

## SPARK ARRESTOR MUFFLER

See the *SERVICE SCHEDULE* Page 1–3 for correct service interval. Do not operate the loader with a defective exhaust system.



### WARNING

Stop engine and allow the muffler to cool before cleaning the spark chamber. Wear safety goggles. Failure to obey can cause serious injury.

W-2011-1285

When an engine is running in an enclosed area, fresh air must be added to avoid concentration of exhaust fumes. If the engine is stationary, vent the exhaust outside. Exhaust fumes contain odorless, invisible gases which can kill without warning.

W-2050-1285

### Cleaning The Spark Arrestor Muffler

Stop the engine. Open the rear door.

Remove the plug (Item 1) [A] & [B] from the bottom of the muffler.



### WARNING

When the engine is running during service, the steering levers must be in neutral and the parking brake engaged. Failure to do so can cause injury or death.

W-2006-0284



### WARNING

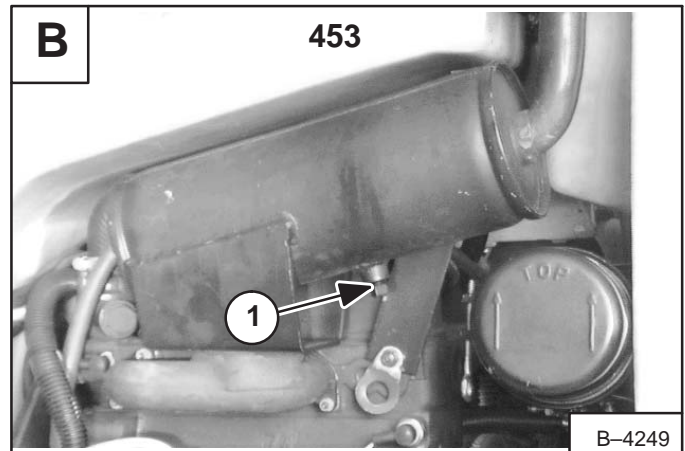
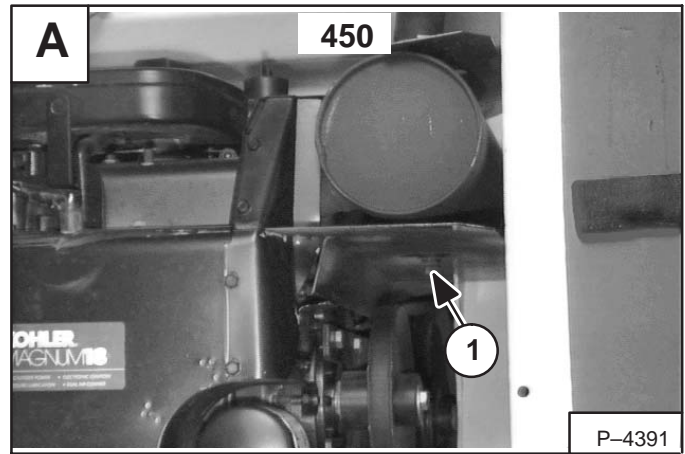
Never use machine in atmosphere with explosive dust or gases or where exhaust can contact flammable material. Failure to obey warnings can cause injury or death.

W-2068-1285

Start the engine.

Have a second person (wearing safety goggles) hold a block of wood over the outlet of the muffler (with the engine running) for about 10 seconds.

Stop the engine and install the plug. Close the rear door.



### IMPORTANT

This loader is factory equipped with a U.S.D.A. Forestry Service approved spark arrestor muffler. It is necessary to do maintenance on this spark arrestor muffler to keep it in working condition. The spark arrestor muffler must be serviced by dumping the spark chamber every 100 hours of operation.

If this machine is operated on flammable forest, brush or grass covered land, it must be equipped with a spark arrestor attached to the exhaust system and maintained in working order. Failure to do so will be in violation of California State Law, Section 4442 PRC.

Make reference to local laws and regulations for spark arrestor requirements.

I-2022-0595

## HYDRAULIC/HYDROSTATIC SYSTEM

The hydraulic and hydrostatic systems use the same hydraulic fluid reservoir.

The system has an engine driven gear pump that supplies fluid to the control valve, lift and tilt cylinders.

