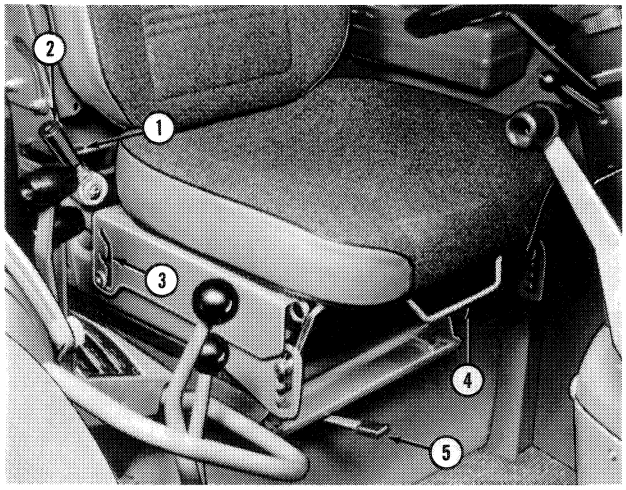


Figure 2
Bostrom Viking Seat

1. Backrest Angle Release Lever (Both Sides)
2. Firmness Adjustment Lever
3. Raise or Lower Rear of Seat
4. Raise or Lower Front of Seat
5. Fore and Aft Adjustment Lever

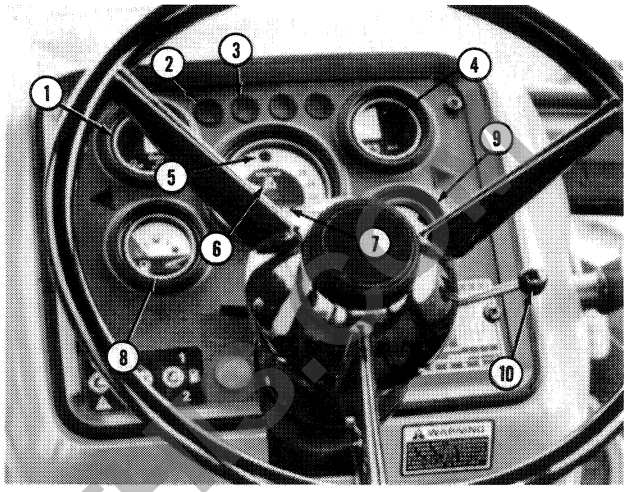


Figure 3
Instruments

1. Engine Oil Pressure Gauge
2. Air Cleaner Restriction Indicator Light
3. Transmission Oil Pressure Warning Light
4. Voltmeter
5. Headlight High Beam Indicator
6. Tachometer
7. Hourmeter
8. Fuel Gauge
9. Engine Coolant Temperature Gauge
10. Steering Wheel Tilt Control

To adjust the front of the seat up or down, pull the release lever (4) and position the seat as desired.

To move the seat fore and aft, move the seat release lever (5) to the side and slide the seat fore or aft as desired.

To adjust the backrest angle, push the lever (1) on each side down and position the seat back to the most comfortable position.

STEERING WHEEL TILT CONTROL

The steering wheel may be tilted up or down as desired by pushing the release lever (10), Figure 3, away from the wheel.

CAUTION: *Be certain that the steering wheel is locked in position before operating the tractor.*

INSTRUMENT PANEL GAUGES AND INDICATOR LIGHTS

ENGINE OIL PRESSURE GAUGE

The engine oil pressure gauge is located on the instrument panel at (1), Figure 3.

Oil pressure is normally greatest after starting a cold engine. As the oil warms up, the pressure drops. Oil pressure is also greater at operating speeds than at low idle. With the key-starter switch on and the engine off, the gauge should register in the red band (1), Figure 4. When the engine is running, the gauge should register in the white band (2). If the gauge does not register in the white band immediately after starting the engine or when operating the tractor, shut the engine off and investigate the cause.

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BREAK-IN PROCEDURES

During the first 50 hours of operation, use care to avoid prolonged engine operation either at a constant speed or with little or no load. Also observe the following notes.

- Check the clutch pedal free travel after the first 25 and 50 hours of operation.
- Avoid overloading (lugging) the engine. Lugging occurs when the engine speed will not increase when the throttle is opened further.
- Use the highest gear in which lugging does not occur to minimize engine wear and conserve fuel.
- Check coolant, lubricant, and power steering levels daily or every 10 hours.
- Observe the instruments, gauges, and warning lights for any indication of a malfunction.
- Study this manual and be familiar with all controls, instruments, gauges, warning lights, and procedures before operating the tractor.
- Maintain (adjust as needed) the clutch pedal free travel.

