

# John Deere 2250 and 2270 Hydrostatic Windrowers



JOHN DEERE

## TECHNICAL MANUAL John Deere 2250 and 2270 Hydrostatic Windrowers

TM1078 (01APR75) English

**John Deere Ottumwa Works**  
**TM1078 (01APR75)**

LITHO IN U.S.A.  
ENGLISH



# 2250 AND 2270 HYDROSTATIC-DRIVE WINDROWERS

Technical Manual  
TM-1078 (Apr-75)

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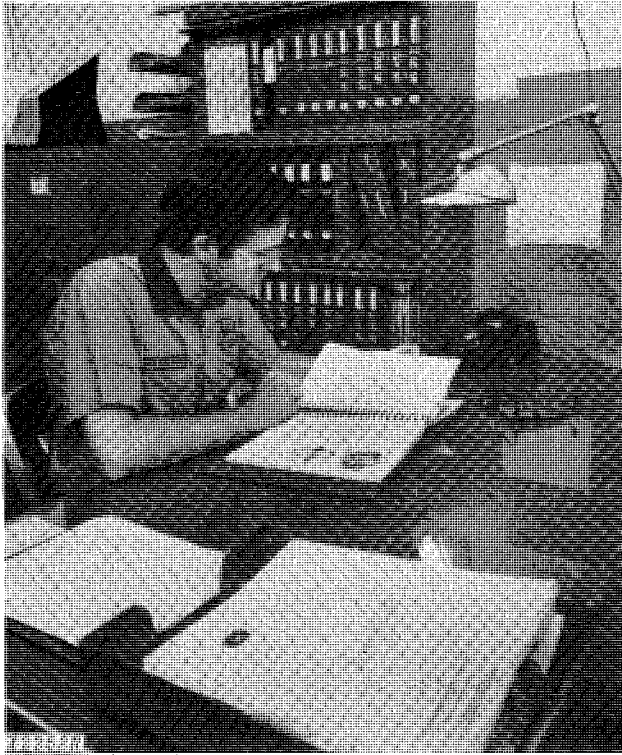
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## INTRODUCTION



Use FOS Manuals for Reference

This technical manual is part of a twin concept of service:

- **FOS Manuals—for reference**
- **Technical Manuals—for actual service**

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

*Fundamentals of Service (FOS) Manuals* cover basic theory of operation, *fundamentals* of trouble shooting, *general* maintenance, and *basic* types of failures and their causes. FOS Manuals are for training new people and for reference by experienced technicians.

*Technical Manuals* are *concise* service guides for a *specific* machine. Technical Manuals are on-the-job guides containing only the vital information needed by an experienced technician.



When a service technician should refer to a FOS Manual for more information, a FOS symbol like the one at the left is used in the TM to identify the reference.



Use Technical Manuals for Actual Service

Some features of this technical manual:

- *Table of contents at front of manual*
- *Exploded views showing parts relationship*
- *Photos showing service techniques*
- *Specifications grouped for easy reference*

This technical manual was planned and written for you—a service technician. Keep it in a permanent binder in the shop where it is handy. Refer to it whenever in doubt about correct service procedures or specifications.

Using the technical manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.


Metric equivalents have been included, where applicable, throughout this technical manual.

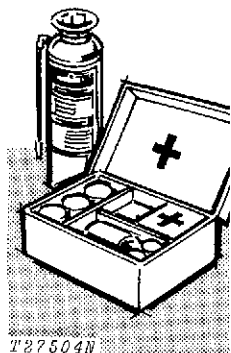
## SAFETY AND YOU



T27999N

### INTRODUCTION

 This safety alert symbol identifies important safety messages in this manual and on the windrower. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.



T27504N

Be prepared if an accident or fire should occur. Know where the first aid kit and the fire extinguishers are located—know how to use them.

### SERVICE AREA

Keep the service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment.

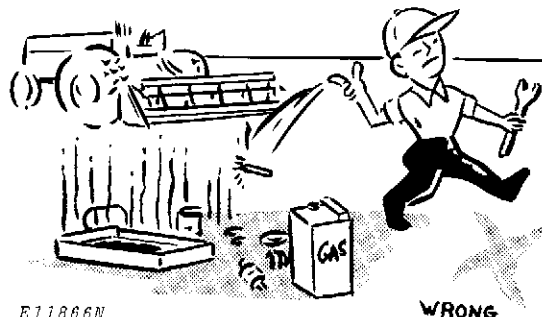
Make sure the service area is adequately vented.

