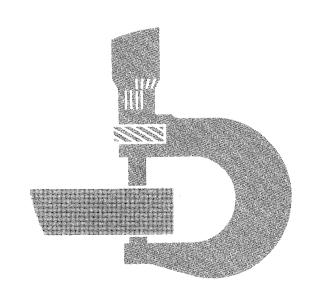
2355, 2555, 2755 and 2855N Tractors

TECHNICAL MANUAL



2355, 2555, 2755 AND 2855N TRACTORS TECHNICAL MANUAL TM4434 (NOV-89)

SECTION CONTENTS IN GROUPS - REPAIR

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40 - Transmission - console shift

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80 - Front PTO

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60 - STEERING SYSTEM AND BRAKES

05 - Hydrostatic steering

10 – Steering cylinder (without front wheel drive)

15 - Power steering

20 - Hydraulic brakes

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INHALT-LB701AE-011088

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80 - MISCELLANEOUS

05 - Front axle

10 - Front and rear wheels

90 - OPERATOR'S STATION

05 - Safe handling of refrigerants

06 - Servicing air conditioning system

07 - Compressor (up to tractor Serial No. 663 473L)

08 - Compressor (from tractor Serial No. 663 474L)

09 - Components of air conditioning system

10 - Cab ventilation and heating

15 - Operator's seats

20 - SOUND-GARD Body

25 – 2-post roll guard

30 - 2-post telescopic roll guard

INHALT-LB702AE-011088

SPECIFICATIONS

SERIAL NUMBER PLATES

The following illustrations show the serial number plates for tractor major components. The letters and figures on these plates are required for warranty claims and when ordering replacement parts.

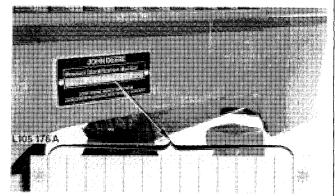
TECHDA-LA71005AE-180385

PRODUCT IDENTIFICATION NUMBER PLATE

The product identification number plate is located on right-hand side of front axle carrier.

The chassis number is stamped in front axle carrier next to the identification number plate.

NOTE: When ordering tractor parts (excluding engine parts), quote all letters and figures of serial number stamped on this plate.

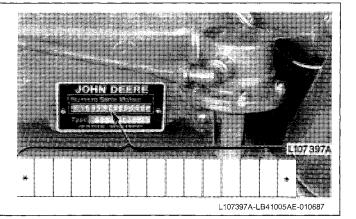


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ENGINE SERIAL NUMBER PLATE

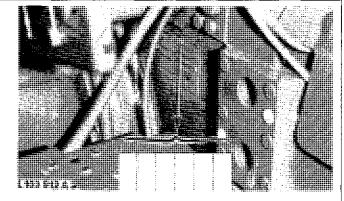
The engine serial number plate is located on right-hand side of engine block.

NOTE: The engine serial number plate shows the engine type as well as the engine serial number.
When ordering engine parts, quote all figures stamped on this plate.



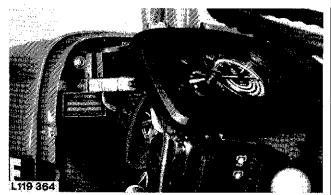
TRANSMISSION SERIAL NUMBER PLATE (Tractors Without SOUND-GARD® Body)

The transmission serial number plate is located on right-hand side of transmission case.



From Tractor Serial No. 617 678L, an additional serial number plate is attached to left-hand side of dash.

NOTE: In addition to the transmission serial number and transmission type, this serial number plate also specifies differential and front wheel drive gear ratios.

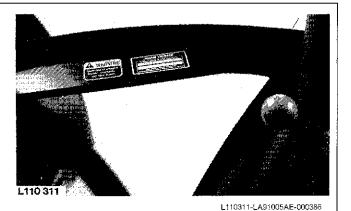


L103912A,L119364-LB71005AE-011088

TRANSMISSION SERIAL NUMBER PLATE (Tractors With SOUND-GARD Body)

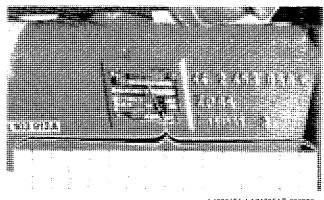
The transmission serial number plate is located on right-hand crossmember of SOUND-GARD body and on right-hand side of transmission case.

