

214G (1250—), 20KG, 25KG AND 30KG HIGH-PRESSURE WASHERS



JOHN DEERE

OPERATORS MANUAL

**214G (1250—), 20KG, 25KG AND
30KG HIGH-PRESSURE WASHERS**

OMTY21674 Issue J5 English

**John Deere Merchandise Division
OMTY21674 Issue J5**

LITHO IN U.S.A.
ENGLISH



Y
C
D



J 5
4
7
6
1
Y
T
O

Introduction

THANK YOU for purchasing a John Deere product.

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages. (See your John Deere dealer to order.)

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction the machine or implement will travel when going forward.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.



214G Illustrated



20KG Illustrated



25KG Illustrated

-UN-25OCT95

TYB2850

-UN-25OCT95

TYB2851

-UN-25OCT95

TYB2750

Contents

	Page		Page
Safety	1	Gun and Nozzle Operation—214G, 20KG	
Safety Signs	7	Gun and Nozzle Control	29
Controls	9	Adjust Spray Pattern	30
Assembly—Model 214G-20KG		Gun and Nozzle Operation—25KG, 30KG	
Remove from Carton	12	Locking Gun Trigger	31
Assembly—25KG and 30KG		Changing Nozzle	31
Remove from Carton	14	Selecting the Proper Nozzle	32
Preparing Washer		15° Nozzle—Yellow	32
Add Oil to Engine	15	0° Nozzle—Red	32
Engine Oil	15	25° Nozzle—Green	33
214G	15	40° Nozzle—White	33
20KG, 25KG and 30KG	16	Cleaning Without Chemicals or	
Filling Fuel Tank	16	Detergents	33
Inlet Water Supply Requirements	17	Adjusting Water Pressure	33
Install Pump Dipstick	18	Chemical System Operation	
Connect Hoses and Prime Pump	19	Chemical Usage Guide	34
Installing Nozzle Wand	20	Cleaning With Cleaning Solution	35
Installing Nozzle	20	Shut-Down	36
Operation—214G		Fuels and Lubricants	
Before Operating	21	Fuel	37
Starting Engine	22	Filling Fuel Tank	37
Stopping the Engine	22	Engine Oil	38
Operation—20KG		Troubleshooting	39
Before Operating	23	Engine Service—214G	
Starting Engine	24	Maintenance Chart	42
Stopping Engine	25	Servicing Air Cleaner	42
Operation—25KG, 30KG		Checking Engine Oil	43
Before Operating	26	Engine Oil	43
Starting Engine	27	Changing Engine Oil	44
Stopping Engine	28	Cleaning and Gapping Spark Plug	44
		Engine Service—20KG, 25KG and 30KG	
		Maintenance Chart	45
		Service Air Filters	45
		Checking Engine Oil	47

Continued on next page

All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

OMTY21674 J5-19-26OCT95

COPYRIGHT© 1995
DEERE & COMPANY
Moline, Illinois
All rights reserved
A John Deere ILLUSTRATION™ Manual

Page

Changing Engine Oil	48
Cleaning and Gapping Spark Plug	49
Clean Fuel Filter	50

Pump Maintenance

Checking Water Pump Oil	51
Changing Water Pump Oil	52
Cleaning Inlet Water Screen	52
Cleaning Siphon Hose Strainers	53
Cleaning Adjustable Fan Shutters	54
Servicing the Nozzle	55

Storage

Storing the Washer	56
Removing Washer from Extended Storage	57

Accessories

Chemical Valve	58
Foamer	58
High Pressure Hoses	58
Gauge	58
Wand Extension	59
Hand Brush	59
Floor and Wall Brush	59
Rotating Brush	59
Rotating Nozzle	60
Angled Nozzle Wand	60
Sandblast Attachment	60
Water Filter	60
All-Purpose Cleaner	61
Surface Preparation	61
Degreasing	61
Spray Wax	61
Rust-Inhibiting Antifreeze	62
Plus-4 Motor Oil	62
Gasoline Conditioner and Stabilizer	62
HY-GARD®	62
Detergent Booster	63

Specifications

Specifications	64
Record Serial Number	64

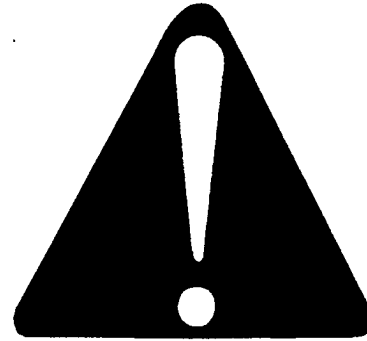
Index

Safety

RECOGNIZE SAFETY INFORMATION

This is the 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 -19-03MAR93

T81389 -UN-07DEC88

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

TS187 -19-30SEP88

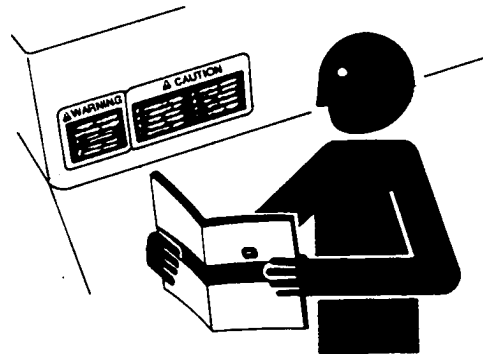
FOLLOW SAFETY INSTRUCTIONS

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

TS201 -UN-23AUG88



PROTECT PEOPLE AND PETS

Keep people and pets out of the area where you are using the high pressure washer.

Do not let children operate high pressure washer.

TY,93SA,A1 -19-12MAR92

INSPECT HIGH PRESSURE WASHER

Be sure all covers, guards, and shields are in place.

Locate all operating controls and safety labels.

Keep all hardware and plumbing fittings tight.

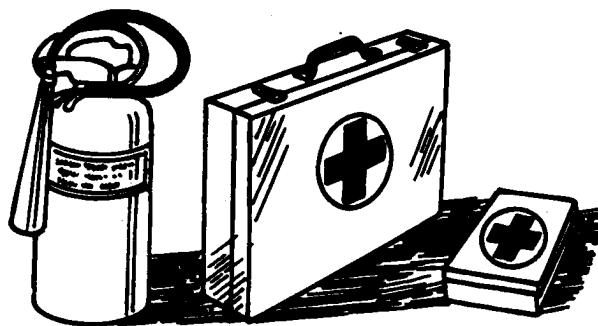
TY,101SA,A -19-12MAR92

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.



DX,FIRE2 -19-03MAR93

TS291 -UN-23AUG88

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.



DX,FIRE1 -19-03MAR93

TS202 -UN-23AUG88



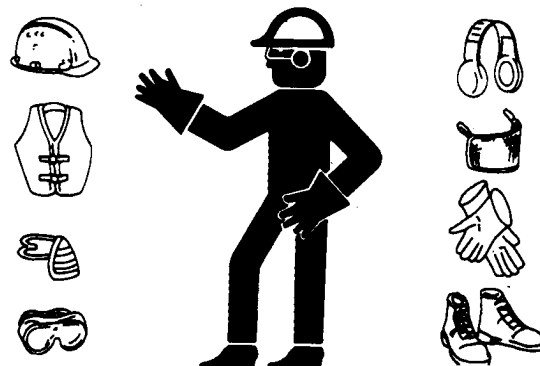
WEAR PROTECTIVE CLOTHING

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

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

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



TS206 -UN-23AUG88

DX,WEAR -19-10SEP90

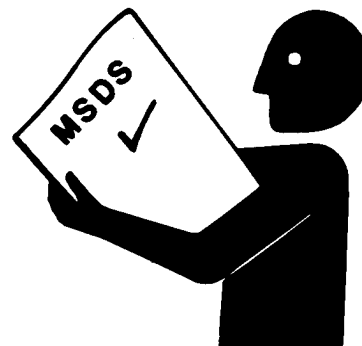
HANDLE CHEMICAL PRODUCTS SAFELY

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



TS1132 -UN-26NOV90

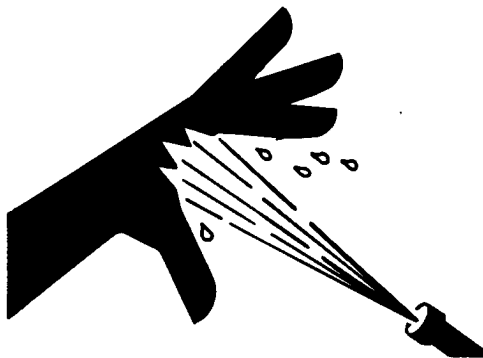
DX,MSDS,NA -19-03MAR93



PROTECT AGAINST HIGH PRESSURE SPRAY

Spray from high pressure nozzles can penetrate the skin and cause serious injury. Keep spray from contacting hands or body.

If an accident occurs, see a doctor immediately. Any high pressure spray 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.



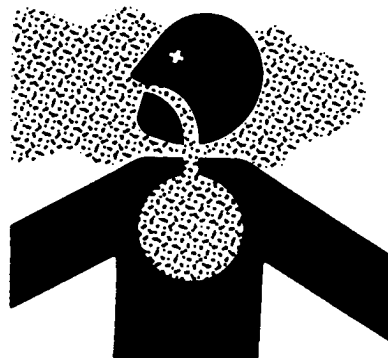
DX,SPRAY -19-16APR92

TS1343 -UN-18MAR92

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 -19-04JUN90

TS220 -UN-23AUG88



MISCELLANEOUS SAFETY PRECAUTIONS

Read this Operator's Manual before using the high pressure washer.

Be aware of the surrounding environment.

Do not direct spray toward any part of the body.

Clear area of people and pets.

Do not allow children or untrained persons to operate the washer.

Be alert. Do not allow yourself to be distracted. Misdirected spray can cause serious injuries and damage.

Do not spray electrical switches, receptacles, or light bulbs, or glass and fragile objects that may shatter.

Do not "lock" trigger in the open position.

Be sure all quick connect fittings are locked to prevent accidental uncoupling.

Do not operate washer if fuel, pump oil, or water leaks are visible. Resume operation ONLY after washer has been inspected and repaired.

Always wear eye protection when using washer. Wear all-rubber footwear to help provide electrical insulation. Wear other appropriate protective clothing such as rubber gloves, respirator, etc. that is applicable to the cleaning operation.

Do not modify or alter washer in any manner not described in the Operator's Manual.

Do not leave washer unattended until it is completely cooled down, pressure is relieved.

TY21674,A -19-11JAN94



SERVICE HIGH PRESSURE WASHER SAFELY

Before servicing washer, disconnect power supply, relieve water pressure, and allow unit to cool down.

Service washer in a clean dry flat area. Block wheels to prevent unit from rolling.

TY,89SA,J -19-12MAR92

CLEANING DETERGENT PRECAUTIONS

Know the detergent being used. Be prepared to tell a physician exactly what you are using in the event of an emergency. Read all chemical labels and follow all instructions exactly regarding preparation, use, safety, transportation, and disposal. Keep all chemicals out of the reach of children, pets, and livestock.

NEVER spray combustible liquids of any kind.

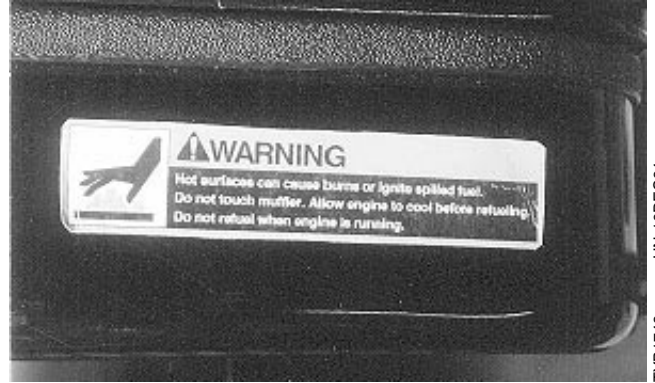
Do not use highly corrosive chemicals or acid-type cleaners with this washer.

