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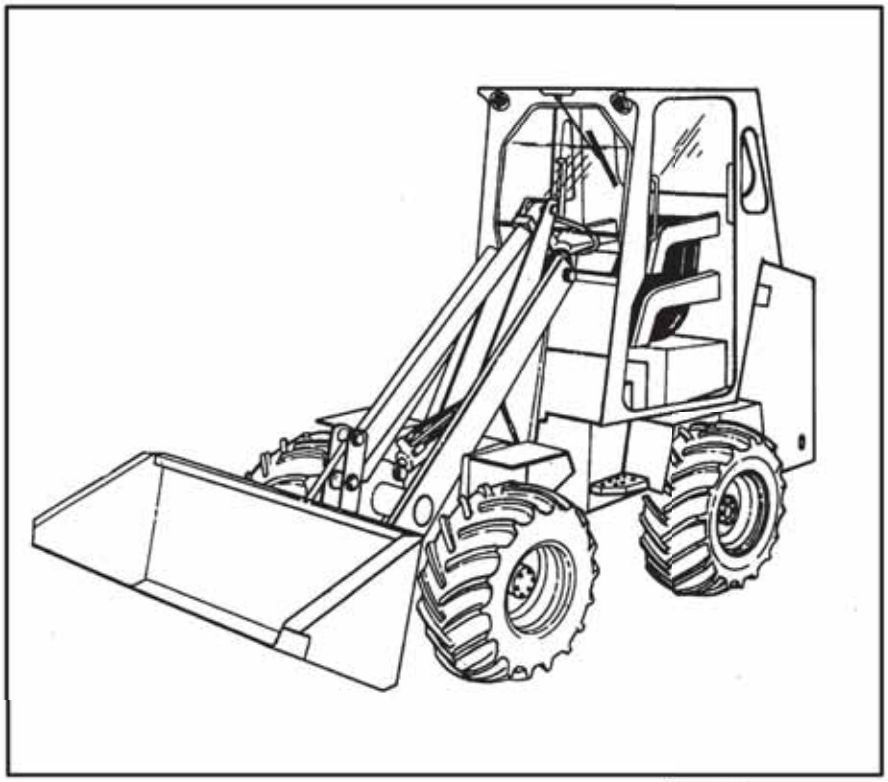
Operation & Maintenance Manual



MELROE
INGERSOLL-RAND

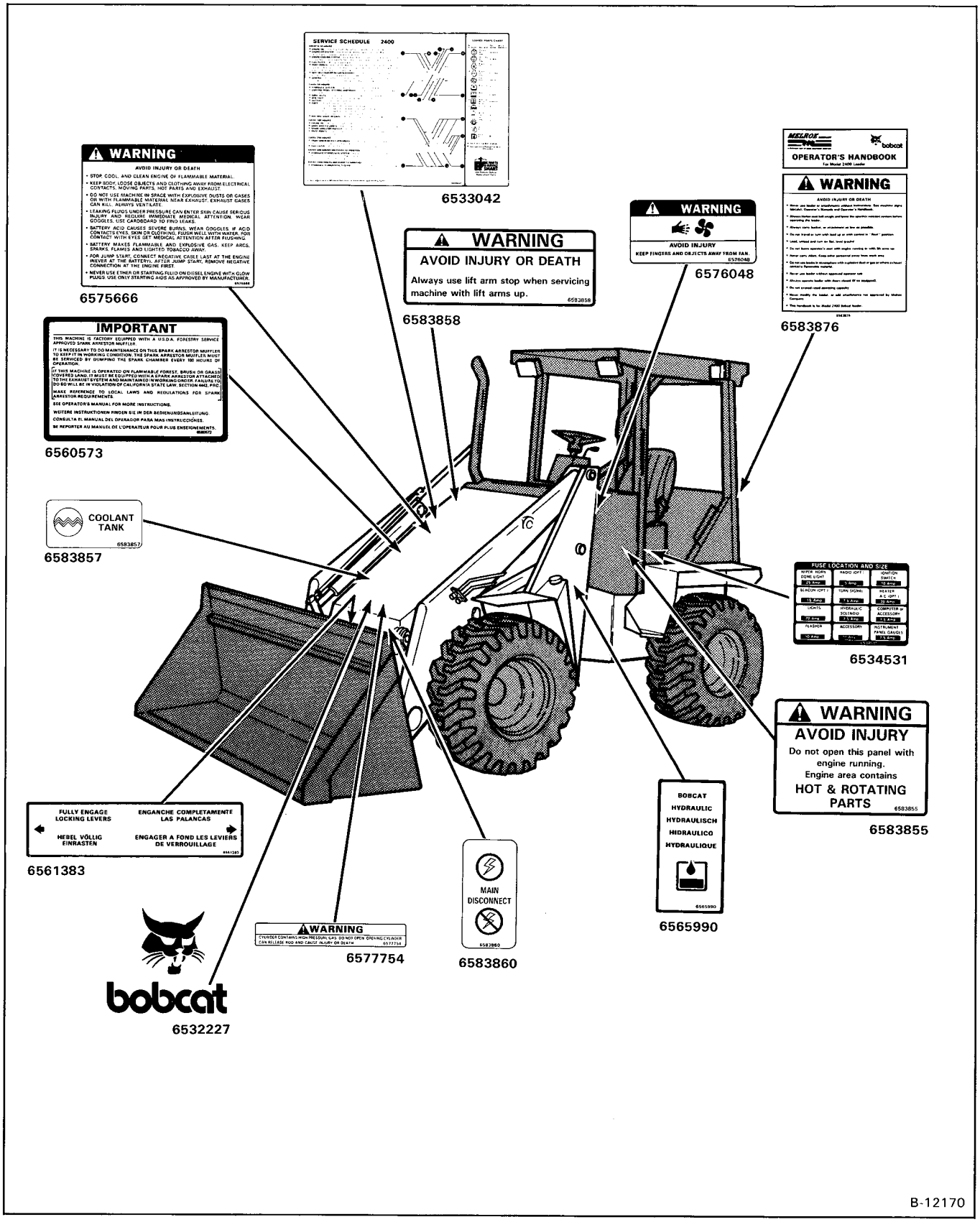
6570571 (9–88) Revised (8–89)

Printed in U.S.A.

bobcat

VI. SAFETY SIGNS (DECALS)

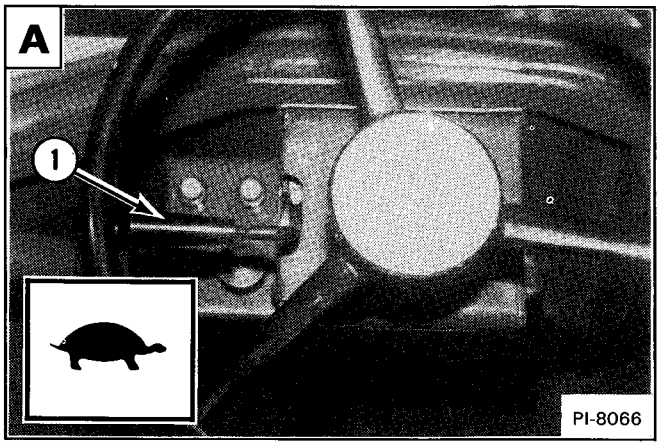
Follow the instructions on all the Safety Signs (Decals) that are on the loader. Replace any damaged safety signs and be sure they are in the correct locations. Safety signs are available from your Bobcat loader dealer.



