

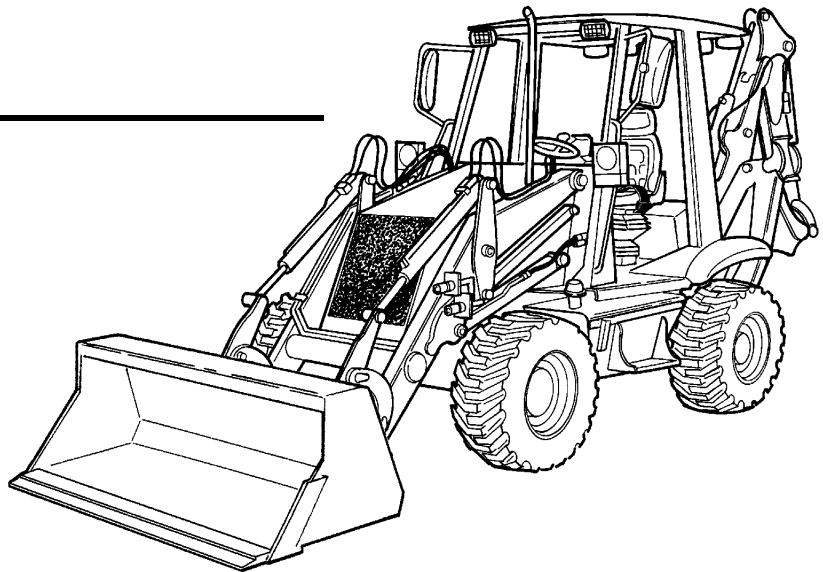
BL-370

B Series



Operation & Maintenance Manual

S/N 572711001 & Above



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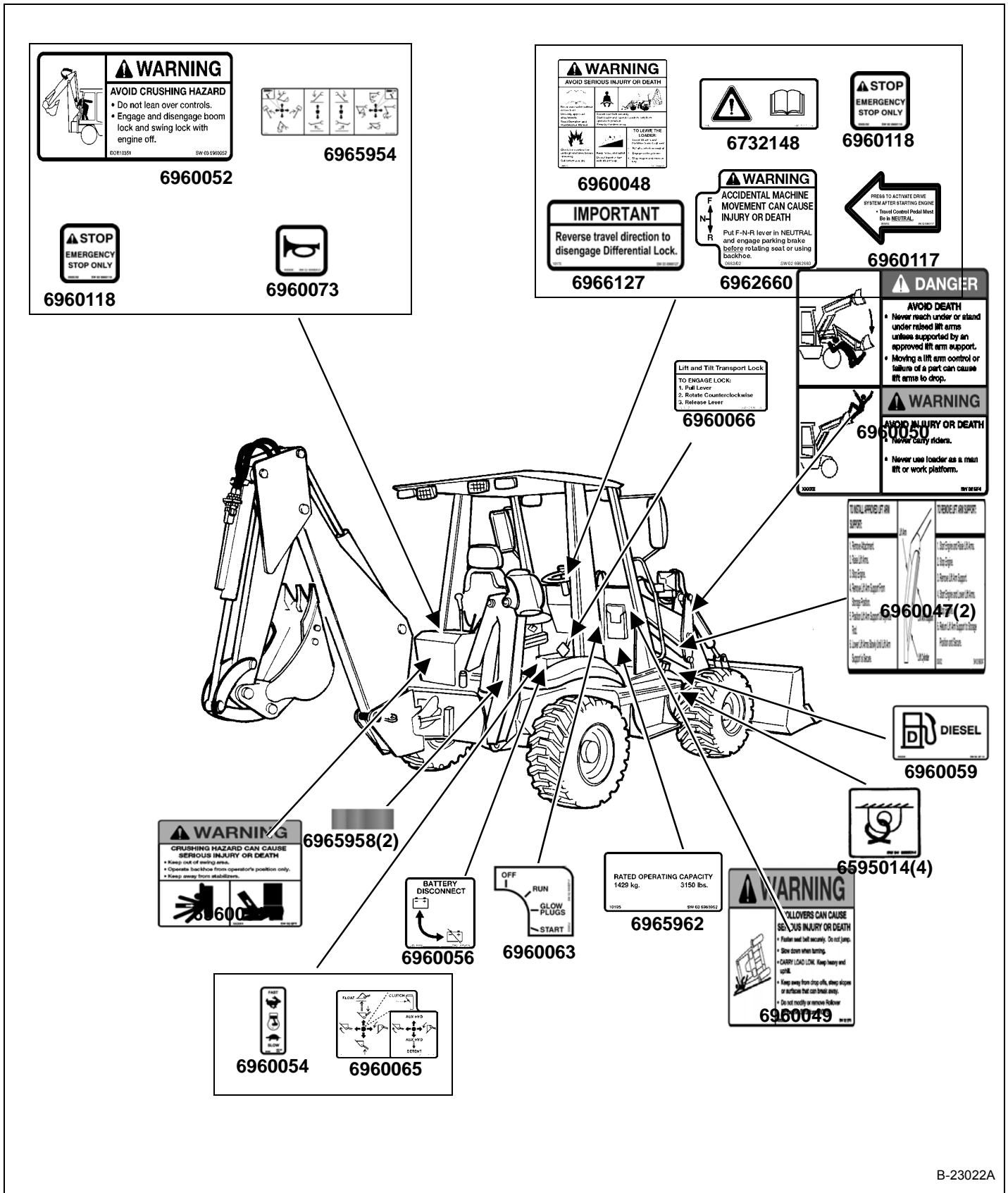


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MACHINE SIGNS (DECALS) (CONT'D)

Follow the instructions on all the Machine Signs (Decals) that are on the Backhoe Loader. Replace any damaged machine signs and be sure they are in the correct locations. Machine signs are available from your Ingersol-Rand Backhoe Loader dealer.