NOTE: In addition to serial number of transmission and transmission type, this serial number plate also specifies differential and front wheel drive gear ratios.



FRONT WHEEL DRIVE AXLE SERIAL NUMBER PLATE

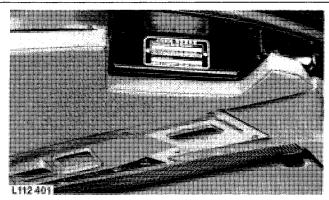
The front wheel drive axle serial number plate is located on rear of right-hand axle half.



L103913A-LA71005AE-000385

SOUND-GARD BODY SERIAL NUMBER

With operator's cab door open, cab serial number plate is visible in roof recess as you enter the cab.



L112401-LA91005AE-051185

MODEL SERIAL NUMBERS

Fuel injection pump, fuel injection nozzles, alternator, starting motor, hydrostatic steering valve, air conditioning system compressor (when equipped) and hydraulic pump have serial numbers to facilitate identification of different makes of a given unit.

TECHDA-LA71005BE-180385

ENGINE Number of cylinders	4
Cylinder liner bore	106.5 mm (4.19 in.)
Stroke	110 mm (4.33 in.)
Displacement	3920 cm³ (239 cu.in.)
Compression ratio	17.8 : 1
Max, torque With synchronized transmission - 2355 at 1400 rpm - 2555 at 1500 rpm - 2755 at 1500 rpm - 2855N at 1500 rpm	255 Nm (188 ft-lb) 285 Nm (210 ft-lb) 328 Nm (241 ft-lb) 340 Nm (250 ft-lb)
With collar shift transmission - 2355 at 1300 rpm - 2555 at 1300 rpm - 2755 at 1500 rpm	230 Nm (169 ft-lb) 248 Nm (183 ft-lb) 297 Nm (219 ft-lb)
Firing order	1–3–4–2
Valve clearance (engine hot or cold) - Intake valve - Exhaust valve	0.35 mm (0.014 in.) 0.45 mm (0.018 in.)
Slow idle speed	750 to 850 rpm
Fast idle speed - Synchronized transmission	2410 to 2510 rpm 2610 to 2660 rpm
Rated engine speed - Synchronized transmission	2300 rpm 2500 rpm
Working speed range Synchronized transmission - 2355	1400 to 2300 rpm 1500 to 2300 rpm
Coliar shift transmission – 2355 and 2555 – 2755	1300 to 2500 rpm 1500 to 2500 rpm

TECHDA-LB71005AE-010487

Engine speed for PTO operation	
Synchronized transmission – 540 rpm PTO – 1000 rpm PTO	2070 rpm 2172 rpm
Collar shift transmission – 540 rpm PTO	2075 rpm
PTO horsepower at engine rated speed - According to SAE J 1349	
- 2355 - 2555 - 2755 - 2855N	Tractors with: Synchronized Transmission Collar Shift Transmission 41 kW (55 hp) 41 kW (55 hp) 48 kW (65 hp) 48 kW (65 hp) 56 kW (75 hp) 56 kW (75 hp) 60 kW (80 hp) 56 kW (75 hp)
Lubrication system	Full internal force feed system with full flow filter
ENGINE CLUTCH - Type	Single dry disk clutch with torsion damper or dual dry disk clutch, foot-operated
COOLING SYSTEM - Type - Temperature regulation	Pressurized system with centrifugal pump Thermostat and, when equipped, viscous fan drive
FUEL SYSTEM - Type - Fuel injection pump timing to engine - Fuel injection pump type	Direct injection TDC Distributor type with two or four pistons
– Air cleaner	Dry-type air cleaner with secondary (safety) element
* With engine run in (over 100 hours of operation) and at operating temperature (engine and transmission), measured by means of a dynamometer. Permissible variation ± 5%	

