:

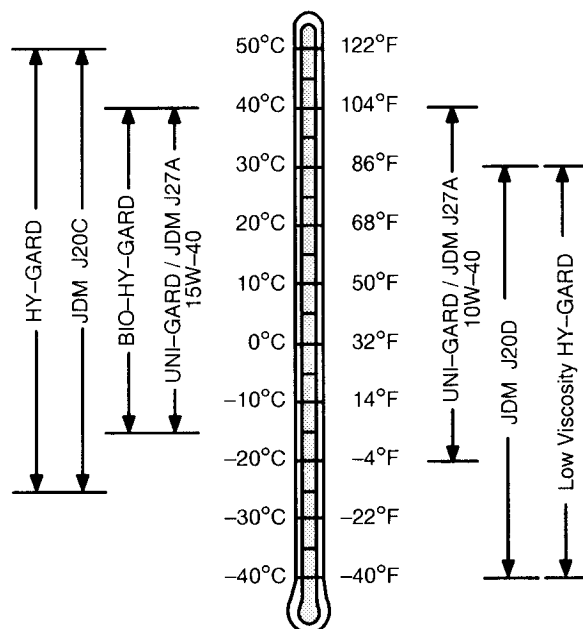
- John Deere UNI-GARD™
- John Deere BIO-HY-GARD™¹

Other oils may be used if they comply with one or more of the following standards:

- John Deere JDM J20C standard
- John Deere JDM J20D standard
- John Deere JDM J27A standard

IMPORTANT: Do not use engine oil in the hydraulic system.

Arctic oils (such as Military Specification MIL-L-46167B) may be used at temperatures below -30°C (-22°F).



TS1650 -UN-14MAR96

HY-GARD is a trademark of Deere & Company
UNI-GARD is a trademark of Deere & Company
BIO-HY-GARD is a trademark of Deere & Company

¹ BIO-HY-GARD achieves or exceeds a minimum biodegradability of 80% in 21 days, according to the CEC L-32-T-82 test method. BIO-HY-GARD should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.

Grease

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

John Deere SD POLYUREA GREASE is preferred.

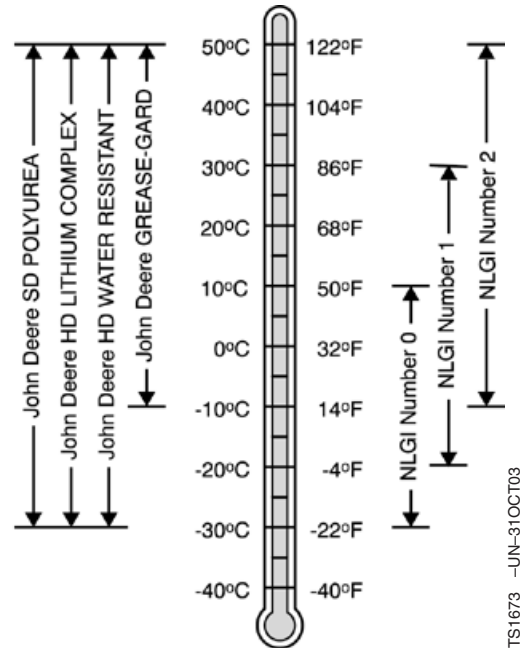
The following greases are also recommended

- John Deere HD LITHIUM COMPLEX GREASE
- John Deere HD WATER RESISTANT GREASE
- John Deere GREASE-GARD™

Other greases may be used if they meet the following:

NLGI Performance Classification GC-LB

IMPORTANT: Some types of grease thickeners are not compatible with others. Consult your grease supplier before mixing different types of grease



TS1673 -UN-31OCT03

GREASE-GARD is a trademark of Deere & Company

DX,GREA1 -19-07NOV03-1/1

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Whenever possible, store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST -19-18MAR96-1/1

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic oils.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER -19-15JUN00-1/1

Use Genuine John Deere Parts

Genuine John Deere parts have been specifically designed for John Deere machines.

Other parts are neither examined nor marketed by John Deere. Installation and use of such products could have negative effects upon the design characteristics of the machine and thereby affect its safety.

Avoid this risk by using only genuine John Deere parts.



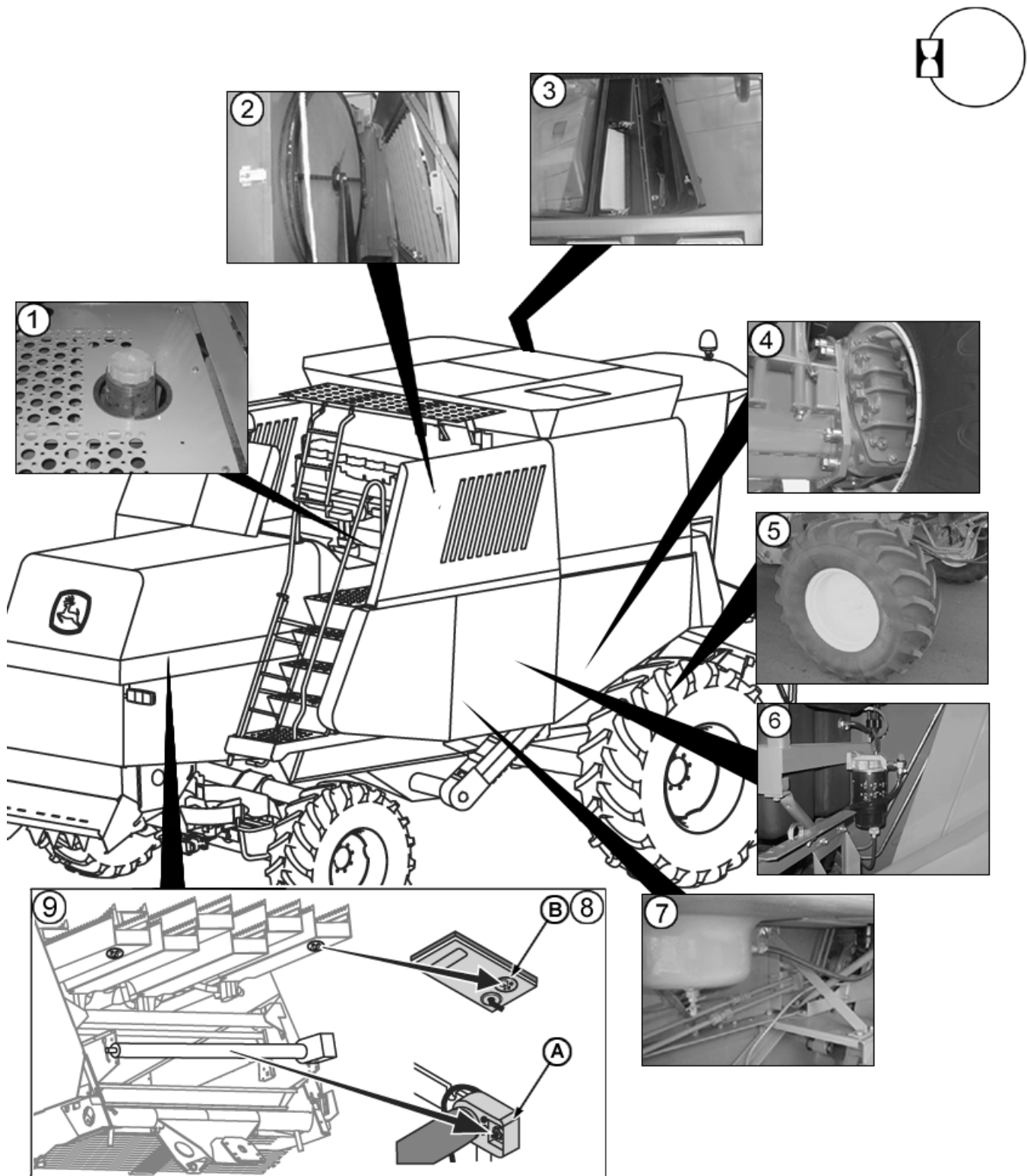
CQ203420

CQ203420 -UN-22MAR01

CQ,PCORIGIN -19-02SEP99-1/1

Periodic Servicing and Lubrication

Service Points—Daily



Continued on next page

ML70882,0000A11 -19-28JUN06-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Check condition of fuel tank filler filter.

Fully refill fuel tank at the end of each day of operation. This prevents the condensation of water inside the tank which reduces the service life of the pump and injection nozzles.

IMPORTANT: The quality and cleanliness of fuel is an important factor in obtaining dependable performance and satisfactory engine life. Use commercial diesel fuel which should be in accordance with Standard EN590.

2. Check the condition and cleanliness of the rotary screen daily.
3. Check the condition and cleanliness of the cab air conditioning and fan filter. This filter is located at right-hand side of cab access door. **Filters should be cleaned every 50 hours.**
4. Check the vent plugs of the final drives. Clean, if necessary.

5. Check condition and inflation of all tires. See table under "Tire Inflation Pressure" in "Wheels, Axles and Counterweights" section.

NOTE: When combine is not being used, checks may be carried out weekly.

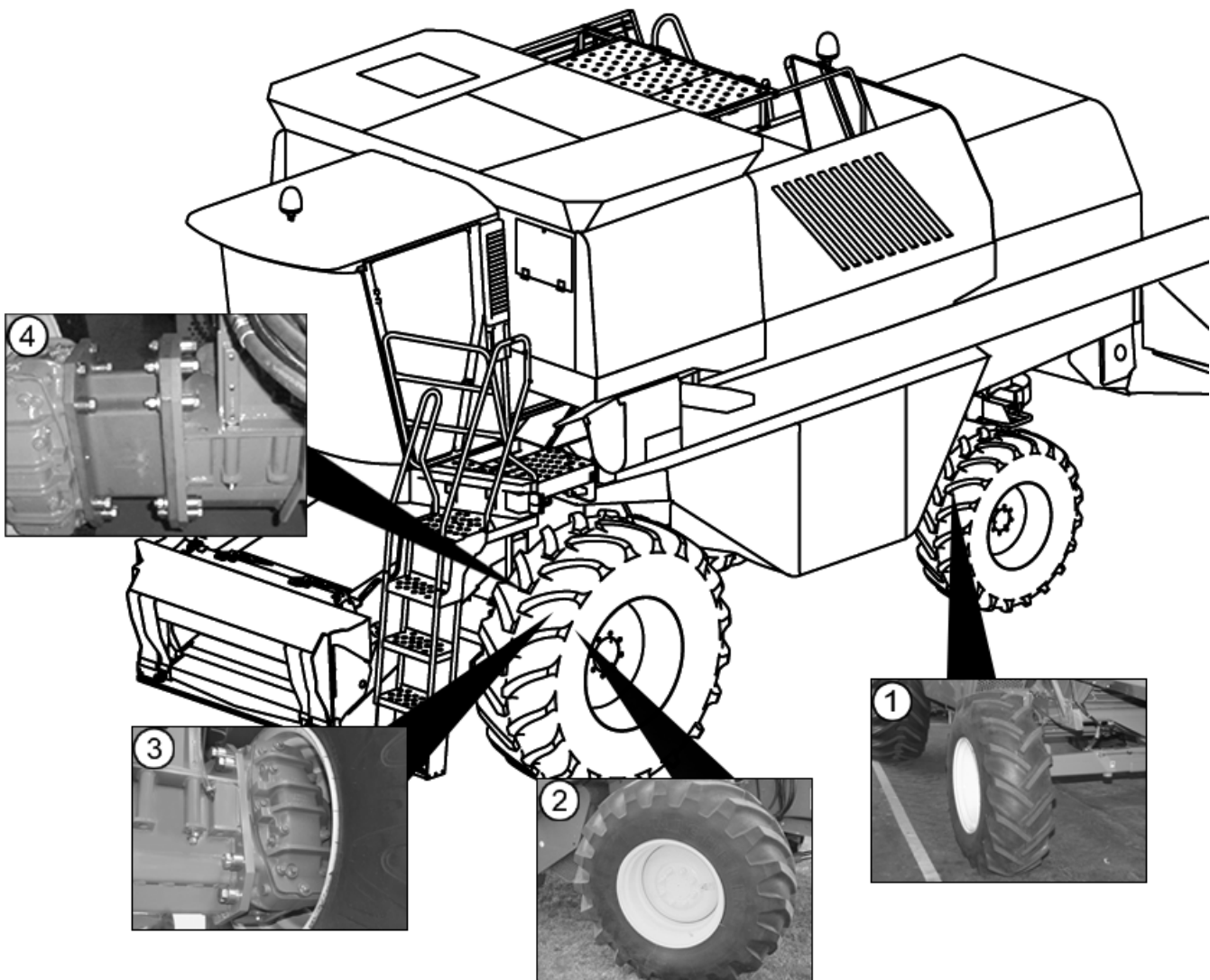
6. Bleed off water accumulated in the primary fuel filter.
7. Remove impurities deposited in the fuel tank decanter. To do so, loosen wing nut enough to allow sediment to bleed out.
8. Check cleaning shoe daily and clean if necessary. This will keep system performance high.

NOTE: Depending on the crop being harvested, it may be necessary to check the cleaning shoe during harvesting.

9. Check functioning of alarm activated by straw walker (B) and cleaning shoe (A) sensors. See "Operational Check of Harvest Performance Monitor".

Service Points—First 10 hours

10



Continued on next page

ML70882,0000A2A -19-12JUL06-1/2

CQ275710 -UN-12JUL06

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Carry out first retightening of all rear wheel attaching nuts to a torque of 180 N•m (130 lb-ft). **Thereafter, repeat this procedure every 200 hours.**
2. Carry out first retightening of front wheel nuts to 550 N•m (400 lb-ft). **Thereafter, repeat this procedure every 200 hours.**

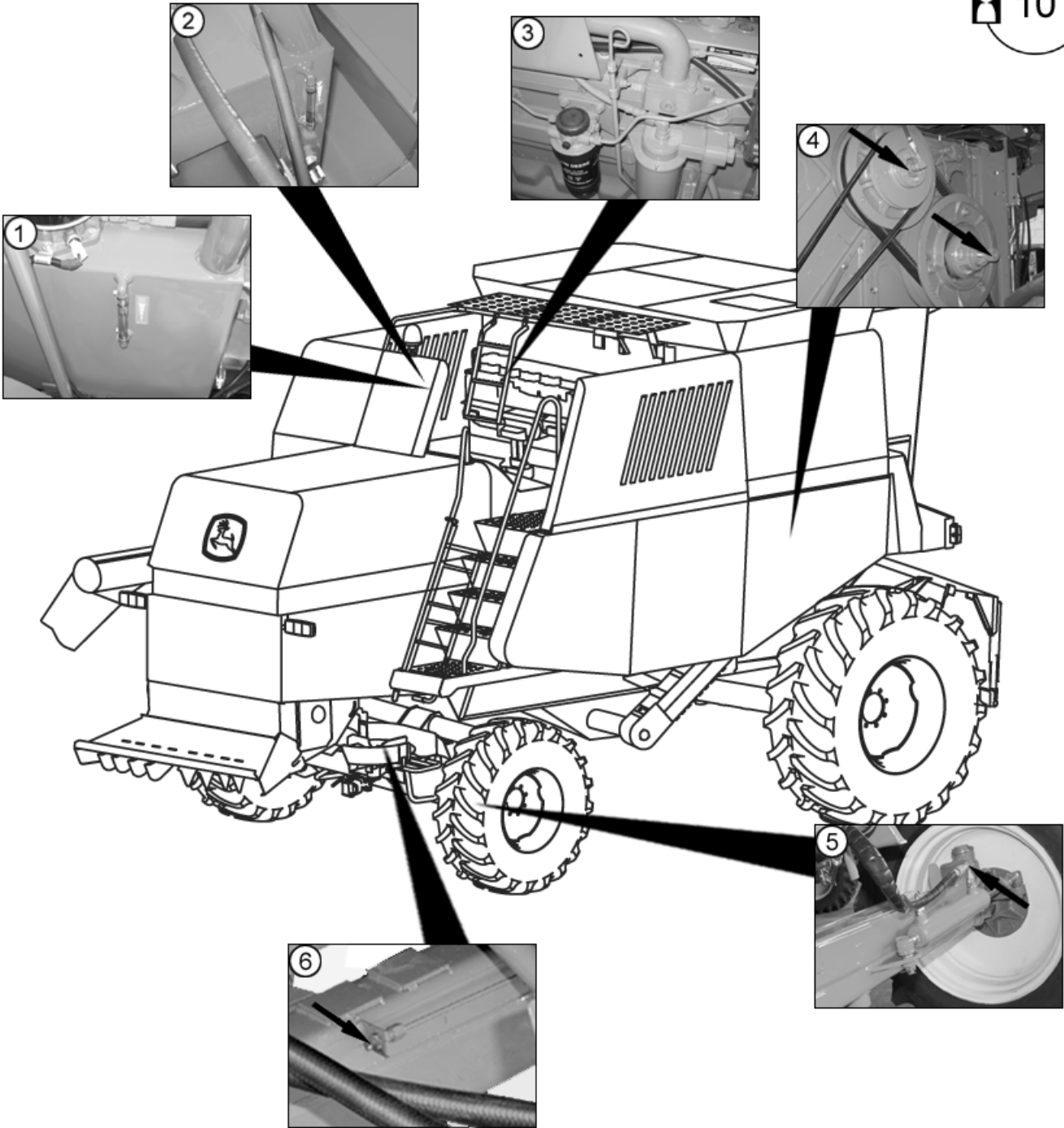
NOTE: Refer to "Installing Front Wheels" for further details.

3. Carry out the first retightening of final drive attaching bolts to 450 N•m (332 lb-ft). **Thereafter, repeat this procedure every 50 hours.**
4. If equipped: Carry out first retightening of front axle attaching bolts to 450 N•m (332 lb-ft). **Thereafter, repeat this procedure every 50 hours.**

ML70882,0000A2A -19-12JUL06-2/2

Service points—Every 10 hours

10



Continued on next page

ML70882,0000A2B -19-12JUL06-1/2

CO275730 -UN-12JUL06

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Check hydraulic system oil level. Check with header on ground. Oil level should be approximately at center of sight-glass. Add John Deere recommended oil if necessary.
2. Check hydrostatic system oil level. Oil level should be approximately at center of sight-glass. Add John Deere recommended oil if necessary.
3. Check engine oil level by means of dipstick.

NOTE: Only check oil level after engine has been shut off for at least 30 minutes. See "Checking Engine Oil Level" for more details.

4. Lubrication points. One point at each variable threshing cylinder speed drive pulley (without reduction gear).

IMPORTANT: These points must be lubricated with GREASE and pulleys closed. MOBILITH SHC 007 grease recommended.

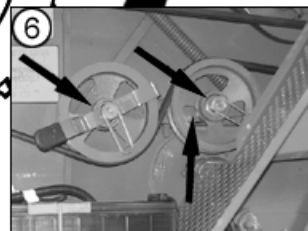
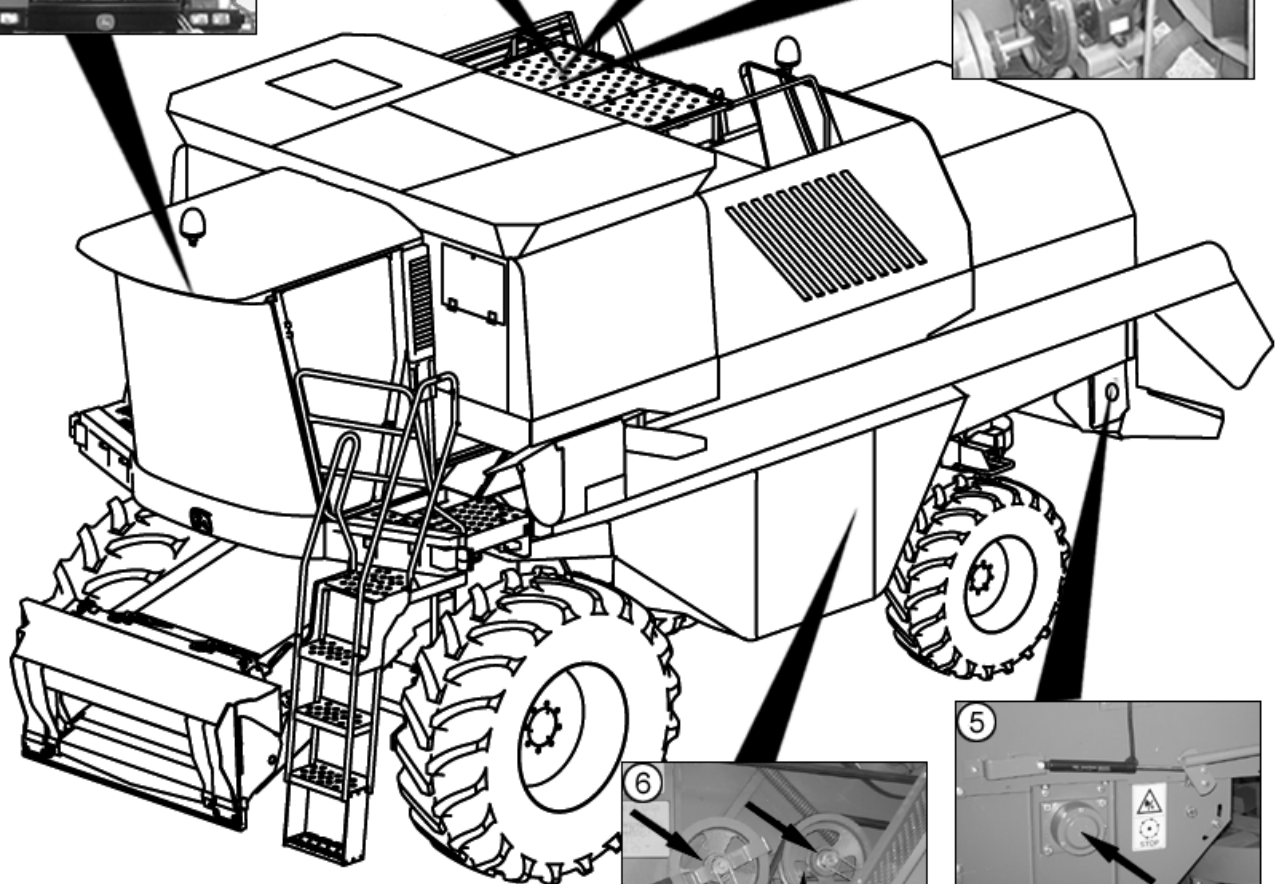
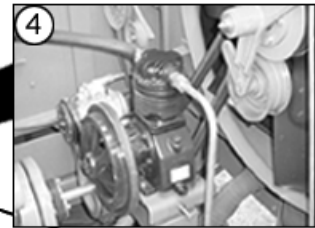
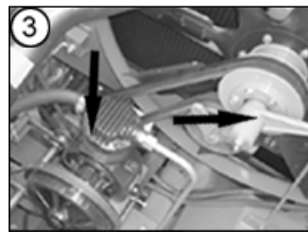
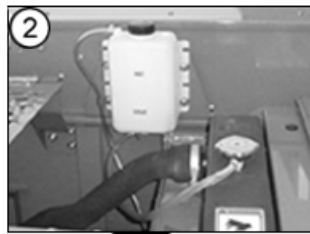
NOTE: The tailings elevator was removed for illustration purposes.

5. Lubrication points. One point on each side of machine, on the rear axle steering system.
6. Lubrication points. One point on rear axle linkage.

ML70882.0000A2B -19-12JUL06-2/2

Service points—Every 10 hours

10



Continued on next page

ML70882,0000A14 -19-29JUN06-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Check cleanliness and service condition of all of the machine's lights.

NOTE: After rough cleaning the lamp lenses, wipe with a cloth moistened in household alcohol for better lamp performance.

2. Check the condition and coolant level of the cooling system. Add water and additives according to the proportions specified in the "Fuel, Lubricants and Coolant" section.

IMPORTANT: Only refill cooling system with engine shut down and at ambient temperature.

NOTE: Change coolant every 2000 hours or two years, whichever happens first.

3. Lubrication points. One point on the engine fan bearing and the other on the air compressor drive shaft bearing.

4. Check the air compressor oil level by means of the oil level plug. Add oil as needed.

NOTE: During the first 50 hours of operation the air compressor will have a higher oil consumption, therefore it is very important to check oil level daily and refill, if necessary. After the first oil change, consumption will be reduced.

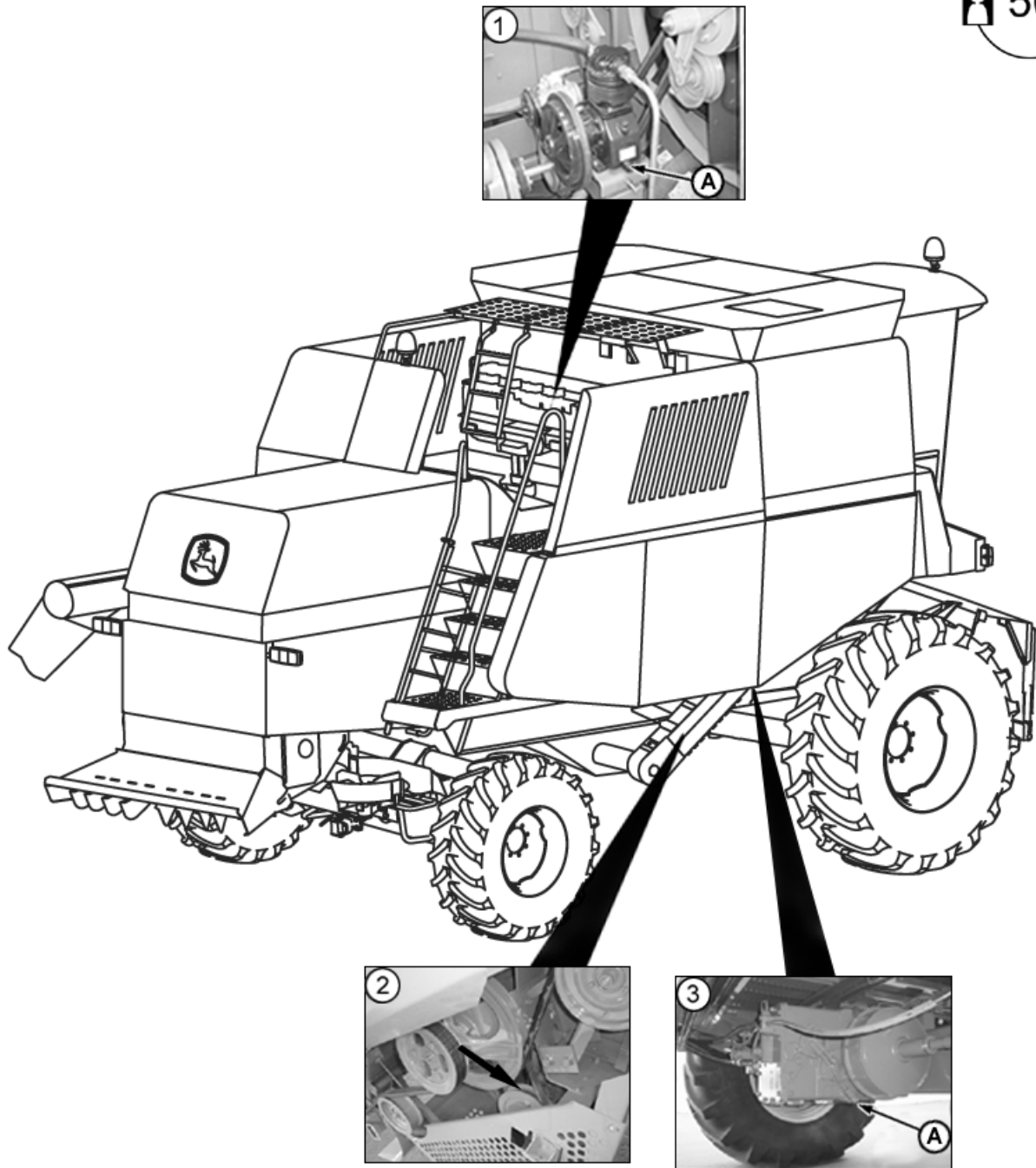
IMPORTANT: In the event that the air compressor continues to consume a very large quantity of oil after 50 hours have expired, check for leaks in the connections and lines.

5. Lubrication points. One point on each side of machine, on straw chopper bearings.
6. Lubrication points. One point on each idler pulley and one point on idler arm of straw chopper belt.

ML70882.0000A14 -19-29JUN06-2/2

Service Points—First 50 hours

50

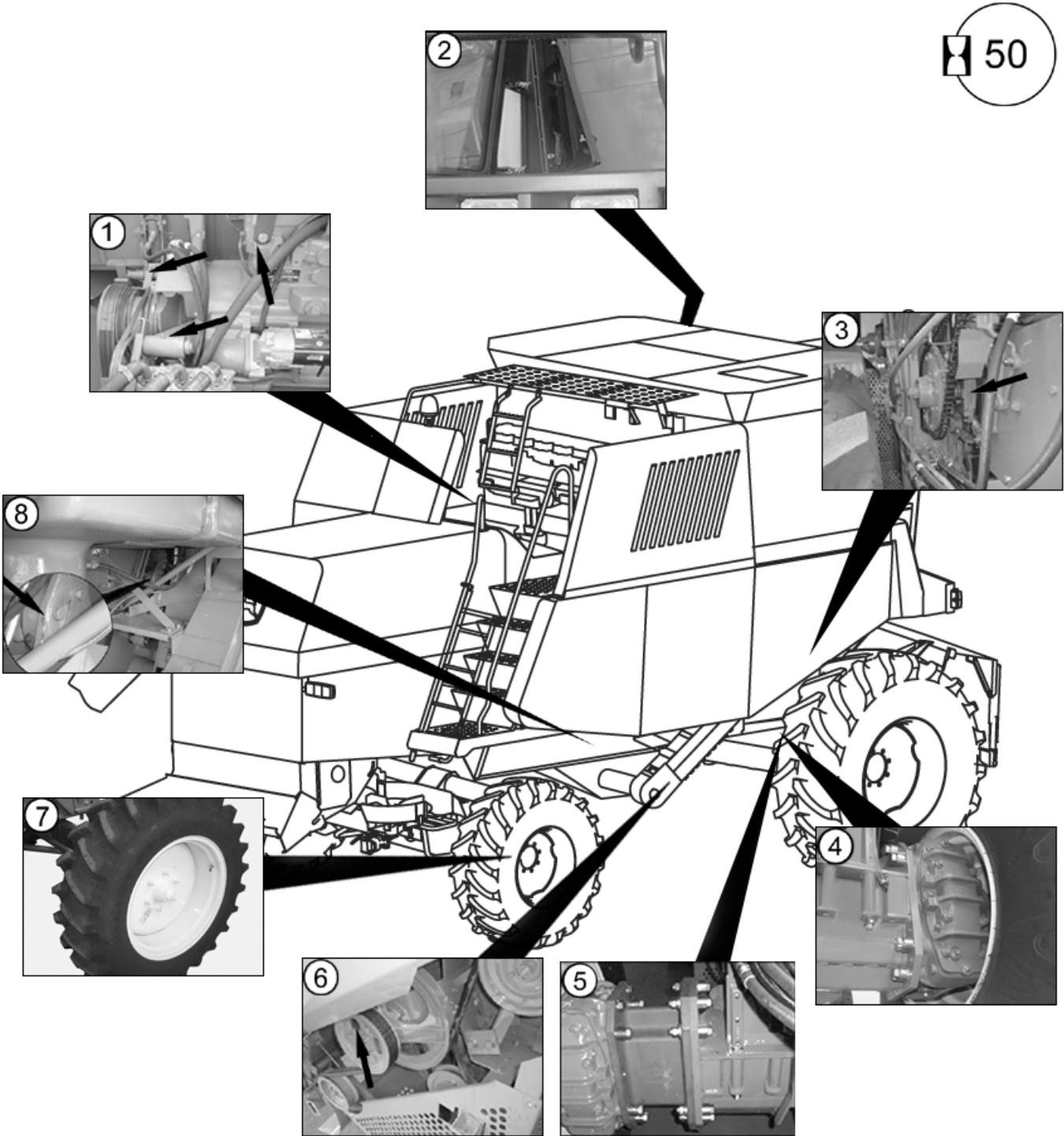


IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Change the air compressor oil for the first time, bleeding off the spent oil through the drain plug (A).
Thereafter, change the oil every 200 hours.
2. Lubrication points. One point on each side of machine, on cleaning system fan bearings.
3. Carry out the first transmission housing oil change, removing the spent oil by means of drain plug (A).
Thereafter, change transmission oil every 500 hours.

ML70882,0000A15 -19-29JUN06-2/2

Service points—Every 50 hours



CQ274810 -UN-29JUN06

Continued on next page

ML70882,0000A16 -19-29JUN06-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Lubrication points. One point on each drive belt idler arm (located next to the engine power takeoff).
2. Clean cab air filters with hand brush supplied with the machine.



CAUTION: When cleaning or changing air filter, shut down engine and remove starter key.

IMPORTANT: Clean these elements whenever air flow is noticeably reduced. The recirculation filter may not require as frequent cleaning as the fresh air (main) filter.

3. Lubrication points. One point on the feeder house linkage bearing.

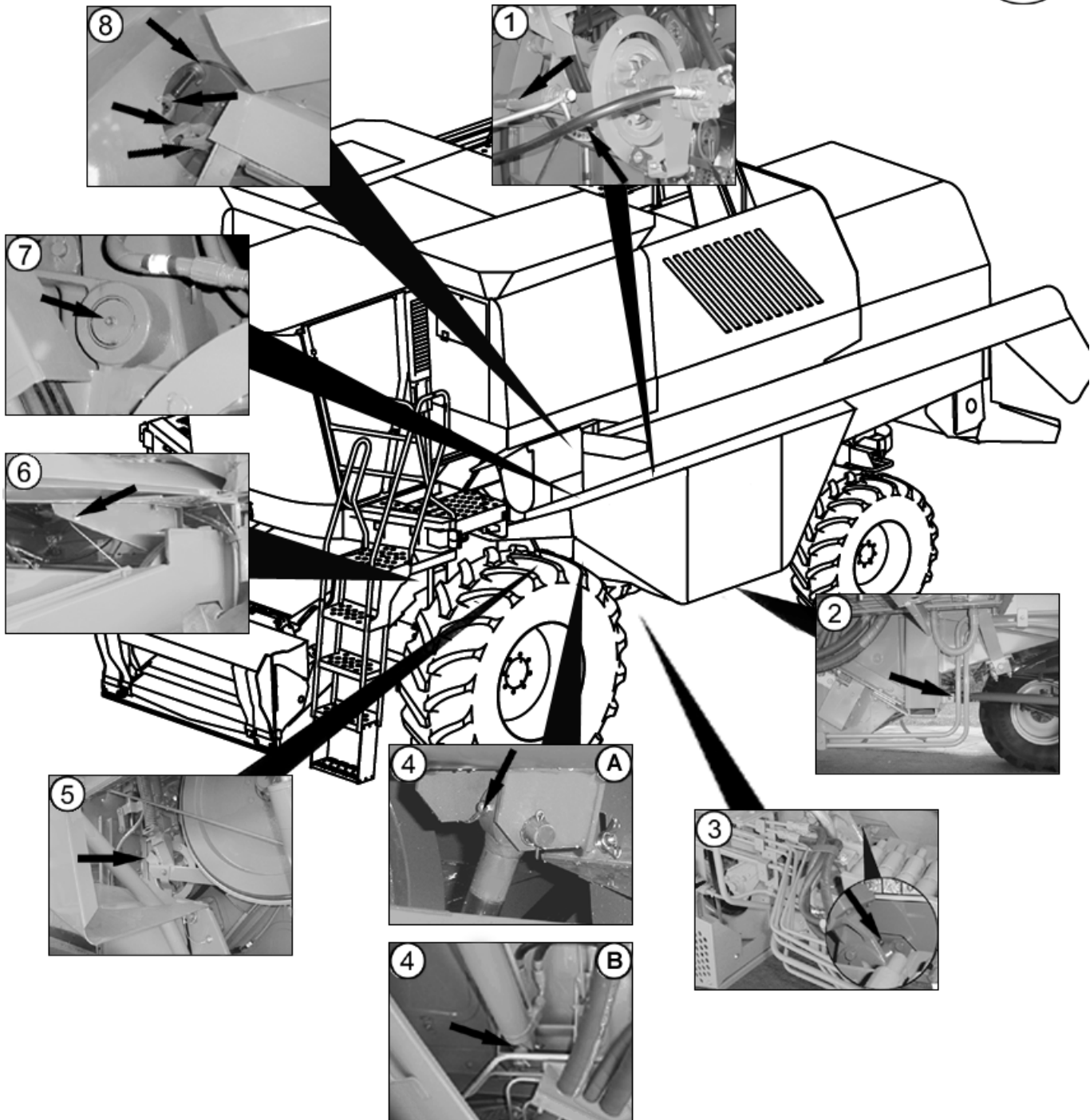
NOTE: Remove existing plastic shield to access bearing.

4. Retighten final drive attaching bolts to 450 N.m (332 lb-ft).
5. If equipped: Retighten front axle attaching bolts to 450 N.m (332 lb-ft).
6. Lubrication points. One point on drive pulley of tailings elevator/fan.
7. Lubrication points. One point on each wheel hub.
8. Lubrication points. One point on drive arm of the right-hand cleaning shoe.

ML70882.0000A16 -19-29JUN06-2/2

Service points—Every 50 hours

 50



Continued on next page

ML70882,0000A18 -19-30JUN06-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

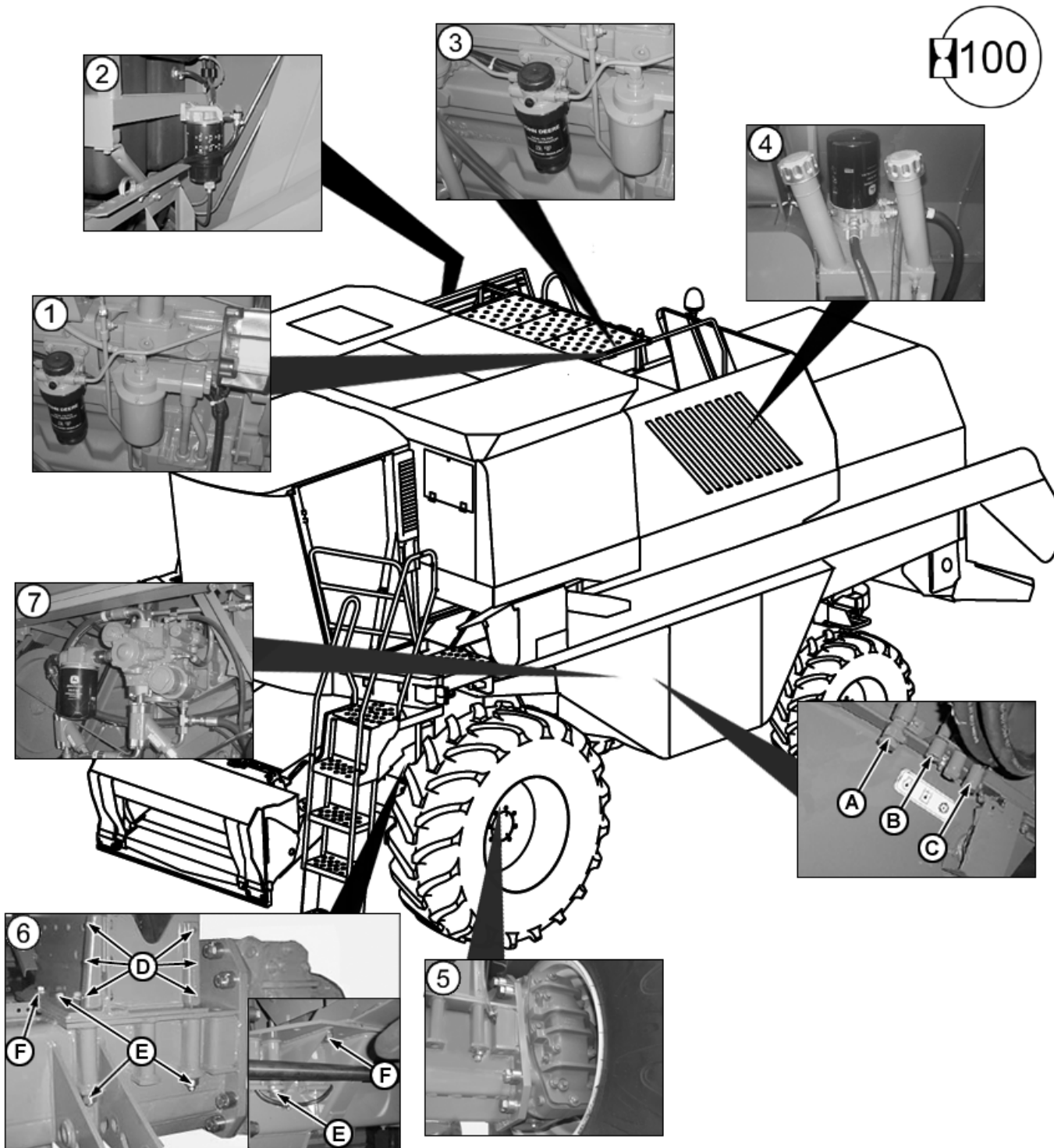
1. Lubrication points. One point on linkage and one point on each bearing of straw chopper intermediate transmission.
2. Lubrication points. One point on rear axle linkage.
3. Lubrication points. One point on drive arm of the left-hand cleaning shoe.
4. Lubrication points. One on upper part (A) and one on lower part (B), on the bearings of the unloading auger swing cylinder.

5. Lubrication points. One point on the header drive pulley.
6. Lubrication points. One point on the feeder house linkage bearing.
7. Lubrication points. One point on bearing of drive belt idler of hydrostatic pump.
8. Lubrication points. Two points on the unloading auger U-joints and two on auger linkage.

NOTE: To access these points the grain tank must be empty. Raise the end of the shield.

ML70882.0000A18 -19-30JUN06-2/2

Service Points—First 100 hours



Continued on next page

ML70882,0000A2C -19-23JAN07-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Change engine oil filter and oil for the first time. Run the engine for approx. 5 minutes to heat up oil before you change it. **Further replacements must be carried out every 250 hours.**

IMPORTANT: Ensure that your hands and the engine are perfectly clean when installing replacement filter elements or changing the oil.

