

Performance Trak™ III Monitor



JOHN DEERE

OPERATORS MANUAL Performance Trak™ III Monitor

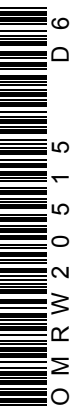
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John Deere Tractor Works
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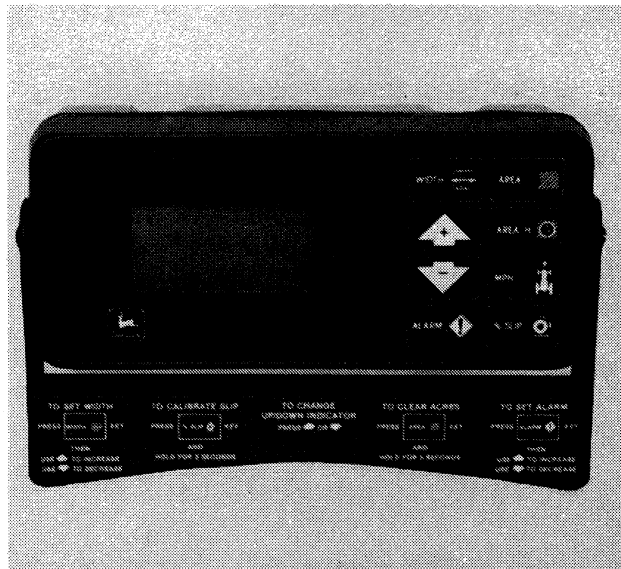
Introduction

Read this manual carefully to learn how to operate and service your unit correctly. Failure to do so could result in personal injury or equipment damage.

This manual should be considered a permanent part of your unit and should remain with the unit when you sell it.

Measurements in this manual are U.S. customary units and their metric equivalents.

Warranty appears on your copy of the purchase order which you should have received from your dealer.



John Deere Performance Trak™ III Monitor

All information, illustrations and specifications contained in this technical 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.

Contents

	Page		Page
Safety		Troubleshooting	
Symbols and Words	2	Operation	12
Signs	2	Ground Speed	13
Precautions	3	Percent Slip	14
		Up/Down Indicator	14
		Area and Area/Hour	15
Controls		Service	
Function Identification	4	Ground Speed Sensor	16
Display Panel	5	Display Panel Bulbs	16
Metric Measurement	5		
Implement Width	5		
Increase and Decrease Arrows	6		
Percent Slip	7		
Group Speed	7		
Area	8		
Operation			
Calibrating Percent Slip	9		
Setting Implement Width	10		
Clearing Total Area	10		
Using Diagnostics	11		

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.



AB6;T81389 053;ALERT 071085

UNDERSTAND SIGNAL WORDS

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

Safety signs with signal word DANGER or WARNING are typically near specific hazards.

General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



AB6;TS187 053;SIGNAL 071085

FOLLOW SAFETY INSTRUCTIONS

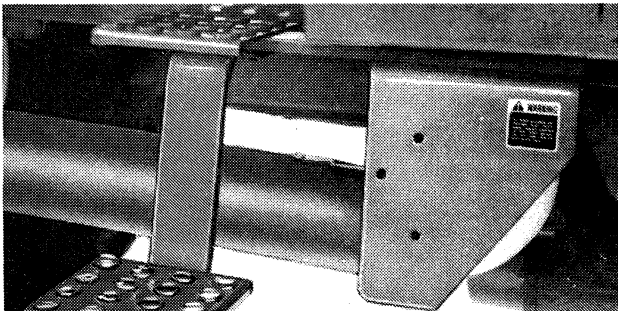
Carefully read all safety messages in this manual and on your machine safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.



AB6;TS188 053;SIGNS 071085

AVOID POSSIBLE EYE DAMAGE



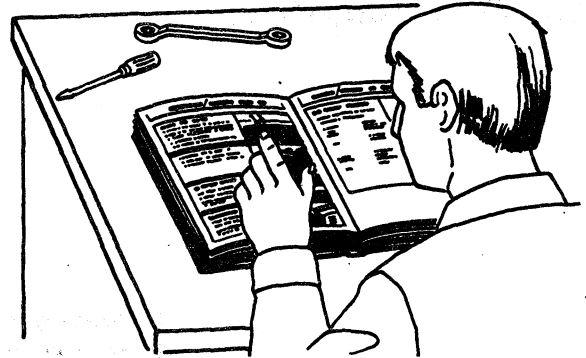
AJ7;RW1169 9, RW1170 0 U01;READ SIGN19 210486

LEARN SAFETY

Carefully read this manual. Learn how to operate the unit and how to use the controls properly.

Do not let anyone operate this unit without proper instruction.

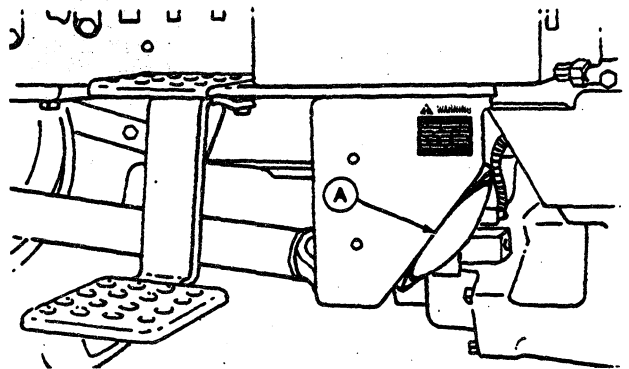
Unauthorized modifications to the unit may impair the function and/or safety and affect its life.