TECHDA-LB71005AE-011088

ELECTRICAL SYSTEM - Batteries - Alternator with external regulator - Starting motor - Battery terminal grounded	2 x 12 volts, 55 Ah or 66 Ah 14 volts, 55 or 85 amps. 12 volts, 2.7 kW (3.7 hp) negative
SYNCHRONIZED TRANSMISSION - Type - Gear selections - Gear shifting	Synchronized transmission 8 forward and 4 reverse Two forward ranges and one reverse range; Synchronized forward and reverse shifting within range
COLLAR SHIFT TRANSMISSION	
TypeGear selectionsGear shifting	Helical gears 8 forward and 4 reverse Two forward ranges and one reverse range
HI-LO SHIFT UNIT	
- Type - Travel speed decreases in each gear by - Shifting to normal (Hi) speed - Shifting to reduced (Lo) speed	Hydraulic gear reduction unit which can be shifted under load with "wet" multiple disk clutch and brake packs. Approx. 20 % Hydraulic Preloaded Belleville springs
REVERSER TRANSMISSION	
- Type - Gear selections - Increase in reverse gear speeds	Hydraulic gear reduction unit which can be shifted under load with "wet" multiple disk clutch and brake packs, planetary reverser unit. 1 to 4 Approx. 16 %
CREEPER TRANSMISSION	
- Type - Travel speed decrease in low (I) and reverse	Synchronized reduction gear
ranges by	Approx. 79% Mechanically, not under load

TECHDA-LB71005CE-010487

DIFFERENTIAL AND FINAL DRIVES - Type of differential	Spiral bevel gears Planetary reduction drive
DIFFERENTIAL LOCK - Operation - Disengaged	Hand or foot operated Automatically as soon as traction has equalized
INDEPENDENT PTO - Type	Independent of transmission, can be engaged and disengaged under load
- With synchronized transmission - 2070 rpm - 2172 rpm - With collar shift transmission - 2075 rpm - With collar shift transmission	540 rpm 1000 rpm 540 rpm
PTO clutch	Interchangeable Hydraulically operated "wet" disk clutch Hydraulically operated "wet" disk brake
CONTINUOUS-RUNNING PTO - Type	Independent of transmission, uses dual engine clutch
PTO SPEEDS At engine speed	540 rpm shaft 1000 rpm shaft
With synchronized or reverser transmission - 800 rpm - 2070 rpm - 2172 rpm - 2300 rpm - 2400 rpm	210 rpm 370 rpm 540 rpm 955 rpm 565 rpm 1000 rpm 600 rpm 1060 rpm 625 rpm
With collar shift transmission (without reverser) – 800 rpm – 2400 rpm – 2500 rpm – 2600 rpm	180 rpm 540 rpm 560 rpm 585 rpm

TECHDA-LB71005DE-010487

FRONT PTO	
- Type - Control - PTO speed at an engine speed of: 2172 rpm (counterclockwise) - PTO clutch - PTO brake	Independent of transmission, can be engaged and disengaged under load Electric/hydraulic solenoid switch 1000 rpm Hydraulically operated "wet" disk clutch Hydraulically operated "wet" disk brake
FRONT WHEEL DRIVE - Type - Control - Drive engagement - Drive disengagement	Engaged hydraulically under load with "wet" disk clutch Electric/hydraulic solenoid switch Preloaded Belleville springs Hydraulic
HYDROSTATIC STEERING - Type	Without mechanical linkage between steering valve and front wheels
POWER STEERING - Type	Hydraulically operated steering linkage
FOOT BRAKES - Rear wheel brakes	Self-adjusting, hydraulically operated "wet" disk brakes
HANDBRAKE - Type	Mechanically operated band-type locking brake acting on the differential
HYDRAULIC SYSTEM - Type - System pressure when pump pistons idle - Operating pressure - Hydraulic pump	Closed, constant pressure system 16000 kPa (160 bar; 2320 psi) 14000 kPa (140 bar; 2050 psi) 8-piston pump with variable displacement

TECHDA-LB71005EE-010487

ROCKSHAFT - Type	With three-point hitch Load control, depth control, load-and-depth control, float position Via draft links
GROUND TRAVEL SPEEDS	See Operator's Manual
FRONT AND REAR WHEELS - Tires, tread widths, tire pressures and ballast weights	See Operator's Manual
DIMENSIONS AND WEIGHTS	See Operator's Manual
CAPACITIES Fuel tank Auxiliary tank	84.0 liters (22.2 U.S. gal.) 52.0 liters (13.7 U.S. gal.)
Cooling system - Without SOUND-GARD Body - With SOUND-GARD Body	13.0 liters (3.4 U.S. gal.) 15.0 liters (4.0 U.S. gal.)
Engine crankcase - Initial filling - Crankcase with filter replacement	10.5 liters (2.8 U.S. gal.) 10.0 liters (2.6 U.S. gal.)
Transmission/hydraulic system (including oil reservoir and oil cooler) Initial filling (synchronized transmission) Without front wheel drive With front wheel drive With front PTO Oil change with filter replacement Without front wheel drive With front wheel drive With front wheel drive	50.0 liters (13.2 U.S. gal.) 53.0 liters (14.0 U.S. gal.) 55.0 liters (14.5 U.S. gal.) 47.5 liters (12.5 U.S. gal.) 50.5 liters (13.3 U.S. gal.)
– With front PTO	52.5 liters (13.9 U.S. gal.)

