

Product: Bobcat 7753 Skid Steer Loader Service Repair Workshop Manual
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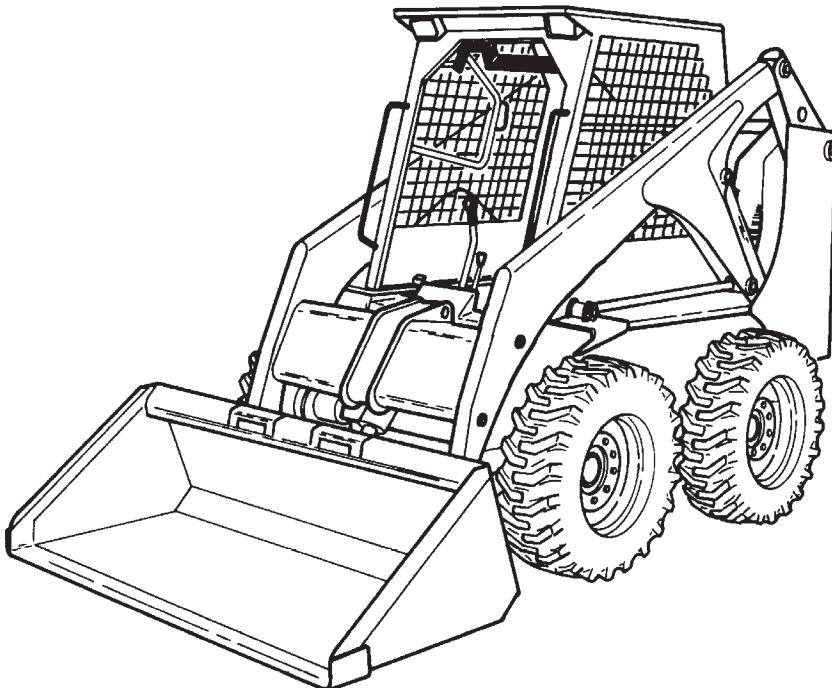
7

7

5

3

Service Manual



Sample of manual. Download All 332 pages at:

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INGERSOLL-RAND

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bobcat[®]
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7753 Bobcat Loader
Service Manual

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MAINTENANCE SAFETY



WARNING

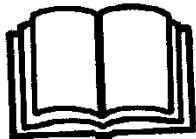
Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after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

W-2003-0903



Safety Alert Symbol: This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.

CORRECT



B-10731a

CORRECT



B-13573

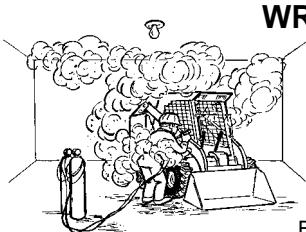
CORRECT



B-13561

⚠ Never service the Bobcat Skid-Steer Loader without instructions.

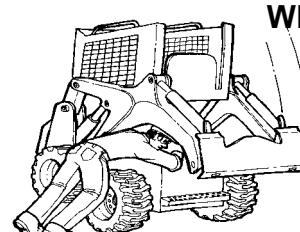
WRONG



B-13574

⚠ Have good ventilation when welding or grinding painted parts.
⚠ Wear dust mask when grinding painted parts. Toxic dust and gas can be produced.
⚠ Avoid exhaust fume leaks which can kill without warning. Exhaust system must be tightly sealed.

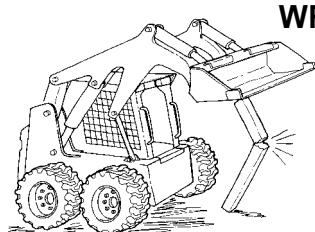
WRONG



B-15232

⚠ Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop. Do not go under lift arms when raised unless supported by an approved lift arm support device. Replace it if damaged.

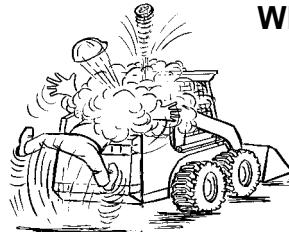
WRONG



B-15281

⚠ Never work on loader with lift arms up unless lift arms are held by an approved lift arm support device. Replace if damaged.
⚠ Never modify equipment or add attachments not approved by Bobcat Company.