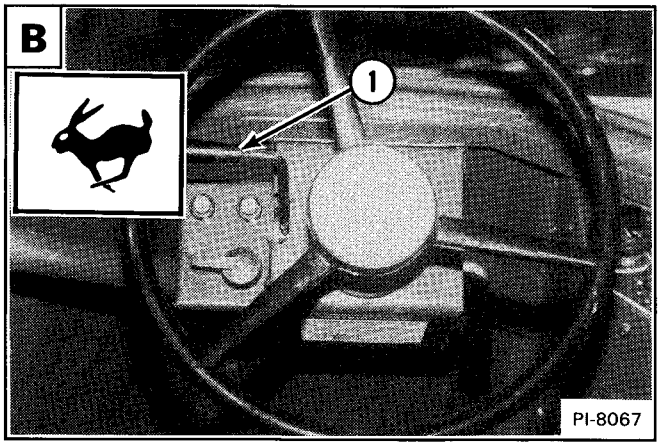
STEERING AND SPEED CONTROLS

Transmission Range Selector

The Bobcat loader drive system has two speeds (work and travel). The transmission range selector lever in the down position is to be used for work operation (Item 1) [A].



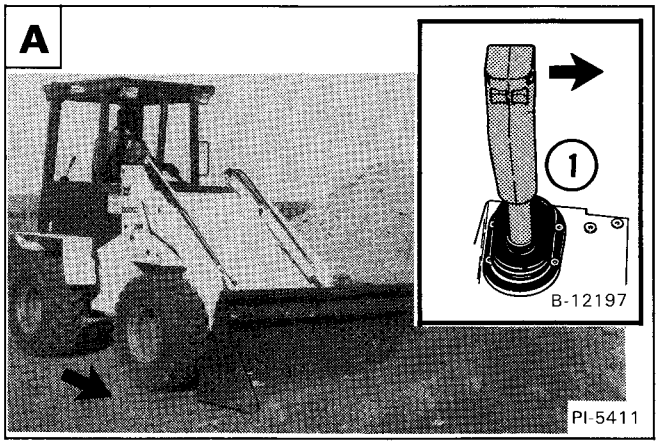
Pushing the transmission range selector lever forward (Item 1) will put the hydrostatic motor in the high range which is used for forward travel over smooth ground [B].



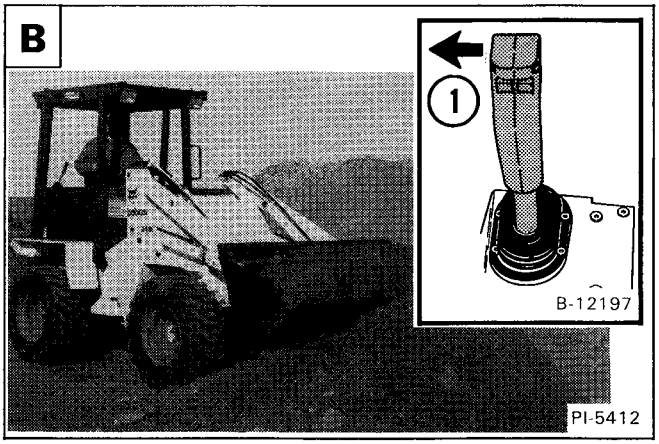
NOTE: The speed range can be selected from "LOW" to "HI" on the "GO". DO NOT shift from "HI" to "LOW" on the "GO" at a high rate of speed or the loader will decelerate rapidly.

Filling the Bucket

Lower the lift arms fully. Push the control lever to the right (Item 1) to put the cutting edge of the bucket on the ground [A].



Drive forward into the material and move the control lever to the left (Item 1) to raise the front of the bucket [B]. Back away from the material.



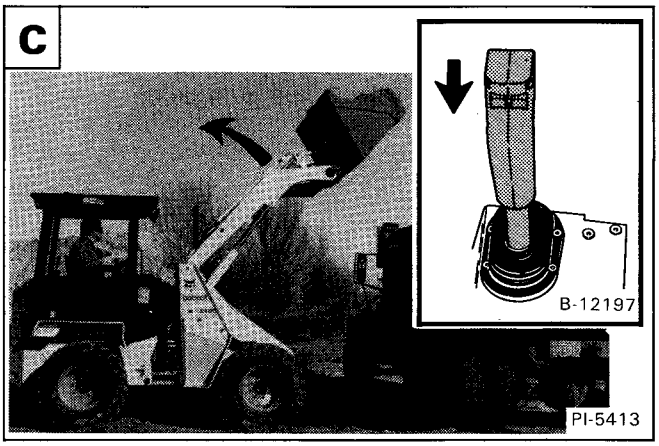
⚠ WARNING

Load, unload and turn on flat level ground. Do not exceed rated operating capacity shown on sign (decal) in cab. Failure to obey warnings can cause the machine to tip or roll over and cause injury or death.

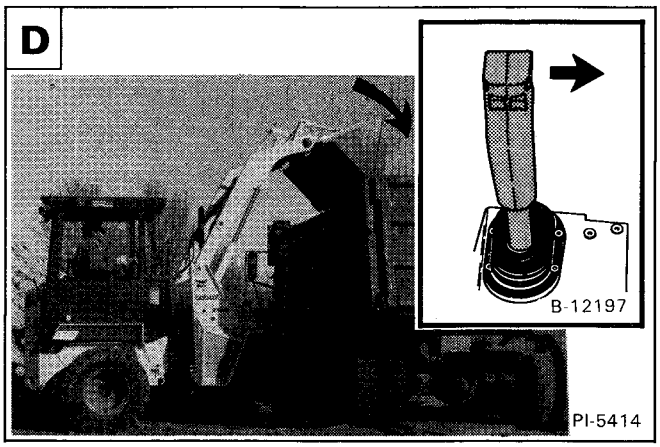
W-2056-1187

Emptying the Bucket

Pull the control lever backward to raise the bucket over the truck box or bin [C]. As the load is being raised the bucket will keep the same position as the lift arms are being raised.