TY,89SA,G -19-12MAR92

Safety Signs

Locations:

- 214G—Top of starter housing
- 20KG—Top of fuel tank
- 25KG—Top of belt guard
- 30KG—Top of belt guard



TYB1748 -UN-16DEC94

OM21674,A -19-19DEC94

Location:

- 214G—Side of fuel tank



TYB1788 -UN-10JAN94

TY,SS,B -19-11JAN94

Locations:

- 214G—Top of air filter cover
- 20KG—Left side of fuel tank



TYB1745 -UN-22DEC93

TY,SS,C -19-11JAN94

Location:

- 25KG—Front of belt guard near handle
- 30KG—Front of belt guard near handle

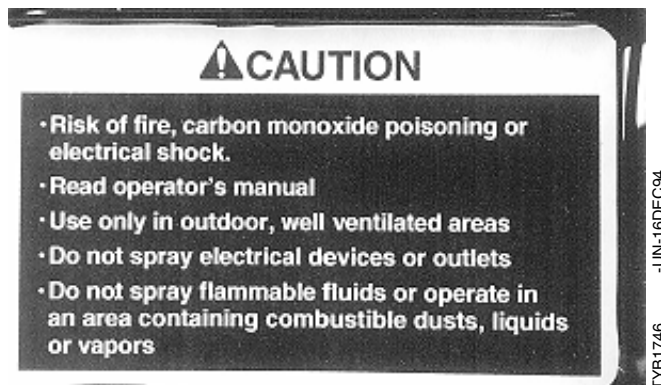


TYB1747 -UN-10JAN94

OM21674,B -19-19DEC94

Locations:

- 214G—Left side of cart on engine mounting plate
- 20KG—Left side of cart on engine mounting plate
- 25KG—Side of belt guard by pump
- 30KG—Side of belt guard by pump

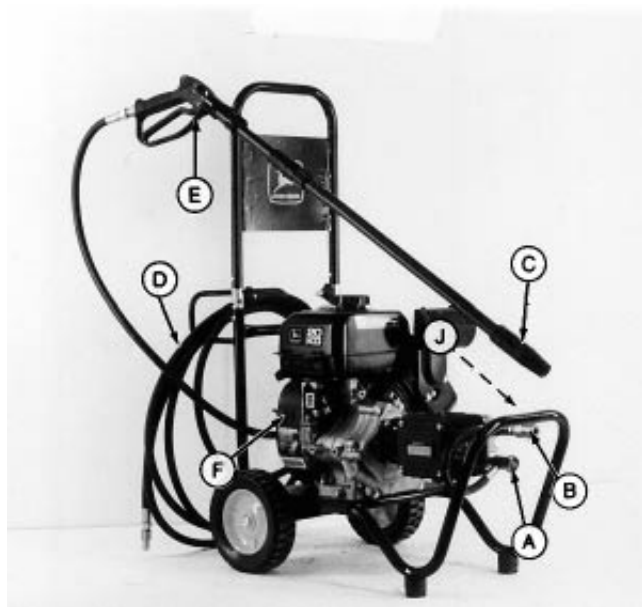


OM21674,C -19-19DEC94

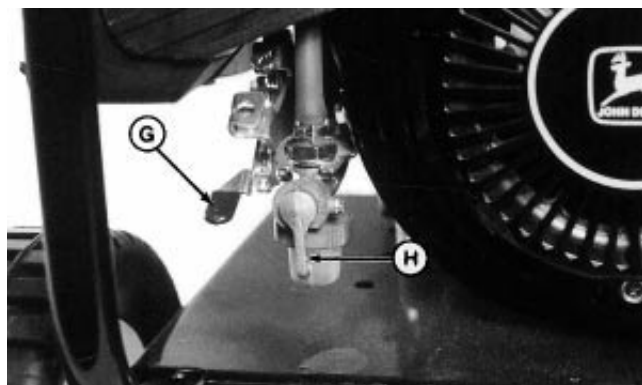
Controls

20KG

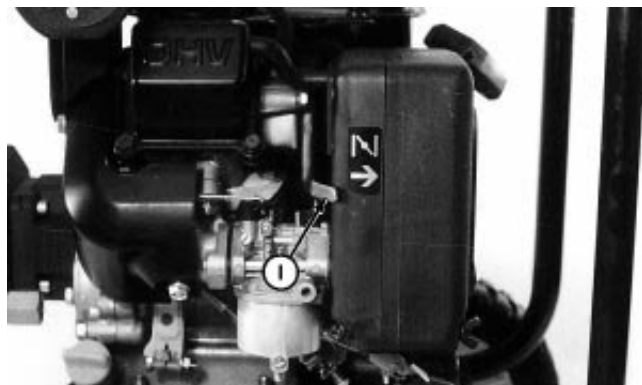
- A—Water Supply Inlet
- B—High Pressure Outlet
- C—Nozzle
- D—High Pressure Hose
- E—Gun
- F—Engine ON-OFF Switch
- G—Throttle
- H—Fuel Shut-Off
- I—Choke
- J—Pressure Adjusting Knob



TYB2751 -UN-18OCT95



TYB2752 -UN-12OCT95



TYB2753 -UN-12OCT95

OM21674,E -19-26OCT95

214G

- A—Water Supply Inlet
- B—High Pressure Outlet
- C—Nozzle
- D—High Pressure Hose
- E—Gun
- F—Throttle
- G—Choke
- H—Pressure Adjusting Knob



TYB2754 -UN-18OCT95

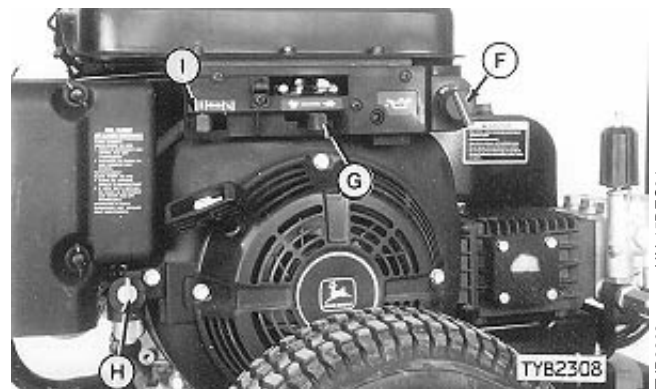
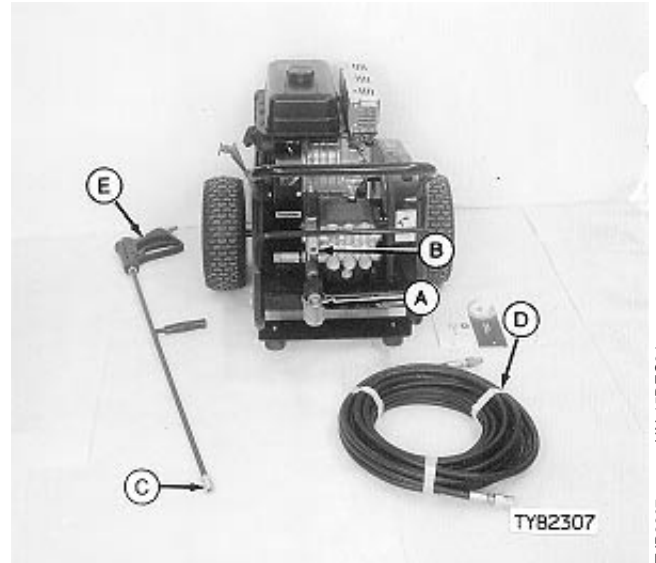


TYB2755 -UN-18OCT95

21674OMA,A -19-26OCT95

25KG AND 30KG

- A—Water Supply Inlet
- B—High Pressure Outlet
- C—Nozzle
- D—High Pressure Hose
- E—Gun
- F—Engine On-Off Switch
(30KG Only)
- G—Throttle
- H—Fuel Shut-Off
- I—Choke
- J—Pressure Adjusting
Knob



OM21674,D -19-26OCT95

Assembly—Model 214G-20KG

REMOVE FROM CARTON

1. Check the carton to verify contents.

Carton contains the engine and pump mounted on the cart, high pressure hose, gun, nozzle end of wand and operator's manual.

2. Remove and discard carton.

IMPORTANT: Unit is shipped **WITHOUT** engine oil.
DO NOT operate until engine is filled
with proper quantity and quality of oil.



TYB2756 -UN-18OCT95

216740M,A -19-26OCT95

3. Fill engine with proper amount and type of engine oil. See “Service”.
4. Check that water inlet filter screen is in place and not damaged.
5. Install remaining hoses, gun, and nozzle wand as required. See “Preparing the Washer” Section.
6. Loosen handle knobs (A) and rotate handle up to a comfortable position. Tighten handle knobs.



TYB2757 -UN-18OCT95



TYB2758 -UN-18OCT95

216740M,B -19-26OCT95

Assembly—25KG and 30KG

REMOVE FROM CARTON

1. The 25KG and 30KG are shipped assembled on a pallet.
2. Remove and discard shipping container.
3. Check engine oil. See “Service”.
4. Check that water inlet filter screen is in place and not damaged.
5. Install remaining hoses and gun as required. See “Preparing Washer” Section.



25KG Illustrated

OM21674,F -19-19DEC94

TYB1764 -UN-1QJAN94

Preparing Washer

ADD OIL TO ENGINE

IMPORTANT: The 214G and 20KG are shipped without engine oil. DO NOT operate until engine is filled with proper quantity and quality of oil. The 25KG and 30KG are shipped with engine oil.

OM21674,G -19-19DEC94

ENGINE OIL

Use oil viscosity based on the expected air temperature range during the period between oil changes.

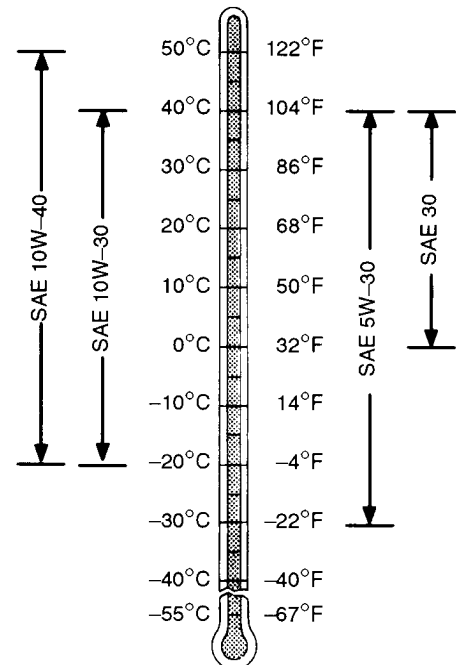
The following oils are preferred:

- John Deere TURF-GARD™
- John Deere PLUS-4®

Other oils may be used if they meet one or more of the following:

- API Service Classification SH
- API Service Classification SG
- CCMC Specification G4
- CCMC Specification G5

Arctic oils (such as Military Specification MIL-L-46167B) may be used at temperature below -30°C (-22°F).

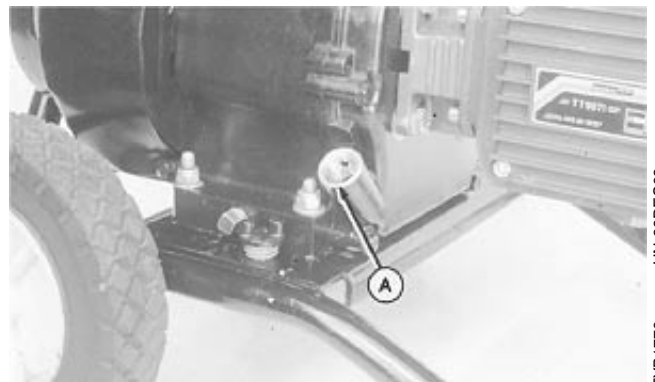


TS1624 -UN-07NOV94

DX,ENOIL2 -19-01DEC94

214G

Remove oil filler cap. Fill with oil to top of threads (A) (0.63 qt—0.6 L). Install filler cap.



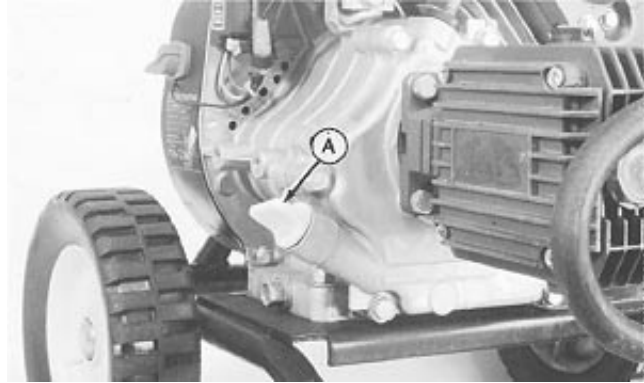
TYB1776 -UN-22DEC93

TY21674,I -19-11JAN94

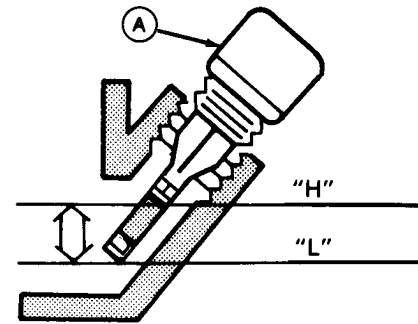
20KG, 25KG AND 30KG

(20KG Only) Remove filler plug (A). Add oil to engine (0.6 qt—0.55 L). Insert plug into filler hole but **DO NOT** screw it in. Oil level should be between H and L on dipstick.

The 25KG and 30KG are shipped with engine oil. Check to be certain oil is at proper level.



TYB1693 -UN-30NOV93



TYB1768 -UN-22DEC93

OM21674,H -19-19DEC94

FILLING FUEL TANK

CAUTION: Do not add fuel while washer is hot or running. Do not smoke when filling fuel tank.

Slowly fill the fuel tank (A) with lead free gasoline.

Fuel Tank Capacity

214G	0.75 gal (2.86 L)
20KG	0.9 gal (3.4 L)
25KG	1.6 gal (6 L)
30KG	1.7 gal (6.4 L)



20KG Illustrated

TYB1769 -UN-22DEC93

OM21674,I -19-19DEC94

INLET WATER SUPPLY REQUIREMENTS

1. Inlet water supply must be at a minimum of 20 psi (1.4 bar).
2. Inlet water flow must be at least 125% of pump rated flow (see table below). Check volume by timing how long it takes to fill a 5 or 6 gal. (19 or 23 L) container.
3. Water supply hose should be a good grade of garden hose with a minimum I.D. 5/8 in. (16 mm) and no longer than 50 ft. (15.24 m). If long supply hose must be used, check to be certain flow is at least 4 gpm (15.14 L/min).
4. If non-pressurized (static draw) water supply is used, check to be certain flow is at least 125% of pump rated flow (see table below).
5. Adding supply hose extensions will reduce water flow rates. Check for required water flow for each supply extension added.

IMPORTANT: Inlet water temperature must not be more than 125° F (60°C). Damage to the pump may result.

NOTE: Use of water filter TY8342 (accessory) is highly recommended for washers used with rural wells or static draw water supply.