Periodically check the shop exhaust system for leakage. Engine exhaust gas is dangerous.

Be sure all electrical outlets and tools are properly grounded.

Use adequate light for the job at hand.

### AVOID FIRE HAZARDS



E11886N

WRONG

Don't smoke while refueling or handling highly flammable material.

Engine should be shut off when refueling.

Use care in refueling if the engine is hot.

Don't use open pans of gasoline or diesel fuel for cleaning parts. Good commercial, nonflammable solvents are preferred.

Provide adequate ventilation when charging batteries.

Don't check battery charge by placing metal objects across the posts.

Don't allow sparks or open flame near batteries.

Don't smoke near battery.

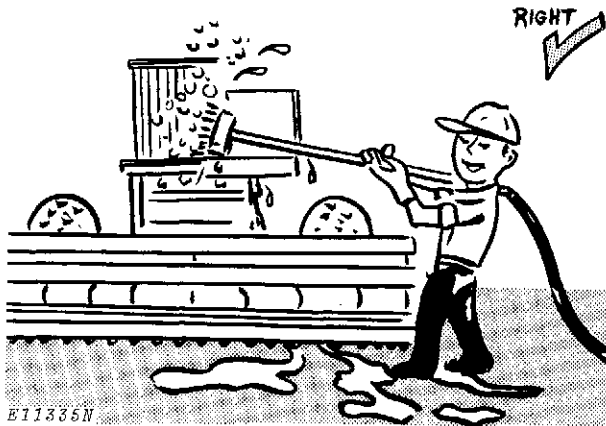
Never check fuel, battery electrolyte or coolant levels with an open flame.

Never use an open flame to look for leaks anywhere on the equipment.

Never use an open flame as a light anywhere on or around the equipment.

When preparing engine for storage, remember that inhibitor is volatile and therefore dangerous. Seal and tape openings after adding the inhibitor. Keep container tightly closed when not in use.

## CLEANING THE WINDROWER



Always stop the engine before cleaning the windrower.

Keep the operator's platform clean. Do not use it as a storage area.

Keep the radiator screen free of foreign matter. Avoid a possible fire hazard.

Keep all equipment free of dirt and oil. In freezing weather, beware of snow and ice on ladder steps and operator's platform.

## FLUIDS UNDER PRESSURE

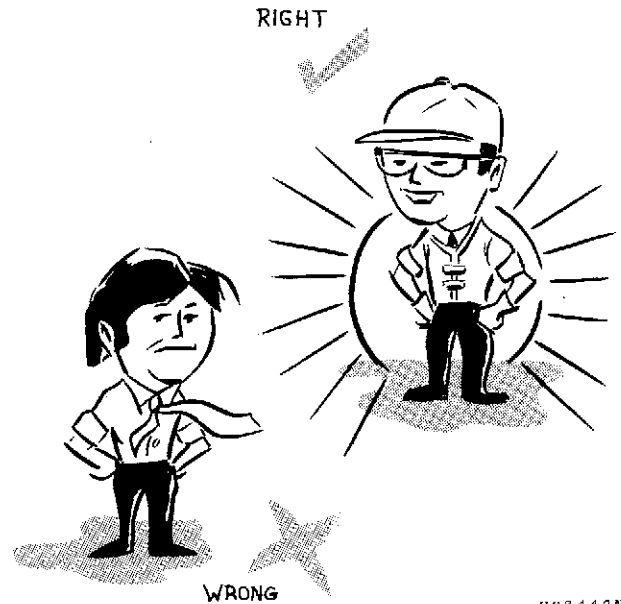
Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Don't forget the hydraulic system or diesel fuel injection system may be pressurized! To relieve pressure, follow the instructions in this technical manual.

When checking hydraulic pressure, be sure to use the correct test gauge for the pressure in the particular system.

## PERSONAL SAFETY



Always avoid loose clothing or any accessory—flopping cuffs, dangling neckties and scarves—that can catch in moving parts and put you out of work. Always wear your safety glasses while on the job.