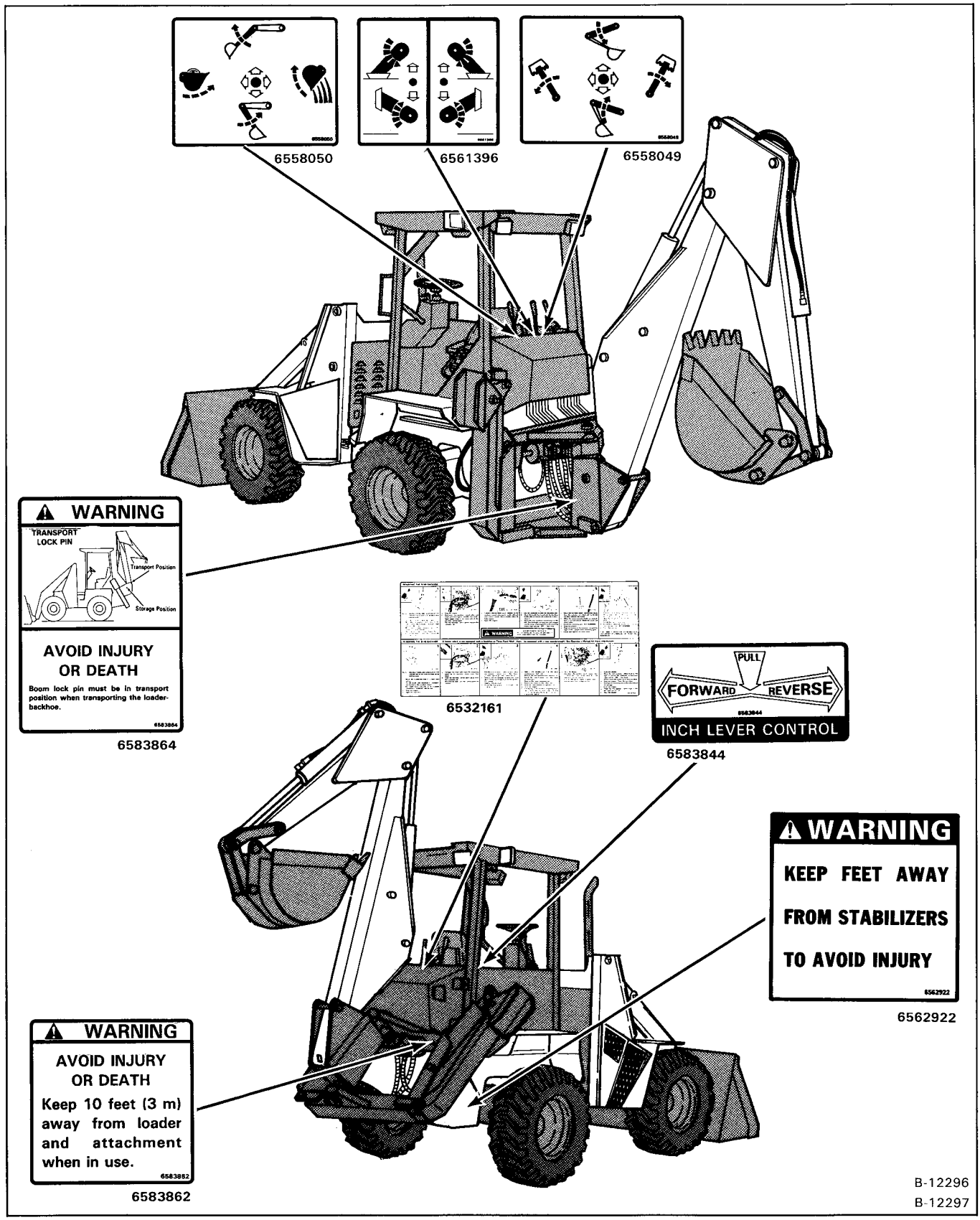


Drive forward slowly until the bucket is over the truck box or bin [C]. Push the control lever to the right until the bucket is empty [D]. If all the material is near the side of truck box or bin, push it to the other side with the bucket.



SAFETY SIGNS (DECALS)

Follow the instructions on all the Safety Signs (Decals) that are on the Backhoe. Replace any damaged safety signs and be sure they are in the correct locations. Safety signs are available from your Bobcat loader dealer.



OPERATING THE BACKHOE (Cont'd)

Operation of the Control Levers

Learn the function of the control levers before you start the engine to begin operation [A] [B]:

NOTE: ALL INSTRUCTIONS ARE GIVEN WITH THE OPERATOR IN THE BACKHOE OPERATING POSITION.

LEVER NO. 1 - Boom and Swing

Push the lever forward to lower the boom.

Pull the lever backward to raise the boom.

Move the lever to the left to swing the boom to the left.

Move the lever to the right to swing the boom to the right.

LEVER NO. 2 - Arm and Bucket

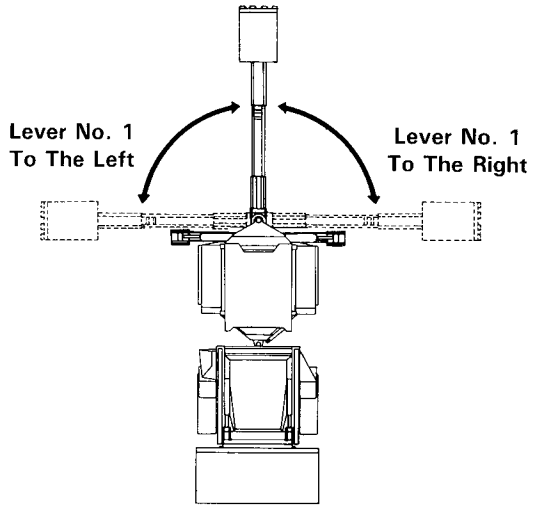
Push the lever forward to move the dipperstick out.

Pull the lever backward to move the dipperstick in.

Move the lever to the left to curl the bucket (fill the bucket).

Move the lever to the right to empty the bucket.