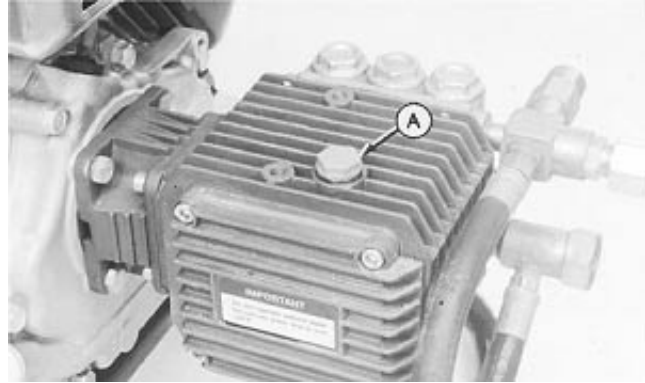


TY14625 -UN-23FEB89

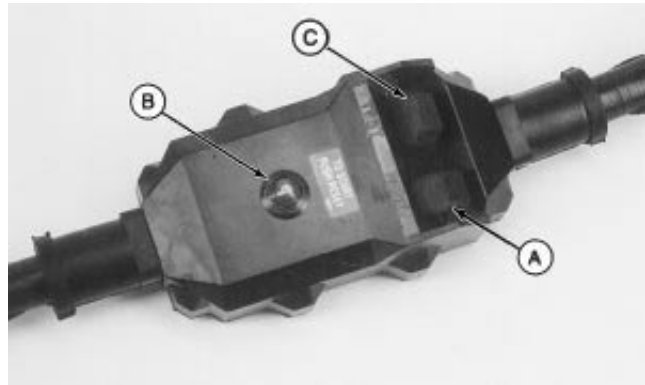
Washer	Rated Flow (GPM)	GPM Supply Required
214G	2.8	3.5
20KG	2.8	3.5
25KG	3.6	4.5
30KG	3.9	4.9

INSTALL PUMP DIPSTICK

Remove shipping plug (A) and install threaded adapter (B) and dipstick (C) into pump.



TYB1780 -UN-10JAN94



TYB2759 -UN-03OCT95

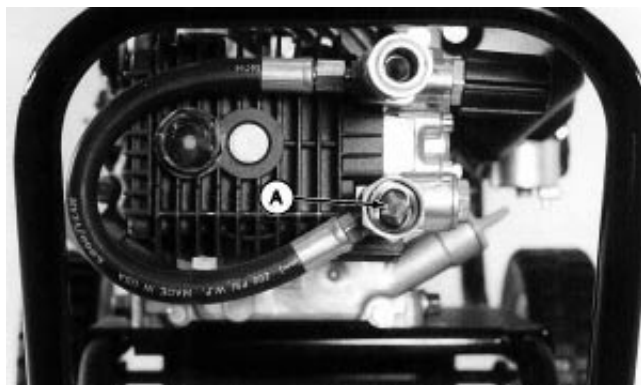
21674OM,C -19-26OCT95

CONNECT HOSES AND PRIME PUMP

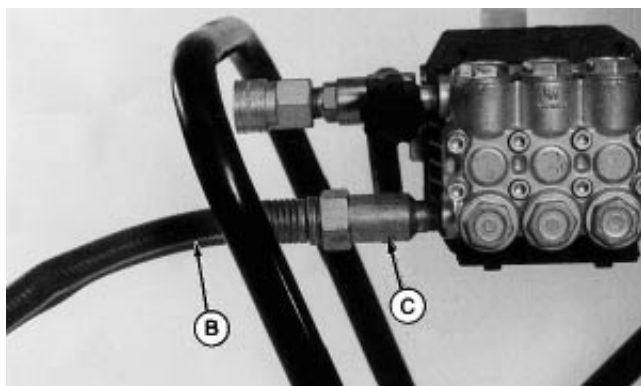
NOTE: The 20KG is illustrated. Procedure is the same for the 214G, 25KG and 30KG.

IMPORTANT: Be sure that inlet water screen (A) is in place before connecting water supply hose. The water pump and valves could be damaged from contaminants.

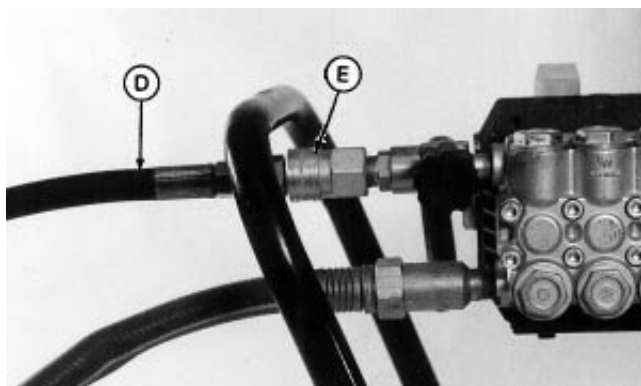
1. Prime water supply hose, shut off water.
2. Connect water supply hose (B) to washer inlet (C). Be sure water supply and hose meet specifications. Do not turn water on at this time.
3. Connect high pressure hose (D) to quick-connect fitting (E). Give hose a slight tug to be sure hose is connected.
4. (214G and 20KG) Use TEFLON® pipe tape and install hose to gun. Pipe tape or sealant should be used each time hose is connected to gun.
5. (25KG and 30KG) Connect pressure hose to gun.
6. Open water supply. Squeeze trigger on gun. Allow water to run (without engine running) until water runs out pressure hose. Start engine and cycle trigger on gun until "crackling" sound (air in lines) stops. Turn off water supply.
7. For static draw water supply or low pressure water supply systems, remove pressure hose from pump outlet and start and run engine until smooth water flow from outlet quick connect occurs. Do not run for more than 3 minutes without water flow from pump. If pump will not draw from water supply after 3 minutes, supply may be inadequate.



TYB2780 -UN-18OCT95



TYB2781 -UN-18OCT95



TYB2782 -UN-18OCT95

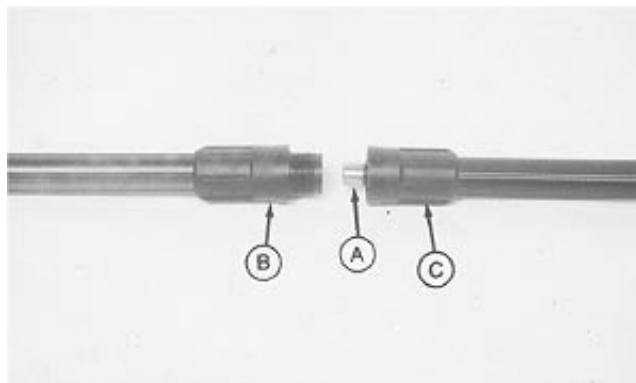
TEFLON is a trademark of the DuPont Company.

OM21674,K -19-26OCT95

INSTALLING NOZZLE WAND—214G, 20KG

CAUTION: To avoid injury from escaping fluids under pressure, relieve the pressure in the system by stopping the washer and depressing gun trigger. Lock trigger before changing or adjusting nozzle.

1. Insert inner tube of wand (A) into gun (B).
2. Turn threaded collar (C) on wand down on gun threads to attach wand.
3. When changing accessories, the wand is disconnected here and the accessory is connected to that point.



TYB1756 -UN-22DEC93

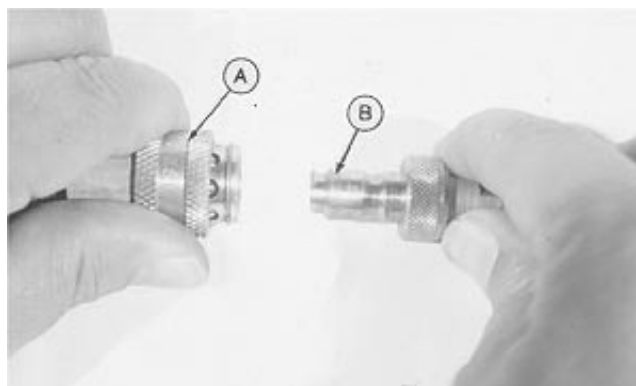
TY,PW,C -19-11JAN94

INSTALLING NOZZLE—25KG, 30KG

CAUTION: To avoid injury from escaping fluids under pressure, relieve the pressure in the system by stopping the washer and depressing gun trigger. Lock trigger before changing or adjusting nozzle.

Be sure nozzle is tightly attached before operating to help prevent nozzle from being propelled.

1. Retract locking ring (A) of quick-connect fitting and insert male quick-connect fitting of nozzle (B).
2. Push ring forward and lock nozzle in place. Be sure nozzle is fastened to wand.



TY14628 -UN-23FEB99

OM21674,L -19-19DEC94

Operation—214G

BEFORE OPERATING

1. Check engine oil and fuel. See “Fuel and Lubricants”.
2. Check water pump oil level and make sure red shipping plug has been replaced with vented plug.
3. Open water supply completely.
4. Check all hose connections.
5. Check hoses for kinks.

TY,OP,AA -19-11JAN94

STARTING ENGINE

CAUTION: Do not run engine in an enclosed area. Exhaust gas contains carbon monoxide, an odorless and poisonous gas.

1. Set throttle control lever (A) to “FAST” position.
2. Move choke control lever (B) to “CHOKE” position.

NOTE: A warm engine requires less choking than a cold engine.

3. Place foot on washer frame.
4. Point nozzle away from people, animals or fragile materials and squeeze gun trigger.
5. Pull recoil starter until engine starts.

IMPORTANT: To avoid loss of lubrication to the engine, operate engine on a level surface. Do not exceed a 15° slope.

6. As engine starts to falter, move choke control lever (B) to “RUN” position. If washer is not immediately used, speed control lever can be placed in “IDLE” position.

IMPORTANT: To prevent possible pump damage, do not allow washer pump to run in bypass (with gun trigger released) for longer than 3 minutes.



TY21674,T -19-26OCT95

STOPPING THE ENGINE

1. Run engine at “IDLE” 2 or 3 minutes.
2. Move speed control lever (A) to “OFF”.



TY21674,BA -19-26OCT95

Operation—20KG

BEFORE OPERATING

1. Check engine oil and fuel. See “Fuel and Lubricants”.
2. Check water pump oil level and make sure red shipping plug has been replaced with vented plug.
3. Open water supply completely.
4. Check all hose connections.
5. Check hoses for kinks.

TY,OP,AA -19-11JAN94

STARTING ENGINE

CAUTION: Do not run engine in an enclosed area. Exhaust gas contains carbon monoxide, an odorless and poisonous gas.

1. Turn switch (A) to “ON” position.
2. Set throttle control lever (B) to the halfway position as illustrated.
3. Turn fuel valve (C) to “ON” position.
4. Move choke control lever (D) to choke position as illustrated.

NOTE: A warm engine requires less choking than a cold engine.

5. Place foot on washer frame.
6. Point nozzle away from people, animals or fragile materials and squeeze gun trigger.
7. Pull recoil starter until engine starts.

IMPORTANT: To avoid loss of lubrication to the engine, operate engine on a level surface. Do not exceed a 25 degree slope or automatic low oil switch will stop engine.

8. As engine starts to falter, move choke control lever to “OPEN” position. If washer is not immediately used, speed control lever can be placed in “IDLE” position.
9. Move throttle control to the wide open position when ready to use the washer.

IMPORTANT: To prevent possible pump damage, do not allow washer pump to run in bypass (with gun trigger released) for longer than 3 minutes.



TYB1694 -UN-30NOV93



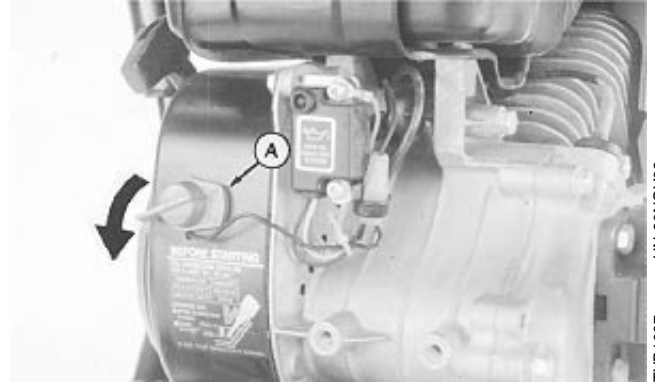
TYB2786 -UN-18OCT95



TYB2753 -UN-12OCT95

STOPPING THE ENGINE

1. Run engine at “IDLE” (A) 2 or 3 minutes.
2. Move ON—OFF control switch (A) to “OFF”.



TY21674,P -19-11JAN94

TYB1697 -UN-30NOV93

Operation—25KG, 30KG

BEFORE OPERATING

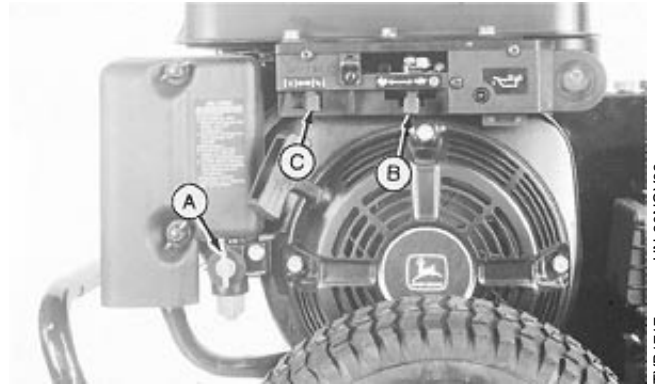
1. Check engine oil and fuel. See “Fuel and Lubricants”.
2. Check water pump oil level and make sure red shipping plug has been replaced with vented plug.
3. Open water supply completely.
4. Check all hose connections.
5. Check hoses for kinks.

TY,OP,AA -19-11JAN94

STARTING ENGINE

1. Turn ON-OFF switch to ON (30KG Only).
2. Open fuel valve (A).
3. Move the speed control lever (B) to the halfway position.
4. Move choke lever (C) to choke position.

NOTE: A warm engine requires less choking than a cold engine.



25KG Illustrated

5. Place foot on washer frame.
6. Point nozzle away from people, animals or fragile materials and squeeze gun trigger.
7. Pull recoil starter until engine starts.

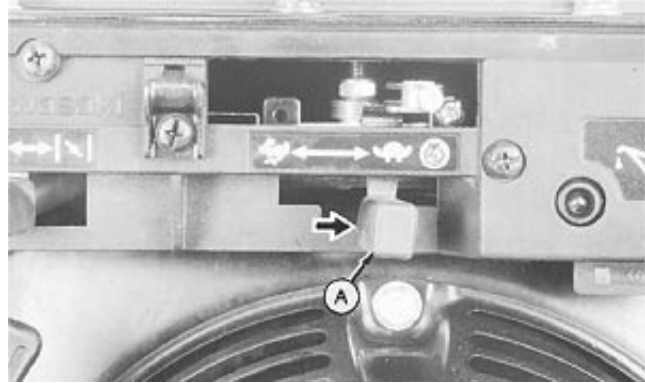
IMPORTANT: To avoid loss of lubrication to the engine, operate engine on a level surface. Do not exceed a 25 degree slope or low oil shut-off switch will stop engine.