AB6;TS183 U01;READ2 080486

OPERATE RADAR UNIT SAFELY

Radar ground speed sensor (A) emits a very low intensity microwave signal. It will not cause any ill effects during normal use. Although intensity is low, DO NOT look directly into face of sensor while in operation, to avoid any possible eye damage.



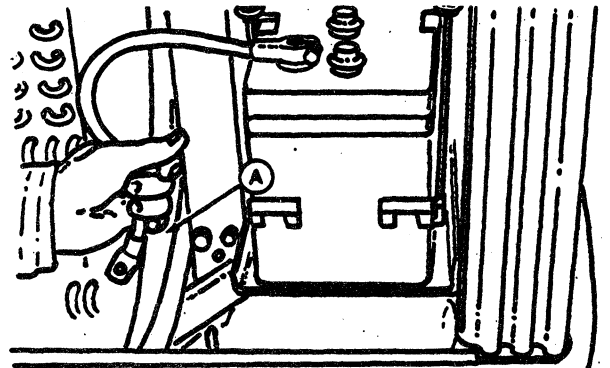
AJ8;RW1100 3L U01;SAFETY RADAR1 250485

OBSERVE ELECTRICAL SERVICE PRECAUTIONS

Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive. Connect ground cable (A) last and disconnect it first.

Disconnect battery ground cable before working in an area where you might accidentally contact electrical components causing shocks, burns, or damage to electrical system.

Failure to disconnect battery cables before use of arc welder can result in damaged electronic components.

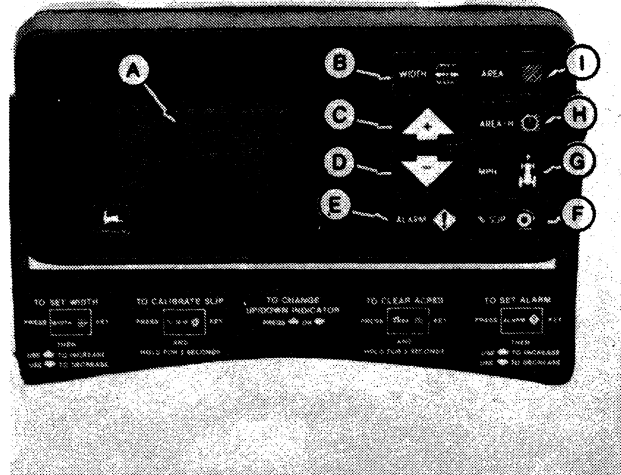


AJ8;RW8196 U01;SAFETY RADAR2 310185

Controls

IDENTIFYING FUNCTIONS

- A—Display Panel
- B—Implement Width
- C—Increase Arrow
- D—Decrease Arrow
- E—Percent Slip Alarm
- F—Percent Slip
- G—Ground Speed
- H—Area Per Hour
- I—Total Area



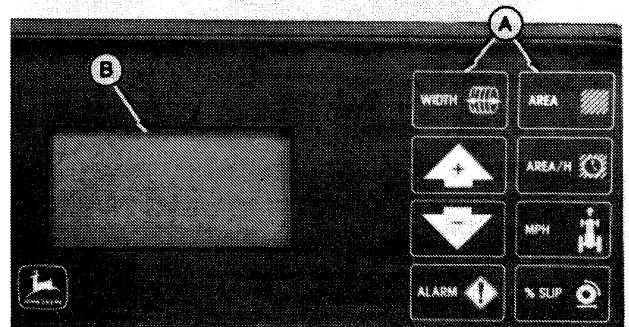
AJ8;RW10735 U01;RADAR ID 090486

DISPLAY PANEL

Turn key switch on while operating tractor for display panel to work.

Information from the selected function (A) displays on liquid crystal indicator panel (B) as numerical information.

Display panel is back lighted when other instruments are lighted.

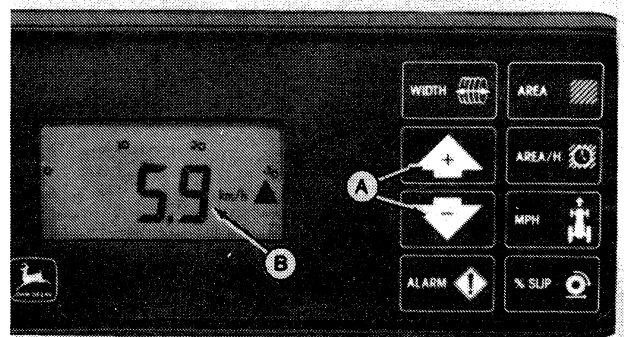


AJ8;RW1073 6 U01;RADAR PANEL 080486

DISPLAY METRIC MEASUREMENTS

With key switch "OFF", press increase and decrease arrows (A) at same time. While pressing the two arrows, turn key switch "ON". Display will change from U.S. customary measurement to corresponding metric measurement (B), or from metric to U.S. customary.