B-23022A

OPERATOR CAB ENCLOSURE (IF EQUIPPED)

The Ingersoll-Rand backhoe loader may be equipped with an enclosed operator cab (ROPS and FOPS) to protect the operator from rollover and falling objects. Check with your dealer if the operator cab has been damaged. The seat belt must be worn for rollover protection.

Emergency Exit

The left and right doors provide emergency exits, if one cannot be accessed in the event of an emergency use the opposite side to exit the machine.

Figure OI-11

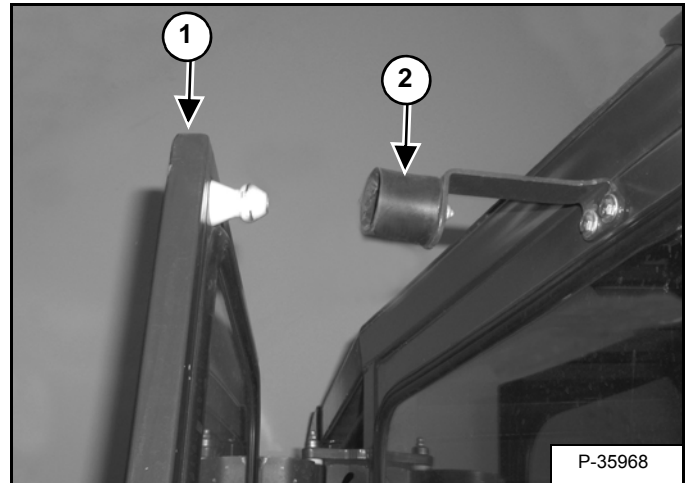


The rear window can also be used as an exit in an emergency [Figure OI-11].

Cab Door

The cab doors can be locked from the outside using a key.

Figure OI-12

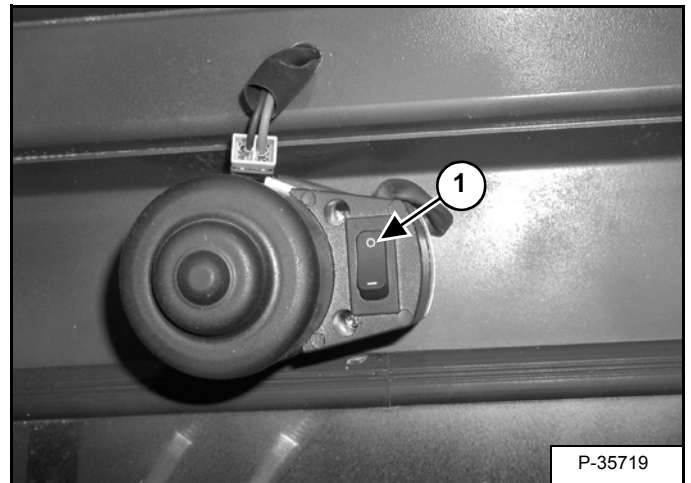


Push the door all the way open until the latch (Item 1) engages into the rubber stop (Item 2) [Figure OI-12] to hold the door open.

Firmly pull the door away from the cab to disengage the latch (Item 1) [Figure OI-12] and close the door.

Front Window And Wiper

Figure OI-13



The front window is equipped with a wiper. The wiper is controlled by the ON/OFF switch (Item 1) [Figure OI-13].

BACKHOE HYDRAULIC CONTROLS (CONT'D)

Backhoe Control Levers (Cont'd)

LEVER NO. 2 [Figure OI-33] - Arm and Bucket

To move the arm out, push the lever forward (Item 1) [Figure OI-33].