8. As engine starts to falter, move choke lever (C) to open position. If washer is not immediately used, speed control lever can be placed in "IDLE" position.
9. Move throttle control to the wide open position when ready to use washer.

IMPORTANT: To prevent possible pump damage, do not allow washer pump to run in bypass (with gun trigger released) for longer than 3 minutes.

STOPPING THE ENGINE

1. Run engine at idle for 2 or 3 minutes.
2. (25KG) Move speed control (A) lever to “STOP” position.
3. (30KG) Turn ON-OFF switch to “OFF” position.



OM21674,N -19-19DEC94

TYB1718 -UN-30NOV93

Gun and Nozzle Operation—214G, 20KG

GUN AND NOZZLE CONTROL

CAUTION: High pressure spray can cause serious injury. Keep away from spray. Never point the gun at yourself or anyone else. Never put your hand, fingers, eyes, or body directly over spray. Do not point spray toward fragile materials.

CAUTION: Gun trigger should be locked when not in use or whenever adjustments are being made to gun or nozzle. This will help prevent accidental discharge of high pressure fluid.

Engage safety lock (A) when not using gun.

Do not adjust spray with gun trigger engaged.

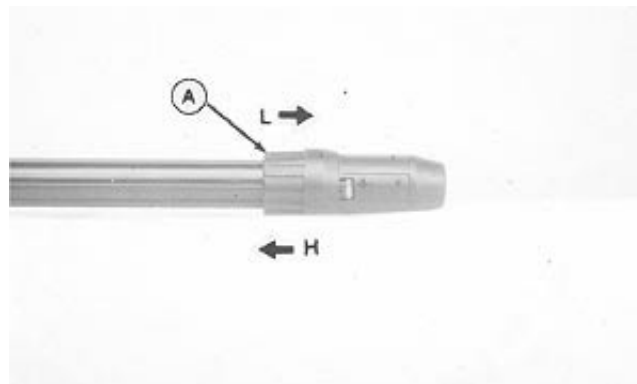


TY16012 -UN-17JAN92

TY21674,U -19-11JAN94

1. For chemical or low pressure spray, move collar (A) forward. Nozzle will produce low pressure and will draw chemical if the chemical valve is open.

2. For a high pressure spray, move the collar rearward.

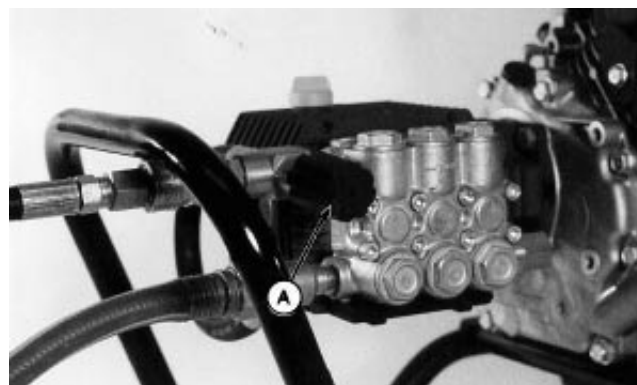


TYB1711 -UN-30NOV93

TY21674,V -19-11JAN94

3. In the high pressure spray position, water pressure can be varied by turning the pressure adjusting knob (A).

4. Turn knob clockwise to increase pressure and counterclockwise to decrease pressure.



TYB2788 -UN-18OCT95

TY21674,W -19-26OCT95

ADJUST SPRAY PATTERN

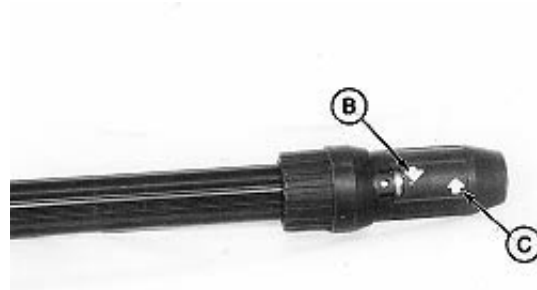
The spray pattern can be adjusted in either low pressure or high pressure positions.

1. For a narrow stream (A), turn the nozzle end clockwise (B) (arrows highlighted for photo purposes).
2. For a fan spray, turn nozzle end counterclockwise (C).



-UN-17JAN92

TY16030

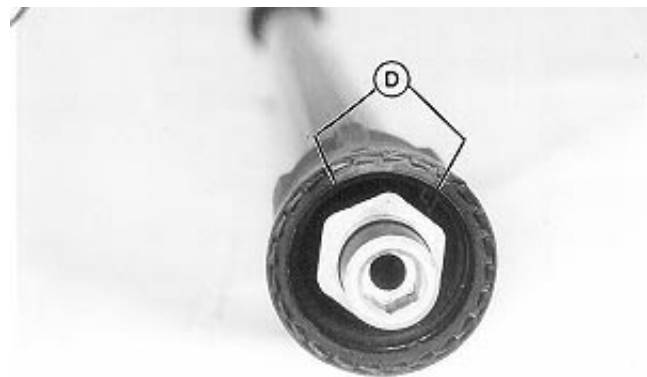


-UN-22NOV94

TYB2521

SPECIFICATIONS

Model	Nozzle Size	Wand Length	Wand Color Code (D)	Nozzle Color Code (Bold Arrow)
214G	.057 in. (1.275 mm)	27 in. (686 mm)	Yellow	Yellow
20KG	.051 in. (1.3 mm)	27 in. (686 mm)	Orange	Orange



-UN-22NOV94

TYB2514



-UN-22NOV94

TYB2520

Alternate Style Washer Wand

Gun and Nozzle Operation—25KG, 30KG

LOCKING GUN TRIGGER

CAUTION: Gun trigger should be locked when not in use or whenever adjustments are being made to gun or nozzle. This will help prevent accidental discharge of high pressure fluid.

1. Pivot lock (A) down to prevent trigger engagement.
2. Pivot lock up to release trigger.



TY,103PW,D3 -19-08MAR92

TY16052 -UN-20FEB92

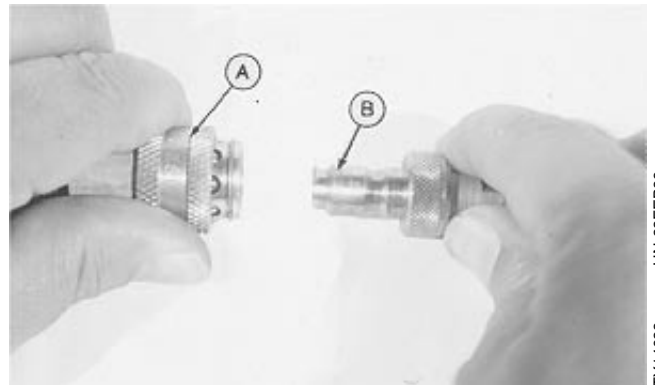
CHANGING NOZZLE

CAUTION: High pressure spray can cause serious injury. Keep away from spray. Never point the gun at yourself or anyone else. Never put your hand, fingers, eyes, or body directly over spray. Do not point spray toward fragile materials.

CAUTION: To avoid injury from escaping fluids under pressure, relieve the pressure in the system by stopping the washer and depressing gun trigger. Lock trigger before changing or adjusting nozzle.

Be sure nozzle is tightly attached before operating to help prevent nozzle from being propelled.

1. Retract locking ring (A) of quick-connect fitting and remove nozzle (B).
2. Insert nozzle and push ring forward and lock nozzle in place. Be sure nozzle is fastened to wand.



TY,GNO,A -19-11JAN94

TY14628 -UN-23FEB89

SELECTING THE PROPER NOZZLE

Pressure and volume are partially determined by the size of the orifice in the nozzle. Standard numbers are stamped on the nozzles to indicate orifice size and angle of notch. The angle determines the spray pattern.

TY,GNO,B -19-11JAN94

15° NOZZLE—YELLOW

This nozzle provides a chiseling effect suitable for surface preparation. The spray should be directed at a 45° angle to the surface. Recommended uses are:

- Removing peeling paint
- Removing mildew stains



TY,GNO,C -19-11JAN94

0° NOZZLE—RED

The nozzle is a blasting nozzle, delivering a concentrated stream of water.

IMPORTANT: Care must be used to avoid gouging wood or damaging fragile surfaces.

Recommended uses are as follows:

- Removing stains from concrete, masonry, aluminum and steel
- Remove weeds from sidewalk cracks
- Remove caked-on mud from equipment
- Clean lawn mower under deck



TY,GNO,D -19-11JAN94

25° NOZZLE—GREEN

This is a flushing nozzle. It produces a brush effect with a narrower spray pattern and more concentrated spray pressure. Recommended uses are:

- Wet-Sweeping leaves from walks and drives
- Cleaning stable floors
- Cleaning swimming pool bottoms
- Cleaning barbeque grill



TY,GNO,E -19-11JAN94

TYB1796 -UN-10JAN94

40° NOZZLE—WHITE

This nozzle is a general purpose nozzle with a wide angle spray pattern. It is recommended for rinsing and light cleaning. Uses are as follows:

- Cleaning windows and aluminum siding
- Vehicles (normal road dirt)
- Cleaning sidewalks, drives and patios



TY,GNO,F -19-11JAN94

TYB1794 -UN-10JAN94

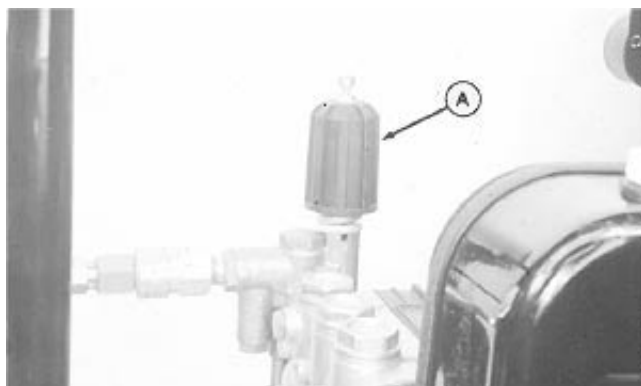
CLEANING WITHOUT CHEMICALS OR DETERGENTS

Because your washer provides a high pressure spray and a choice of spray patterns, there are many cleaning and maintenance jobs that can be done without the use of detergents or chemicals.

TY,101OP,E -19-12MAR92

ADJUSTING WATER PRESSURE

Turn knob (A) clockwise to increase pressure and counterclockwise to decrease pressure.



TY,GNO,J -19-11JAN94

TYB1767 -UN-22DEC93

Chemical System Operation

CHEMICAL USAGE GUIDE



CAUTION: Use detergents and chemicals carefully. Read labels thoroughly and follow all instructions for preparation, use, safety, transportation and disposal. Be prepared to tell a physician exactly what chemicals you are using in the event of an emergency. Keep all chemicals out of reach of children.

Be aware that two chemicals or detergents can be mixed on the sprayed surface. In this regard, some chemicals may give off harmful fumes or start an unpredictable chemical reaction when mixed with another chemical.

NEVER SPRAY FLAMMABLE LIQUIDS such as gasoline, fuel oil, alcohol, naphtha, etc.

The washers are designed to dispense John Deere approved cleaners and degreasers.

IMPORTANT: Using chemicals other than John Deere approved cleaners and degreasers is **NOT recommended.**

If the use of chemicals other than those approved by John Deere is desired, be sure to read and follow all chemical labels exactly regarding preparation, use, safety, transportation, and disposal. Keep in mind that the detergent injector system further dilutes the chemical with water, and that some chemicals may not be concentrated enough to properly work with the system.

Some detergent may not give premix instructions and may require experimenting to determine proper dilution for your application.

If you are not familiar with the chemical or detergent, always test a small area of the surface to be cleaned for adverse reaction. Do this a day in advance. Thoroughly rinse area with water.

TY,101OP,J -19-12MAR92

CLEANING WITH CLEANING SOLUTION



CAUTION: Wear goggles, respirator, and protective clothing to help prevent injury from chemicals and spray.

1. Mix chemicals or detergent as instructed by the manufacturer.
2. Be sure that water supply is adequate and turned on fully.
3. Install chemical valve (accessory).
4. Insert siphon hose into cleaning solution. Be sure that hose is clear and fully submerged in solution.

IMPORTANT: The chemical system will work only if the nozzle is in the low pressure position or when a chemical nozzle is installed (25KG, 30KG).

5. Move nozzle end forward into the low pressure position (214G and 20KG). For 25KG and 30KG install soap nozzle.
6. Start washer and squeeze gun trigger. Chemical solution should flow up the clear siphon hose and the mixture should start to spray after the clear water spray. If it does not, check to make sure that injector hose is in the cleaning solution and not plugged. Siphon ratios may vary due to temperature and viscosity of detergent.
7. To help avoid streaking, apply solution to the lower surface and move up, using long overlapping strokes. Allow solution to soak for several minutes.

IMPORTANT: Remember that high pressure spray can gouge soft woods, damage other materials and loosen grout.

8. Slide nozzle end to the rear to place in high pressure position or install a pressure nozzle (25KG, 30KG). With the nozzle 6 to 10 inches (15 to 25 cm) and at an angle to the surface, power rinse the area from the top down.
9. If surface is not clean, repeat the above procedures.

IMPORTANT: To avoid damage and contamination with other chemicals, siphon a gallon (3.78 L) of clear water through the system after each use.

SHUT-DOWN

IMPORTANT: Shut-down procedures should be followed at the end of each cleaning operation.

