JOHN DEERE 2150 AND 2255 TRACTORS

JOHN DEERE

OPERATORS MANUAL

JOHN DEERE 2150 AND 2255
TRACTORS

OML55480 L4 English

JOHN DEERE WERKE MANNHEIM
OML55480 L4

LITHO IN THE U.S.A. (REVISED)
ENGLISH

Read this manual carefully to learn how to operate and service your machine correctly.

SAFETY

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

DIRECTIONS

Left, right, front and rear in this manual are seen from the operator's seat facing the direction of forward travel.

MEASUREMENTS

This machine is of metric design.

For your convenience, most specifications are given in metric measurement with the customary U.S. measurement following.

Some specifications cannot be converted. These appear in metric only.

Most hardware is metric. Specified metric hardware must be used for replacement.

CAUTION: Use only metric tools. Other tools may not fit properly. They may slip and cause injury.

WARRANTY

The warranty on this machine appears on your copy of the purchase order which you should have received from your dealer when making your purchase. This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty.

Warranty and field improvements are a part of John Deere's product support program for customers who operate and maintain their equipment as described in this manual. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

MACHINE NUMBERS

Write your product identification number (PIN) and serial numbers on the pages provides at the end of this manual, and provide this information to your dealer when ordering spare parts.

SPECIAL INSTRUCTIONS FOR OM-L55480

Reference: 2150 and 2255 Tractors

Operator's manual OM-L55480

The following supplementary pages are to be added to your manual to replace existing pages or provide information not previously included:

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TRAVEL SPEEDS AT 2500 ENGINE RPM

Tractor 2150 (with Synchronized Transmission)				
	14.9-24		Tire Size	Change in Speed
	km/h	mph		
1 L	2.2	1.4	14.9-24 R4	0.5% Faster
H*	2.8	1.8	16.9-24	9.0% Faster
			17.5L-24	3.3% Faster
2 L	3.1	1.9	21.5L-16.1	9.5% Slower
H*	3.8	2.4		
3 L	4.3	2.7		
H*	5.5	3.5		
4 L	5.9	3.7		
H*	7.5	4.6		
5 L	7.5	4.6		
H*	9.5	5.9		
6 L	10.4	6.4		
H*	13.2	8.2		
7 L	14.9	9.3		
H*	19.0	11.8		
8 L	20.1	12.5		
H*	25.7	15.9		
R 1 L	3.4	2.1		
H*	4.2	2.7		
R 2 L	4.6	2.9		
H*	5.9	3.7		
R 3 L	6.7	4.1		
H*	8.5	5.3		
R 4 L	9.0	5.6		
H*	11.4	7.1		

Tractor 2150 (with Collar Shift Transmission)				
	14.9-24		Tire Size	Change in Speed
	km/h	mph		
1	2.3	1.4	14.9-24 R4	0.5% Faster
			16.9-24	9.0% Faster
2	3.3	2.0	17.5L-24	3.3% Faster
			21.5L-16.1	9.5% Slower
3	4.9	3.0		
4	6.9	4.2		
5	9.0	5.6		
6	12.9	8.0		
7	19.1	11.9		
8	26.7	16.6		
R 1	2.7	1.7		
R 2	3.8	2.4		
R 3	5.7	3.5		
R 4	7.9	4.9		

L–Low
H–High
** Speeds shown under „High" also apply to tractors not equipped with Hi-Lo shift unit*

Cast-Iron Weights

When additional weight is required, cast-iron weights may be bolted to the inside or outside of the rear wheels.

CAUTION: Be sure wheel bolts are always properly tightened.

For 24 in. steel wheels on flanged axle	48 kg (106 lb)
For 28 in. steel wheels on flanged axle	51 kg (113 lb)
For 28 in. power adjusted steel wheels on flanged axle	48 kg (106 lb)
For 30 in. steel wheels on flanged axle	55 kg (120 lb)

Liquid Weight

Tire Size	Liquid Weight Per Tire (75 % Fill)	
	kg	(lb)
14.9-24	230	(507)
16.9-24	297	(654)
17.5L-24	270	(595)
21.5L-16.1	306	(675)

A solution of water and calcium chloride provides afe, economical ballast. Used properly, it will not damage tires, tubes or rims.

Use calcium chloride to prevent water from freezing. A mixture of 0.4 kg calcium chloride per liter (3.5 lb per gallon) will not freeze solid up to –45°C (–50°F).

