

1250, 1450, AND 1650 TRACTORS



JOHN DEERE

OPERATORS MANUAL 1250, 1450, AND 1650 TRACTORS

OMRW18976 B6 English

JOHN DEERE TRACTOR WORKS
OMRW18976 B6

LITHO IN THE U.S.A.
ENGLISH



Introduction

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

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



This machine is of metric design. Measurements in this manual are metric with the customary U.S. measurement following. Use only metric hardware and tools as specified.

Right-hand and left-hand sides are determined by facing in the direction of forward travel.



Worldwide symbols are used to assist identification and operation. In this manual, an identifying symbol is placed by the instructions like the example at left for the symbol on the engine oil pressure gauge. The cylinder block in the symbol represents the engine, the drop signifies oil, and the arrows indicate pressure. Regardless of the language used in a nation, this symbol means engine oil pressure without translation.

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.

The tire manufacturer's warranty supplied with your machine may not apply outside the U.S.

Write product identification numbers in the Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. If this manual is kept on the machine, also file the identification numbers in a secure place off the machine.

All information, illustrations and specifications in this manual are based on the latest product information available at the time of publication. The right is reserved to make changes at any time without notice.

U01;INSCOV 1250 070266

2U4;IFC 1 270186

Contents

Safety	05-1	Wheels, Tires, and Treads	
Operator's Station		Wheel Tightening	60-1
Controls	10-1	Front Wheel Spacing	60-2
Instruments	10-2	Rear Wheel Spacing	60-7
Seat	10-2	Tire Inflation Pressures	60-11
Lighting and Signals	15-1	Transporting	65-1
Break-In	20-1	Fuels and Lubricants	70-1
Prestarting Checks	25-1	Lubrication and Maintenance	
Operating the Engine		10 Hour Service	80-1
Start-up Procedure	30-1	50 Hour Service	85-1
Instruments	30-3	200 Hour Service	90-1
Stopping The Engine	30-6	600 Hour Service	95-1
Cold Weather Starting Aids	30-7	1200 Hour Service	100-1
Driving the Tractor		Annual Service	105-1
Using Brakes	35-1	2 Year Service	110-1
Operating Transmission	35-2	As Required	115-1
Differential Lock	35-3	Troubleshooting	
Operating Mechanical Front-Wheel		Engine	120-1
Drive (MFWD)	35-4	Electrical	120-4
Driving on Public Roads	35-5	Hydraulic	120-5
Rockshaft and 3-Point Hitch		Service	
Component Identification	40-2	Air Cleaner	125-1
Rockshaft Controls	40-2	Belts	125-4
Connecting Implement	40-6	Fuel System	125-5
Adjusting Hitch	40-8	Cooling System	125-8
Hydraulic Warm-Up	40-10	Electrical System	125-11
Remote Hydraulic Cylinders		Brakes	125-18
Connecting Cylinder Hoses	45-2	ROLL-GARD®	125-19
Operating SCV	45-3	Tires	125-20
Adjusting Cylinder Stop	45-5	Storage	130-1
Disconnecting Cylinder Hoses	45-5	Specifications	135-1
Drawbar and PTO		Identification Numbers	140-1
Drawbar Adjustments	50-1	Lubrication and Maintenance Records	145-1
Attaching PTO Implements	50-3	Index	150-1
Operating 1250 Tractor PTO	50-5		
Operating 1450 and 1650 Tractor PTO	50-6		
Ballast			
Importance of Ballast	55-1		
Measuring Wheel Slip	55-2		
Rear Ballast	55-3		
Front Ballast	55-4		

<https://www.ebooklibonline.com>

Hello dear friend!

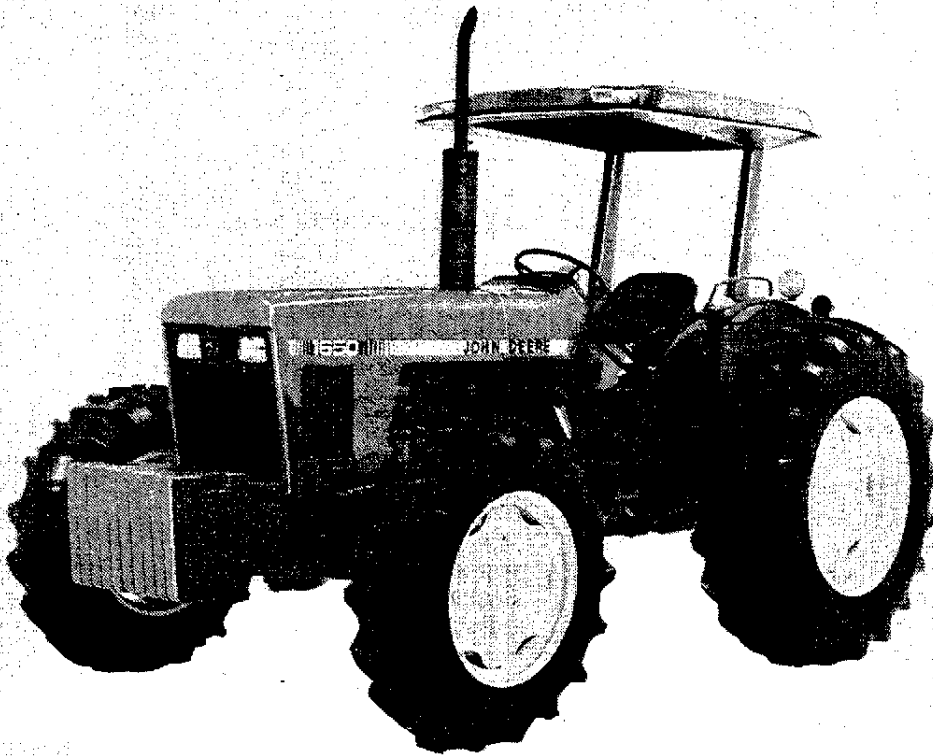
Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

Identification View



RW11009

JOHN DEERE 1650 TRACTOR

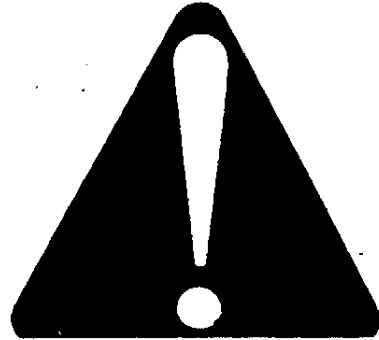
AJ7:RW1100 9 U01:DVVIEW 1650 170186

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.