1. If a chemical was used, place chemical inlet strainer in CLEAN water and operate trigger to spray water for a period of three minutes. This will flush the system of chemicals and help avoid the chemical valve sticking or corrosion.
2. Run engine at idle for 2—3 minutes. Stop engine and trigger gun to relieve pressure.
3. Turn inlet water supply off. Squeeze trigger momentarily to relieve pressure. Disconnect hoses.
4. Allow engine to cool, then wipe washer down with a damp cloth.

TY21674,Y -19-11JAN94

Fuels and Lubricants

FUEL

CAUTION: Do not fill fuel tank when washer is running or hot. Do not smoke when filling tank.

Use clean, fresh, lead-free gasoline. Do not use stale gasoline or gasoline that has been stored for a long time. Stale gasoline does not vaporize properly, causing hard starts. Use of TY15977 gasoline stabilizer is highly recommended. Use of leaded gasoline or gasohol is NOT recommended.

IMPORTANT: Do not mix oil with gasoline.

TY21674,Z -19-11JAN94

FILLING FUEL TANK

CAUTION: Handle fuel carefully:

- Stop engine and allow to cool before refueling.
- Fill tank outdoors.
- Do not smoke around fuel.
- Avoid spilling fuel. Do not overfill fuel tank.
- Wipe clean after refueling.
- Move from refueling area before starting.

IMPORTANT: Do not permit dirt or other foreign matter to enter the fuel system. This will cause hard starting, poor performance and engine damage. Always use clean fuel storage containers and funnels.



TYB1769 -UN-22DEC93

1. Wipe dust and dirt from around fuel tank (A). Remove cap and place in a clean area.
2. Fill tank to bottom of filler neck.
3. Install and tighten fuel cap.

TY21674,AA -19-11JAN94

ENGINE OIL

Use oil viscosity based on the expected air temperature range during the period between oil changes.

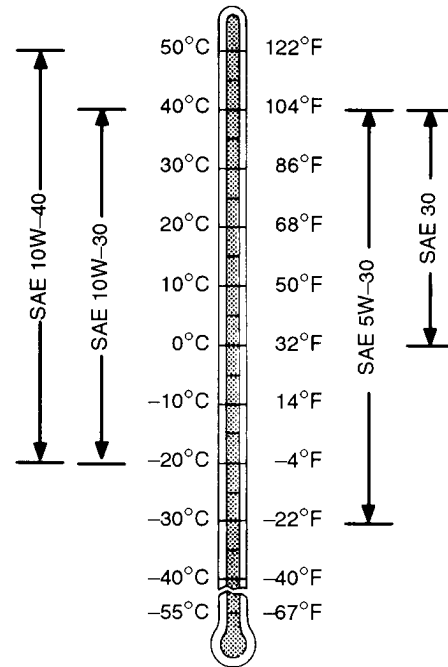
The following oils are preferred:

- John Deere TURF-GARD™
- John Deere PLUS-4®

Other oils may be used if they meet one or more of the following:

- API Service Classification SH
- API Service Classification SG
- CCMC Specification G4
- CCMC Specification G5

Arctic oils (such as Military Specification MIL-L-46167B) may be used at temperature below -30°C (-22°F).



DX,ENOIL2

-19-01DEC94

TS1624 -UN-07NOV94

Troubleshooting

Symptom	Problem	Solution
Pump Runs But There Is No Water Flow From Nozzle	Water is turned off	Check incoming water supply.
	Obstruction in nozzle	Clean or replace nozzle.
Pump Runs But Has Low Spray Pressure	Inadequate inlet water supply	Check size of water hose and provide specified inlet water volume and pressure.
	Chemical nozzle installed	Install pressure nozzle.
	Nozzle in soap position.	Slide collar backward.
	Air leak	Tighten connections.
	Foreign matter in pump valves	See your John Deere dealer
Pump Runs But There is Erratic, Fluctuating Pressure	Inadequate inlet water supply	Use larger I.D. size of hose and provide specified inlet water pressure and volume.
	Inlet water screen is clogged	Clean screen every 20 hrs. or as necessary
	Air entering water lines	Check inlet hose connection for tightness. Make sure metering control knob is off. Prime washer.
Water Flows from Nozzle When Trigger is Released	Gun malfunctioning	See your John Deere Dealer
Pump oil is white or milky color	Water in oil	Change oil. Avoid directing water spray at pump.
No Soap (Accessory)	Strainer plugged	Clean strainer
	Nozzle not in soap position	Slide collar forward
	Soap valve plugged	Use air pressure to clear or see your John Deere Dealer.
	Too many high pressure hose extensions	Use only one extension.
	Nozzle assembly restricted or plugged	Clean nozzle.
Water leaks from brass valve on pump	Heat valve opening to protect pump	Do not run washer with gun trigger closed for more than 3 minutes. Trigger gun to close valve.

Symptom	Problem	Solution
Engine Does Not Start	Fuel tank empty	Fill fuel tank
	Washer on too steep of slope.	Level washer. Low oil switch engaging (20KG, 25KG and 30KG)
	Low oil level causing low oil switch to engage (20KG, 25KG and 30KG)	Add oil
	Improper fuel	Use correct fuel.
	Old fuel	Use fresh fuel.
	Spark plug wire loose or disconnected	Connect spark plug
	Spark plug not gapped correctly	Check and set spark plug gap
	Spark plug bad	Install new spark plug
	Ignition parts bad	See your John Deere dealer.
Engine does not start and low oil light flickers while attempting to start (20KG, 25KG and 30KG)	Washer on too steep of slope	Level washer. Low oil switch engaging.
	Low oil level	Add oil, low oil switch engaging.
Engine Starts Hard or Loses Power	Dirt or water in fuel tank	Drain and clean fuel tank
	Fuel filter plugged (20KG, 25KG and 30KG)	Clean fuel filter.
	Vent in gas cap plugged	Clean vent or install new gas cap.
Engine Starts Hard or Loses Power	Air cleaner element dirty.	Clean or replace air cleaner element.
	Spark plug not gapped correctly	Check and set spark plug gap.
	Spark plug bad	Install new spark plug
	Ignition parts bad	See your John Deere dealer.
	Dirt or water in fuel tank	Drain and clean fuel tank.
	Fuel filter plugged (20KG, 25KG and 30KG)	Clean fuel filter
	Vent in gas cap plugged	Clean vent or install new gas cap

Continued on next page

Troubleshooting

Symptom	Problem	Solution
Engine Starts Hard or Loses Power	Air cleaner element dirty	Clean or replace air cleaner element.
	Spark plug not gapped correctly	Check and set spark plug gap
	Spark plug bad	Install new spark plug.
	Spark plug loose	Clean, regap and tighten spark plug
	Ignition parts bad	See your John Deere dealer.
Engine Runs Erratically	Cylinder exhaust ports plugged	See your John Deere dealer.
	Carburetor out of adjustment	See your John Deere dealer
	Fuel filter plugged (20KG, 25KG and 30KG)	Clean fuel filter
	Spark plug bad	Install new spark plug
	Spark plug not gapped correctly	Check and set spark plug gap
Engine Idles Poorly	Cooling fins are plugged	Clean cooling fins
	Air filter element dirty	Clean or replace element
	Carburetor out of adjustment	See your John Deere dealer
	Cooling fins plugged	Clean cooling fins
Engine Overheats	Blower housing or cooling fins plugged	Clean blower housing and cooling fins.

OM21674.Q -19-19DEC94

Engine Service—214G

MAINTENANCE CHART

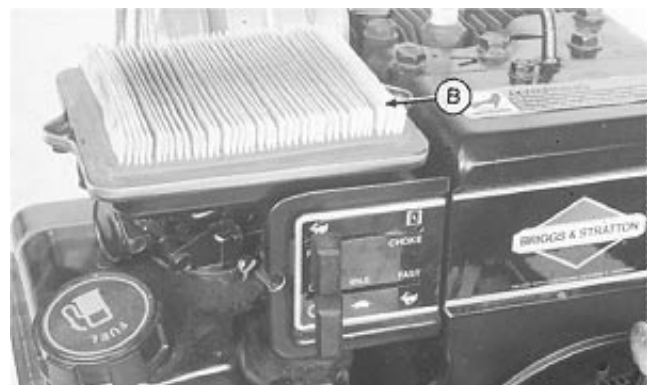
	Every 25 hrs.	Every 50 hrs.	Every 100 Hrs.	Every 250 Hrs.
Change Engine Oil	X			
Clean Air Filter		X		
Change Air Filter			X	
Clean and Gap Spark Plug	X			
Change Pump Oil	X*			X
Clean Inlet Water Screen	X			
Clean Siphon Hose Strainer	X			

*Perform oil change after first 25 hours of use and then at recommended intervals (250 hrs.).

TY21674,AD -19-26OCT95

SERVICING AIR CLEANER

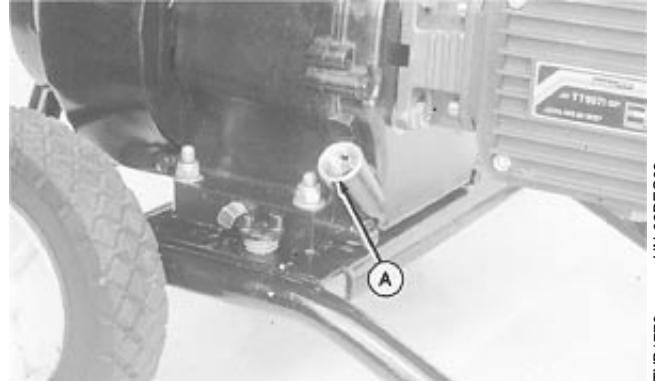
1. Remove screws (A) to remove cover.
2. Remove filter (B).
3. Clean filter by tapping gently on a flat surface. If very dirty, wash in liquid detergent. Rinse thoroughly with flowing water until water is clear.
4. Allow filter to air dry completely before using. DO NOT use pressurized air to dry.
5. Install air cleaner assembly in reverse order as removed.



TY21674,BC -19-11JAN94

CHECKING ENGINE OIL

1. Stop engine.
2. Place unit on level surface.
3. Remove oil filler cap.
4. Proper oil level is at the top of threads (A). Add oil if necessary.
5. Install and tighten cap.



TYB1776 -UN-22DEC93

TY21674,BD -19-11JAN94

ENGINE OIL

Use oil viscosity based on the expected air temperature range during the period between oil changes.

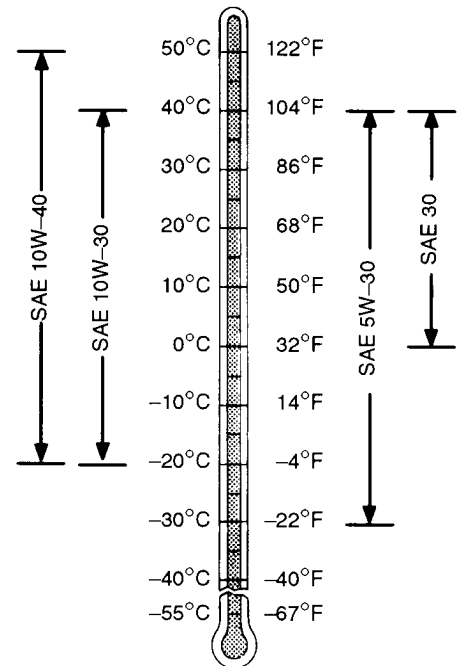
The following oils are preferred:

- John Deere TURF-GARD™
- John Deere PLUS-4®

Other oils may be used if they meet one or more of the following:

- API Service Classification SH
- API Service Classification SG
- CCMC Specification G4
- CCMC Specification G5

Arctic oils (such as Military Specification MIL-L-46167B) may be used at temperature below -30°C (-22°F).



-UN-07NOV94

TS1624

DX,ENOIL2 -19-01DEC94

CHANGING ENGINE OIL

IMPORTANT: Change oil after first 5 hours of operation and every 25 hours thereafter.

1. Put unit on level surface.
2. Run engine a few minutes to warm oil.
3. Stop engine.
4. Remove drain plug (A) to drain oil into container. Do not pollute; dispose of waste oil properly.
5. Install plug and remove oil filler cap. Fill with oil to top of threads. Install cap. Oil capacity is approximately 0.63 qts (0.6 L).



TYB1774 -UN-22DEC93

TY21674,AE -19-11JAN94

CLEANING AND GAPPING SPARK PLUG

1. Remove and inspect spark plug.

If porcelain is cracked or electrodes are pitted, install a new spark plug. Tighten plug.

If spark plug is in good condition, clean plug and reset gap.

IMPORTANT: Do not clean spark plug in a machine using abrasives.

2. Clean spark plug by scraping or using a wire brush. Wash with a commercial solvent.
3. Use a round wire-type feeler gauge to check for a 0.030 in. (0.762 mm) gap.
4. Bend only the outer electrode when you set gap.
5. Install spark plug. Tighten to 12—17 lb-ft (16—23 N·m).



TY8335 -UN-07SEP88

TY21674,DA -19-11JAN94

Engine Service—20KG, 25KG and 30KG

MAINTENANCE CHART

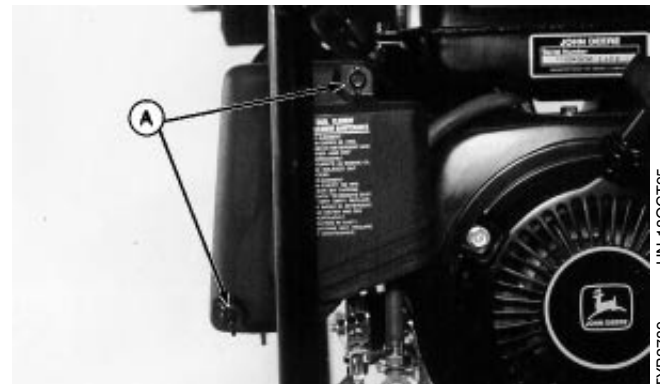
	Every 25 Hrs.	Every 50 Hrs.	Every 100 Hrs.	Every 200 Hrs.	Every 250 Hrs.	Every 300 Hrs.
Change Engine Oil		X				
Clean Air Filters		X				
Change Air Filters				X		
Clean and Regap Spark Plug			X			
Clean Fuel Valve		X				
Valve Maintenance						X
Change Pump Oil	X*				X	
Clean Inlet Water Screen	X					
Clean Siphon Hose Strainer	X					

*Perform oil change after first 25 hours of use and then at recommended intervals (250 hrs.).