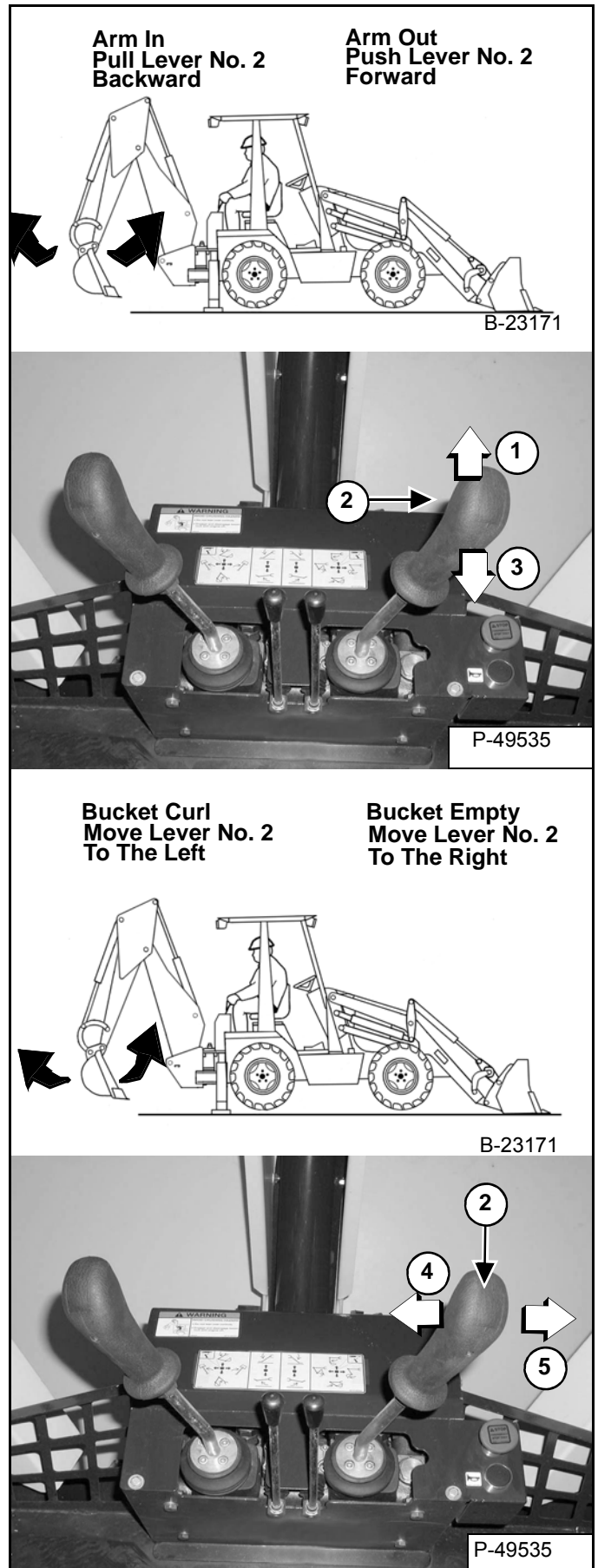
To move the arm in, pull the lever backward (Item 3) [Figure OI-33].

To curl the bucket (fill the bucket), move the lever to the left (Item 4) [Figure OI-33].

To empty the bucket, move the lever to the right (Item 5) [Figure OI-33].

NOTE: If you release the arm and bucket control lever, the lever will return to the neutral position.

Figure OI-33



LOADER ATTACHMENTS

NOTE: Warranty is void if non-approved attachments are used on the backhoe loader.



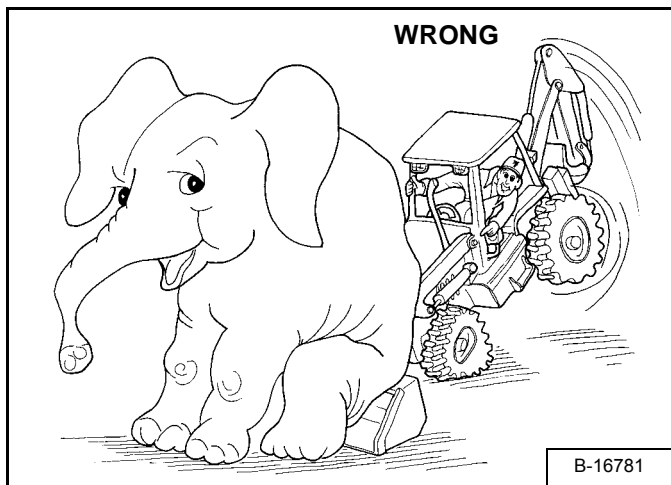
Never use attachments or buckets which are not approved by Ingersoll-Rand. Buckets and attachments for safe loads of specified densities are approved for each model. Unapproved attachments can cause injury or death.

W-2430-0402

The dealer can identify, for each model backhoe loader the attachments and buckets approved by Ingersoll-Rand. The buckets and attachments are approved for Rated Operating Capacity and for secure fastening to the Bob-Tach.

The Rated Operating Capacity (ROC) of the loader is determined by using a standard dirt bucket, and material of normal density, such as dirt or dry gravel. If longer buckets are used, the load center moves forward and reduces the Rated Operating Capacity. If very dense material is loaded, the volume must be reduced to prevent overloading.

Figure OI-55



Exceeding the Rated Operating Capacity [Figure OI-55] can cause the following problems:

- Steering the loader may be difficult.
- There will be a loss of stability.
- The life of the Ingersoll-Rand backhoe loader will be reduced.

Use the correct size bucket for the type and density of material being handled. For safe handling of material and avoiding machine damage, the attachment (or bucket) should handle a full load without going over the Rated Operating Capacity for the backhoe loader.



AVOID INJURY OR DEATH

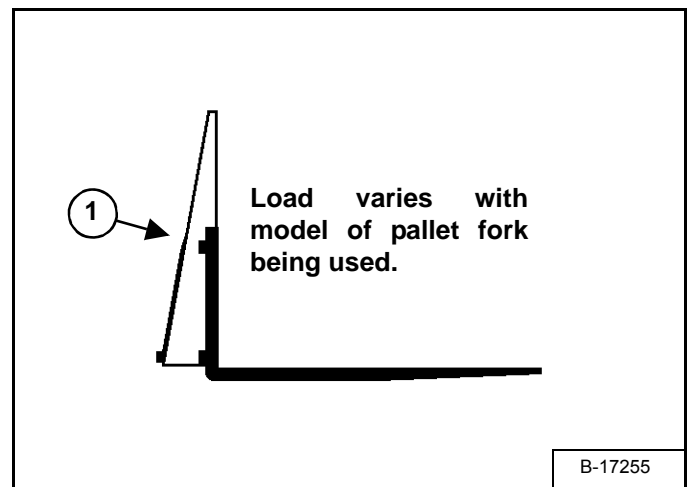
Do not exceed the Rated Operating Capacity. Excessive load can cause tipping or loss of control.