Follow recommended precautions and safe operating practices.



AB6;T81389 053;ALERT 160687

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.



WARNING

CAUTION

AB6;TS187 053;SIGNAL 071085

FOLLOW SAFETY INSTRUCTIONS

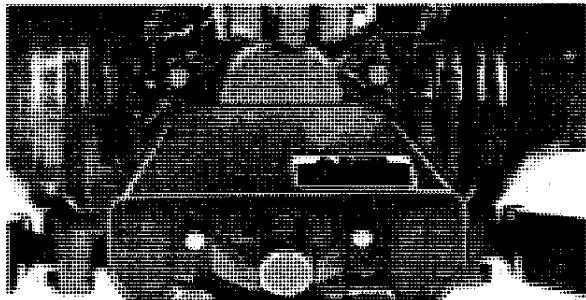
Carefully read all safety messages in this manual and on your machine safety signs. Follow recommended precautions and safe operating practices.

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



AB6;TS188 053;SIGNS 071085

STAY CLEAR OF PTO



WARNING

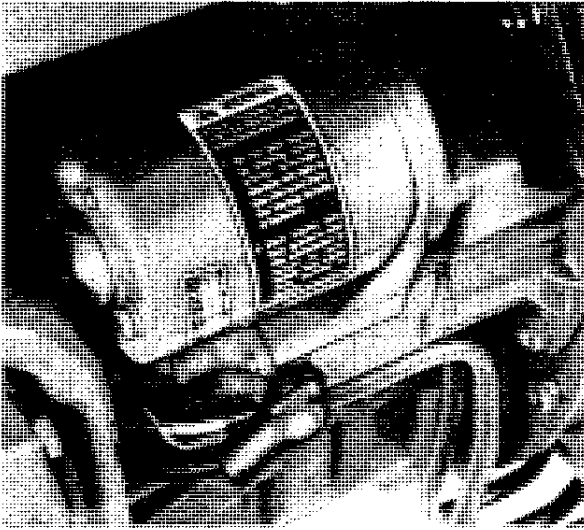
TO AVOID BODILY INJURY:

1. Keep PTO master shield and all power drive system safety shields in place. Also install PTO shaft guard when the system is not in use.
2. When operating PTO driven implements, install drawbar in the down position if offset, and use the following drawbar instructions:

PTO Shaft	PTO Shaft End to Hitch Pin Hole
540 rpm - 6 spline	14.00 in. (356 mm)
1000 rpm - 21 spline	16.00 in. (407 mm)
*1000 rpm - 20 spline	20.00 in. (508 mm)
	*1.75 in. (44.5 mm) dia. shaft

AJ7;RW1167 6, RW1167 7 U01;READ SIGN14 060286

PREVENT MACHINE RUNAWAY



WARNING

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.

AJ7;RW1167 8,RW1167 9 U01;READ SIGN15 060286

OPERATE TRACTOR SAFELY



CAUTION

1. Keep all shields in place.
2. Make certain everyone is clear of machine before starting engine or operation.
3. Stop engine, lower implement to ground and set brakes securely before dismounting. Wait for all movement to stop before servicing machinery.
4. Keep all others off equipment.
5. Keep hands, feet and clothing away from power driven parts.
6. Reduce speed when turning or applying individual brakes.
7. Couple brake pedals together for road travel.
8. Use flashing warning lights on highway unless prohibited by law.

AJ7;RW1168 0,RW1168 1 U01;READ SIGN16 17C186

USE SEAT BELT



CAUTION

Use of seat belt with this Roll-Gard is recommended for almost all operating conditions.

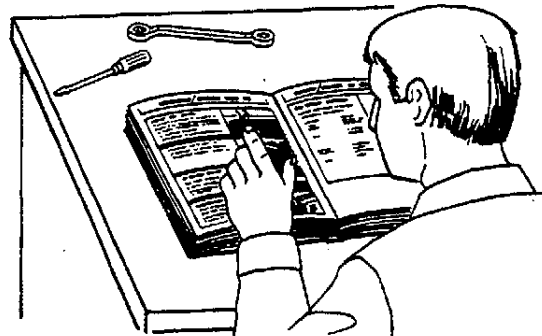
AJ7;RW11682,RW1168 3 U01;READ SIGN17 170186

LEARN MACHINE SAFETY

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

Do not let anyone operate this machine without proper instruction.

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



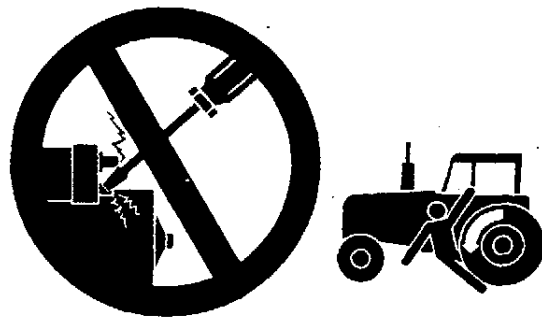
AB6;TS183 053;READ2 080785

PREVENT MACHINE RUNAWAY

Avoid possible injury or death from machinery runaway.