Keep transmission and brake control units properly adjusted at all times. Before making adjustments, stop engine.

Before removing any housing covers, stop engine. Take all objects from your pockets which could fall into the opened housings. Don't let adjusting wrenches fall into opened housings.

Don't attempt to check belt tension while the engine is running.

Don't adjust the fuel system while the machine is in motion.

Before repairing the electrical system, or performing a major overhaul, make sure the batteries are disconnected.

Avoid working on equipment with the engine running. If it is necessary to make checks with the engine running, **ALWAYS USE TWO PEOPLE**—one, the operator, at the controls, the other checking the machine, always in view of the operator. Also, put the transmission in neutral, set the brake, and apply any safety locks provided. **KEEP HANDS AWAY FROM MOVING PARTS.**

Use extreme caution in removing radiator caps, drain plugs, grease fittings, or hydraulic pressure caps.

# Section 10 GENERAL

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## Group 5 SPECIFICATIONS

### TRACTION UNIT

ENGINE	(Traction Unit Model)	
	2250 Windrower	2270 Windrower
Make .....	Chrysler	John Deere
Model .....	HB-225	219
Number of cylinders .....	6	4
Type .....	4-stroke cycle, in-line, valve- in-head	4-stroke cycle, in-line, valve- in-head
Horsepower .....	65	70
Bore .....	3.40 in. (8.6 cm)	4.02 in. (10.2 cm)
Stroke .....	4.12 in. (10.5 cm)	4.33 in. (11.0 cm)
Piston displacement .....	225 cu. in. (3680 cm <sup>3</sup> )	219 cu. in. (3595 cm <sup>3</sup> )
Compression ratio .....	8.2 to 1	16.3 to 1
Firing order .....	1-5-3-6-2-4	1-3-4-2
Recommended maximum speed (no load) .....	2665 rpm	2665 rpm
Recommended idle speed .....	600 rpm	800 rpm
Fuel .....	Gasoline	Diesel
Cooling system .....	Pressurized	Pressurized
Lubrication system .....	Force-feed, pressurized with full- flow oil filter	Force-feed, pressurized with full- flow oil filter
Fuel system .....	Pressure system, diaphragm-type fuel pump; single barrel, down- draft carburetor	Direct injection, inlet metering, distributing-type. Diaphragm-type fuel pump.

**TRACTOR UNIT—Continued**

**ELECTRICAL SYSTEM**

Starter, alternator, lights, and accessory voltage ..... 12 volts

PROPELLING DRIVE ..... Hydrostatic

**TIRE SIZES:**

**Drive wheels**

2250 ..... 16:5 x 16:1, 4-ply rated  
(16 psi) (110 kPa)

2270 ..... 18:4 x 16:1, 4-ply rated  
(16 psi) (110 kPa)

**Caster wheels**

2250 ..... 5:90 x 15, 4-ply rated  
(20 psi) (138 kPa)

2270 ..... 9:50 x 14, 4-ply rated  
(16 psi) (110 kPa)

**GROUND SPEED**

2250 ..... 0-12 mph (0-19 km/h)

2270 ..... 0-12 mph (0-19 km/h)

TURNING RADIUS ..... Variable to 0 ft.

**WEIGHT**

(Without cab)

2250 ..... (Approx.) 4,585 lbs. (2080 kg)

2270 ..... (Approx.) 5,280 lbs. (2395 kg)

(With cab)

2250 ..... (Approx.) 5,170 lbs. (2325 kg)

2270 ..... (Approx.) 5,790 lbs. (2624 kg)

**CAPACITIES**

Fuel tank ..... 40 U.S. gals. (151 l)

Hydraulic system ..... 10 U.S. gals. (38 l)

Engine oil crankcase (including filter) ..... 6 U.S. qts. (5.7 l)

Cooling system ..... 14 U.S. qts. (13.2 l)

Main drive gear case ..... 2-1/2 U.S. qts. (1.4 l)

Final drive gear case ..... 9 U.S. qts. (8.5 l)