W-2053-0887

Pallet Forks

If a pallet fork attachment is used, the load center moves forward and reduces the Rated Operating Capacity.

Figure OI-56



The maximum load to be carried when using a pallet fork is shown on decals located on the pallet fork frame (Item 1) [Figure OI-56].

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OPERATING PROCEDURE (CONT'D)

Operating the Backhoe

Figure OI-79

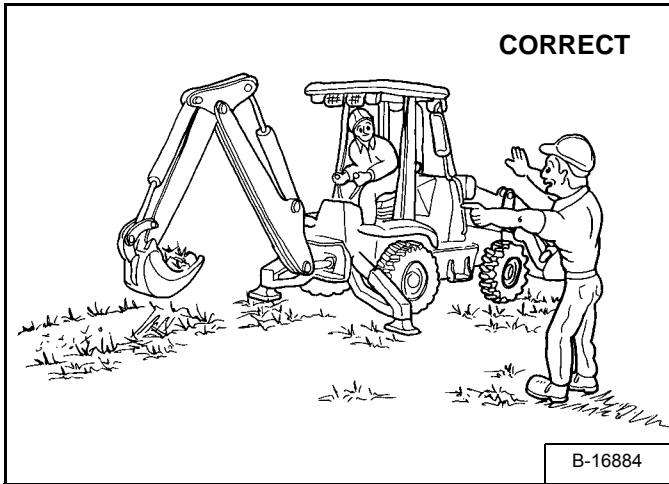
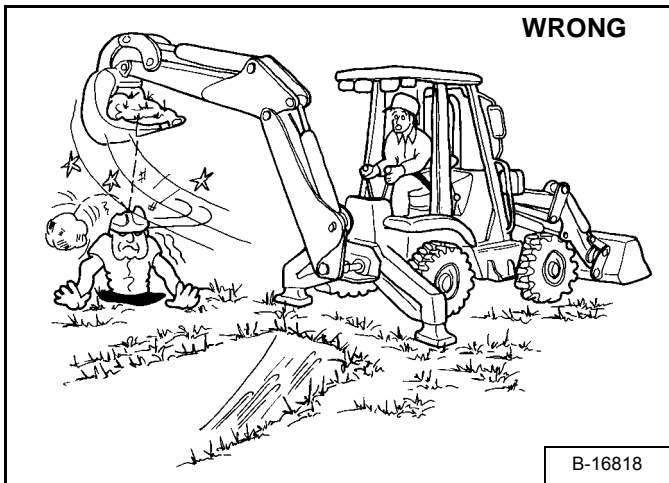


Figure OI-80



Operate the backhoe at a slow rate in an open and level area when learning to operate the backhoe.

WARNING

AVOID INJURY OR DEATH

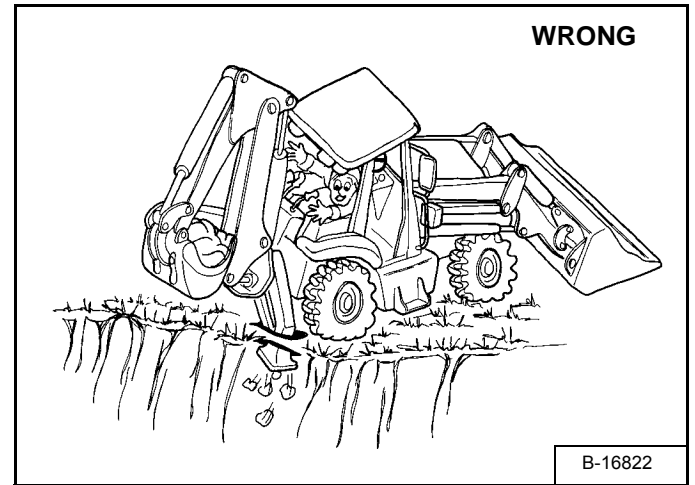
- Never permit personnel to stand in the maximum swing reach area while operating the backhoe.
- Never move a load above other personnel.

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Never leave the backhoe loader with the engine running. Stop the engine.

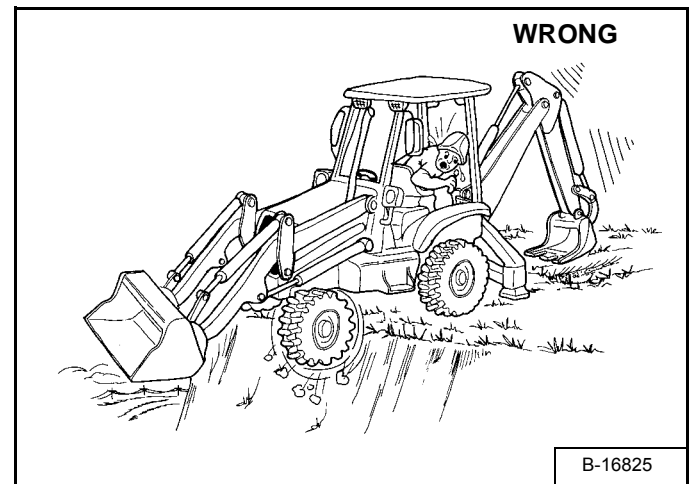
Lower the backhoe and lift arms to the ground and stop the engine before making any adjustments on the backhoe or loader.

Figure OI-81



The backhoe must remain level and stable during operation. Never dig under a stabilizer [Figure OI-81].

