

2840 Tractor Technical Manual TM-4336 (NOV-76)

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Section 10

General **10**

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Group 5 Specifications

SERIAL NUMBERS

The engine serial number is stamped into the name plate located on the lower front right-hand side of the cylinder block.

NOTE. I ordering engine parts, indicate all digits of the serial number on the name plate.

The name plate showing the tractor serial number is located on the right-hand side of the front support.

NOTE. I ordering tractor parts (excluding engine parts), indicate all digits of the serial number on the name plate.

MODEL NUMBERS

The injection pump, injection nozzles, alternator, starting motor and hydraulic pump have model numbers to facilitate identification of different makes of a given unit.

ENGINE

Number of cylinders	6
Cylinder liner bore	102 mm (4.02 in.)
Stroke - - - - -	111 mm (4.33 in.)
Displacement	5390 cm ³ (329 cu. in.)
Compression ratio	16.8:1
Maximum torque at 1300 rpm	320 Nm (235 ft-lb)
Firing order	1-5-3-6-2-4
Valve clearance (engine hot or cold)	
Intake valve	0.35 mm (0.014 in.)
Exhaust valve	0.45 mm (0.018 in.)
Fast idle	2660 rpm
Slow idle	650 rpm
Working speed range - - - - -	110 to 2500 rpm
PTO horsepower* - - - - -	60 kW (80 HP) (at 2500 rpm engine speed)

ENGINE CLUTCH

Single dry disk clutch with torsion damper (isolator), foot-operated.

ELECTRICAL SYSTEM

Batteries - - - - -	2 x 12 volts, 88 ampere-hours
Starting motor - - - - -	11 volt, 3 kW (4 HP)
Alternator - - - - -	11 volts, 28 amps.
Battery terminal grounded	negative

TRANSMISSION

Collar shaft transmission with helical cut gears.

The tractor has 6 forward gears and three reverse gears, park lock included. However, by shifting the Hi-Lo shift unit, 12 forward and 6 reverse speeds may be selected.

HI-LO SHIFT UNIT

Hydraulically controlled reduction gear which can be shifted under load, with "wet" multiple disk clutch and "wet" multiple disk brake. Allows reduction of the individual gear speeds by 21.9%.

* With the engine run in (above 100 hours of operation) and having reached operating temperature (engine and transmission); measured by means of a dynamometer. Permissible variation 1.5%.

D I F F E R E N T I A L A N D F I N A L D R I V E S

Planetary reduction gear and differential with spiral bevel gears.

D I F F E R E N T I A L L O C K

Hand or foot operated; spring-loaded out of engagement.

P O W E R T A K E - O F F (P T O)

Independent of transmission, can be engaged and disengaged under load.

The independent PTO is engaged by a hydraulically operated disk clutch. Disengaging the PTO is achieved by operating the hydraulically actuated disk brake.

Changing PTO shaft speed from 540 rpm to 1000 rpm or vice-versa is effected by changing the PTO stub shaft.

PTO Speeds (in r jom)

Engine speed in rpm	540 rpm shaft	1000 rpm shaft
650	160	300
2175	540	1000
2500	620	1150
2660	660	1225

H Y D R A U L I C S Y S T E M

closed center, constant pressure system; also includes rockshaft, power steering and selective control valves.

System pressure 155 bar
 (2250 psi)

Pump S-piston pump
 driven by the engine

P O W E R S T E E R I N G

The steering system is a "closed center" type incorporated in the hydraulic system and supplied with oil by the hydraulic pump. It is connected to the front wheels by means of a steering linkage.

H Y D R A U L I C B R A K E S

The disk brakes run in an oil bath and are hydraulically controlled.

C A P A C I T I E S

	Etbas	U\$.gals
Fuel tank	106.0	28.0
Cooling system	19.0	5.0
Ringier crane case incl. filter	11.5	3.0
Transmission hydraulic system		
Dry system	27.0	15.0
At service intervals	49.0	12.9

T R A V E L S P E E D S

See Operator's Manual.

F R O N T A N D R E A R W H E E L S

For tire sizes, treads, inflation pressure and weights see Operator's manual.

D I M E N S I O N S

See Operator's Manual.



Group 10

Predelivery, Delivery and After-Sales Inspections

PREDELIVERY INSPECTION

Every new JOHN DEERE tractor leaves the factory in such a condition that it can be delivered to the customer after a minimum of service.

To promote complete customer satisfaction, proper predelivery service including mending of possible shipping damage and giving the finishing touches to the tractor, are of prime importance to the dealer.

A tag pointing out the factory-recommended procedure for predelivery service is attached to every

new tractor before it leaves the factory. The reverse side of this tag is filled in by the factory after the tractor has undergone a thorough inspection prior to shipping.

After completing the factory-recommended dealer checks and services listed on the predelivery tag, remove the tag from the tractor and file it with the shop order for the job. The tag will then serve as a basis for certifying that the tractor has received the proper predelivery service.

Temporary Tractor Storage

Service	Specifications	Reference
<p>Check radiator for coolant loss and antifreeze protection (gravity of antifreeze and rust inhibitor mixture)</p> <p>If the tractor is to be operated for a short time without battery (using a slave battery for starting), do not, under any circumstances, interrupt the circuit by switching off the key switch before stopping the engine by means of fuel pump shut off cable. Use additional current (lights) whilst engine is running. Insulate terminal of battery cable before starting by means of slave battery. If this advice is disregarded, damage to alternator and regulator may result.</p>	<p>Coolant level should be midway between radiator core and bottom edge of filler neck</p>	<p>Operator's manual</p> <p>Section 40, group 10</p>
<p>Remove batteries. Drain electrolyte and store batteries</p>	<p>Store at room temperature</p>	
<p>Reduce shipping pressure of tires</p>		<p>Operator's manual</p>
<p>Cover tractor and tires for protection and cleanliness</p>		

PREDELIVERY INSPECTION (Contd.)