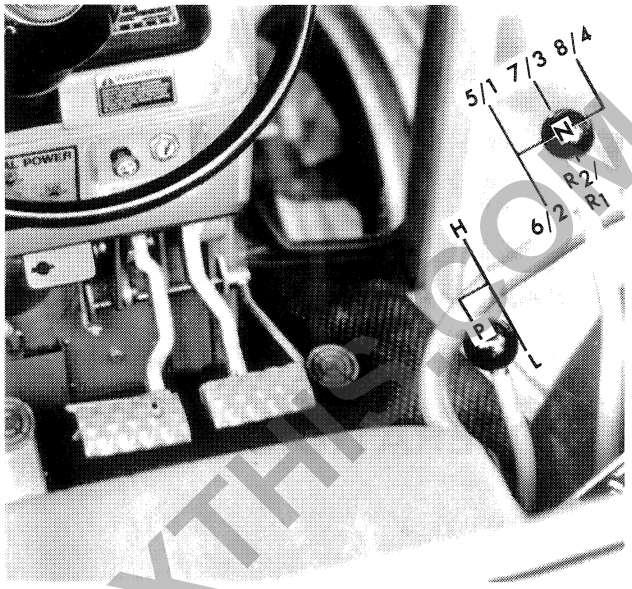


Figure 29
Transmission in Park Position

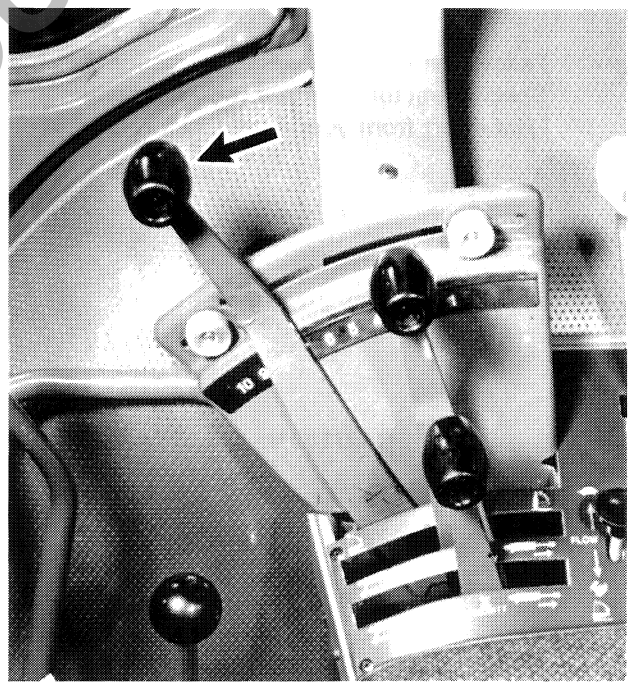


Figure 30
Lift Control Lever in the "Down" Position

STARTING THE ENGINE

CAUTION: *Never attempt to start the engine while standing beside the tractor. Always sit in the seat.*

1. Place the high-low shift lever in park and the transmission in neutral as shown in Figure 29.
2. Place the hydraulic lift control lever in the down position as shown in Figure 30.
3. Relieve pressure in the remote control valve circuits by moving the levers fully forward then rearward; then returning them to the neutral position as shown in Figure 31.

CAUTION: *Be certain that no one will be injured by moving equipment when relieving the remote control valve circuits of pressure.*

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SAFETY PRECAUTIONS

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. Read and take the following precautions before operating this tractor to help prevent accidents. Equipment should be operated only by those who are responsible and instructed to do so.

THE TRACTOR

1. Read the Operator's Manual carefully before using the tractor. Lack of operating knowledge can lead to accidents.
2. Use an approved Rollbar and Seat Belt for safe operation. Overturning a tractor without a rollbar can result in death or injury. If your tractor is not equipped with a rollbar and seat belt, see your Ford Tractor Equipment Dealer.
3. Always use the seat belt when the rollbar is installed. Do not use the seat belt if the rollbar is removed from the tractor.
4. Use the handholds and step plates when getting on and off the tractor to prevent falls. Keep steps and platform cleared of mud and debris.
5. Do not permit anyone but the operator to ride on the tractor. There is no safe place for extra riders.

SERVICING THE TRACTOR

6. Cooling system operates under pressure which is controlled by the radiator cap. It is dangerous to remove the cap while system is hot. Always turn cap slowly to the first stop and allow the pressure to escape before removing the cap entirely.
7. Do not smoke while refueling the tractor. Keep any type of open flame away. Wait for engine to cool before refueling.
8. Keep the tractor in good operating condition for your safety. An improperly maintained tractor can be hazardous.
9. Keep open flame away from battery or cold weather starting aids to prevent fires or explosions. Use jumper cables according to instructions to prevent sparks which could cause explosion.
10. Stop the engine before performing any service on the tractor.
11. Do not attempt to service air conditioning system. It is possible to be severly frostbitten or injured by escaping refrigerant. See your dealer for service.
12. Do not modify or alter or permit anyone else to modify or alter this tractor or any of its components or any tractor function without first consulting a Ford Tractor-Equipment Dealer.