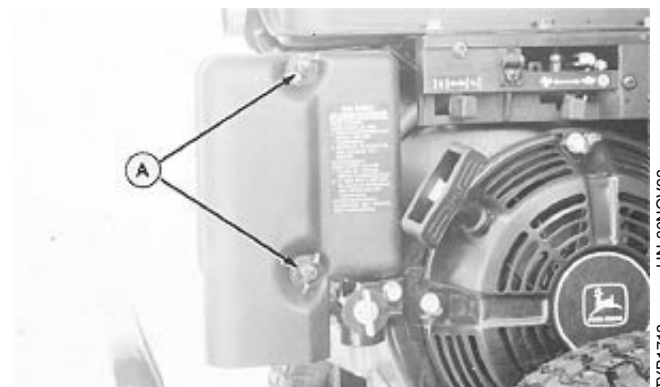
TY21674,AF -19-26OCT95

SERVICE AIR FILTERS

1. Remove wing bolts (A) to remove cover.



20KG



25KG

TY21674,AG -19-26OCT95

-UN-18OCT95

TYB2789

-UN-30NOV93

TYB1712

2. Remove the air filters and separate the foam elements (A) from the paper elements (B).

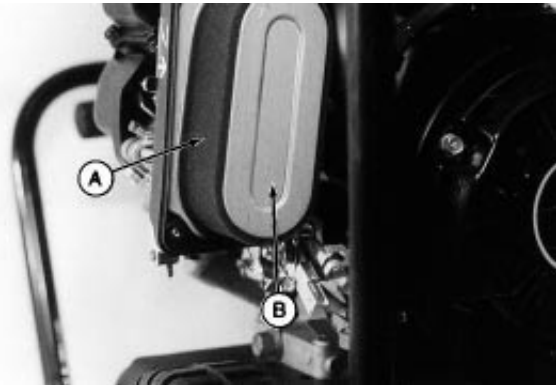
3. Clean paper elements (B) by GENTLY tapping to remove dust. If very dirty, wash in liquid detergent and water. Rinse thoroughly with flowing water until water is clear.

4. Allow to dry completely before using. DO NOT use pressurized air to dry.

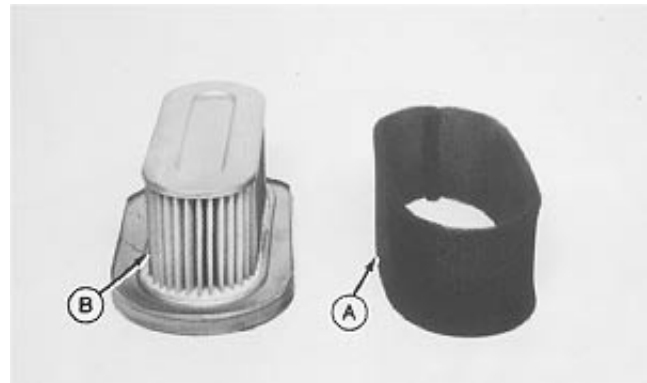
5. Wash foam elements (A) in liquid detergent and water. Rinse thoroughly with flowing water and allow to dry completely before using. DO NOT use pressurized air to dry.

6. Soak foam element (A) in new engine oil and squeeze to remove excess oil.

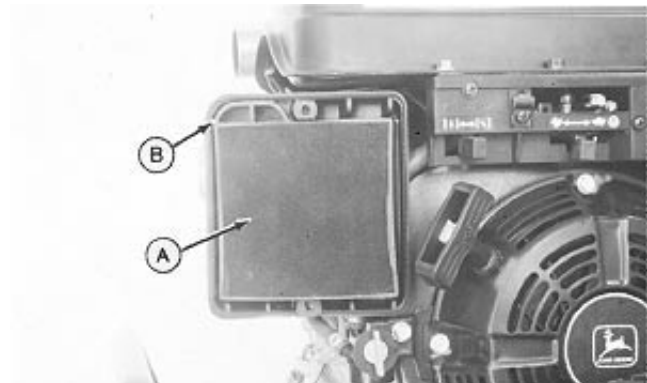
7. Install foam element, paper element and air filter cover.



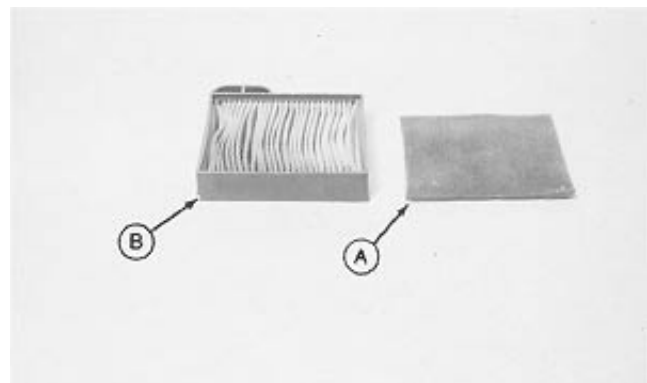
20KG



20KG



25KG, 30KG



25KG, 30KG

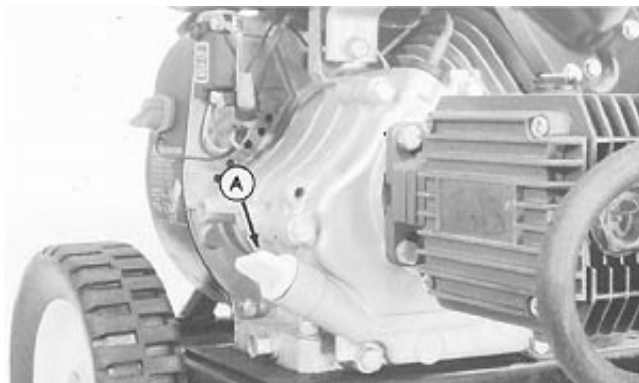
CHECKING ENGINE OIL

1. Stop engine.
2. Place unit on level surface.
3. Remove oil filler cap (A).
4. Unscrew the filler plug, wipe its dipstick dry, and insert it into the filler hole but **DO NOT SCREW IT IN**.
5. The oil level should be between the “H” and “L” marks on the dipstick.
6. Add oil if necessary.
7. Install and tighten cap.

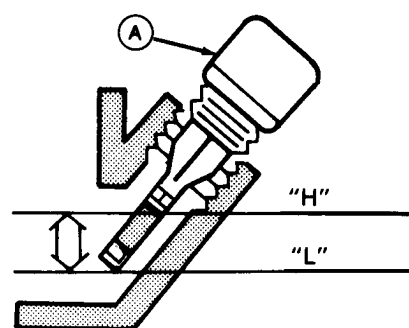
NOTE: The 20KG, 25KG and 30KG have a low oil-level warning system. This system stops the engine without delay if the oil level drops too low.

If you attempt to restart the engine without adding oil; this system will not allow the engine to start and warns you, by lighting the LED lamp (B) that the oil level is too low.

The engine may suddenly stop even though the oil level is not too low, if it is tilted very much during operation. If this happens, level the washer and check the oil level. Refill with oil as needed, before restarting the engine.



20KG Illustrated



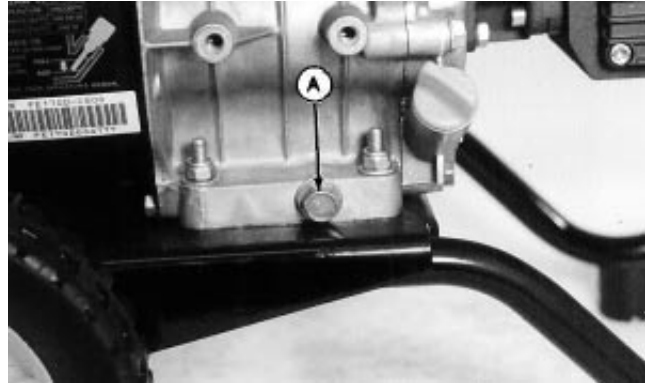
20KG Illustrated

OM21674,R -19-19DEC94

CHANGING ENGINE OIL

IMPORTANT: Change oil after first 20 hours of operation and every 50 hours thereafter.

1. Put unit on level surface.
2. Run engine a few minutes to warm oil.
3. Stop engine.
4. Remove drain plug (A) to drain oil into container. Do not pollute; dispose of waste oil properly.
5. Install drain plug.



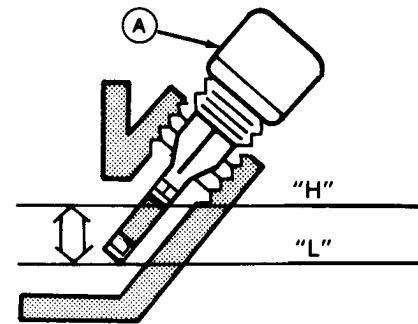
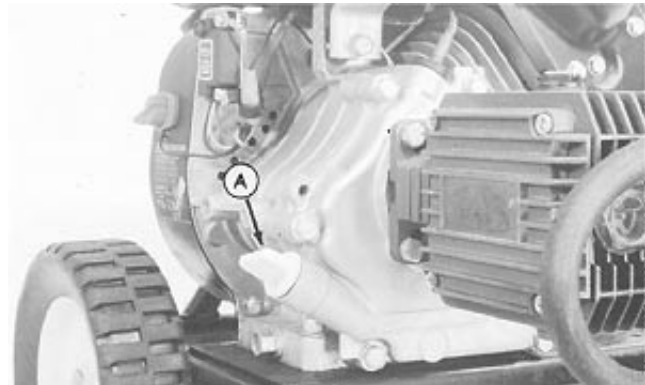
20KG Illustrated

TY21674,AJ -19-26OCT95

6. Add oil to engine:

20KG	0.6 qt (0.55 L)
25KG	1.2 qt (1.1 L)
30KG	1.4 qt (1.3 L)

7. To check the oil level, remove the filler plug (A), wipe the dipstick dry, and insert it into the filler hole but DO NOT SCREW IT IN.
8. The oil level should be between the "H" and "L" marks on the dipstick.
9. Install and tighten the filler plug.



OM21674,S -19-19DEC94

CLEANING AND GAPPING SPARK PLUG

1. Remove and inspect spark plug.

If porcelain is cracked or electrodes are pitted, install a new spark plug. Tighten plug.

If spark plug is in good condition, clean plug and reset gap.

IMPORTANT: Do not clean spark plug in a machine using abrasives.



TY8335 -UN-07SEP88

2. Clean spark plug by scraping or using a wire brush. Wash with a commercial solvent.

3. Use a round wire-type feeler gauge to check gap:

20KG		0.7—0.8 mm (0.027—0.031 in.)
25KG		0.6—0.7 mm (0.024—0.027 in.)
30KG		0.7—0.8 mm (0.027—0.031 in.)

4. Bend only the outer electrode when you set gap.

5. Install spark plug. Tighten to 20 lb-ft (27 N-m).

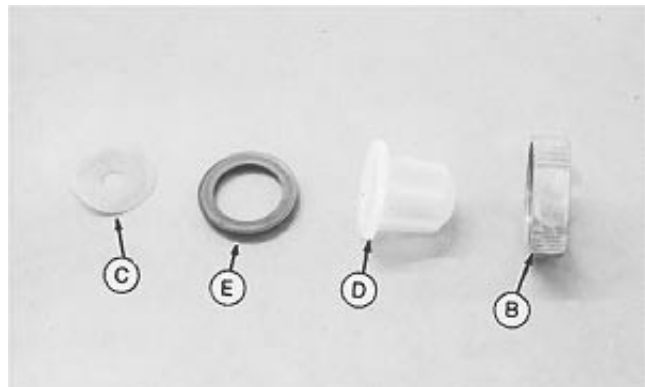
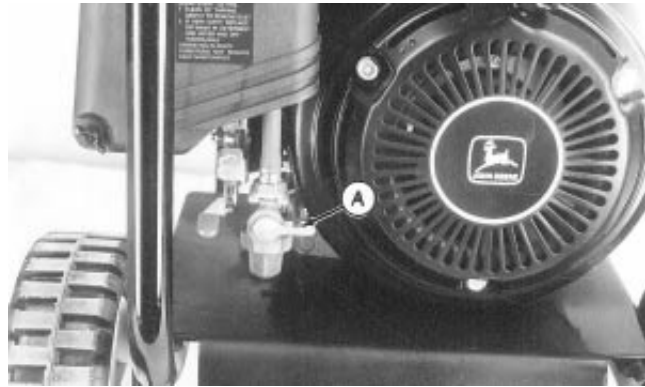
OM21674,T -19-19DEC94

CLEAN FUEL FILTER

CAUTION: Clean the fuel valve in a well ventilated area, and take care that there are no sparks or flame anywhere near the working area; this includes any appliance with a pilot light. Do not use gasoline or a low flash-point solvent to clean the fuel valve. A fire or explosion could result.

NOTE: The 20KG is illustrated, but the procedure is the same for the 25KG and 30KG.

1. Turn fuel valve (A) horizontal as illustrated to shut off the fuel flow.
2. Unscrew the retaining ring (B) and remove filter screen (C), sediment bowl (D) and gasket (E).
3. Remove any sediment or other foreign matter.
4. Wipe clean and install filter screen (C), gasket (E), sediment bowl (D) and retaining ring (B).
5. Turn fuel valve to ON position and check around gasket for fuel leaks.



OM21674,U -19-26OCT95

-UN-23AUG88

TS227

-UN-17OCT95

TYB2792

-UN-30NOV93

TYB1700

Pump Maintenance

CHECKING WATER PUMP OIL

IMPORTANT: If oil is white or foaming, water is in the oil reservoir. Change oil.

NOTE: Water in oil occurs as a result of spray or condensation. Milky oil is not indicative of a pump malfunction.