TECHDA-LB71005BE-011088

CAPACITIES (Contd.)

 Initial filling (collar shift transmission) with Reverser without Reverser 2355 and 2555* Oil change with filter replacement with Reverser without Reverser 2355 and 2555* 	36.0 liters (9.5 U.S.gal.) 41.0 liters (10.8 U.S. gal.) 46.0 liters (12.2 U.S. gal.) 28.0 liters (7.4 U.S.gal.) 33.0 liters (8.7 U.S. gal.)
- 2755	38.0 liters (10.0 U.S. gal.) 5.0 liters (1.3 U.S. gal.)
- 2355 to 2755	5.3 liters (1.4 U.S. gal.) 3.25 liters (0.86 U.S. gal.) 0.75 liters (0.2 U.S. gal.)
Hydraulically operated clutch system Air conditioning system	250 cm³ (8.75 fl.oz.) 1.8 kg (4 lb)

TECHDA-LB71005CE-011088

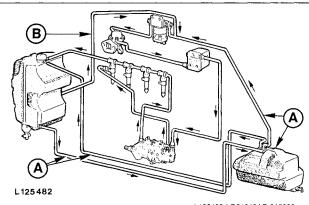
PREDELIVERY INSPECTION

NOTE: Should a malfunction occur when carrying out the predelivery inspection, then see relevant T.M. "Engines" or "Operation and Tests".

INSPEK-LB21010JE-010488

CHECKING FUEL LINES FOR LEAKS

A-Tractors with auxiliary fuel tank B-Tractors without auxiliary fuel tank



L125482-LB31010AE-010888

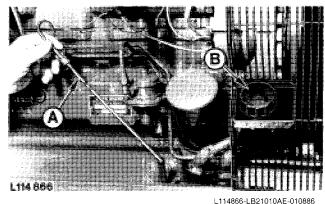
EXAMINING ENGINE FOR LEAKS

INSPEK-LB21010EE-010886

CHECKING OIL LEVEL IN ENGINE CRANKCASE

If necessary, add oil to bring oil level to top mark on dipstick. Use JOHN DEERE Torq-Gard Supreme engine oil SAE 10W-20 or an equivalent oil (see Group 15).

> A-Oil dipstick B-Oil filler neck



CHECKING COOLANT LEVEL

Tractors Without Expansion Tank

Coolant must reach up to marker plate in radiator.

On All Tractors

The cooling system is filled with JOHN DEERE engine coolant at the factory. It protects the engine against corrosion and against frost down to -36° C (-35° F).

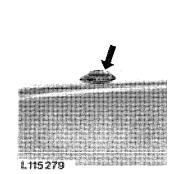
IMPORTANT: Use only JOHN DEERE engine coolant in the cooling system, independent of the season.

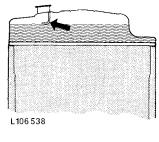
If JOHN DEERE engine coolant is not available, use a mixture of 50% ethylene-glycol antifreeze/corrosion inhibitor and 50% clear, soft water. This guarantees engine protection against corrosion and frost down to -36° C (-35° F).

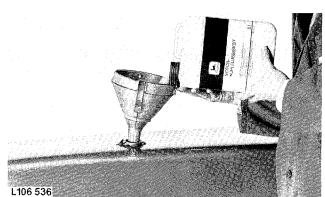
Never use any cooling system sealing additives.

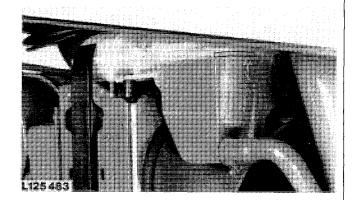
Tractors With Expansion Tank

Coolant level should never drop below "MIN" mark.