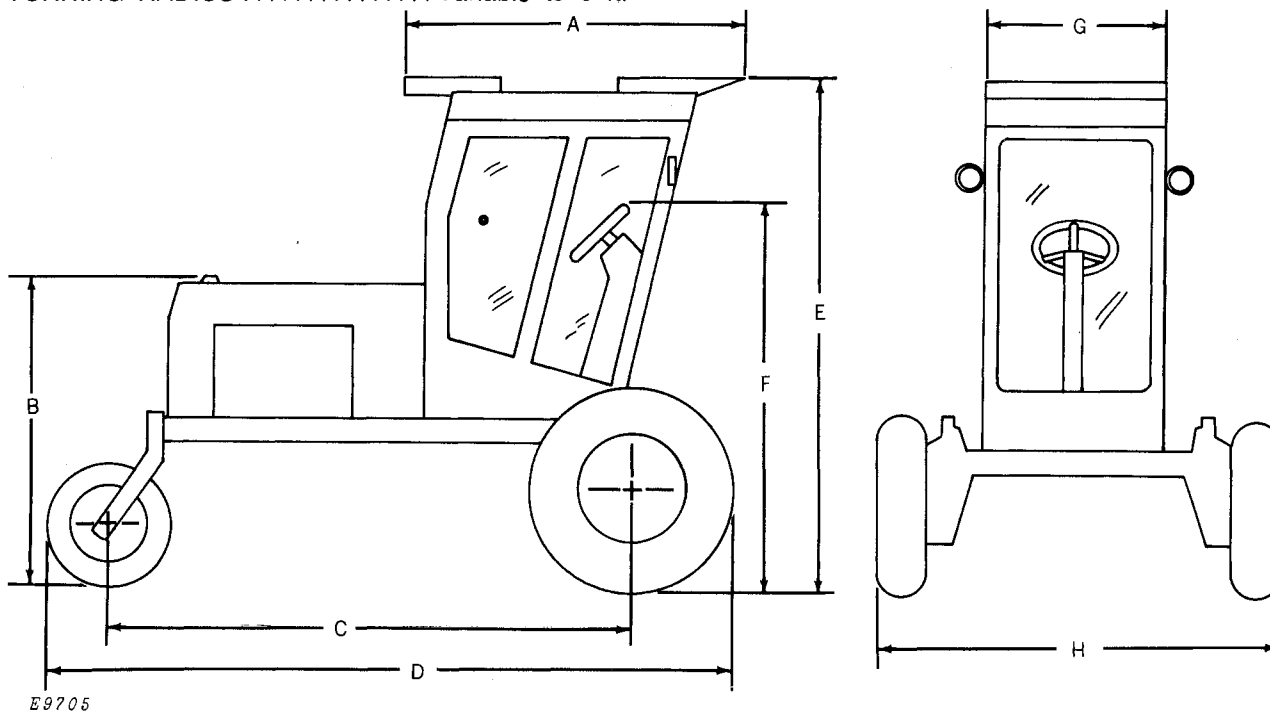


Fig. 1-Dimensions of 2250 and 2270 Hydrostatic Drive Windrowers

**WINDROWER DIMENSIONS**

A. Length of cab  
(-225,000)  
(225,001- )

B. Height to top of radiator cap

C. Wheel base

D. Overall length

E. Height to top of cab

F. Height to top of steering wheel

G. Width of cab

H. Overall width

**2250**

**2270**

72 in. (1.83 m)

72 in. (1.83 m)

66 in. (1.68 m)

66 in. (1.68 m)

64-1/2 in. (1.64 m)

65-1/2 in. (1.66 m)

118-1/2 in. (3.01 m)

118-1/2 in. (3.01 m)

152 in. (3.86 m)

154-1/2 in. (3.92 m)

114 in. (2.90 m)

115-1/2 in. (2.93 m)

\*83 in. (2.11 m)

93 in. (2.36 m)

42-1/2 in. (1.18 m)

42-1/2 in. (1.18 m)

124-1/2 in. (3.16 m)

126 in. (3.24 m)

\*To top of steering levers on the 2250 windrower.