A



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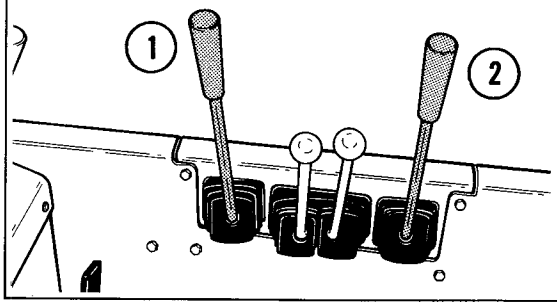

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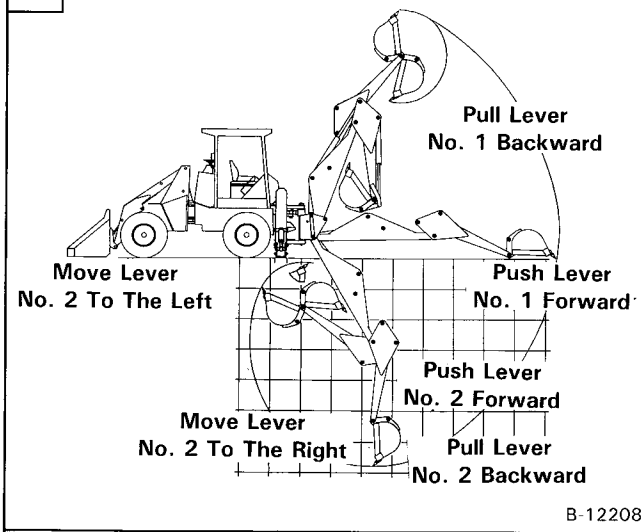
B



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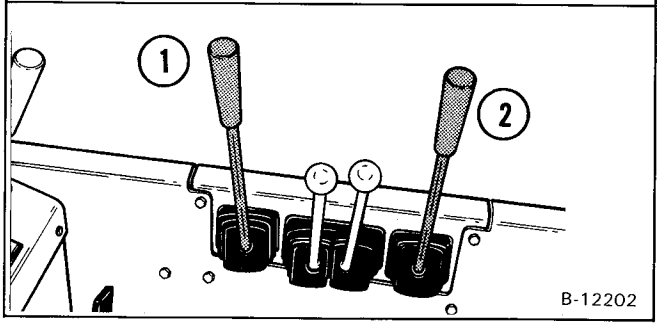
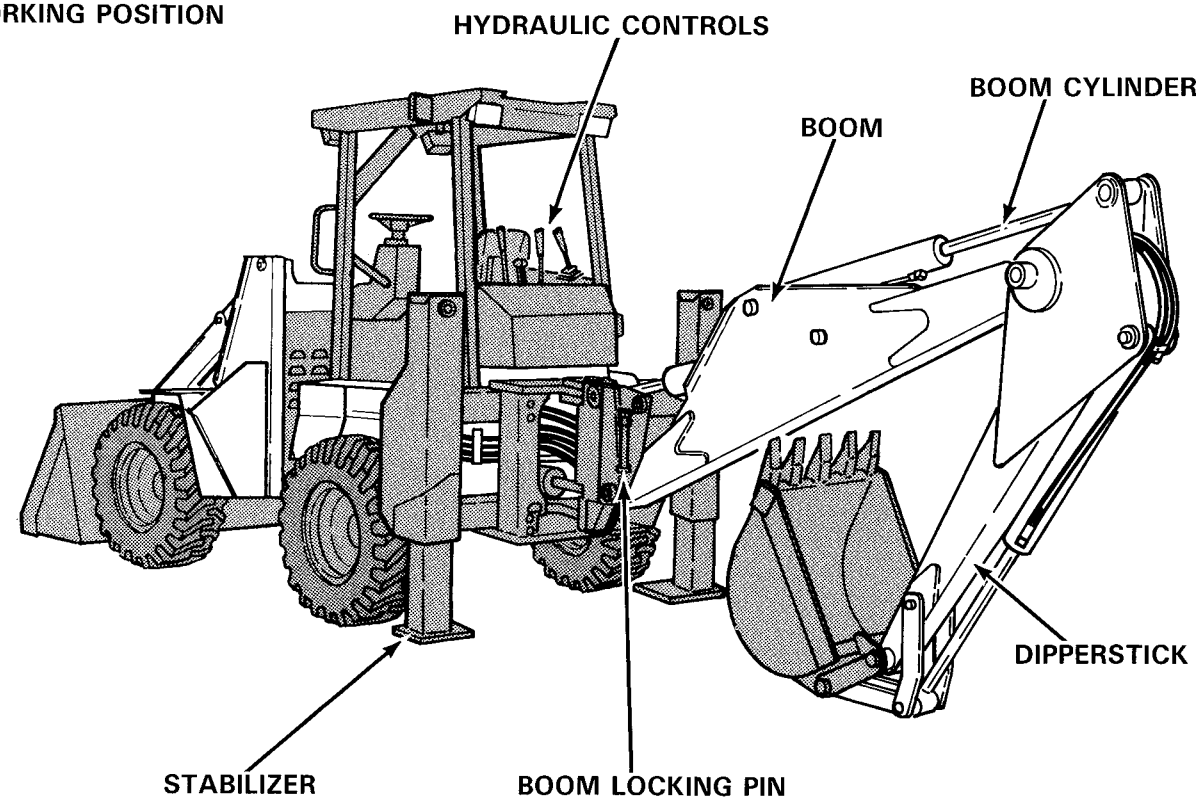