L115279,L106538,L106536,L125483-LB31010AE-010888

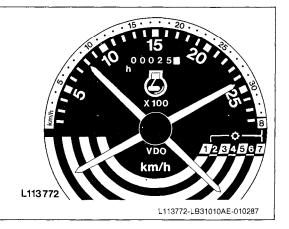
CHECKING ENGINE IDLE SPEEDS

Tractors with Synchronized Transmission

Warm up engine to operating temperature and check speeds.

Slow idle speed: 750 to 850 rpm Fast idle speed: 2410 to 2510 rpm

See Section 30, Group 15, for adjustment.

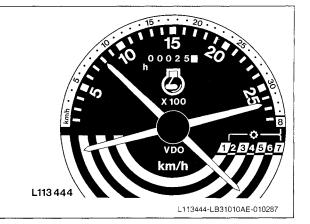


Tractors with Collar Shift Transmission

Warm up engine to operating temperature and check speeds.

Slow idle speed: 750 to 850 rpm Fast idle speed: 2610 to 2660 rpm

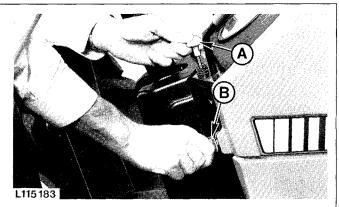
See Section 30, Group 15, for adjustment.

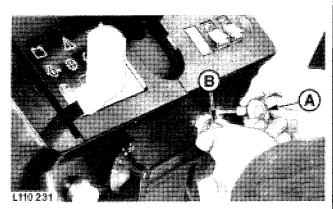


CHECKING FUNCTION OF ENGINE SHUT-OFF CABLE

Move hand throttle lever to idle position and run engine for 1 to 2 minutes at slow idle speed.

Completely pull out shut-off knob (A), making sure that engine stops immediately. Switch off main switch (B).



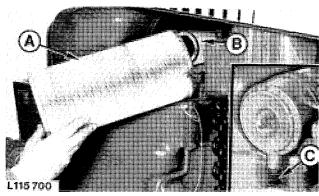


L115183,L110231-LB71010AE-010487

CHECKING AIR CLEANER AND SAFETY ELEMENTS FOR CORRECT INSTALLATION

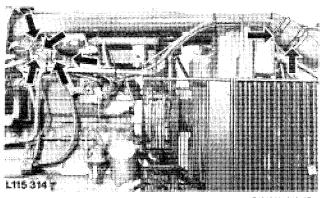
Make sure that dust unloading valve (C) (rubber cap) is installed on air cleaner.

A-Air cleaner element B-Safety element C-Dust unloading valve



L115700-LB61010AE-011086

CHECKING HOSE CLAMPS OF AIR INTAKE SYSTEM FOR TIGHTNESS



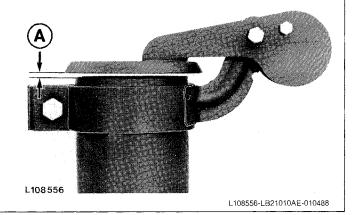
L115314-LB71010AE-010487

INSTALLING EXHAUST STACK

Up To Tractor Serial No. 629 372L

Install weather flap with flap hinge at the rear (as seen in direction of forward travel).

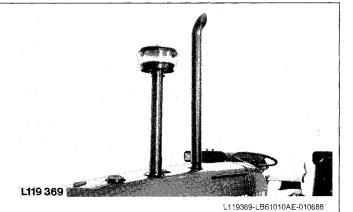
Distance (A) between cap and stack end must be 2 mm (5/64 in.).



From Tractor Serial No. 629 373L

Tractors with SOUND-GARD Body: Install exhaust stack with opening facing to the rear.

Tractors without SOUND-GARD Body: Install exhaust stack with opening facing to the left.

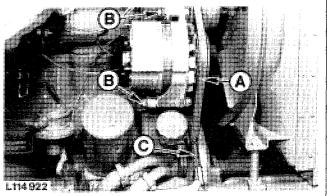


CHECKING FAN BELT TENSION

Using belt tension gauge JDST-28 (C) check tension of fan belt.

Fan belt should have 19 mm (3/4 in.) flex with 90 N (20 lb) pull midway between crankshaft and alternator or water pump.