OPERATING THE TRACTOR

13. Apply the parking brake, place the P.T.O. lever in the "OFF" position, the lift control lever in the down position, the remote control valve levers in the neutral position, and the transmission in neutral before starting the tractor.
14. Do not start the engine or operate controls while standing beside the tractor. Always sit in the tractor seat when starting the engine or operating controls.
15. Do not bypass the safety start switch. Consult your Ford Tractor-Equipment Dealer if your safety start controls malfunction. Use jumper cables only in recommended manner, improper use can result in tractor runaway.
16. Do not get off the tractor while it is in motion.
17. Shut off the engine and apply the parking brake before getting off the tractor.
18. Do not park the tractor on a steep incline.
19. Do not operate the tractor engine in an enclosed building without adequate ventilation. Exhaust fumes can cause death.
20. If power steering or engine ceases operating, stop the tractor immediately.
21. Pull only from the swinging drawbar or the lower link drawbar in the down position. Use only a drawbar pin that locks in place. Pulling from the tractor rear axle or any point above the axle may cause the tractor to upset.
22. If the front end of the tractor tends to rise when heavy implements are attached to the three-point hitch, install front end or front wheel weights. Do not operate the tractor with a light front end.
23. Always set the hydraulic selector lever in position control when attaching equipment, when transporting equipment. Be sure hydraulic couplers are properly mounted and will disconnect safely in case of accidental detachment of implement.
24. Do not leave equipment in the raise position.
25. Use the Flasher/Turn Signal Lights and SMV signs when traveling on public roads both day and night unless prohibited by law.
26. Dim tractor lights when meeting a vehicle at night. Be sure the lights are adjusted to prevent blinding an oncoming vehicle operator.

DRIVING THE TRACTOR

27. Watch where you are going especially at row ends, on roads, around trees and any low hanging obstacle.
28. To avoid upsets drive the tractor with care and at speeds compatible with safety, especially when operating over rough ground, crossing ditches, slopes, and when turning.
29. Lock tractor brake pedals when transporting on roads to provide two wheel braking.
30. Keep the tractor in the same gear when going downhill as used when going uphill. Do not coast or free wheel down hills.
31. Any towed vehicle whose total weight exceeds that of the towing tractor must be equipped with brakes for safe operation.
32. When the tractor is stuck or tires frozen to the ground, back out to prevent upset.

OPERATING THE P.T.O.

33. When operating P.T.O. driven equipment, shut off the engine and wait until the P.T.O. stops before getting off the tractor and disconnecting the equipment.
34. Do not wear loose clothing when operating the power takeoff, or when near rotating equipment.
35. When operating stationary P.T.O. driven equipment, always apply the tractor parking brake and block the rear wheels front and back.
36. Do not add dressing, install or remove the belt while the belt pulley is in motion.
37. To avoid injury, do not clean, adjust, unclog or service P.T.O. driven equipment when the tractor engine is running.
38. Make sure the P.T.O. master shield is installed at all time and always replace the P.T.O. shaft cap when the P.T.O. is not in use.

Whenever you see this symbol  it means: ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

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INTERNATIONAL SYMBOLS

As a guide to the operation of your tractor, various international symbols have been utilized on the instruments and controls. The symbols are shown below with an indication of their meaning.


Engine speed (rev/min x 100)


Hours recorded


Engine water temperature


Fuel level


Fuel cut-off


Lights


Horn


Engine oil pressure


Air filter


Transmission oil pressure


Alternator charge


Heater temperature control


Air conditioner temperature control


Fan


Wipe/Wash control


Power take-off (on)


Power take-off (off)


Tortoise', slow or minimum setting


Hare', fast or maximum setting


Caution

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COLD WEATHER STARTING

If the engine fails to start, use the excess fuel button (1), Figure 34, as covered in this procedure. The excess fuel button, when depressed, delivers extra fuel to the engine for easier starting when the temperature is below 40°F. (4.4°C). When temperatures are extremely low, it is recommended that the Ether Spray Primer, or the Coolant Immersion Heater be used as a starting aid. Refer to "COLD WEATHER STARTING AIDS".

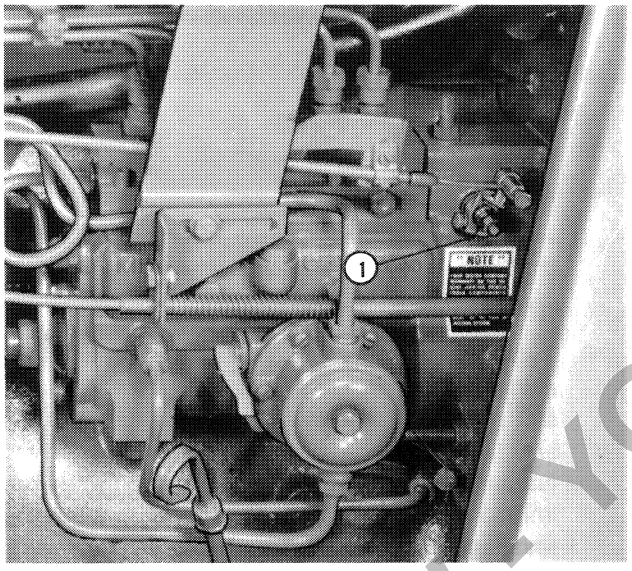


Figure 34
Excess Fuel Button
1. Excess Fuel Button

CAUTION: *Never attempt to start the engine while standing beside the tractor. Always sit in the seat.*

1. Place the high-low shift lever in park and the transmission in neutral as shown in Figure 29.
2. Place the hydraulic lift control lever in the down position as shown in Figure 30.
3. Relieve pressure in the remote control valve circuits by moving the levers fully forward then rearward; then returning them to the neutral position as shown in Figure 31.