NOTE: Drain engine oil through drain plug (A) for 1550 CWS CIS combines and through plug (B) for 1450 CWS CIS combines.

2. Carry out first replacement of filter element of primary fuel filter (water separator). **Further replacements must be carried out every 500 hours.**
3. Carry out first replacement of final fuel filter. **Further replacements must be carried out every 250 hours.**
4. Carry out first replacement of hydraulic system oil filter. **Further replacements must be carried out every 500 hours.**

5. Carry out first replacement of final drive oil. **Further replacements must be carried out every 1000 hours.**

NOTE: Clean vent plug of final drive.

6. Carry out first retightening of front axle attaching bolts. **Further retightening should be carried out every 500 hours.**

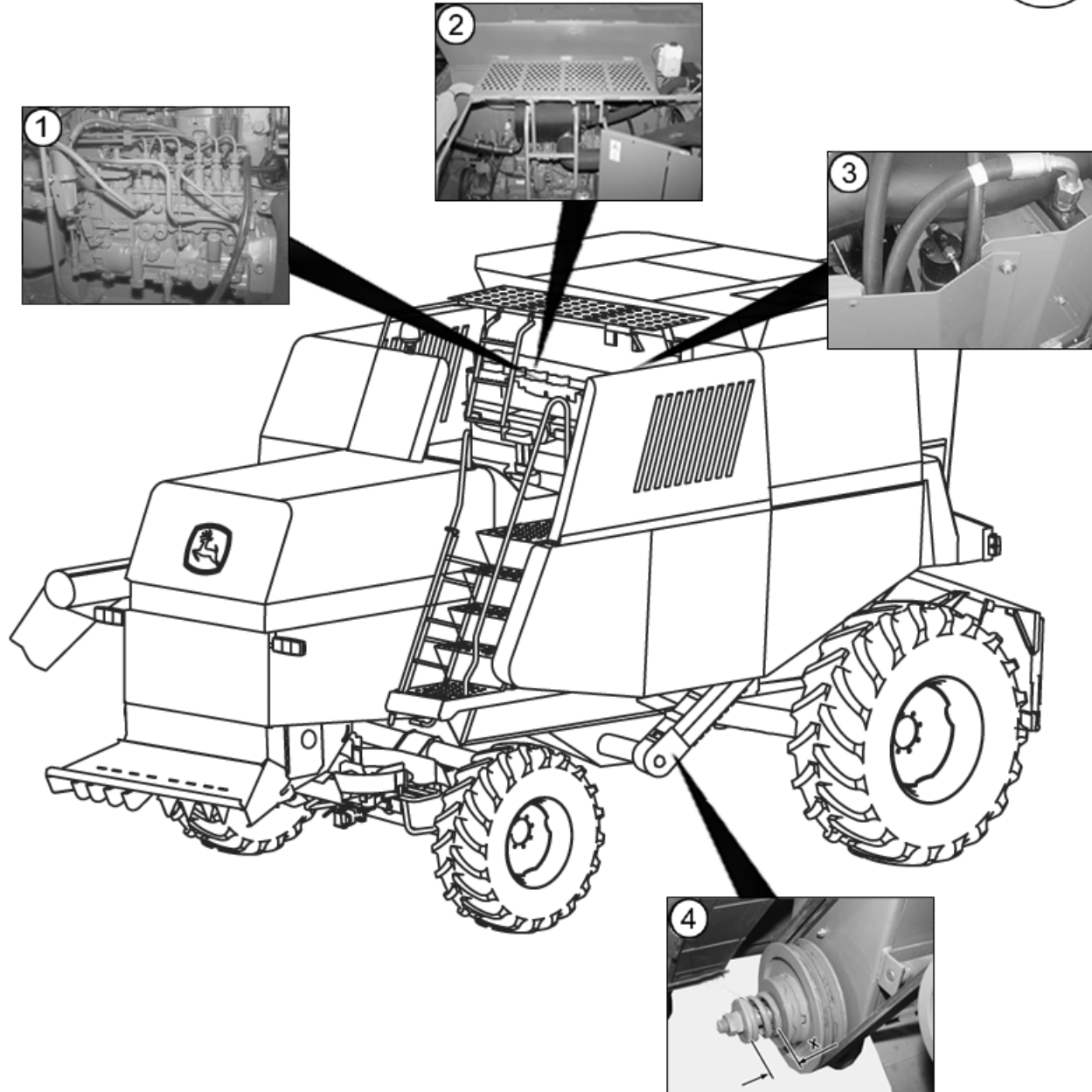
- a. Tighten bolts (D) to 95 N•m (70 lb-ft).
- b. Tighten bolts (E) to 300 N•m (221 lb-ft).
- c. Tighten bolts (F) to 240 N•m (177 lb-ft).

7. Carry out first replacement of hydrostatic system oil filter. **Further replacements must be carried out every 500 hours.**

Change the hydrostatic system oil through drain plug (C) only if John Deere **Hy-Gard®** oil is not used.

*NOTE: The combine is filled with **Hy-Gard®** oil in the factory.*

Service points—Every 100 hours



Continued on next page

ML70882,0000A1A -19-30JUN06-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Check connections on fuel injection lines. Retighten if necessary.
2. Check the tightness of hose clamps and connections. Retighten if necessary.
3. Change drier filter.

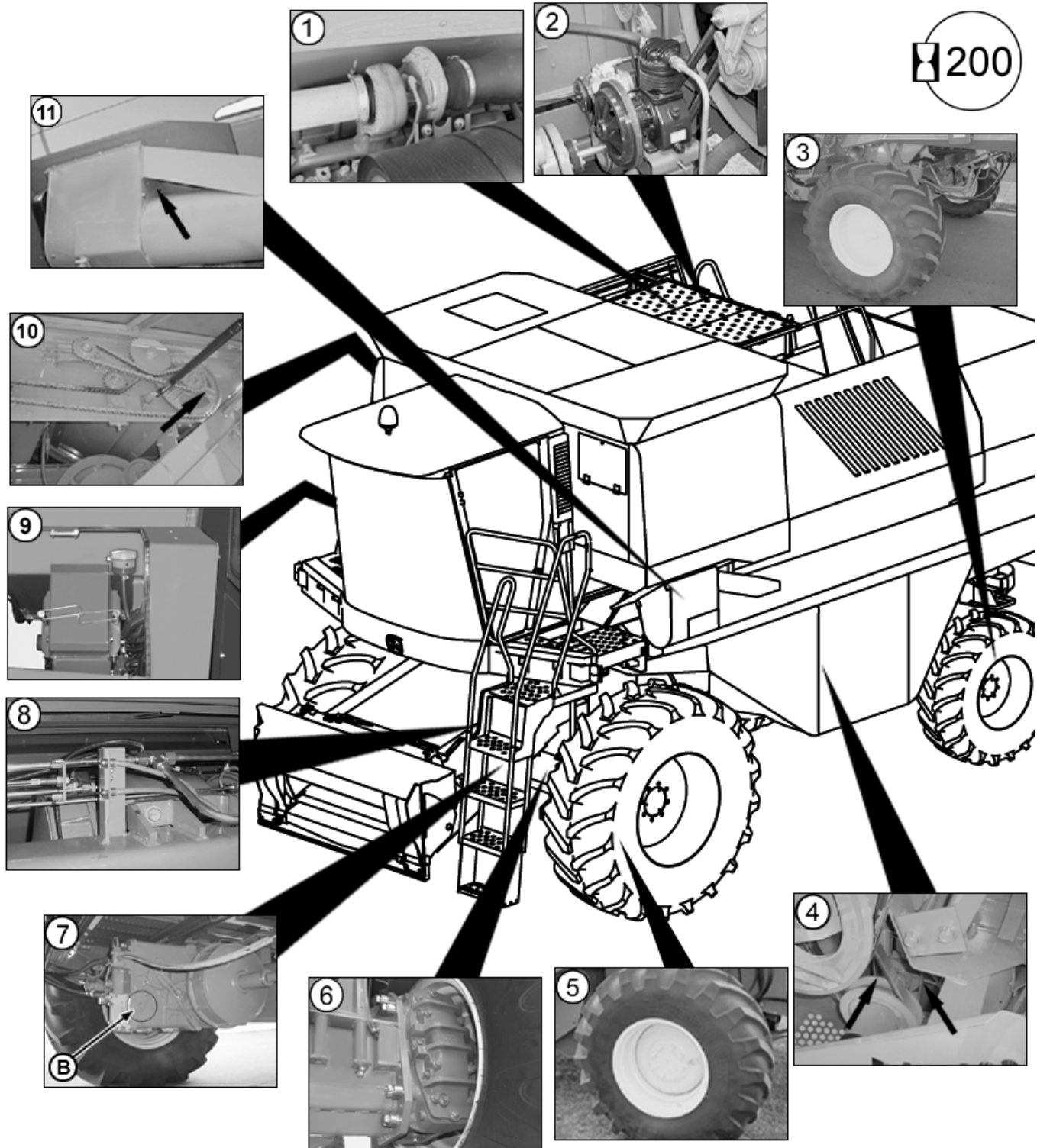
NOTE: Also change it if the system becomes contaminated with air.

4. Check length of clean grain elevator slip clutch spring. Readjust, if necessary. See section "Service—Drives/Shields".

NOTE: Also check if the clutch reaches 50 engagements before the specified interval.

ML70882,0000A1A -19-30JUN06-2/2

Service points—Every 200 hours



CQ274870 -UN-30JUN06

Continued on next page

ML70882,0000A2D -19-12JUL06-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Check clamps and hoses of turbocharger feeder system. Retighten if necessary.



CAUTION: Avoid burns as a result of contact with hot parts. Only carry out check with engine at ambient temperature.

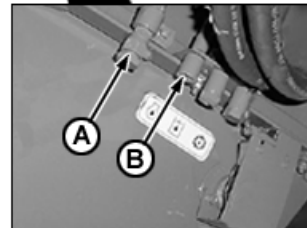
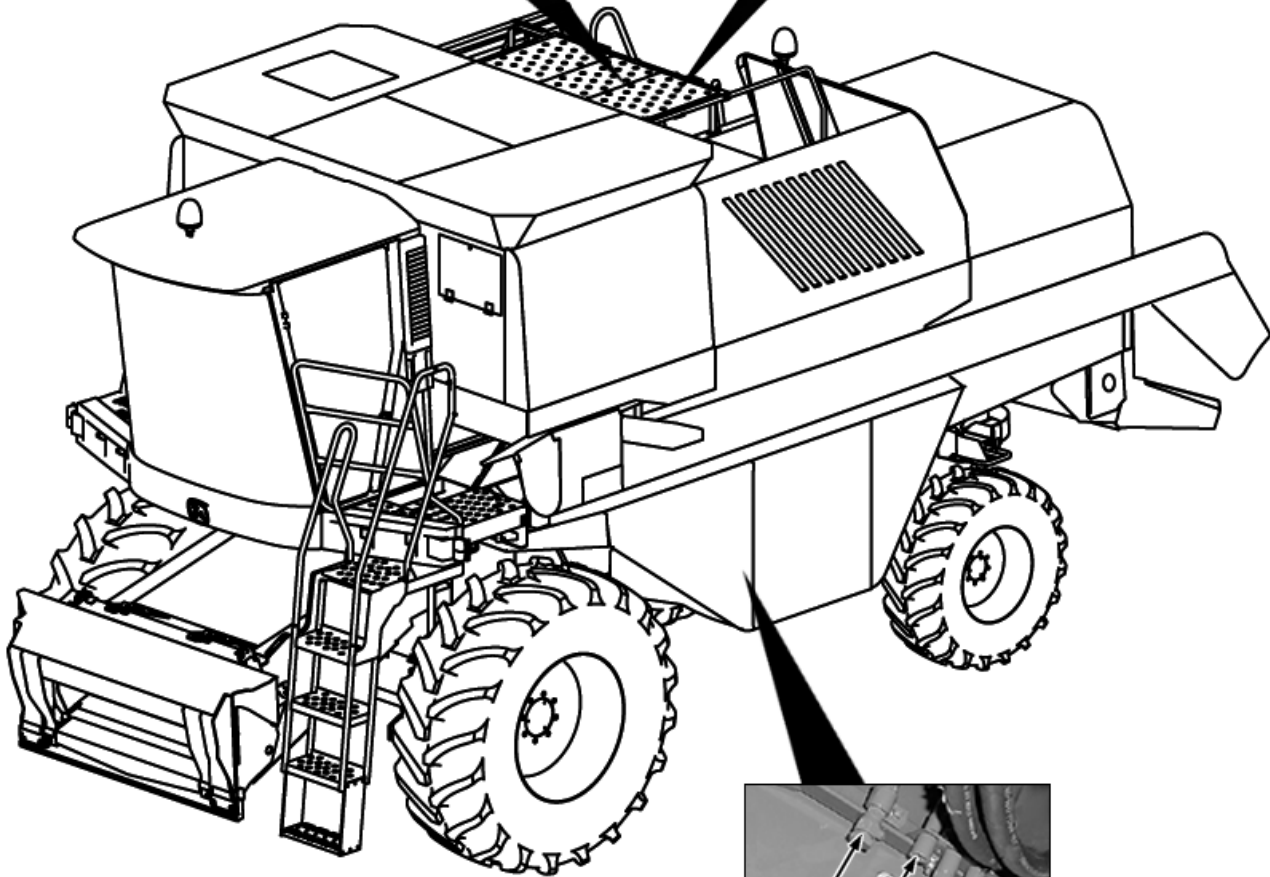
2. Change air compressor oil. See "Air Compressor Oil Change".
3. Retighten rear wheel nuts to 180 N•m (130 lb-ft).
4. Lubrication points. One point on pulley and one point on each side of machine, on fan bearing.
5. Retighten front wheel nuts to 550 N•m (400 lb-ft).

NOTE: Refer to "Installing Front Wheels" for further details.

6. Check oil level of final drives. Fill up if necessary.
7. Check oil level in transmission housing through oil level check plug (B). Fill up if necessary. See "Changing Transmission Housing Oil".
8. Check parking brake cable and readjust, if necessary.
9. Check level of brake fluid. Pull cap for access. Fill up if necessary.
10. Lubrication points. One point on the unloading auger drive gear.
11. Lubrication points. One point on external side of unloading auger.

ML70882.0000A2D -19-12JUL06-2/2

Service points—Every 250 hours



Continued on next page

ML70882,0000A2E -19-23JAN07-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

NOTE: Drain engine oil through drain plug (A) for 1550 CWS CIS combines and through plug (B) for 1450 CWS CIS combines.

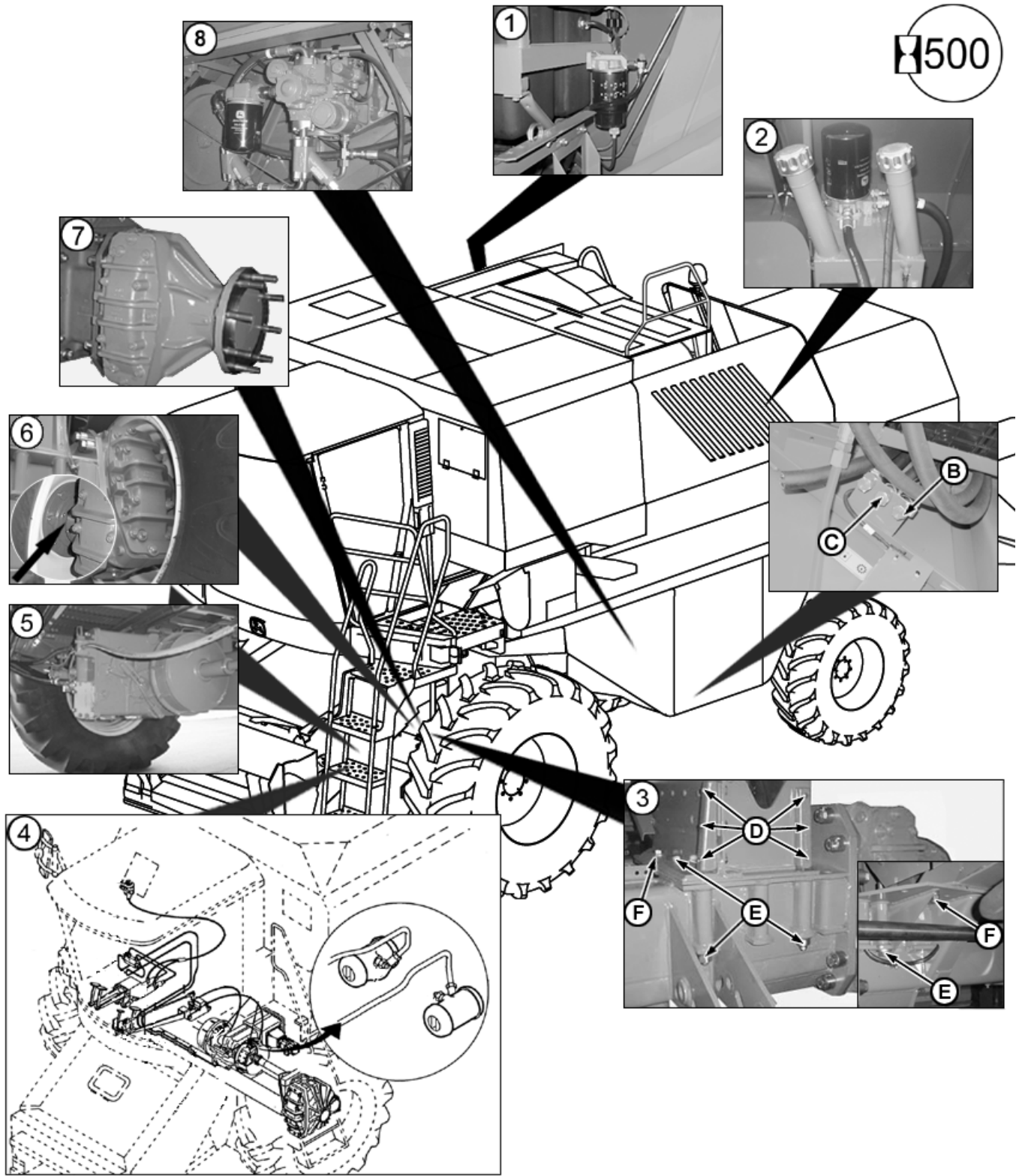
1. Change oil and engine oil filter (Engines not using John Deere PLUS-50 or ACEA E5 oil specifications).

This interval can be extended to **375 hours** for engines using John Deere PLUS-50 or oil meeting ACEA E5 specifications.

2. Replace final fuel filter.

ML70882,0000A2E -19-23JAN07-2/2

Service points—Every 500 hours



CQ274890 -UN-30JUN06

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ML70882,0000A1D -19-30JUN06-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Replace filter element of primary fuel filter (water separator).
2. Replace hydraulic system oil filter. Change the hydraulic system oil (only if John Deere **Hy-Gard**® oil is not used) by means of drain plug (C).
3. Retighten front axle attaching bolts.
 - a. Tighten bolts (D) to 95 N•m (70 lb-ft).
 - b. Tighten bolts (E) to 300 N•m (221 lb-ft).
 - c. Tighten bolts (F) to 240 N•m (177 lb-ft).
4. Check the condition of the brake system. In case of any fault, see your John Deere dealer.
5. Change transmission housing oil. See "Changing Transmission Housing Oil".
6. Lubrication points. One point on each wheel hub.
7. Check play of final drive flanged axle bearings on all combines. Adjust, if necessary.

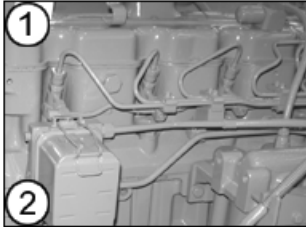
NOTE: See "Adjusting Play of Final Drive Flanged Axle Bearings" in the "Service—Hydrostatic Variable Speed Drive and Brakes" section.
8. Replace hydrostatic system oil filter. Change the hydrostatic system oil (only if John Deere **Hy-Gard**® oil is not used) by means of drain plug (B).

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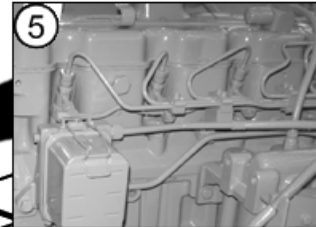
ML70882,0000A1D -19-30JUN06-2/2

Service points—Over 750 hours

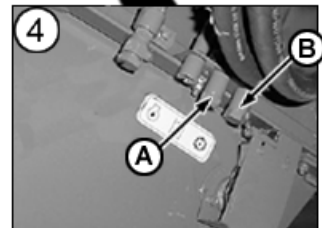
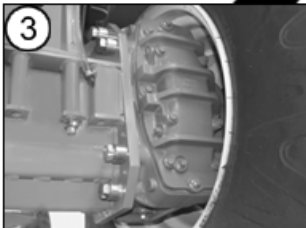
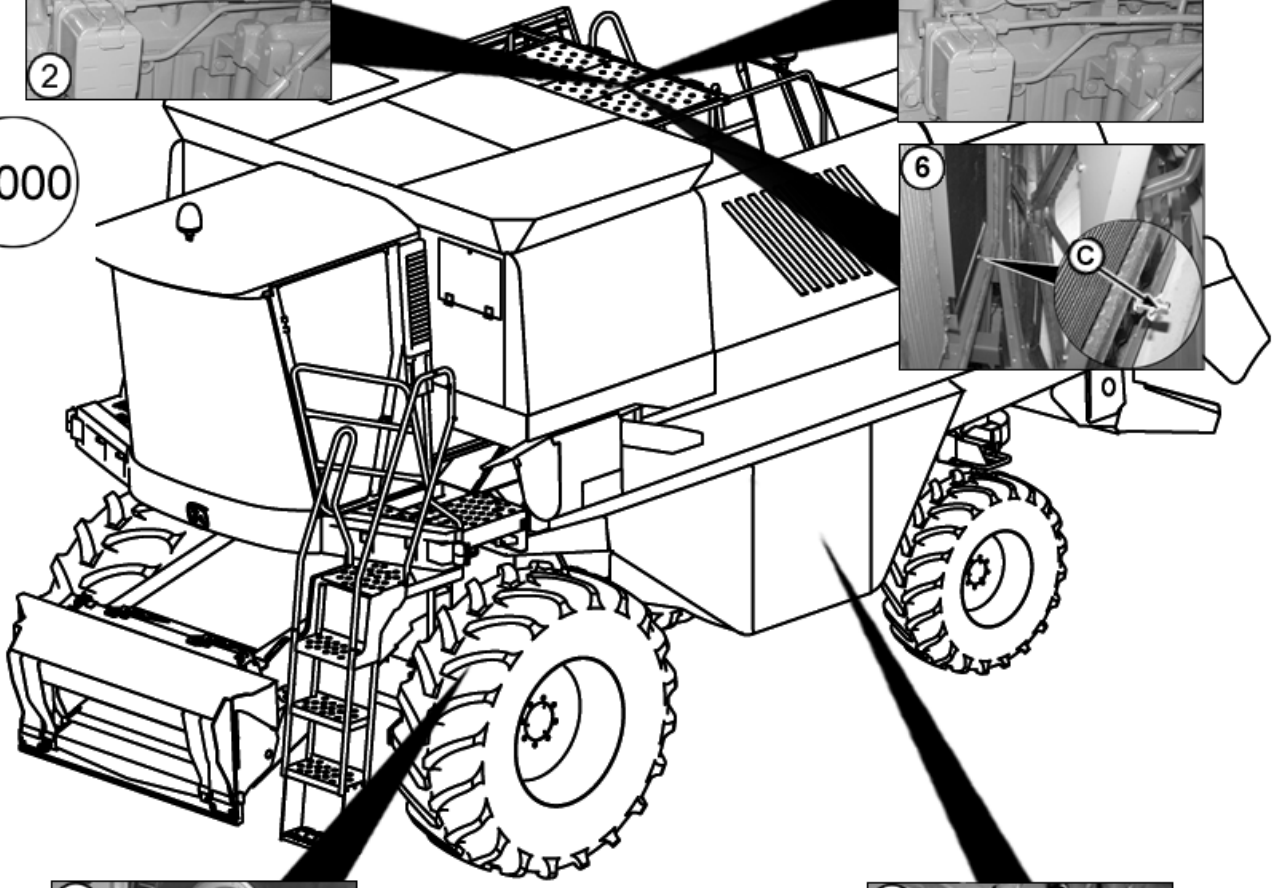
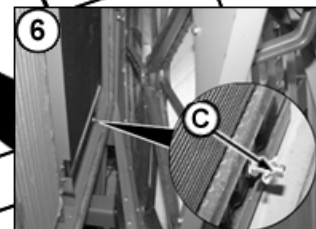
750



2000



1000



1000

1500

CQ279350 -UN-24JAN07

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ML70882,0000A2F -19-23JAN07-1/2

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

1. Service points—First 750 hours:

1550 CWS CIS: Carry out first adjustment of engine valves. See your John Deere dealer for this adjustment. **Thereafter, repeat this procedure every 2000 hours.**

2. Service points—First 1000 hours:

1450 CWS CIS: Carry out first adjustment of engine valves. See your John Deere dealer for this adjustment. **Thereafter, repeat this procedure every 2000 hours.**

3. Service points—Every 1000 hours:

Change oil of final drives.

4. Service points—Every 1500 hours:

Change hydraulic system oil through drain plug (A) and hydrostatic system oil through drain plug (B) (if John Deere **Hy-Gard®** is being used).

5. Service points—Every 2000 hours:

Carry out adjustment of engine valves. See your John Deere dealer for this adjustment.

6. Change engine coolant. Drain coolant through drain plug (C). Clean radiator internally and externally.

IMPORTANT: See how to change coolant in “Changing Engine Coolant”.

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ML70882.0000A2F -19-23JAN07-2/2

After Each Harvesting Season

Combine

- ☐ Store the combine in a dry, sheltered area.
- ☐ Carefully wash and clean the interior and exterior of the combine. Powder and chaff fragments attract moisture, causing rust. To facilitate cleaning, run the combine for a few minutes with all inspection openings and doors open and the fan at maximum speed.
- ☐ Clean with water, compressed air or industrial-strength vacuum cleaner.
- ☐ Clean the augers and elevators and leave the elevator inspection doors open.
- ☐ Thoroughly clean grain tank and unloading auger.
- ☐ Clean the bottom of the feeder house and coat it with grease or oil to prevent rust.
- ☐ Lubricate the combine according to the instructions in this section.
- ☐ Lubricate all linkages and bearings that do not have zerks. Grease threads of adjusting screws.
- ☐ Loosen all belts to avoid stress points.
- ☐ Clean and lubricate chains with oil or grease to prevent rust.
- ☐ Clean the cleaning shoe and grain pan with a good steel brush.
- ☐ Lubricate the fin linkages with an oil can.
- ☐ Uncouple the head and set on wooden blocks.
- ☐ Fully retract all hydraulic cylinders.
- ☐ Inflate the tires and place the combine on jackstands to remove the weight from the tires.
- ☐ Retouch any painted surfaces needing attention.
- ☐ Make a note of all repair and service work needed before the start of the next season.

- ☐ To ensure work is done quickly and safely during the off season have these services carried out by your John Deere dealer long before the season starts.

Engine



CAUTION: Do not use petroleum spirits to clean the engine.

- ☐ Clean the outside of the engine with a good solvent.
- ☐ Clean the outside of the radiator with a brush or with a jet of water or compressed air.
- ☐ Change the engine oil and filter.
- ☐ Bleed the oil when the engine is hot.
- ☐ Run the engine for a few minutes.
- ☐ Drain the fuel tank and rinse it with clean fuel.
- ☐ Then fill completely.
- ☐ Check the fuel filters and clean or replace them as needed.
- ☐ Clean the engine air intake and replace the primary air cleaner and safety elements.
- ☐ Check the battery electrolyte level and, if necessary, top up with distilled water (non-sealed batteries).
- ☐ Coat the battery cable terminals with petroleum jelly.
- ☐ Periodically run the engine at half throttle for about 30 minutes.

AG,GG05155,215 -19-01AUG05-1/1

Belts



CAUTION: Never install belts with the engine running.

When installing a belt, loosen the idler pulleys. Never force the belt over the outside lip of the pulley as this could cause one or more strands to break and weaken the belt.

New belts stretch. For this reason check the tension of new belts several times during the initial days of use. Belts can be damaged by being fitted too loose as well as too tight.

Never use a harsh product to clean belts. Never use turpentine or similar solvents. Clean belts with a rag

soaked in a solution of liquid ammonia or soap and water.

The service life of a belt also depends on pulley condition. A damaged pulley can also damage the belt.

Slight fraying of the outer belt layer does not mean a damaged belt. These frayed areas can be cut off.

IMPORTANT: After the end of harvesting, remove the belts and store them in a cool, dry area.

AG,GG05155,216 -19-16FEB99-1/1

Chains



CAUTION: Do not work on chains when the engine is running.

A chain drive will work longer without problems if correctly installed and serviced. The following information is important for keeping the machine in good condition and reducing repair costs.

Check the chains frequently, primarily during the initial hours of operation. Adjust the idlers so that they maintain proper chain tension. The total deflection range of a chain should be approximately 2% of the distance between the shafts of the drive sprocket and idler sprocket.

For example:

If the distance between the shafts of the drive sprocket and idler sprocket is 250 mm (9.84 in.), the chain should not hang by more than 5 mm (0.20 in.). This distance is measured in the center of the chain span

on the side opposite the idler sprocket. Make sure that there is no chain deflection on the idler sprocket side before measuring the chain deflection on the opposite side.

A chain with excessive deflection will result in rapid and excessive wear of the chain rollers, sprocket teeth and chain-driven components.

A chain that is too tight can damage the bearings and shafts. It can also cause the chain itself to wear faster.

Proper chain lubrication is important. Lubrication primarily reduces friction, aids cooling and lessens the effect of minor impacts. The lubricant should penetrate between the plates in order to reach the remaining components (pins, caps and rollers).

A graphite lubricant, such as Mobil chain oil (produced by Mobiloil) or similar, or medium-viscosity pure mineral oil is recommended.

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Service—Engine

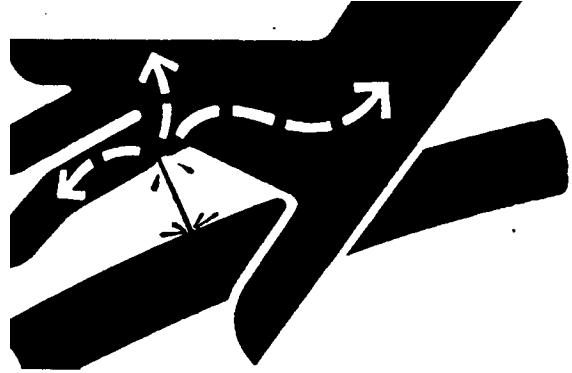
Avoid High-Pressure Fluids

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 -UN-23AUG88

DX,FLUID -19-03MAR93-1/1

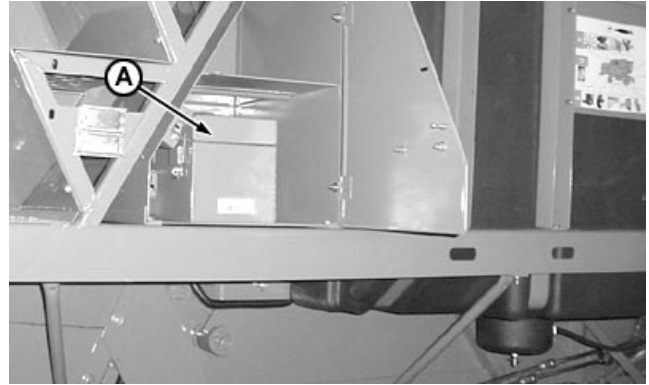
Do Not Modify Fuel System

IMPORTANT: Any modification or alteration of the fuel system, injection pump, injection pump timing or fuel injectors in a manner not recommended by the manufacturer will terminate the manufacturer's warranty obligations to the purchaser. See warranty information inside front cover. Do not attempt to service injection pump or fuel injectors yourself. Special training and special tools are required. Consult your John Deere dealer. Never attempt to clean injection pumps while they are hot, as this may damage pump parts.

AG,GG05155,222 -19-15NOV02-1/1

Tool Box

To perform basic maintenance services and some adjustments, a tool box (A), located in the compartment under the rear right service platform access ladder, is supplied with the combine.



CO03622,0000068 -19-01FEB05-1/1

Access to Engine

Access to the engine is via the rear service deck. Use ladder (A).

NOTE: For more details see “Access Points Via Rear Ladder”.

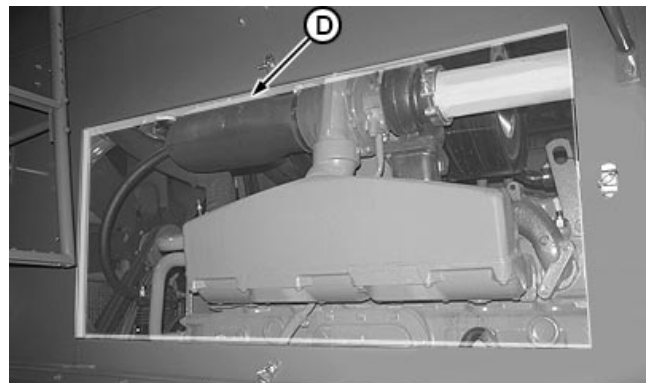
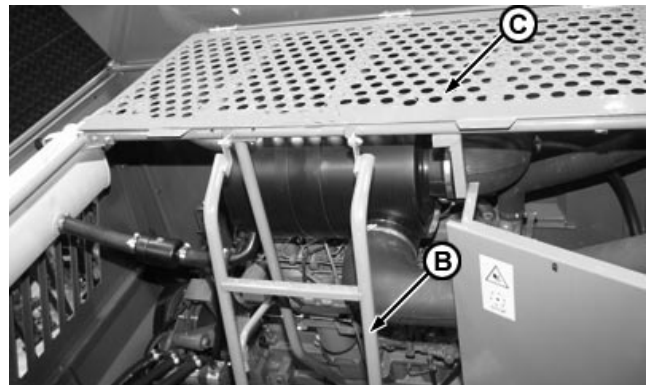


ML70882,00009E9 -19-19JUN06-1/2

The engine compartment can be reached by raising ladder (B).

Climb to deck (C) and then access interior of grain tank. Open inspection hatch (D) to access the other side of the engine.

CAUTION: If it is really necessary to go inside the grain tank, shut off engine and remove starter key.



ML70882,00009E9 -19-19JUN06-2/2

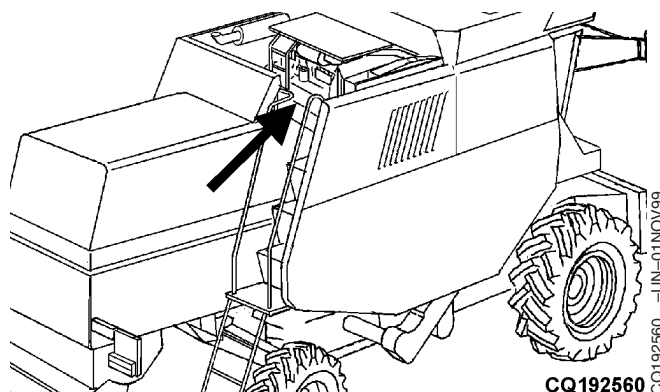
Engine Compartment



CAUTION: A combination of dirt, oil and chaff in the engine compartment represents a fire hazard.

Keep engine and engine compartment clean at all times.

If necessary, clean engine compartment by blowing out dirt with compressed air. Wipe clean any soil deposits.



AG.CO03622,2075 -19-14MAR02-1/1

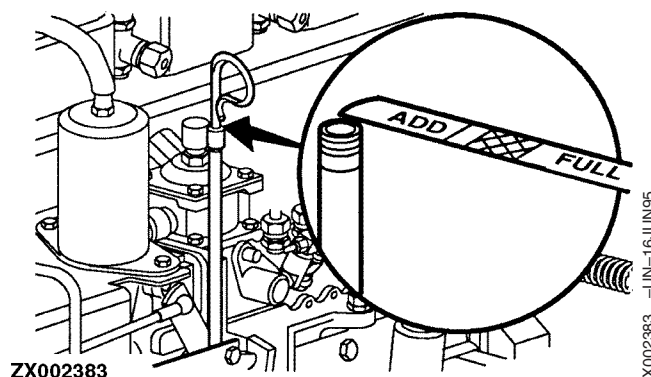
Checking Engine Oil Level

To prevent interruption of the circulation of lubrication oil when the combine is in an inclined position, never allow oil to drop below the minimum level.

IMPORTANT: It is vital to maintain the engine oil at the correct level to ensure a longer engine service life. Check the engine oil level when the engine is cool and the combine is parked on a flat surface.

Before removing dipstick, clean surrounding area thoroughly.

The oil level should be between the upper and lower marks on the dipstick.



AG.CO03622,2078 -19-01AUG05-1/1

Changing Engine Oil Filter and Oil

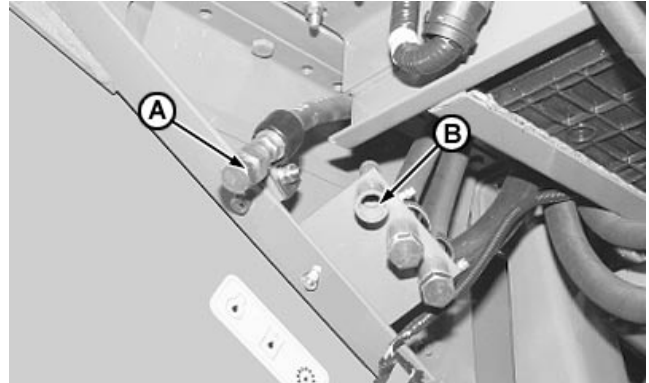
IMPORTANT: Ensure that your hands and engine are perfectly clean when installing replacement filter elements or changing oil.

1. Run engine for approx. 5 minutes to heat up oil.
2. Then shut down engine.
3. Bleed oil through plug (A or B) while it is still warm.
4. Remove oil filter (arrow).
5. Remove sealing ring and clean mounting surface where new ring will be fitted. Apply a thin coat of oil to new sealing ring and install it together with the new oil filter. When sealing ring is touching mounting surface, tighten filter manually by another 1/2 to 3/4 turn. Do NOT overtighten filter.
6. Close oil drain plug (A or B) again.
7. Fill engine with oil complying with specified viscosity and quality. (Refer to "Specifications" section).

NOTE: Actual capacity may vary slightly from figure stated above. Do NOT overfill!

IMPORTANT: Directly after completing oil change and/or filter change, crank engine for 30 seconds. This ensures that all engine components are thoroughly lubricated when engine is started.

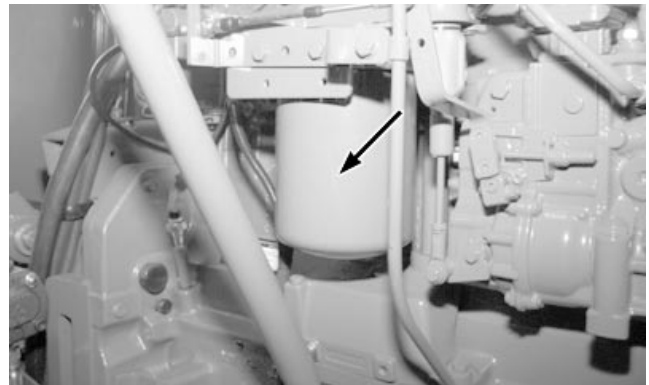
8. Start engine and check for leaks.
9. Shut off engine and wait 10 minutes before checking oil level. Oil should still be up to upper mark on dipstick.