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

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



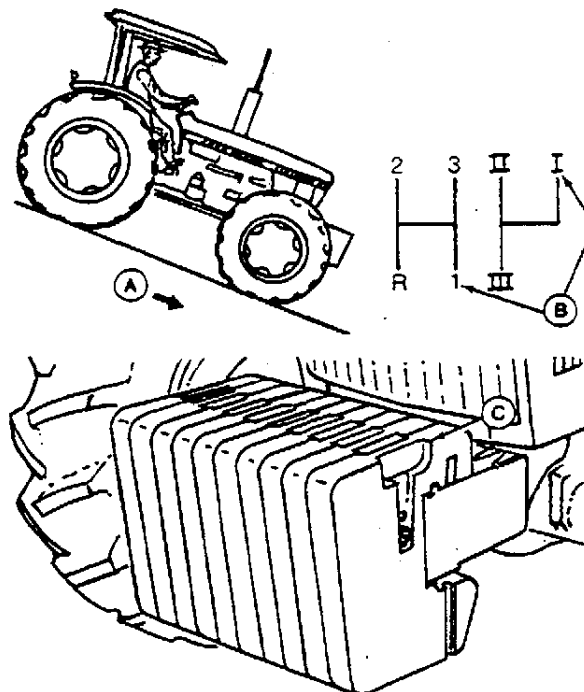
AB6;TS177 053;BYPAS1 210585

SHIFT TO LOW GEAR ON HILLS

Shift to a low gear (B) before descending a steep hill (A), to improve your control of the tractor with little or no braking. Make sure brake pedals are locked together. Never coast downhill.

When driving on icy or graveled surfaces, reduce speed and be sure tractor is properly ballasted to avoid skidding and loss of steering control.

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



AJ7;RW9328 L, RW9329 L U01;DRIVE SAFE2 170786

USE CAUTION ON HILLSIDES

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

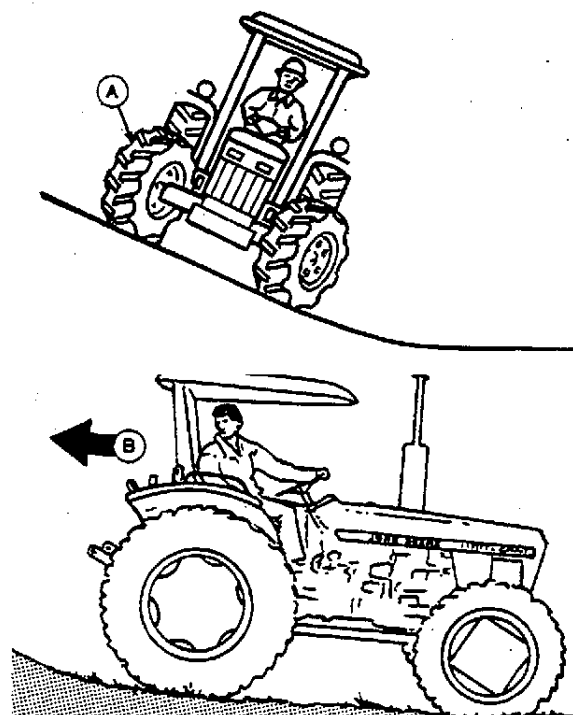
Front-wheel drive (A) greatly increases traction. When this option is used, extra caution is needed on slopes. Compared to 2-wheel drive, a front-wheel drive tractor maintains traction on steeper slopes, increasing the possibility of a tip over.

Never drive near the edge of a gully or steep embankment—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 (B).

Be especially careful when using single wheels. Danger of overturn increases greatly with narrow tread, 60 in. (1.50 m), at high speed.

Hitch towed loads only to drawbar. When using a chain, take up the slack slowly.



AJ7;RW8023 L,RW9327 L U01:HILL SIDE2 170186

KEEP RIDERS OFF MACHINE

Only allow the operator on the machine. Keep riders off.

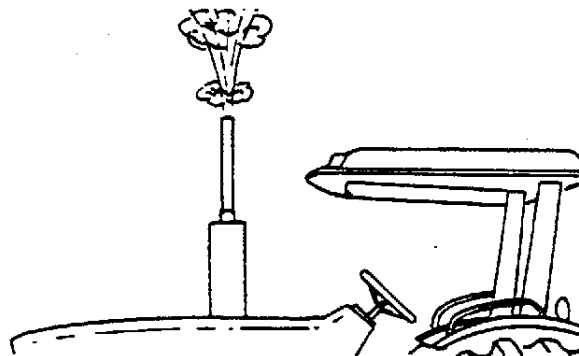
Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



AB6;TS213 053;RIDER 160687

AVOID EXHAUST FUMES

Never run engine in a closed building. Make sure service area is adequately ventilated.



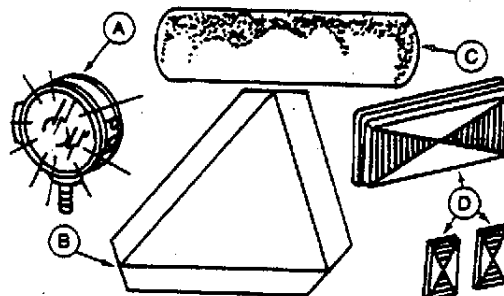
AJ7;RW9338 L U01;AVOID FUMES2 190186

USE SAFETY LIGHTS AND DEVICES

When transporting your machine on a road or highway at night or during the day, use necessary safety lights. Check local governmental regulations. A safety lighting kit is available from your John Deere dealer.

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

- A—Lights
- B—Slow Moving Vehicle Emblem
- C—Reflector Tape
- D—Reflectors



AB6;N36564 053;WARN 260687

HANDLE FUEL SAFELY—AVOID FIRES

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



AB6;TS202 053;FIRE1 230487

PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



AB6;TS186 053;FIRE2 080785

PREVENT BATTERY EXPLOSIONS

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace it last.