Fluid also goes from the control valve to the hydrostatic transmission pumps to provide charge pressure and cooling.

A 10 micron filter element is installed on the left side of the engine compartment. This filter is used to clean the fluid for the hydrostatic transmission.

### **WARNING**

Diesel fuel or hydraulic fluid under pressure can penetrate skin or eyes, causing serious injury or death. Fluid leaks under pressure may not be visible. Use a piece of cardboard or wood to find leaks. Do not use your bare hand. Wear safety goggles. If fluid enters skin or eyes, get immediate medical attention from a physician familiar with this injury.

W-2072-0496

### Checking And Adding Fluid

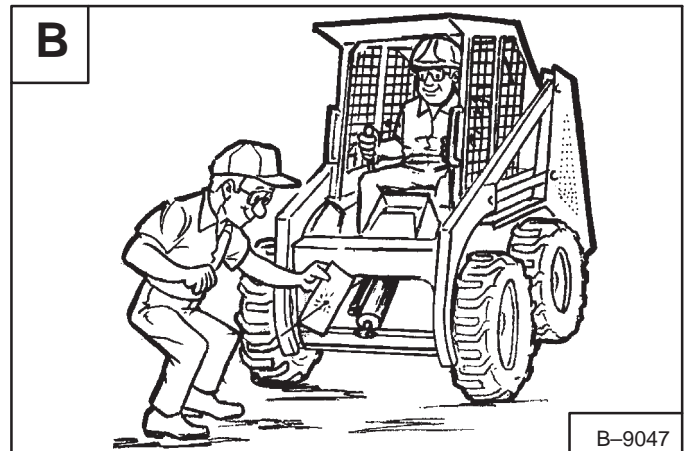
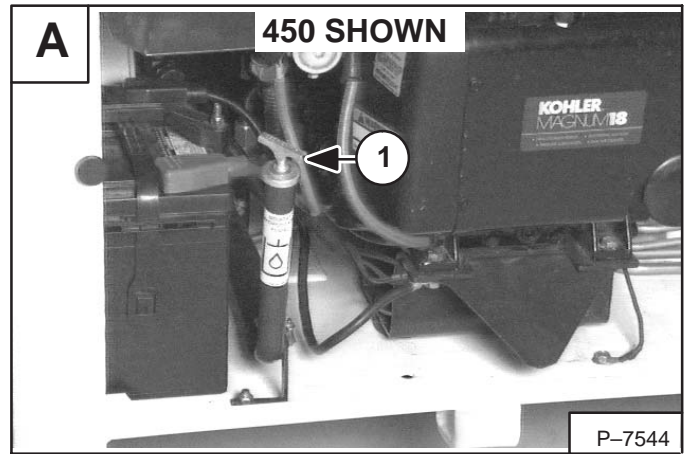
Put the Bobcat loader on a level surface. Lower the lift arms and tilt the bucket fully backward.

Open the rear door. Remove the dipstick (Item 1) [A].

The fluid level is correct if the fluid level is between the marks on the dipstick.

**NOTE:** The dipstick may indicate an incorrect level of fluid when first removed because of expansion or contraction of oil in the fill tube. Always (1) remove the dipstick, (2) wipe the dipstick, (3) insert the dipstick again and (4) re-check the fluid level.

If fluid is needed, remove the dipstick (Item 1) [A] and add fluid to the reservoir until the level is correct.



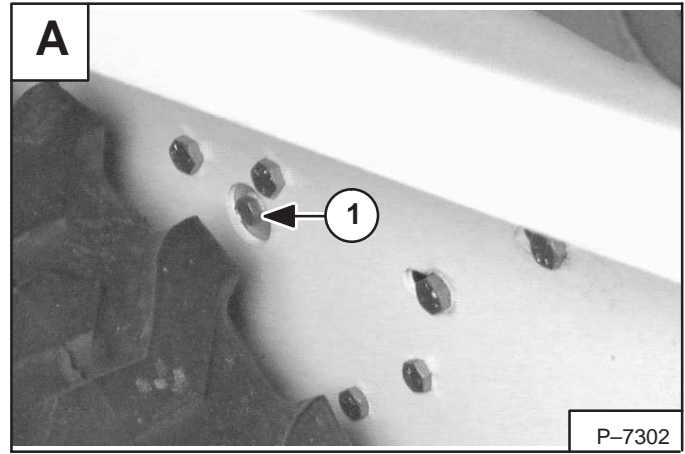
## HYDRAULIC/HYDROSTATIC SYSTEM (Cont'd)

### Replacing The Hydraulic/Hydrostatic Filter Element

See the *SERVICE SCHEDULE* Page 1–3 for the correct service interval.