1550 CWS CIS combine illustrated



1450 CWS CIS—oil filter

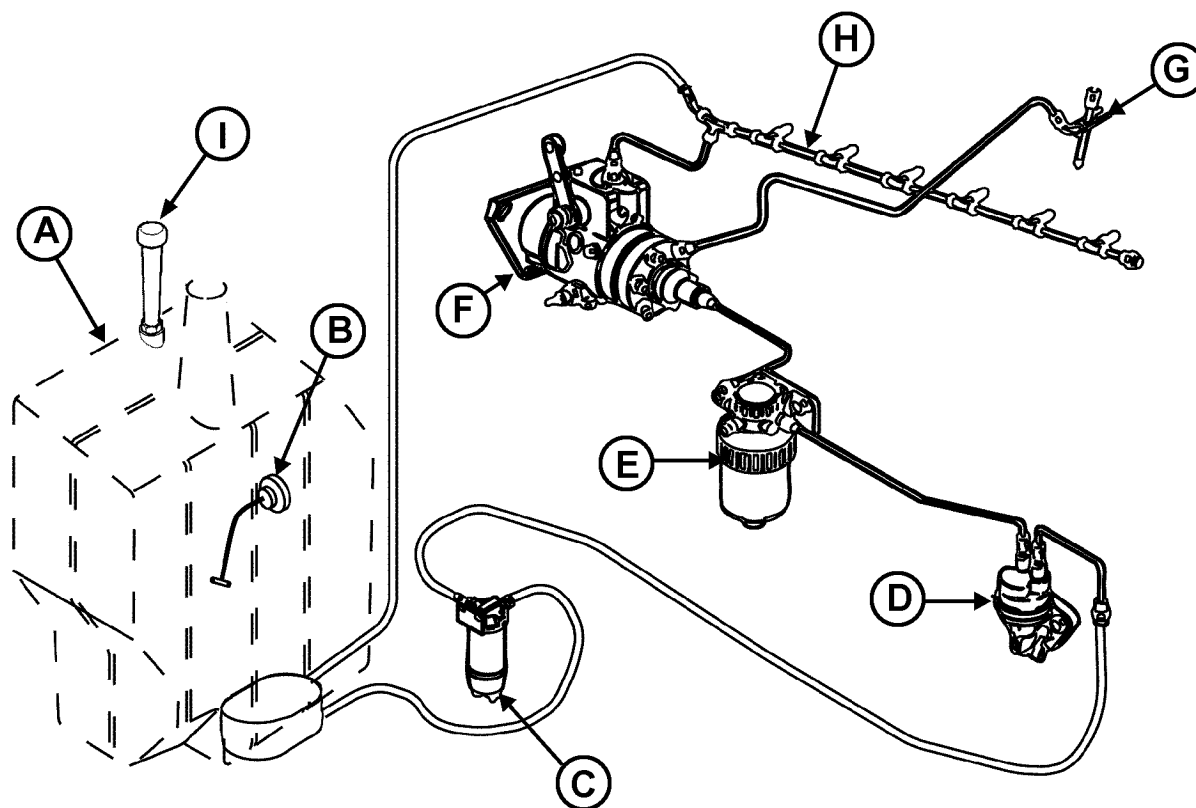


1550 CWS CIS—oil filter

A—1550 CWS CIS—drain plug
B—1450 CWS CIS—drain plug

AS60558,00003F4 -19-23JAN07-1/1

Fuel System in 6.8 L Engines—1450 CWS CIS



6.8 L Engine—1450 CWS CIS

A—Fuel tank
B—Level sensor
C—Primary Filter

D—Fuel transfer pump
E—Fuel filter

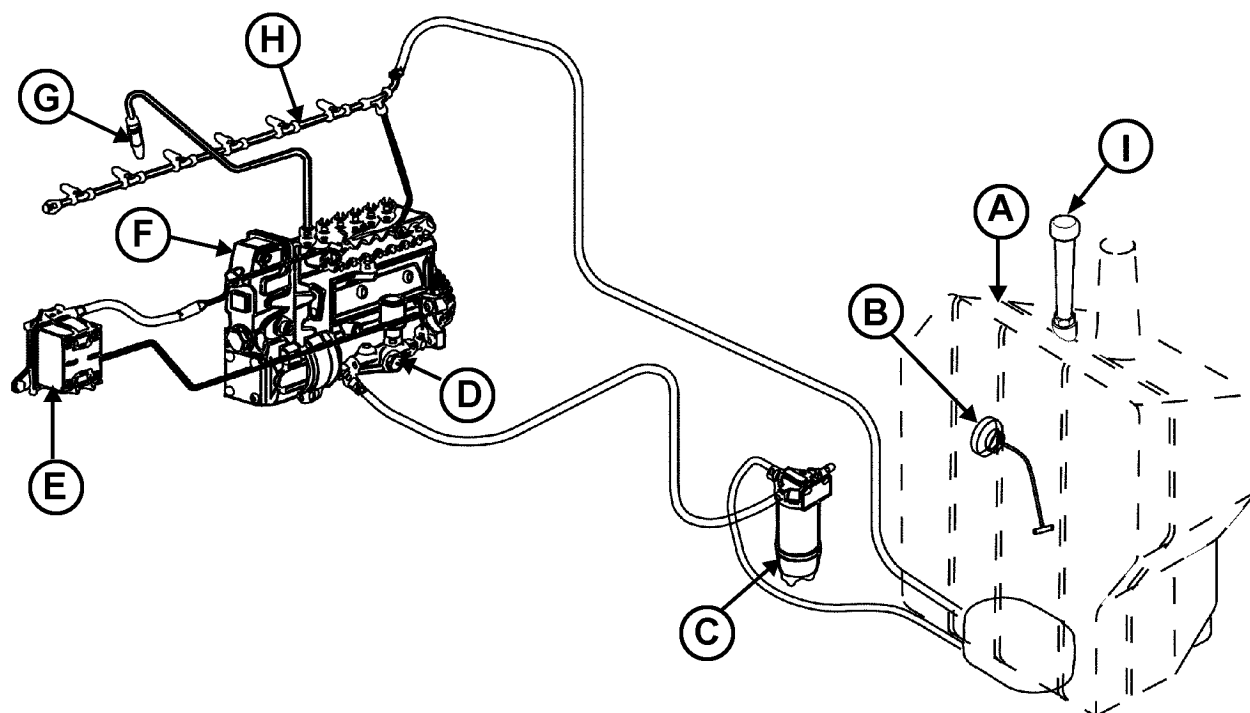
F—Injection pump
G—Injection nozzle

H—Return line
I—Fuel tank breather

AS60558,00003F5 -19-23JAN07-1/1

CQ194112 -UN-11OCT02

Fuel System in 8.1 L Engines—1550 CWS CIS



8.1 L Engine — 1550 CWS CIS

A—Fuel tank
B—Level sensor
C—Primary Filter

D—Fuel transfer pump
E—Fuel filter

F—Injection pump
G—Injection nozzle

H—Return line
I—Fuel tank breather

CQ194121 —UN-11OCT02

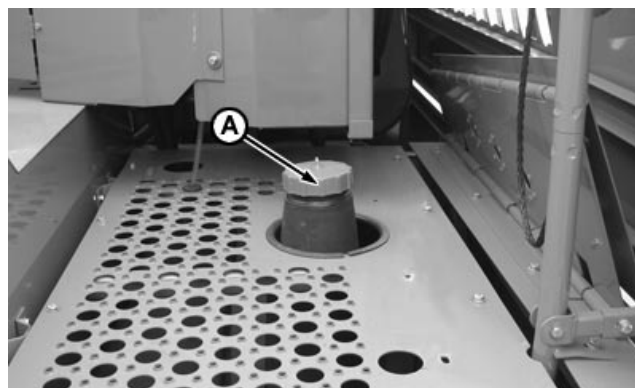
ML70882,0000A37 —19-23JAN07-1/1

Fuel Tank Cap

The fuel tank filler neck is closed with a tank cap (A).

The fuel tank cap is sealed. To vent the tank there is a special vent.

Clean dust and chaff from the surrounding area before removing tank cap.



CQ216331 —UN-29JUL05

AG,CO03622,2082 —19-17AUG05-1/1

Cleaning Primary Fuel Filter

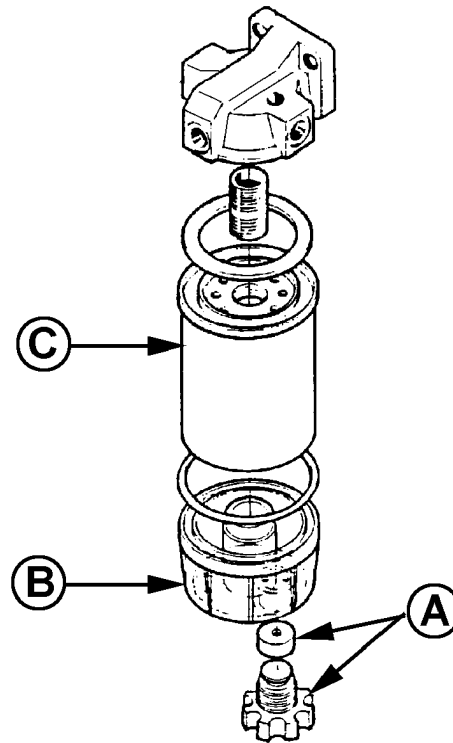
When water and sediment are visible at the sight-glass (B), shut off the engine and open drain cock (A). Trap the contaminated fuel as it emerges in a suitable container. Then close drain cock (A) again. To clean the filter further, proceed as follows:

Unfasten sight-glass (B).

Remove filter insert (C) and clean it thoroughly in clean diesel fuel. When the insert has been washed between 5 and 10 times, throw it away and use a new insert.

Once the filter has been cleaned, re-assemble it, reversing the removal procedure.

A—Drain cock
B—Sight-glass
C—Filter insert



Primary Filter

CQ192580

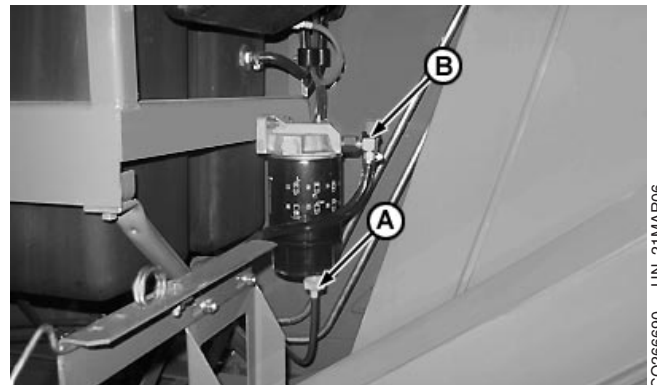
—UN-01NOV99

ML70882,00009EA —19-19JUN06-1/1

Bleeding off Water from Primary Fuel Filter

NOTE: Make sure fuel shut-off valve (B) is in position "ON".

1. Loosen drain screw (A).
2. Drain water from primary filter and retighten drain screw as soon as clean fuel is observed.



ML70882,00009EB —19-19JUN06-1/1

—UN-21MAR06

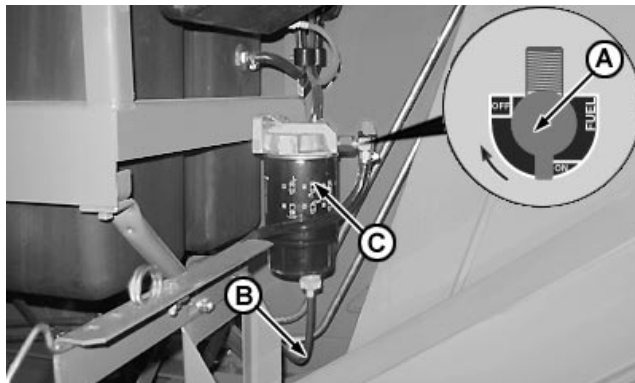
Replacing Primary Fuel Filter

CAUTION: Always remove ignition key before performing maintenance work on primary fuel filter. Avoid fire hazards!

1. Close fuel shut-off valve (A) (OFF position).
2. Remove drain hose (B).
3. Remove primary filter (C).
4. Clean or replace as required.
5. Install parts following reverse procedure.

NOTE: Make sure you open fuel shut-off valve (ON position).

6. Bleed fuel system. See “Bleeding the Fuel System” for more information.



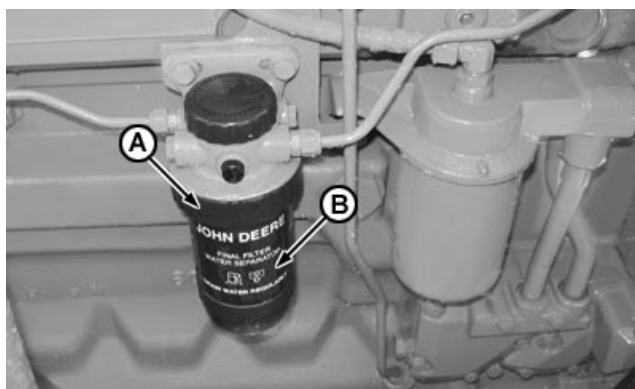
CQ274040 -UN-20JUN06

ML70882,00009EC -19-20JUN06-1/1

Replacing Fuel Filter—1450 CWS CIS

CAUTION: Always remove starter key before performing maintenance work on fuel filter. Avoid fire hazards!

1. Unfasten ring (A) and remove filter (B).
2. Install the new filter and tighten until it fits into position.
3. Bleed the system. See “Bleeding the Fuel System”.



CQ274050 -UN-20JUN06

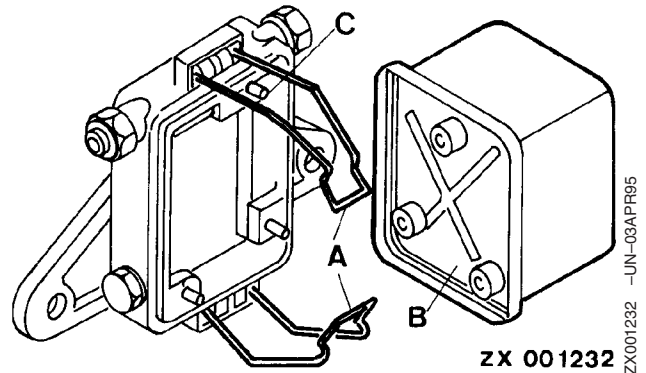
AS60558,00003F6 -19-23JAN07-1/1

Replacing Fuel Filter—1550 CWS CIS



CAUTION: Always remove starter key before performing maintenance work on fuel filter. Avoid fire hazards!

IMPORTANT: Impurities trapped in the groove or in the cavity of spring pin (C) might be flushed into the injection system where they could seriously damage the pump or injection nozzles.



1. Release retaining springs (A) and remove filter (B).
2. Install new filter, correctly aligning marks on filter and filter base.
3. Bleed the system. See "Bleeding the Fuel System".

ML70882,0000A38 -19-23JAN07-1/1

Checking Injection Nozzles

IMPORTANT: Never attempt to remove injection nozzles. Special tools are required to perform this task.

If the engine is running rough, this indicates that the injection nozzles are clogged or not operating correctly. Consult your John Deere dealer.

Check injection nozzles every 1500 hours.

AG,CO03622,2091 -19-01FEB05-1/1

Bleeding the Fuel System

Bleed the fuel system:

- After every filter change.
- Whenever the fuel tank has run dry.
- After repair work on the fuel system.
- If the engine has not been run for a while.

Continued on next page

AS60558,00003F7 -19-23JAN07-1/3

IMPORTANT: First bleed fuel in fuel filter. Turn on engine and bleed fuel in injection nozzles if engine still does not start.

Bleeding Fuel in Fuel Filter

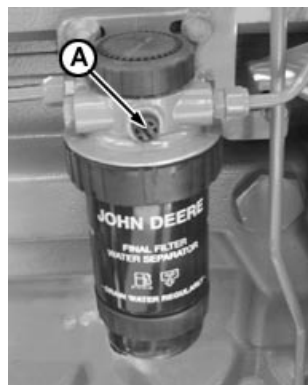
1. Loosen bleed screw (A).
2. Pump fuel by means of lever (B) at fuel transfer pump (C).

IMPORTANT: If no resistance is felt when moving lever (B) (of pump), crank engine through starter motor to change position of primer pump cam.

NOTE: Pump until fuel is free of air bubbles.

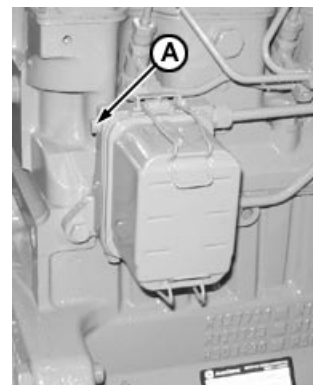
3. Retighten bleed screw (A).

A—Bleed screw
B—Lever
C—Fuel transfer pump



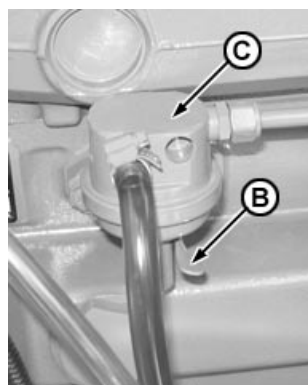
1450 CWS CIS

CQ265950 -UN-21MAR06



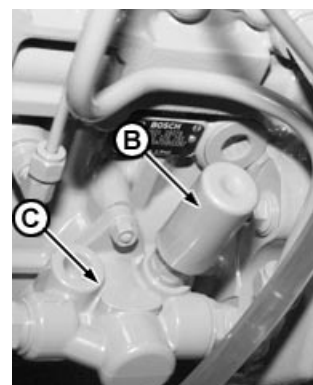
1550 CWS CIS

CQ265960 -UN-17FEB06



1450 CWS CIS

CQ266010 -UN-21MAR06



1550 CWS CIS

CQ266020 -UN-17FEB06

Continued on next page

AS60558,00003F7 -19-23JAN07-2/3

Bleeding Fuel System at the Fuel Injection Nozzles

IMPORTANT: Always use a backup wrench when loosening or tightening fuel lines at injection nozzles and/or at the injection pump in order to avoid damaging the fittings.

1. Using two wrenches loosen the fittings (A) of the two pressure lines at the injection nozzles.
2. Pump fuel by means of lever (B) at fuel transfer pump (C).

IMPORTANT: If no resistance is felt when moving lever (of pump), crank engine with starter motor to change position of primer pump cam.

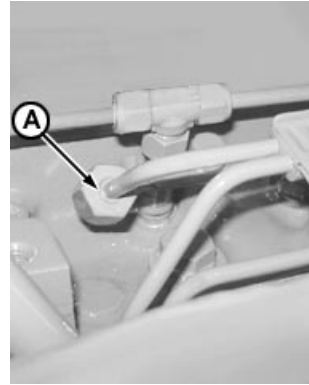
NOTE: Pump until fuel is free of air bubbles.

3. Retighten fittings according to specifications.

Specification

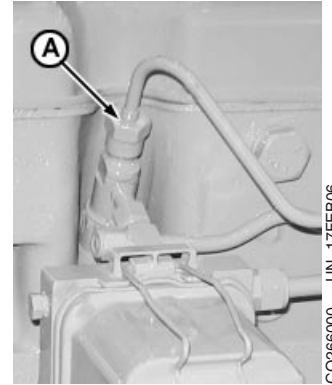
Fuel injection nozzle pressure line fittings—Torque 27 N.m (20 lb-ft)

4. Repeat procedure for remaining injection nozzles (if necessary) until all air has been removed from fuel system.



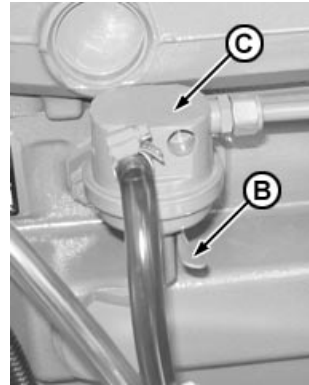
1450 CWS CIS

CQ265990 -UN-17FEB06



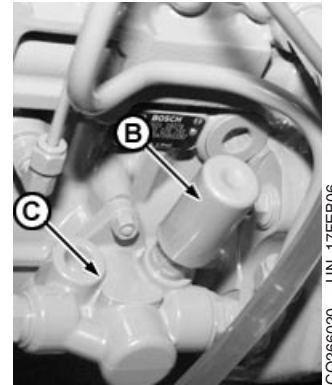
1550 CWS CIS

CQ266000 -UN-17FEB06



1450 CWS CIS

CQ266010 -UN-21MAR06



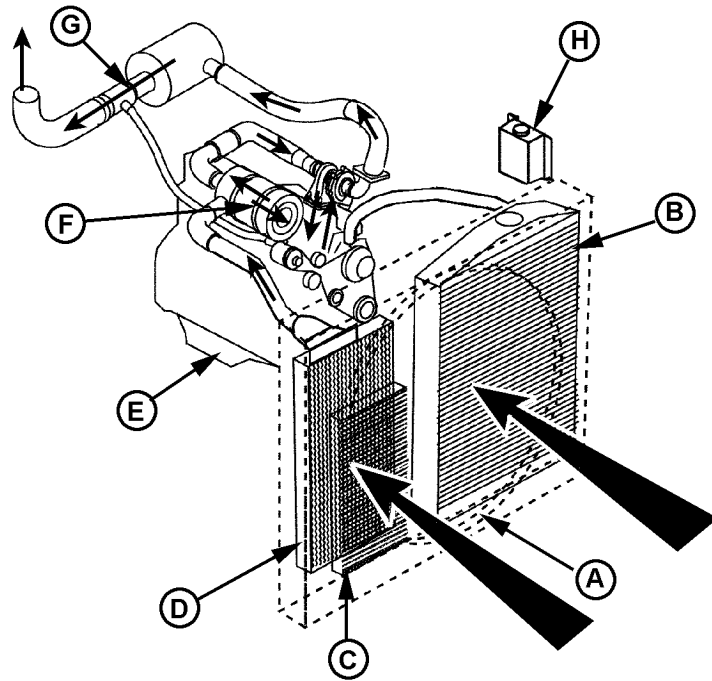
1550 CWS CIS

CQ266020 -UN-17FEB06

A—Fitting
B—Lever
C—Fuel transfer pump

AS60558,00003F7 -19-23JAN07-3/3

Cooling, Exhaust and Air Intake System—1450 CWS CIS



A—Rotary screen
B—Radiator
C—Condenser (air conditioning system)

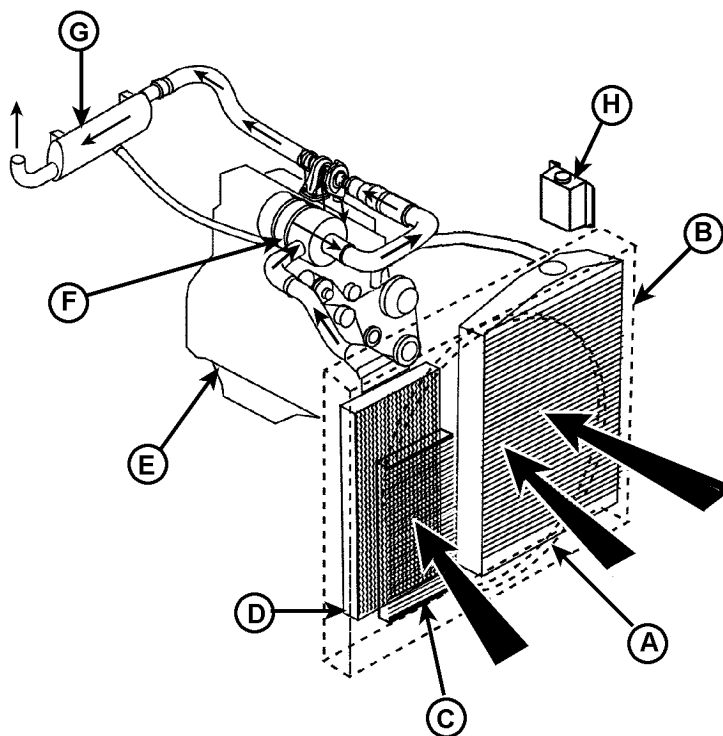
D—Hydrostatic oil cooler
E—Engine

F—Air filter
G—Exhaust

H—Expansion tank (coolant)

AS60558,00003F8 -19-23JAN07-1/1

Cooling, Exhaust and Air Intake System—1550 CWS CIS



A—Rotary screen
B—Radiator
C—Condenser (air conditioning system)

D—Hydrostatic oil cooler
E—Engine

F—Air filter
G—Exhaust

H—Expansion tank (coolant)

CQ197160

UN-17JUL00

ML70882.0000A3A -19-23JAN07-1/1

Changing Engine Coolant



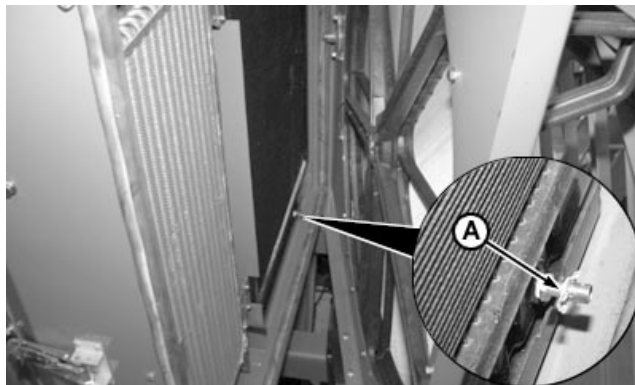
CAUTION: Danger of scalding! Do not loosen or remove the radiator filler cap when coolant temperature is near or above boiling point. Always loosen cap slightly to relieve pressure before removing cap completely.

IMPORTANT: With engine OFF, wait approx. 30 minutes before draining system.

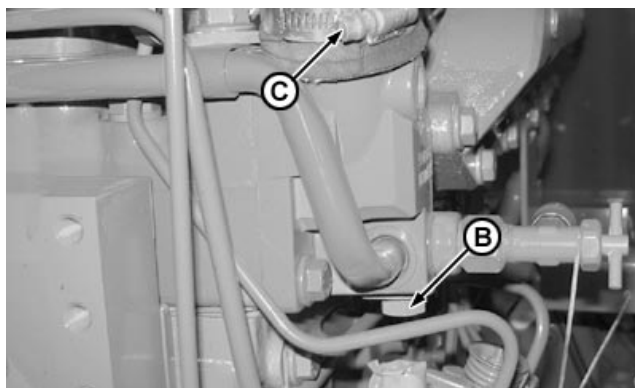
IMPORTANT: Regardless of the season, use only recommended coolant. Never use any cooling system additives.

Draining Coolant:

1. Open drain plug (A).
2. Open plug (B) on thermostat housing and clamp (C).
3. Wait until all coolant drains from system.
4. Close drain plug (A) and tighten clamp (C).

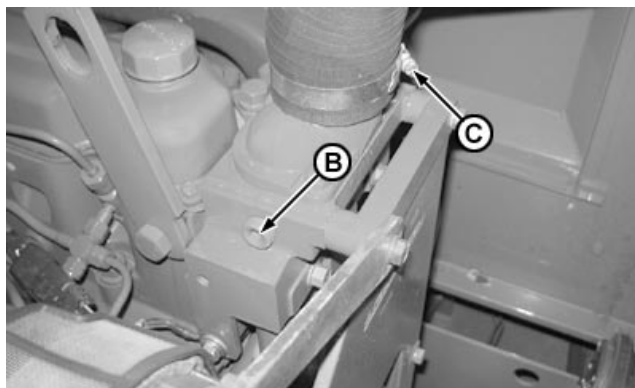


CQ247720 -UN-12JUL06



CQ274320 -UN-21JUN06

1450 CWS CIS—plug



CQ274330 -UN-21JUN06

1550 CWS CIS—plug

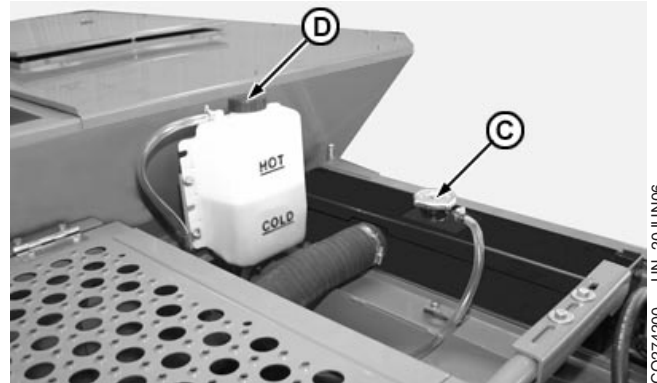
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AS60558,00003F9 -19-23JAN07-1/3

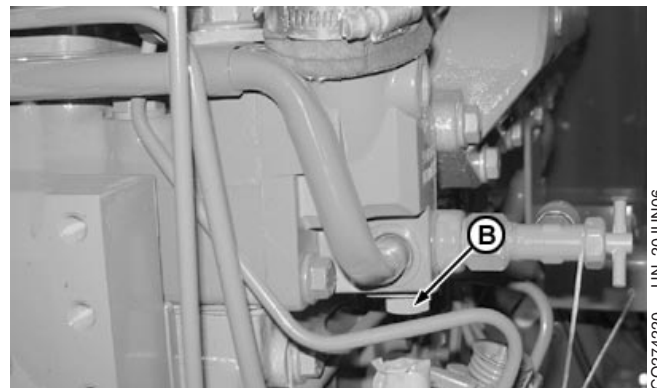
Interior Cleaning of Cooling System:

IMPORTANT: Deposits of interior impurities can cause engine overheating.

1. Keep plug (B) half open to let the air leave the system. Slowly add clean, distilled water until it comes through plug (B), then close plug.
2. Fill radiator. Close filler cap (C) and complete filling via filler neck (D) until intermediate level between marks "COLD" and "HOT" is reached. Close cap (D).
3. Run engine at half-throttle until it reaches operating temperature.
4. Stop engine and drain system.
5. Fill system again (following steps 1 and 2) adding a radiator cleaner and following the instructions supplied by manufacturer.
6. Run engine at half throttle for approx. 20 minutes.
7. Drain system again.
8. Repeat Steps 1, 2, 3 and 4.

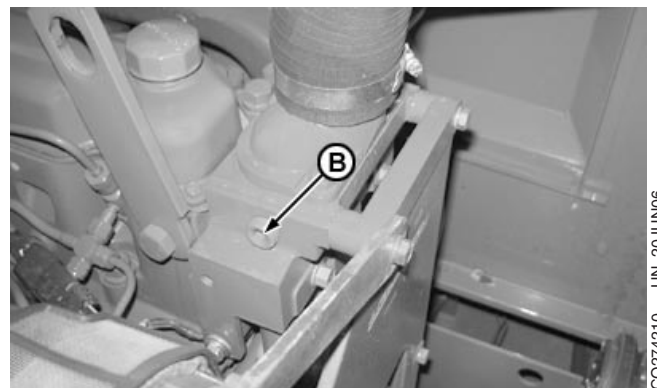


CO274200 -UN-20JUN06



1450 CWS CIS—plug

CO274220 -UN-20JUN06



1550 CWS CIS—plug

CO274210 -UN-20JUN06

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AS60558,00003F9 -19-23JAN07-2/3

Adding Coolant:

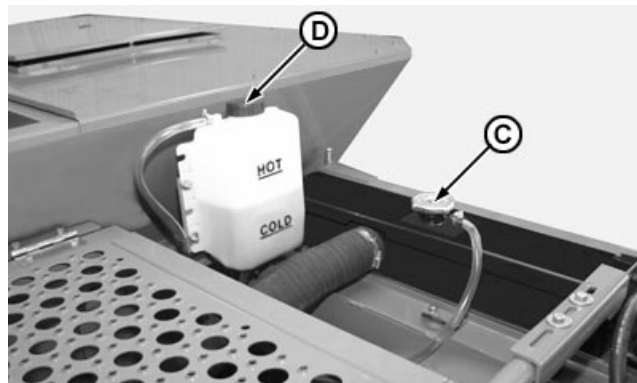
1. Keep drain plug (B) half open to let the air leave the system, slowly add coolant until it comes out through plug (B), then close plug.
2. Fill radiator with coolant, close filler cap (C) and complete filling via filler neck (D) until intermediate level between marks "COLD" and "HOT" is reached. Close cap (D).

IMPORTANT: Only refill system with coolant when engine is cold and shut off.

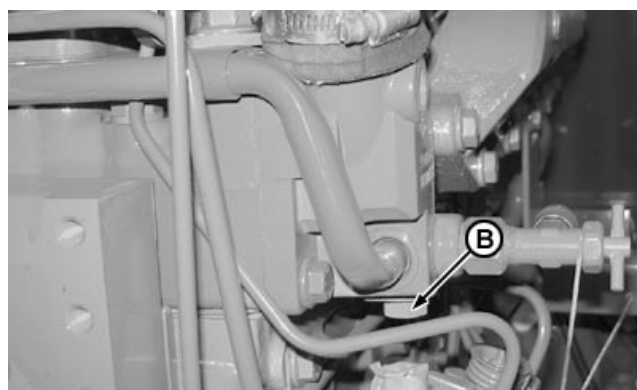
3. Start engine and run it for approximately 5 minutes. Stop engine and wait until it has cooled down. Check coolant level in expansion tank. If necessary, add coolant to system and repeat procedure until air is eliminated from system.

IMPORTANT: When engine is cold, coolant level in expansion tank should be up to "COLD" mark.

NOTE: Make sure there are no system leaks.

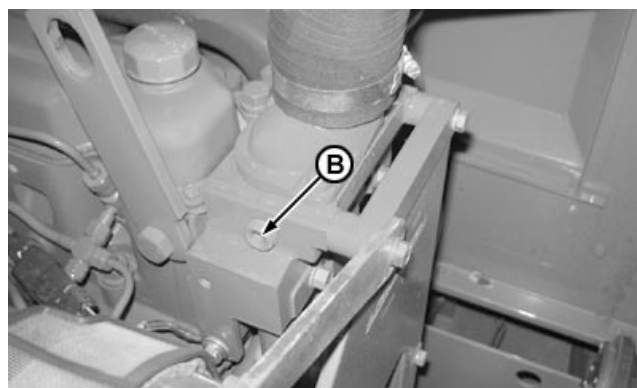


CQ274200 -UN-20JUN06



CQ274220 -UN-20JUN06

1450 CWS CIS—plug



CQ274210 -UN-20JUN06

1550 CWS CIS—plug

AS60558,00003F9 -19-23JAN07-3/3

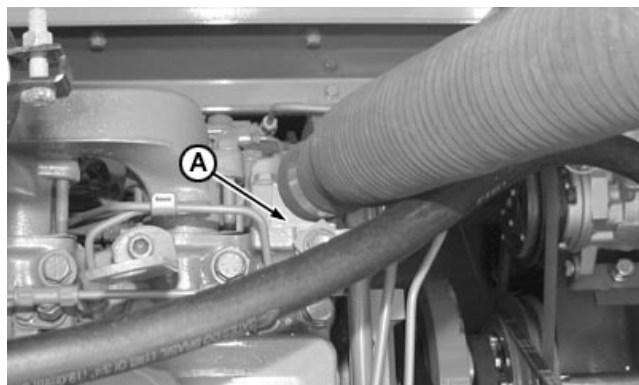
Replacing Thermostat



CAUTION: Danger of scalding! Before replacing the thermostat, release system pressure by turning expansion tank cap to first stop.

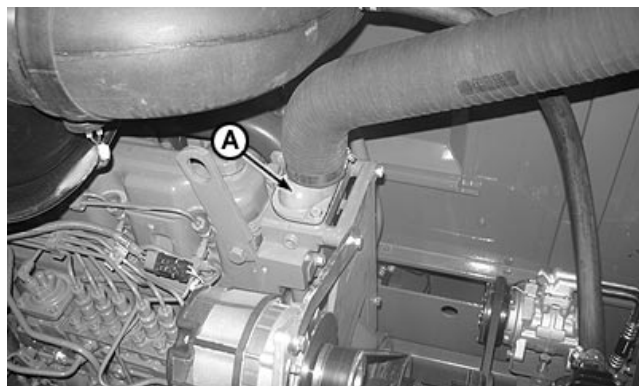
IMPORTANT: See your John Deere dealer to carry out this service.

When thermostat (A) is replaced coolant should also be replaced.



1450 CWS CIS

CO247690 -UN-29JUL05



1550 CWS CIS

CO247960 -UN-01AUG05

AS60558,00003FA -19-23JAN07-1/1

Checking Alternator Belt Tension

Tensioner Spring Tension

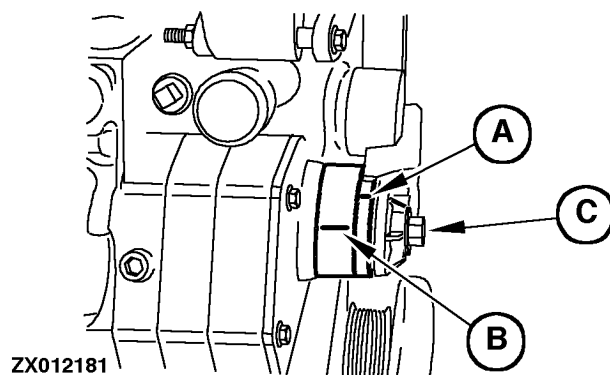
1. Remove belt from tensioner pulley.
2. Put a mark (A) on swing arm.
3. Put a mark (B) 20 mm (0.79) from mark (A).

NOTE: The torque wrench should be aligned with the tensioner pin.

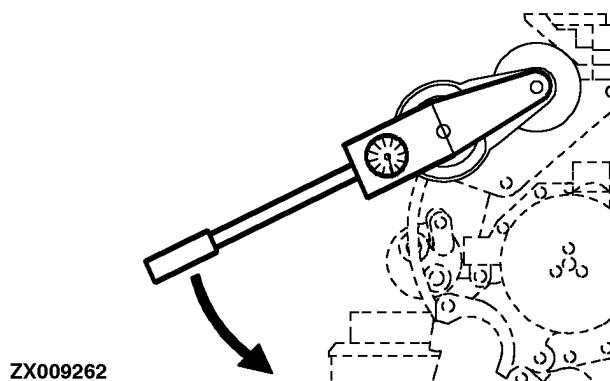
4. Turn swinging arm with torque wrench until marks are aligned.
5. The torque wrench should indicate 20 N•m (14.8 lb-ft).

IMPORTANT: The automatic belt tensioner is designed to maintain proper belt tension over the service life of the belt. If tensioner spring tension is not within specification, replace tensioner assembly.

NOTE: If torque is correct, check "Belt Wear".



ZX012181 -UN-24SEP97



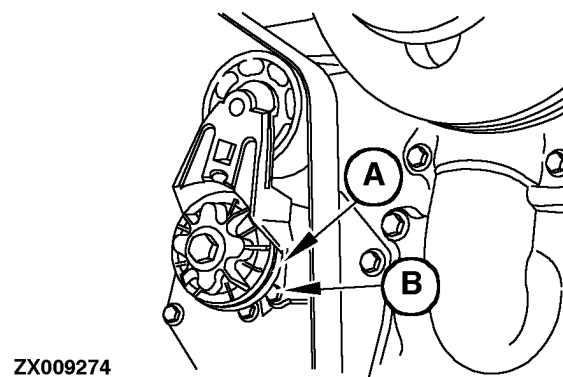
ZX009262 -UN-10JUN96

ML70882,00009F2 -19-19JUN06-1/2

Belt Wear

The belt tensioner is designed to operate within the arc limits defined by the cast stops (A and B).

If the spring tensioner has the correct tension and swing arm cast stop (A) touches fixed cast stop (B), replace belt. See "Replacing Alternator Belt".



ZX009274 -UN-10JUN96

ML70882,00009F2 -19-19JUN06-2/2

Replacing Alternator Belt

1. Relieve belt tension.
2. Remove belt from pulleys.
3. Install a new belt and ensure that it is correctly seated in all pulley slots.
4. Apply tension to belt with tensioner.
5. Start engine and check belt alignment.

ML70882,00009F3 -19-19JUN06-1/1

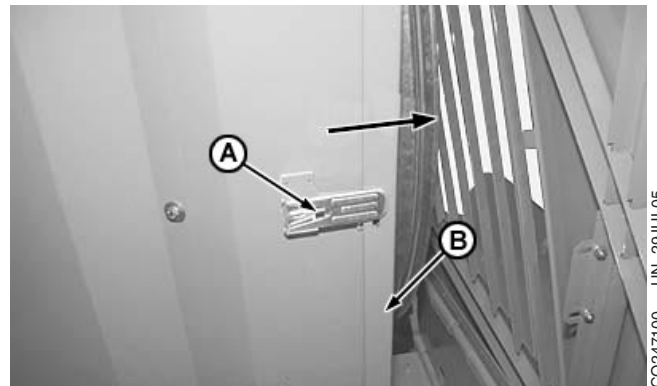
Cleaning Rotary Screen, Oil Cooler, Condenser and Radiator



CAUTION: Shut off engine and remove starter key before cleaning rotary screen.

1. Remove locking clamp (A) and open rotary screen door (B), as arrow shows.

NOTE: Clean rotary screen with a brush and compressed air when dirt and chaff build up on or behind the screen.



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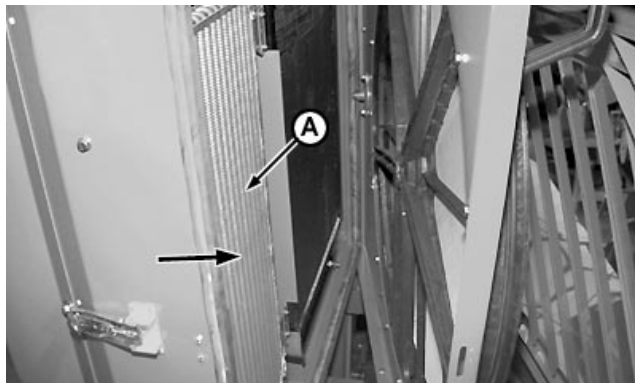
ML70882,0000A00 -19-22JUN06-1/2

2. Open oil cooler and condenser (A), as arrow shows.

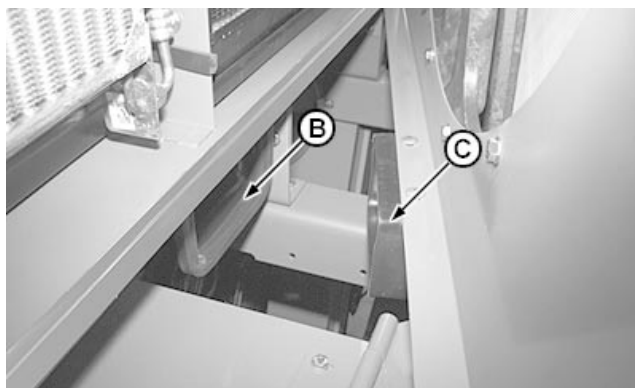
NOTE: Clean oil cooler, condenser and radiator with compressed air which should be directed from inside out.

3. Clean dirt from lower vacuum ducts (B) and (C).

IMPORTANT: When using high pressure air or water, be careful of fin damage to coolers. Straighten bent fins. Bent fins will decrease cooler performance.



CQ274440 -UN-22JUN06



CQ247710 -UN-29JUL05

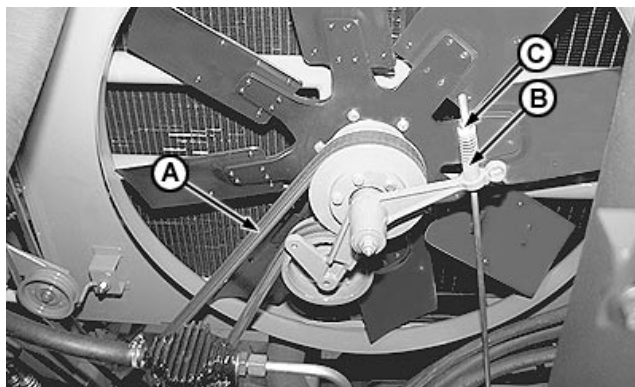
ML70882,0000A00 -19-22JUN06-2/2

Replacing (Engine) Cooling Fan Belt

CAUTION: Shut off engine and remove key.

To remove belt (A), it is necessary to release spring (B) tension by loosening jam nut (C).

Remove pulley.