A-Fan belt B-Attaching nut C-Belt tension gauge (JDST-28)



L114922-LB21010AE-010886

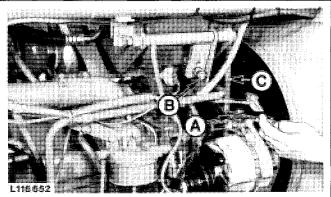
CHECKING COMPRESSOR BELT TENSION (Tractors With Air Conditioning System)

Using belt tension gauge JDST-28 (A) check compressor belt tension.

Compressor belt should have 19 mm (3/4 in.) flex with 60 N (13 lb) pull midway between both pulleys.

A-Belt tension gauge (JDST-28)

B-Adjusting screw C-Compressor belt



L116652-LB71020AE-010487

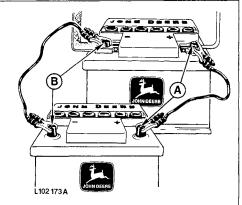
IMPORTANT NOTES

If a booster battery is to be used for charging and the tractor run for a short time without battery, do not, under any circumstances, interrupt the circuit by switching off the main switch before stopping the engine by means of the fuel pump shut-off cable. It is further recommended that additional loads (lights) be switched on while the engine is running. Do not run engine at speeds above 1000 rpm. Insulate battery end of disconnected starter cable properly to avoid damage to alternator and regulator.

Do not connect ground strap of booster battery to the SOUND-GARD Body.

Connect batteries or battery charger with the proper polarity (" + " and " -"). Incorrectly connected batteries will result in the immediate destruction of the rectifier diodes.

A-Positive terminals B-Negative terminals



L102173A-LB71010AE-010487

Thank you very much for your reading. Please Click Here. Then Get COMPLETE MANUAL. NO WAITING



NOTE:

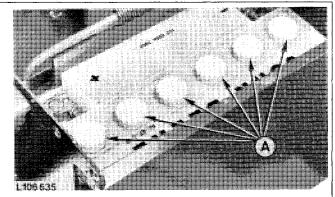
If there is no response to click on the link above, please download the PDF document first and then click on it.

CHECKING BATTERIES

Check battery terminals and cable ends and, if necessary, clean and coat them with petroleum jelly.

Check electrolyte level in each battery cell. If necessary, add distilled water to bring level above cell plates.

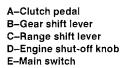
A-Filler caps

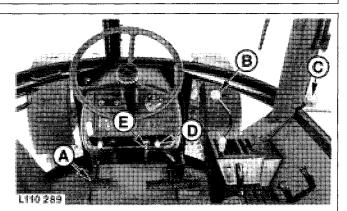


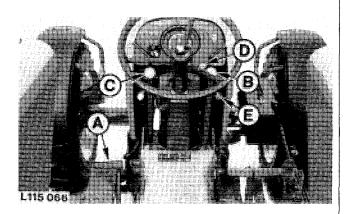
L106635-LA71010AE-091184

CHECKING NEUTRAL START SYSTEM

Depress clutch pedal (A).
Move gear shift lever (B) to neutral position.
Move range shift lever (C) to any range position.
Pull out engine shut-off knob (D).
Turn main switch (E) to start position.
Starter should NOT crank.







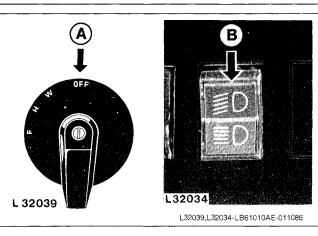
L110289,L115066-LB71010AE-010487

CHECKING LIGHTING SYSTEM

See Operator's Manual.

Check adjustment of headlights and adjust, when necessary.

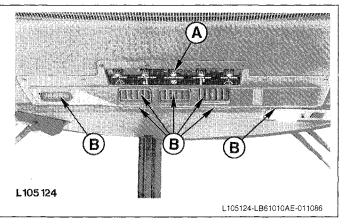
A-Light switch B-Dimmer switch



CHECKING FAN SWITCH (With SOUND-GARD Body)

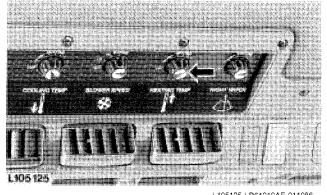
Open air louvers (B).

Check function of three-stage cab ventilation and heater fan switch (A).