Photo: Copyright Images

AVOID ACID BURNS

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

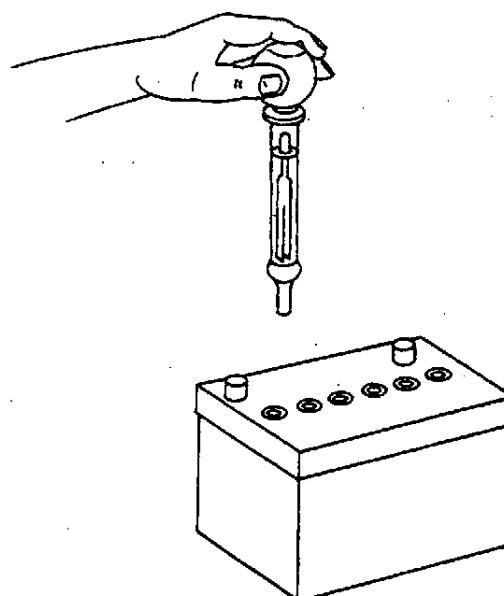
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.

If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 10-15 minutes. Get medical attention immediately.

If acid is swallowed:

1. Drink large amounts of water or milk.
2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
3. Get medical attention immediately.



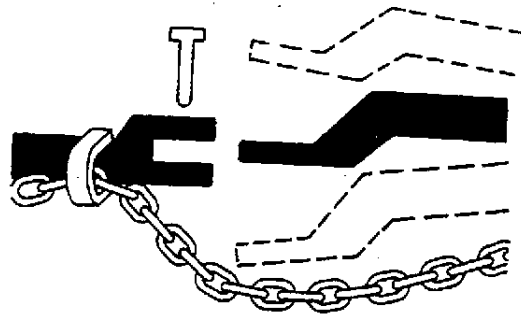
AB6/TS182 059/ACID 180485

USE A SAFETY CHAIN

A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine. Do not use safety chain for towing.

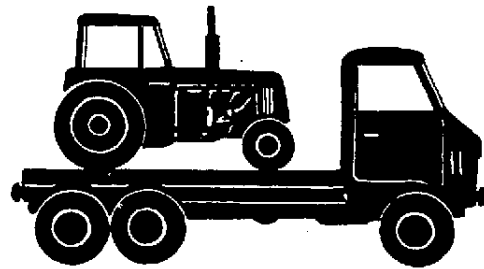


AB6;TS208 053;CHAIN 180987

TRANSPORT TRACTOR SAFELY

The best method for transporting a disabled tractor is to haul it on a flatbed carrier.

If towing a tractor, never tow faster than 20 mph (32 km/h). Have an operator steer and brake tractor.



AJ7;RW/1167 3 U01;HAUL IT2 170286

TOW EQUIPMENT PROPERLY

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.

U01;TOW 061284

PROTECT AGAINST NOISE

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

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

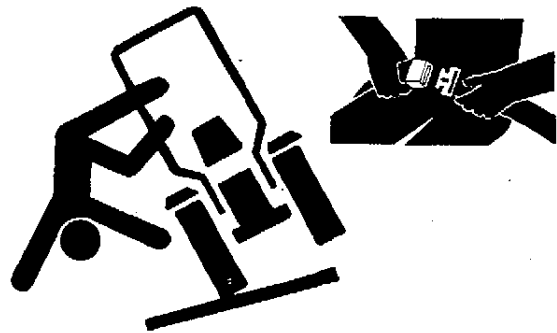


AB6;TS207 053;NOISE 230487

USE SEAT BELT PROPERLY

Use a seat belt when you operate with a roll-over protective structure (ROPS) to minimize chance of injury from an accident such as an overturn.

Do not use a seat belt if operating without a ROPS.



AB6;TS205 053;ROPS1 230487

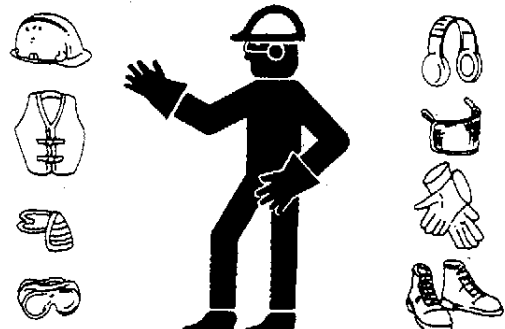
HANDLE CHEMICALS PROPERLY

Follow instructions given in the implement operator's manual and those given by the chemical manufacturer when using agricultural chemicals.

U01;HANDLE CHEM1 170286

WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.



AB6;TS206 053;WEAR2 230487

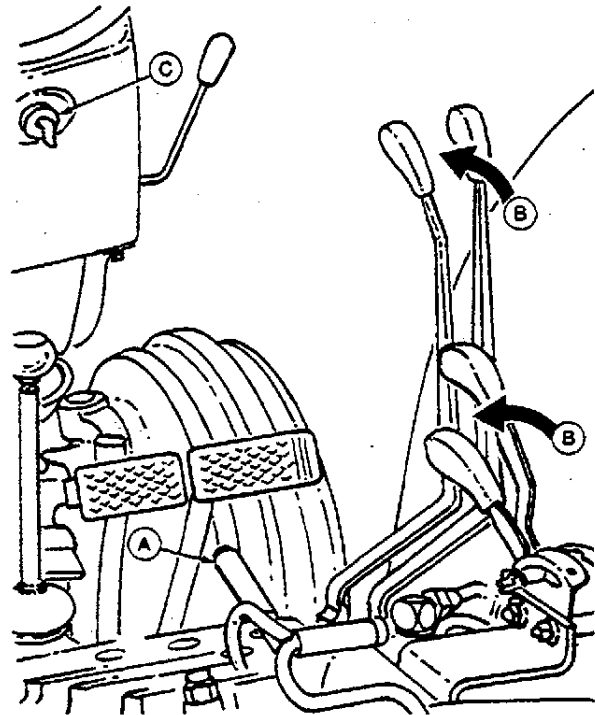
STAY CLEAR OF MOVING TRACTOR

Always place transmission in neutral and set handbrake (A).