CAUTION: *Be certain that no one will be injured by moving equipment when relieving the remote control valve circuits of pressure.*

4. Disengage the PTO by pulling the PTO control lever, Figure 32, fully rearward as shown.
5. Push the engine stop control (1), Figure 33, fully in.
6. Move the hand throttle to the half open position.
7. Get off the tractor and push the excess fuel button (1), Figure 34, in to increase the fuel delivery. The excess fuel button should automatically stay "in". If not, push the hand throttle forward slightly and push the button in again.
8. Get back on the tractor and fully depress the clutch pedal.

NOTE: *A safety start switch in the clutch linkage prevents starter operation except when the clutch pedal is fully depressed.*

9. Turn the key-starter switch fully clockwise to the start position. Release the key when the engine starts. The excess fuel button automatically "pops out" when the engine starts. Be certain that the warning lights go out and the gauges have normal readings. If the lights do not go out immediately or the gauges do not have normal readings, turn the tractor engine off by pulling out the engine stop control (1), Figure 33, and investigate the cause.

NOTE: *Do not operate the starter motor for longer than 30 seconds or the motor may overheat. Allow the motor to cool for one minute before operating the starter motor again.*

IMPORTANT: *The Ford TW-20 and TW-30 are equipped with a turbocharger which may be damaged if the tractor is driven before the turbocharger is adequately lubricated. Idle the engine for one minute before driving the tractor to assure adequate turbocharger lubrication.*

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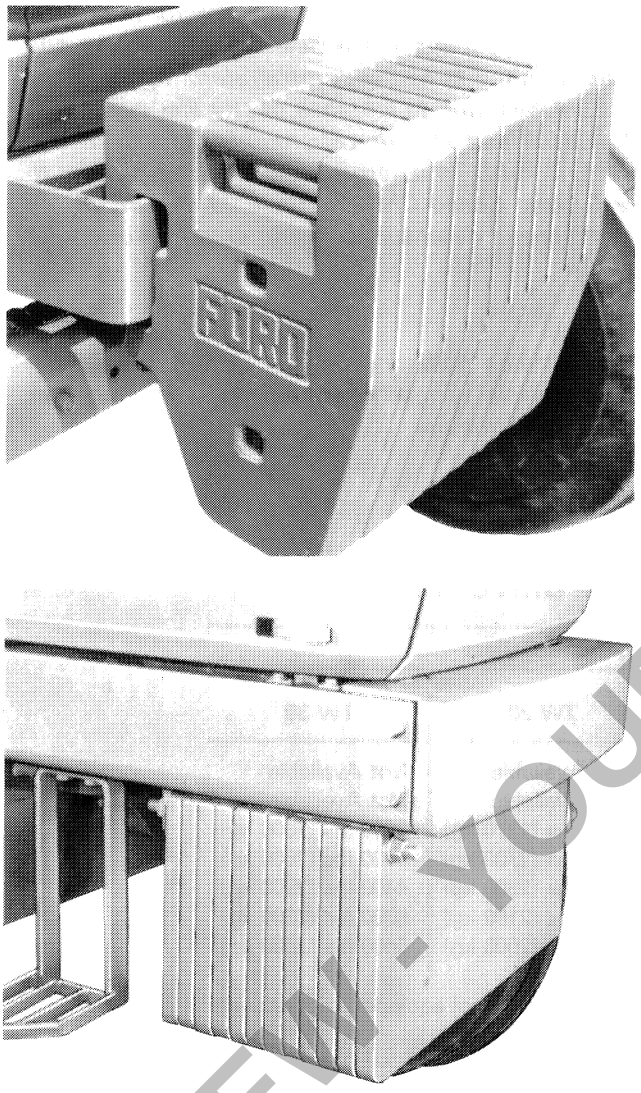


Figure 98
Front End Weights

A. TW-10, TW-20
B. TW-30

IMPORTANT: *Overweighting your tractor to pull extremely heavy loads in low gear will shorten tire and tractor life and* ***is not recommended.*** *To avoid excess tire wear and to lengthen tractor life, avoid continuous full load operation at ground speeds below 4.5 mph (7.3 kph). To determine ground speeds, refer to the Ground Speed Chart on page 30 and 31, or the ground speed decal supplied with your tractor.*

Adding ballast to the front of the tractor will reduce rear tire slippage when using mounted equipment as well as improve stability. If rear tire slippage is too great, add weight to the rear wheels until rear tire slippage is within the 10 to 15% range. Refer to Weighting Limitations, page 70, to determine the maximum allowable weight that can be added.