## DRAPER PLATFORM

WIDTH ..... 12 ft. (3.66 m)  
CUTTERBAR:  
Type of drive ..... Enclosed, running in oil  
Speed ..... 725 rpm, 1450 strokes per min.  
Guards ..... Double tine.  
Guard angle ..... Variable, 6-1/2° to -12.5°  
below horizontal  
Knives... Overserrated, underserrated, or smooth  
REEL:  
Type ..... Pickup  
Speed ..... Variable, 36 to 81 rpm  
Adjustments:  
Vertical ..... 27 in. (68.6 cm)  
Horizontal ..... 12 in. (30.5 cm)  
CONVEYOR CANVASES:  
Drive ..... Bevel gear case and chain  
Speed ..... 758 rpm  
Draper tension ..... Spring-loaded  
RANGE OF PLATFORM CUTTING  
HEIGHT ..... -5 to 22 in. (-12.7 to 25.4 cm)  
PLATFORM ANGLE ..... 30°  
DISTANCE BETWEEN  
CANVASES ..... 36 in. (91.4 cm)  
WEIGHT..... (Approx.) 1885 lbs. (855 kg)

## AUGER PLATFORM

WIDTH ..... 12 ft. (3.66 m), 14 ft. (4.27 m)  
and 16 ft. (4.88 m)  
CUTTERBAR:  
Type of drive ..... Enclosed, running in oil  
Speed ..... 725 rpm, 1450 strokes per min.  
Guards ..... Double tine.  
Guard angle ..... Variable, 6-1/2° to -12.5°  
below horizontal  
Knives... Overserrated, underserrated, or smooth  
REEL:  
Type .... 3-Hub - 12 ft. (3.66 m); 4-Hub - 14 ft.  
(4.27 m) and 16 ft. (4.88 m)  
Speed ..... 12-tooth sprocket - 41-52 rpm  
15-tooth sprocket - 52-66 rpm  
18-tooth sprocket - 62-79 rpm  
AUGER:  
Outside diameter ..... 22 in. (55.9 cm)  
Width of flighting ..... 5 in. (12.7 cm)  
Speed ..... 12-tooth - 126 rpm  
15 tooth - 158 rpm  
18-tooth - 190 rpm  
RANGE OF PLATFORM CUTTING  
HEIGHT ..... -5 to 22 in. (-12.7 to 55.9 cm)  
WEIGHT:  
12-ft. with conditioner ..... (Approx.) 2640 lbs.  
(1197 kg)  
14-ft. with conditioner ..... (Approx.) 2820 lbs.  
(1279 kg)  
16-ft. with conditioner ..... (Approx.) 3000  
(1361 kg)

## HAY CONDITIONER

TYPE OF ROLLS ..... Formed steel, fluted  
DRIVE OF ROLLS:  
Auger platform model ..... Gear Case  
Draper platform model ..... Chain  
LENGTH OF ROLLS ..... 58 in. (1.47 m)  
DIAMETER OF ROLLS ..... 7-3/4 in. (19.8 cm)  
SPEED OF ROLLS:  
Auger platform model ..... 862 rpm  
Draper platform model ..... 725 rpm  
WEIGHT OF CONDITIONER:  
Auger platform model ..... (Approx.) 485 lbs.  
(220 kg)  
Draper platform model ..... (Approx.) 518 lbs.  
(235 kg)



## Group 10

# PREDELIVERY, DELIVERY AND AFTER-SALES SERVICES

## PREDELIVERY SERVICE

Because of the shipping factors involved, plus extra finishing touches that are necessary to promote customer satisfaction, proper delivery service is of prime importance to the dealer.

After completing the factory-recommended dealer

checks and services listed on the predelivery page, remove the page from the windrower operator's manual and file it with the shop order for the job. The page will certify that the windrower has received the proper predelivery service when that portion of the customer's John Deere Delivery Receipt is completed.

## TEMPORARY WINDROWER STORAGE

Service	Specification	Reference
Check radiator for coolant loss and antifreeze protection.	2 inches (5.1 cm) above baffle.	.....
Reduce shipping pressure of tires.	.....	Operator's manual
Cover windrower and tires for protection and cleanliness.	.....	.....

## BEFORE DELIVERING WINDROWER

### COOLING SYSTEM

Inspect radiator for coolant loss.	.....	.....
Check antifreeze protection.	.....	.....

### ELECTRICAL SYSTEM

Install electrolyte and charge batteries.	.....	FOS-20 Manual
Stamp date code on battery.	.....	FOS-20 Manual
Connect alternator. Do not attempt to polarize.	.....	Section 40
Clean terminals and connect battery cables.	.....	Section 40

### TIRES AND WHEELS

Adjust pressure of tires.	.....	Operator's manual
Check front wheel cap screws and rear wheel hub bolts for tightness.	Front cap screws - 120 ft-lbs (163 Nm) Rear hub bolts - 85 ft-lbs (115 Nm)	.....