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.

When tractor is left unattended, lower implements to the ground (B), stop the engine, and remove the key (C).



AJ7;RW9332 L U01;STAY CLEAR3 170186

STAY CLEAR OF ROTATING DRIVELINES

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.



AB6;TS198 053;PTO 160697

SERVICE TRACTOR SAFELY

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

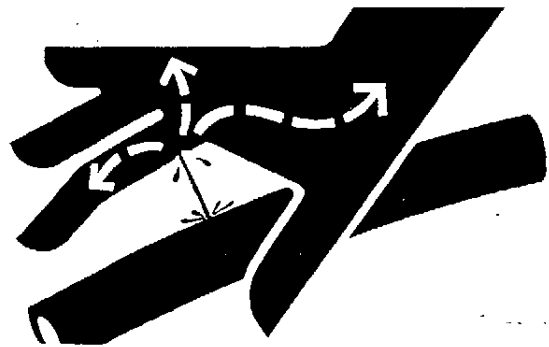
Reinstall all shields removed during service.

U01;WORK SAFE2 060286

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 pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard to search for leaks.

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.

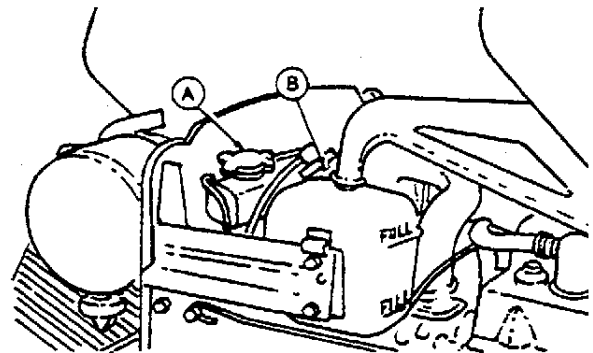


AB6;X9611 053;FLUID 180987

SERVICE COOLING SYSTEM SAFELY

Under normal circumstances, radiator cap (A) should not be removed. Add coolant to cooling system through coolant recovery tank (B).

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 slowly to the first stop to relieve pressure before removing it completely.

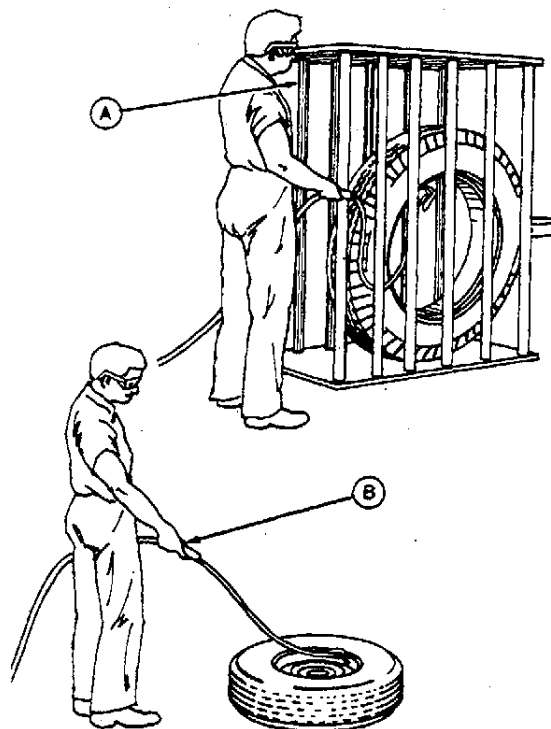


AJ7;RW9337 L U01;COOL I72 170186

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 tire repair service.

When sealing tire beads on rims, never exceed 35 psi (241 kPa) (2.4 bar) or maximum inflation pressures specified by tire 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.



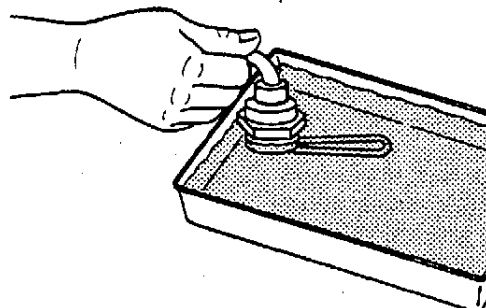
A—Use a Safety Cage if Available.
B—Do Not Stand Over Tire. Use a Clip-on Chuck and Extension Hose.

AB6;TS123 053;TIRE 160486

TEST COOLANT HEATER IN LIQUID ONLY

Do not plug coolant heater into electrical power unless heating element is immersed in coolant. Sheath could burst and result in personal injury.

Use a heavy-duty grounded cord to connect coolant heater to electrical power.

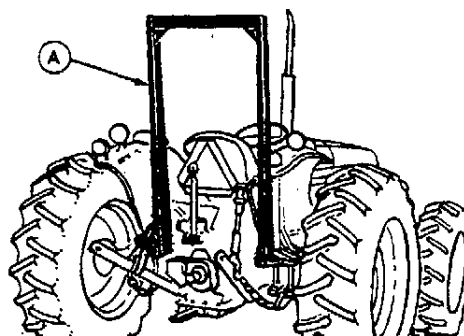


AB6;TS174 053;HEA™ 110584

KEEP ROPS INSTALLED PROPERLY

Make certain all parts are reinstalled correctly if the roll-over protective structure (ROPS) (A) is loosened or removed for any reason. Tighten mounting bolts to proper torque.