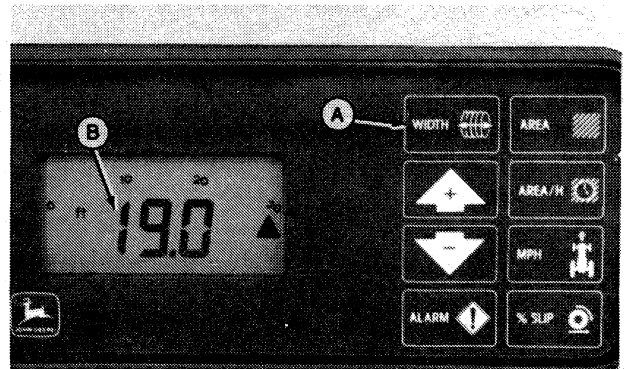
It is necessary to reset implement width when changing from metric to U.S. customary measurement.



AJ8;RW10737 U01;RADAR METRIC 310185

IMPLEMENT WIDTH KEY

Pressing WIDTH key (A) displays current implement width (B). (See Setting Implement Width in Operation section.)



AJ8;RW10738 U01;RADAR WIDTH 310185

INCREASE AND DECREASE ARROWS

Pressing increase (A) or decrease (B) arrows changes values when setting WIDTH or ALARM modes.

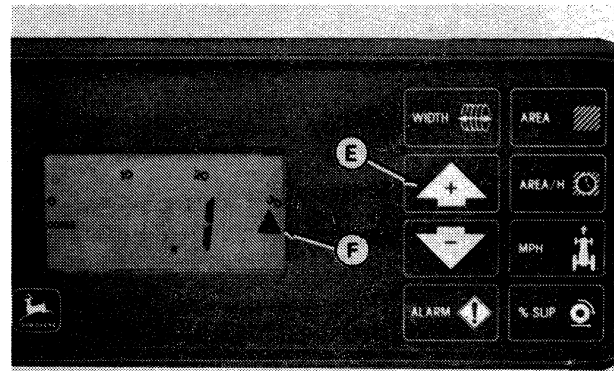
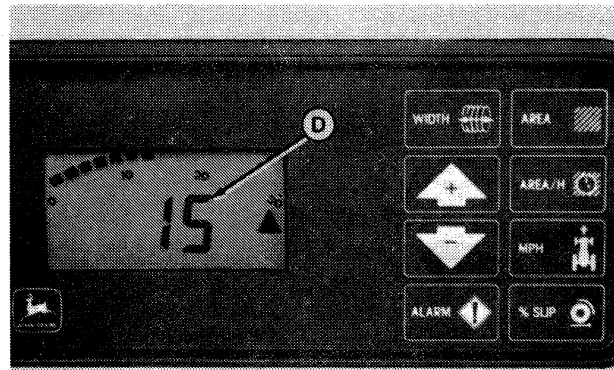
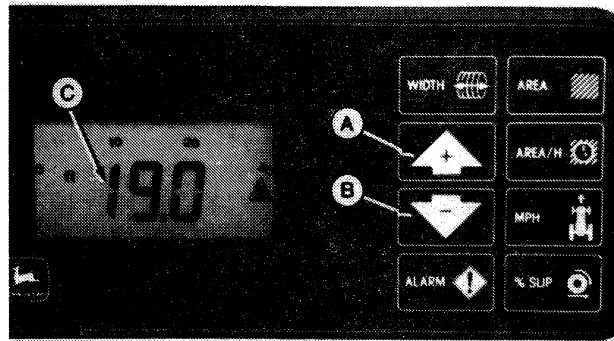
In WIDTH mode, display (C) will increase or decrease by 0.5 ft or 0.2 m increments. When display reaches 99.5 ft or 99.8 m, it will roll over to 0 in increase mode and will stop at 0 in decrease mode.

In ALARM mode, display panel shows percent slip alarm limit to nearest percent (D). Digits go from 0 to 99 when increase arrow is pushed and 99 to 0 when decrease arrow is pushed. When display reaches 99, it will roll over to 0 in increase mode. It will stop at 0 in decrease mode.

Another function of increase and decrease arrows is to show position of implement. Arrow keys will work in this mode when unit is not in ALARM or WIDTH set modes.

If optional implement switch is installed, push increase (E) or decrease arrow so implement position indicator (F) corresponds with implement position. Unit will accumulate total acres covered when implement position indicator is pointing down.

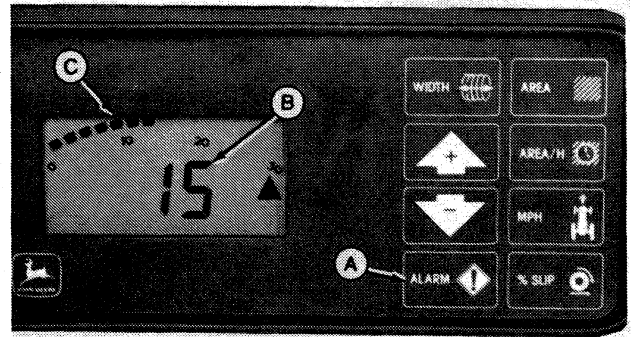
If implement switch is not installed, unit will accurately measure total area covered only if implement position indicator is pointing up when implement is not in use, such as on turns, and implement position indicator points down when implement is back in use. Indicator arrows must be manually selected each time implement is raised or lowered.