**BEFORE DELIVERING WINDROWER—Continued**

Service	Specification	Reference
<i>LUBRICATION</i>		
Check crankcase oil level.	.....	Section 10 - Group 20
Check final drives oil level.	SAE 90-140 API GL5 Gear Lubricant	Operator's manual
Check hydraulic system oil level.	John Deere Hy-GARD Transmission and Hydraulic Oil	Operator's manual
Check main gear case oil level.	SAE 90-140 API GL5 Gear Lubricant	Operator's manual
Lubricate grease fittings.	John Deere Multi-Purpose Lubricant	Operator's manual
Lubricate drive chains.	SAE 30 or heavier engine oil	Operator's manual
<i>ENGINE</i>		
Remove protective covers from all engine openings.	.....	.....
Fill fuel tank and start engine.	.....	Operator's manual
Check operation of gauges and indicator lights.	.....	.....
Check engine speeds.	.....	.....
Slow idle	2250 - 600 rpm	.....
Fast idle	2270 - 800 rpm	.....
	2665 rpm	.....
<i>OPERATION</i>		
Check to be certain drive wheels are fully engaged or disengaged.	.....	Operator's manual
Check master control operation.	.....	.....
Check hydrostatic drive operation.	.....	.....
Check all hydraulic system functions.	.....	.....
Check parking brake operation.	.....	.....
Check steering operation.	.....	.....
Check seat operation.	.....	.....

Service	Specification	Reference
<i>GENERAL</i>		
Install non-slip cleats on operator's platform.	.....	Operator's manual
All moving parts are working freely.	.....	.....
Install platform and attachments. Make sure platform lift arm lock plates are properly installed.	.....	Operator's manual
Adjust platform float.	.....	Operator's manual
Check tension of all belts and adjust if necessary.	.....	Operator's manual
Check all chains for proper installation and adjustment.	.....	Operator's manual
Check platform draper belt for cracks, missing rivets, etc.	.....	Operator's manual
Check and, if necessary, lubricate all points of lubrication.	.....	Operator's manual
Tighten accessible nuts and cap screws.	.....	.....
Clean windrower and touch up paint.	.....	.....

## DELIVERY SERVICE

A thorough discussion of the operation and service of a new windrower at the time of delivery helps to assure complete customer satisfaction. Proper delivery should be an important phase of a dealer's program. A portion of the John Deere Delivery Receipt emphasizes the importance of proper delivery service.

Many complaints have arisen simply because the owner was not shown how to operate and service the new windrower properly. Enough time should be devoted, at the customer's convenience, to introducing the owner to the new windrower and explaining how to operate and service it.

The following procedure is recommended before the service technician and owner complete the delivery acknowledgments portion of the delivery receipt.

Using the windrower operator's manual as a guide, be sure that the owner understands these points thoroughly:

1. Controls and instruments.
2. How to start and stop the engine.
3. The importance of the break-in period.
4. All functions of the hydraulic system.
5. All functions of hydrostatic system.
6. Advise the customer of the optional attachments that are available for special crop and operating conditions.
7. The importance of lubrication and periodic services.
8. The importance of safety.

After explaining and demonstrating the above features, have the owner sign the delivery receipt and give the owner the operator's manual.

## AFTER-SALE INSPECTION

The purchaser of a new John Deere windrower is entitled to a free inspection within the warranty period after the equipment has been "run in." The terms of this after-sale inspection are outlined on the back of the John Deere Delivery Receipt.

The purpose of this inspection is to make sure that the customer is receiving satisfactory performance from the windrower. At the same time, the inspection should reveal whether or not the windrower is being operated, lubricated, and serviced properly.

If the recommended after-sale service inspection is followed, the dealer can eliminate a needless volume of service work by preventing minor irregularities from developing into serious problems later on. This will promote strong dealer-customer relations and present the dealer an opportunity to answer questions that may have arisen during the first few days of operation. During the inspection service, the dealer has the further opportunity of promoting the possible sale of other new equipment.

The following inspection program is recommended within the first 100 hours of harvester operation.