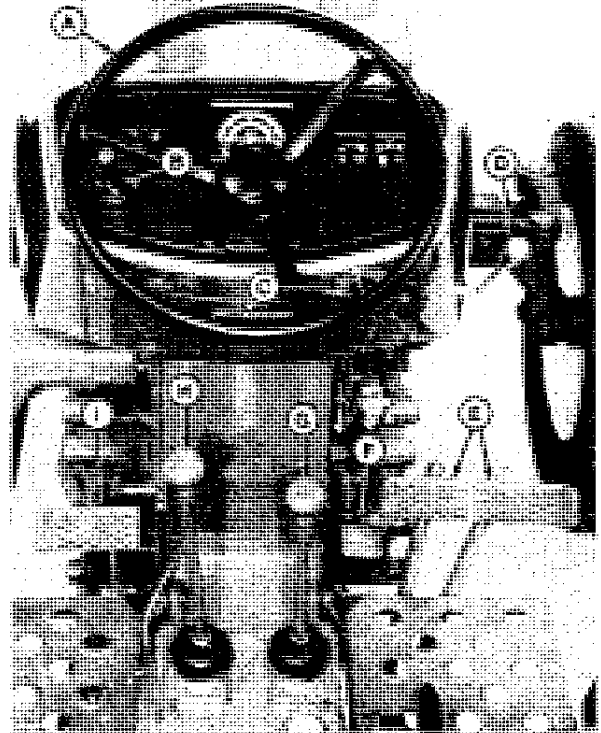
The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.



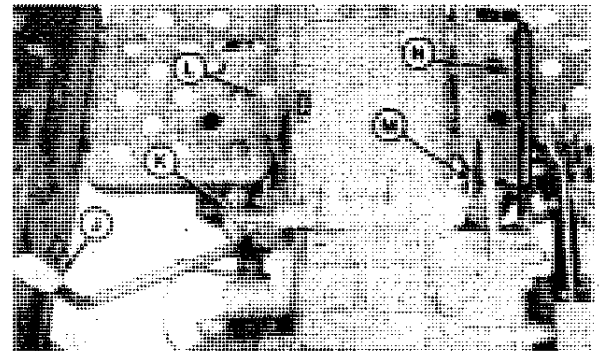
AJ7;RW1168 4 U01;ROPS3 UT 140286

Operator's Station

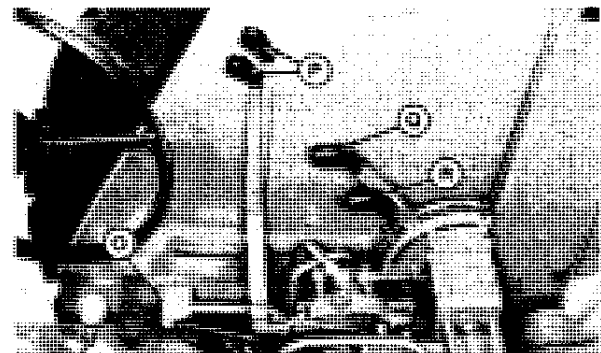
CONTROLS



- A—Steering Wheel
- B—Light Switch
- C—Key Switch
- D—Hand Throttle
- E—Brake Pedals
- F—Foot Throttle
- G—Range Shift Lever
- H—Gear Shift Lever
- I—Clutch Pedal



- J—PTO Control Lever
- K—Hydraulic Stop Valve
(Field Option)
- L—Mechanical Front-Wheel Drive
(MFWD) Shift Lever (Optional)
- M—Rockshaft Rate-of-Drop Valve
- N—Hand Brake

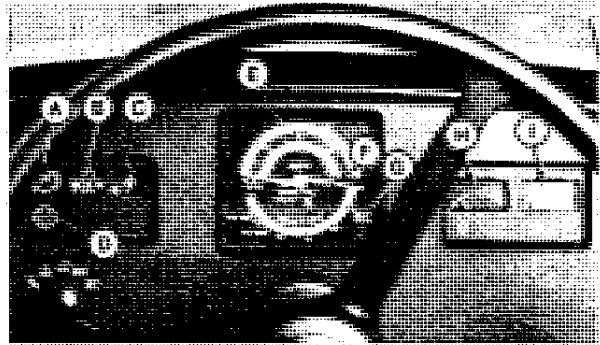


- O—Differential Lock Pedal
- P—Selective Control Levers (SCV)
(Field Option)
- Q—Rockshaft Position Control Lever
- R—Rockshaft Draft Control Lever

AJ8;RW9339,RW9340,RW9341 U01;C101 X1 040883

INSTRUMENTS

- A—Parking Brake Indicator
- B—Engine Oil Pressure Indicator
- C—Charging System Indicator
- D—Air Restriction Indicator
(Sender is a Field Option)
- E—Tach-Hourmeter
- F—Hour Meter
- G—High Beam Indicator
- H—Coolant Temperature Gauge
- I—Fuel Gauge



AJ8;RW9342 U01;C102 X1 130683

USING SEAT BELT

- CAUTION:** Use a seat belt when you operate with a roll-over protective structure (ROPS) to minimize chance of injury from an accident such as an overturn. Do not use a seat belt if operating without a ROPS.

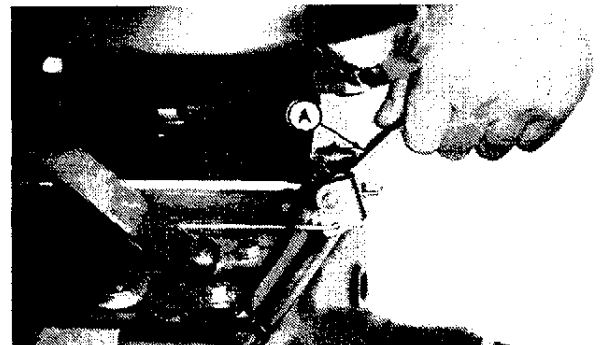
Adjust belt (A) to fit snugly across lower abdomen. Belt does not lock at the retractor. To properly retain operator, belt must be completely extend from retractor and length adjusted by pulling belt tail through buckle.