Figure OI-82



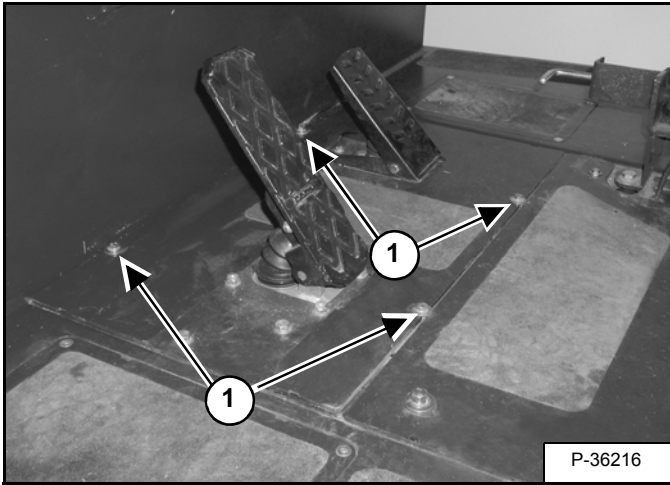
Never operate near an overhang [Figure OI-82].

TOWING THE BACKHOE LOADER

Procedure

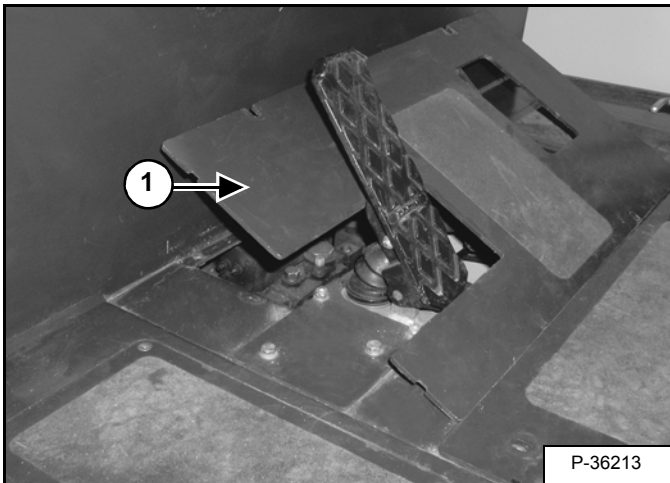
Place blocks in front and behind rear wheels.

Figure OI-107



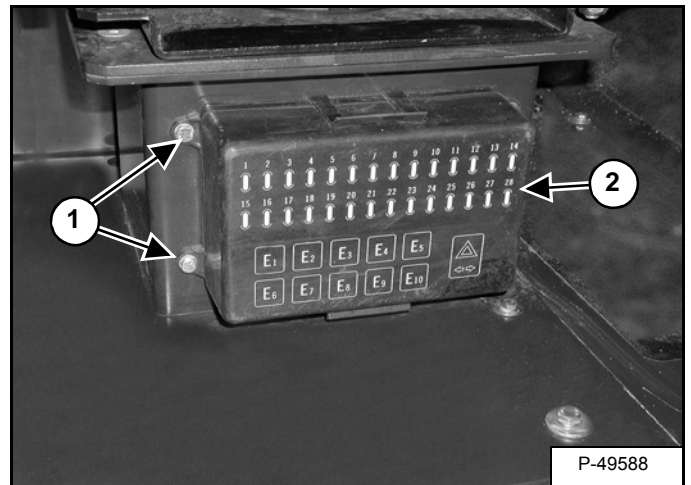
Remove the four mounting bolts (Item 1) [Figure OI-107].

Figure OI-108



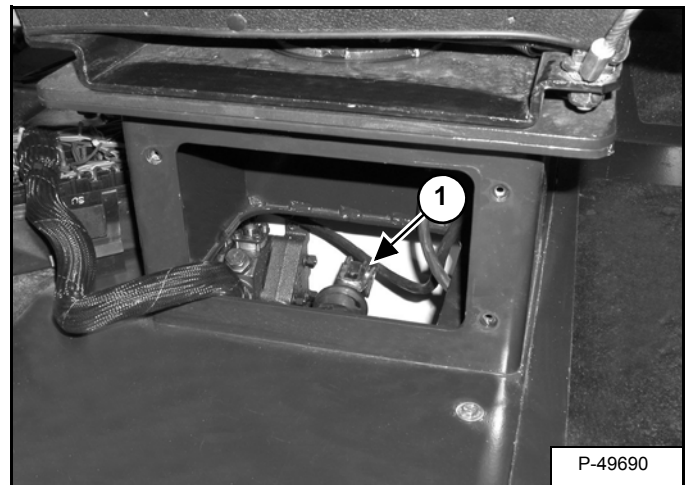
Remove the cover (Item 1) [Figure OI-108].

Figure OI-109



Remove the four bolts (Item 1) and remove the fuse box assembly (Item 2) [Figure OI-109].

Figure OI-110



Locate the brake cylinder linkage (Item 1) [Figure OI-110] inside the seat housing above the rear axle.