NOTE: Use of alcohol as liquid ballast is not recommended. Calcium chloride solution is heavier and more economical.

CAUTION: Installing liquid ballast requires special equipment and training. Have the job done by your JOHN DEERE dealer or a tire service store.

Fill tubeless tires at least to valve level (minimum 75% full). Less solution would expose part of rim, possibly causing corrosion. Tube-type tires may be filled to any level below 90%. Radial-ply and bias-ply tires hold the same amount of liquid. Chart shows how much each size holds if filled to 75% full.

IMPORTANT: Never fill any tire to more than 90% full. More solution would leave too little air space to absorb shocks. Damage to tire could occur.

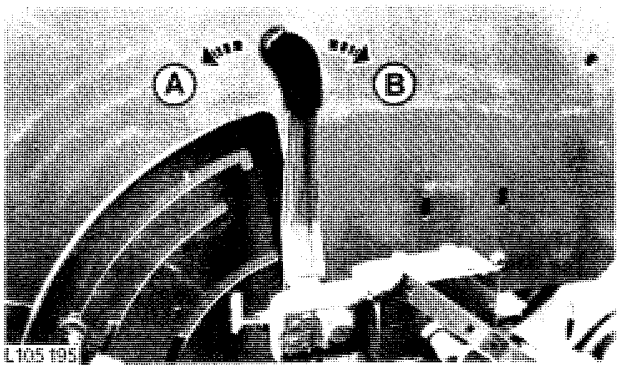
SELECTIVE CONTROL VALVES (spool type)

CAUTION: If valves are used for loader boom or bucket control functions, eliminate detend function by removing detend spring and ball.

Single or dual selective control valves may be installed as required.

CONTROL LEVER

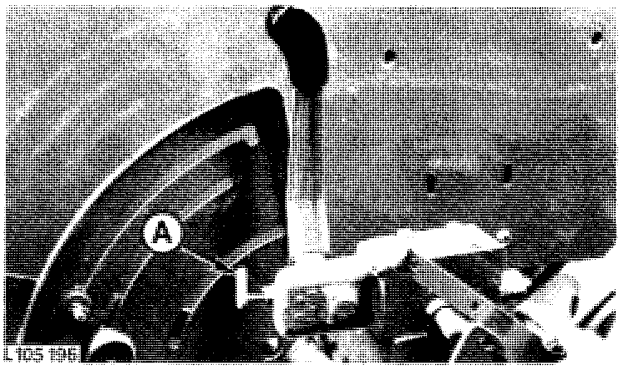
The less movement on the control lever, the slower the raise or lower movement. Hold control lever until required position has been reached, then return it to neutral.
If control lever is moved fully forward or backward so that it is locked in position, move it back to neutral when operation is completed.



A–Lower implement
B–Raise implement

TRANSPORT LOCK

CAUTION: When traveling on public roads with implement raised, the control lever must be locked in neutral position to prevent accidental lowering of implement.



A–Transport lock

Turn transport locking screw into control valve until resistance is felt and control lever is locked. To release transport lock-ing screw, turn counter-clockwise 2-1/2 to 3 turns.

FRONT WHEEL TREADS

Adjustable Front Axle

Front axle can be adjusted on each side in increments of 50 mm (2 in.). Maximum front wheel tread is attained by reversing wheels. Reversing the wheels is not possible with 27/9.5-15 tires.

IMPORTANT: To avoid excessive stress on axle bolts, do not separate axle halves beyond the specified limits.

Bolt spacing should be 102 mm (4 in.) in maximum tread width and 153 mm (6 in.) in all other tread widths.

Front Axle Type	Front Tire Size	Front Wheel Tread		Maximum with Wheels Reversed
		Minimum	Maximum	
Swept-back Axle	6.50-16	1.26 m (49.6 in.)	1.88 m (74.0 in.)	2.02 m (79.5 in.)
	7.50/8.00-16	1.26 m (49.6 in.)	1.88 m (74.0 in.)	2.02 m (79.5 in.)
	11L-15	1.31 m (51.4 in.)	1.83 m (72.0 in.)	
	27/9.5-15	1.32 m (52.0 in.)	1.94 m (76.4 in.)	
Straight Axle	6.50-16	1.26 m (49.6 in.)	1.88 m (74.0 in.)	2.02 m (79.5 in.)
	7.50/8.00-16	1.26 m (49.6 in.)	1.88 m (74.0 in.)	2.02 m (79.5 in.)
	11L-15	1.31 m (51.4 in.)	1.83 m (72.0 in.)	