Stop the engine. Open the rear door. Raise the operator cab. (See Page 1–9 for the correct procedure.) Clean the area around the filter housing. Remove the plug (Item 1) [A] from the filter housing (located on the outside of the loader at the right side).

After the fluid is drained from the filter, install the plug (Item 1) [A] and tighten.



Remove the filter element (Item 1) [B].

Clean the surface of the filter housing where the filter element seal contacts the filter housing.

Put grease on the seal of the filter element, install the element and hand tighten only.

Lower the operator cab.

Start the engine and operate the loader through the hydraulic and hydrostatic functions. Stop the engine. Check the fluid level and add fluid to the reservoir as needed.

### Removing The Hydraulic/Hydrostatic Fluid

See the *SERVICE SCHEDULE* Page 1–3 for the service interval to replace the fluid. The fluid must also be replaced if it becomes contaminated and after any major repairs.

Stop the engine. Open the rear door.

Remove the fill cap/dipstick.

Loosen the nut (Item 1) [C] which fastens the fill tube to the loader frame.

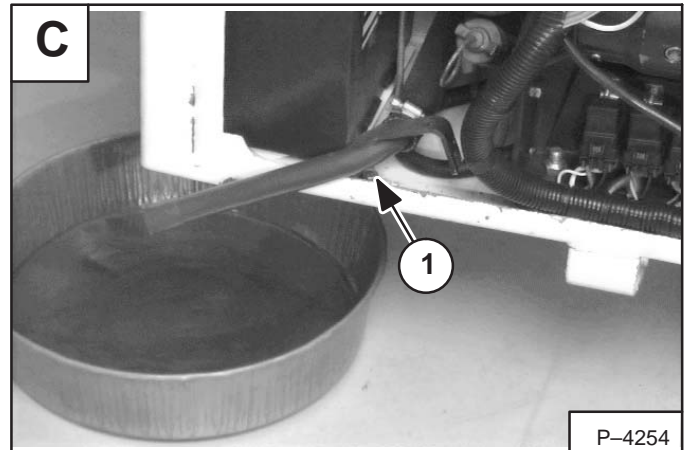
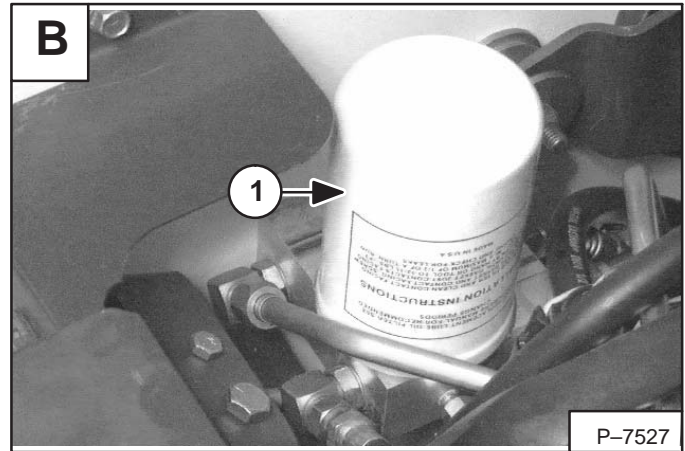
Loosen the clamp at the fill tube, turn the fill tube down to drain the fluid from the reservoir [C].

After the fluid is removed, put the fill tube in the correct position, tighten the hose clamp and tighten the bolt.

Replace the hydraulic filter element.

Add hydraulic/hydrostatic fluid to the reservoir. (See *SPECIFICATIONS*, Page 9–1 for the correct fluid.)

Do Not over-fill the reservoir.