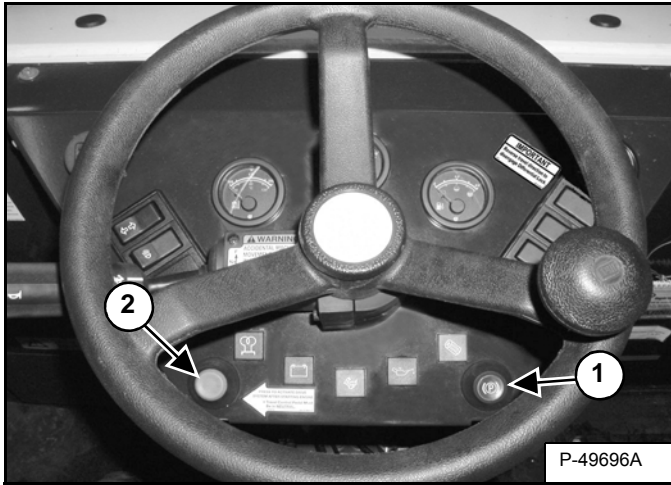
PARKING BRAKE (BUTTON ACTIVATED)

Description

The button activated brake system is a Spring Applied Pressure Release (SAPR) parking brake system that automatically engages whenever the engine stops, the key switch is OFF or the red parking brake button is pressed.

Parking Brake Operation

Figure PM-8



To manually apply the brake, press the red parking brake button (Item 1) [Figure PM-8]. The red light will illuminate and the green PRESS TO DRIVE light (Item 2) [Figure PM-8] will go off. When the parking brake is engaged using the red parking brake button, the drive system is disabled.

To disengage the parking brake, press the green PRESS TO DRIVE button (Item 2) [Figure PM-8]. The green PRESS TO DRIVE light (Item 2) [Figure PM-8] will illuminate and the red parking brake light (Item 1) [Figure PM-8] will go off.

NOTE: The Travel Direction Control Lever must be in NEUTRAL before pressing the PRESS TO DRIVE button or the system will not activate.

Inspection/Adjustment

Figure PM-9



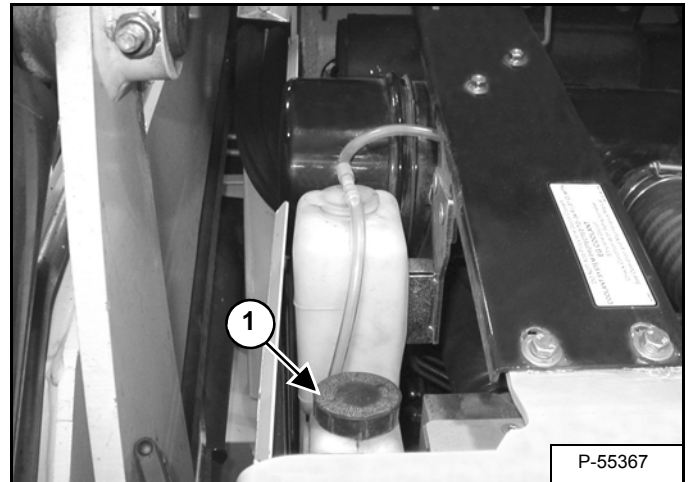
With the loader and backhoe buckets attached, back the backhoe loader up a 15° slope [Figure PM-9]. Raise the lift arms approximately 18" above ground. Turn the key switch to the OFF position while both the front and rear tires are on the slope. The parking brake should engage and the machine should not roll.

If any movement of the backhoe loader is noticeable, the parking brake requires adjustment. See your Ingersoll-Rand dealer for service.

BRAKE RESERVOIR

Checking Fluid Level

Figure PM-10



Open the engine cover.

Remove the brake reservoir cap (Item 1) [Figure PM-10] and check the fluid level.

Add Dextron 2 or 3 fluid as needed.

NOTE: Do Not use Dot 3 or other types of brake fluid. Damage to the brake system may occur.

ENGINE COOLING SYSTEM (CONT'D)

Coolant Replacement

See the *SERVICE SCHEDULE* Page PM-5 for the correct service interval.

WARNING

AVOID BURNS

Do not remove radiator cap when the engine is hot. You can be seriously burned.

W-2059-0598

Raise the lift arms and install an approved lift arm support device. (See Page PM-6.)

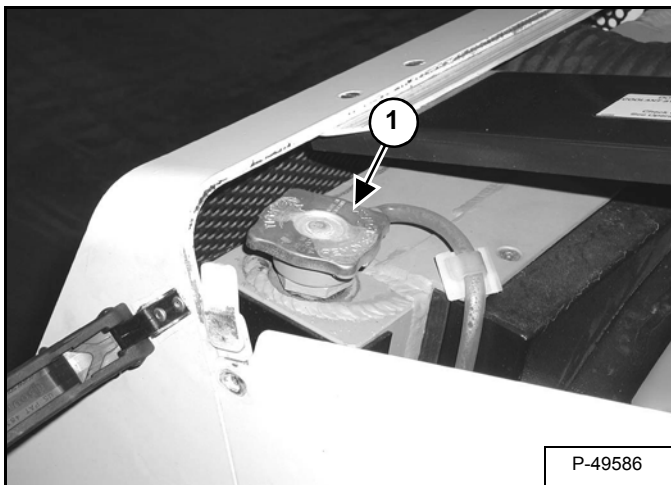
WARNING

Never work on a machine with the lift arms up unless the lift arms are secured by an approved lift arm support device. Failure to use an approved lift arm support device can allow the lift arms or attachment to fall and cause injury or death.

W-2059-0598

Stop the engine, open the engine cover.