PERCENT SLIP ALARM

Pressing ALARM key (A) displays current percent wheel slip alarm limit (B). (See Setting Percent Slip Alarm in Operation section.)

An upper limit may be placed on percent slip function. Anytime wheel slip exceeds this limit, bargraph (C) in display panel blinks to warn operator.



AJ8;RW10934 U01;RADAR ALARM 090486

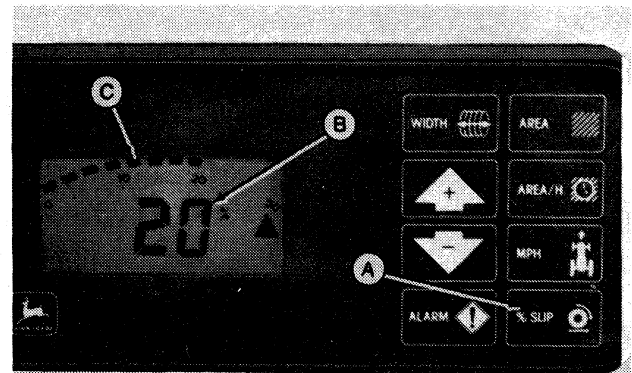
PERCENT SLIP KEY

Pressing % SLIP key (A) displays wheel slip in percent numerically (B).

Percent wheel slip is the percent difference between true ground speed and vehicle wheel speed.

The bargraph (C) displays up to 30 percent wheel slip, in 2 percent increments. If more accurate display is needed, press % SLIP key. Wheel slip will display digitally to nearest 1 percent.

Percent wheel slip must be calibrated for individual tractor variations. (See Calibrating % Slip in Operation section.)

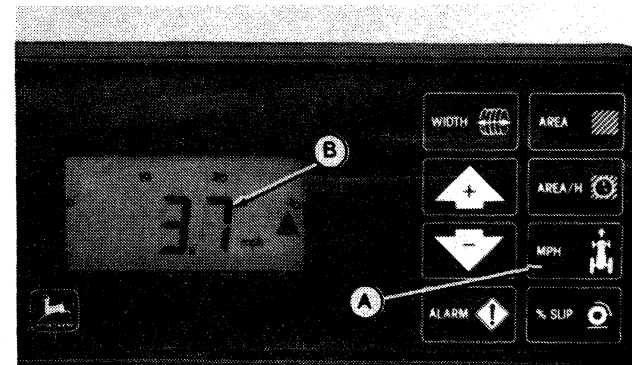


AJ8;RW10935 U01;RADAR SLIP 090486

GROUND SPEED KEY

Pressing MPH key (A) displays true ground speed (B) to nearest 0.1 mph or 0.1 km/h. (Ground speed automatically displays on panel unless another option is selected.)

NOTE: Digital tachometer displays 0 travel speed during normal radar operation.

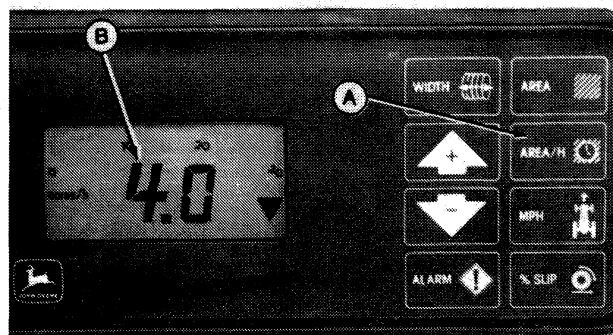


AJ8;RW1093 6 U01;RADAR SPEED 080486

AREA PER HOUR KEY

Pressing AREA/H key (A) displays acres or hectares covered in an hour (B).

True ground speed and implement width are combined to project the area that can be covered in 1 hour, based on a constant speed. Accuracy is displayed to 0.1 acre or 0.1 hectare.



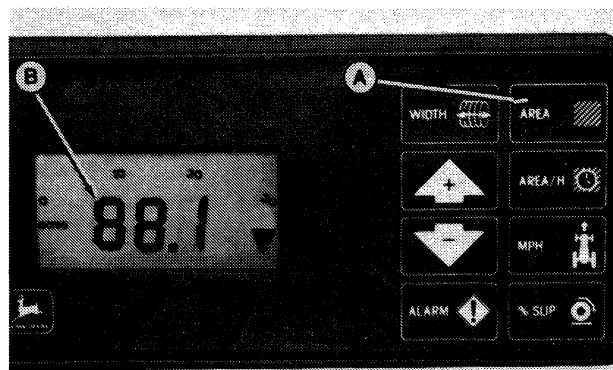
AJ8;RW1100 0 U01;RADAR AREA 080486

TOTAL AREA KEY

Pressing AREA key (A) displays total acres or hectares covered (B).

True ground speed, implement position, and current implement width are combined to measure area covered. When implement position indicator is down, unit accumulates area covered by measuring distance traveled, multiplied by implement width. Accuracy is displayed to nearest 0.1 acre or 0.1 hectare for 0 to 99.9 acres or 99.5 hectares and to nearest acre or hectare for more than 100 acres or 100 hectares.