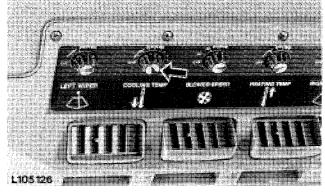
CHECKING HEATER CONTROL SWITCH (With SOUND-GARD Body)

With engine running at operating temperature, turn control switch to the right and wait until warm air enters cab through the air louvers.



CHECKING THERMOSTAT SWITCH (Tractors With Air Conditioning System)

With fan switched on, turn infinitely adjustable switch to the right and wait until cool air enters cab through the air louvers.

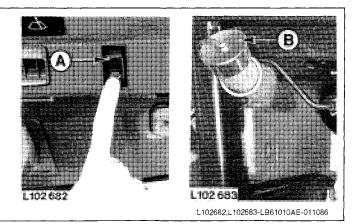


L105126-LB61010AE-011086

CHECKING WINDSHIELD WASHER SYSTEM (With SOUND-GARD Body)

Operate tumbler switch (A) of washer system.

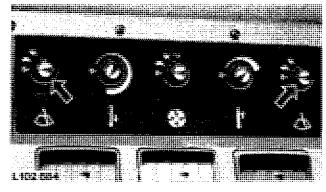
Add a suitable commercially available anti-freeze solution to reservoir (B) if temperature is likely to drop below freezing point.



10-10-11

CHECKING FUNCTION OF WINDSHIELD WIPERS (With SOUND-GARD Body)

Check both windshield wiper speeds by turning both two-speed switches.

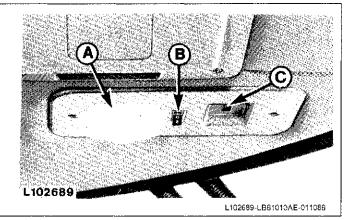


L102684-LB61010AE-011086

CHECKING CAB INTERIOR LIGHTS (With SOUND-GARD Body)

Turn switch (B) to position 1, lamp (A) glows continuously and, in position 2, it glows as long as cab door is open.

Lamp (C) illuminates transmission shift lever as soon as headlights are switched on.



CHECKING INSTRUMENTS AND INDICATOR LIGHTS

See Operator's Manual.

INSPEK-LB21010FE-010886

CHECKING TRANSMISSION/HYDRAULIC SYSTEM OIL LEVEL

IMPORTANT: Check oil level. Check prior to starting engine after long shut-down period when oil is cold.

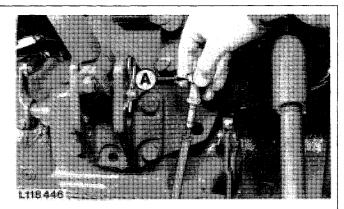
Park tractor on level ground. Completely lower rock-shaft. Remove dipstick (A) and wipe clean. Reinsert dipstick, again remove and check oil level.

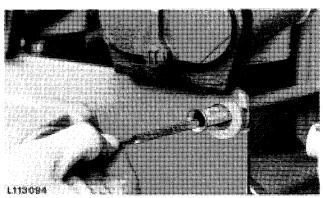
NOTE: If oil level is below top mark, top up with oil to bring level up to top mark on dipstick through filler neck (B).

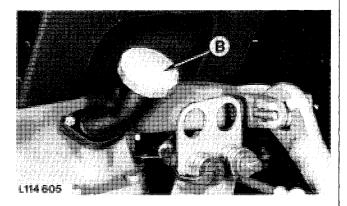
IMPORTANT: After having topped up transmission with oil, wait for a period of five minutes before rechecking oil level with dipstick.

If necessary, add JOHN DEERE HY-GARD ® Transmission and Hydraulic Oil or equivalent (see Group 15) to bring oil level to top mark on dipstick.

NOTE: Types of oil not meeting JOHN DEERE specifications will not give satisfactory service and may result in eventual damage.





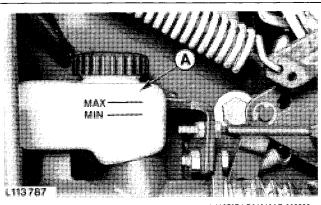


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CHECKING LEVEL OF BRAKE FLUID (With Hydraulically Operated Clutch)

Level of fluid should be between the marks "MIN" and "MAX". When necessary add brake fluid type FMVSS 116 DOT 4.

A-Reservoir



L113787-LB61010AE-000688