Adjusting Front Wheel Tread

Jack up front end of tractor.

IMPORTANT: Do not place jack under engine oil pan.

Remove tie rod clamp bolts (1) and axle bolts (2). Reposition axle ends to the desired front wheel tread. Reinsert axle bolts and tighten to 400 Nm (300 ft-lb) torque.

Adjust tie rods to front wheel tread, reinsert clamp bolts and tighten to 110 Nm (80 ft-lb) torque.

1–Tie Rod Clamp Bolt
2–Axle Bolts
3–Tie Rod
4–Steering Arm Clamping Screw

Check to see that front wheels turn equally to the right and left. Check toe-in and adjust, if necessary.

TIRE PRESSURES

UNDER INFLATION

OVER INFLATION

PROPER INFLATION

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Properly inflated tires are important to the operation of your tractor. The amount of air pressure to be carried in front and rear tires depends upon implement used with tractor and amount of ballast employed.

Keep tires inflated according to recommendations shown in the charts. Under-inflated tires break and wear out rapidly. Over-inflated tires reduce traction, increase wheel slippage and wear.

Inflation Charts

Rear Tires

Tire Size	PR	Recommended min. kPa (bar; psi)	Tire Pressures max. kPa (bar; psi)
14.9-24	6	100 (1.0; 14)	140 (1.4; 20)
16.9-24	6	100 (1.0; 14)	130 (1.4; 18)
17.5L-24	8	110 (1.1; 16)	150 (1.5; 22)
21.5L-16.1	6	80 (0.8; 12)	80 (0.8; 12)

Front Tires

Tire Size	PR	Recommended min. kPa (bar;psi)	Tire Pressures max. kPa (bar; psi)
6.50-16	6	170 (1.7; 24)	330 (3.3; 48)
7.50/8.00-16	6	170 (1.7; 24)	300 (3.0; 44)
11L-15	6	170 (1.7; 24)	220 (2.2; 32)
27/9.5-15	6	310 (3.1; 45)	310 (3.1; 45)

DIRECTION OF TIRE ROTATION

When mounting or changing tires, make sure arrow on flank of tires points in the direction of forward rotation.

CAUTION: Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious bodily injury. DO NOT attempt to mount a tire unless you have the proper equipment and experience to perform the job safely. Have it done by your John Deere dealer or a qualified tire repair service.

ISO QUICK-DISCONNECT COUPLERS

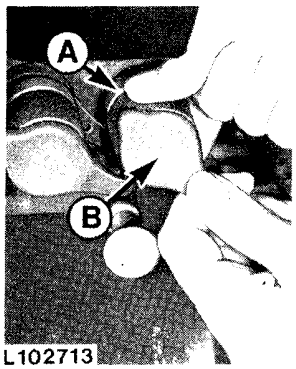
CAUTION: The hydraulic system has a stand-by pressure of 15500 kPa (155 bar; 2250 psi). For your own protection and to assure proper functionning of the system, use only genuine JOHN DEERE parts.

CONNECTING HYDRAULIC HOSES

Shut off the engine before connecting hoses to couplers, lower any mounted implement and move control lever forward and backward. This will relieve pressure to the couplers.

1. Slide coupler ring (A) forward, remove dust cap (B) and check connections for cleanliness.
2. Press hose connector (C) into quick-coupler and release coupler ring.

NOTE: When the remote cylinder control lever is pushed to the rear, the implement will normally rise if the hoses are properly attached.



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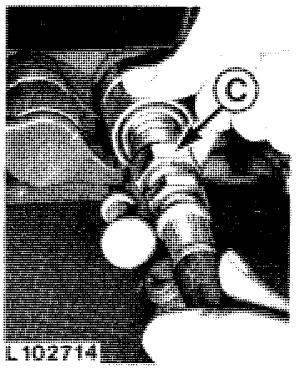

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DISCONNECTING HYDRAULIC HOSES

Relieve the pressure on the coupler by stopping the engine, lowering implement, and moving the remote cylinder control lever back and forth.

1. Slide coupler ring (A) forward.
2. Pull hose (C) from coupler and install dust cap (B).

Similarly insert dust plugs in implement hose ends.