If AREA key is held for more than 3 seconds, total area is cleared and set to 0. (See Clearing Total Area in Operation section.)



AJ8;RW1100 1 U01;RADAR AREA 080486

Operation

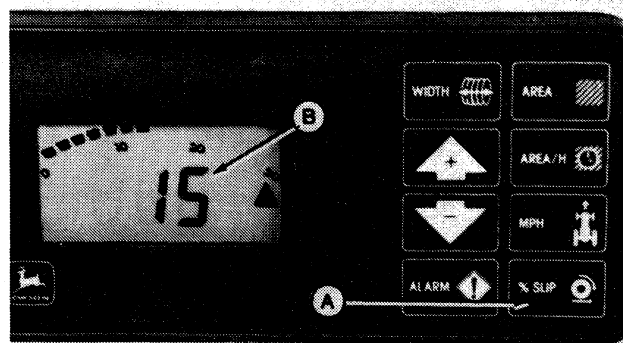
MATCHING UNIT TO TRACTOR

After installing, permanent memory in unit must be matched with your tractor for percent wheel slip (A).

The unit stores last calibration (B) in permanent memory. Recalibration is only necessary when there is a significant change in loaded radius of the tire, such as changing tire size, severely worn tires, or installing new tires.

However, percent wheel slip should be recalibrated when extreme accuracy is needed.

It is necessary to reset implement width when changing from metric to U.S. customary measurement.



AJ8;RW10939 U01;RADAR MATCH 090486

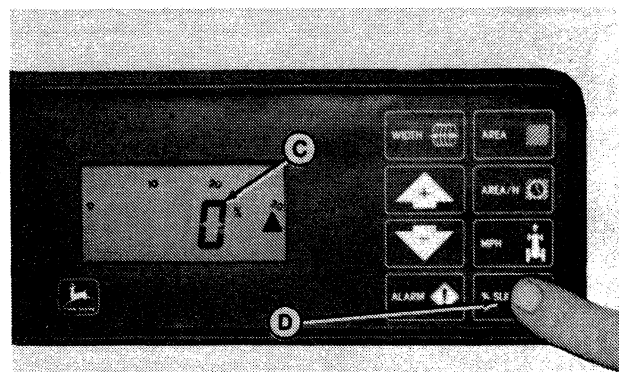
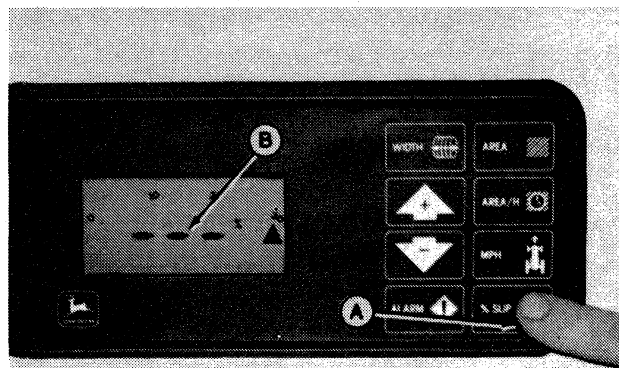
CALIBRATING PERCENT SLIP

1. Drive tractor at constant, working speed across flat, dry ground with implement raised in "no load" condition.

2. Press % SLIP key (A) and hold it for at least 3 seconds or until dashes appear, then release key. Unit will enter percent slip mode and then enter calibrate mode. Three dashes on panel (B) indicate calibrate mode. Unit is calibrating wheel slip.

3. Continue driving tractor at constant speed until dashes change to "0" (C), indicating calibration is complete.

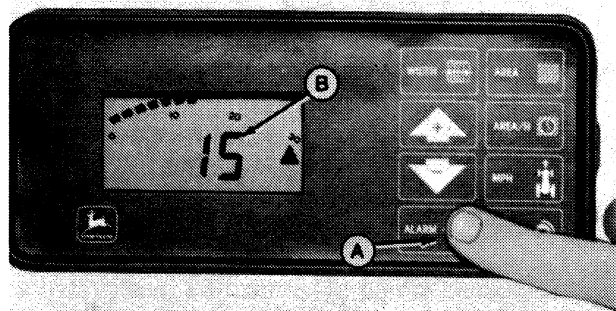
4. Stop calibration by pressing any key (D), when unit is in calibration mode.



AJ8;RW1094 0,RW1094 1 U01;SET SLIP 090486

SETTING PERCENT SLIP ALARM

1. Press ALARM key (A) to display current alarm limit (B).
2. Change limit by pressing increase or decrease arrow.
3. When correct limit is displayed, press any other key to enter limit into permanent memory.