AJ9;RW2410 U01;0503 X1 170186

SELECT SEAT POSITION

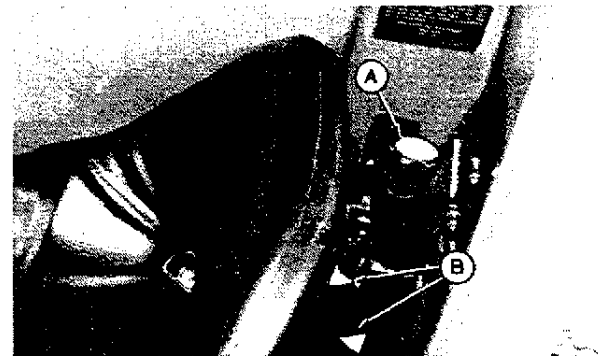
Lift latch (A) and slide seat fore and aft to desired position.



AJ8;RW9343 U01;0501 X1 130683

ADJUST SEAT SUSPENSION

With operator seated, turn adjusting knob (A) to align pointers (B). When pointers are aligned, seat suspension system has full vertical travel range.



AJ9;RW2409 U01;0502 X1 020981

Lighting and Signals

LIGHT SWITCH POSITIONS

Tractor light switch has five positions:

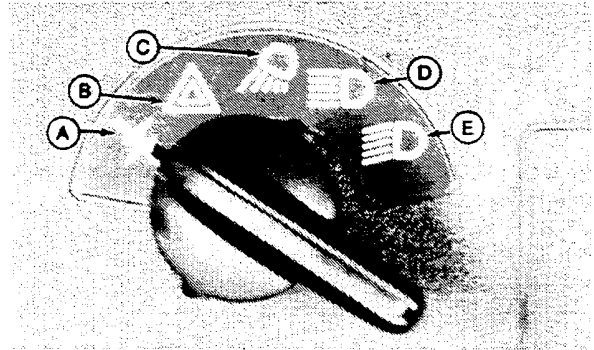
(A)—Turns off all lamps

(B)—Turns on warning lamps only. For driving on highway during daytime.

(C)—Turns on bright head lamps and rear flood lamp. For field use only. Do not use on roads. Flood lamp might blind or confuse other drivers.

(D)—Turns on bright head lamps, tail lamp, and warning lamps. For highway driving during daytime or night-time.

(E)—Turns on dim head lamps, tail lamp, and warning lamps. Turn switch to this position before meeting other vehicles.



AE5:RW9344 U01:LS01 X1 130683

USING HEAD LAMPS

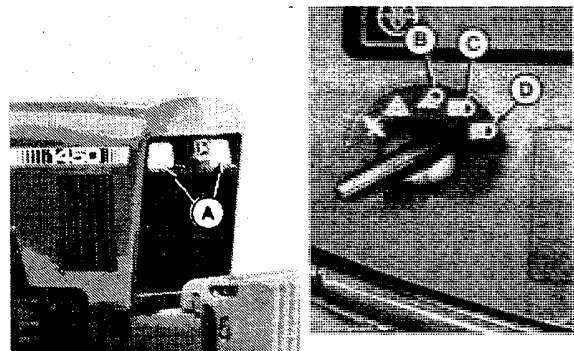
Dual-beam head lamps (A) are switched on by either "flood lamp" (B), "bright head lamp" (C), or "dim head lamp" (D) light switch position.

Always dim head lamps before meeting another vehicle.

Keep head lamps adjusted properly, (See Adjusting Head Lamps in Service section).

A—Head Lamps
B—Flood Lamp

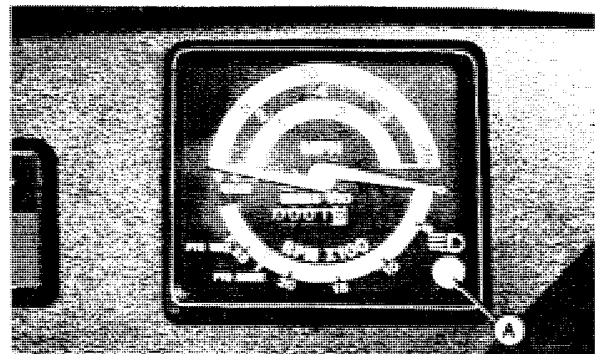
C—Bright Head Lamp
D—Dim Head Lamp



AE5:RW9345,RW3086 U01:LS02 X1 130683

HIGH BEAM INDICATOR

High beam lamp (A) should glow when light switch is turned to "Bright Head Lamp" position. Bright head lamps, tail lamp and warning lamps should be on.

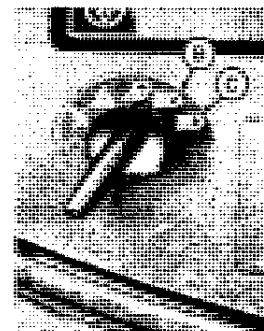
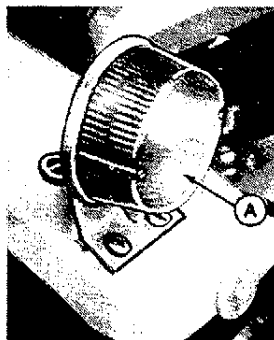


AJ8:RW2408 U02:LL2 R1 040883

USING TAIL LAMP

Red tail lamp (A) is switched on by either "bright head lamp" (B), or "dim head lamp" (C) light switch position.

Be sure tail lamp lens is clean before driving on a road, so other drivers can see it easily.