NOTE: *Do not exceed the tire load and inflation specifications in the Tire Inflation vs. Permissible Load Chart, page 73.*

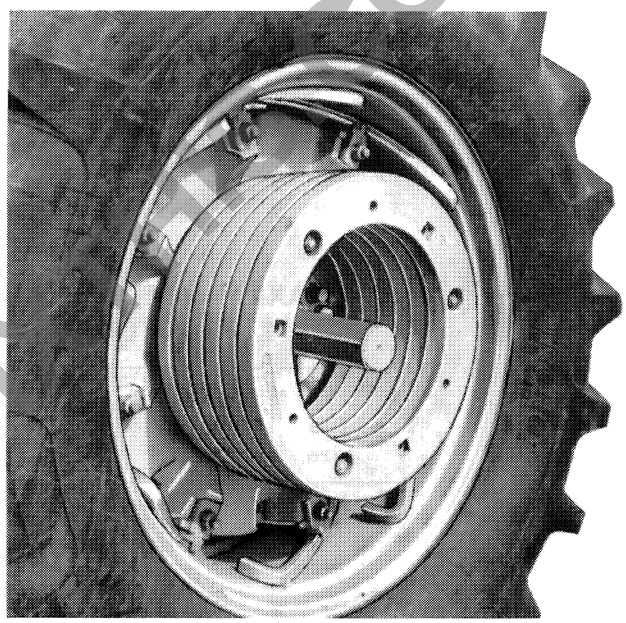


Figure 99
Rear Wheel Weights

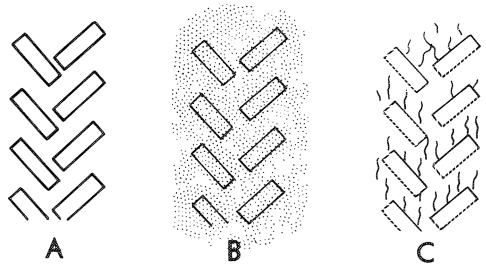


Figure 100
Weighting vs. Tire Tread Pattern

A. Too Much Weight
B. Too Little Weight
C. Correct Weight

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2. Discard the element and sealing rings (4).

3. Wash the filter head and sediment bowl with a brush and clean diesel fuel.

4. Install a new element and sealing rings, taking care to prevent dirt from contacting the parts.

5. Snug down the retaining bolt. Do not overtighten, as the sealing rings may be damaged.

6. Drain the water and sediment separator by loosening the drain plug (6), Figure 135. Tighten the drain plug after it is drained.

7. Open the bleed screw (2) and actuate the lift pump lever until air free fuel flows from the bleed screw orifice. Tighten the bleed screw.

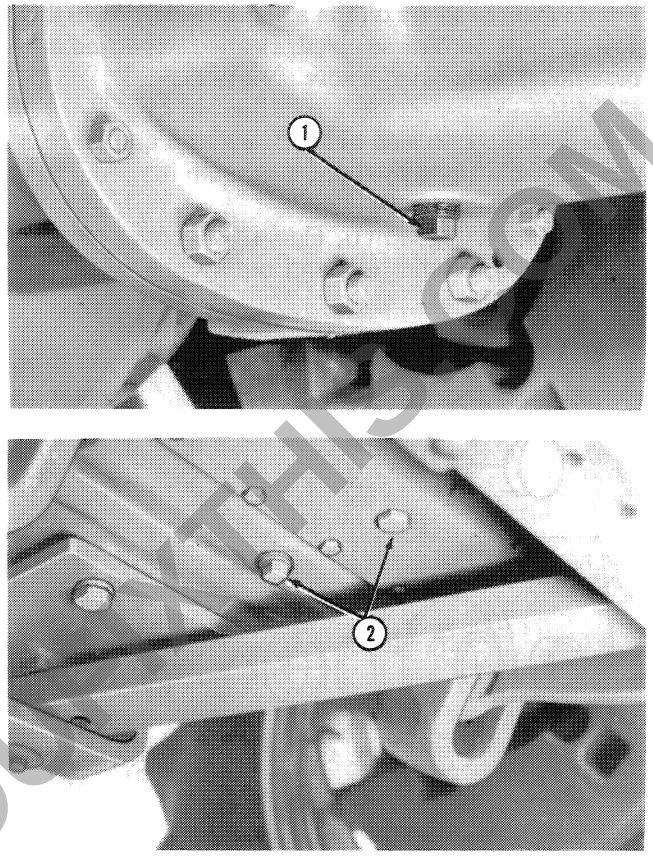


Figure 136
Rear Axle/Transmission/Hydraulic Oil Drain Plugs
1. Forward (Transmission) Drain Plug
2. Rear (Rear Axle) Drain Plugs

1200 HOURS

Rear Axle/Transmission/Hydraulic Oil

1. With the oil at operating temperature and the tractor parked on a level surface remove the forward drain plug (1), Figure 136, on the bottom of the transmission case and the two rear drain plugs (2) on the rear bottom of the rear axle center housing.