AJ8;RW10942 U01;SET ALARM 090486

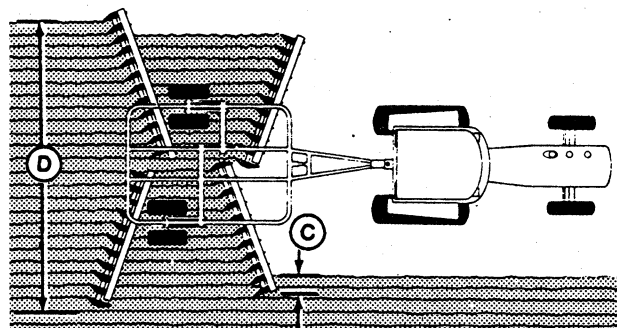
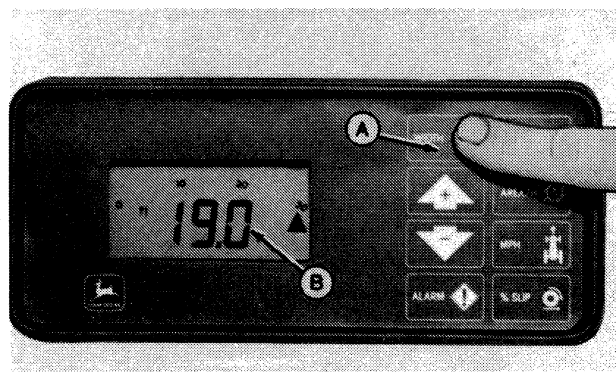
SETTING IMPLEMENT WIDTH

1. Press WIDTH key (A) to display current implement width (B).
2. Change width by pressing increase or decrease arrows. Number will increase or decrease in 0.5 ft or 0.2 m increments.
3. When correct width is displayed, press any other key to enter width into permanent memory.

NOTE: When setting implement width, consider any field overlap. Subtract width of overlap (C) from measured implement width (D) to determine working width of implement. Enter working width into permanent memory.

EXAMPLE:

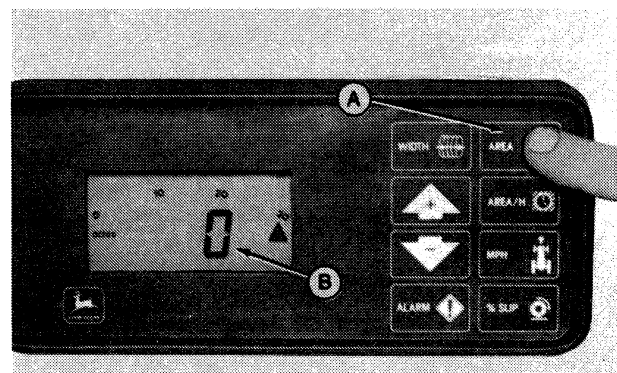
Measured Disk Width — Overlap = Working Width
 19 ft (5.8 m) — 1 ft (0.3 m) = 18 ft (5.5 m)



AJ8;RW1094 3,RW1073 3L U01;SET WIDTH 170486

CLEARING TOTAL AREA

1. Press AREA key (A) and hold it for 3 seconds.
2. Display (B) will show "0" indicating total area is cleared.

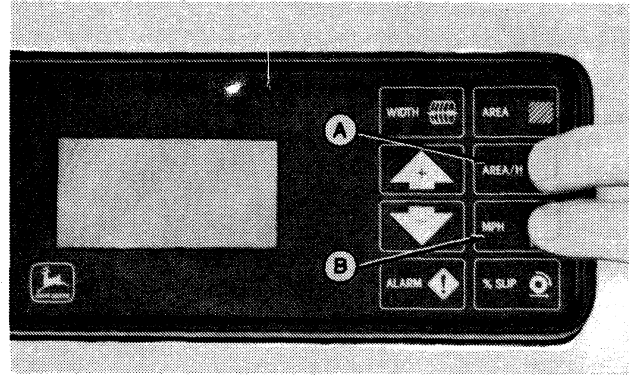


AJ8;RW10944 U01;CLEAR AREA 010285

USING BUILT-IN DIAGNOSTICS

With key switch "OFF", press AREA/H key (A) and MPH key (B) at same time. While pressing the two keys, turn key switch "ON". Unit is now in diagnostic mode.

While driving vehicle, "%" and "MPH" symbols should be flashing "on" and "off" on display panel at same time. If "%" symbol stays "on" or "off", wheel speed signal is not working. (See Troubleshooting section or your John Deere dealer.) If "MPH" symbol stays "on" or "off", radar speed signal is not working. (See Troubleshooting section or your John Deere dealer.)



AJ8;RW1170 1 U01;DIAGNO STICS 090486

Troubleshooting

OPERATION

Problem	Possible Cause	Possible Remedy	Page Reference
Monitor will not operate or operates intermittently	Improper installation	See installation instructions	
	No power	Check wiring harness	
	Loose or corroded wiring connection	Clean and tighten loose connections	
	Defective monitor	Have your John Deere dealer check radar system	
Monitor operates; digital tachometer will not operate	Faulty digital tachometer harness connector	Clean and tighten loose connections	
	Defective digital tachometer	See your John Deere dealer	
Monitor operates; digital tachometer displays 0 rpm	Faulty engine speed sensor wiring harness	Check wiring harness	
	Loose or corroded connections	Clean and tighten loose connections	
	Defective engine speed sensor	See your John Deere dealer	
Monitor will not change from U.S. customary measurement to metric measurement	Improper operation	See "Display Metric Measurement"	5
	Monitor memory error	Turn key off; wait 15 seconds; try again	
Monitor display dim or dark during nighttime operation	Tractor light switch not "ON"	Turn light switch to "H" or "F"	5
	Light bulb burned out	Replace light bulb	16
	Loose or corroded bulb connections	Clean and tighten loose connections	16
	Faulty monitor wiring harness	Check wiring harness	
	Faulty tractor lighting system	Have your John Deere dealer check lighting system	