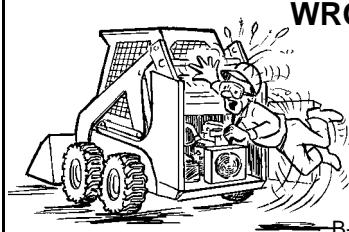
WRONG



B-13576

⚠ Stop, cool and clean engine of flammable materials before checking fluids.
⚠ Never service or adjust loader with the engine running unless instructed to do so in the manual.
⚠ Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate the skin or eyes.
⚠ Never fill fuel tank with engine running, while smoking or when near open flame.

WRONG



B-13577

⚠ Keep body, jewelry and clothing away from moving parts, electrical contact, hot parts and exhaust.
⚠ Wear eye protection to guard from battery acid, compressed springs, fluids under pressure and flying debris when engines are running or tools are used. Use eye protection approved for type of welding.
⚠ Keep rear door closed except for service. Close and latch door before operating the loader.

WRONG



B-6589

⚠ Lead-acid batteries produce flammable and explosive gases.
⚠ Keep arcs, sparks, flames and lighted tobacco away from batteries.
⚠ Batteries contain acid which burns eyes or skin on contact. Wear protective clothing. If acid contacts body, flush well with water. For eye contact flush well and get immediate medical attention.

Maintenance procedures which are given in the Operation & Maintenance Manual can be performed by the owner/operator without any specific technical training. Maintenance procedures which are **not** in the Operation & Maintenance Manual must be performed **ONLY BY QUALIFIED BOBCAT SERVICE PERSONNEL**. Always use genuine Bobcat replacement parts. The Service Safety Training Course is available from your Bobcat dealer.

MSW03-0805



Bobcat®

CONTENTS

SAFETY INSTRUCTIONS	i
SERIAL NUMBER LOCATIONS	ii
DELIVERY REPORT	iii
BOBCAT LOADER IDENTIFICATION	iii
PREVENTIVE MAINTENANCE	1-1
HYDRAULIC SYSTEM	2-1
HYDROSTATIC SYSTEM	3-1
DRIVE SYSTEM	4-1
MAIN FRAME	5-1
ELECTRICAL SYSTEM	6-1
ENGINE SERVICE	7-1
SPECIFICATIONS	8-1

PREVENTIVE
MAINTENANCE

HYDRAULIC
SYSTEM

HYDROSTATIC
SYSTEM

DRIVE
SYSTEM

MAIN
FRAME

ELECTRICAL
SYSTEM

ENGINE
SERVICE

SPECIFICATIONS

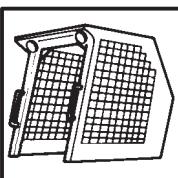


FOREWORD

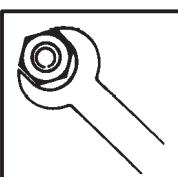
This manual is for the Bobcat loader mechanic. It provides necessary servicing and adjustment procedures for the Bobcat loader and its component parts and systems. Refer to the Operation & Maintenance Manual for operating instructions, starting procedure, daily checks, etc.

A general inspection of the following items must be made after the loader has had service or repair:

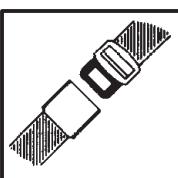
1. Check that the ROPS/FOPS (Including sidescreens) is in good condition and is not modified.



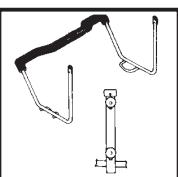
2. Check that ROPS mounting hardware is tightened and is Melroe approved.



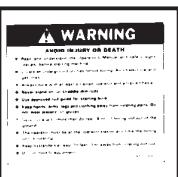
3. The seat belt must be correctly installed, functional and in good condition.



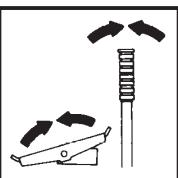
4. The seat bar and pedal interlocks must be correctly adjusted, clean and lubricated.