CQ247070 -UN-29JUL05

AG,CO03622,2202 -19-17AUG05-1/1

Replacing Rotary Screen Drive Belt

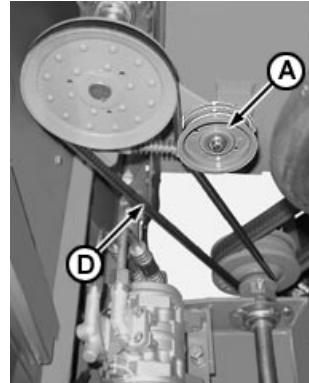


CAUTION: Shut off engine and remove key.

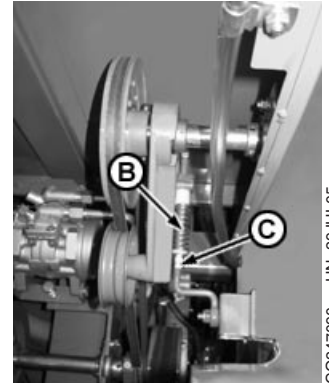
Pull up on spring loaded idler (A) loosening spring (B) through nut (C) to remove rotary screen drive belt (D).

NOTE: To start this procedure the fan belt should be removed in advance.

A—Idler Pulley
B—Spring
C—Nut
D—Drive Belt



CQ247080 -UN-29JUL05

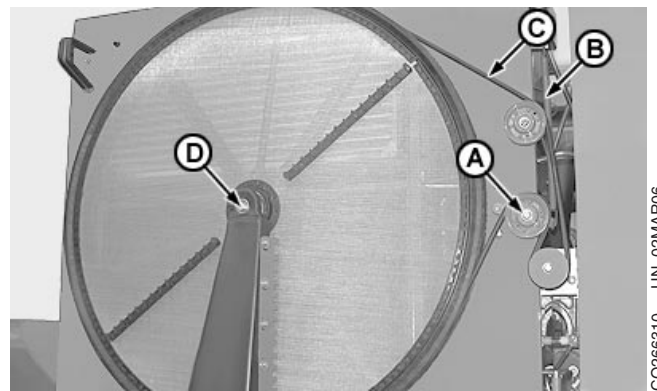


CQ247090 -UN-29JUL05

AG.CO03622,2204 -19-17AUG05-1/1

Replacing Rotary Screen Drive Belt

1. Loosen idler pulley (A) releasing spring (B).
2. Remove bolt (D) and belt (C).

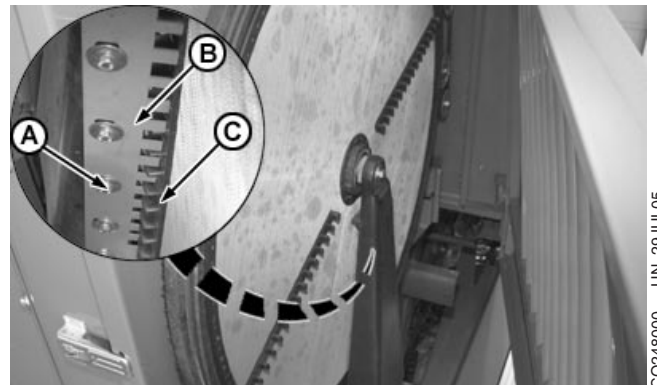


CQ266310 -UN-02MAR06

ML70882,0000916 -19-06MAR06-1/1

Adjusting Rotary Screen Rake Bar

Loosen bolts (A) and position rotary screen knife comb (C) so that rake bar (B) passes through comb unobstructed.



CQ248000 -UN-29JUL05

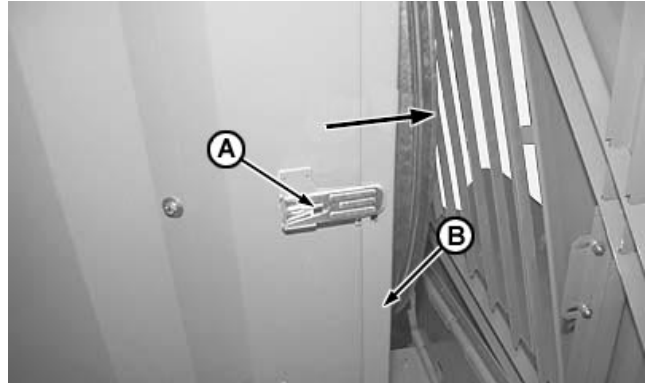
AG.CO03622,2103 -19-01AUG05-1/1

Replacement of Rotary Screen Knife Comb

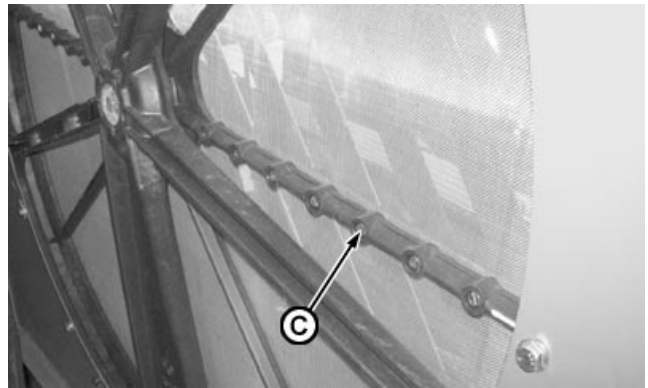


CAUTION: Shut off engine and remove starter key.

1. Remove locking clamp (A) and open rotary screen door (B).
2. Remove screws (C).
3. Remove rotary screen knife comb.



CO247100 -UN-29JUL05



CO248510 -UN-21JUN06

AG,CO03622,2104 -19-21JUN06-1/1

Removing Engine Air Filter

IMPORTANT: NEVER run engine without filters installed.

Use only genuine John Deere parts.

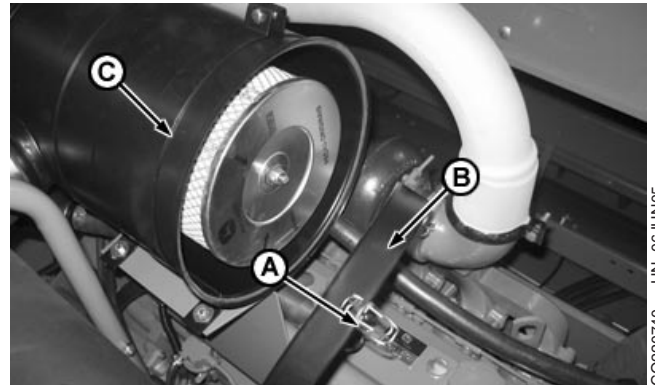
Perform service on the air filter only when the air filter indicator light remains on. The air filter has two filter inserts: filter insert and internal insert.

IMPORTANT: When cleaning or changing air filter, shut down engine and remove starter key.

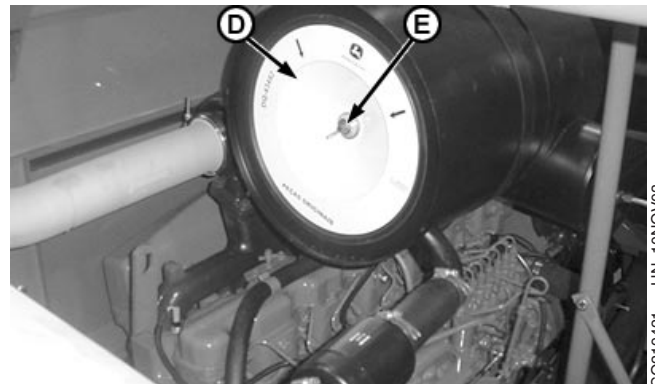
Removing Filter Insert:

1. Remove cover (B) of air filter housing (C) releasing locking tabs (A) (1450 CWS CIS combine models only).
2. To free filter insert (D) remove nut (E) by turning it counterclockwise, also remove thrust washer.
3. Grip edges of filter insert (D) and pull it out by hand.
4. Clean inside of housing with a dry rag and afterwards with a rag moistened in water. Also clean gasket on edge of filter insert.

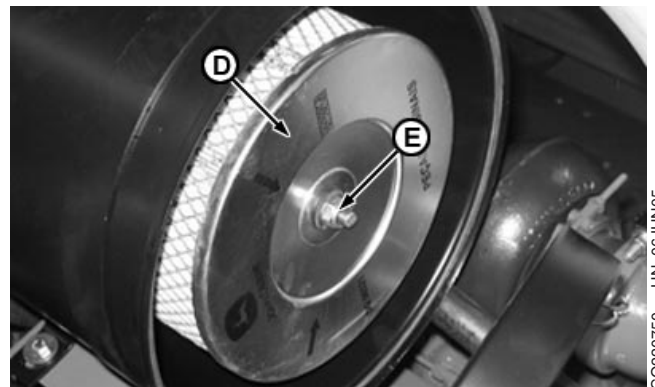
A—Locking clamps
B—Cover
C—Housing
D—Filter insert
E—Nut



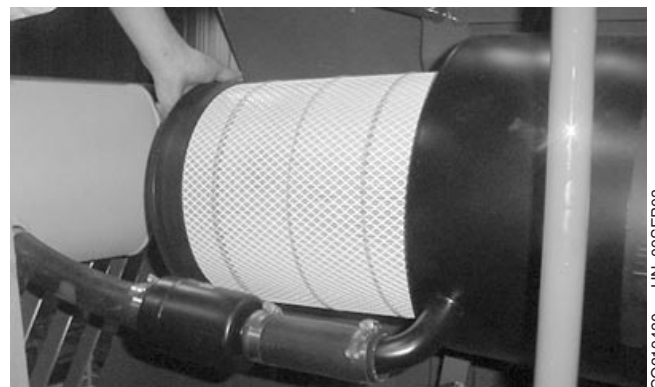
1450 CWS CIS



1550 CWS CIS



1450 CWS CIS



1550 CWS CIS

Continued on next page

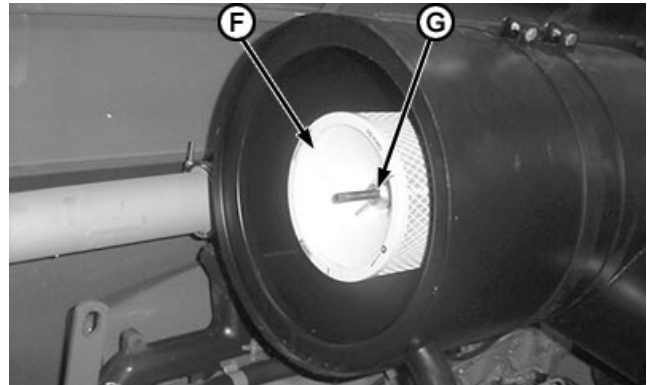
AS60558,00003FB -19-23JAN07-1/2

Removing Internal Insert:

NOTE: Remove internal insert (F) only when filter insert cleaning is being carried out for the third time.

NEVER clean internal insert. Always replace it if removed.

1. Unfasten nut (G) by turning it counterclockwise.
2. To remove internal insert (F), grip it by the sides with your hands and pull it out.
3. Clean inside of housing with a dry rag and afterwards with a rag moistened in water.
4. Install a new, genuine internal insert.



Removing internal insert

F—Internal insert
G—Nut

AS60558,00003FB -19-23JAN07-2/2

Cleaning and Inspecting Filter Insert**Cleaning Procedure:**

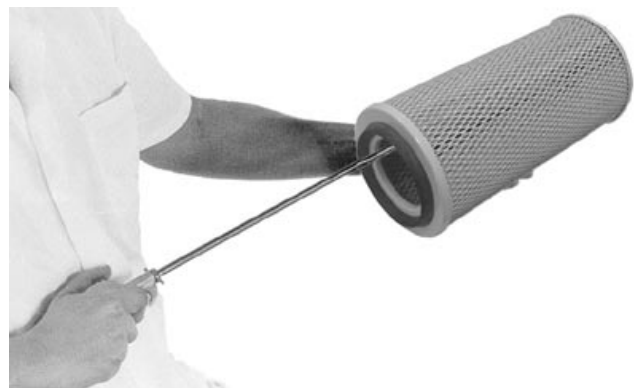
CAUTION: NEVER apply water directly to internal and filter inserts.

1. Shake filter insert carefully to loosen dirt on outside.

IMPORTANT: NEVER beat the filter insert against hard objects (tires, shields, etc.).

2. Blow dry with compressed air as shown in the figure. Compressed air blow should be parallel in relation to internal surface of filter insert. Pressure should not exceed 5 kg/cm² (70 lb/in², 70 psi).
3. Clean the external screen of the filter insert with a damp rag .

IMPORTANT: This cleaning procedure should only be implemented on the filter insert a maximum of three times.



Cleaning filter insert

Continued on next page

ML70882,00003FB -19-28NOV03-1/2

Inspection Procedure:

1. Insert a light inside filter insert as illustrated in the figure, and carefully look for holes or ruptures on paper part of insert.

IMPORTANT: Replace any filter insert containing a hole or rupture of any kind.

2. Check if the outside screen of the filter insert is crushed.

NOTE: If it is crushed then the vibration caused may, in a short time, create a hole in the screen.

3. Check if the rubber seal is in good condition.

IMPORTANT: If the rubber seal is damaged replace the insert.

4. Mark down the number of times upper part of insert was cleaned.

NOTE: The filter insert can be cleaned a maximum of three times. On the fourth occasion it must be replaced by a new and genuine filter insert.



Inspecting filter insert

CO219450 -UN-09SEP03

ML70882,00003FB -19-28NOV03-2/2

Installing Engine Air Filter

1. Mount filter and internal insert, ensuring that nuts are tightened.

NOTE: Nuts are sufficiently tight when both filter insert and internal insert do not move when you try to turn them by hand.

2. Close the housing (1450 CWS CIS model combines only).



Attaching filter insert

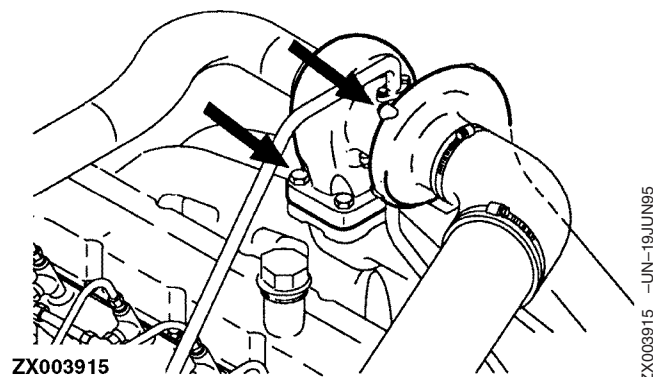
CO220770 -UN-05NOV03

ML70882,0000A3E -19-23JAN07-1/1

Turbocharger

All engine types are equipped with a turbocharger.

Carefully check all connections and attaching points of the turbocharger every 250 hours. Any lube oil leaks at the turbocharger or its lube oil feed line must be rectified at once.



AG,CO03622,2122 -19-17APR02-1/1

Crankshaft Damper Inspection

IMPORTANT: The engine crankshaft damper cannot be repaired. It must be replaced after 4500 hours or 5 years, whichever occurs first.

See your John Deere dealer about replacement.



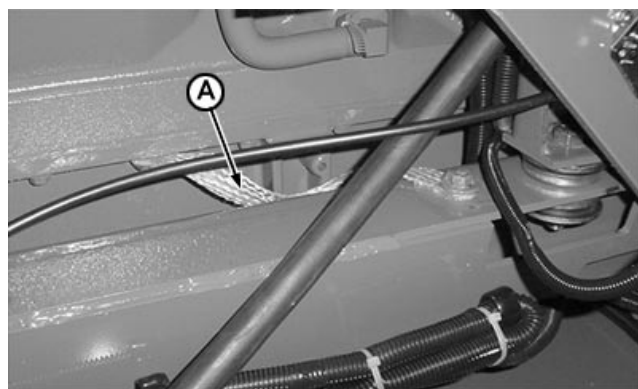
MB03730,00001E3 -19-01AUG05-1/1

Engine Grounding

IMPORTANT: Periodically inspect the condition of the engine ground cable (A) and check the tightness of the attaching nuts.

John Deere engines are seated on rubber dampers inside the machinery. These dampers, as well as reducing noise levels, also electrically insulate the engine. Nevertheless, it is necessary that the engine has a good ground connection, for which reason the ground cable (A) exists.

If this cable is not in perfect working order then the flow of excess current produced by the alternator may be redirected to the engine bearings, causing severe damage to the engine.



Engine Grounding

ML70882,00004C0 -19-28JUL04-1/1

Service—Compressed Air System

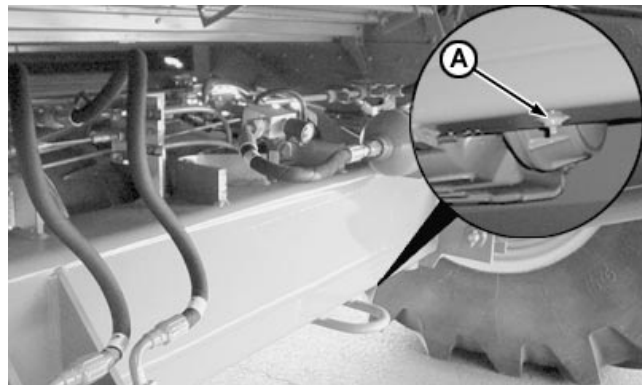
Compressed Air System Reservoir

The reservoir is located inside the front axle.

Maximum pressure: 570 kPa; 5.7 bar; 82.7 psi.

Drain off contaminants periodically.

With the engine off, drain accumulated water by turning the drain valve (A) located on the lower left side of the front axle.



CO231800 -UN-28JAN05

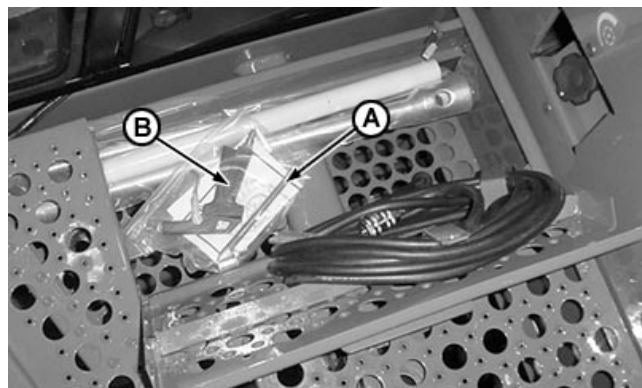
AG,CO03622,2120 -19-01FEB05-1/1

Compressed Air Hose and Using Compressed Air

The compressed air hose is wound up inside the tool box cover, located in the operator's station.

To inflate the tires, connect valve (A) to the hose quick-coupler.

To use compressed air for cleaning, connect nozzle (B) to the hose quick-coupler.

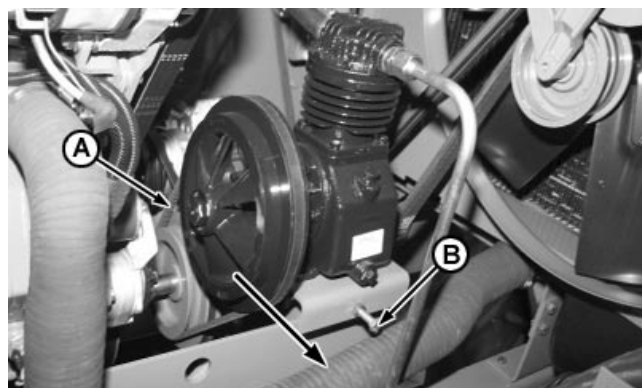


CO231790 -UN-28JAN05

AG,CO03622,2124 -19-01FEB05-1/1

Adjusting Compressor Drive Belt Tension

Belt tension (A) can be adjusted by tightening bolt (B) and shifting compressor in the direction of arrow (see illustration).



CO247740 -UN-29JUL05

AG,CO03622,2126 -19-01AUG05-1/1

Air Compressor Oil Change

Open the filler neck and oil level (A) and drain plug (B), and bleed off the oil into a suitable recipient.

Mount and tighten drain plug (B).

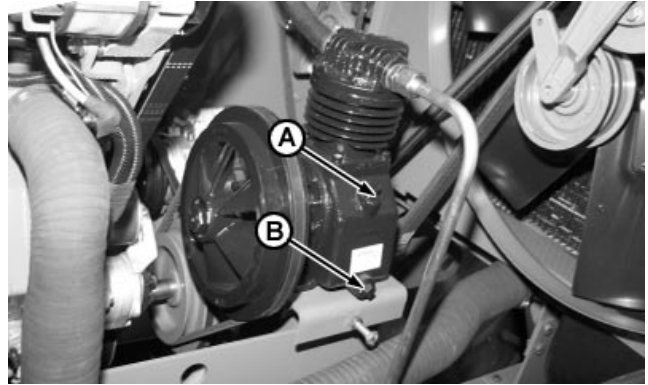
Fill with recommended oil. See “Fuel, Lubricants, Coolant and Capacities” section.

Consult capacity in the “Specifications” section.

Check the oil level with dipstick.

The oil level should be between the upper and lower marks on the dipstick.

NOTE: *During the first 50 hours of operation the air compressor has a very high oil consumption, because of this it is very important to check the oil level daily and refill it, if necessary. After the first oil change consumption reduces to a minimum.*



A—Filler neck and oil level
B—Drain plug

CO247230 -UN-29JUL05

AG,CO03622,2190 -19-17AUG05-1/1

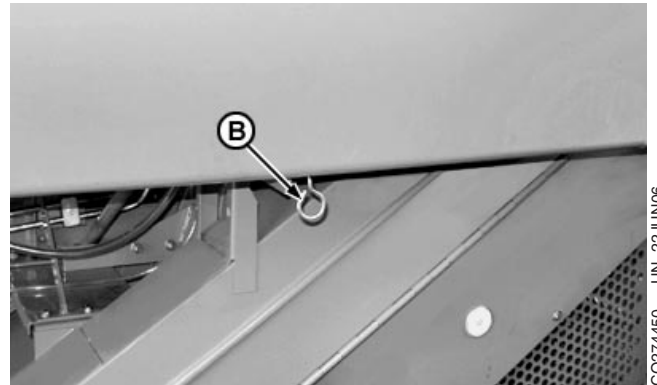
Service—Drives/Shields

Opening the Side Shield

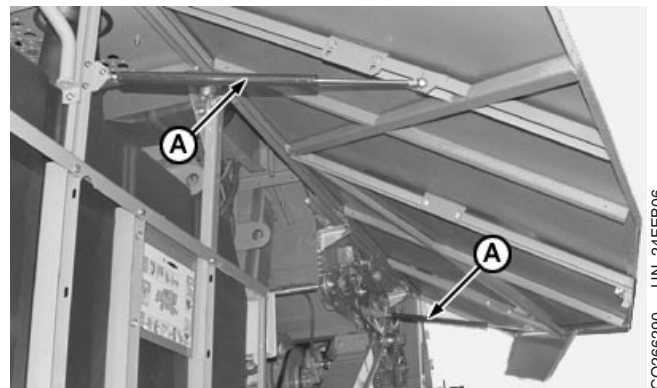
NOTE: The procedure is the same for both sides of the combine.

1. Release clamp (B) by pulling it downward.
2. Gas cylinders (A) will support shield once it is released from the spring latch. Shield will open enough to allow safe service on this side of combine.
3. Close shield by lowering it until it locks in clamp (B).

A—Gas cylinder
B—Clamp



CO274450 -UN-22JUN06



CO266290 -UN-24FEB06

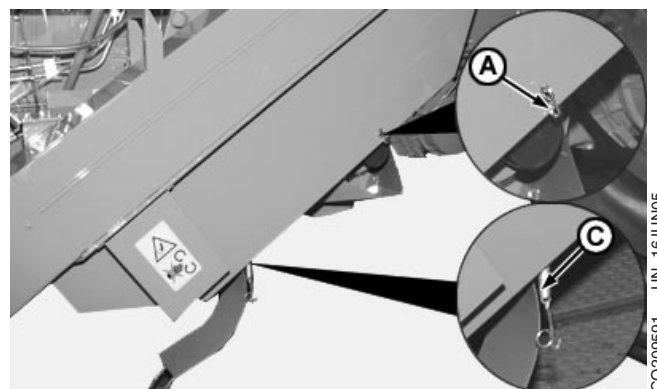
ML70882.0000A04 -19-06JUL06-1/1

Opening the Fan Shield

Turn catch (A) and raise shield.

Secure the shield by means of spring (C).

A—Catch
C—Spring



CO209591 -UN-16JUN05

AG,CO03622,2208 -19-16JUN05-1/1

Opening the Straw Chopper Idler Pulley Shield

To remove shield (A), remove all bolts (B).

To reinstall the shield, perform the reverse procedure.



CO247760 -UN-29JUL05

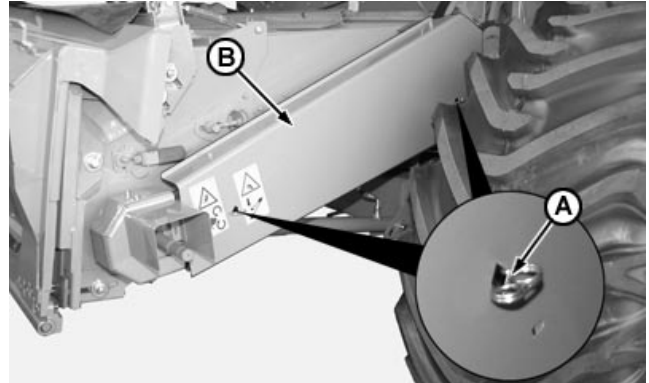
ML70882.0000A3F -19-14JUL06-1/1

Opening the Head Drive Shield

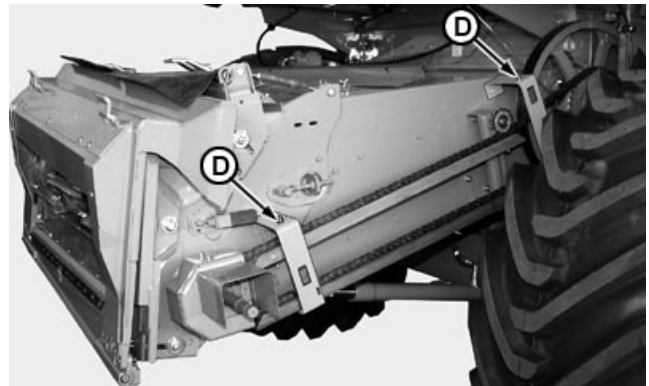
Undo locking clips (A) and remove shield (B).

To remount shield, slot into place on the alignment pins (D) and secure with clips (A).

- A—Locking clips
- B—Shield
- D—Alignment pins



CQ247770 -UN-29JUL05



CQ247780 -UN-29JUL05

AG,CO03622,2129 -19-01AUG05-1/1

Drive Chains Tension

During the first few hours of operation, check that the tension on the chains is correct.

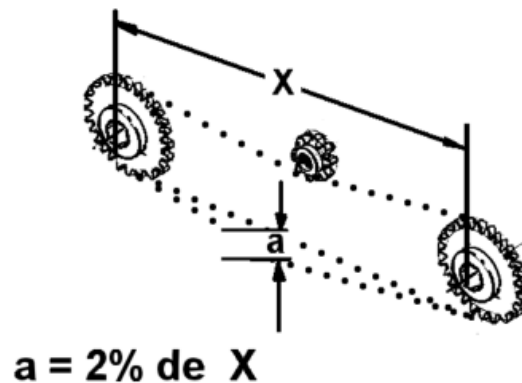
The flex on a chain should be about 2% of the distance between the shafts of the drive sprocket and idler sprocket, flexion being measured on a section of chain opposite the tensioner.

The chain must not flex on the tensioner side.

Example: If the distance between the shafts of the drive sprocket and idler sprocket is 250 mm (10 in.), the chain should not hang by more than 5 mm (0.2 in.).

Loose chains cause premature and excessive wear on the roller elements of the chain links, the sprocket teeth and possibly the drive components of the machine.

Chains that are too tight cause excessive pressure on the sprockets, the bearings and the shafts.



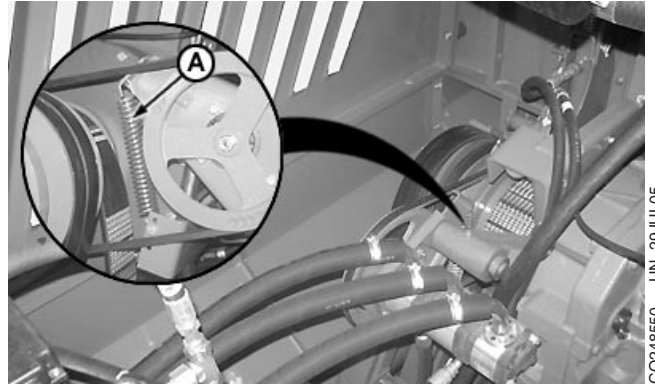
CQ188760

-UN-19AUG99

AG,GG05155,603 -19-04MAR02-1/1

Adjusting Hydraulic Pump Belt Tension

Spring (A) maintains belt tension.



AG.CO03622,2131 -19-17AUG05-1/1

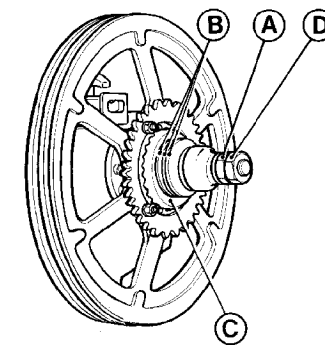
CO248550 -UN-29JUL05

Adjusting Feeder House Slip Clutch

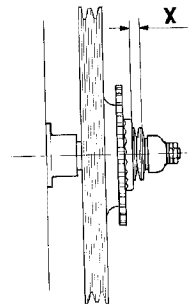
The slip clutch is adjusted by means of the pressure applied by hex nut (A) on the three disk springs (B), which then act on the clutch (C).

First loosen locknut (D) and hex nut (A). Then tighten nut (A) until distance (X) is 17.2 mm (0.68 in.). Tighten locknut (D) to 140-160 N•m (102.2 to 116.8 lb-ft).

- A—Hex nut
- B—Disk spring
- C—Clutch
- D—Locknut
- X—17.2 mm (17.27 mm)



ZCQD3941



ZCQD3941 -UN-04APR96

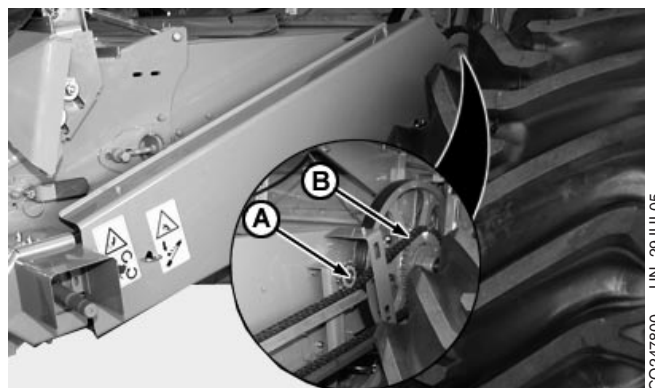


CO247790 -UN-29JUL05

AG.CO03622,2133 -19-01AUG05-1/1

Feeder House Drive to Head

Move sprocket (A) to tighten chain (B).



CO247800 -UN-29JUL05

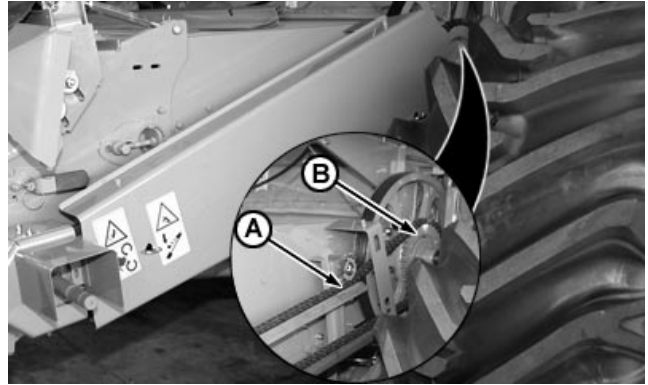
AG.CO03622,2134 -19-01AUG05-1/1

Replacing Feeder House Drive Belt

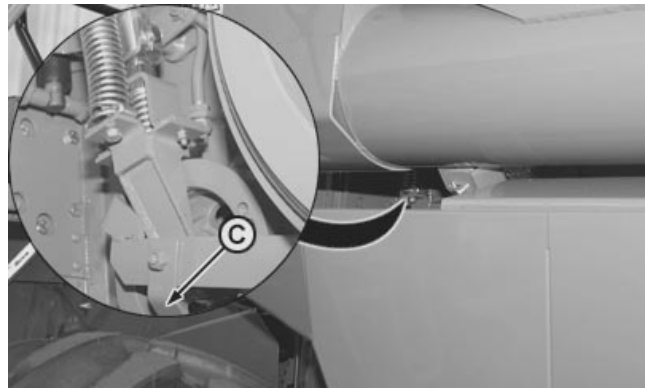
Remove feeder house chain shield. After loosening head drive chain (A), remove sprocket (B) from feeder house upper shaft.

Remove guide (C).

- A—Head Drive Chain
- B—Sprocket
- C—Guide



CO247810 -UN-29JUL05

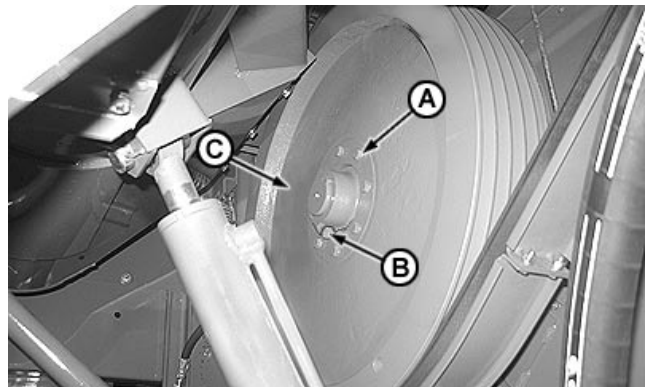


CO247820 -UN-29JUL05

AG,CO03622,2135 -19-01AUG05-1/2

Remove retaining bolts (A), locking bolt (B) and beater pulley wheel (C). Replace belt.

CAUTION: Warning! This pulley wheel is heavy (approx. 40 kg [88 lb]) and difficult to handle.

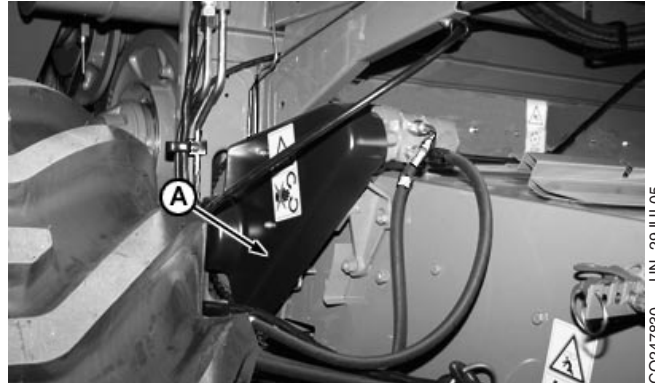


CO248560 -UN-29JUL05

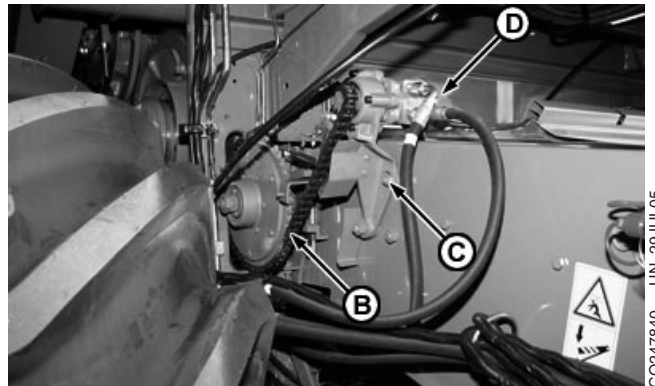
AG,CO03622,2135 -19-01AUG05-2/2

Adjusting Feeder House Hydraulic Reverser Chain Tension

1. Remove shield (A).
2. Loosen the three nuts (C) of bracket.
3. Swing hydraulic motor (D) forwards and adjust chain tension as described in “Chain Tensions” in this section.
4. Retighten nuts (C).
5. Remount shield (A).



CO247830 -UN-29JUL05



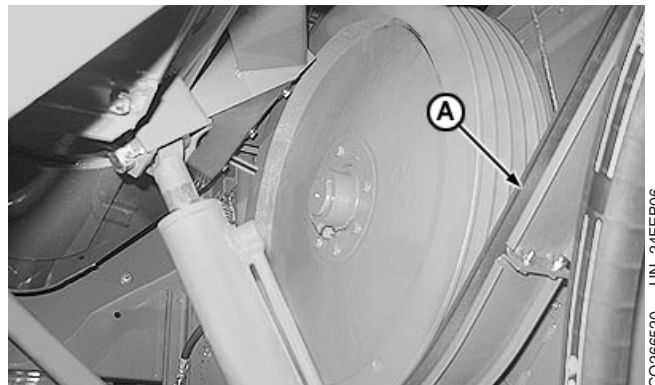
CO247840 -UN-29JUL05

AG,CO03622,2136 -19-01AUG05-1/1

Replacing Threshing Unit Drive Belt

NEVER replace belt (A) of threshing unit drive. Consult your John Deere dealer to perform this replacement.

A—Belt



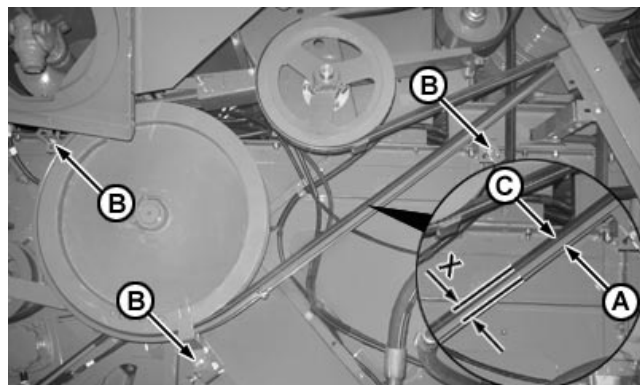
CO266520 -UN-24FEB06

AG,GG05155,313 -19-24FEB06-1/1

Adjusting Threshing Unit Drive Belt Guide

NOTE: To prevent accidents shut off engine before adjusting belt guide.

1. Start engine and engage threshing unit.
2. Turn off engine (with threshing unit engaged) and remove starter key.
3. Adjust play (X) between belt guide (A) and belt (C). Adjust through bolts of supports (B).



CO266590 -UN-15MAR06

Specification

Play between belt guide and threshing unit drive belt—Play 2—5 mm (0.08—0.2 in.)

AG,CO03622,2137 -19-05APR06-1/1

Adjusting Hydraulic Variable Speed Drive

IMPORTANT: When required, see your John Deere dealer for adjustment of the drive pulley halves on the cylinder and beater shaft.



CO247850 -UN-29JUL05

AG,CO03622,2138 -19-17AUG05-1/1

Preparing for Replacement of Cylinder Variable Speed Drive Belt

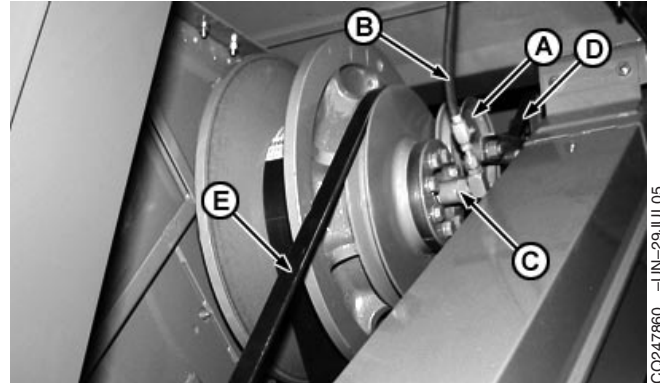
With the engine at top speed and the threshing unit engaged, use the cylinder speed control switch to fully open the beater shaft pulley (lowest cylinder speed). Disengage the threshing unit and stop the engine.



CAUTION: Do not adjust belt while the engine is running.

IMPORTANT: Before any disassembly, thoroughly clean the area around the connector (C) and hydraulic hose (B).

1. Remove hydraulic hose (B) and connector (C). Loosen and remove the clean grain elevator drive belt (D) and the separator and cleaner drive belt (E).
2. Remove the idler (A). Move support and bolt down and secure in this position.



A—Idler Pulley Wheel
B—Hydraulic hose
C—Connector
D—Clean grain elevator drive belt
E—Separator and cleaning unit drive belt

ML70882.0000867 -19-03SEP05-1/1

Removing Cylinder Variable Speed Drive Belt on Combines without Reduction Gear

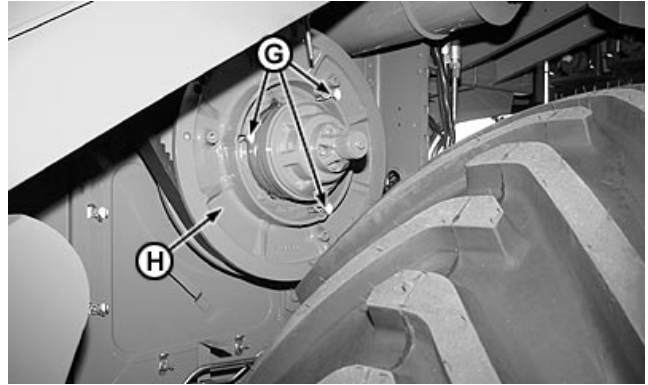
1. On the beater's variable pulley, push the inner half pulley inward as far as possible.
2. There are three M12 x 150 bolts (G) in the tool box. Insert these into the threaded holes in the outer half pulley (H) of the cylinder shaft. When the bolt ends touch the inner half pulley wheel, evenly tighten them and the two halves will begin to separate and stay in that position.
3. Pull the belt with your hand over the outer half pulley wheel of the beater shaft pulley (do not force on belt).

NOTE: Before removing the belt, check that the belt is fully seated at the bottom of the cylinder shaft pulley wheel rim.