Continued on next page

GROUND SPEED

Problem	Possible Cause	Possible Remedy	Page Reference
Monitor displays 0 mph (0 km/h) at slow speed	Tractor not traveling fast enough to activate radar	Drive tractor faster than 0.5 mph (0.8 Km/h)	
	Improper calibration	Recalibrate	
Monitor display erratic	Driving surface too smooth	Check radar operation on flat, dry ground	9
	Sensor face dirty	Clean face of sensor	16
	Defective monitor	Have your John Deere dealer check radar system	
	Radar sensor defective	Have your John Deere dealer check radar system	
Monitor displays 0 mph (0 km/h) and 0 % slip (engine and PTO speed OK)	Faulty wheel speed sensor wiring harness	Check two-way connector and wiring harness lead	
	Loose or corroded connections	Clean and tighten loose connections	
	Defective wheel speed sensor	See your John Deere dealer	
Monitor displays 0 mph (0 km/h) and 99 % slip	Faulty radar sensor wiring harness	Check wiring harness	
	Loose or corroded connections	Clean and tighten loose connections	
	Defective radar sensor	Have your John Deere dealer check radar system	

Continued on next page

PERCENT SLIP

Problem	Possible Cause	Possible Remedy	Page Reference
Monitor displays 0 % slip (wheels observed slipping)	Improper operation	See "Calibrating Percent Slip"	9
	Faulty wheel speed sensor wiring harness	Check wiring harness	
	Loose or corroded connections	Clean and tighten loose connections	
	Defective wheel speed sensor	See your John Deere dealer	
Monitor displays incorrect % slip; % slip bargraph flashes constantly	% slip not calibrated	See "Calibrating Percent Slip"	9
	Tire size changed	See your John Deere dealer	
	Severely worn tires	Recalibrate permanent memory	
	New tires installed	Recalibrate permanent memory	

UP/DOWN INDICATOR

Implement position arrows will not display correctly when implement raised or lowered	Improper operation	See "Increase and Decrease Arrows"	6
	Improper implement switch installation	See installation instructions	
	Faulty implement switch wiring harness	Check wiring harness	
	Loose or corroded connections	Clean and tighten loose connections	
	Defective implement switch	See your John Deere dealer	
	Faulty wiring	See your John Deere dealer	
	Defective monitor	Have your John Deere dealer check radar system	

Continued on next page

AREA AND AREA/HOUR

Problem	Possible Cause	Possible Remedy	Page Reference
Total area will not accumulate (implement operating)	Improper operation	See "Increase and Decrease Arrows"	6
		See "Total Area Key"	8
	Implement position "logic" reversed	See "Increase and Decrease Arrows"	6
	Insufficient tractor travel	See "Total Area key"	8
		Operate tractor longer (monitor updates area every 10 seconds; display will change after 0.1 acre or 0.1 hectare is accumulated)	8
Total area incorrect	Improper operation	See "Increase and Decrease Arrows"	6
		See "Total Area Key"	8
		See "Setting Implement Width"	10
	Implement width incorrect	See "Setting Implement Width"	10

U01;RADAR TS4 080486

Service

CLEAN GROUND SPEED SENSOR

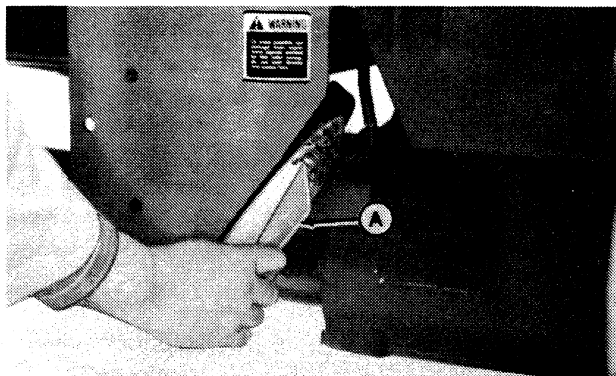


CAUTION: Radar ground speed sensor emits a very low intensity microwave signal. It will not cause any ill effects during normal use. Although intensity is low, **DO NOT** look directly into face of sensor while in operation, to avoid any possible eye damage.

Keep face of sensor clean. Scrape mud off with plastic scraper (A). Do not use a metal scraper.

Wash face of sensor with soap and water or steam clean.

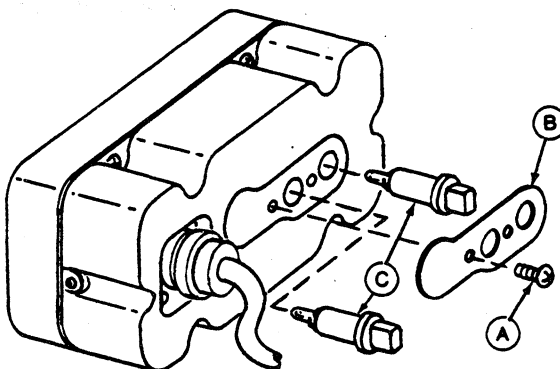
Do not paint sensor face.