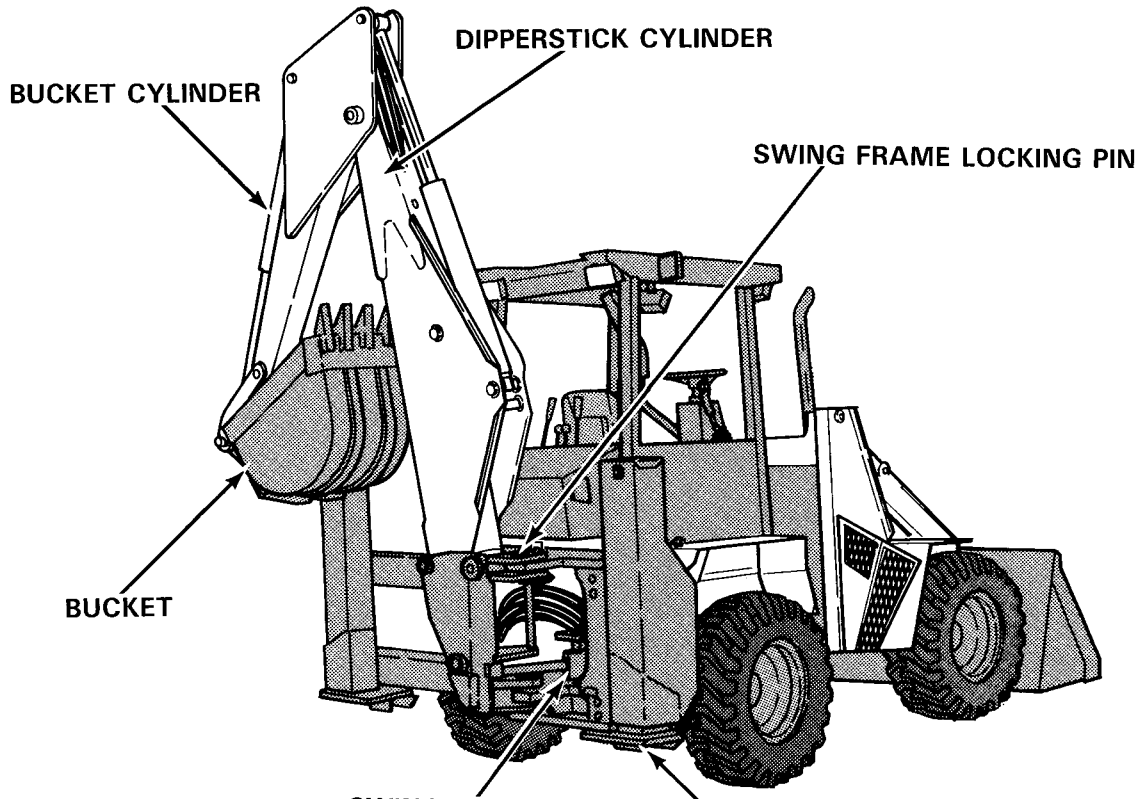
B-12202

937S BACKHOE IDENTIFICATION

WORKING POSITION



TRANSPORT POSITION



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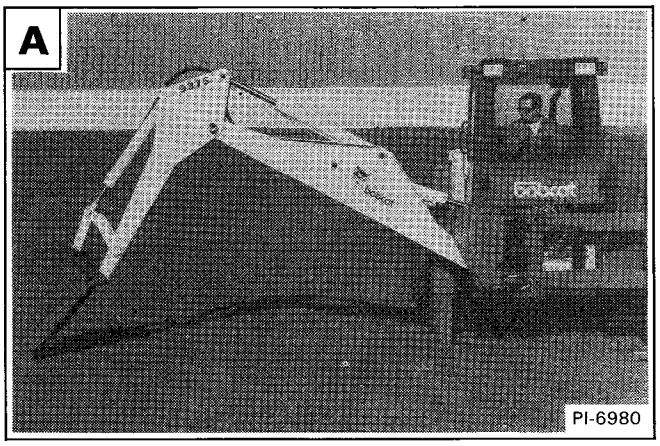
SIDE SHIFT OPERATION

Moving the Swing/Side Shift Frame

Use the following procedure to move the swing/side shift frame to either the right or left side of the backhoe frame:

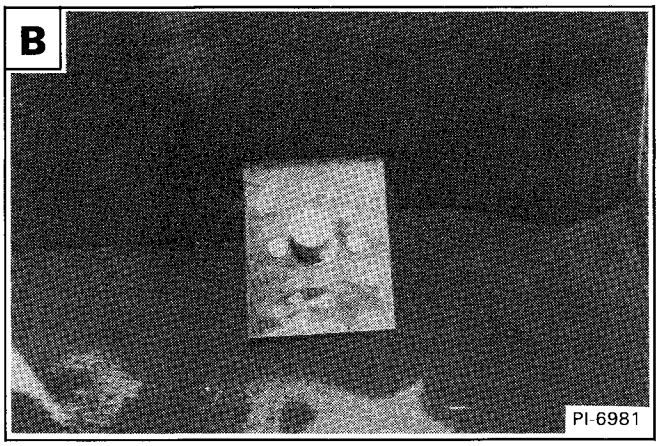
Lower the stabilizers.

Position the boom, dipperstick and bucket as shown in figure [A].



Push the foot switch down [B].

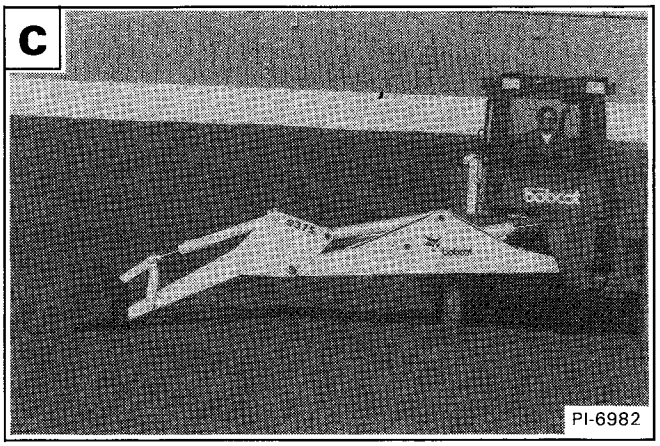
NOTE: When the foot switch is engaged and the backhoe hydraulic controls are activated it will release the locking pucks on the backhoe frame.



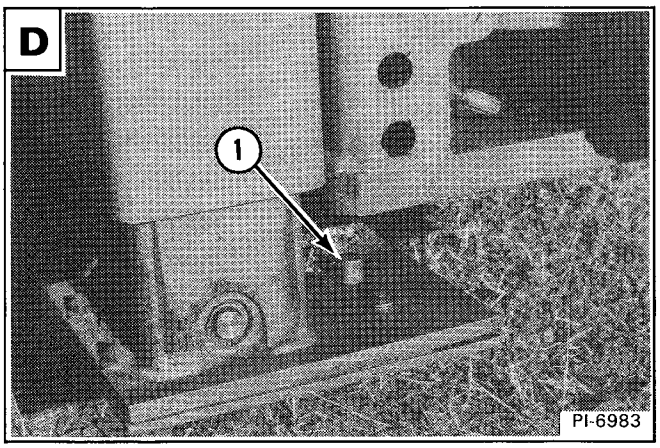
Move lever No. 1 (dipperstick) and lever No. 2 (boom) to push the swing/side shift frame to the other side of the backhoe frame [C].

Release the foot switch.