Service	Specification	Reference
<i>COOLING SYSTEM</i>		
Check radiator coolant level. ....		Operator's manual
Clean external surface of radiator core. ....		.....
Check hoses and connections for leaks. ....		.....

Service	Specification	Reference
<b>FUEL SYSTEM</b>		
Remove water and foreign material from filter sediment bowls	.....	Operator's manual
Bleed fuel system.	.....	Operator's manual
Check fuel line and connections.	.....	.....
<b>ELECTRICAL SYSTEM</b>		
Check specific gravity of battery (s).	Full charge - 1.260 at 80°F (26.7°C)	FOS-20 Manual
Check level of battery electrolyte.	To bottom of filler neck in cell.	Operator's manual
Check belt tension.	Alternator - 3/4-inch (19 mm) deflection with a 20 lb. (89 N) force. Compressor - 3/8-inch (9.5 mm) deflection with a 15 lb. (67 N) force.	Operator's manual
Start engine and check operation of starter, lights, and indicator lamps.	.....	Operator's manual
<b>TIRES AND WHEELS</b>		
Adjust pressure of tires.	.....	Operator's manual
Check front wheel cap screws and rear wheel hub bolts for tightness.	Front cap screws - 120 ft-lbs (163 Nm) Rear hub bolts - 85 ft-lbs (115 Nm)	.....
<b>LUBRICATION</b>		
Check crankcase oil level.	To upper mark on dip stick.	Operator's manual
Check hydraulic system oil level.	To upper mark on dip stick.	Section 10 - Group 20
Check hydraulic lines and connections.	.....	.....
Check final drive gear case oil level.	To check plug.	Section 10 - Group 20
Check main drive case oil level.	To check plug.	Section 10 - Group 20
Check cutterbar drive case.	To check plug.	Section 10 - Group 20
Lubricate grease fittings.	.....	Operator's manual

## AFTER-SALE INSPECTION—Continued

Service	Specification	Reference
<i>ENGINE</i>		
Check air cleaner.	.....	Operator's manual
Check fan belt tension.	3/4 inch (19 mm) deflection with 20 lb (89 N) force.	Operator's manual
Check speed control and governor linkage for free operation.	.....	.....
Check valve clearance (static)		
2250	Intake 0.010 (0.254 mm) Exhaust 0.020 (0.508 mm)	Section 20 - Group 10
2270	Intake: 0.014 in. (0.356 mm) Exhaust: 0.018 in (0.457 mm)	
Check engine speed.		
Slow idle	2250—600 rpm. 2270—800 rpm.	.....
Fast idle	2665 rpm.	.....
Check operation of starter, alternator, gauges, and indicator lights	.....	Operator's manual
<i>OPERATION</i>		
Check platform drive clutch lever adjustment.	.....	Operator's manual
Check parking brake adjustment.	.....	Operator's manual
Check hydraulic system operation.	.....	Section 70
Check hydrostatic system operation.	.....	Section 70
Check steering.	.....	Section 60
Check headlight adjustment.	.....	Operator's manual
Check cab controls and seat operation.	.....	Operator's manual
Check drive chain adjustments.	.....	Operator's manual
Check V-belt adjustments.	.....	Operator's manual

Service	Specification	Reference
<b>GENERAL</b>		
Tighten accessible nuts and cap screws.	.....	.....
Visual inspection.	.....	.....
All safety shields in place.	.....	.....
Clean windrower and touch up paint.	.....	.....

## TORQUE CHART

RECOMMENDED TORQUE IN FT-LBS (Nm) COARSE AND FINE THREADS			
Bolt Diameter	Plain Head	Three Dashes	Six Dashes
1/4	Not used	10 (14)	14 (19)
5/16	Not used	20 (27)	30 (41)
3/8	Not used	35 (47)	50 (68)
7/16	35 (47)	55 (75)	80 (108)
1/2	55 (75)	85 (115)	120 (163)
9/16	75 (102)	130 (176)	175 (237)
5/8	105 (142)	170 (230)	240 (325)
3/4	185 (251)	300 (407)	425 (576)
7/8	160 (217)	445 (603)	685 (929)
1	250 (339)	670 (908)	1030 (1397)
1-1/8	330 (447)	910 (1234)	1460 (1980)
1-1/4	480 (651)	1250 (1695)	2060 (2793)

E11579N

The types of bolts and cap screws are identified by head markings as follows:

*Plain Head:* regular machine bolts and cap screws.