1. Stop engine.
2. Put unit on level surface.
3. Oil level can be checked two ways:
 - View level through clear indicator (A). Oil should fill sight glass.
 - Remove dipstick (B) and wipe clean.

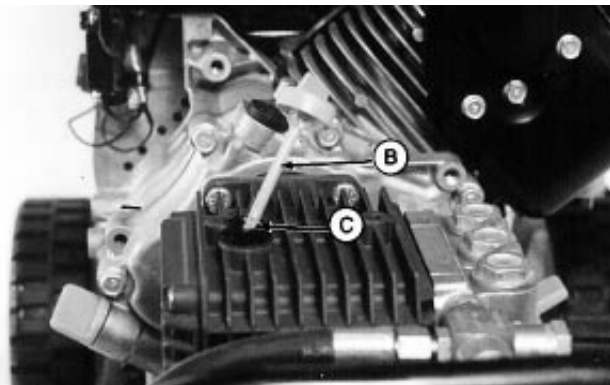
Put dipstick in hole.

Remove dipstick and check level. Oil level should be located at notch (C).

4. Add HY-GARD® or SAE-30 non-detergent oil if necessary. Do not overfill.



20KG Illustrated



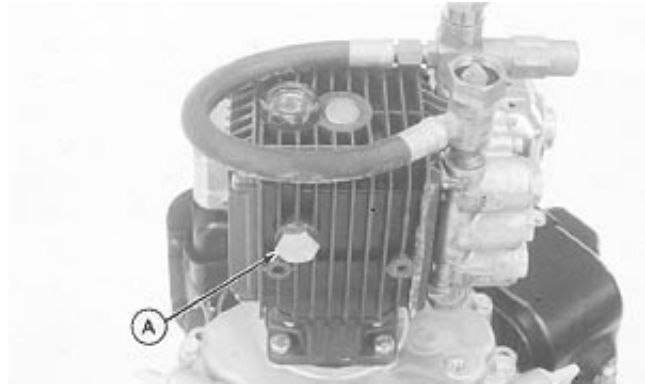
20KG Illustrated

OM21674,V -19-26OCT95

CHANGING WATER PUMP OIL

IMPORTANT: Change pump break-in oil after first 25 hours of operation and at 250 hour intervals thereafter.

1. Put unit on level surface.
2. With water flowing through pump, run unit for a few minutes to warm oil.
3. Stop engine and close water supply.
4. Remove drain plug (A) to drain oil into container. Do not pollute; dispose of waste oil properly.
5. Add HY-GARD® or SAE30 non-detergent oil to fill sight glass or to notch in dipstick. Oil capacity is 11 oz.



20KG Illustrated

TY21674,AN -19-11JAN94

CLEANING INLET WATER SCREEN— 214G, 20KG

IMPORTANT: Do not operate washer with inlet water screen removed. Foreign material may enter and damage pump or valves.

Inspect cone-shaped screen (A) every 25 hours or more often as necessary for build-up of scale, dirt and grit. Clean, if necessary, by removing and back-flushing with compressed air or clean water.

Replace screen if corroded or broken.

Install cone-shaped screen pointing out.

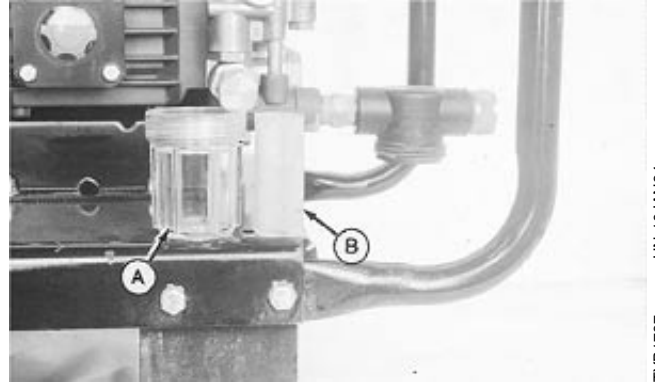


TY21674,CA -19-26OCT95

CLEANING INLET WATER SCREEN—25KG AND 30KG

IMPORTANT: Do not operate washer with water inlet screen removed. Foreign material may enter and damage pump or valves.

Remove the sediment bowl (A) and inspect the inlet screen (B) periodically for build-up of scale, grit and dirt. Clean as necessary. If screen is corroded or broken, replace it.



OM21674,W -19-19DEC94

TYB1797 -UN-10JAN94

CLEANING SIPHON HOSE STRAINERS (ACCESSORY)

Check siphon hose strainer (A) for detergent or contaminant build-up.

Unscrew strainer from hose and back flush with clean water.

NOTE: If strainer frequently becomes plugged, check cleaning solution to be sure it is thoroughly mixed.



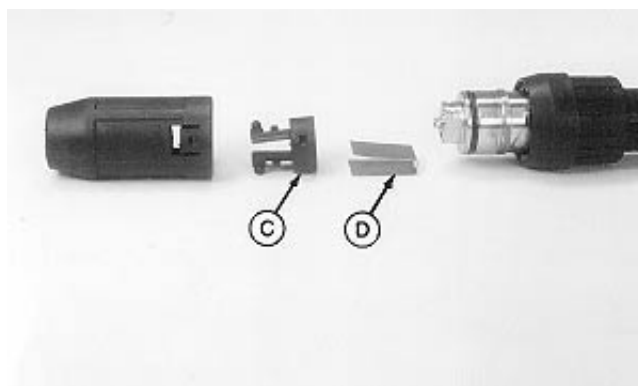
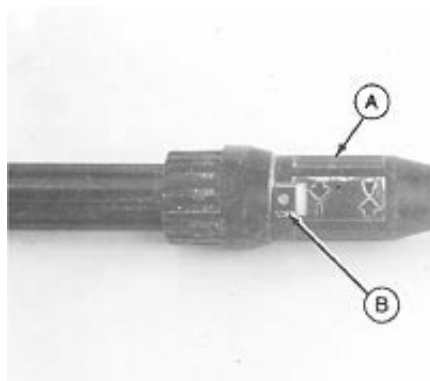
TY,PS,B -19-11JAN94

TY15485 -UN-20APR89

CLEANING ADJUSTABLE FAN SHUTTERS

CAUTION: Shutters metal edges are extremely sharp. Wear gloves. Nozzle wand must be disconnected from gun before servicing.

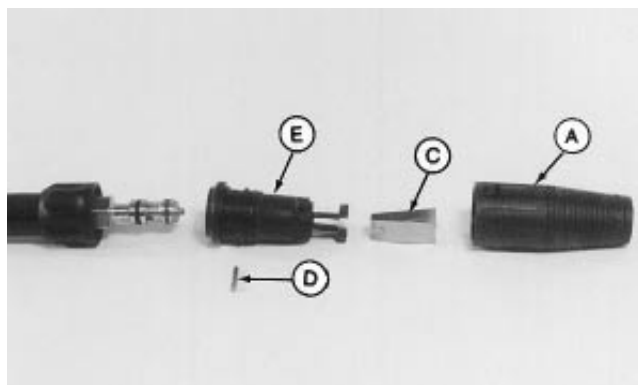
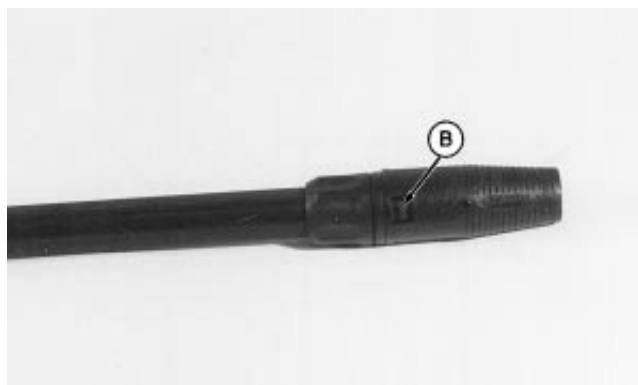
1. Slide nozzle collar rearward.
2. Gently pry tabs (B) open.
3. Remove nozzle end (A), regulator (C), shutter (D) and clean.
4. Install shutter assembly. Squeeze nozzle end tabs inward and slide nozzle end back over nozzle assembly.



OM21624,D -19-24OCT95

CLEANING ADJUSTABLE FAN SHUTTERS (ALTERNATE STYLE WAND)

1. Slide nozzle collar rearward.
2. Gently pry tabs (B) open.
3. Remove nozzle end (A), shutter (C), lock pin (D), regulator (E) and clean.
4. Install regulator, lock pin, and shutter.
5. Squeeze nozzle end tabs inward and slide nozzle end back over nozzle assembly.



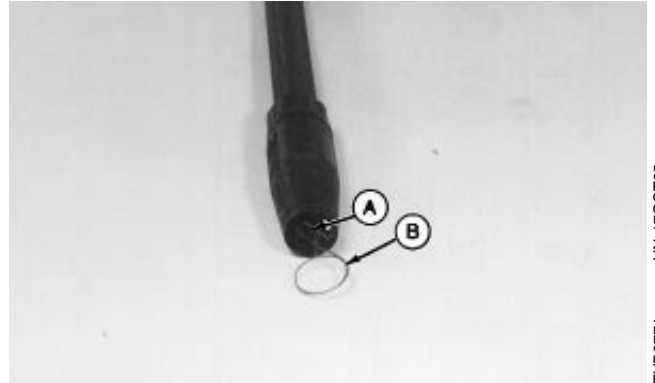
OM21624,E -19-24OCT95

SERVICING THE NOZZLE



CAUTION: Nozzle wand must be disconnected from gun before servicing.

1. Rotate nozzle to expose orifice (A).
2. Insert nozzle cleaner (B) into orifice and turn.
3. Flush nozzle wand with water.
4. If nozzle can not be cleaned thoroughly, use a 2.5 mm allen wrench (C) to remove orifice. Insert wrench and turn counterclockwise.
5. Check orifice and clean or replace, if necessary.



TYB2771 -UN-17OCT95



TY16037 -UN-17JAN92

OM21624,F -19-24OCT95

Storage

STORING THE WASHER

IMPORTANT: Protect washer from freezing temperatures. If unit will experience freezing conditions, pump must be filled with antifreeze to prevent cracking of pump manifold and relief valve due to water expansion. Draining alone will not remove all the water.



CAUTION: If the washer will be used where food is prepared, stored or consumed, or where sanitation is required, use a non-toxic antifreeze.

1. Stop engine.
2. Change engine oil (See Service Section).
3. Add TY15977 Gasoline Stabilizer as directed on label.
4. With water flowing through gun, run engine five minutes to draw stabilized gasoline into carburetor. Stop engine.
5. Close water supply and remove inlet supply hose. Install short piece of hose on water inlet and the other end in a container of TY8261 John Deere Rust Inhibiting Antifreeze.

6. Start engine, place nozzle into container and trigger gun for 30 seconds.

NOTE: Trigger must be released to pull antifreeze into relief valve.

7. Release trigger for 30 seconds to direct antifreeze into relief valve.

IMPORTANT: Dispose of the sprayed solution safely according to instructions on the antifreeze container.

8. Disconnect supply line.
9. (20KG, 25KG and 30KG Only) Turn fuel valve to "OFF" position.
10. Remove spark plug and squirt 10 cc of 2 cycle oil into cylinder. Turn crankshaft over 5 times to distribute the oil throughout cylinder.
11. Install spark plug and pull starter handle slowly until compression is felt and stop there.



TYB2806 -UN-19OCT95

REMOVING WASHER FROM EXTENDED STORAGE

1. Prepare washer as previously directed. Connect and open water supply. Squeeze trigger on gun. Allow water to run (without engine running) until water runs out of pressure hose. Dispose of antifreeze solution safely according to the instructions on the antifreeze container.

TY,STOR,A -19-11JAN94

Accessories

CHEMICAL VALVE

TY8345 214G, 20KG
TY20435 25KG, 30KG

The chemical injector is installed between the pump and high pressure hose and is adjustable to provide chemical proportioning at 100 psi.



OM21674,Y -19-26OCT95

TYB1798 -UN-10JAN94

THE FOAMER—TY8328 (214G, 20KG ONLY)

The foamer uses highly concentrated detergent to produce a thick foam that clings to surfaces for a superior cleaning action.



TY,ACC,AF -19-11JAN94

TY16026 -UN-17JAN92

HIGH PRESSURE HOSES—TY20414

IMPORTANT: DO NOT use more than 1 extension hose. The higher restriction will cause the relief valve to function all the time.

An additional pressure hose may be connected to existing hose. This allows the operator to move around a greater distance without moving the unit.



TY,ACC,AA -19-11JAN94

TY14784 -UN-23FEB89

GAUGE—TY20425

This glycerine filled gauge indicates tip pressure.



TY21674,CC -19-11JAN94

TYB1777 -UN-10JAN94

WAND EXTENSION—TY8322 (214G, 20KG ONLY)

The wand extension adds 18 inches (457 mm) between the gun and nozzle wand for hard to reach places.



TY,ACC,AG -19-11JAN94

TY16027
-UN-17JAN92

HAND BRUSH—TY8329 (214G—20KG ONLY)

For scrubbing contoured and smaller surfaces when used with chemical valve, applies chemical or detergent.



TY,ACC,AE -19-19DEC94

TY16025
-UN-17JAN92

FLOOR AND WALL BRUSH—TY8331 (214G, 20KG ONLY)

36 ft (11 m) length to scrub vehicles and large surfaces. When used with chemical valve, applies chemical or detergent.



TY,ACC,AD -19-19DEC94

TY16024
-UN-17JAN92

ROTATING BRUSH—TY8330 (214G, 20KG ONLY)

Water pressure and flow act against gears to turn the brushes. When used with the chemical valve, the brush scrubs the dirt away.



TY,ACC,AC -19-19DEC94

TY16023
-UN-17JAN92

ROTATING NOZZLE—TY8326 (214G, 20KG ONLY)

The rotating high pressure nozzle provides a rotating spray that quickly cuts through dirt and debris and is very effective at removing mud from equipment.