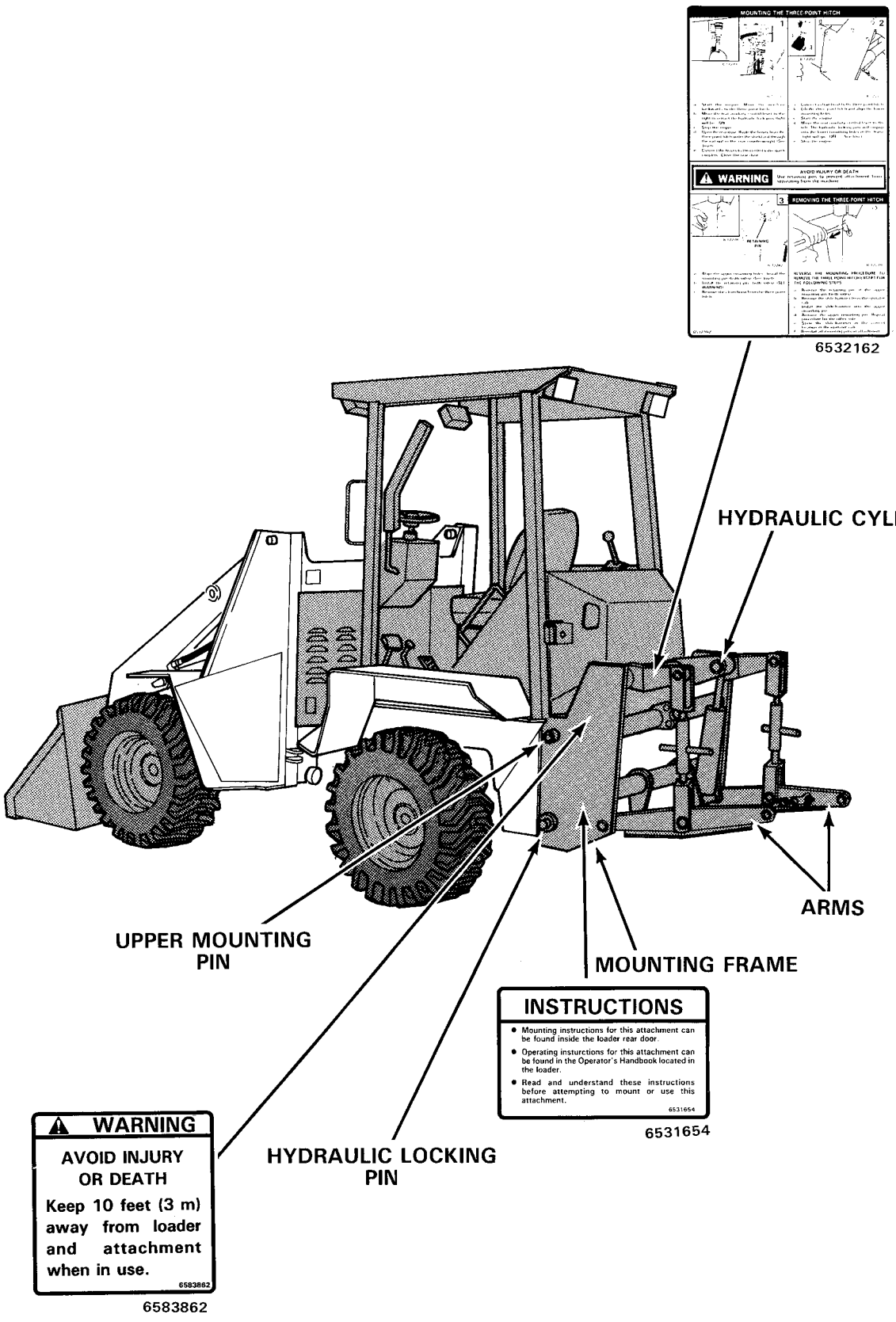
Repeat the above procedure to move the swing/side shift frame to the other side of the backhoe frame.



When the swing/side shift frame is all the way to one side, raise the stabilizer, this will engage the pin (Item 1) and hold the swing/side shift frame for transport position [D].



THREE-POINT HITCH IDENTIFICATION



SERVICE SCHEDULE

You must do maintenance work at regular intervals. Failure to do so will result in damage to the loader or the engine. The service schedule is a guide for correct maintenance of the Bobcat loader. Follow this service schedule as explained below unless it is to increase the frequency of intervals when the Bobcat is used in very hot, cold, dusty or corrosion conditions.

⚠ WARNING

Instructions are necessary before operating or servicing machine. Read Operator's Manual, Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Failure to follow instructions can cause injury or death.

W-2003-1285

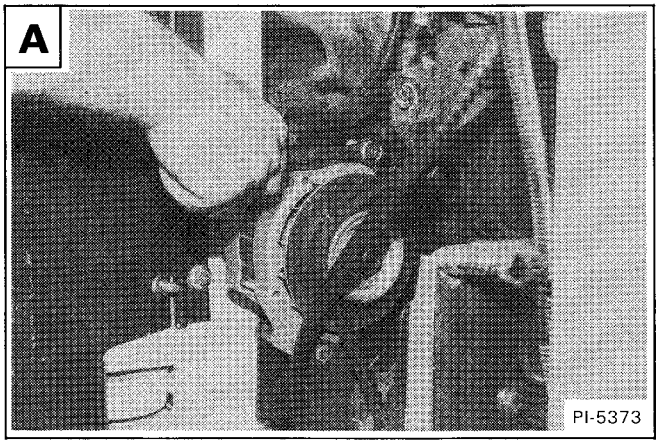
SERVICE SCHEDULE		HOURS					
ITEM	**SERVICE REQUIRED**	**8-10**	**50**	**100**	**250**	**500**	**1000**
Engine Oil	Check the oil level and add as needed.	■					
Engine Air Cleaner	Check restriction indicator. See Page 2A—4 for correct procedure to service filter elements.	■					
Engine Coolant System	Check coolant recovery tank level and add coolant as needed. Remove debris from the grill area.	■					
Seat Belt	Check the condition of seat belt and restraint bar.	■					
Loader Pivot Points	Add lubricant to all fittings (See Page 2A—19).	■					
Hydraulic Fluid Reservoir	Check the fluid level & add as needed.	■					
Fuel Filter	Remove any trapped water.	■					
Hyd. Tubelines and Hoses	Check for damage and leaks and replace as needed.	■					
Tires	Check tires for damage and correct pressure.		■				
Safety Signs (Decals)	Check for damaged decals and safety treads. Replace any decals or safety treads that are damaged or missing.		■				
Wheel Nuts	★ Tighten wheel nuts to 140 ft.-lbs. (190 Nm) torque.		■				
Battery and Cables	Check the battery condition. Clean cable ends and cover with grease.		■				
Hydraulic Control Lever	Check the lever for correct operation. Make repair and adjust as needed.		■				
Bob-Tach	Check the locking levers and wedges for condition and correct operation.		■				
Brakes and Controls	Check the brake for correct operation.		■				
Alternator Belt	Check condition and tension of belt.		■				
Belt Drive	* Check gap at rod nuts. (See Page 2A—21).		■				
Deluxe Cab Blower Filter	Remove and clean with reduced air pressure.		■				
Engine Oil and Filter	Replace oil and filter.			■			
Spark Arrestor Muffler	Empty spark chamber.			■			
U-Joints (Drive Shaft)	Lubricate with the correct grease (See Page 2A—19).			■			
Fuel Filter	Replace the filter element.				■		
Front and Rear Axle	Check oil level and add as needed.				■		
Hydraulic Filter	• Replace filter element.					■	
Hydraulic/Hydrostatic System	Replace the fluid and filter. Replace the vent filter.						■