## FINAL DRIVE TRANSMISSION (CHAINCASE)

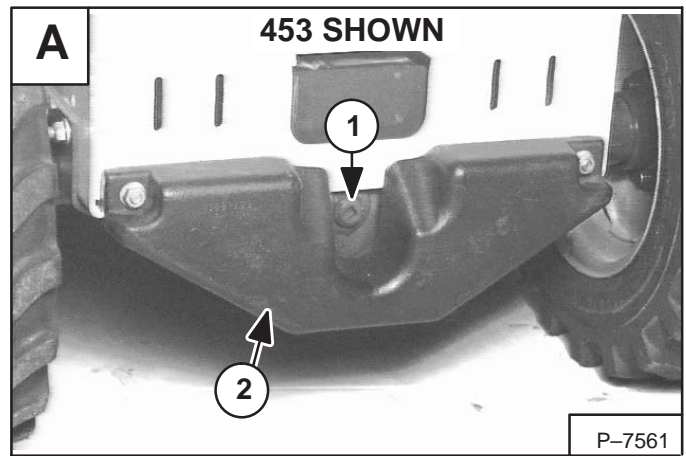
The chaincase contains the final drive sprockets and the chains and is filled with the same type of fluid as is used in the hydraulic system. (See *SPECIFICATIONS*, Page 9-1.)

### Checking And Adding Oil

Put the loader on a level surface. Remove the plug (Item 1) [A] from the front of the chaincase. If the fluid can be reached with the tip of your finger through the hole, the level is correct.

Add fluid through the check plug hole until the fluid flows from the hole. Install and tighten the plug.

**NOTE: Counterweight (Item 2) [A] is used on 453 loaders only.**

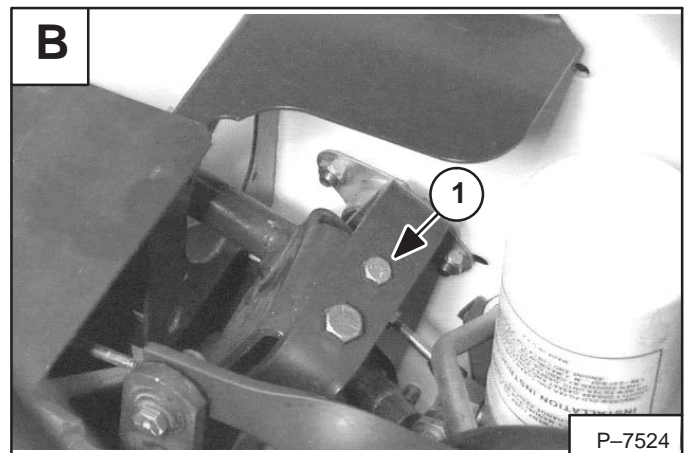


## AUXILIARY CONTROL LOCKBOLT

The Auxiliary control has a lockbolt (Item 1) [B] that must be removed to use the optional auxiliary hydraulics.

Raise the operator cab. (See Page 1-9.)

Remove the nut and bolt (Item 1) [B] from the right hand steering lever.



## TIRE MAINTENANCE

### Wheel Nuts

See the *SERVICE SCHEDULE* Page 1-3 for the service interval to check the wheel nuts. The correct torque is 40-45 ft.-lbs. (54-61 Nm) .

### Tire Rotation

Check the tires regularly for wear, damage and pressure. (See *SPECIFICATIONS*, Page 9-1 for the correct tire pressure.)

Rear tires usually wear faster than front tires. To keep tire wear even, move the front tires to the rear and rear tires to the front [C].

It is important to keep the same size tires on each side of the loader. If different sizes are used, each tire will be turning at a different rate and cause excessive wear. The tread bars of all the tires must face the same direction.

Recommended tire pressure must be maintained to avoid excessive tire wear and loss of stability and handling capability. Check for the correct pressure before operating the loader.

### Tire Inflation

Tires are to be repaired only by an authorized person using the proper procedures and safety equipment. Tires and rims must always be checked for correct size before mounting. Check rim and tire bead for damage.

The rim flange must be cleaned and free of rust. The tire bead and rim flange must be lubricated with a rubber lubricant before mounting the tire, avoid excess pressure which can rupture the tire and cause serious injury or death. During inflation of the tire, check the tire pressure frequently to avoid over-inflation.