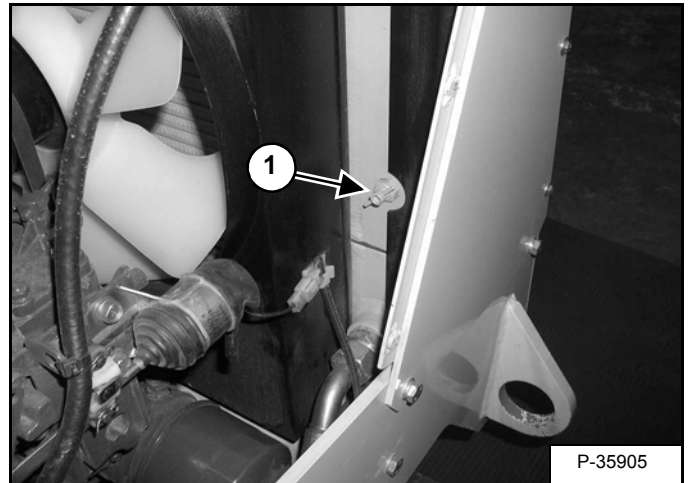
Figure PM-32



When the engine is cool, loosen and remove the radiator cap (Item 1) [Figure PM-32].

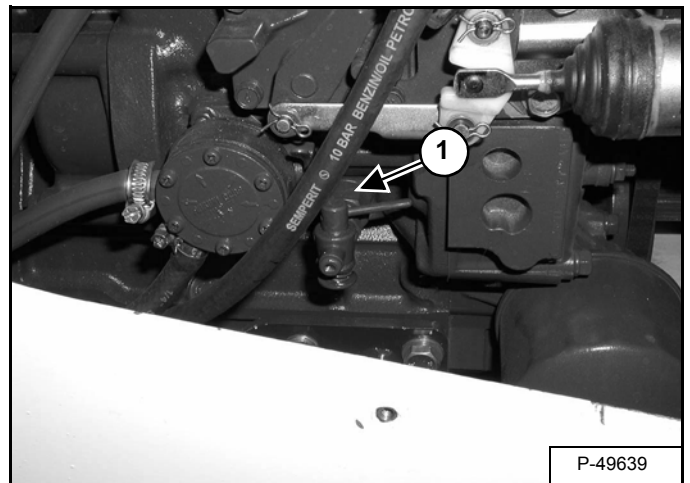
Remove the engine side covers.

Figure PM-33



Open the radiator drain valve (Item 1) [Figure PM-33] at the bottom of radiator. Drain the coolant into a container.

Figure PM-34



Open the engine block drain valve (Item 1) [Figure PM-34] and drain the coolant into a container.

After all the coolant is removed, close both drain valves.

Recycle or dispose of coolant in an environmentally safe manner.

Mix the coolant in a separate container. (See Page SPEC-5, for correct capacity.)

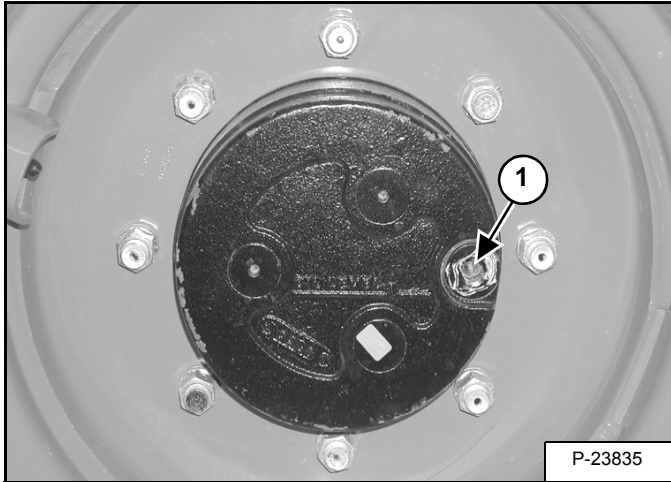
NOTE: The backhoe loader is factory filled with ethylene glycol. DO NOT mix propylene glycol with ethylene glycol.

Add premixed coolant; 50% water and 50% ethylene glycol to the recover tank if the coolant level is low.

AXLES (FRONT AND REAR)

Checking Oil Level (Planetary Carrier)

Figure PM-56



Put the machine on a level surface with the plug positioned as shown (Item 1) [Figure PM-56].

Remove the plug (Item 1) [Figure PM-56]. The oil level should be at the bottom edge of the plug hole.

Add gear lube through the hole if the oil level is below the hole. (See Page SPEC-5, for correct capacity.)

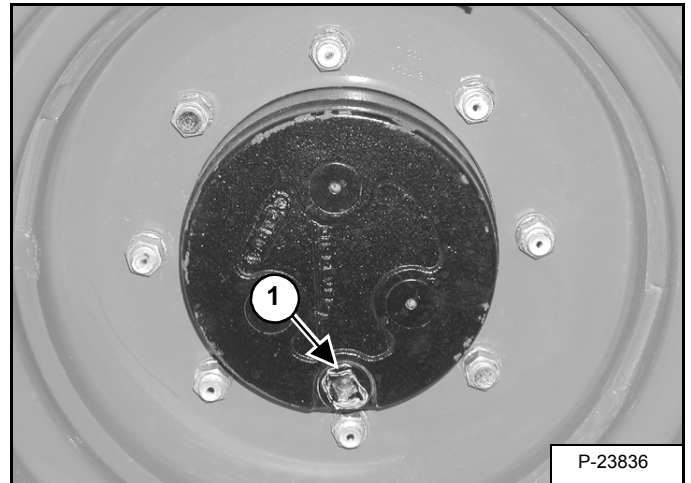
Install and tighten the plug.

Repeat procedure for the other side.