CAPACITIES

	Liter	Gal.
Fuel tank	74	19.55
Cooling system	10.0	2.65
Crankcase		
without filter	6.5	1.70
with filter	7.0	1.85
Transmission/hydraulic system (collar shift transmission)	28.0	7.40
(synchronized transmission	45.0	11.90

CLUTCH	Single dry disk
TRANSMISSION	Collar shift or Synchronized Transmission
Optional equipment	High-Low or Reverser Transmission
FINAL DRIVE	Planetary reduction drive
DIFFERENTIAL LOCK	Hand or foot operated mechanical lock, spring-loaded out of engagement
POWER TAKE-OFF (Continuous-running or independent)	540 rpm
HYDRAULIC SYSTEM	Closed center, constant pressure of 15500 kPa (155 bar, 2250 psi)
FOOT BRAKES	Hydraulically actuated, wet-disk type, one each per rear wheel
HANDBRAKE	Band-type brake, acting on differential

TIRE COMBINATIONS

	Rear Tires			
Front Tires	**14.9-24**	**16.9-24**	**17.5L-24**	**21.5L-16.1**
6.50-16	x	–	–	–
7.50/8.00-16	x	x	x	–
11L-15	–	x	x	–
27/9.50-15	–	–	–	x

WEIGHTS

Stability Weight (with tires 6.50-16/14.9-24)

Total	2130 kg	(4700 lg)
Front	815 kg	(1800 lb)
Rear	1315 kg	(2900 lb)

Maximum Permissible Static Vertical Load

a. on drawbar (standard length)	454 kg	(1000 lb)
b. on drawbar (fully retracted)	760 kg	(1675 lb)

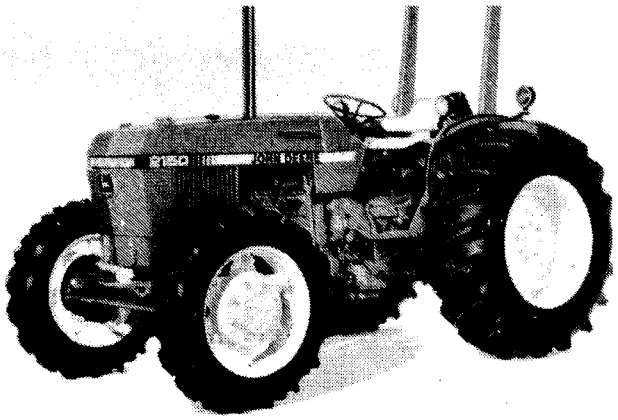
Maximum Permissible Axle Loads (Based on Tire Capacity)

a. front	6.50-16	6 PR	1234 kg	(2720 lb)
	7.50/8.00-16	6 PR	1533 kg	(3380 lb)
	11L-15	6 PR	2240 kg	(4940 lb)
	27/9.50-15	6 PR	1614 kg	(3560 lb)
	27/9.50-15	10 PR	2004 kg	(4420 lb)
b. rear	14.9-24	6 PR	3023 kg	(6660 lb)
	16.9-24	6 PR	3447 kg	(7600 lb)
	17.5L-24	8 PR	3701 kg	(8160 lb)
	21.5L-16.1	6 PR	2875 kg	(6340 lb)

DIMENSIONS (equipped with 14.9-24 rear tires)

Over-all height (top of ROLL-GARD)	2190 mm	(86.1 in.)
Over-all lenght (with 3-Point Hitch)	3350 mm	(131.8 in.)
Over-all width (minimum)	1780 mm	(70.0 in.)

Contents



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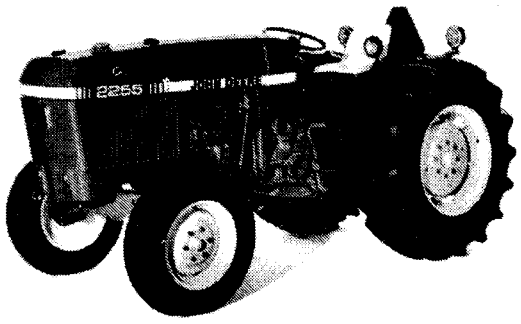

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Safety

OPERATE TRACTOR SAFELY

Never allow riders on the tractor.

Slow down for hillsides, rough ground, and sharp turns.

Couple the brake pedal together before driving at transport speeds.

When implements or attachments are used with the tractor, always follow safety precautions listed in Operator's Manual or operating instructions. When raising a heavy object with a loader, be sure the object is secure from falling. It could fall on and seriously injure a bystander or the operator.

Keep all shields in place.

AVOID TIP-OVERS

Avoid holes, ditches, and obstructions which may cause the tractor to tip-especially on hillsides.