★ Check wheel nut torque every 8 hours for the first 24 hours of operation.
• Replace the element sooner if the warning light comes "ON".
*** Check every 8 hours for the first 40 hours of operation.**

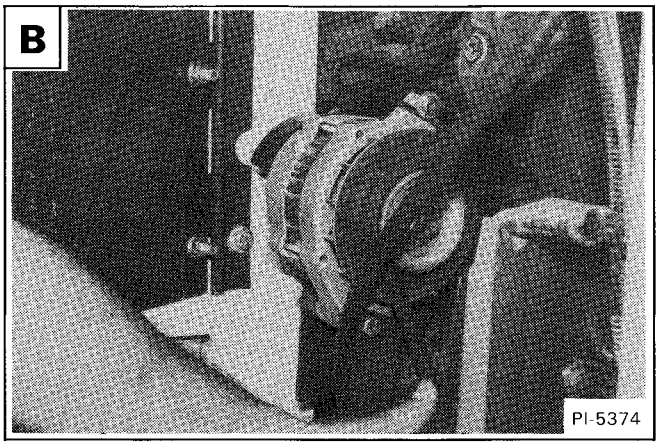
ALTERNATOR BELT

To adjust the belt tension, use the following procedure:

1. Stop the engine. Open the right rear engine door.
2. Loosen the alternator adjusting bolt [A].



3. Move the alternator to give the belt about 3/8'' (9,5 mm) deflection with about 20 lbs. (9,1 kg) force between the pulleys [B].
4. Tighten the adjusting bolt. Close the rear engine door.



ELECTRICAL SYSTEM

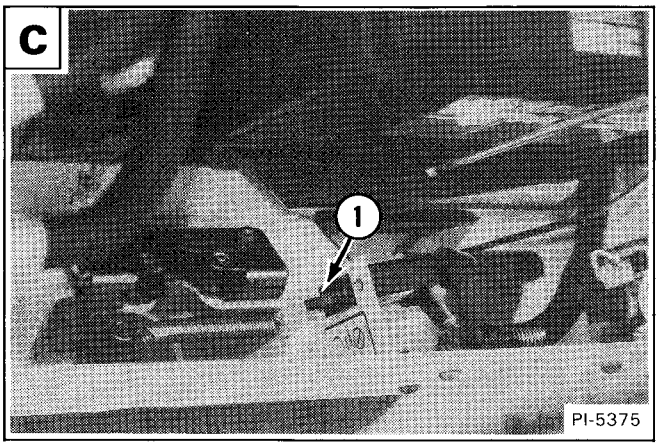
The loader has a 12 volt, negative ground alternator charging system. The electrical system is protected by fuses. The fuses will protect the electrical system when there is an electrical over-load. The reason for the over-load must be found before starting the engine again.

Electrical Breaker

The electrical breaker (Item 1) is located under the engine hood and in front of the battery [C].

The breaker protects the electrical system from an electrical over-load.

This breaker disconnects the battery from the electrical circuit when turned ''OFF''. The breaker must be in the ''ON'' position before the loader engine can be started.

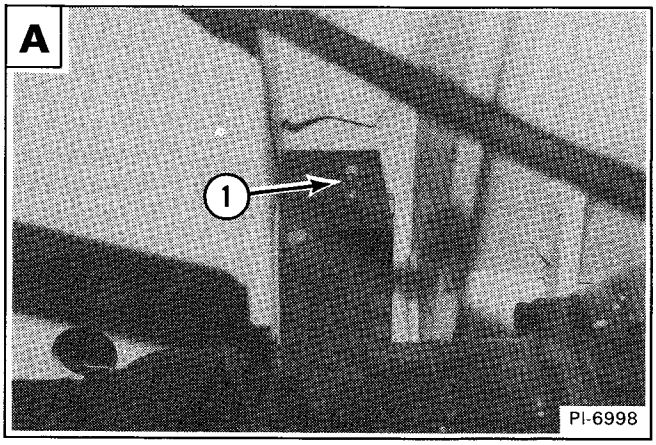


LUBRICATION OF THE LOADER (Cont'd)

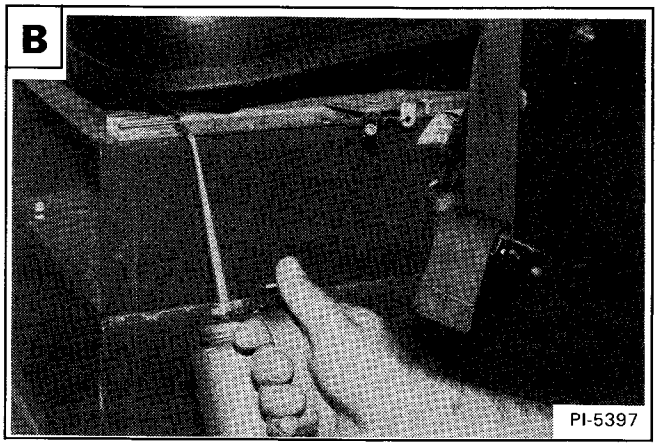
Oscillation pivot blocks [A]:

Rear oscillation pivot block (Item 1).

The front oscillation pivot block can be lubricated after the seat and floor panel is removed from the operator cab.