2. Drain front wheel drive transfer case (where fitted), Figure 138.

3. Install the drain plugs after the oil is finished draining and add the type oil specified on page 79, through the rear axle/transmission/hydraulic oil filler tube (1), Figure 137. The front wheel drive pickup point will automatically be filled by oil from the rear axle.

4. Check the oil level on the dipstick (2). Be careful not to overfill.

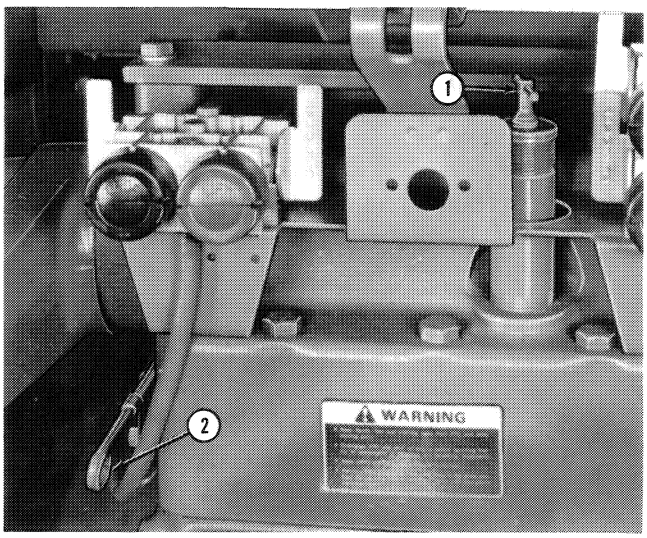


Figure 137
Rear Axle/Transmission/Hydraulic Oil Level Check and Filler
1. Filler Tube
2. Dipstick

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CAB CONTROLS

WINDSHIELD WIPER/WASHER SWITCH

Turn the switch (1), Figure 14, clockwise to actuate the wiper and to increase its speed. Depress the switch to actuate the windshield washer.

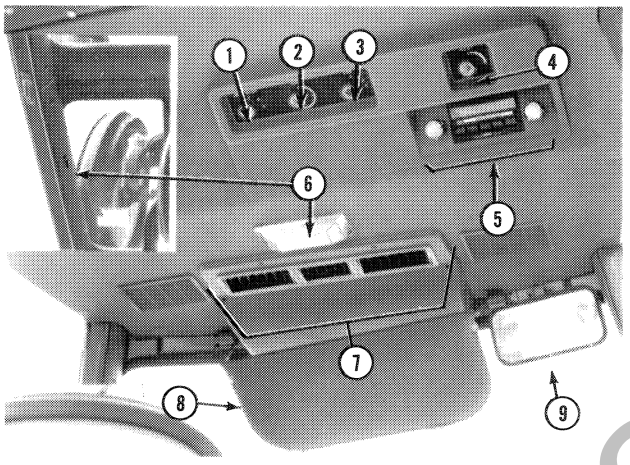


Figure 14
Cab Controls

1. Windshield Wiper/Washer Switch
2. Air Conditioning Temperature Control
3. Fan Switch
4. Heater Temperature Control
5. Radio
6. Dome Light and Switch
7. Ventilation Louvers
8. Sun Visor
9. Rear View Mirror

AIR CONDITIONING TEMPERATURE CONTROL

Turn the control (2), Figure 14, clockwise to lower the cab temperature. The fan switch must be on before the air conditioning system will operate.

FAN SWITCH

Turn the fan switch (3), Figure 14, clockwise to run the fan and increase its speed.

HEATER TEMPERATURE CONTROL

Increase cab air temperature by turning the control 4, Figure 14, clockwise.

The engine heater hose valves (1), Figure 15, must be open to operate the heater and should be closed when operating the tractor in hot weather.

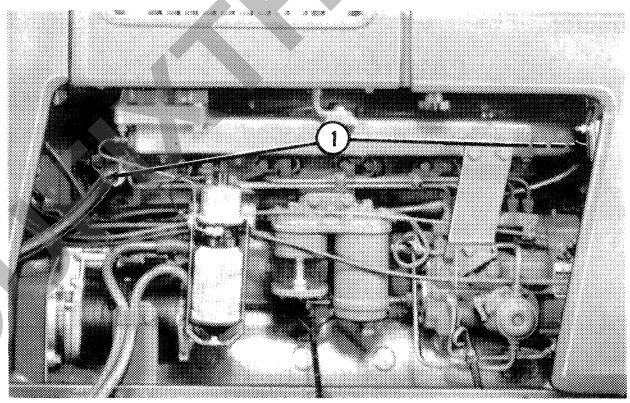


Figure 15
Heater Shut-Off Valves

1. Valves

VENTILATION LOUVERS

Adjust the louvers (7), Figure 14, as needed to defog the windows and optimize cab air circulation.