Front-wheel drive greatly increases traction. Extra caution is needed on slopes. Compared to 2-wheel drive, a front wheel drive tractor maintains traction on steeper slopes, and it's easier to approach stability limits.

Never drive near the edge of a gully or steep embrankment—it might cave in.

Driving forward out of a ditch or mired condition or up a steep slope could cause tractor to tip over rearward. Back out of these situations if possible.

TRANSPORT TRACTOR SAFELY

Before descending a steep hill, shift to a low gear to control the tractor with little or no braking. Never coast downhill.

When transporting downhill on icy or graveled grades, be alert for skids which could result in loss of steering control. To decrease chance of skids, reduce speed and be sure tractor is properly ballasted.

Additional ballast may be needed for transporting heavy integral implements. When implement is raised, drive slowly over rough ground, regardless of how much ballast is used.

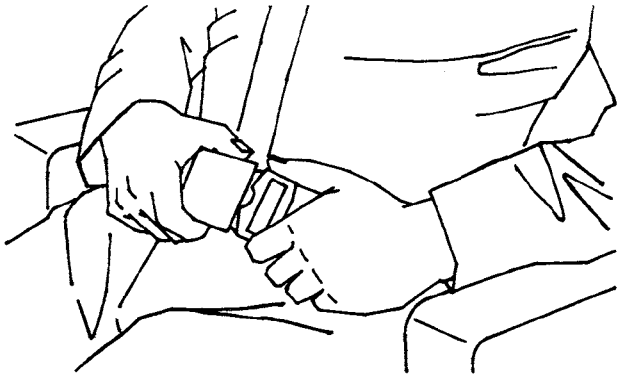
Never tow tractor faster than 10 mph (15 km/h.).

USE PROTECTIVE EQUIPMENT PROPERLY

If your tractor is equipped with ROLL-GARD® protective frame, use a seat belt under almost all operating conditions.

If your tractor usage permits, a ROLL-GARD protective frame is recommended. The ROLL-GARD will reduce the likelyhood of serious injury or death in case of a tractor upset.

If ROLL-GARD protective equipment is loosened or removed for any reasons, make certain all parts are reinstalled correctly. Tighten mounting bolts to proper torque.



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DO NOT MODIFY TRACTOR

Unauthorized modification to the machine may impair the function and/or safety and affect machine life.

Never modify structural members of ROLL-GARD by welding, bending, drilling or cutting as this might weaken the structure. If any component is damaged, replace it. Do not attempt repairs.

MAKE TRACTOR VISIBLE

Turn light switch to "H" position. Never use white lights which are visible from the rear. Always dim head lamps before meeting another vehicle. Keep head lamps properly adjusted.

Add SMV emblem, reflectors, and auxiliary lighting to equipment as required for safety and by local regulations.

Before operating tractor on highway, be sure flashing warning lamps work properly. Adjust rear view mirror and clean windows and SMV emblem.

TOW EQUIPMENT PROPERLY

Hitch towed loads only to drawbar. Lock drawbar pin in place and use safety chain for towed equipment.

Use caution when towing loads at transport speeds. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes. Avoid hard braking applications. Consult implement operator's manual for recommended transport speeds.

Use additional caution when transporting towed loads under adverse surface conditions, when turning or on inclines.

When descending steep grades, select a gear low enough to maintain control with minimum braking.

When using a chain, attach it to the drawbar and be sure to take up the slack in the chain slowly.

STAY CLEAR OF MOVING TRACTOR

Be sure everyone is clear of tractor and attached equipment before starting engine. Some movement may occur as engine starts.

Never try to get on or off a moving tractor.

Before dismounting, set handbrake and lower implements to the ground. If tractor is to be left unattended, stop the engine and remove the key.

Never attempt to start or operate tractor except from the operator's station.

AVOID TRACTOR RUNAWAY

Avoid possible injury or death from a machine runaway.

1. Do not start engine by shorting across starter terminals. Machine will start in gear and move if normal starting circuitry is bypassed.

2. Start engine only from operator's seat with transmission in neutral or park. NEVER start engine while standing on ground.