4. Pull the belt off over the cylinder shaft pulley. Dislocate the outer half pulley wheel of the cylinder shaft inward approximately 50 mm by unfastening the three bolts (G).

IMPORTANT: After changing the belt, remove the three bolts and store them in the tool box.

5. To install a new belt, follow this procedure in reverse order.



CO248480 -UN-29JUL05

ML70882,0000868 -19-03SEP05-1/1

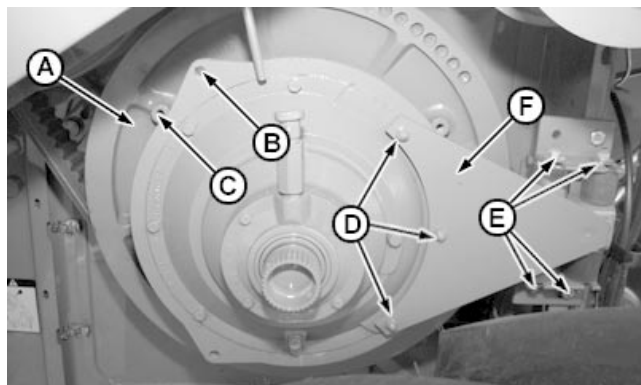
Removing Cylinder Variable Speed Drive Belt on Combines with Reduction Gear

1. Rotate half pulley (A) until hole (B) of reduction gear is aligned with threaded hole (C) of outer half pulley.
2. Remove nuts (D), (E) and support (F).
3. There are three M12 x 150 bolts (G) with nuts and washers in the tool box. Fully insert these bolts into the threaded bores in the outer half pulley (A) of the cylinder shaft. Evenly tighten three nuts (H) to fully separate the two halves.

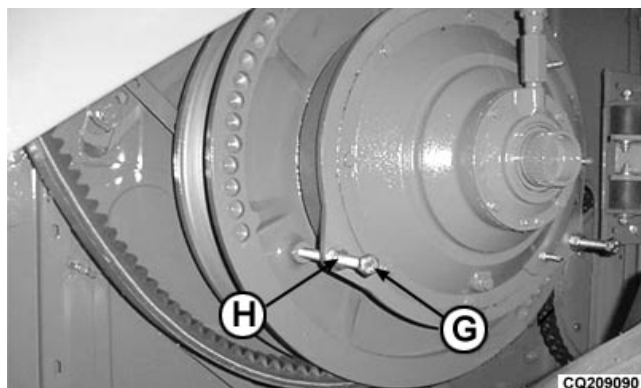
NOTE: Before removing the belt, check it is fully seated at the bottom of the cylinder shaft pulley wheel rim.

4. Pull the belt with your hand over the outer half pulley wheel of the beater shaft pulley (do not force the belt).
5. Pull the belt off over the cylinder shaft pulley.
6. To install a new belt, follow this procedure in reverse order.

IMPORTANT: After changing the belt, remove the three bolts and store them in the tool box.



CQ247870 -UN-29JUL05



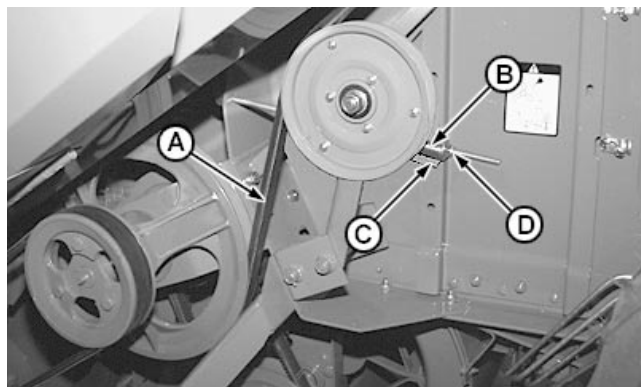
CQ209090 -UN-02OCT01

ML70882,0000869 -19-20JUN06-1/1

Adjusting Straw Walker Belt Tension

Belt tension (A) is correct when the length of spring (B) is equal to the length of tab (C). Effect adjustment by means of nut (D).

- A—Belt
B—Spring
C—Indicator Tab
D—Nut



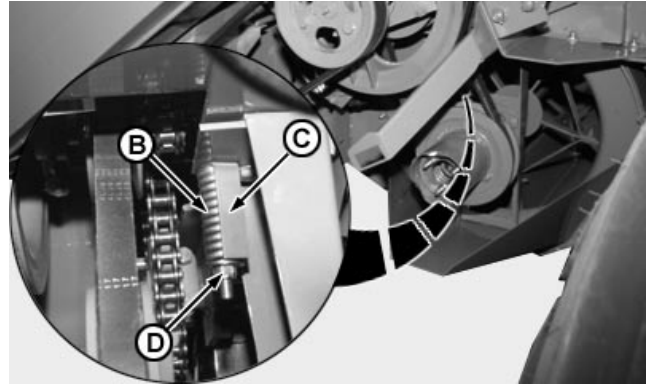
CQ247880 -UN-29JUL05

AG,CO03622,2139 -19-01AUG05-1/1

Adjusting Straw Walker Drive Belt Tension

Belt tension is correct when the length of spring (B) is equal to the length of tab (C). Effect adjustment by means of nut (D).

B—Spring
C—Indicator Tab
D—Nut



CO247890 -UN-23JUL05

AG,CO03622,2140 -19-01AUG05-1/1

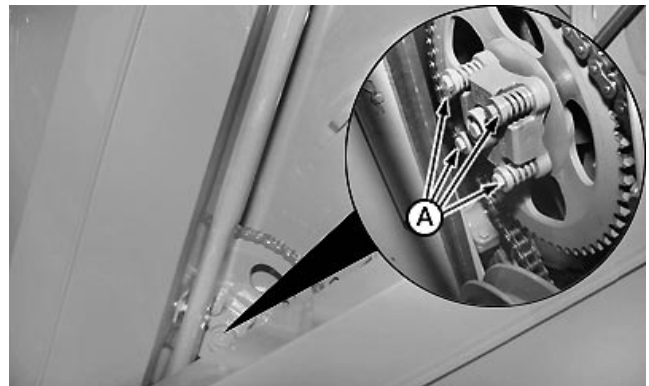
Adjusting Straw Walker Slip Clutch

The straw walkers are protected by a slip clutch.

Adjust by tightening four nuts (A).

Specification

Nuts (A)—Torque 40 N•m (29 lb-ft)



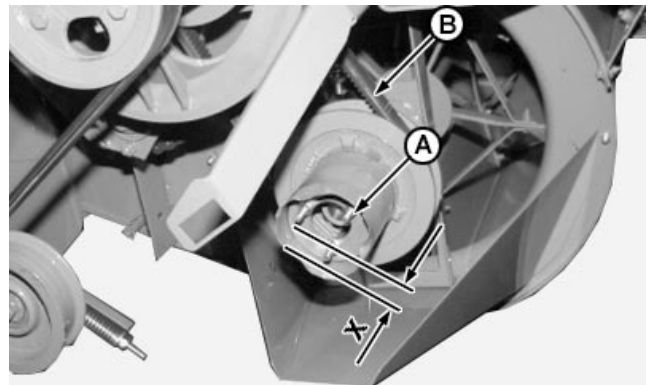
CO247900 -UN-22JUN06

AG,CO03622,2141 -19-17AUG05-1/1

Adjusting Fan Variable Speed Drive Belt

The fan drive belt (B) is correctly adjusted when the distance (X), as measured from the outer edge of the spring box to the spring retaining washer, is 20 to 30 mm (0.79 to 1.18 in.).

Use nuts (A) to adjust.



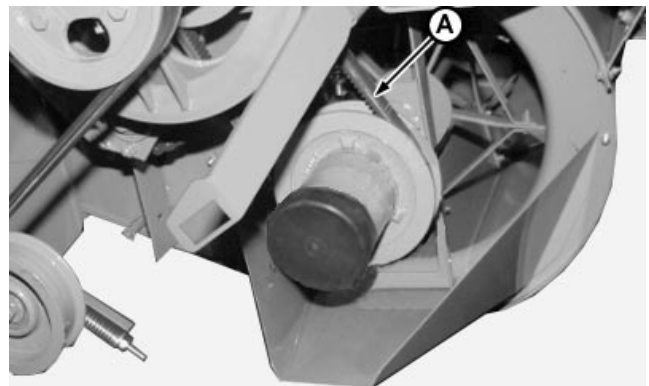
CO247910 -UN-23JUL05

AG,CO03622,2142 -19-01AUG05-1/1

Replacing Fan Variable Speed Drive Belt

NEVER replace belt (A) of fan. Consult your John Deere dealer to perform this replacement.

A—Belt



CO266540 -UN-02MAR06

AG,CO03622,2143 -19-02MAR06-1/1

Adjusting Tailings Elevator Drive Belt

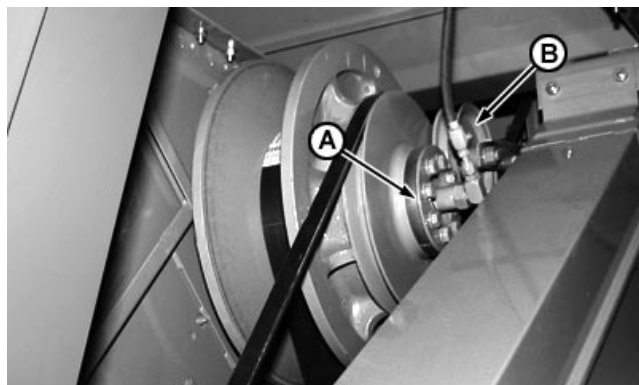
The tailings elevator is driven by the beater pulley via the elevator slip clutch.

Belt (A) is automatically tensioned by the idler pulley wheel (B).

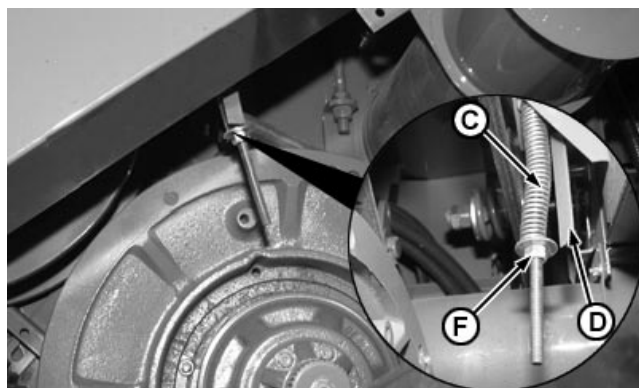
To obtain the appropriate tension, the spring backing washer (C) should be level with the indicator tab (D).

Effect adjustment with nut (F).

- A—Belt
- B—Idler pulley wheel
- C—Spring
- D—Indicator Tab
- F—Nut



CO248010 -UN-29JUL05



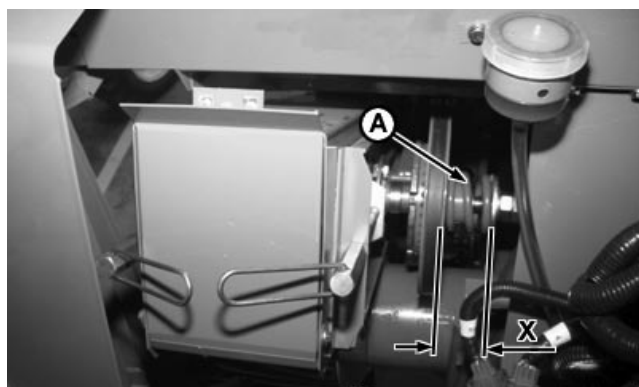
CO248020 -UN-29JUL05

AG.CO03622,2144 -19-01AUG05-1/1

Adjusting Tailings Elevator Clutch

The slip clutch is correctly adjusted when the length (X) of spring (A) measures 60 mm (2,36 in.).

NOTE: Do not lubricate the slip clutch.

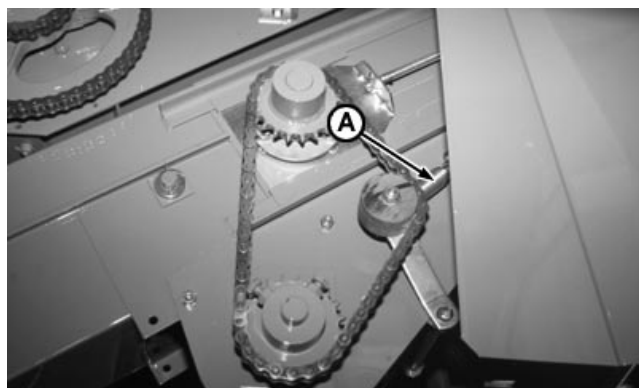


CO248030 -UN-29JUL05

AG.CO03622,2145 -19-01AUG05-1/1

Adjusting Tailings Auger Drive

The chain is automatically tightened by spring (A).



CO247980 -UN-29JUL05

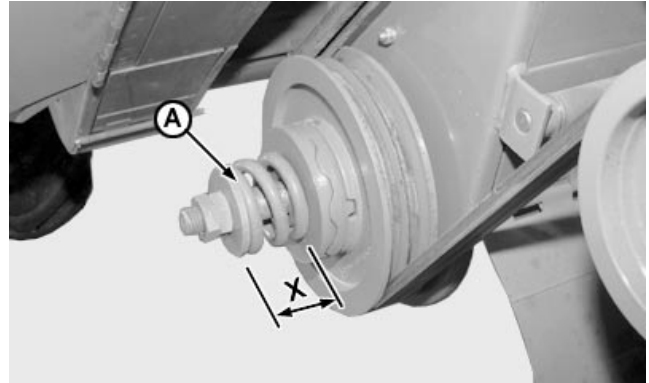
AG.CO03622,2146 -19-17AUG05-1/1

Adjusting Clean Grain Elevator Slip Clutch

The slip clutch is correctly adjusted when the length (X) of spring (A) measures 51 mm (2 in.).

IMPORTANT: Measure at two distinct points with an angle of 180° between points.

NOTE: Check length according to section “Periodic Servicing and Lubrication” or every 50 engagements. Do not lubricate the slip clutch.



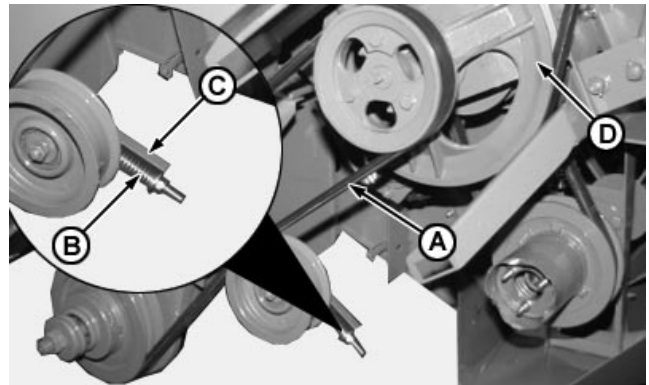
AG,CO03622,2147 -19-14JUN06-1/1

Clean Grain Elevator Drive Belt

The clean grain elevator is driven by belt (A) from the straw walker drive (D).

The belt tension is correct when spring (B) is as long as indicator tab (C).

- A—Belt
- B—Spring
- C—Indicator Tab
- D—Straw Walker Drive



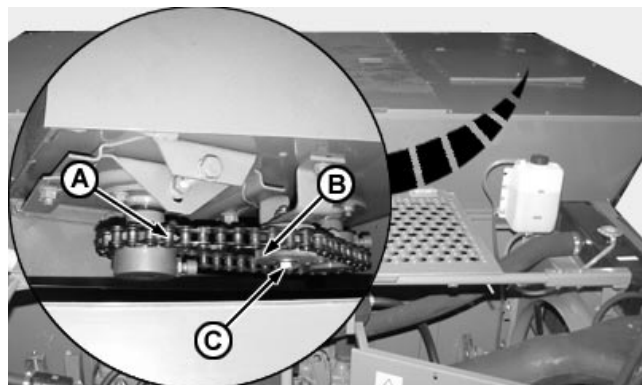
AG,CO03622,2148 -19-17AUG05-1/1

Adjusting Grain Tank Upper Auger Drive Chain

Remove wing nut and open the cover.

Use idler (B) to adjust chain tension (A). Loosen nut of bolt (C) and move idler (B) as required.

A—Chain
B—Idler
C—Bolt

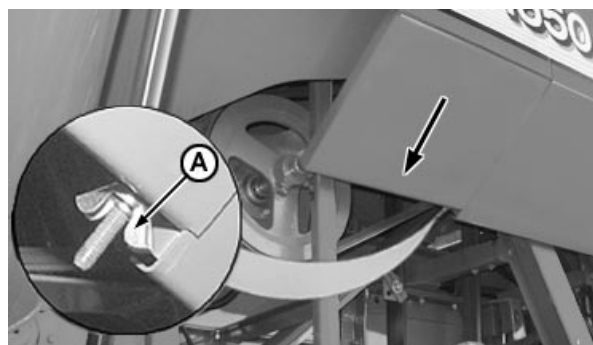


CO248060 -UN-29JUL05

AG,CO03622,2150 -19-01AUG05-1/1

Opening Grain Tank Unloading Auger Drive Shield

Remove butterfly nut (A) and remove shield as illustrated.



CO278260 -UN-29AUG06

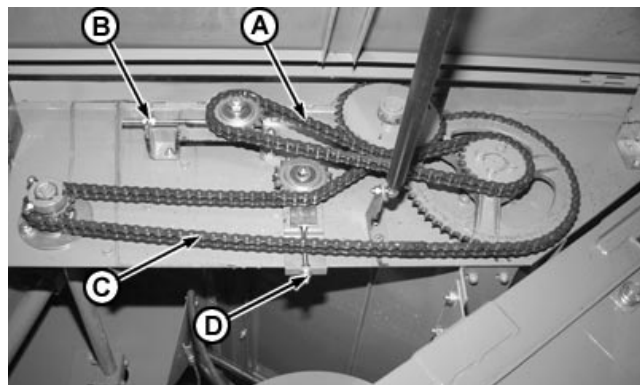
ML70882,000080F -19-29AUG06-1/1

Adjusting Grain Tank Unloading Auger and Feeder Auger Chain Tension

The drive of the unloading auger feeder is powered by chain (A). Adjustment is made by means of nut (B).

The drive of the unloading auger is powered by chain (C). Adjustment is made by means of nut (D).

Adjust the chains as described in “Chain Tensions”.



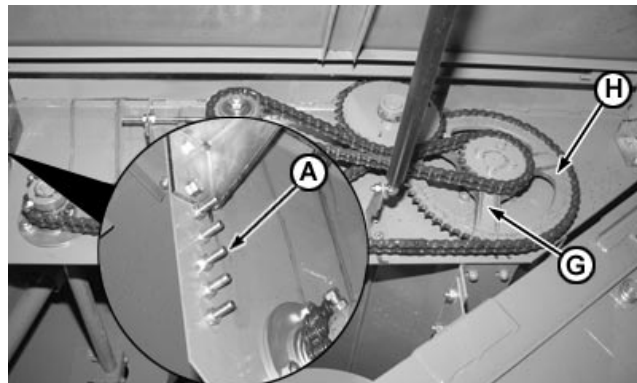
CO248070 -UN-29JUL05

Continued on next page

AG,CO03622,2151 -19-21MAR06-1/2

IMPORTANT: Bolt (G) is a safety (shear) bolt which will break on overload in order to protect the drive system. Always replace with original JOHN DEERE part. Tighten it enough to bring the drag arm smoothly in contact with sprocket (H).

NOTE: The combine holds spare shear bolts (A).



AG,CO03622,2151 -19-21MAR06-2/2

Adjusting Belt Guide of Unloading Auger Drive



CAUTION: To prevent accidents shut off engine before adjusting belt guide.

Start engine and engage unloading auger transmission. Turn off engine (with transmission engaged) and remove starter key.

Adjust belt guide (A) through its supports to obtain uniform spacing of 3 to 5 mm (0.1 to 0.2 in.) between belt and guide.



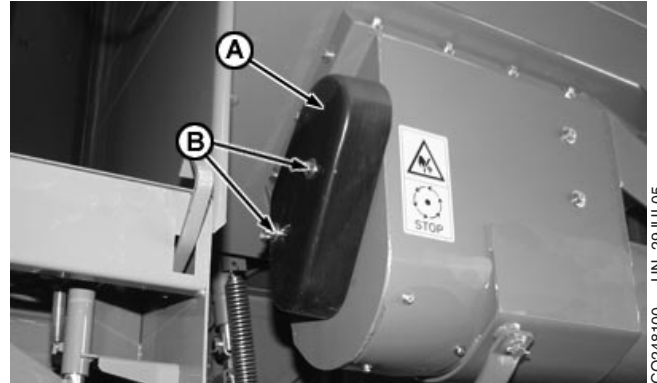
ML70882,0000912 -19-21MAR06-1/1

Adjusting Unloading Auger Drive Chain

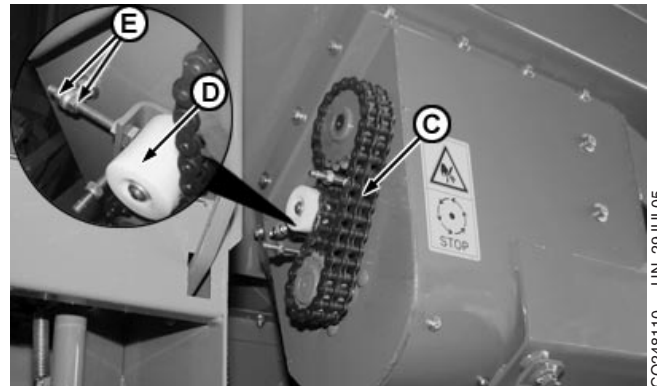
Remove drive shield (A) by taking out wing nuts (B).

The grain unloading auger is driven by means of chain (C). Adjust tension of chain (C) by means of idler sprocket (D) through nuts (E). Put drive shield back in its place.

- A—Drive Shield
- B—Wing nut
- C—Chain
- D—Idler sprocket
- E—Nuts



CO248100 -UN-29JUL05



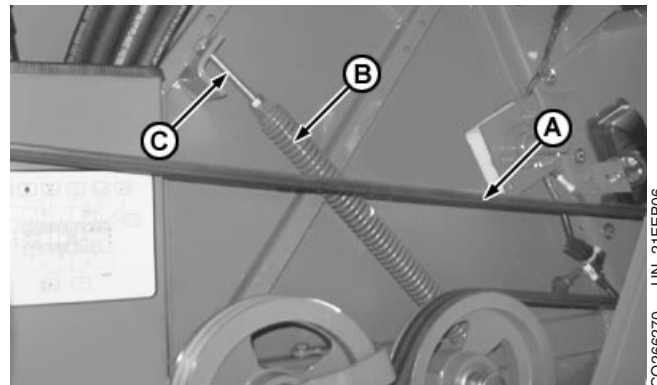
CO248110 -UN-29JUL05

AG,CO03622,2153 -19-17AUG05-1/1

Tensioning Straw Chopper Intermediate Drive Belt

The correct tension of belt (A) is obtained by means of spring (B). Use bolt (C) for adjustment.

- A—Belt
- B—Spring
- C—Bolt



CQ266270 -UN-21FEB06

AG,CO03622,2212 -19-20FEB06-1/1

Service—Electrical System

Prevent Battery Explosions

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).



TS204 -UN-23AUG88

DX,SPARKS -19-03MAR93-1/1

Removing Battery

CAUTION: When servicing the electrical system **ALWAYS** disengage the battery switch.

CAUTION: When removing the battery, first disconnect the negative (-) cable followed by the positive cable (+).

NOTE: When reconnecting the battery cables, first connect the positive (+) cable and then the negative (-).



CQ194821 -UN-01DEC03

ML70882,0000813 -19-01AUG05-1/1

Cleaning the Battery

— Clean the battery daily. Remove straw build-up.

— Use a brush to remove any corrosion from the terminals.

— Smear the battery terminals and cables with grease or petroleum jelly.



CQ194821 -UN-01DEC03

ML70882,00003EE -19-23MAR06-1/1

Battery Charging

Check battery charge weekly.

- Green:** battery voltage is OK.
- Dark:** battery voltage is not OK. Charge battery until test indicator turns to green.
- Light:** low level of electrolyte. Replace battery and check combine electrical system.



CO194841 -UN-01DEC03

ML70882,0000751 -19-13MAR06-1/1

Storing and Handling Battery

At the end of the harvesting season store the battery in a cool, dry place.

Inspect the battery every 30 days.

If necessary, recharge the battery.

AG,CO03622,441 -19-26SEP03-1/1

Battery Switch

Turn switch clockwise to turn on and counterclockwise to turn off.

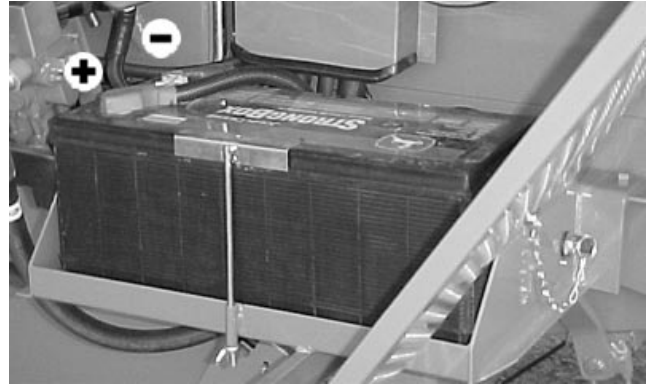


CO216341 -UN-01DEC03

ML70882,00003EC -19-10NOV03-1/1

Installing and Connecting the Battery

IMPORTANT: Check that battery is connected to correct poles. The positive cable (from starting motor) to the positive (+) pole, the negative cable (from ground) to the negative (-) pole. Inverted polarity may cause permanent damage to the electrical system.



ML70882,00003F1 -19-10NOV03-1/1

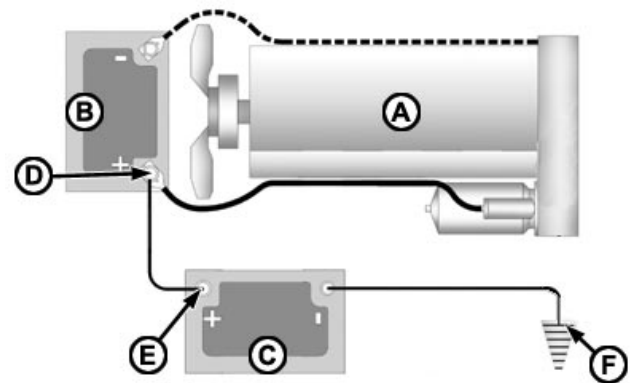
Using a Booster Battery

IMPORTANT: If this is necessary, do not directly connect the booster battery cables (C) to the terminals of the weak battery (B). This may damage the batteries or even cause an explosion.

Use cables terminated in “crocodile” clips, and with sufficient current carrying capacity.

Procedure

1. Connect one cable between the (+) terminals (D and E) of the batteries (B and C).
2. Connect the other cable to the (-) terminal of the booster battery (C) and attach the other end to a ground connection (F) e.g.: engine housing, chassis.
3. Start up engine.



A—Engine
B—Weak battery
C—Booster battery
D—Positive terminal of weak battery
E—Positive terminal of booster battery
F—Ground connection

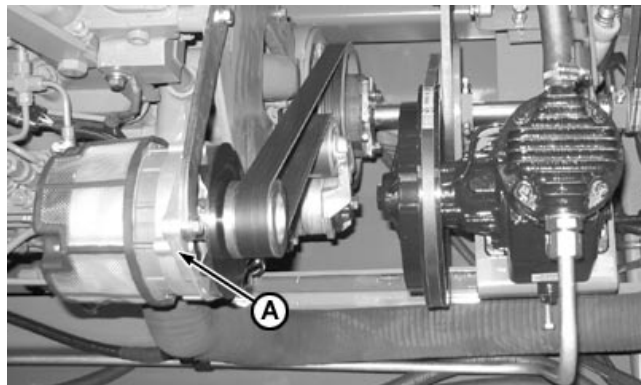
ML70882,0000814 -19-01AUG05-1/1

Alternator

IMPORTANT: When working on the electrical system, always disconnect the ground cable. This prevents damage from occurring.

NOTE: Tensioning of the drive belt is described in the “Service — Engine” section.

Have the alternator (A) serviced by a specialist workshop once every year.



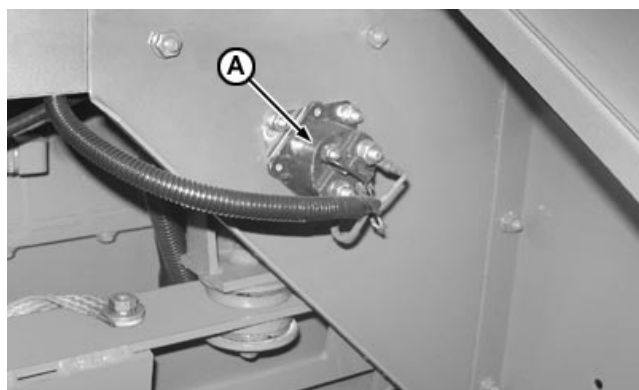
CO248120 -UN-29JUL05

AG,CO03622,2214 -19-01AUG05-1/1

Starter Motor Relay

Solenoid of starter motor is powered via relay (A). The relay is attached to the left-hand rear grain tank support.

Access is possible via an opening in the grain tank bottom.



CO266260 -UN-21FEB06

ML70882.00009E6 -19-16JUN06-1/1

Starter Motor

IMPORTANT: When working on the electrical system, always disconnect the ground cable. This prevents damage from occurring.

If the starting motor does not function or operates sluggishly, the fault may lie not in the starting motor but in one of the causes suggested below:

- ☐ **Loose, dirty or corroded connections:** Clean and tighten all connections.
- ☐ **Low battery output:** Check electrolyte level and specific gravity of battery. Recharge battery, if necessary. See “Battery Electrolyte Level”.

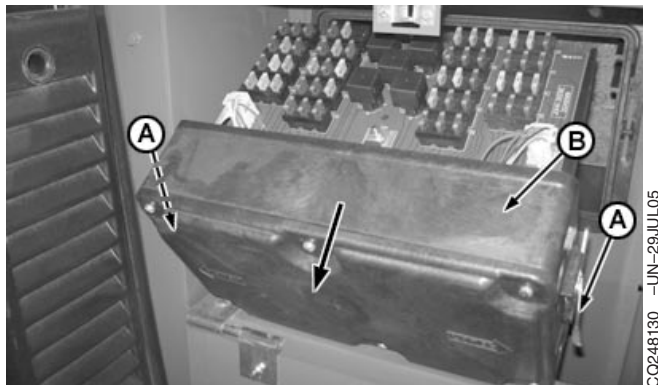
- ☐ **Run down battery:** Recharge battery.
- ☐ **Wrong engine oil viscosity:** Engine oil with incorrect viscosity.
- ☐ **Defective Starting Motor Safety Relay:** Replace relay.

If the remedies suggested fail to improve starting motor operation, see your local John Deere dealer. Have starting motor inspected by a specialist workshop once every year.

ML70882.0000A08 -19-22JUN06-1/1

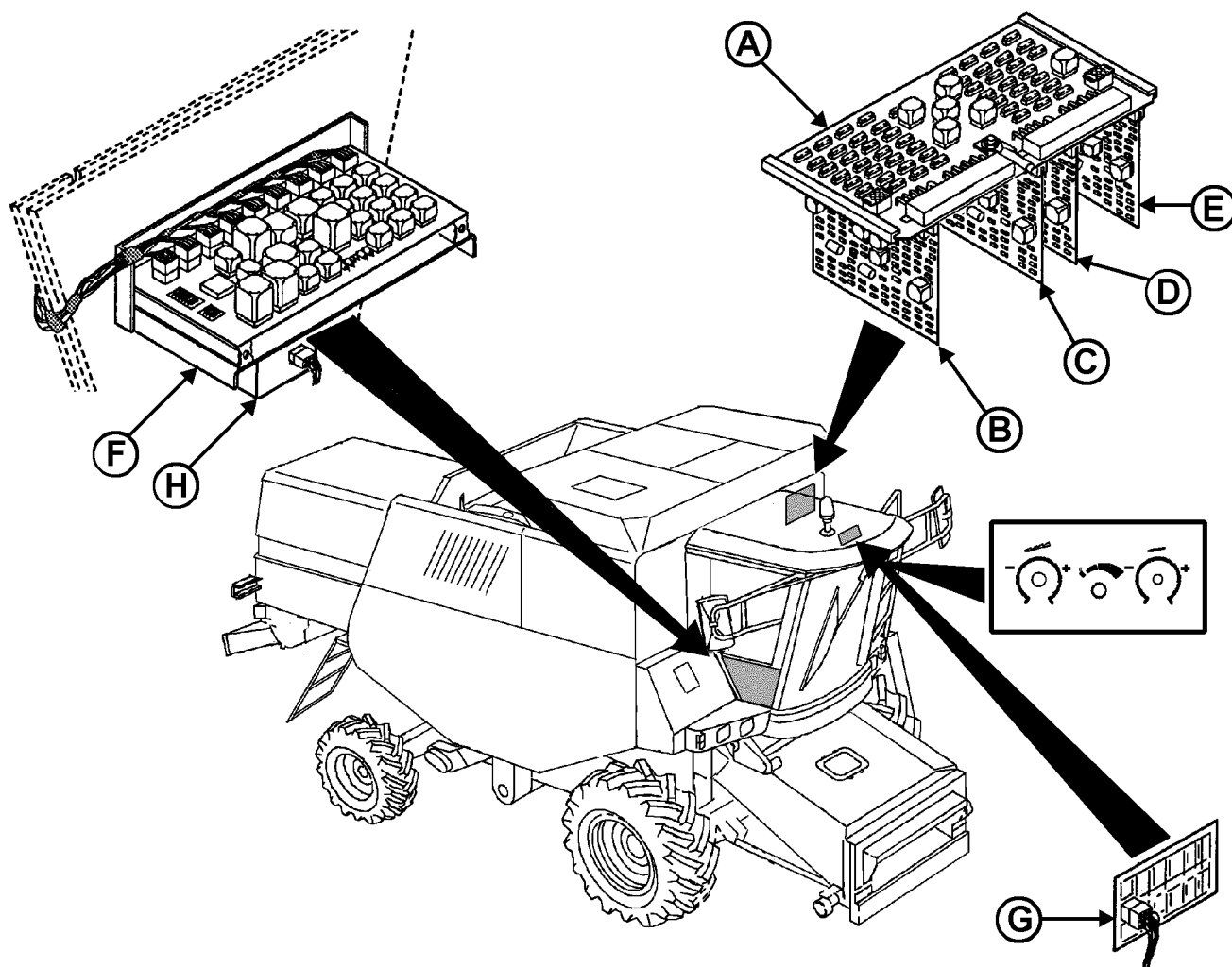
Removing Main Electrical Box

- Remove access cover of main electrical box (not illustrated).
- Loosen latches (A) on both sides of box.
- Slowly and carefully pull out the main electrical box (B) as illustrated.



AG,CO03622,2217 -19-01AUG05-1/1

Electronic Circuit Boards



A—Fuse circuit board
B—Speed and warning signal
monitoring circuit board
C—Reel speed adjustment
circuit board

D—Auxiliary relay circuit
board
E—Head control circuit board

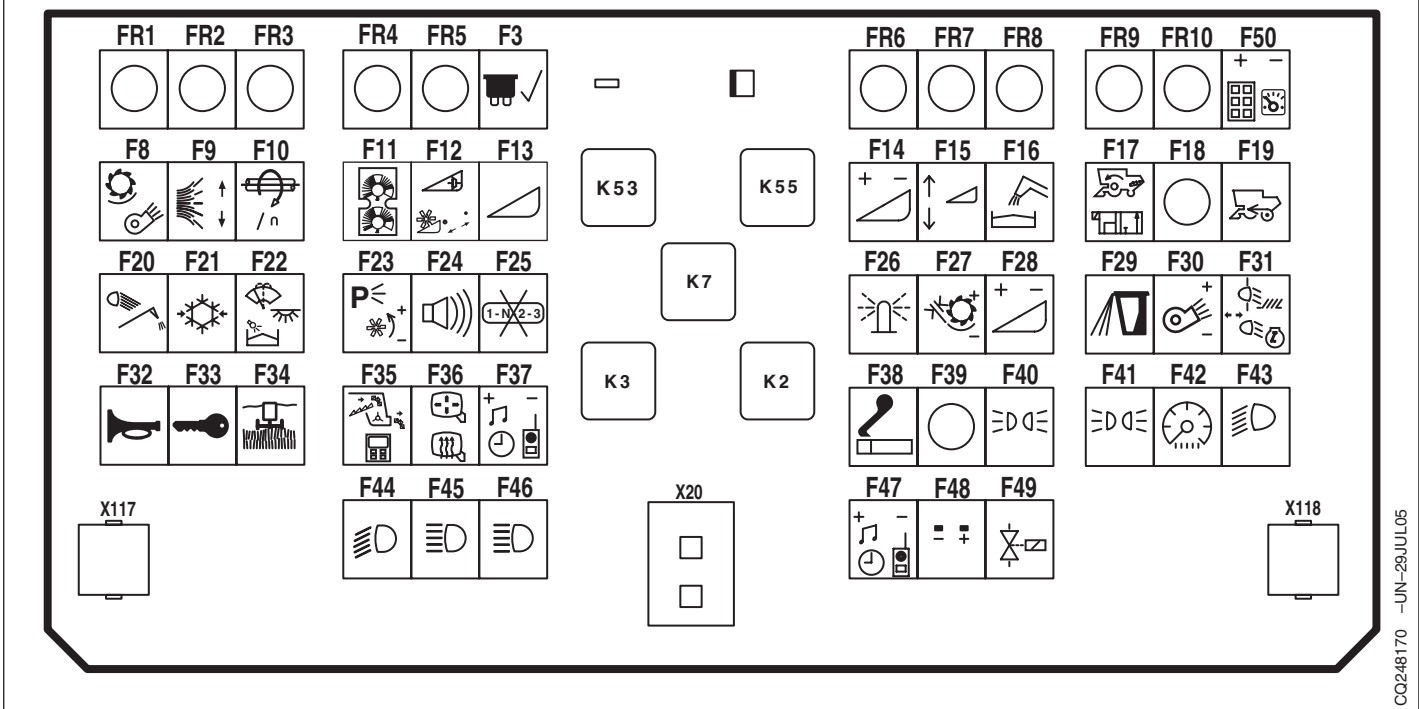
F—Relay and diode circuit
board
G—Harvest performance
monitor circuit board

H—Separator relay circuit
board

CQ193052 -UN-29JUL05

AG.CO03622,2216 -19-01AUG05-1/1

Fuse and Relay Board	



F3—Fuse Tester	F21—30 A fuse - Air conditioning system	F34—15 A fuse - Field / road safety switch	F47—7.5 A fuse - Radio, CB and clock

F8—7.5 A fuse - Fan and threshing cylinder speed adjustment
F9—Not used
F10—7.5 A fuse - Low shaft speed monitor system
F11—7.5 A fuse - Harvest performance monitor
F12—15 A fuse - Head and reverser drive
F13—7.5 A fuse - Head controls
F14—7.5 A fuse - Power supply to head control circuit board
F15—7.5 A fuse - Head raise/lower
F16—7.5 A fuse - Grain tank unloading system
F17—7.5 A fuse - Main power supply to threshing and splitter relays
F18—Not used
F19—Not used
F20—7.5 A fuse - Unloading auger light

conditioning system

F22—15 A fuse - Windshield wipers, grain tank light and cab dome light

F23—15 A fuse - Brake lights, reel speed adjustment

F24—7.5 A fuse - Reverse travel warning siren

F25—Not used

F26—15 A fuse - Beacon lights

F27—30 A fuse - Concave adjustment

F28—7.5 A fuse - Power supply to head control circuit board

F29—30 A fuse - Work lights on cab roof

F30—30 A fuse - Fan adjustment

F31—15 A fuse - Turn signal lights, cleaning shoe and engine compartment lighting

F32—15 A fuse - Horn

F33—30 A fuse - Starter key switch

F6—7.5 A fuse - Fan and conditioning system	F22—15 A fuse - Windshield wipers, grain tank light and cab dome light	F35—7.5 A fuse - Straw walker and straw chopper warning device
F9—Not used	F23—15 A fuse - Brake lights, reel speed adjustment	F36—Not used
F10—7.5 A fuse - Low shaft speed monitor system	F24—7.5 A fuse - Reverse travel warning siren	F37—15 A fuse - Radio, CB and clock
F11—7.5 A fuse - Harvest performance monitor	F25—Not used	F38—15 A fuse - Cigarette lighter socket
F12—15 A fuse - Head and reverser drive	F26—15 A fuse - Beacon lights	F39—Not used
F13—7.5 A fuse - Head controls	F27—30 A fuse - Concave adjustment	F40—7.5 A fuse - Left clearance light
F14—7.5 A fuse - Power supply to head control circuit board	F28—7.5 A fuse - Power supply to head control circuit board	F41—7.5 A fuse - Right clearance light
F15—7.5 A fuse - Head raise/lower	F29—30 A fuse - Work lights on cab roof	F42—7.5 A fuse - Dash panel lighting
F16—7.5 A fuse - Grain tank unloading system	F30—30 A fuse - Fan adjustment	F43—7.5 A fuse - Right-hand low beam
F17—7.5 A fuse - Main power supply to threshing and splitter relays	F31—15 A fuse - Turn signal lights, cleaning shoe and engine compartment lighting	F44—7.5 A fuse - Left-hand low beam
F18—Not used	F32—15 A fuse - Horn	F45—7.5 A fuse - Left-hand high beam
F19—Not used		F46—7.5 A fuse - Right-hand high beam

ker F48—7.5 A fuse - D+ alternator
F49—7.5 A fuse - Injector
pump solenoid
F50—7.5 A fuse - Indicator
lights, temperature
gauge
FR1—7.5 A fuse - Spare
FR2—7.5 A fuse - Spare
FR3—7.5 A fuse - Spare
FR4—7.5 A fuse - Spare
FR5—15 A fuse - Spare
FR6—15 A fuse - Spare
FR7—15 A fuse - Spare
FR8—30 A fuse - Spare
FR9—30 A fuse - Spare
FR10—30 A fuse - Spare
K02—Power supply relay
K03—Power supply relay
K07—Work lights relay
K53—Threshing unit relay
K55—Field / road safety switch
relay

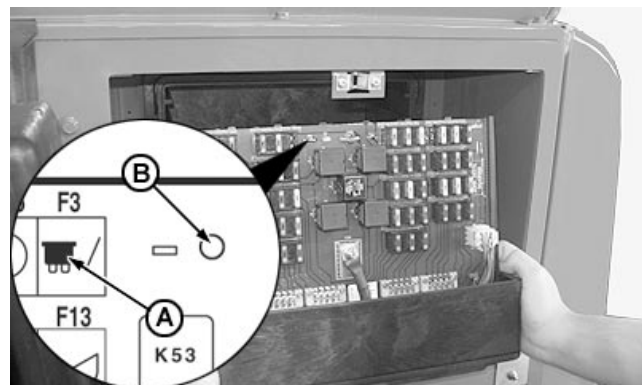
Fuse Tester

To test fuses a tester was placed on the fuse circuit board proper, permitting a fuse's working order to be checked.