RECIRCULATION DOOR

Close the recirculation door, Figure 16, to pull outside air into the cab with the fan.

Open the door to recirculate air in the cab.

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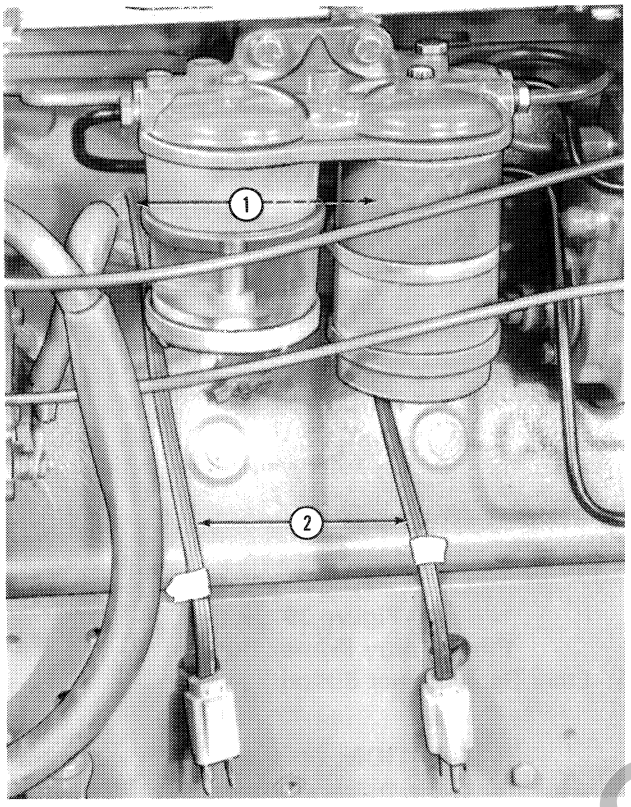


Figure 37
Coolant Immersion Heaters
1. Heater Elements
2. Heater Cords

Plug the heater cords into a 110/120 volt circuit for at least 2 hours before starting the tractor. You can leave the heater in operation for periods longer than 2 hours without damage but maximum starting ease is attained after the coolant has been heated for two hours.

CAUTION: *To avoid shocks or other injuries, never use an ungrounded or inadequate extension cord. Always use a grounded 3 wire extension cord with a 3 wire plug which is rated for at least a 15 ampere load.*

STARTING THE TRACTOR WITH JUMPER CABLES

If it is necessary to use jumper cables to start the engine, proceed with the following instructions and refer to Figure 38.

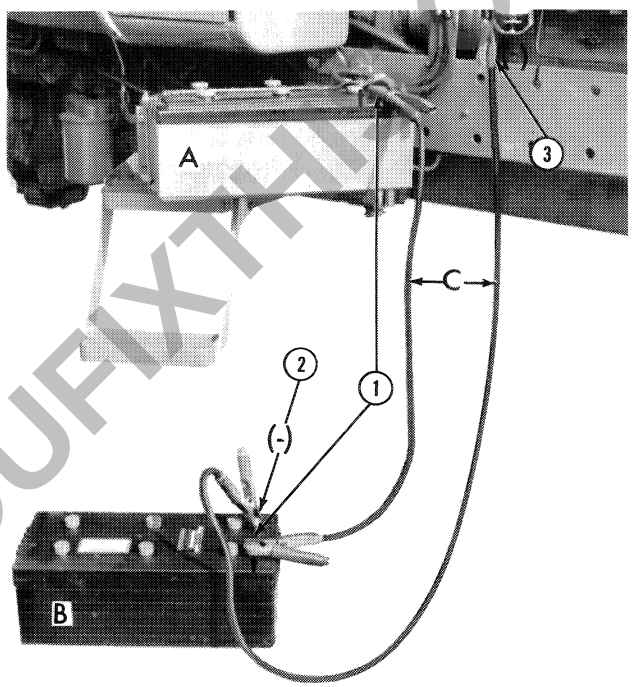
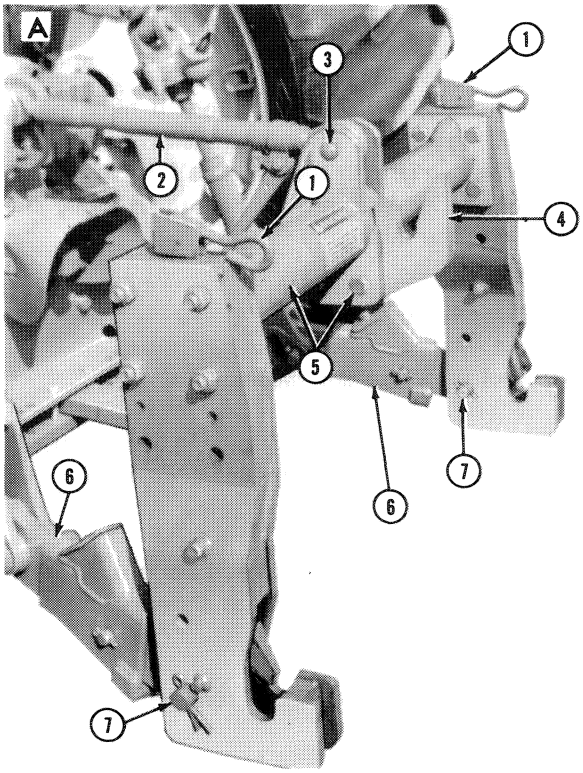