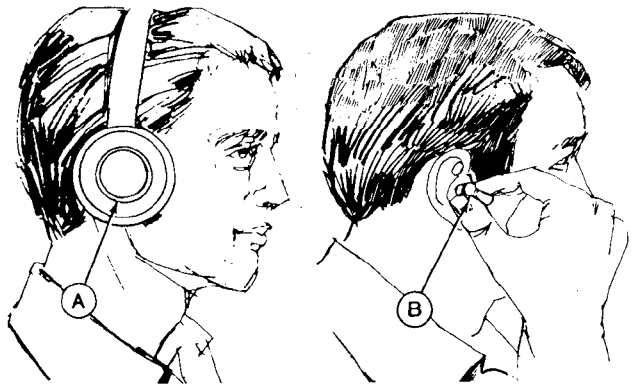
AVOID EXHAUST FUMES

To avoid exhaust gas hazards, never run engine in a closed building.

PROTECT AGAINST NOISE

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

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



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STAY CLEAR OF PTO

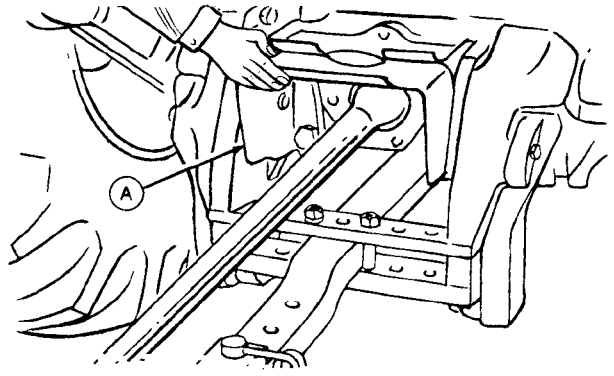
Stop the engine and be sure the PTO drive line has stopped before:

—Connecting or disconnecting implement drive line

—Making adjustments on the implement

—Clearing out PTO driven equipment

PTO master shield (A) should be in place at all times except for special applications as directed in the implement Operator's Manual.



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The PTO shaft guard should be in place when the PTO is not being used.

Operate PTO at recommended speed.

Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

Thank you so much for reading

SERVICE TRACTOR SAFELY

Do not service the tractor while it is in motion or while the engine is running.

When servicing front-wheel drive equipped tractor with rear wheels supported off ground and rotating wheels by engine power, always support front wheels in a similar manner. Loss of electrical power or transmission-hydraulic system pressure will engage front driving wheels, pulling rear wheels off support if front wheels are not raised.

Under these conditions, the front-drive wheels can engage even with switch in disengaged position.

Disconnect the battery ground cable before working the electrical system or working in any area when you might accidentally contact electrical components. A short circuit accidentally contact electrical components. A short circuit could cause bums as well as damaging the electrical system.

Reinstall all shields removed during service.

SERVICE COOLING SYSTEM SAFELY

If radiator cap must be removed, do not remove it when engine is hot. Shut the engine off and wait until it cools. Then turn the cap to the first stop to relieve pressure before removing it completely.

AVOID EXPLOSIONS OR FIRE

Batteries produce explosive gas. Before using booster batteries, read the instructions on page 13.

Turn the charger off to avoid sparks before connecting or disconnecting a battery charger.

Be careful with starting fluid or any type of fuel. Do not refuel the tractor when the engine is hot or running. Never smoke while handing fuel. A fire extinguisher can be mounted to your tractor. It is available from your John Deere dealer. Be sure to see the owners manual packaged with the extinguisher for operation and service instructions.

AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pin holes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

If any fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.

HANDLE CHEMICALS PROPERLY

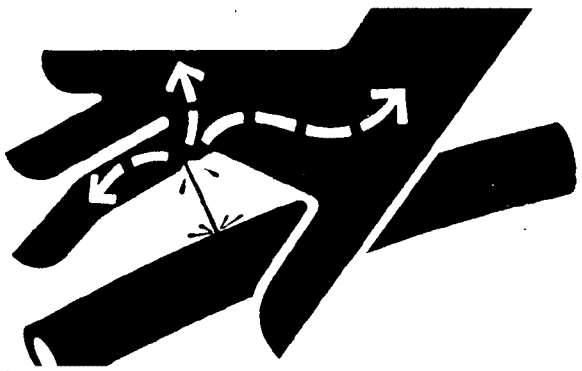
When using agricultural chemicals, follow instructions given in the implement operator's manual and those given by the chemical manufacturer.

SERVICE TIRES SAFELY

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified repair service.

When sealing tire beads on rims, never exceed 35 psi (240 kPa) (2.4 bar) or maximum inflation pressures specified by the manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead, and reinflate.

Detailed agricultural tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55, Tires and Tracks, available through your John Deere dealer. Such information is also available from the Rubber Manufacturers Association and from tire manufactures.



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