5. Machine signs must be legible and in the correct location.



6. Steering levers and foot pedals must return to neutral.



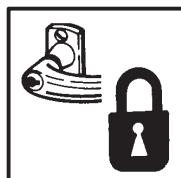
7. Check for correct function of the work lights and travel lights.



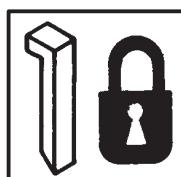
8. The parking brake must function correctly.



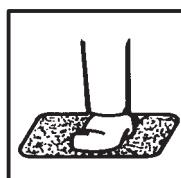
9. Enclosure door latches must open and close freely.



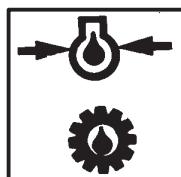
10. Bob-Tach wedges and linkages must function correctly and be in good condition.



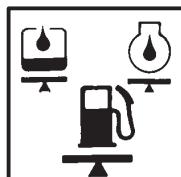
11. Safety treads must be in good condition.



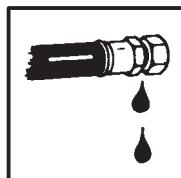
12. Check for correct function of indicator lamps (Optional on some models).



13. Check hydraulic fluid level, engine oil level and fuel supply.



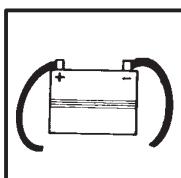
14. Inspect for fuel, oil or hydraulic fluid leaks.



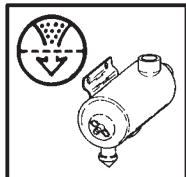
15. Lubricate the loader.



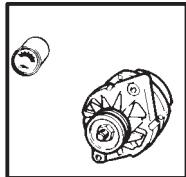
16. Check the condition of the battery and cables.



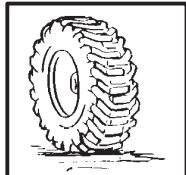
17. Inspect the air cleaner for damage or leaks. Check the condition of the element.



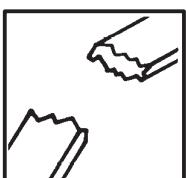
18. Check the electrical charging system.



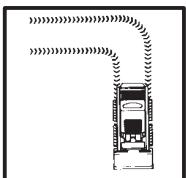
19. Check tires for wear and pressure.



20. Inspect for loose or broken parts or connections.



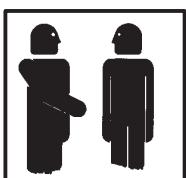
21. Operate the loader and check all functions.



22. Check for any field modification not completed.



Recommend to the owner that all necessary corrections be made before the machine is returned to service.



SAFETY INSTRUCTIONS

⚠ WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance 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. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0199

The following publications provide information on the safe use of the loader and attachments:

- The Delivery Report is used to assure that complete instructions have been given to the new owner and that the machine is in safe operating condition.
- The Operation & Maintenance Manual delivered with the loader gives operating information as well as routine maintenance and service procedures. It is a part of the loader and must stay with the machine when it is sold.
- The loader has machine signs (decals) which instruct on the safe operation and care. The signs and their locations are shown in the Operation & Maintenance Manual. Replacement signs are available from your Bobcat loader dealers.
- The EM Manual delivered with the loader gives general safety information.
- The Service Manual and Parts Manual are available from Bobcat loader dealers for use by mechanics to do shop-type service and repair work.

⚠ WARNING

Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.

W-2044-1285

IMPORTANT

This notice identifies procedures which must be followed to avoid damage to the machine.

I-2019-0284



Safety Alert Symbol: This Safety Symbol is used for important safety messages. When you see this symbol follow the safety message to avoid personal injury or death.

- Wear tight fitting clothing and any other required safety apparel when operating or servicing the loader.
- Wear safety glasses when maintaining or servicing the loader.
- Exhaust gases can kill, vent engine exhaust outdoors.
- Know where fire extinguisher and first aid kits are located and how to use them.
- Do not run the Bobcat loader where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.
- Check fuel and hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Tighten or replace any parts that show leakage. Always clean fluid spills. DO NOT use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.
- Clean the loader before doing any welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the loader when welding.
- Have good ventilation when welding or grinding painted parts. Wear dust mask when grinding painted parts. Toxic dust and gas can be produced.
- Stop the engine and let it cool before adding fuel. No smoking!
- Use the procedure in this Manual for connecting battery.
- Use the procedure in this Manual for cleaning the spark arrestor muffler after each 100 hours of operation.