Figure 38
Jumper Cables Installed
A. Tractor Battery
B. Auxiliary Battery
C. Jumper Cables
   1. Positive (+) Terminals
   2. Auxiliary Battery Negative (—) Terminal
   3. Starter Negative (—) Terminal

Connect one end of the jumper cable to the tractor battery positive (+) terminal and the other to the auxiliary battery positive (+) terminal (1). Connect one end of the other cable first to the auxiliary battery negative (-) terminal (2), and the other end to the tractor starter negative terminal (3) as shown. Follow the starting procedures after the jumper cables are connected.

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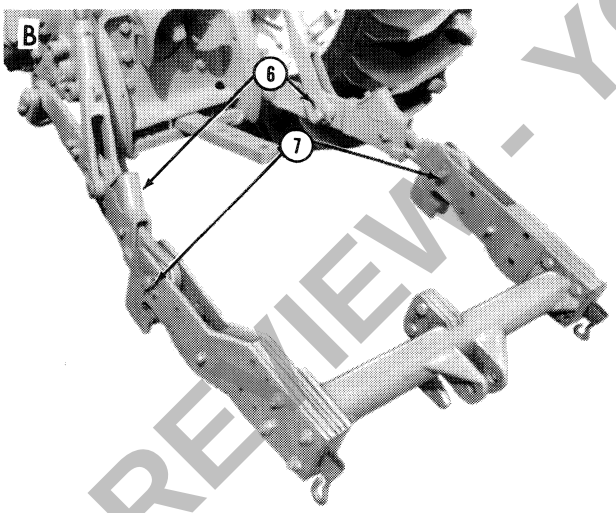


Figure 55
Quick Hitch Installation

A. Installed
B. Installation Position
   1. Latch Handles
   2. Upper Link
   3. Upper Link Pin
   4. Upper Hook
   5. Upper Hook Bolts
   6. Lower Links
   7. Lower Link Pins

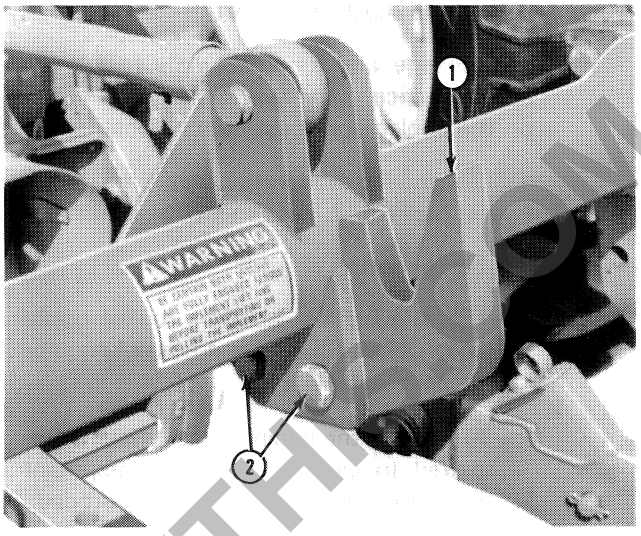


Figure 56
Upper Hook Removed

1. Upper Hook
2. Upper Hook Bolts

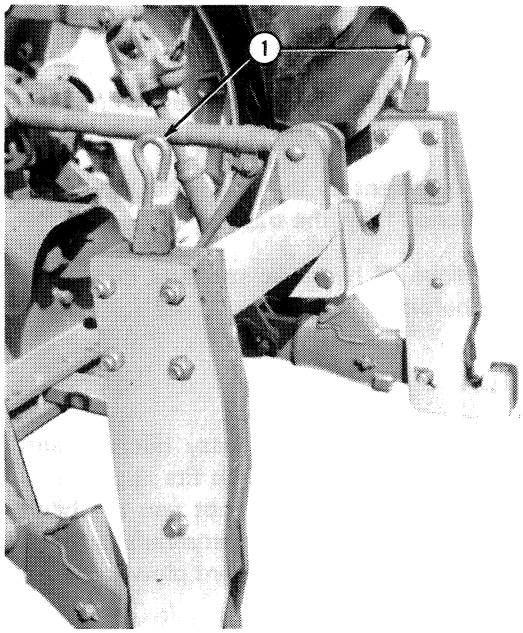


Figure 57
Unhitching Equipment

1. Latch Handles

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