*3-Dash Head:* tempered steel high-strength bolts and cap screws.

*6-Dash Head:* tempered steel extra high-strength bolts and cap screws.

Machine bolts and cap screws 7/8-inch and larger are sometimes formed hot rather than cold, which accounts for the lower torque.

# Group 15

## TUNE-UP

### GENERAL INFORMATION

Before tuning up a windrower, determine whether a tune-up will restore operating efficiency. When there is doubt, the following preliminary tests will help determine if the engine can be tuned up. If the condition

is satisfactory, proceed with the tune-up. Choose from the following procedures only those necessary to restore the unit.

### PRELIMINARY ENGINE TESTING

Operation	Specification	Section-Group Reference
Check compression (minimum readings).		
2250 .....	130 psi (907 kPa) at wide open throttle	FOS 30 Manual* * ,
2270 .....	300 psi (2070 kPa) at full cranking speed	Chapter 12
Check manifold depression (2250).	.....	FOS 30 Manual, Chapter 12
Check engine coolant.	No air bubbles or oil film in radiator.	FOS 30 Manual, Chapter 12

### ENGINE TUNE-UP

Service air cleaner and check system for leaks.	.....	FOS 30 Manual, Chapter 12
Check exhaust system for leaks.	.....	FOS 30 Manual, Chapter 12
Check muffler and exhaust pipe for restrictions.	.....	FOS 30 Manual, Chapter 12
Check crankcase ventilating system for restrictions.	.....	FOS 30 Manual, Chapter 12
Clean cooling system screen, radiator core, and oil cooler core.	.....	Section 20 - Group 40
Clean and flush cooling system; check thermostat opening temperature, if necessary.	.....	Section 20 - Group 40
Check pressure cap.	6.25 to 7.50 psi (42.8 to 51.5 kPa) release pressure.	Section 20 - Group 40

\* *Fundamentals of Service Manual—ENGINES*



### ENGINE TUNE-UP—Continued

Operation	Specification	Section-Group Reference
Tighten cylinder head cap screws.		
2250 .....	65 ft-lbs (88 Nm) in sequence ....	Section 20 - Group 10
2270 .....	110 ft-lbs (149 Nm) in sequence ..	Section 20 - Group 10
Set valve clearance.		
2250 .....	Intake-0.010 inch (0.25 mm) .....	Section 20 - Group 10
	Exhaust-0.020 inch (0.51 mm)	
2270 .....	Intake-0.014 inch (0.36 mm) .....	Section 20 - Group 10
	Exhaust-0.018 inch (0.46 mm)	
Inspect ignition system (2250).	.....	Section 40 - Group 15
<b>2250 WINDROWER FUEL SYSTEM</b>		
Check fuel tank for water or other foreign material.	.....	.....
Clean fuel pump sediment bowl and filter screen.	.....	Operator's manual
Check system for leaks.	.....	.....
Check fuel pump pressure.	.....	Section 30 - Group 15
Clean carburetor inlet screen.	.....	Section 30 - Group 15
Drain carburetor bowl.	.....	Section 30 - Group 15
Check choke operation.	.....	.....
Check carburetor adjustment.	.....	Section 30 - Group 15
<b>2270 WINDROWER FUEL SYSTEM</b>		
Check fuel tank for water or other foreign material.	.....	.....
Check fuel pump pressure.	3-1/2 - 4-1/2 psi (24 - 31 kPa)	Section 30 - Group 10
Clean sediment bowls and change filter(s).	.....	Section 30 - Group 10
Injection Pump:		
Service and check timing .....	TDC .....	Section 30 - Group 10
	4° advance at 1200 rpm (no load)	Section 30 - Group 10
Adjust throttle linkage.		
Slow idle .....	2250 - 600 rpm 2270 - 800 rpm	.....
Fast idle .....	2665 rpm	.....
Check engine oil pressure.		
2250 .....	45 - 60 psi (310-414 kPa) at high idle .	Section 20 - Group 30
2270 .....	45 - 65 psi (310-448 kPa) at high idle	Section 20 - Group 30



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