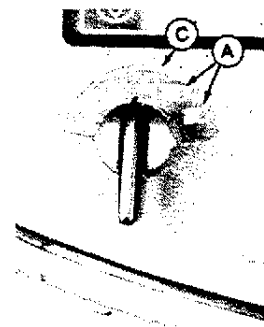
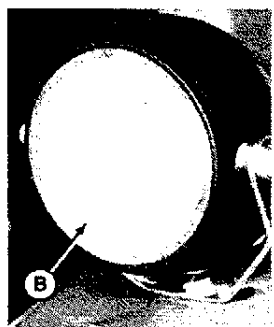


AE5;RW3087,RW3088 U01;LS03 X1 130681

USING FLOOD LAMP

CAUTION: When operating on a road, move light switch to either "head lamp" position (A). Never use flood lamps or any lamps which would blind or confuse other drivers.

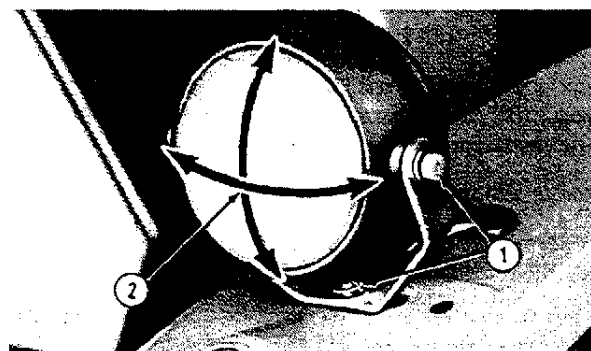
Rear flood lamp (B) is switched on by "flood lamp" (C) light switch position.



AE5;RW3089,RW3090 U01;LS04 X1 130683

ADJUSTING FLOOD LAMP

1. Loosen mounting bolts.
2. Turn or tilt flood lamp to desired position.
3. Retighten bolts securely.



AE5;RW3091 U01;LS05 X1 130683



Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

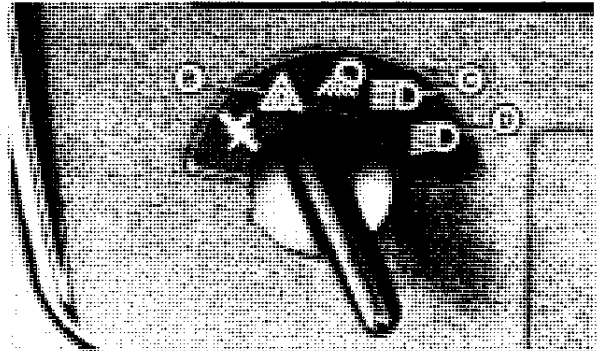
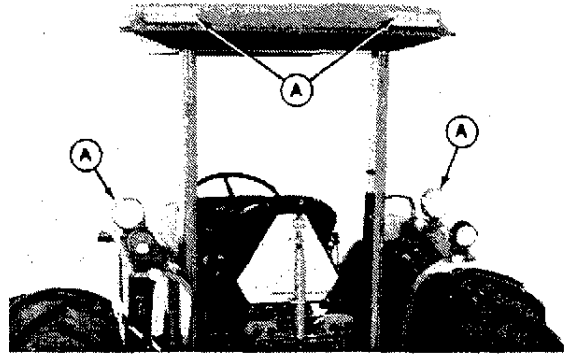
Thank you so much for reading

USE WARNING LAMPS

CAUTION: When transporting the machine on a road or highway at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. Check local governmental regulations. Various safety devices are available from your John Deere dealer. Keep safety items in good condition. Replace missing or damaged items.

Warning lamps (A) are switched on in either "warning lamp" (B), "bright head lamp" (C), or "dim head lamp" (D) light switch position.

- A—Warning Lamps
- B—Warning Lamp Switch Position
- C—Bright Head Lamp Switch Position
- D—Dim Head Lamp Switch Position



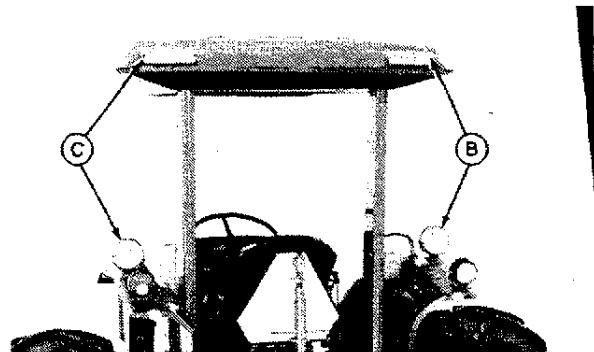
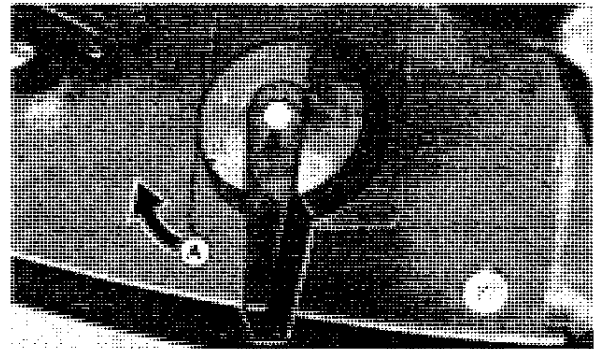
AE5;RW9346,RW9347 U01;LS06 X1 050286

USING TURN SIGNALS—FIELD OPTION

A turn signal kit is available from your John Deere dealer.

When turn signal lever is moved to desired turn position (A), warning lamp on that side (B) of tractor flashes. Warning lamp on opposite side (C) of tractor goes on solid.

NOTE: Be sure to return lever to center position after turning.



AE5;RW9348,RW9349 U01;LS07 X1 170186

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>