Remove any fuse that is believed to be defective and insert it in the "slot" (A). If the led (B) lights up the fuse is functioning perfectly.

IMPORTANT: Never use fuses with a higher current carrying capacity than the specified value. If fuses keep blowing in one circuit, have the combine electrical system inspected by your John Deere dealer.

NOTE: It is not necessary to engage the starter key to carry out the test, just ensure that the battery switch is ON.



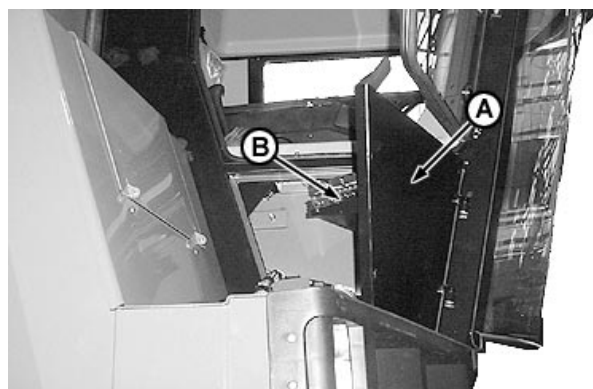
A—Fuse Tester
B—LED

CO248180 -UN-29JUL05

CO03622,000006D -19-01AUG05-1/1

Access to the Relay and Diode Board

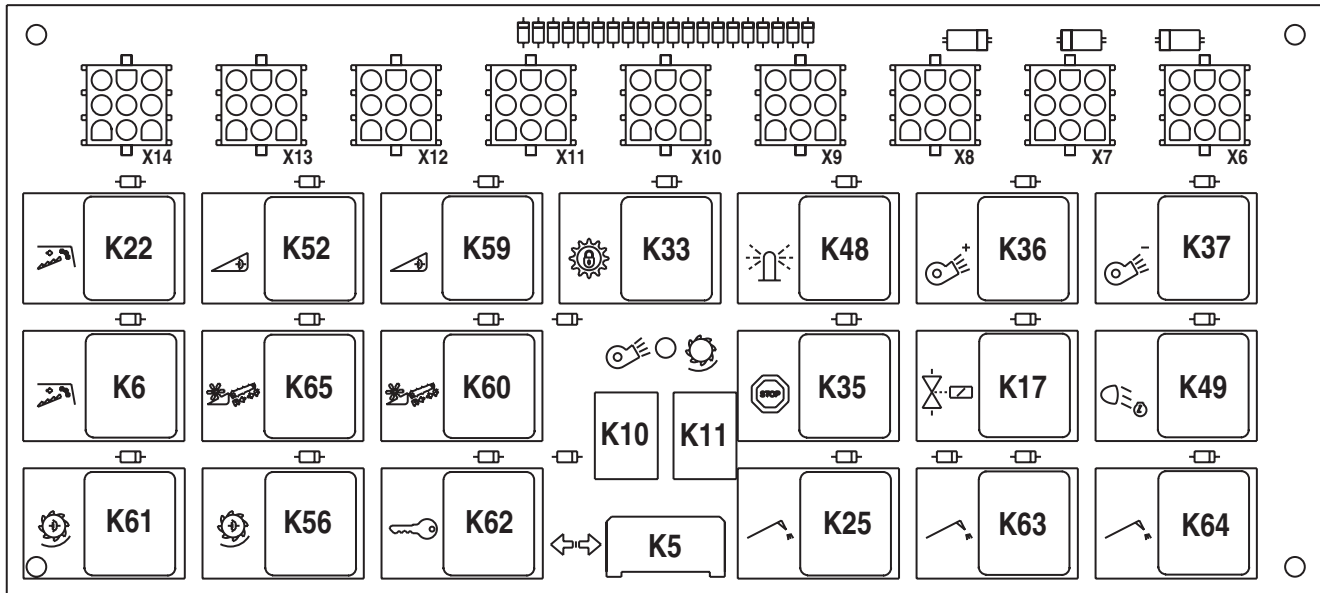
- Remove cover (A).
- The relay and diode board (B) is integrated into the inner side of the cover (A).



AG,CO03622,2218 -19-01FEB05-1/1

CQ193091 -UN-31JAN05

Relay and Diode Board



K05—Turn signal relay
 K06—Horn relay number 2
 K10—Fan speed alarm relay
 K11—Cylinder speed alarm relay
 K17—Splitter relay
 K22—Horn relay number 1
 K25—Unloading auger relay

K33—Not used
 K35—Emergency stop relay
 K36—Relay increasing fan speed
 K37—Relay, decreasing speed of fan
 K48—Beacon lights relay

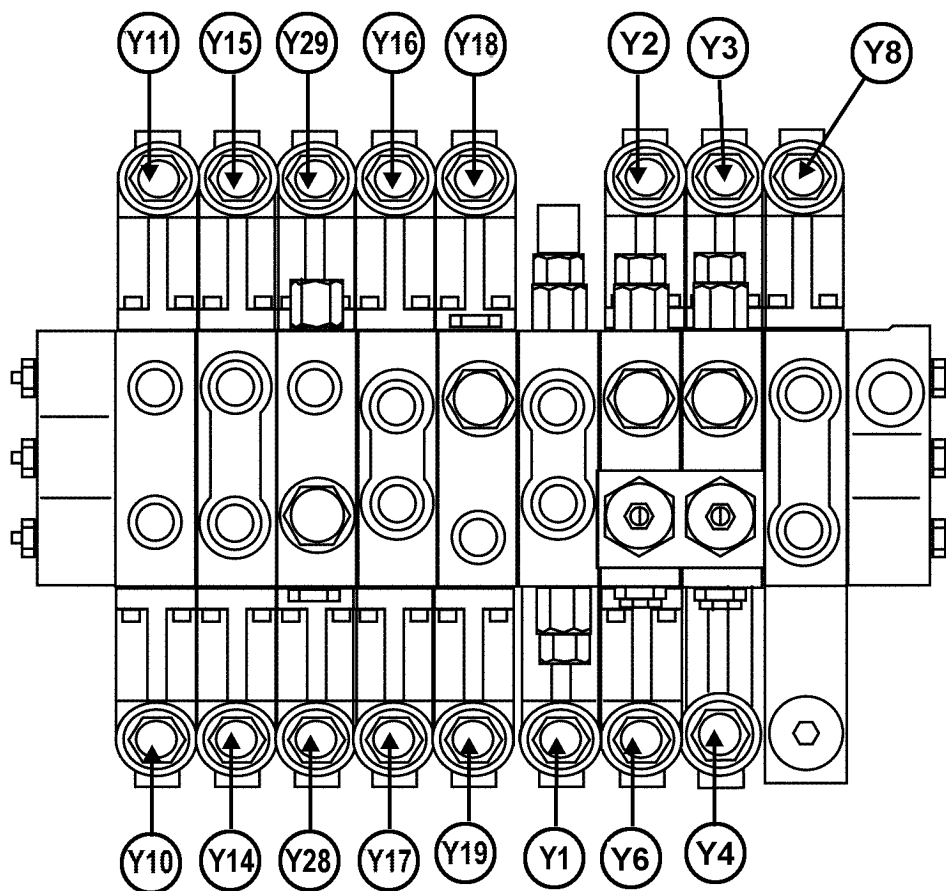
K49—Rear light relay
 K52—Header drive retain relay
 K56—Separator drive relay
 K59—Header drive engage relay
 K60—Reverser relay
 K61—Separator drive self retain relay

K62—Start lock relay
 K63—Unloading auger drive self retain relay
 K64—Unloading auger drive relay
 K65—Reverser self retain relay

ML70882,0000A07 -19-22JUN06-1/1

CQ216550 -UN-12JAN05

Solenoid Valves (Main Hydraulic Block)



CQ222860 -UN-23MAR04

Y1—Splitter

Y2—Fast raise of header

Y3—Slow raise of header

Y4—Slow lowering of header

Y6—Fast lowering of header

Y8—Hydraulic reverser

Y10—Swinging in unloading
auger

Y11—Unloading auger
swinging

Y14—Header tilt to right

Y15—Header tilt to left

Y16—Reel aft position

Y17—Reel forward position

Y18—Reel lowering

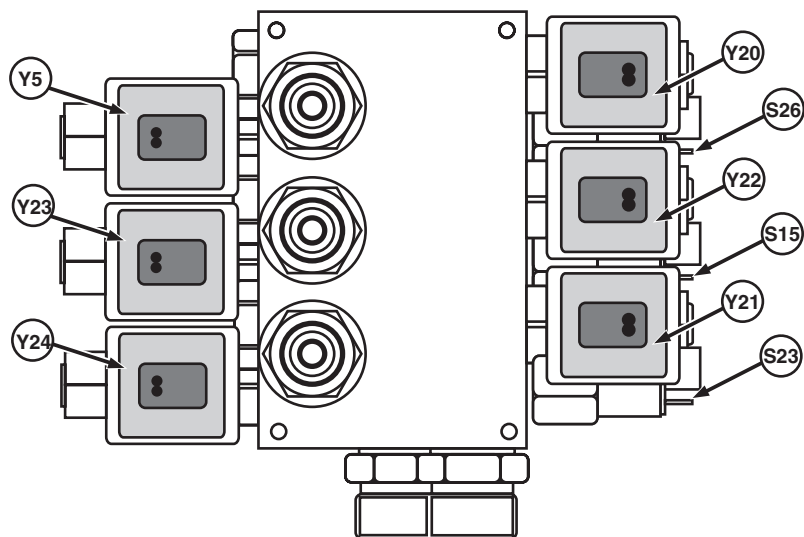
Y19—Reel raising

Y28—Reduce threshing
cylinder speed

Y29—Increase threshing
cylinder speed

ML70882,00004AD -19-20JUL04-1/1

Solenoid Valves (Secondary Hydraulic Block)



S15—Pressure Switch (35 bar)	Y5—Disengaging unloading auger	Y21—Header drive	Y23—Disengaging separator
S26—Pressure Switch (12 bar)	Y20—Engaging unloading auger	Y22—Engaging separator	Y24—Engaging header
S23—Pressure Switch (12 bar)			

CQ248230 -UN-01AUG05

ML70882,00004B5 -19-17AUG05-1/1

INFO-TRAK™ Monitor Error Codes

Whenever the INFO-TRAK™ monitor displays a three-digit number followed by an “E”, a malfunction or operator error has occurred. The cause of a machine malfunction may be a broken wire etc.

IMPORTANT: If the solution cannot be found or the malfunction solved, see your John Deere dealer.

Error Codes	Problem	Solution
101E	The engine operating hours counter of the INFO-TRAK™ monitor is defective.	
102E	The engine operating hours counter of the INFO-TRAK™ monitor is not functioning	
122E	Concave cannot be adjusted, sensor signals not in correct area (too low)	Check fuse (F27)
123E	Concave cannot be adjusted, sensor signals not in correct area (too high)	Check fuse (F27)
128E	No response from INFO-TRAK™ monitor	
129E		
130E	Adjustment motor cannot reduce fan speed to required rpm	Check fuses (F8, F30)
131E	Variator cannot reduce cylinder speed to required rpm	Check fuse (F8)
132E	Adjustment motor cannot reduce concave clearance to required gap	Check fuse (F27)
135E	Adjustment motor cannot increase fan speed to required rpm	Check fuses (F8, F30)
136E	Variator cannot increase cylinder speed to required rpm	Check fuse (F8)
137E	Adjustment motor cannot increase concave clearance to required value	Check fuse (F27)
139E	With versions 7 or 9 of EPROM	Engine speed at “automatic machine adjustment” is less than 2000 rpm, or the separator is switched off

AG.CO03622,2225 -19-01AUG05-1/1

Automatic Header Control System Error Codes

IMPORTANT: The solution number for the error message is the number (step) of the header test procedure.

Error Codes	Error Message	Solution
200	System not calibrated	
201	Header height not calibrated	
202	Header float not calibrated	
203	Header height sensors not available	28
209	Slow raise valve driver circuit fault	25
210	Slow lower valve driver circuit fault	25
211	Fast raise valve driver circuit fault	25
212	Fast lower valve driver circuit fault	25
213	Tilt left valve driver circuit fault	26
214	Tilt right valve driver circuit fault	26
215	Flex pressure diverter valve circuit fault	24
216	Accumulator shutoff valve circuit fault	24
218	Sensor power fault	6
220	Height control setting fault	10
221	Float control setting fault	11
224	Feeder house angle sensor fault	13
225	Header height sensor (left) fault	14
226	Header height sensor (right) fault	15
227	Cylinder pressure sensor fault	16
232	Header raise/lower switch fault	8
233	Manual tilt switch fault	8
234	Flex pressure switch fault.	9
235	Reel raise/lower switch fault	8
236	Reel forward switch fault	8
240	Header height sensor fault	21
241	Reel raise/lower position sensor fault (not available)	19
242	Reel forward position sensor fault (not available)	20
243	Reel fast raise valve driver circuit fault	26
244	Reel fast lower valve driver circuit fault	26
245	Reel forward position circuit fault	26
246	Reel aft position circuit fault	26
247	Reel raise/lower setpoint position not reached (not available)	
248	Reel fore/aft setpoint position not reached (not available)	

Header Test Procedures

Display Addresses	Circuit Description	Display / Description	RELATED FAULT CODE
1	Recover codes / Delete codes	Mode 3 to mode 23 numbers	all
2	Global intermittent circuit mode (bip)	Mode 3 to mode 23 numbers	none
3	Battery voltage for logic circuit and valves (F28)	12.3 — 13.5 Volts (normal)	none
4	Battery voltage for valves (F15)	12.3 — 13.5 Volts (normal)	none
5	Battery voltage for valves (F14)	12.3 — 13.5 Volts (normal)	none
6	Sensor power	4.8 — 5.2 Volts	218
7	Voltage of height sensor number 5 contact (Flex 300 Series)	0.0 — 5.0 Volts	none
8	Status of Reel Manual Control two position switch, Tilt and Raise/Lower	Code: xxx0 - Left/Right Switch "OFF" xxx1 - Slow Raise xxx2 - Slow Lower xxx3 - Fast Raise xxx4 - Fast Lower xxx5 - Raise/Lower Switch Error xx0x - Tilt Switch "OFF" xx1x - Left Tilt xx2x - Right Tilt xx5x - Tilt Switch Error x0xx - Right/Left Reel "OFF" x1xx - Raising Reel x2xx - Lowering Reel x5xx - Right/Left Reel Error 0xxx - Reel Fore/Aft Position "OFF" 1xxx - Reel Forward Position 2xxx - Reel Aft Position 5xxx - Reel Fore/Aft Position Error	232, 233, 235, 236
9	Status of manual flex pressure raise/lower switch (Flex 600 Series)	0000 - Pressure "OFF" 0001 - Pressure Increase 0002 - Pressure Decrease 0005 - Switch Error	234
10	Height control setting (Rigid)	0.50 — 4.50 Volts	220
11	Float control setting (Rigid)	0.50 — 4.50 Volts	221
12	Voltage of height sensor number 6 contact (Flex 300 Series)	0.0 — 5.0 Volts	none
13	Feeder house angle sensor (Rigid)	0.25 — 4.75 Volts	224
14	Left-hand header tilt sensor (Flex 600 Series)	0.25 — 4.75 Volts	225

Continued on next page

MB03730,000035A -19-26JUL04-1/4

Display Addresses	Circuit Description	Display / Description	RELATED FAULT CODE
14	Right-hand header tilt sensor (Flex 300 Series)	0.0 — 5.0 Volts	none
15	Right-hand header tilt sensor (Flex 600 Series)	0.25 — 4.75 Volts	226
15	Left-hand header tilt sensor (Flex 300 Series)	0.0 — 5.0 Volts	none
16	Lift cylinder pressure sensor (Rigid)	0.24 — 4.76 Volts	227
17	Voltage of height sensor number 2 contact (Flex 300 Series)	0.0 — 5.0 Volts	none
18	Voltage of height sensor number 3 contact (Flex 300 Series)	0.0 — 5.0 Volts	none
19	Reel raise/lower position sensor (Flex 600 Series)	0.25 — 4.75 Volts	241
20	Reel fore/aft position sensor (Flex 600 Series)	0.25 — 4.75 Volts	242
21	Flex header height sensor (Flex 600 Series)	0.25 — 4.75 Volts	240
21	Voltage of height sensor number 1 contact (Flex 300 Series)	0.0 — 5.0 Volts	none
22	Resume switch positions	Code: 0000 - Switches "OFF" 0xx1 - Resume Float 0x1x - Return to cut 01xx - Auto Enable	none
23	Reel, float, tilt and height enable switch positions	Code: 0000 - Switches "OFF" xxx1 - Float "ON" xx1x - Height "ON" x1xx - Tilt "ON" 1xxx - Reel "ON"	none
23	Height switch positions (Flex 300 Series)	xx1x - Pos 1 xx2x - Pos 2 xx3x - Pos 3	none
24	Status of flex pressure divert valve and accumulator shut-off safety valve	Code: 00x0 - Accumulator valve "OFF" 00x1 - Accumulator valve "ON" 000x - Divert Valve "OFF" 001x - Divert Valve "ON"	215, 216
25	Height valve control block	Code: 0000 - Valve "OFF" 0001 - Slow Raise Command 0002 - Slow Lower Command 0003 - Fast Raise Command 0004 - Fast Lower Command - - - - Disabled Valve	209, 210, 211, 212

Display Addresses	Circuit Description	Display / Description	RELATED FAULT CODE
26	Overflow valve, tilt and reel control blocks	Code: 0000 - All "OFF" xxx1 - Overflow Valve "ON" xx1x - Left Tilt xx2x - Right Tilt x1xx - Raising Reel x2xx - Lowering Reel 1xxx - Reel Forward Position 2xxx - Reel aft position	213, 214, 243, 244, 245, 246
27	Flex pressure, tilt and height operating modes	Code: 0xxx - 5xxx Pressure Modes x0xx - x6xx Tilt Modes xx00 - xx17 Height Modes	none
28	Header sensors, reel operating modes	Code: 1xxx - Mean Height Sensor x1xx - Mechanical Height Sensors xx0x - xx7x Reel Fore/Aft Position Modes xxx0 - xxx7 Reel Raise/Lower Position Modes	none
29	Error cancel modes	Code: 0 — 2048	none
30	Header calibration mode (Corn Header and 600 Series)		none
31	Float calibration mode (Rigid)		none
32	Header type	0 - 300 Series Flex Headers 1 - 600 Series Flex Headers 2 - 300 and 600 Series Rigid Header 3 - Corn Header	none
33	Synchronized raise valve	0 — 5 seconds (3 second standard)	none
34	Height set point (Corn Header and 600 Series Flex Header)	0 — 250 (standard: 35)	none
35	Height system deadband (Corn Header and 600 Series Header)	50 — 250 (standard: 105)	none
36	Tilt system deadband (Corn Header and 600 Series Header)	50 — 250 (standard: 150)	none
37	Fast Raise of Flex Header (Flex 300 Series)	0 — 1	none
38	TEST ONLY - no display AHC calibration fault codes (600 Series)		none
39	TEST ONLY - no display Calibration memory fault		200
40	TEST ONLY - no display Header height calibration fault		201
41	TEST ONLY - no display Header float calibration fault		202

Display Addresses	Circuit Description	Display / Description	RELATED FAULT CODE
42	TEST ONLY - no display Header sensors not responding		203
73	Header height position		none
75	Header tilt position		none
87	Software version	xxxx - (example: 0006)	none

MB03730,000035A -19-26JUL04-4/4

Preliminary Head AHC Calibration Procedures

IMPORTANT: Make sure that the head operating position and rods are parallel to the ground before starting the calibration procedure. Head angle adjustment depends on tire size and is described in the “Feeder House” section.

The head height sensors are calibrated by the AHC (Automatic Height Control) in the head calibration procedure.

All other components of the automatic head control system are calibrated in the combine calibration procedure.

The head calibration procedure must only be performed when a head is initially installed or when head height sensors are replaced.

Definition of head type:

The types of heads supported are:

- 0 — 300 Series Flex Head
- 1 — 600 Series Flex Head
- 2 — Rigid Head
- 3 — Corn Head

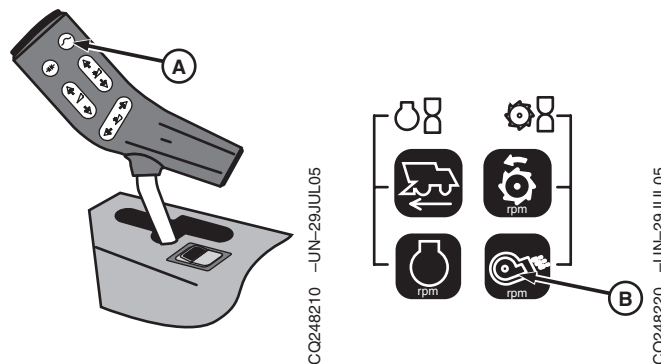
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AG,CO03622,2235 -19-01AUG05-1/2

To change the head type stored in the memory, perform the following:

1. Go to Infotrak address number 32. The current head type will be displayed.
2. With the starter key in position II and the road safety switch engaged, push the return-to-float knob (A) on the multifunction control handle. The AHC will scroll through the available head types. Release the return-to-float knob when the required head type is displayed.
3. Press the “Fan Speed” key (B) on the INFOTRAK monitor to store the new head type.

NOTE: The following table provides a detailed description of the steps necessary to calibrate the head, including operator action and system response. “r” and “l” on the display signify: “r = right” and “l = left” or “r = raise ” and “l = lower”.



600 Series Header AHC Calibration Procedure—Step by Step

IMPORTANT: Carry out “Preliminary Header AHC Calibration Procedures” before you perform the calibration.

Step	Action	Go to:
Prepare Header for Calibration	Hook up header to combine and ensure header harness is connected to main vehicle harness. Check that header height sensors are in working condition. Move machine onto a level concrete surface.	GO TO Step 1
1 — Select Diagnostic Mode	The INFO-TRAK™ monitor is used to provide diagnostic mode. While pressing the up/down button on INFO-TRAK monitor, turn combine key switch on and start combine. Display should indicate: -- dIA	OK: GO TO Step 2 NOT OK: Check INFO-TRAK Monitor
2 — Select AHC (Active Header Control)	Press the up/down key on Infotrak until "AHC" is displayed. Display should indicate: -- AHC	OK: GO TO Step 3 NOT OK: See your nearest dealer
3 — Enter header calibration mode	Press fan speed key on INFO-TRAK monitor to access "AHC" diagnostic mode Display should indicate: 0000 AHC Press the up/down key on INFO-TRAK monitor twice to obtain mode 2. Display should indicate: 0002 AHC Press fan speed key on INFO-TRAK monitor to obtain header calibration mode 30 Display should indicate: 0030 Hdr	OK: GO TO Step 4 NOT OK: Check INFO-TRAK Monitor
4 — Calibrate height system and return-to-cut. Define sensor minimum settings	Lower header until it rests fully on ground by "raise/lower" switch on multi-function lever handle. Left- and right-hand sides of header should contact ground at the same time as the header is lowered. Press "Fan Speed" button on INFO-TRAK monitor. Display should indicate: 0030 H - d Press return to cut knob on multi-function control handle. Display should indicate: 0030 H - U	OK: GO TO Step 5 NOT OK: Header does not raise or lower, check hydraulic system NOT OK: Display does not change to "H-U", make sure "raise/lower" rocker switch is off. See your nearest dealer NOT OK: Display "E5X", "E7X", "E8X" or "E9X" indicates an error. See your nearest dealer NOT OK: Display does not change from "r-d". See your nearest dealer

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ML70882,00004BA -19-14JUL06-1/2

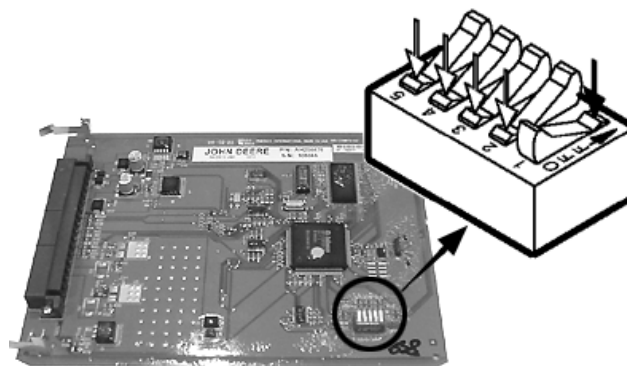
Service—Electrical System

Step	Action	Go to:
5 — Define maximum sensor settings.	Use raise/lower switch on multi-function control handle to raise header fully. Press return to cut knob on multi-function control handle. Display should indicate: 0030 EOC	OK: GO TO Step 6 NOT OK: Display "E5X", "E7X", "E8X" or "E9X" indicates an error. See your nearest dealer
6 — Store header calibration data in the AHC (Active Header Control).	Press "Fan Speed" knob on INFO-TRAK monitor to store all calibration values. If no errors occurred during calibration, the following will be displayed: EOC E00 END If any errors occurred during calibration, previous calibration values are kept and display reads: EOC Err END	OK: Calibration is done. GO TO Step 7 NOT OK: See your nearest dealer
7 — Reset to normal operation.	Turn starter key to position "0" to return the AHC (Active Header Control) to normal operation at next start-up.	

ML70882.00004BA -19-14JUL06-2/2

Position of Dipswitches on Reel Speed Control Board

Consult position of dipswitches according to tire radius below.



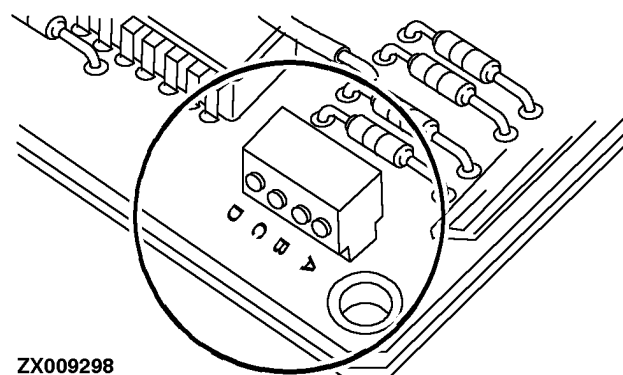
CQ216530 -UN-12NOV02

Drive Tire	Tire Rolling Radius	S1	S2	S3	S4	S5
28.1-26 (750/65 R26)	756	OFF	ON	OFF	OFF	OFF
18.4-30	741	OFF	ON	OFF	OFF	OFF
18.4-38	805	OFF	ON	ON	OFF	OFF
24.5-32	849	OFF	ON	ON	ON	OFF
620/75R 30 (Radial)	810	OFF	ON	ON	OFF	OFF
(650/75 R32)	863	OFF	ON	ON	ON	OFF
28.1/18-26 R1 14L	761	OFF	ON	OFF	ON	OFF
28L26 R1 12L	767	OFF	ON	OFF	ON	OFF
23.1/18-26 R2 10L	780	OFF	ON	ON	OFF	OFF
23.1/18-30	804	OFF	ON	ON	OFF	OFF
800/65R 32 (Radial)	861	OFF	ON	ON	ON	OFF
30.5L32 R1	857	OFF	ON	ON	ON	OFF
STEEL TRACK	315	OFF	OFF	OFF	OFF	OFF

CO03622,000009D -19-13MAR06-1/1

LEDs on Reel Speed Control Board (Error Codes)

If a solution cannot be found nor the malfunction eliminated, see your John Deere dealer.



ZX009298 -UN-22MAY96

Continued on next page

AG,CO03622,2240 -19-17SEP05-1/3

ERROR CODE 0 —LED off X — LED on	PROBLEM	SOLUTION
A — 0 B — 0 C — 0 D — 0	No power	Check fuse (F23)
A — X B — 0 C — 0 D — 0	No ground speed signal	Check 3-speed transmission signal transmitting unit
A — 0 B — X C — 0 D — 0	Ground speed signal outside of operating range	Check system operating range.
A — X B — X C — 0 D — 0	No reel speed signal	Check header signal transmitting unit
A — 0 B — 0 C — X D — 0	Reel speed signal outside of operating range	
A — X B — 0 C — X D — 0	“Bit 1” error of reel speed control switch	Check reel speed control switch, electrical board and harness
A — 0 B — X C — X D — 0	“Bit 2” error of reel speed control switch	Check reel speed control switch, electrical board and harness
A — X B — X C — X D — 0	“Bit 4” error of reel speed control switch	Check reel speed control switch, electrical board and harness
A — 0 B — 0 C — 0 D — X	“Bit 8” error of reel speed control switch	Check reel speed control switch, electrical board and harness
A — X B — 0 C — 0 D — X	Option A, input short circuiting to ground	
A — 0 B — X C — 0 D — X	Option A, input 2 short circuiting to ground	
A — X B — X C — 0 D — X	Reel does not accelerate	Check electrical board, cut wire or hydraulic motor

Service—Electrical System

ERROR CODE 0 — LED off X — LED on	PROBLEM	SOLUTION
A — 0 B — 0 C — X D — X	Reel does not reduce speed	Check electrical board, cut wire or hydraulic motor
A — X B — 0 C — X D — X	Reel speed control switch outside of diagnostic mode position	Check system operating range.
A — 0 B — X C — X D — X	No problem found	
A — X B — X C — X D — X	All contacts of reel speed control switch open	

AG,CO03622,2240 —19–17SEP05–3/3

Service—Hydraulic System

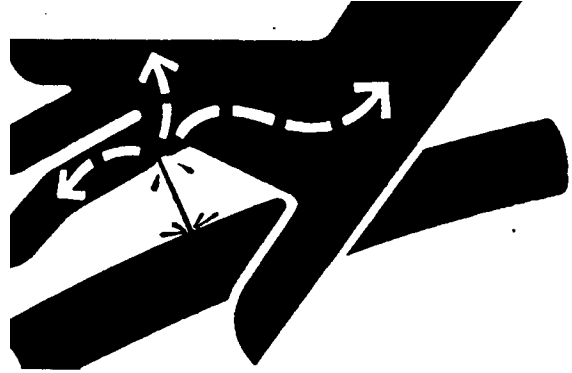
Avoid High-Pressure Fluids

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 -UN-23AUG88

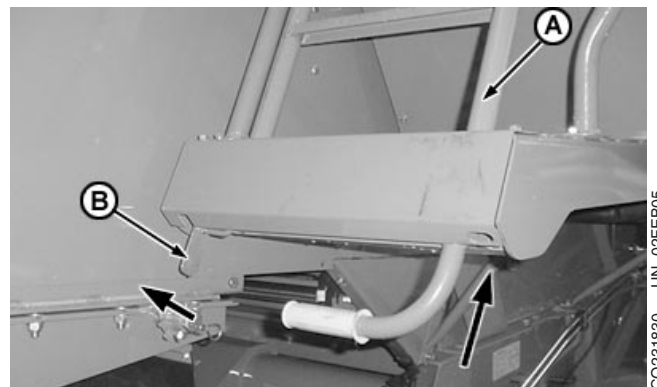
DX,FLUID -19-03MAR93-1/1

Access Points Behind Rear Ladder

Some services to be carried out on the engine, hydraulic system or straw-walkers require access via rear ladder.

To access these points push (upwards) the ladder (A) and pull (rearwards) locking latch (B).

NOTE: To retract ladder, carry out reverse procedure.



Q0231830 -UN-02FEB05

ML70882,0000517 -19-06JUN05-1/1

Description of Hydraulic System

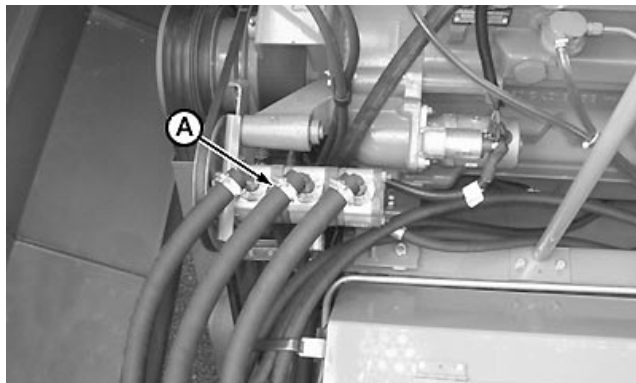
The machine is equipped with an open-center hydraulic system, which means that with the engine running at constant speed the triple hydraulic pump (A) conveys a constant flow of hydraulic oil. See Triple Hydraulic Pump section for more details.

If no pressurized oil is required, the solenoid pressure valves direct pressure-free oil back to the tank.

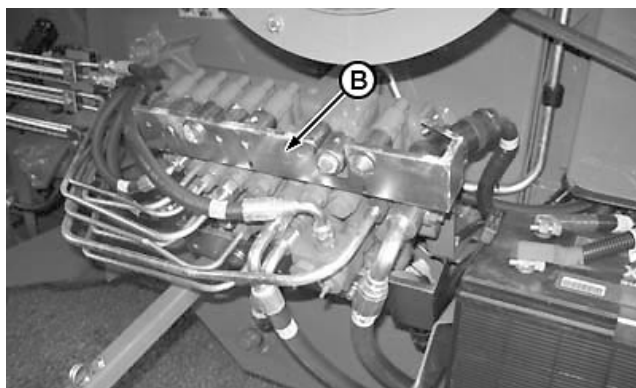
The primary hydraulic valve block (B) is located on the left-hand side of the combine close to the battery.

The secondary hydraulic valve block (C) is likewise located on the left-hand side of the combine, a little bit above the primary hydraulic valve block (B).

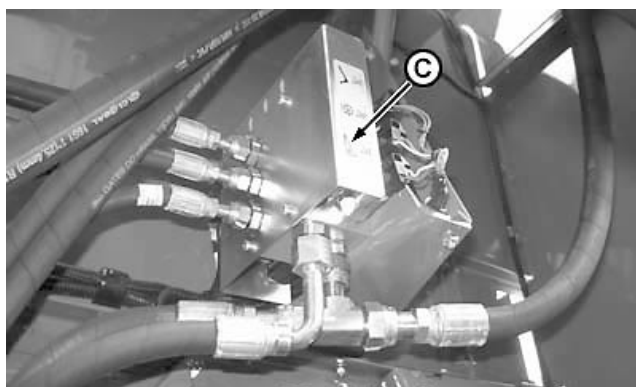
- A—Triple hydraulic pump
- B—Primary hydraulic valve block
- C—Secondary hydraulic valve block



CO238360 -UN-27JUL05



CO238370 -UN-27JUL05



CO238380 -UN-27JUL05

AG,CO03622,2273 -19-24MAR05-1/1

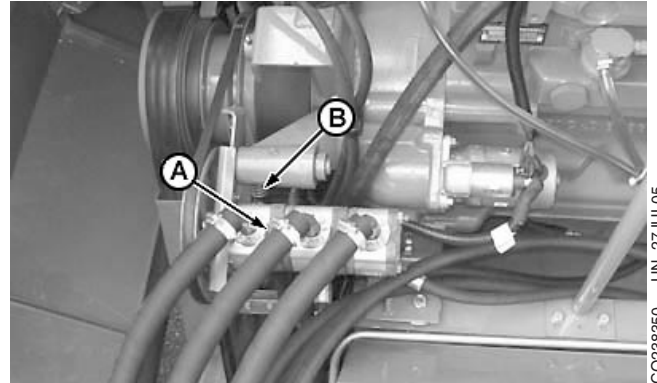
Triple Hydraulic Pump

The triple hydraulic pump (A) is V-belt driven.

The belt tension required to start up the engine is achieved by means of spring (B) on the pivoting pump support.

When the hydraulic pump operates, the drive belt is tensioned automatically by the shift of the pump support depending on the required drive power.

Consult “Specifications” section for system details.



A—Triple Hydraulic Pump
B—Spring

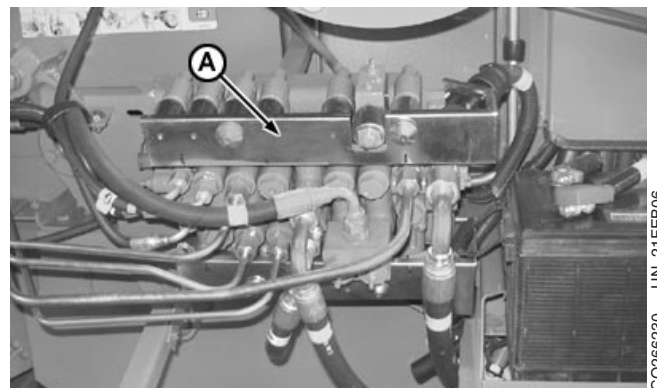
AG,CO03622,2910 -19-06JUN05-1/1

Hydraulic Valve Block Relief Valves

IMPORTANT: Have pressure relief valves serviced solely by your John Deere dealer.

The main hydraulic valve block (A) is equipped with 4 pressure relief valves which have been tested and set in the factory.

If any of the drives or the header malfunctions, the drive relief valve may be damaged. If this or a similar defect occurs, consult your John Deere dealer.



AG,CO03622,2272 -19-13MAR06-1/1

Functions of Hydraulic Control Block Valves

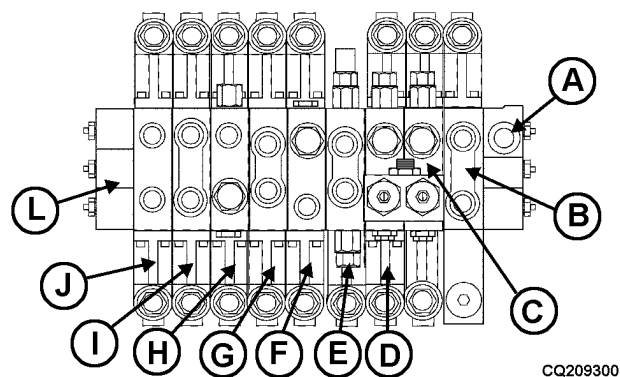
Main hydraulic valve block controls 6, 7 or 8 functions of combine through individual modules (valves) depending on configuration and combine model:

- Without header tilt and reel forward position = 6 functions.
- Without header tilt = 7 functions.
- With header tilt = 8 functions.

Secondary hydraulic valve block controls three functions of combine.

NOTE: See detailed list of electrical valves (solenoids) in the "Service — Electrical System" section.

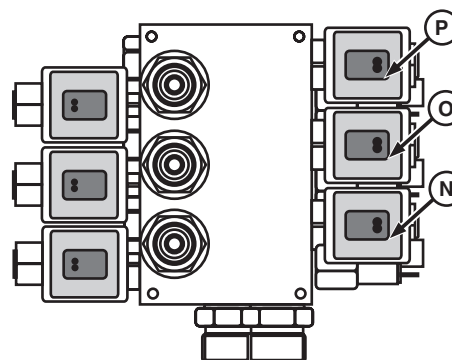
- A—Return to reservoir
- B—Hydraulic reverser
- C—AHC (Automatic Header Control) / Slow raise/lower of header
- D—Fast raise/lower of header (manual)
- E—Power and splitter / Secondary valve block output port
- F—Reel raise
- G—Reel fore/aft position
- H—Threshing cylinder speed variator
- I—Header lateral tilt
- J—Unloading auger swing out
- L—Secondary valve block pressure take-off
- N—Header engage
- O—Separator drive
- P—Unloading auger drive



Primary Hydraulic Control Block

CQ209300

—UN-15OCT01



Secondary Hydraulic Valve Block

CQ248200 —UN-29JUL05

ML70882,0000874 —19-17SEP05-1/1

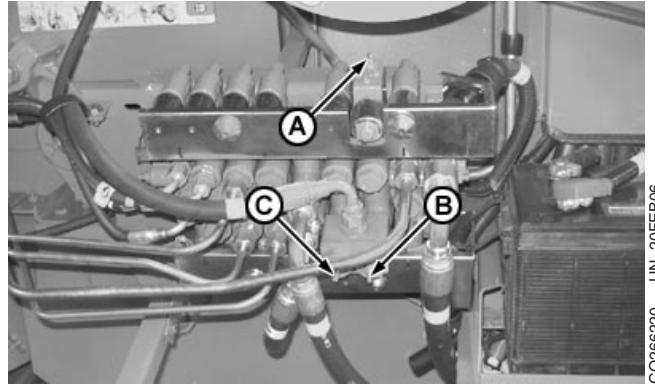
Adjusting Header Raise and Lower Speed

The adjustment of the slow header raise speed is done by screw (A) located on the hydraulic valve block.

- Turn screw counterclockwise to increase speed.
- Turn screw clockwise to decrease speed.

Adjustment of **slow and fast lower** speed can be done in the same way through its respective valves (B) and (C).