Draining Oil (Planetary Carrier)

See the *SERVICE SCHEDULE* Page PM-5 for the correct service interval.

Figure PM-57



Put the machine on a level surface with the plug positioned as shown (Item 1) [Figure PM-57].

Remove the plug (Item 1) [Figure PM-57] and drain into a container. Recycle or dispose of the used lubricant in an environmentally safe manner.

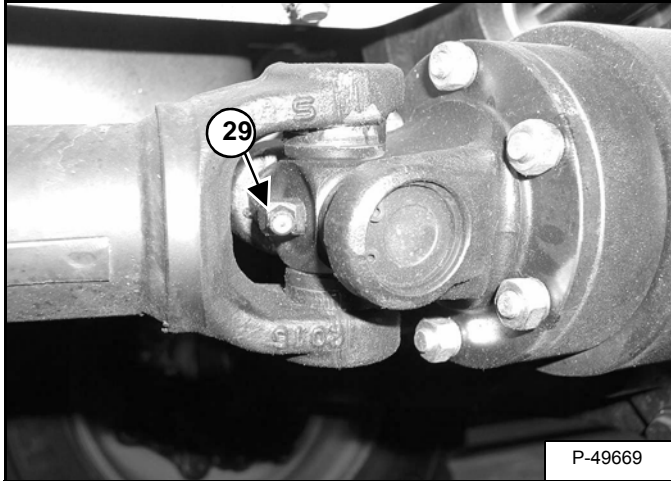
Reposition the plug hole and add gear lube until the lube level is at the bottom edge of the plug hole (Item 1) [Figure PM-56]. (See Page SPEC-5, for correct capacity.)

Install and tighten the plug.

Repeat the procedure for the other side.

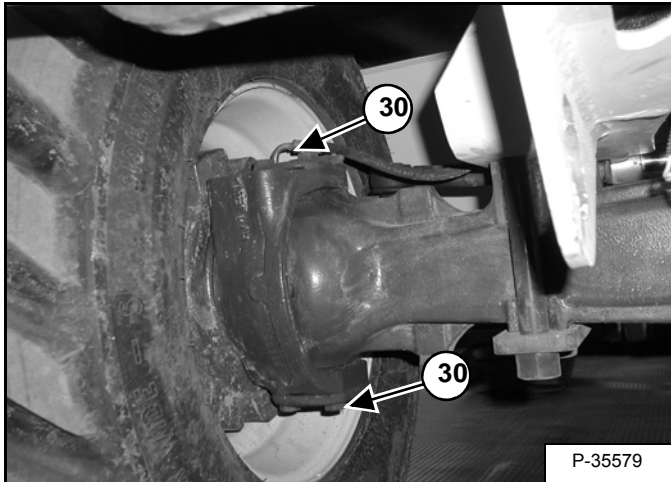
LUBRICATING THE BACKHOE LOADER (CONT'D)

Figure PM-90



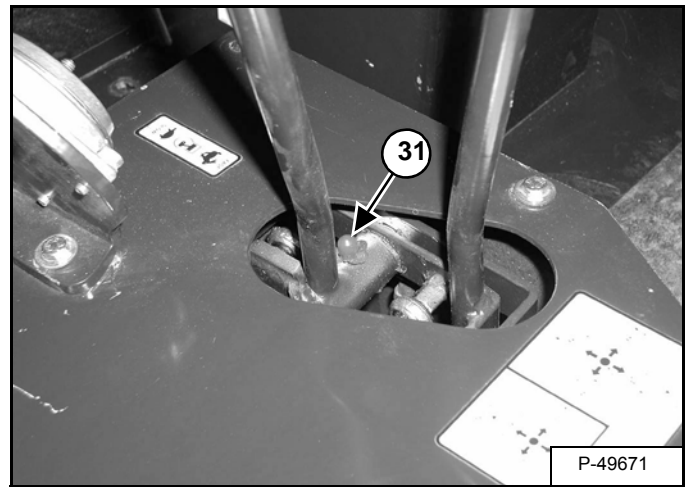
29. Rear Universal Joint [Figure PM-90].

Figure PM-91



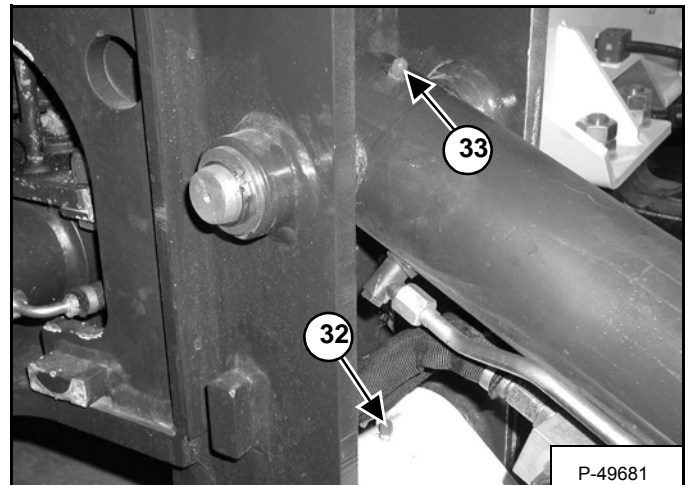
30. Rear Axle (Both sides) [Figure PM-91].

Figure PM-92



31. Control Levers [Figure PM-92].

Figure PM-93



32. Stabilizer Pivot Pin (both sides) [Figure PM-93].

33. Base End Stabilizer cylinder (both sides) [Figure PM-93].

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