TY,ACC,AB -19-11JAN94

TY16022 -UN-17JAN92

ANGLED NOZZLE WAND—TY8323 (214G, 20KG ONLY)

The angled nozzle wand is used to clean vehicle undercarriages and other areas not readily accessible.

This is a mid pressure spray and does not deliver soap.



TY,ACC,AH -19-11JAN94

TY16028 -UN-17JAN92

SANDBLAST ATTACHMENT

TY8327 214G, 20KG
TY20405 25KG, 30KG
TY20447 Nozzle for 25KG, 30KG

The attachment uses water and dry sand to strip paint and rust from metal parts, clean stains from concrete, remove graffiti from walls, etc.



OM21674,Z -19-19DEC94

TY16029 -UN-17JAN92

WATER FILTER—TY8342 (214G, 20KG ONLY)

Use when water supply is a rural well or a static draw to help filter incoming water.



TY,ACC,AK -19-11JAN94

TYB1799 -UN-10JAN94

ALL-PURPOSE CLEANER—TY8308

Use John Deere All Purpose Cleaner concentrate for most cleaning jobs. Contains water-soluble solvents for soil penetration on vehicles and is safe to use on rubber and wax finishes.



TY,ACC,AJ -19-11JAN94

TYB1703 -UN-30NOV93

SURFACE PREPARATION—TY8309

Use John Deere Surface Preparation to clean, remove mildew, and condition surfaces of all types of siding, farm buildings and mobile homes. It is safe to use on ferrous and non-ferrous metal surfaces and removes mildew stains and chalk build-up.



TY21674,AR -19-11JAN94

TYB1704 -UN-30NOV93

DEGREASING—TY8310

Apply John Deere Heavy-Duty Degreaser as directed by container label, allow to soak for a few minutes, then wash with all purpose cleaner. Rinse with clear water.

Cover sensitive parts such as air cleaner, electrical components, etc. when cleaning engines.



TY21674,AS -19-11JAN94

TY16020 -UN-17JAN92

SPRAY WAX—TY8277

Mix John Deere Spray Wax at a ratio of ONE ounce of wax to 1/2 gallon of water to give a long lasting finish to painted metal surfaces.



TY21674,AT -19-11JAN94

TYB1706 -UN-30NOV93

RUST-INHIBITING ANTIFREEZE—TY8261

Use John Deere Rust Inhibiting Antifreeze to help prevent rust and corrosion from occurring on carbon steel and cast iron, while protecting from damage due to freezing.



TY21674,AU -19-11JAN94

TYB1707 -UN-30NOV93

PLUS-4 MOTOR OIL—AR63231

John Deere Plus-4 Motor Oil is a superior, fuel efficient all-season engine oil.



TY21674,AV -19-11JAN94

TYB1708 -UN-30NOV93

GASOLINE CONDITIONER AND STABILIZER—TY15977

Use John Deere Gasoline Conditioner and Stabilizer to help prevent formation of gum or varnish in fuel system.



TY21674,AW -19-11JAN94

TYB1709 -UN-30NOV93

HY-GARD®—TY6354

Use John Deere HY-GARD® when adding or changing oil in pressure washer pump.



TY21674,AX -19-11JAN94

TYB1710 -UN-30NOV93

DETERGENT BOOSTER—TY8276

Use John Deere Detergent Booster at a ratio of ONE part detergent booster to THREE parts TY8308 Cleaner. Use with the foamer for maximum cleaning power.



TYB1705 -UN-30NOV93

TY21674,AY -19-11JAN94

Specifications

SPECIFICATIONS

Item	Model 214G	Model 20KG	Model 25KG	Model 30KG
Operating pressure . . .	1500 psi (104 bar)	2000 psi (138 bar)	2500 psi (172 bar)	3000 psi (207 bar)
Discharge capacity . . .	2.8 gpm (10.64 L/min)	2.8 gpm (10.6 L/min)	3.6 gpm (13.6 L/min)	3.9 gpm (14.8 L/min)
Engine	Briggs & Stratton Series 132200	Kawasaki FE170D-CS00	Kawasaki FE290D-CS03	Kawasaki FE350D-AS01
Engine Horsepower . .	5.0 (3.7 Kw)	5.3 (3.9 Kw)	9.0 (6.6 Kw)	11 (8.2 Kw)
Displacement	12.57 cu. in. (206 cc)	10.4 cu. in. (171 cc)	17.4 cu. in. (286 cc)	21.4 cu. in. (350 cc)
Spark plug	AM54450	M802138	M802138	M802138
Plug gap	0.030 in. (0.76 mm)	0.027—0.031 in. (0.7—0.8 mm)	0.024—0.027 in. (0.6—0.7 mm)	0.027—0.031 in. (0.7—0.8 mm)
Oil capacity	0.63 qt (0.6 L)	0.6 qt (0.55 L)	1.2 qts (1.1 L)	1.4 qt (1.3 L)
Fuel tank capacity . . .	0.75 gal (2.8 L)	0.9 gal (3.4 L)	1.6 gal (6 L)	1.7 gal (6.4 L)
Inlet water supply				
minimum	3.5 gpm (15 L/min)	3.5 gpm (13 L/min)	4.5 gpm (13 L/min)	4.9 gpm (11.7 L/min)
Weight	64 lbs (29.03 kg)	67 lbs (30.39 kg)	143 lbs (64.86 kg)	152 lbs (68.94 kg)

OM21674,AA -19-26OCT95

RECORD SERIAL NUMBER

Write your model number, machine serial number and date of purchase in the spaces provided below. Your dealer needs this information when ordering parts.

Model No. _____

Machine Serial No. _____

Date of Purchase _____
(To be filled in by purchaser)



TY,104SP,B -19-12MAR92

TY16088 -19-12MAR92

Index

	Page		Page
A		I	
Add oil to engine	15	Inlet water supply requirements	17
Air cleaner		Install vented pump plug	18
Servicing	42		
Assembly—25KG			
Remove from carton	14		
C		M	
Changing engine oil	44, 48	Maintenance chart	42
Changing nozzle	31		
Checking engine oil	43, 47		
Checking water pump oil	51		
Chemical injector	58		
Clean fuel filter	50		
Cleaning and gapping spark plug	44, 49		
Cleaning siphon hose strainers	53		
Cleaning with cleaning solution	35		
Connect hoses and prime pump	19		
D		N	
Degreasing	61	Nozzle wand—214G, 20KG	
Detergent booster	63	Installing	20
		Nozzle—25KG	
		Installing	20
E		O	
Engine		Oil	
Oil	15, 38, 43	Engine	15, 38, 43
		Operation—20KG	
		Before operating	21, 23, 26
		Operation—25KG	
		Before operating	21, 23, 26
F		R	
Filling fuel tank	16	Rotating brush	59
Floor and wall brush	59	Rotating nozzle	60
Fuel	37		
Fuel tank			
Filling	37		
G		S	
Gasoline conditioner and stabilizer	62	Selecting the proper nozzle	32
Gun and nozzle control	29	Service air filters	45
		Shut-down	36
		Spray wax	61
		Starting engine	22
		Stopping the engine	22
		Storing the washer	56
H		W	
Hand brush	59	Wand extension	59
High pressure hoses	58	Water filter	60
		Water pressure	
		Adjusting	33

Page

0

0° nozzle—red 32

1

15° nozzle—yellow 32

2

25° nozzle—green 33

4

40° nozzle—white 33

John Deere Service Literature Available

PARTS CATALOG

The parts catalog lists service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.



DX,PARTS -19-03MAR93

TS189 -UN-17JAN89

OPERATOR'S MANUAL

The operator's manual provides safety, operating, maintenance, and service information about John Deere machines.

An extra copy of the operator's manual is available. The operator's manual and safety signs on your machine may also be available in other languages. (See your John Deere dealer to order.)



DX,OM -19-03MAR93

TS190 -UN-17JAN89

JOHN DEERE PUBLISHING BOOKS

Covering all types of vehicles, regardless of manufacturer, each book starts with basic theory and proceeds through complex systems. There are four series:

- Farm Business Management (FBM)
- Fundamentals of Machine Operation (FMO)
- Fundamentals of Service (FOS)
- Fundamentals of Compact Equipment Service (FCP)



DX,FMOFOS -19-02OCT95

TS1646 -UN-02OCT95

John Deere Service Literature Available

John Deere Distribution Service Center
Department S/P
P.O. Box 186, Moline, IL 61266-0186

Please ship to . . .

Name _____

Address _____

THIS SPACE RESERVED FOR OFFICE USE

To order these publications, fill out this form and mail it with payment to the address given. Make checks payable to Deere & Co. Service Publications. Please allow three weeks for delivery. PRICES INCLUDE HANDLING AND POSTAGE TO ANYWHERE IN THE U.S.A. AND CANADA.

City _____ State _____
 Zip _____ Phone _____

Title	Order Number	Price Each	x Quantity	= Total
Parts Catalog—210G, 214G, 215G and 225G High Pressure Washers	PC2143		x	=
Parts Catalog—20KG, 25KG and 30KG High Pressure Washers	PC2419		x	=
Operator's Manual—214G (1250—) 20KG, 25KG and 30KG High Pressure Washers	OMTY21674		x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
For current prices of John Deere Service Literature, please call 1-800-522-7448			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
			x	=
FOS Manual—Engines	FCP-80101B		x	=
FOS Manual—Electrical Systems	FCP-83101B		x	=
FOS Manual—Hydraulics	FCP-82101B		x	=
FOS Manual—Power Trains	FCP-81101B		x	=
Catalogs of Available Service Publications:				
Consumer Product Publications	CPC-1704	No Charge		
Agricultural Product Publications	CPC-1703	No Charge		
Industrial Product Publications	CPC-1852	No Charge		
NOTE: If you want manuals or catalogs for Subtotal				

NOTE: If you want manuals or catalogs for equipment not shown on this list, list the model number, serial number, and name of the product.

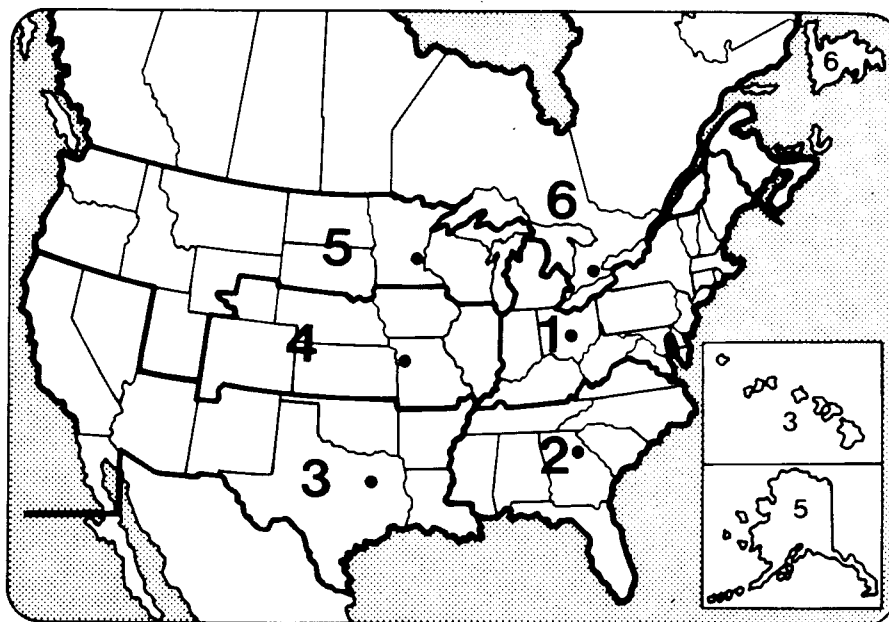
Subtotal	
Illinois State Residents add 6% for Retail Occupation Tax or show tax exemption number.	

Check or money order in U.S.
Dollars enclosed Total
(Do not send cash or stamps)

Prices subject to change without notice.
SP-317 Jan-87

OM21674,AB -19-26OCT95

JOHN DEERE IS AT YOUR SERVICE WHEN YOU NEED IT



1. JOHN DEERE COMPANY

701 Georgesville Road
Columbus, OH 43228-2499
614-275-1500 (Fax. 614-275-1450)

3. JOHN DEERE COMPANY

P.O. Box 540598
Dallas, TX 75354-0598
214-385-1701 (Fax. 214-663-2390)

5. JOHN DEERE COMPANY

2001 West 94th Street
Bloomington, MN 55431-3211
612-887-6200 (Fax. 612-887-6385)

2. JOHN DEERE COMPANY

2001 Deere Dr.
Conyers, GA 30208
404-922-7040 (Fax. 404-388-2138)

4. JOHN DEERE COMPANY

3210 East 85th Street
Southeast Station
Kansas City, MO 64132-2586
816-361-4000 (Fax. 816-995-9381)

6. JOHN DEERE LIMITED

South Service Road at Hunter
Grimsby, Ontario, Canada L3M 4H5
905-945-9281 (Fax. 905-945-0341)

CUSTOMER SATISFACTION is important to John Deere. We take pride in providing superior service. We'll be around when you need us:

- We maintain a large and varied parts inventory to help minimize downtime.
- Precision tools and testing equipment enable technicians to locate and correct troubles.
- We hold regular training schools for service technicians so they know your equipment and how to maintain it.
- Our goal is to provide prompt, efficient service through competent dealerships.

COMPLAINT-RESOLUTION PROCEDURE

Your dealer is the best and fastest source to solving any problems you may experience with your product.

1. Be prepared with the following information:
 - Machine model and product identification number
 - Date of purchase
 - Nature of problem
2. Discuss problem with dealer service manager.
3. If unable to resolve, see the dealership manager. Explain the problem and request assistance.
4. If you have a persistent problem your dealership is unable to satisfy, ask your dealer to contact the John Deere territory aftermarket manager for resolution.
5. If a problem is not resolved to your satisfaction, contact the appropriate John Deere sales branch for your area and ask to speak with the division aftermarket manager. (See map.)