AJ8;RW1100 2 U01;RADAR CLEAN 090486

REPLACING DISPLAY PANEL BULBS

1. Remove screws (A) from back of housing.
2. Remove rear cover (B) from housing.
3. Turn bulb socket (C) one-eighth turn counterclockwise and remove from housing.
4. Pull bulb from socket to remove. Do not twist.
5. Replace with No. 18T 1-3/4 wedge-type bulb.
6. Be sure seal and cover are correctly in place before closing display panel.



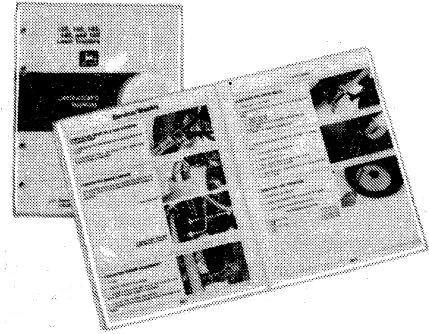
AJ8;RW1073 2L U01;RADAR BULBS 080486

John Deere Service Literature Available

OPERATOR'S MANUAL

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

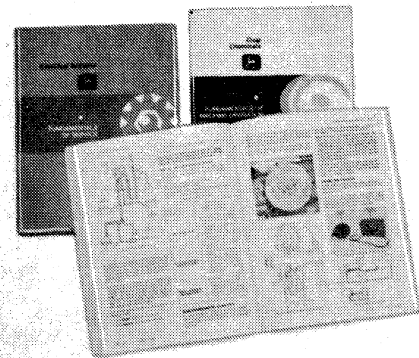
An extra copy of the operator's manual is important if the copy furnished with your machine is misplaced.



AB6;TS190 053;OM 271185

FMO AND FOS MANUALS

These are basic manuals covering most types and makes of agricultural machinery. FMO manuals tell you how to *operate* machines; FOS manuals tell you how to *service* machines. Each manual starts with basic theory and is fully illustrated with colorful diagrams and photographs. Both the "whys" and "hows" of adjustments and repairs are covered in this reference library.



AB6;TS195 053;FMOFOS 271185

John Deere Service Literature Available

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

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Title	Order Number	Price Each	x Quantity	= Total
Performance Trak III Monitor			x	=
Operator's Manual	OM-RW20515		x	=
			x	=
			x	=
			x	=
			x	=
			x	=
FMO Manual—Tractors	FMO-10102B		x	=
FMO Manual—Tillage	FMO-11102B		x	=
FMO Manual—Planting	FMO-12102B		x	=
FMO Manual—Crop Chemicals	FMO-13102B		x	=
FMO Manual—Hay & Forage Harvesting	FMO-14102B		x	=
FMO Manual—Combine Harvesting	FMO-15102B		x	=
FMO Manual—Preventive Maintenance	FMO-16103B		x	=
FMO Manual—Machinery Management	FMO-17102B		x	=
FMO Manual—Machine Safety	FMO-18102B		x	=
SET OF 9 FMO MANUALS (above)	FMO-394 Set		x	=
FOS Manual—Hydraulics	FOS-1003B		x	=
FOS Manual—Electrical Systems	FOS-2005B		x	=
FOS Manual—Engines	FOS-3005B		x	=
FOS Manual—Power Trains	FOS-4005B		x	=
SET OF 4 FOS MANUALS (above)	FOS-90 Set		x	=
FOS Manual—Shop Tools	FOS-5104B		x	=
FOS Manual—Welding	FOS-5205B		x	=
FOS Manual—Belts and Chains	FOS-5303B		x	=
FOS Manual—Bearings and Seals	FOS-5404B		x	=
FOS Manual—Tires and Tracks	FOS-5505B		x	=
FOS Manual—Mowing and Spraying Equipment	FOS-5604B		x	=
FOS Manual—Air Conditioning	FOS-5705B		x	=
FOS Manual—Fuels, Lubricants & Coolants	FOS-5805B		x	=
FOS Manual—Fiber Glass	FOS-5902B		x	=
FOS Manual—Fasteners	FOS-6002B		x	=
FOS Manual—Iden. of Parts Failures	FOS-6102B		x	=
SET OF 11 FOS MANUALS (above)	FOS-71 Set		x	=
SET OF ALL 15 FOS MANUALS	FOS-181 Set		x	=
Conservation Farming	FC-10101B		x	=
Machinery Maintenance	FMW-10101B		x	=
Farm Business Management	FBM-10101B		x	=
Catalogs of Available Service Publications:				
Agricultural Product Publications	CPC-1703			
Industrial Product Publications	CPC-1852			
Consumer Product Publications	CPC-1704			

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.

For current prices of John Deere Service Literature, please call 1-800-522-7448

SP-320 (MAR-86)

Subtotal

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

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

JOHN DEERE PARTS

We help minimize downtime by putting the right 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.



AB6;TS100 053;IBC A 030985

THE RIGHT TOOLS

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.



AB6;TS101 053;IBC B 030985

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!



AB6;TS102 053;IBC C 030985

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.



AB6;TS103 053;IBC D 030985