A—Adjusting slow raise speed
B—Adjusting slow lower speed
C—Adjusting fast lower speed



CO266220 -UN-20FEB06

MB03730,000001D -19-20FEB06-1/1

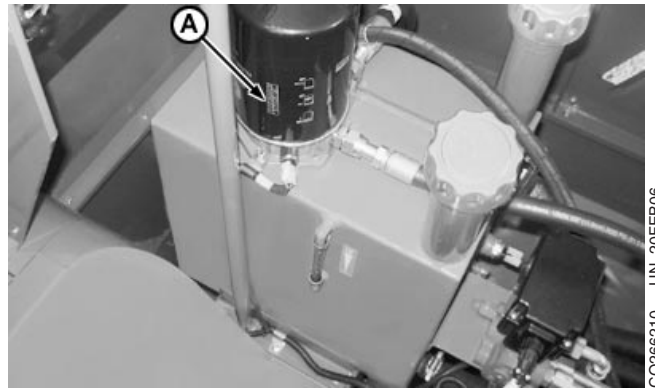
Changing Hydraulic Oil and Filter

Changing the hydraulic oil filter:

- According to intervals specified in the “Lubrication Chart, Periodic Service” section.
- Whenever the hydraulic filter obstruction warning light glows on the dash.

IMPORTANT: Observe utmost cleanliness when installing filter.

1. Loosen and remove filter (A).
2. Dispose of filter properly and replace with a genuine John Deere filter.
3. Coat filter sealing surface with a thin layer of oil.
4. Tighten filter (A) by hand until sealing ring touches filter housing sealing surface and then tighten a further 3/4 to 5/4 turns. Do not overtighten.
5. Start engine and check for leaks. Retighten filter if necessary.



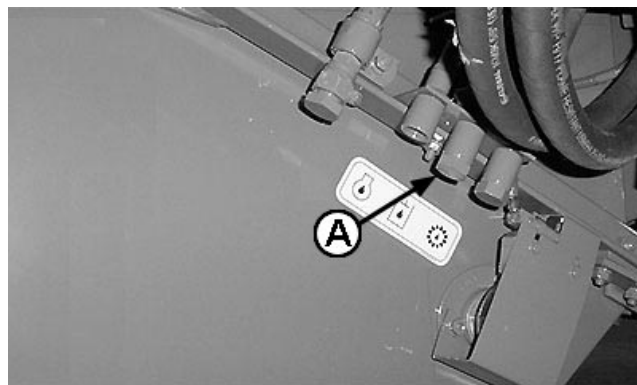
CO266210 -UN-20FEB06

AG,CO03622,2267 -19-13MAR06-1/1

Changing Hydraulic Oil

Draining Oil:

1. Lower header to ground. Retract hydraulic cylinders of reel and unloading auger.
2. Remove drain plug (A) and drain the oil into an appropriate container.
3. Disconnect the hoses from all hydraulic cylinders, the hydraulic valve block return hose and the reel drive system hoses close to the valve. Let the oil flow out of these points.



CO216360 -UN-10OCT02

NOTE: Before disconnecting the hoses clean the connections thoroughly.

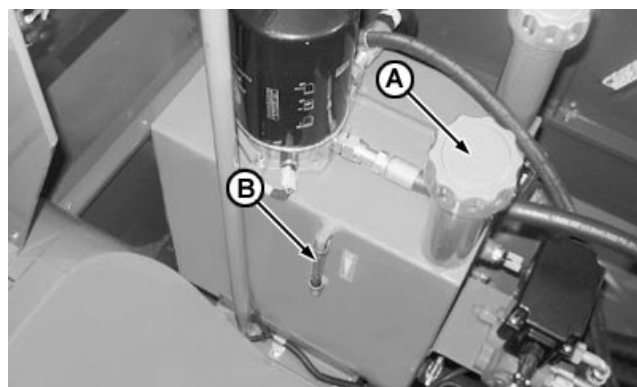
4. After draining all oil, reconnect all connections and reinstall the reservoir drain plug (A).

AG,CO03622,2268 -19-20FEB06-1/2

Refilling:

NOTE: Only use recommended oil (see "Fuel, Lubricants and Coolant" section). Carefully clean area around filler neck.

1. Refill with fresh hydraulic oil through filler neck (A) until oil reaches the center of sight glass (B).
2. Run engine. After 15 seconds raise and lower the unloading auger, reel and header a number of times and turn the steering wheel in both directions several times to bleed off the air in the circuit.
3. Engage the threshing unit and the header and activate the cylinder speed control several times.
4. Inspect all lines and connections for leaks. Comply with all safety rules.
5. Check oil level in reservoir with all hydraulic cylinders completely retracted. If necessary, add oil to reservoir until correct level is reached.



CO266200 -UN-20FEB06

AG,CO03622,2268 -19-20FEB06-2/2

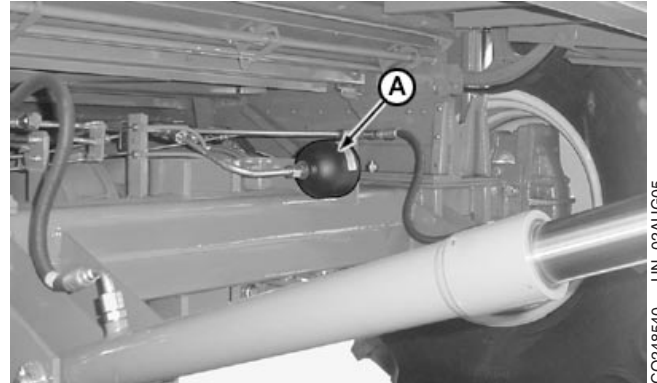
Accumulators



CAUTION: If necessary, have hydraulic accumulator replaced by your local John Deere dealer.

A—Head raise system accumulator

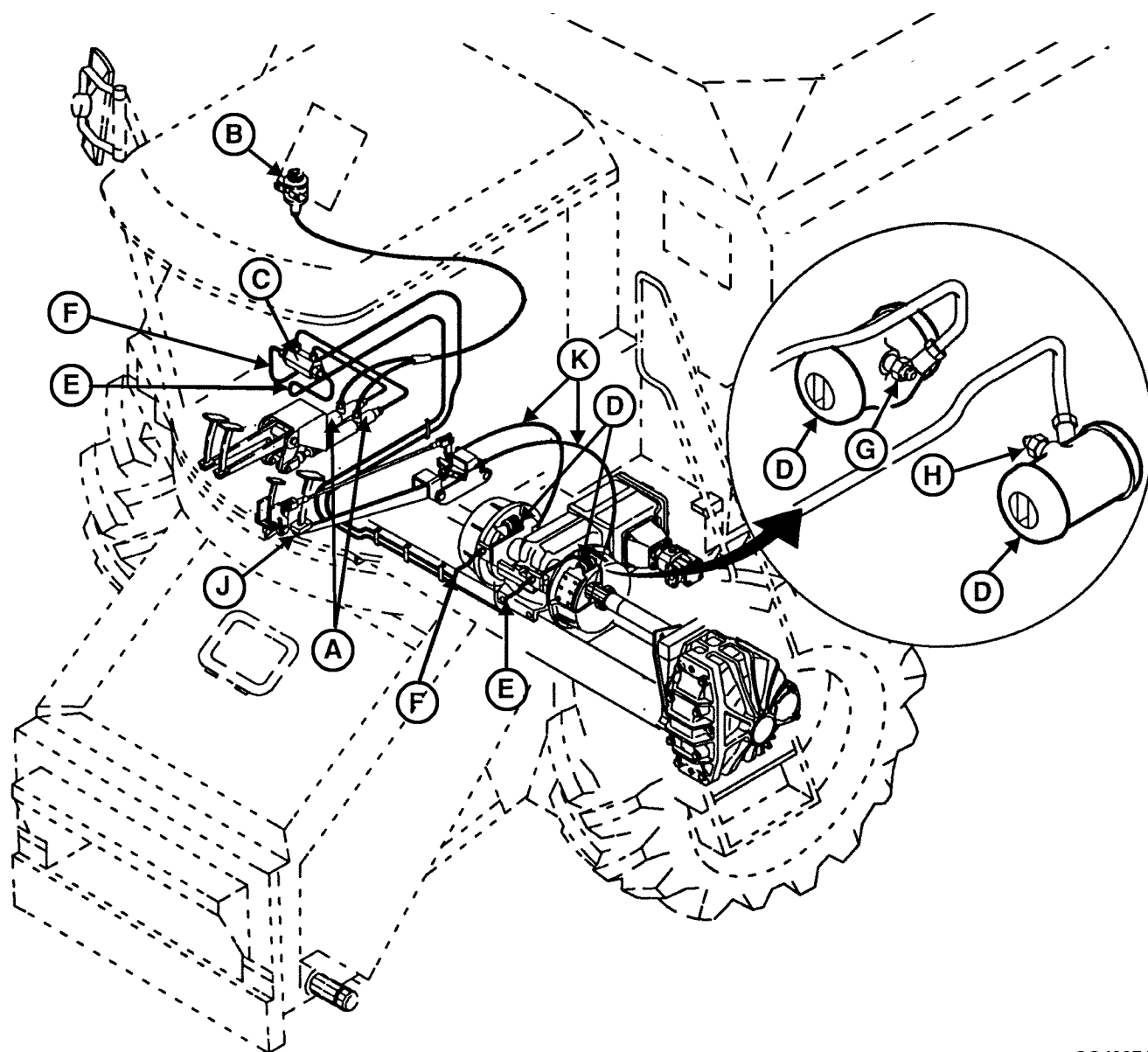
C—Separator and straw chopper drive accumulator



AG.CO03622,2271 -19-01AUG05-1/1

Service-Hydropst. Variable Speed Drive/Brakes

Brake System



A—Brake master cylinder (2 used)

B—Brake fluid reservoir

C—Equalizing valve

D—Brake slave cylinder (2 used)

E—L.h brake line

F—R.h. brake line

G—R.h. bleed screw

H—L.h. bleed screw

J—Parking brake operating assembly

K—Parking brake bowden cables (2 used)

CQ193740

CQ193740 -UN-29NOV99

AG,CO03622,2250 -19-15MAR02-1/1

Adjusting Foot Brakes



CAUTION: In case of any leakage or malfunction of the brake system see your nearest John Deere dealer.

When depressing brake pedals drum brake is adjusted automatically and thus further adjustment is not necessary.

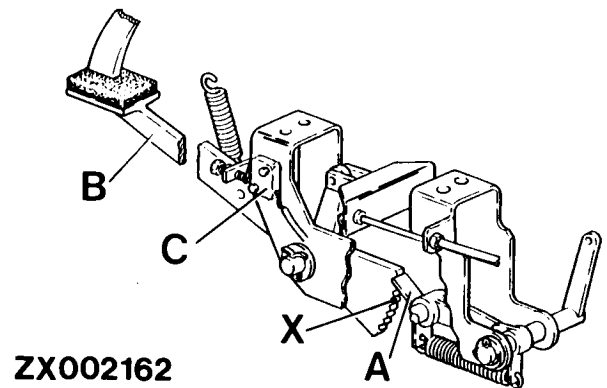
AG,CO03622,2252 -19-26NOV99-1/1

Parking Brake

Basic adjustment:

With parking brake released, lock (A) of brake pedal (B) engages the first tooth of the quadrant and the pedal bottoms against cab floor. Maximum pedal travel should not go beyond the fourth tooth (X) of the brake quadrant.

When parking brake is released, indicator light switch (C) is activated by the adjusting screw on the pedal.

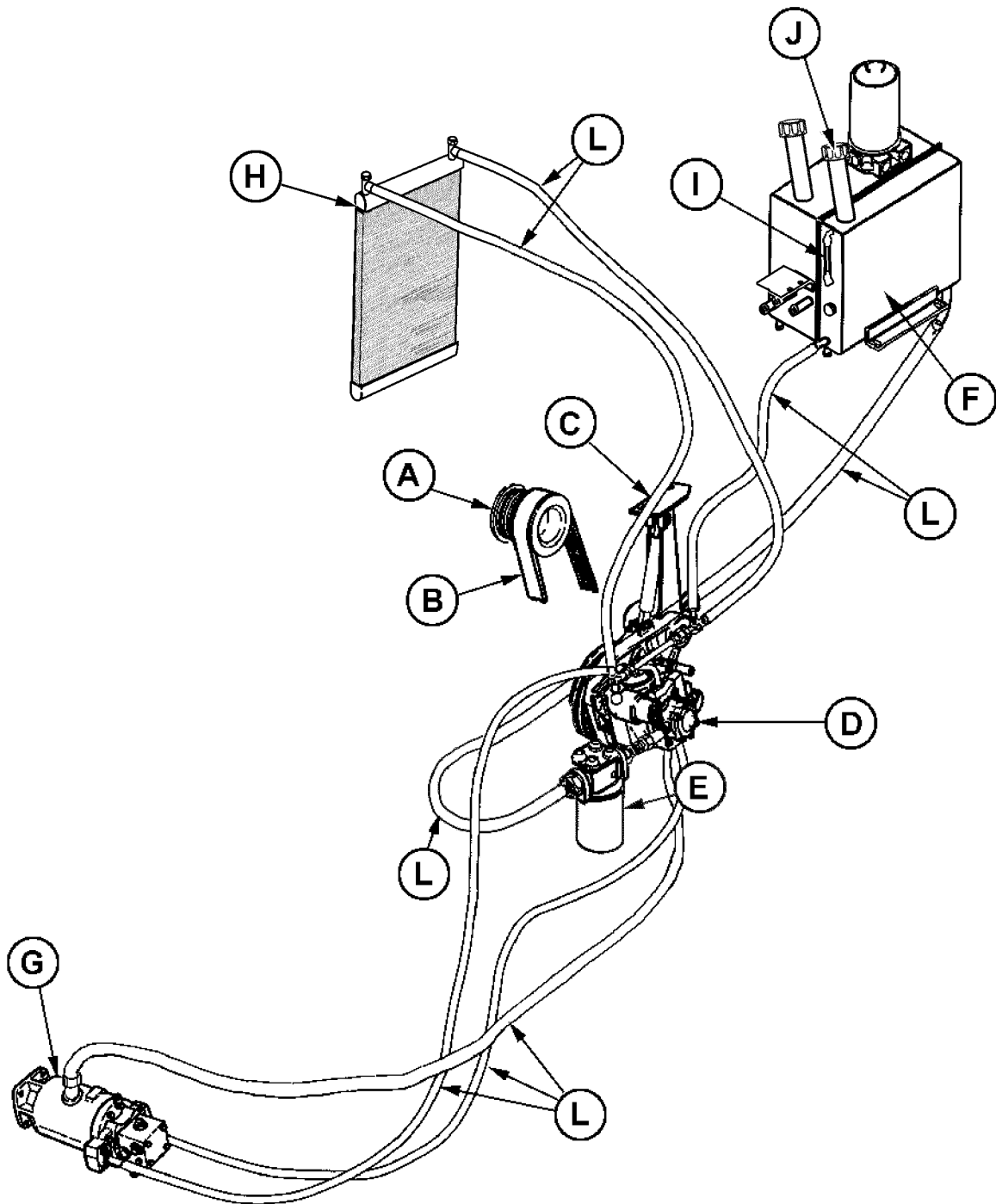


- A—Lock
- B—Pedal
- C—Indicator light switch
- X—Max. position (fourth tooth of pedal)

ZX002162 -UN-04APR95

AG,CO03622,2253 -19-15MAR02-1/1

Hydrostatic Drive Components



A—Engine power takeoff
B—Multi-“V”-Belt
C—Tensioner hydraulic cylinder

D—Hydrostatic pump
E—Oil filter
F—Oil reservoir

G—Hydrostatic motor
H—Oil cooler
I—Level indicator

J—Oil filler neck
L—Hoses

CQ267700 -UN-22JUN06

Changing Hydrostatic Drive Oil and Filter

Change hydrostatic oil and filter according to time periods specified in the Lubrication Chart, Periodic Service section.

Filter change

IMPORTANT: Observe utmost cleanliness when installing filter. Install the new filter immediately after removing the used one.



Loosen and remove filter (A).

Dispose of filter properly and replace with a genuine John Deere filter.

For installation of new filter, proceed as follows:

- Coat filter sealing surface with a thin layer of oil.
- Tighten filter (A) by hand until sealing ring comes into contact with filter housing surface and then tighten a further 3/4 to 1-1/4 turns. Do not overtighten.
- Start engine and check for leaks. Retighten filter, if necessary.
- Check oil level and refill system, if necessary.

Oil change

Preferentially have this service carried out by your local John Deere dealer, who alone is familiar with the relevant rules and regulations.

IMPORTANT: Always use specified oil (see “Fuel, Lubricants, Coolant and Capacities” section).

AG,CO03622,2255 -19-01FEB05-1/1

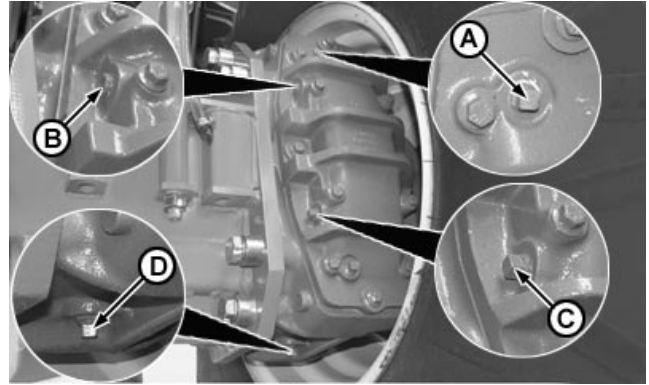
Changing Final Drive Oil

1. Remove drain plug (D) to drain oil. Open filler plug (A).
2. After draining the oil, close drain plug (D) and remove oil level plug (C).
3. Fill with oil up to the indicated level. Install oil level plug. Close filler plug.

IMPORTANT: Only use recommended oil and quantity. Carefully clean area around filler opening.

Recommended oil: **SAE 90.**

NOTE: Consult capacity in the "Specifications" section.



A—Oil filler plug
B—Vent plug
C—Oil level plug
D—Drain plug

CO267970 -UN-15MAR06

AG,CO03622,2257 -19-14MAR06-1/1

Changing Transmission Oil

Remove bolt (D).

Remove cap (A) from transmission box and take out line (E).

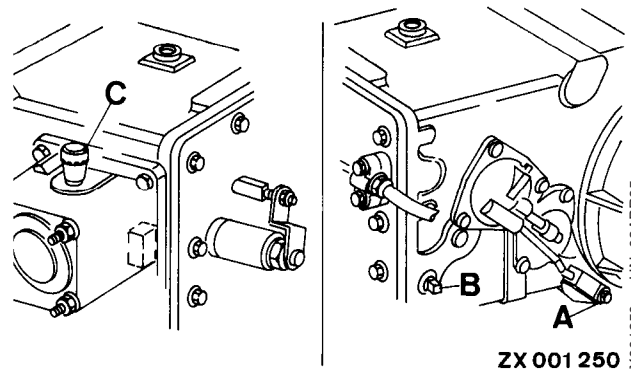
Check filter (F) and rings (G), and replace if necessary.

IMPORTANT: When reinstalling, make sure filter (F) is seated correctly in transmission housing.

Recommended oil - SAE 90.

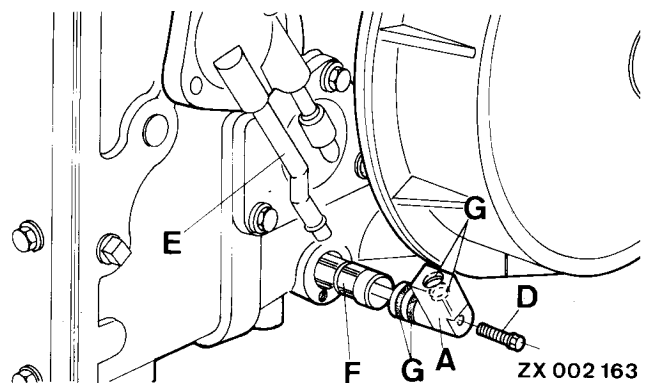
IMPORTANT: Always use specified oil.

Consult capacity in the "Specifications" section.



ZX 001 250

ZX001250 -UN-03APR95



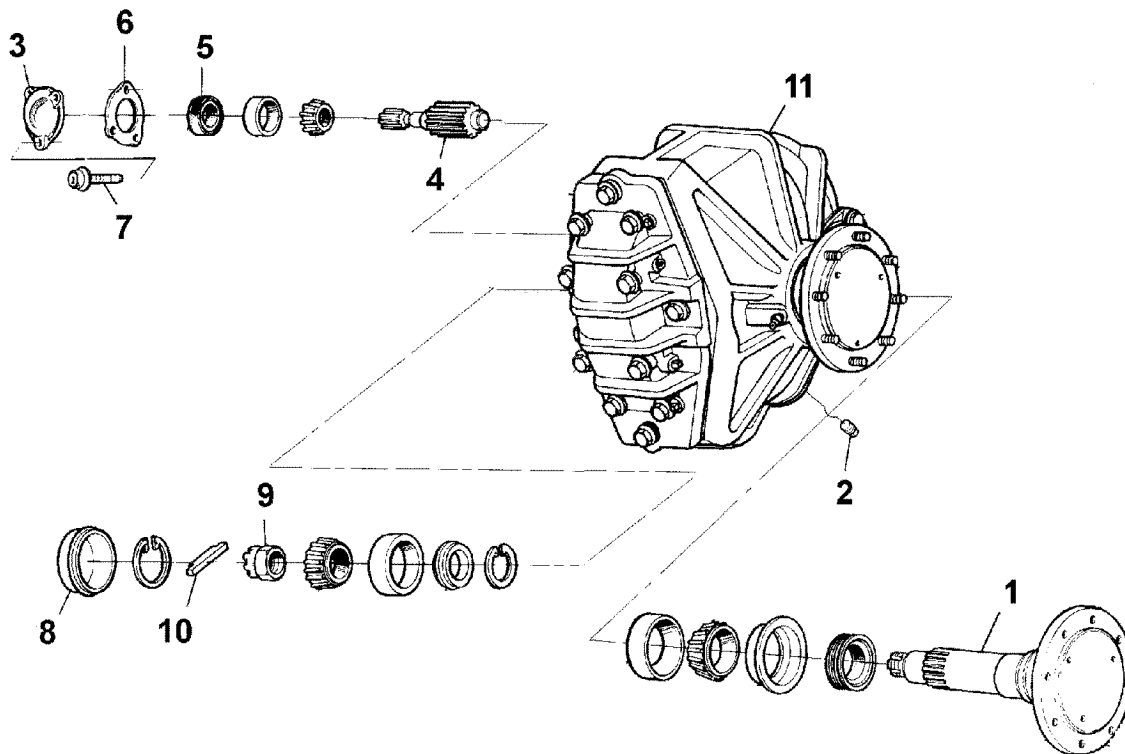
ZX 002 163

ZX002163 -UN-27MAR95

A—Cap
B—Check plug
C—Filler neck and bleed plug
D—Bolt
E—Line
F—Filter
G—Rings

AG,CO03622,2115 -19-01AUG05-1/1

Adjusting Play of Final Drive Shaft End Bearings



1—Shaft end
2—Drain screw
3—Bearing housing

4—Drive Pinion
5—Shaft Seal
6—Shim

7—Locking Bolt
8—Cover
9—Nut

10—Locking Bolt
11—Housing

It is necessary to check play of final drive shaft end bearings on the completion of the first 100 hours of operation, every 500 hours and at the end of each harvest season.

When checking the adjustment, it is necessary to remove the front wheel of the machine and push the shaft end (1) up and down.

If there is play, have the bearings adjusted by your John Deere dealer or, if you possess the suitable tools, adjust as follows:

1. Drain final drive oil through drain screw (2).
2. Remove final drive from machine.
3. Remove bearing housing (3) and shaft seal (5) of drive pinion (4).
4. Install drive pinion bearing housing (3), without shaft seal (5). Take care to assemble the same shims (6). Tighten bearing housing (3) bolts (7) to 60 N.m (44 lb-ft).
5. Remove shaft end nut cap (8) and locking pin (10).
6. Check castle nut (9) torque, it should be 150 N.m (110 lb-ft).
7. Rotate shaft end (1) several times in both directions. Using an aluminum hammer, lightly tap both sides of shaft end to seat bearing cups.

Continued on next page

MB03730,00001D3 -19-01AUG05-1/2

8. Check shaft end (1) rolling drag torque through castle nut (9), it should be 7 to 13 N.m (5 to 10 lb-ft). Adjust castle nut, if necessary.

NOTE: If necessary loosen nut (9). Make sure to loosen bearings also. If necessary, use an aluminum hammer and lightly tap both sides of shaft end to seat bearing cups.

9. Repeat this procedure until the correct torque is obtained.
10. Tighten castle nut (9) until one of the grooves aligns with the bore on the shaft end (1) and

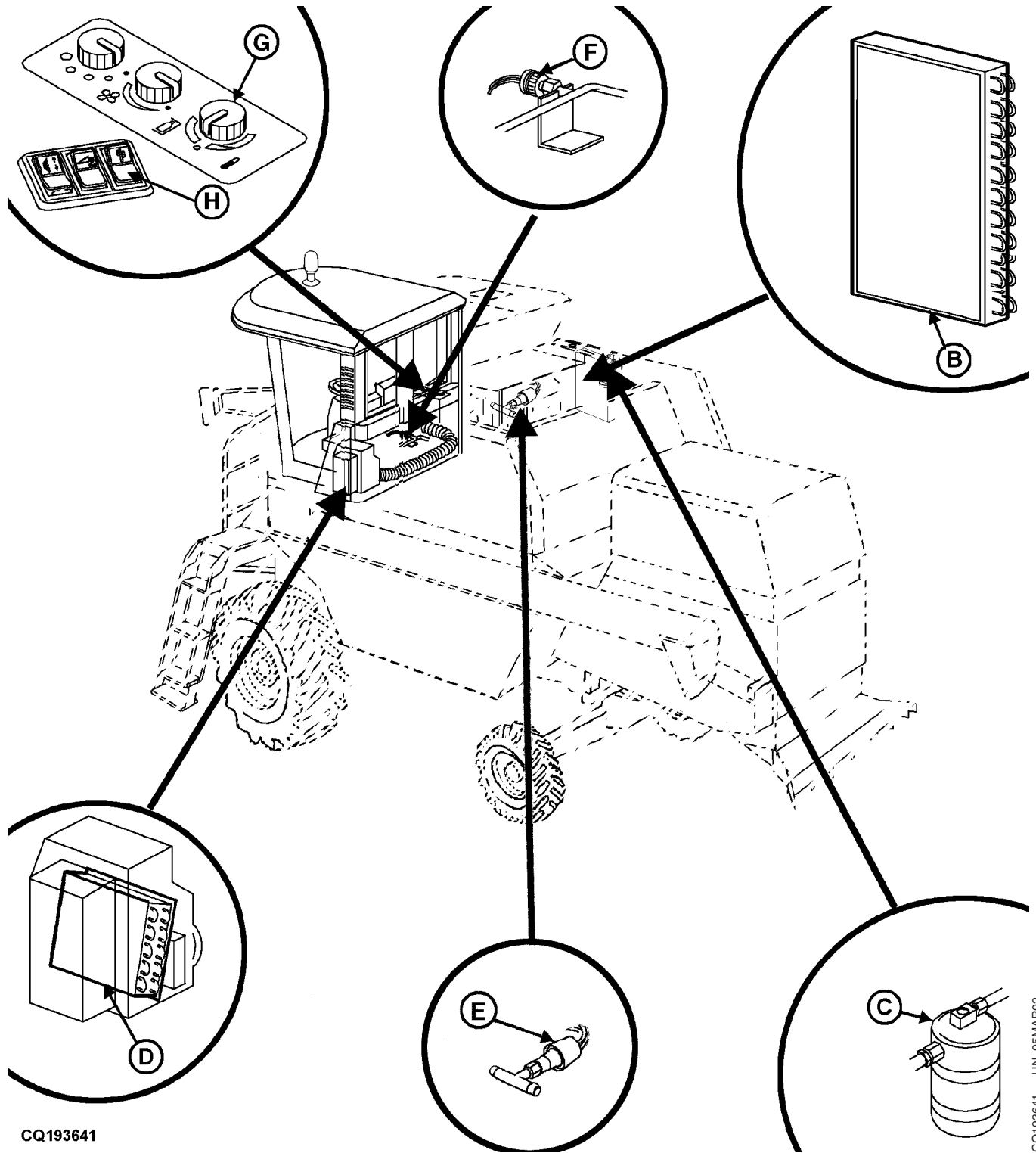
install the locking bolt (10). Seal and install nut cap (8).

11. Remove drive pinion bearing housing (3) and install shaft seal (5).
12. Install drive pinion bearing housing (3), taking care to use the same shim (6). Tighten bearing housing (3) bolts (7) to 60 N.m (44 lb-ft).
13. Repeat this procedure with the final drive on the other side.

MB03730,00001D3 -19-01AUG05-2/2

Service—Air Conditioning

Air Conditioning System Components



CQ193641

B—Condenser
C—Drier filter

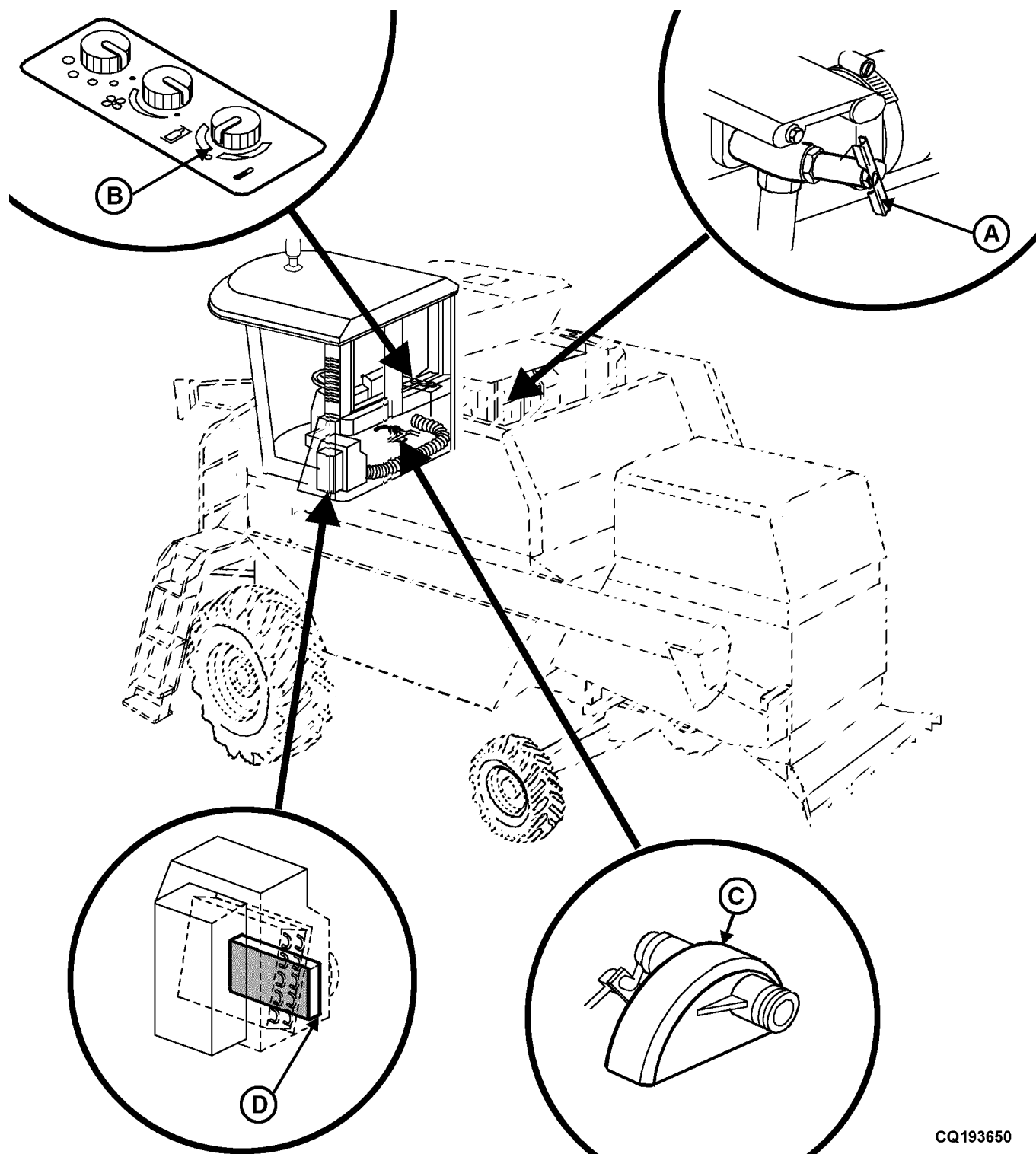
D—Evaporator
E—High pressure switch

F—Low pressure switch
G—Air conditioning/heater
rotary switch

H—Demoisturizer switch

CQ193641 —UN—05MAR02

Heater Components



A—Heater valve at cylinder block

B—Air conditioning/heater rotary switch

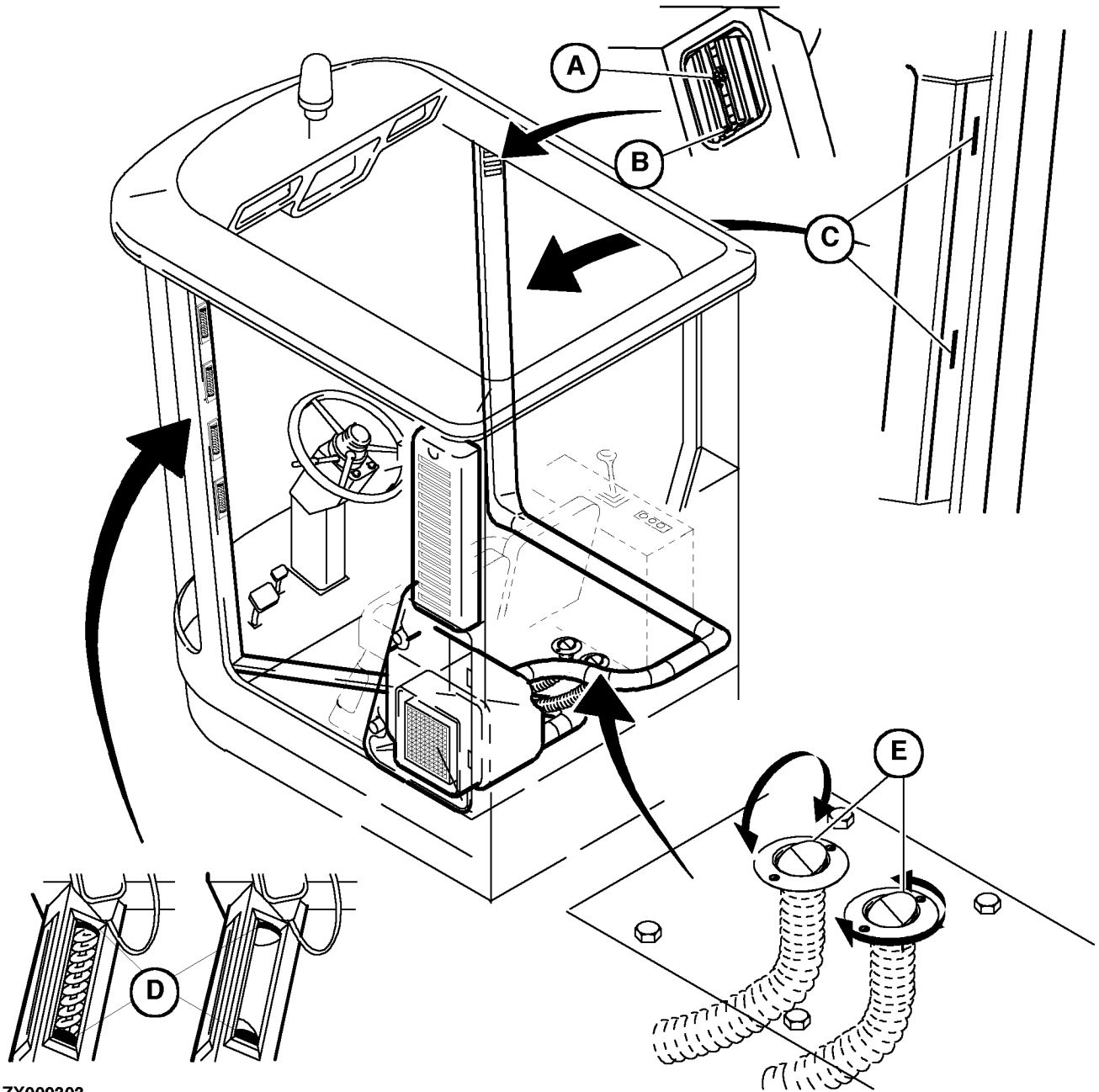
C—Heater valve in cab

D—Radiator

CQ193650

CQ193650 -UN-18NOV99

Adjustable Air Louvers



ZX009303

A—Wheel to regulate air flow
B—Baffles adjustment

C—Air louvers

D—Wheel to regulate and
direct air flow.

E—Regulation of air flow and
baffles

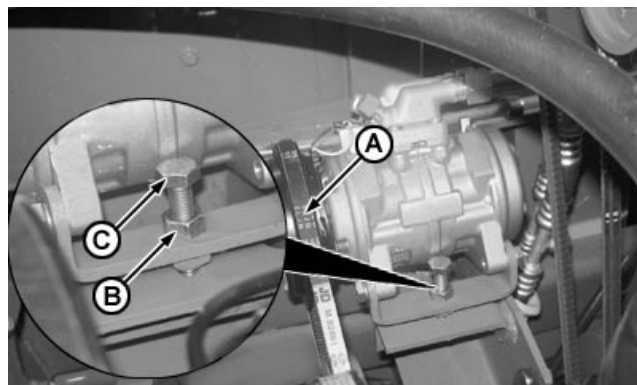
Adjust air louvers to prevent misting of windows.

ZX009303 -UN-23MAY96

Air Conditioning Compressor Belt Tension

Check tension of air conditioning compressor belt (A), if necessary.

1. Loosen nut (B) and move compressor through bolt (C).
2. Retighten nut (B).



CQ266150 -UN-20FEB06

AG,CO03622,2246 -19-20FEB06-1/1

Refrigerant Level

IMPORTANT: The air conditioning system operates using R134a refrigerant (tetra-fluorethane). This substance does not contain any chlorine atoms, so it does not have a detrimental effect on the ozone in the Earth's atmosphere.

Even so, the refrigerant must never be discharged into the atmosphere. Before any intervention in the system, it must be trapped in a recycling unit. Therefore, do not execute repairs on refrigeration lines nor the system itself. Service work on the air conditioning system must be carried out by your John Deere dealer.

With air conditioning system controls set for maximum cooling and with the engine running, check sight glass (A) at drier filter (B). If refrigerant appears cloudy or foamy, refrigerant level is low and system should be recharged.



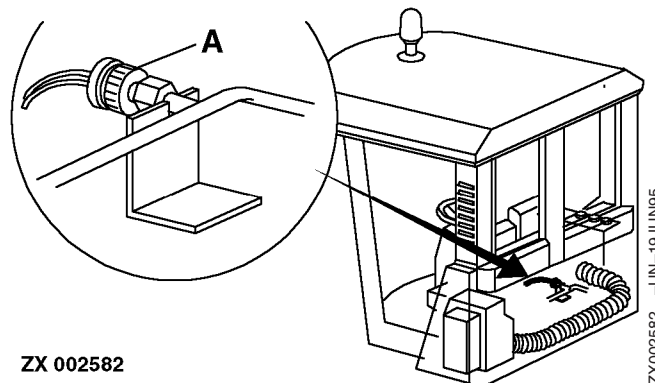
CQ266180 -UN-21MAR06

AG,CO03622,2160 -19-20FEB06-1/1

Low Pressure Switch

IMPORTANT: Use the highest comfortable fan speed and adjust the temperature to an intermediate setting. Do not operate the air conditioning system at maximum output when the fan is at its lowest speed setting.

The air conditioning system is equipped with a low pressure switch (A) which switches off the system in the event of a refrigerant leak. Some leakage (a minimal amount) through air conditioning hoses cannot be avoided. Check refrigerant level every 100 hours of operation. When necessary, have system recharged by your John Deere dealer.



ZX 002582

ZX002582 -UN-19JUN95

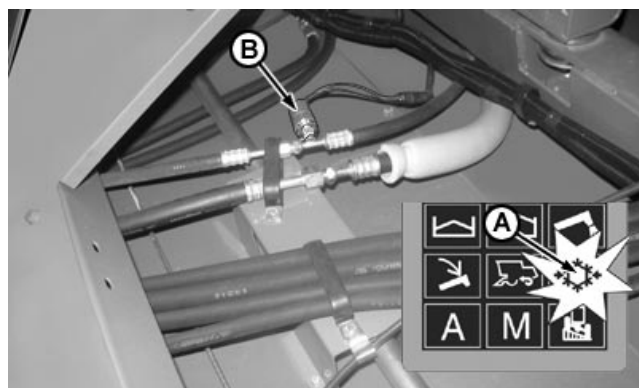
AG,CO03622,2161 -19-15MAR02-1/1

High Pressure Switch

Light (A) indicates that the high pressure switch (B) has disengaged the air conditioning system. Stop the combine. Disconnect and clean the condenser. (See the “Service—Engine” section).

The switch is located under the lower cover of grain tank.

If the indicator light remains on after the condenser has been cleaned, see your John Deere dealer.



CO248570 -UN-01AUG05

AG,CO03622,2162 -19-17AUG05-1/1

Cleaning Condenser

Clean the condenser periodically. See the “Service—Engine” section.

AG,CO03622,2163 -19-20AUG04-1/1

Cab Filters

The operator's cab is equipped with two reusable dry-type filter elements.

significantly reduced. The recirculation filter may not require as frequent cleaning as the air filter.