10

Service	Specifications	Reference
COOLING SYSTEM		
Check radiator for coolant loss	Coolant level should be midway between radiator core and bottom edge of filler neck.	Operator's manual
Check gravity of antifreeze and rust inhibitor mixture		Operator's manual
ELECTRICAL SYSTEM		
If the tractor is to be operated for a short time without battery (using a slave battery for starting), do not, under any circumstances, interrupt the circuit by switching off the key switch before stopping the engine by means of fuel pump shut off cable. Use additional current (lights) whilst engine is running. Insulate terminal of battery cable before starting the engine by means of slave battery.		Section 40, group 10
If this advice is disregarded, damage to alternator and regulator may result.		
If the batteries are to be installed, connect them in the proper polarity (negative to ground). If they are improperly connected, the rectifier diodes will be immediately destroyed.		Section 40, group 10
First connect positive (+) cable and then ground (-) strap of each battery. Only then start tractor engine.		Section 40, group 10

PREDELIVERY INSPECTION (Contd.)

Service	Specifications	Reference	10
<p>TIRES AND WHEELS</p>			
<p>Check tire inflation pressure</p>		Operator's manual	
<p>Retighten wheel bolts</p>		Section 80, group 10 and Operator's manual	
<p>LUBRICATION</p>			
<p>Check crankcase oil level</p>	Top mark on dip stick	Operator's manual	
<p>Check transmission-hydraulic system: oil level</p>		Operator's manual	
<p>Lubricate all lubrication points on the tractor</p>		Operator's manual	
<p>ENGINE</p>			
<p>Check dry type air cleaner</p>		Operator's manual	
<p>Fill fuel tank and start engine</p>	Fuel tank capacity: 106.0 liters (28.0 U.S. gal.)	Operator's manual	
<p>Check lighting system, indicator lights and instruments for proper operation</p>		Operator's manual	
<p>Check if speed control linkage moves easily</p>		Section 20, group 40	
<p>Check engine idle speeds</p>		Section 20, group 40	
<p>Check injection timing</p>		Section 30, group 15	
<p>OPERATION</p>			
<p>Check clutch pedal adjustment</p>	Approx. 25 mm (1 in.) clutch pedal free travel	Section 50, group 5	
<p>Check operation of Hi-Lo shift unit</p>		Section 50, group 10	
<p>Shift transmission through all gears</p>		Operator's manual	
<p>Check differential lock operation</p>		Operator's manual	
<p>Check PTO operation</p>		Operator's manual	
<p>Check 3-point hitch operation</p>		Operator's manual	
<p>Check hydraulic system operation</p>		Section 70, group 5	
<p>Check brake operation</p>		Section 60, group 15	

PREDELIVERY INSPECTION (Contd.)

Service	Specifications	Reference
Check steering operation		Section 60, group 10
Check seat adjustment		Operator's manual
Check operation of remote hydraulic cylinder (if equipped)		Section 70, group 5
GENERAL		
Tighten accessible nuts and attaching screws		Section 10, group 20
Attach roll guard		Section 80, group 15
Clean tractor and touch up paint		

DELIVERY INSPECTION

A thorough discussion of the operation and service of the tractor at the time of its delivery helps to assure complete customer satisfaction.

Proper delivery should be an important phase of the dealer's program.

It is a well-known fact that many complaints have arisen simply because the owner was not shown how to operate and service his new tractor properly. Therefore, enough time should be devoted, at the customer's convenience, to introducing him to this new tractor and explaining to him how to operate and service it.

Using the tractor operator's manual as a guide, be sure that the owner understands the following points properly:

1. Adjusting the seat
2. Operation of control levers and instruments
3. Starting and shutting off the engine
4. The importance of the tractor break-in period
5. Use of counterweights and proper tire inflation pressure as well as filling of tires with water and calcium chloride, if required
6. All functions of the hydraulic system
7. Operating the PTO
8. The importance of the safety rules
9. The importance of lubrication and periodic service

AFTER-SALES INSPECTION

In the interest of the purchaser and the dealer an after-sales inspection should be carried out by the dealer after the first 100 hours of using a new John Deere tractor.

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

Through this inspection a needless volume of service work can be eliminated by preventing minor difficulties from developing into serious problems later on. It also will promote stronger dealer-customer relations and give the customer an opportunity to ask questions that may have arisen during the first few days of use.

Thereby the dealer has the further opportunity of promoting the possible sale of other new equipment.

The following inspection program is recommended:

A F T E R-S A L E S I N S P E C T I O N (C o n t d .)

Service	Specifications	Reference
COOLING SYSTEM		
Check coolant level	Coolant level should be midway between radial or core and bottom edge of filler neck	Operator's manual
Clean exterior of radiator		
Check hose connections		
FUEL SYSTEM		
Check fuel filter housing for water or sediment deposits and clean transfer pump screen		Operator's manual
Check line connections		
ELECTRICAL SYSTEM		
Check gravity of battery electrolyte	Gravity should be 1.261 at an electrolyte temperature of 27°C (80°F)	
Check electrolyte level of batteries	To bottom of filler neck in each cell	Operator's manual
Check tension of fan belt,	19 mm (3/4 in.) deflection with a 90 N (20 lb) force	Operator's manual and section 20, group 35
Start engine and check operation of lights, indicator lamps and instruments		Operator's manual
LUBRICATION		
Check crankcase oil level	Top mark on dipstick	Operator's manual
Check transmission oil level		Operator's manual
Lubricate 3-point hitch		Operator's manual

John Deere 2840

Tractor Service Manual

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the Complete Manual

Thank you very much!