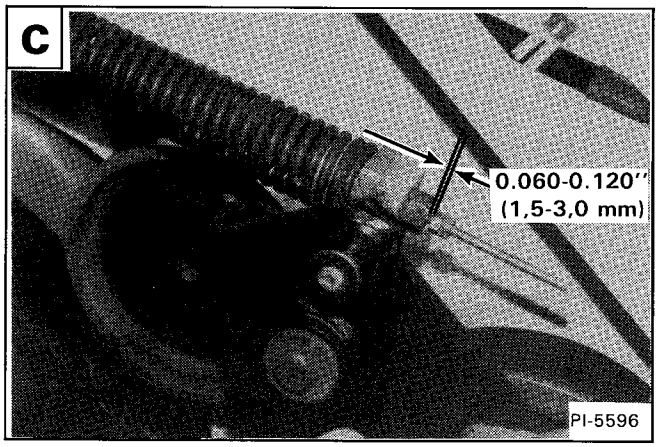


Lubricate the seat rails for easy movement when the seat is adjusted [B].

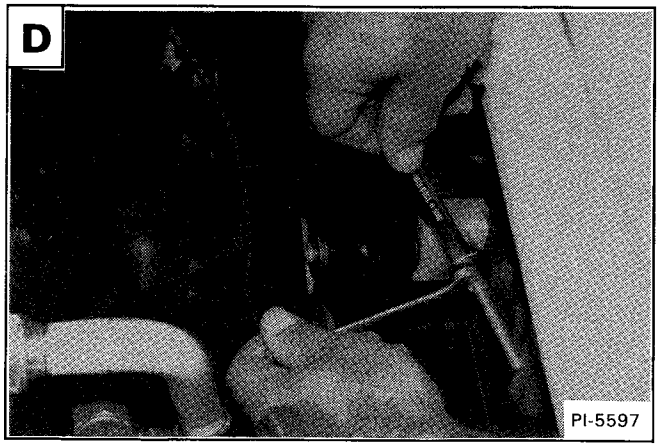


DRIVE BELT ADJUSTMENT

The correct gap between the spring bolt and locknut should be 0.060-0,120'' (1,5-3,0 mm) [C].



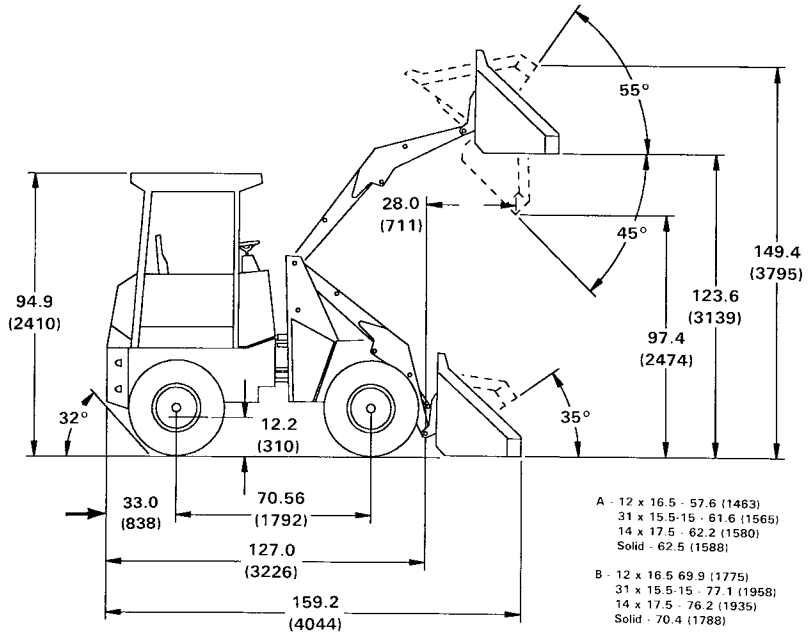
If the adjustment is not correct, turn the locknut until the gap is correct [D].

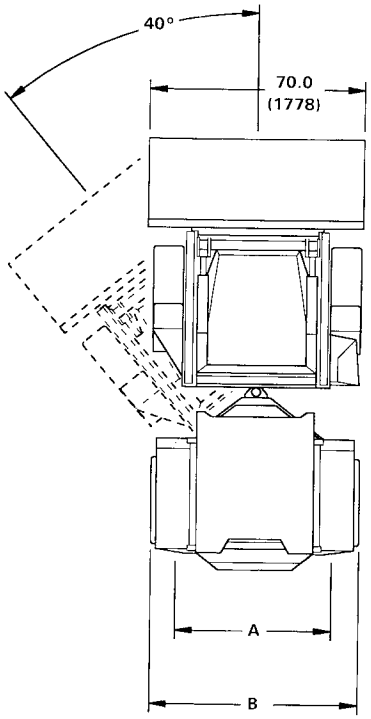


LOADER SPECIFICATIONS

- Dimensions are given for loader equipped with standard tires and dirt bucket. Dimensions and may vary with other bucket types. All dimensions are shown in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.
- Where applicable, specifications conform to SAE standards. Specifications are subject to change without notice.

LOADER DIMENSIONS





MC-1076
MC-1077

OPERATION & PERFORMANCE

	2400 MTC	
Weights		**With Opt. Ctws.**
Operating Weight	9270 lbs. (4209 kg)	10,085 lbs. (4579 kg)
Rated Operating Capacity	2400 lbs. (1090 kg)	3000 lbs. (1362 kg)
Tipping Load (SAE Rating)	4800 lbs. (2179 kg)	6000 lbs. (2724 kg)
Travel Speed (12 x 16.5 Tires)		
Work Range	0.0 to 5.5 MPH (8,8 km/hr.)	
Travel Range	0.0 to 14.5 MPH (23,3 km/hr.)	
Controls		
Steering	Steering Wheel	
Direction	Single Foot Pedal	
Transmission	Two Speed Range Selector Lever	
Control Valve	Joystick control lever lift & tilt. Front Auxiliary (Opt.) electrically controlled.	
Engine Speed	Hand lever throttle; key type starter switch & shut-down.	
Main Drive	Engine-Hydrostatic (Belt drive to pump)	
Brake (Parking)	Foot Operated Brake	
ENGINE		
Make	Perkins	
Model	4.236	
Horsepower	74 HP (55,2 kW)	
Maximum Governed RPM	2200 RPM	
Torque	194 ft.-lbs.(263 Nm) @ 1350 RPM	
Number of Cylinders	Four	
Bore/Stroke	3.875/5.00 (98,4/127)	
Displacement	235.9 cu. in. (3,86 L)	
Cooling System	Liquid	
Lubrication	Pressure System W/Filter	
Crankcase Ventilation	External	
Air Cleaner	Dry replaceable paper cartridge with safety element	
Ignition	Compression (Diesel)	
Low Idle	800 - 1000 RPM	
High Idle	2290 - 2330 RPM	

2400/911B MACHINE SPECIFICATIONS

911B
BACKHOE