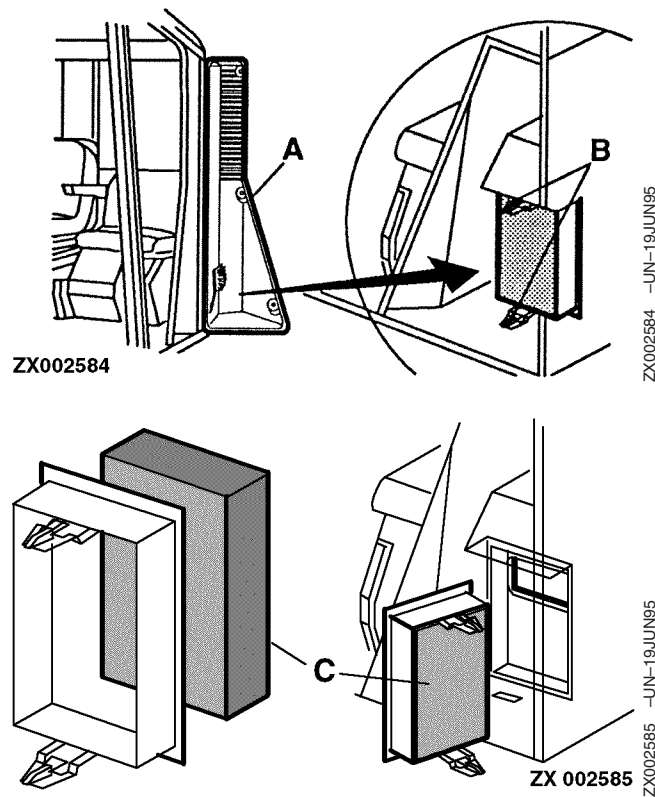
Clean filters according to section "Lubrication and Periodic Service", or whenever air circulation is

AG,CO03622,2164 -19-20FEB06-1/1

Removing Cab Air Filter

1. Open service cover (A).
2. Disengage fasteners (B).
3. Lift out filter housing with element (C).
4. When reinstalling, make sure filter element is in correct position.

IMPORTANT: Replace air filter after the sixth cleansing.



AG,CO03622,2165 -19-20FEB06-1/1

Cleaning Cab Air Filters

Temporary Cleaning

As a provisional measure during harvesting, tap element on palm of hand to remove major dirt build-up.



Z 63398

Continued on next page

AG,CO03622,2166 -19-14MAR06-1/2

Cleaning with Compressed Air

Direct compressed air through filter in inside-out direction with maximum pressure of 200 kPa (2 bar; 30 psi).



Z 63399

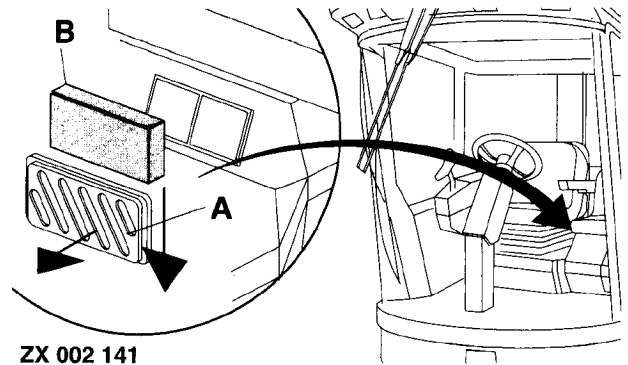
Z63399 -UN-04APR95

AG.CO03622,2166 -19-14MAR06-2/2

Removing Cab Recirculating Filter

Press down grille (A) and pull out by top.

Lift out filter element (B).



ZX 002 141

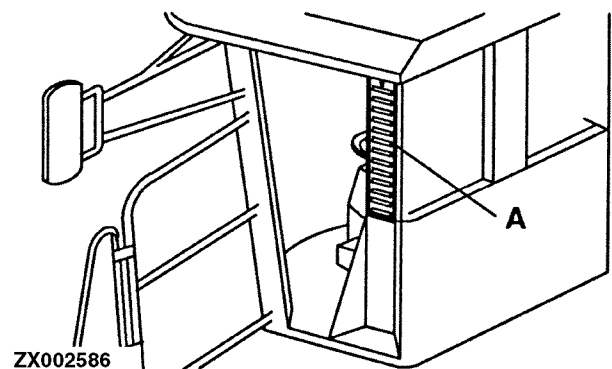
ZX002141 -UN-03APR95

AG.CO03622,2168 -19-15MAR02-1/1

Air Intake Opening

A fine plastic mesh screen (A) covers the air intake opening. Keep screen clear of chaff and leaves.

Use hand brush located in main filter service cover.



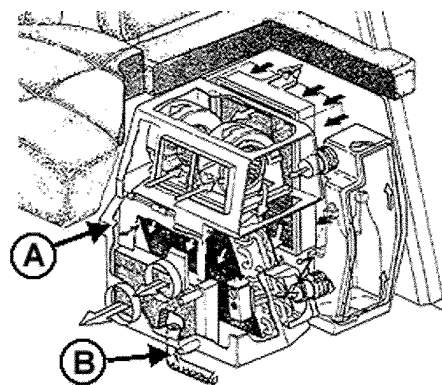
ZX002586

ZX002586 -UN-19JUN95

AG.CO03622,2169 -19-15MAR02-1/1

Condensed Water Drain Hose

If water is accumulating in housing (A), the condensed water drain hose (B) may be blocked. Check if hose is bent or blocked.



CQ195030

CQ195030 -UN-23FEB00

AG.CO03622,2170 -19-15MAR02-1/1

Storage

At Season's End

If possible, store the combine harvester in a dry, sheltered place.

Clean the combine harvester thoroughly inside (by means of inspection holes) and out. Chaff and dirt will attract moisture, which leads to corrosion.

NOTE: Should a high-pressure washer be used for cleaning, do not direct pressurized water jet at the bearings.

Remove all V-belts.

Clean all belts. Do not use aggressive cleaning agents. Do not use petrol, benzene, turpentine or similar cleaning solvents.

The recommended procedure is to use a rag dipped in:

- liquid ammonia,
- soap-suds, or a
- 1:10 mixture of glycerin spirit.

Store drive belts in a dry, cool and dark area, avoiding distortion or tensioning of belts.

Thoroughly clean all drive chains and coat them with heavy oil to prevent corrosion.

Clean out augers and clean grain and tailings elevators, leaving upper and lower flaps open.

Thoroughly clean grain tank and unloading auger.

Thoroughly clean all sieves.

Grease feeder house conveyor bottom to prevent corrosion. Lubricate combine thoroughly as indicated in the lubricating charts. Lubricate threads of adjusting screws etc. Release tension in springs.

Touch up all parts where paint is damaged.

Support the combine with blocks to level it or support the header on a horizontal, dry base. Lower the feeder house.

Grease bare metal surfaces of hydraulic cylinder piston rods well and retract rods as far as possible.

Block up combine, taking the load off the tires. Leave tires inflated.

If combine is stored outside, jack it up on supports and remove wheels. Store wheels in a cool, dark and dry place.

Coat all lever linkages and bearing points without grease fittings with oil.

List all service work to be done before the next season and have it carried out in good time. Your John Deere dealer is in a better position to carry out necessary service and repairs during the off-season.

AG,CO03622,2171 -19-26SEP03-1/1

At Season's End— Engine

If the combine harvester is to be stored for some time (during the winter months), metal parts of the engine must be protected from corrosion and the fuel system must be protected from gum-type deposits.

Protect engine, fuel system etc. as follows:

- ☐ Thoroughly clean outside of engine with a safe solvent.



CAUTION: Do not use gasoline!

- ☐ Drain, flush and refill the engine cooling system with new coolant every two years (See "Engine Coolant").

IMPORTANT: Use only John Deere recommended coolant in the cooling system.

- ☐ Open rotary radiator screen and carefully clean radiator fins, using compressed air or a weak water jet.
- ☐ Drain off engine oil and replace the filter. Drain off the oil while it is still hot. Refill crankcase with oil of the specified quality and viscosity (refer to "Fuel, Lubricants, Coolant and Capacities " section).
- ☐ Fully drain fuel tank and flush it with clean fuel.
- ☐ Check fuel filters and clean them. Replace them, if necessary.
- ☐ Fully fill the fuel tank to avoid condensation.
- ☐ Clean the engine air intake and replace the primary air cleaner and safety elements.
- ☐ Coat the battery cable terminals with petroleum jelly or grease.
- ☐ Periodically run the engine at half throttle.

AG,CO03622,2172 -19-20AUG04-1/1

At Season's End — Air Conditioning System

Clean condenser.

Remove compressor drive belt and store with the other belts.

AG,CO03622,2173 -19-30SEP99-1/1

Removing Combine From Storage

Before the beginning of each harvesting season, the combine harvester should undergo a thorough check. By ensuring that the machine is in really good condition, costly breakdowns at critical times will be avoided.

Thoroughly clean the combine harvester inside and out, if this was not done at the termination of the previous harvesting season. Reinstall all belts and check tensions.

Re-adjust chain tensions and make sure the chains on the grain and tailings elevators are in a clean condition.

Clean the slip clutches. Adjust the tension of springs (see "Adjusting Tailings Elevator Slip Clutch" in the "Service—Drives/Shields" section).

Close elevator flaps.

Fully lubricate combine harvester in accordance with the lubrication charts.

Afterwards run combine harvester at half-speed for about an hour. Check all bearings for overheating.

Check tire inflation pressures.

Inspect the entire combine, ensuring that all bolts are tight and cotter pins are in place.

AG,CO03622,2174 -19-20AUG04-1/1

Before Harvesting—Engine

Check all hose clamps and coolant level.

Drain engine oil and add new oil if it has not been done at the end of the harvest season. See section "Fuel, Lubricants and Coolant".

Check all seals and coolant level.

Check battery electrolyte level (See "Battery Electrolyte Level"). Recharge battery, if necessary.

Crank engine for 5 seconds without starting. This will assure complete engine lubrication.

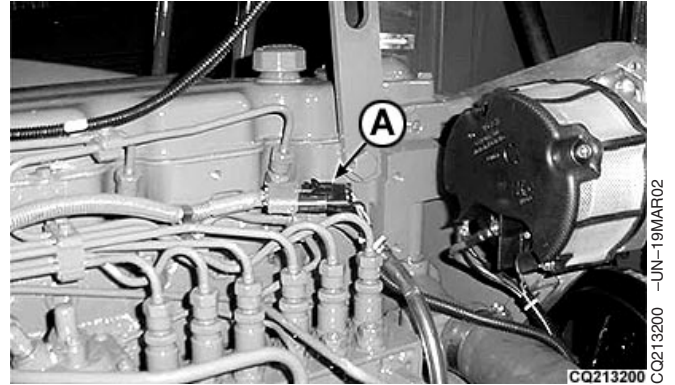
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AS60558,00003FF -19-24JAN07-1/2

Procedure:

This procedure is possible by disconnecting fuel supply solenoid connector (A) and cranking engine.

A—Connector



1550 CWS CIS

AS60558,00003FF -19-24JAN07-2/2

Removing Combine From Storage — Air Conditioning System

An annual service of the air conditioning system is necessary to assure satisfactory performance.

Clean or replace dry-type paper filter.

Clean or replace recirculating air filter.

Install and tension compressor drive belt.

Check refrigerant level in the sight glass.

It is a good idea to have your John Deere dealer check the entire system at the beginning of each season.



CAUTION: The air conditioning system should be serviced only by your John Deere dealer.

AG,CO03622,2176 -19-30SEP99-1/1

Specifications

Specifications

	1450 CWS CIS	1550 CWS CIS
Engine:		
Manufacturer	John Deere	
Model	6068TJ04	6081AJ01
Type	Six-cylinder, in line, valve-in-head, diesel turbocharged	
Power	134 kW (179.7 hp)	168 kW (225.3 hp)
Cylinder bore	106.5 mm (4.2 in.)	116 mm (4.56 in.)
Cylinder travel	127 mm (5 in.)	129 mm (5.08 in.)
Displacement	6.8 L (1.8 US gal)	8.1 L (2.14 US gal)
Firing order	1-5-3-6-2-4	
Hydraulic system*:		
Type	Triple pump, electro-hydraulic valves	
Pressure	120—195 bar (1740.5—2828.2 psi)	
Flow Rate to Header / Controls	28.8 L/min (7.61 US gal/min)	
Flow Rate to Steering	10.5 L/min (2.77 US gal/min)	
Flow Rate to Reel	28.8 L/min (7.61 US gal/min)	
Total Flow Rate	68.1 L/min (18 US gal/min)	
Transmission:		
Type	3 Gears	
Steering System:		
Type	Hydrostatic with telescopic and inclinable post	
Capacities		
Engine cooling system	30 L (8 US gal)	38 L (10 US gal)
Engine crankcase	20 L (5.01 US gal)	28.5 L (7.52 US gal)
Grain tank	6800 L (1796 US gal)	
Unloading auger (unloading flow rate)	3300 L/min (871.77 US gal/min)	
Final drive	4.8 L (1.27 US gal)	
Air compressor crankcase	0.37 L (0.1 US gal)	
Threshing cylinder drive reduction gear (grease)	0.8 kg (1.76 lb)	
Brake system (with reservoir)	1 L (0.264 US gal)	
Gearbox	9.6 L (2.5 US gal)	
Fuel tank	470 L (124.16 US gal)	
Windshield washer reservoir	2.8 L (0.74 US gal)	
Hydraulic system reservoir	29 L (7.66 US gal)	
Hydrostatic system reservoir	24 L (6.34 US gal)	
* Engine at maximum rpm without load.		

Continued on next page

AS60558,00003FC -19-24JAN07-1/2

Specifications

	1450 CWS CIS	1550 CWS CIS
Cab Noise Level:		
EEC Directive No. 86/188.	Measurement method in accordance with ISO 5131, with cab closed. 79 dB (Average value)	
Weight without Header ^a		
Approximate	10,000 kg (22046.23 lbs)	11400 kg (25,132.7 lbs)
Electrical System:		
Type	12 Volts, negative ground, 120 A alternator and 150 A battery	
Feeder house		
Number of chains	3	4
Number of cross members	2 - T-Profile	3 - "T"Profile
Length	1.8 m (5.9 ft)	
Lateral tilt	+/- 4 degrees - option	
Vertical tilt	+/- 9 degrees - standard	
Reverser	11,931.2 W (16 hp)	
Separator:		
Diameter	610 mm (2 ft)	
Cylinder width	1.3 m (4.26 ft)	
Number of bars	08	
Concave width	1.3 m (4.26 ft)	
Beater bore	380 mm (14.96 in.)	
Concave area	0.77 m2 (1,193.50 sq in.)	0.93 m² (1,441.5 sq in.)
Separator System:		
Fan diameter	580 mm (22.83 in.)	
Fan adjustment	Electrically from cab	
Number of steps on straw walker	05	
Straw walker length	3.715 m (146.25 in.)	
Quantity of straw walkers	05	06
Straw walker separating area	4.83 m2 (51.98 sq ft)	5.79 m² (62.32 sq ft)
Chaffer area (including extension)	2.45 m2 (26.37 sq ft)	2.95 m² (31.75 sq ft)
Grain sieve area	1.88 m2 (20.23 sq ft)	2.38 m² (25.61 sq ft)
Total cleaning area	4.60 m2 (49.51 sq ft)	5.60 m² (60.27 sq ft)
^a All weights stated in this manual are approximate combine values with all accessories installed.		

AS60558,00003FC -19-24JAN07-2/2

Specifications

Operating Speeds

The indicated speeds are average values and may vary from machine to machine. Speeds are graded using an elevated ground speed with the threshing unit engaged and without load.

Engine idling	1300 rpm
Engine maximum rpm (no load)	2550 rpm
Hydraulic pump maximum rpm	2615 rpm
Feeder house speed	510 rpm
Threshing cylinder standard speed	452—1115 rpm
Threshing cylinder speed (with final drive in position I)	150—420 rpm
Threshing cylinder speed (with final drive in position II)	380—1100 rpm
Beater speed	865 ± 15 rpm
Fan speed range	550—1150 rpm

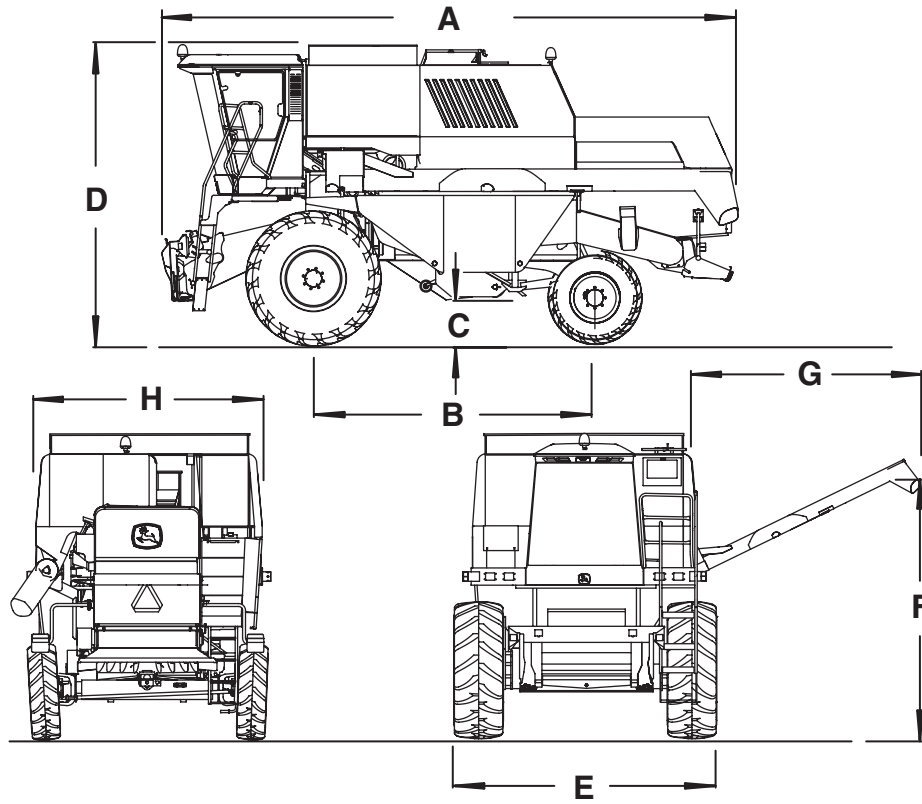
ML70882,000045D -19-16AUG06-1/1

Wheel Configurations

Consult your John Deere dealer for more information about wheel configurations for your combine.

ML70882,000045E -19-17MAR06-1/1

Combine Dimensions



A—Total length
B—Wheelbase
C—Ground clearance of vehicle

D—Total height
E—Front axle width between outside tire faces

F—Maximum unloading height
G—Unloading auger reach
H—Overall width

Continued on next page

AS60558,00003FE -19-24JAN07-1/2

CQ243610 -UN-01AUG05

Specifications

1450 CWS CIS combine dimensions* with 28.1-26 front tires and 12.4-24 rear tires

A	B	C	D	E	F**	F***	G**	G***	H
8.25 m (27.06 ft)	3.57 m (11.7 ft)	0.47 m (1.54 ft)	3.73 m (12 ft)	3.62 m (11.87 ft)	4.55 m (14.93 ft)	5.05 m (16,57 ft)	3.62 m (11.87 ft)	4.28 m (14.04 ft)	2.95 m (9.68 ft)

1450 CWS CIS combine dimensions* with 28.1-26 front tires and 14.9-24 rear tires

A	B	C	D	E	F**	F***	G**	G***	H
8.25 m (27.06 ft)	3.57 m (11.7 ft)	0.47 m (1.54 ft)	3.73 m (12 ft)	3.62 m (11.87 ft)	4.55 m (14.93 ft)	5.05 m (16,57 ft)	3.62 m (11.87 ft)	4.28 m (14.04 ft)	2.95 m (9.68 ft)

1450 CWS CIS combine dimensions* with 18.4-38 front tires (double wheel) and 14.9-24 rear tires

A	B	C	D	E	F**	F***	G**	G***	H
8.25 m (27.06 ft)	3.57 m (11.7 ft)	0.47 m (1.54 ft)	3.73 m (12 ft)	4.62 m (15.16 ft)	4.55 m (14.93 ft)	5.05 m (16,57 ft)	3.62 m (11.87 ft)	4.28 m (14.04 ft)	2.95 m (9.68 ft)

1550 CWS CIS combine dimensions* with 18.4-38 front tires (double wheel) and 16.9-24 rear tires

A	B	C	D	E	F**	F***	G**	G***	H
8.25 m (27.06 ft)	3.72 m (12.2 ft)	0.57 m (1.87 ft)	4.16 m (13.65 ft)	3.92 m (12.86 ft)	4.55 m (14.93 ft)	5.05 m (16,57 ft)	3.62 m (11.87 ft)	4.28 m (14.04 ft)	2.95 m (9.68 ft)

1550 CWS CIS combine dimensions* with 30.5-32 front tires and 16.9-24 rear tires

A	B	C	D	E	F**	F***	G**	G***	H
8.25 m (27.06 ft)	3.72 m (12.2 ft)	0.57 m (1.87 ft)	4.16 m (13.65 ft)	3.92 m (12.86 ft)	4.55 m (14.93 ft)	5.05 m (16,57 ft)	3.62 m (11.87 ft)	4.28 m (14.04 ft)	2.95 m (9.68 ft)

*The dimensions are approximate values and vary according to tire configuration.

** Standard Unloading Auger

*** Long Unloading Auger

AS60558,00003FE -19-24JAN07-2/2

Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation produced by other appliances. This may be hazardous and it may cause the malfunction of installed equipment. We therefore recommend that the following safety instructions are complied with:

If electrical and electronic appliances are subsequently installed on the machine and connected to the onboard system, the user must verify whether the installation affects the electronics or other components. This applies particularly to the following:

- Area counter
- Personal Computer
- GPS (Global Positioning System) receiver

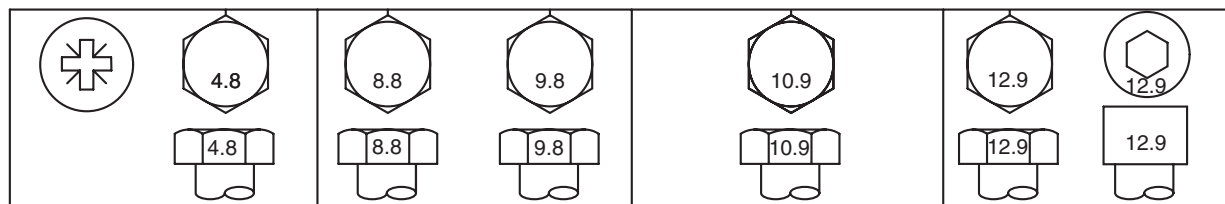
In particular, subsequently installed electrical/electronic components must comply with the relevant edition of

EMC Directive 89/336/EEC, and be CE marked. In the event of the installation of mobile communications equipment (e.g.: radio-transmitter, telephone, etc.) these must additionally comply with the following requirements:

- The device shall be installed securely.
- Portable or mobile devices may be operated in the vehicle only if connected to a fixed outside antenna.
- Transmitters shall be installed separately from the vehicle's electronics.
- The antenna must be installed in a professional manner, with a good ground connection between the antenna and the vehicle ground.

Wiring, installation and maximum permissible current supply must be in accordance with those stated in the installation instructions of the machine's manufacturer.

Metric Bolt and Screw Torque Values



TS1670 -UN-01MAY03

Bolt or Screw	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b	
Size	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N•m	lb-ft	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N•m	lb-ft	N•m	lb-ft	N•m	lb-ft								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N•m	lb-ft														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

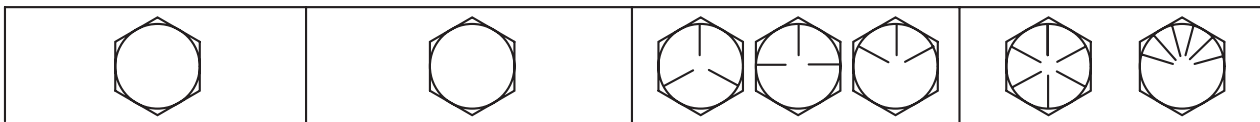
Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

^a"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C zinc flake coating.

^b"Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B zinc flake coating.

Unified Inch Bolt and Screw Torque Values

TS1671 –UN-01MAY03



Bolt or Screw	SAE Grade 1				SAE Grade 2 ^a				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c	
Size	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in
1/4	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N•m	lb-ft	N•m	lb-ft
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N•m	lb-ft	N•m	lb-ft				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N•m	lb-ft	N•m	lb-ft	N•m	lb-ft								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N•m	lb-ft														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

^aGrade 2 applies for hex cap screws (not hex bolts) up to 6. in (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

^b"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C zinc flake coating.

^c"Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B zinc flake coating.

Serial Numbers

Type Plates

Serial numbers identifying combine harvester components or assemblies are stamped on components or factory serial number plates.

These numbers and letters are required when ordering parts or components for the combine harvester.

To ensure that you always have these numbers at hand, enter the appropriate serial numbers in the spaces provided in each illustration.

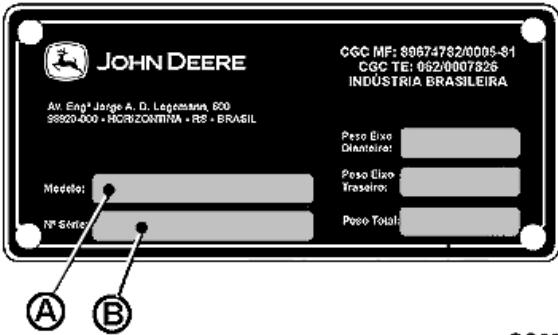
AG,CO03622,2179 -19-04OCT99-1/1

Combine Serial Number

The product identification number is located under operator's platform on front right-hand side.

Enter appropriate serial numbers in spaces provided below:

*															*



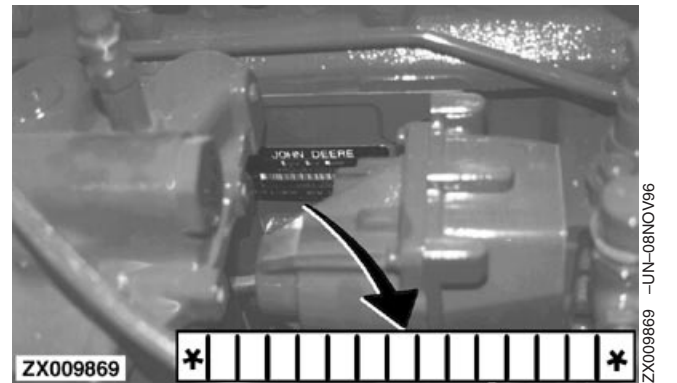
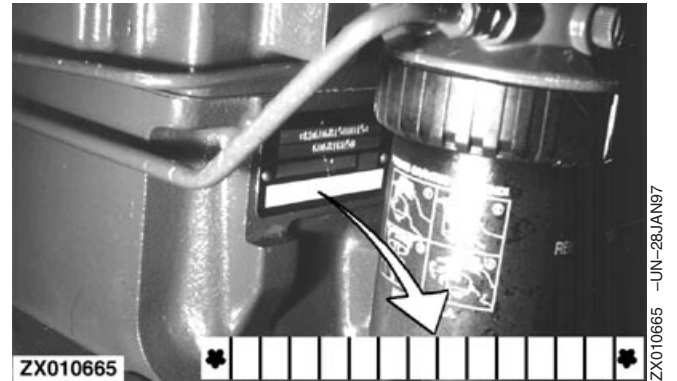
—UN-10APR01
CQ204180
CQ204180

A—Model
B—Serial Numbers

ML70882,0000A0C -19-27JUN06-1/1

Engine Serial Number

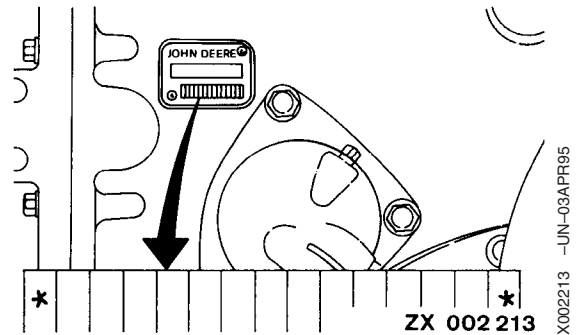
The engine serial number for combines described in this manual is located on engine block.



AS60558,00003FD -19-23JAN07-1/1

Three-Speed Transmission Serial Number

The three-speed transmission serial number is located on right-hand side of transmission housing.



AG,CO03622,2249 -19-15MAR02-1/1

Serial Numbers

Index

	Page		Page
A		B	
Access Points Behind Rear Ladder	110-1	Alternator Belt	
Access to Engine	90-2	Tensioner Spring Tension	90-18
Access to the Relay and Diode Board	105-8	Alternator Indicator Light	20-6
Accumulators	110-7	Area Counter	
Adapting Seat to Operator's Weight	30-3	Adjust Date	20-25
Adjust Lateral Spacing between Threshing		Adjust Header Width	20-23
Cylinder Teeth and Concave Teeth	65-7	Adjust Pulses	20-24
Adjustable Air Louvers	120-3	Adjust Time	20-25
Adjusting		Adjustment of Tire Radius	20-22
Concave	55-4	Change Language	20-21
Fan	55-5	Change Measuring System	20-21
Play of Final Drive Shaft End Bearings	115-6	Change Password	20-27
Sieves	55-6	Checking Actual Area	20-22
Threshing Cylinder	55-4	Checking Partial Area	20-22
Adjusting Clean Grain Elevator Drive Belt	100-12	Checking Total Area	20-22
Adjusting Compressor Drive Belt Tension	95-1	Armrest Console	15-3
Adjusting Concave Extension	65-4	Ashtray	30-4
Adjusting Concave-to-Cylinder Clearance	55-15	At Season's End	125-1
Adjusting Fan Air Flow Direction	65-14	Automatic Header Control System Error	
Adjusting Fan Speed	15-18	Codes	105-13
Adjusting Feeder House Hydraulic Reverser Chain		Avoid Overheating of Hydrostatic System	45-2
Tension	100-5		
Adjusting Feeder House Slip Clutch	100-3	B	
Adjusting Foot Brakes	115-2	Basic Combine Adjustments Chart	55-14
Adjusting Grain Retention Plate	65-13	Battery	
Adjusting Grain Tank Unloading Auger and Feeder		Battery Charging	105-2
Chain Tension	100-13	Battery recharging	105-3
Adjusting Grain Tank Upper Auger Drive		Cleaning	105-1
Chain	100-13	Installing and connecting	105-3
Adjusting Header Raise and Lower Speed	110-5	Removal	105-1
Adjusting Hydraulic Pump Belt Tension	100-3	Storing and handling	105-2
Adjusting Hydraulic Variable Speed Drive	100-6	Switch	105-2
Adjusting Rotary Screen Rake Bar	90-21	Before Starting the Engine	40-2
Adjusting Tailings Auger Drive	100-11	Belts	85-28
Adjusting the Armrest	30-3	Bleeding Hydraulic System Oil	110-6
Adjusting The Chaffer Extension Angle	65-11	Bleeding the Fuel System	
Adjusting Threshing Unit Drive Belt Guide	100-6	Engines without ECU	90-9
After Each Harvesting Season	85-27	Brake Fluid for Brake System	35-2
After Long Storage Period	35-3	Brake System	115-1
Air Comfort Seat	30-5	Break-in engine oil	80-5
Air compressor		Breaking In The Engine	40-1
Oil change	95-2		
Air Conditioner Indicator Light (High		C	
Pressure)	20-7	Cab Access Ladder	30-1
Air conditioning		Cab Access Ladder Positions	30-1
Compressor Belt Tension	120-4	Cab Air Filter	
Air Conditioning System Components	120-1	Removing	120-6
Air Intake Opening	120-7		
Alternator	105-4		

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	Page		Page
Fan Indicator Light	20-5	Grain Retention Plate	65-13
Fan Variable Speed Drive, Adjusting Drive Belt	100-10	Grain Separating Process	55-2
Feeder House		Grain Tank Extension	
Adjusting Floating Roller Height	60-3	Operating Position	75-3
Adjusting Tension of Conveyor Chains	60-4	Transport Position	75-3
Feeder House Drive to Head	100-3	Grain Tank Indicator Light (Full)	20-7
Feeder House, Adjusting Front Face Angle	60-4	Grain Tank Inspection Hatch	75-1
Feeder House/Header Reverser	15-21	Grain Tank Lighting Rocker Switch	25-4
Filling Fuel Tank	80-1	Grain Tank Lower Auger Cover Plates	75-3
Final Drive	115-5	Grease	
Final Drive Oil	115-5	Extreme pressure and multipurpose	80-10
Fire Extinguisher	30-7		
Fire extinguisher location	30-7	H	
Forward and Reverse Travel	45-2		
Front Wheels		Harvest Performance Monitor	
Installing	50-3	Adjusting Ground Speed	20-18
Fuel		Adjusting Potentiometers	20-17
Diesel	80-2, 80-3	Adjusting Sensor Sensitivity	20-17
Lubricity	80-7	Operational Check	20-19
Fuel gauge	20-7	Hazard Warning Light Rocker Switch	25-6
Fuel Level	35-2	Head Losses	55-7
Fuel System	35-4, 90-6	Header AHC Calibration Procedure—Step by Step	105-19
6.8 L engines—1450	90-5	Headlights	25-1
Fuel Tank Cap	90-6	Heater Components	120-2
Full Beam Rocker Switch	25-1	Hectaremeter	20-20
Full-Beam Indicator Light	25-1	Functions of Keys	20-21
Functions of Hydraulic Control Block Valves	110-4	High Pressure Switch	120-5
Functions of Multi-Function Control Handle		Horn Knob	15-19
Buttons	15-4	Hydraulic Oil	80-9
Fuse and Relay Board	105-7	Hydraulic Oil Filter Indicator Light	20-5
Fuses	105-7	Hydraulic System	
		Description	110-2
G		Refilling	110-6
Gear oil	80-8	Hydraulic System Oil Level	35-1
Gearshift lever	15-14	Hydraulic Valve Block	
General Information on Combine		Pressure Relief Valves	110-3
Adjustments	55-13	Hydrostatic Drive Components	115-3
General View of Controls and Instruments	15-1	Hydrostatic System Oil Level	35-2
Grain Cleaning Process	55-2	Hydrostatic Transmission Oil Temperature Indicator Light	20-3
Grain Loss			
Causes of Loss	55-7	I	
Identifying Problems	55-3		
in Cleaning System	55-8	Identification Views	00-1
in Separating System	55-8	Identifying Problems	55-3
In Threshing System	55-8	Inadequate Tailings	55-6
Grain Losses		Indicator Light	
Reduction of Losses	55-12	Emergency stop	20-2
Grain Recovery Process	55-3		

	Page		Page
Engine Air Filter	20-6	Overhead Console	15-6
Grain tank 3/4 full	20-6		
Slugging	20-3		
Straw walker	20-4		
Unloading auger	20-7		
Indicator Lights	20-1		
INFO-TRAK Monitor Functions	20-9		
INFO-TRAK Monitor Service Information	20-14		
INFOTRAK Monitor	20-8		
INFOTRAK Monitor Error Codes	105-12		
Input of Machine-Specific Data	20-12		
Installing Rear Wheels	50-5		
Instructional Seat	30-5		
Intermittent Indicator Light Rocker Switch	25-4		
Intermittent Indicator Lights	25-4		
L			
Losses			
Loss Measurement	55-10		
Loss Percentage Calculation	55-10		
Low Pressure Switch	120-5		
Lower Elevator Inspection Doors	75-1		
Lubricant			
Storage	80-10		
Lubricity of diesel fuel	80-7		
Lumbar Support (Only Mechanical Seat)	30-3		
M			
Machine Code	20-12		
Main Console	15-2		
Main Electrical Box, Removal	105-5		
Mechanical Adjustment of Operator's Seat			
Position	30-2		
Mounting Tires	50-2		
Multi-Function Control Handle			
Functions of Buttons	15-4		
Multifunction Control Handle	15-3		
O			
Oil Gear	80-8		
Opening Stone Trap	65-2		
Opening The Pan	65-14		
Operating Foot Brakes	30-7		
Outside Rear View Mirrors	30-8		
		P	
		Parking Brake	30-8, 115-2
		Parking Brake Indicator Light	20-2
		Parking Light and Headlight Rocker Switch	25-1
		Performance monitor	20-16
		Pictorial Safety Decals	10-1
		Position of Dipswitches on Reel Speed Control	
		Board	105-21
		Potentiometers on Switch Console	15-2
		Preliminary Adjustments On Combine	20-14
		Preliminary Head AHC Calibration	
		Procedures	105-17
		Preparations for Harvesting Corn	55-16
		Preparations for Harvesting Grain Crops	55-16
		Preparations for Harvesting Oil Seed Crops	55-17
		Prevention of Grain Loss— General	55-9
		Primary Fuel Filter	
		Cleaning	90-7
		Protected Shaft Speed Monitor	20-15
		R	
		R.H. Armrest — Fore-And-Aft Adjustment	30-4
		Rear Axle Toe-In	50-6
		Rear Ladder	110-1
		Rear Turn-Signal Lights, Tail Lights and "STOP"	
		Lights	25-6
		Reel	
		Dipswitch Positions	105-21
		Speed Adjustment	15-13
		Reel Speed Adjustment	15-13
		Reel Speed Control Board	
		Error Codes	105-21
		Reel Speed Control Board Error Codes	105-21
		Refrigerant Level	120-4
		Releasing Parking Brake	30-8
		Removing Chaffer	65-12
		Removing Chaffer Extension	65-12
		Removing Grain Sieve	65-13
		Replacement of Rotary Screen Knife Comb	90-22
		Replacing Fan/Alternator Belt	90-19
		Replacing Feeder House Drive Belt	100-4
		Replacing Fuel Filter	90-9
		1450	90-8
		Replacing Rotary Screen Drive Belt	90-21
		Replacing Threshing Unit Drive Belt	100-5

	Page		Page
Rice Harvesting Attachment	65-6	Operating Speeds	130-3
Right-hand Armrest Cover	30-4	Wheel Configurations	130-3
Right-hand Armrest Storage Compartment	30-4	Stalling of Engine	40-5
Rocker Switch		Starter Motor	105-4
Concave Clearance Adjustment	15-17	Starter Motor Relay	105-4
Fan Speed	15-18	Starter switch	15-20
Head Lateral Tilt	15-14	Starting the Engine	40-2
Reel Horizontal Adjustment	15-14	Starting the Engine by Means of a Booster	
Road Safety	15-8	Battery	40-4
Separator Drive	15-9	Steering and Driving	45-1
Threshing Cylinder Speed	15-18	Steering Column	15-7
Unloading Auger Swing	15-10	Steering Column Height Adjustment	30-6
Windshield Demoisturizer	15-11	Steering Column Tilt Adjustment	30-6
Windshield Washer	15-16	Storing lubricants	80-10
Windshield Wiper	15-17	Straw Chopper	
Rocker Switch for Work Lights on Operator's		Adjusting Counterknives	70-3
Platform and Outside Mirror Arms	25-3	Belt Tension	100-15
Rotary Switch		Deflector Sheet	70-1
Air conditioning	15-16	Disengaging	70-2
Cab Fan	15-15	Precautions for Engaging	70-2
Cooling Compartment	15-15	Preparations for Engaging	70-1
Heater	15-16	Reducing Rotational Speed	70-5
		Replacement of Counterknives	70-4
		Replacement of Knives	70-3
		Straw Distributor	
		Adjusting Baffles	70-6
		Operating and Transport Position	70-6
		Straw walker	
		Adjusting Bearings	65-9
		Straw Walker	
		Adjusting Belt Tension	100-9
		Adjusting drive belt tension	100-10
		Straw walker	
		Adjusting Slip Clutch	100-10
		Straw Walker	
		Curtain	65-9
		Straw walker	
		Fishbacks	65-8
		Types	65-8
		Sun visor	30-8
		Support Points for Raising Combine	50-6
		Switch	
		Emergency Stop	15-9
		Header Drive	15-10
		Reel Speed Control	15-12
		Unloading Auger Drive	15-19
		Switches, types	15-8
		Switching on Harvest Performance Monitor	20-14
		T	
		Tailings Elevator	75-1

	Page		Page
Tailings Elevator Conveyor Chain Tension	75-1	Wheels and tires	
Tailings Elevator Indicator Light	20-4	Tire inflation pressure	50-7
Tailings Elevator, Adjusting Clutch	100-11	Work Lights on Cab Roof and Unloading	
Tailings Elevator, Drive Belt	100-11	Auger	25-2
Thermostat		Work Lights on Operator's Platform And Mirror	
Replacing	90-17	Arms	25-3
Threshing Cylinder		Work Lights Rocker Switch	
Front Inspection Cover	65-1	Cab Roof	25-2
Rake Bars	65-2	Unloading Auger	25-2
Side Inspection Ports	65-1	600 Series Feeder House	
Threshing Cylinder Alarm Adjustment	20-13	Multi-coupler	60-1
Threshing Cylinder Indicator Light	20-5	600 Series Rigid Headers	
Threshing Cylinder Speed Reduction Gear —		Cut Position	55-18
Operation	65-3	Return to Cut (AHC)	55-19
Threshing Unit			
Adjusting System	55-2		
Throttle	15-17		
Tire Inflation Pressures	50-7		
Tire Maintenance	50-1		
Tire Rolling Radius	20-10		
Tire Rolling Radius Code	20-10		
Tires	35-3		
Tires and wheels			
Rear Wheel Nut Torque	50-5		
Tool Box	90-2		
Tooth Concave Closure Plates	65-5, 65-7		
Towing the Combine	45-5		
Transmission			
Oil Change	115-5		
Transmission Oil	115-5		
Transmission Speed Ratio Code	20-12		
Transport Information	45-3		
Transporting Under Own Power	45-4		
Triple Hydraulic Pump	110-3		
Tubeless Tires	50-1		
Turn Signal Indicator Light	25-6		
Turn Signal Lever	25-6		
Type Plates	135-1		

U

Unloading Auger	
Adjusting Auger Drive Chain	100-15
Use Genuine John Deere Parts	80-11
Using a Booster Battery	105-3
Using Compressed Air	95-1
Using Hazard Warning Lights	25-6

W

Warming Up Engine	40-3

John Deere Keeps You On The Job

John Deere Parts

We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.



DX,IBC,A -19-04JUN90-1/1

TS100 -UN-23AUG88

The Right Tools

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.



DX,IBC,B -19-04JUN90-1/1

TS101 -UN-23AUG88

Well-Trained Technicians

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!



DX,IBC,C -19-04JUN90-1/1

TS102 -UN-23AUG88

Prompt Service

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.



DX,IBC,D -19-04JUN90-1/1

TS103 -UN-23AUG88

John Deere Keeps You On The Job