SERIAL NUMBER LOCATIONS

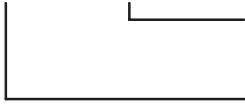
Always use the serial number of the loader when requesting service information or when ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation.

LOADER SERIAL NUMBER

The loader serial number plate is located on the inside of the left upright, above the grill [A].

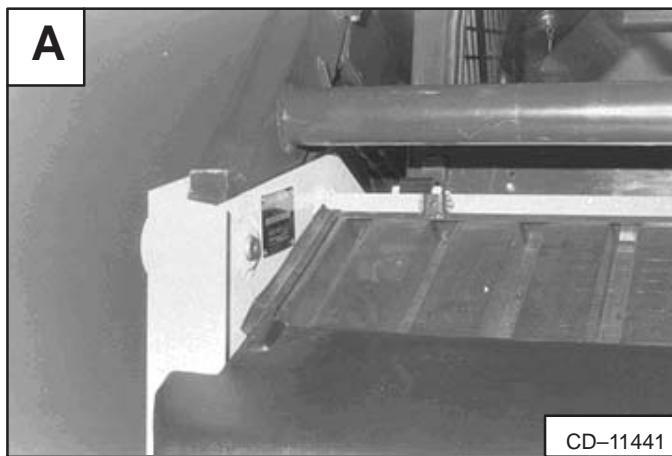
Explanation of loader Serial Number:

XXXX XXXXX



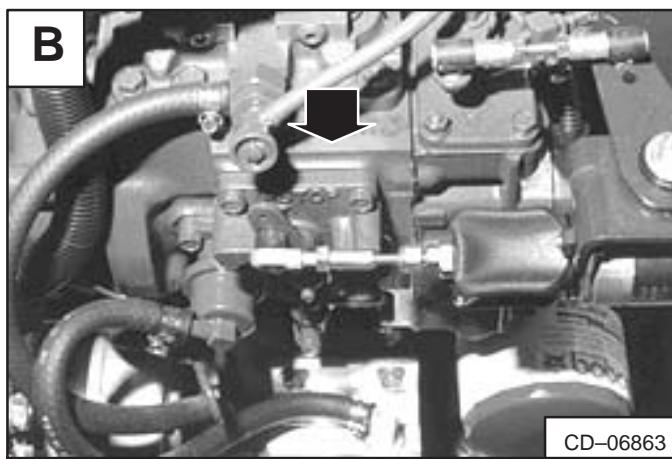
Production Sequence (Series)

Model/Engine Version



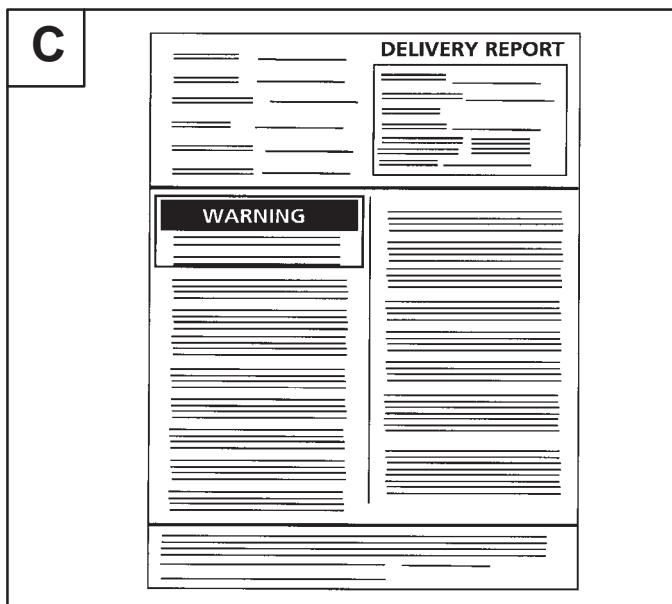
ENGINE SERIAL NUMBER

The serial number is near the fuel injection pump on the engine block [B].

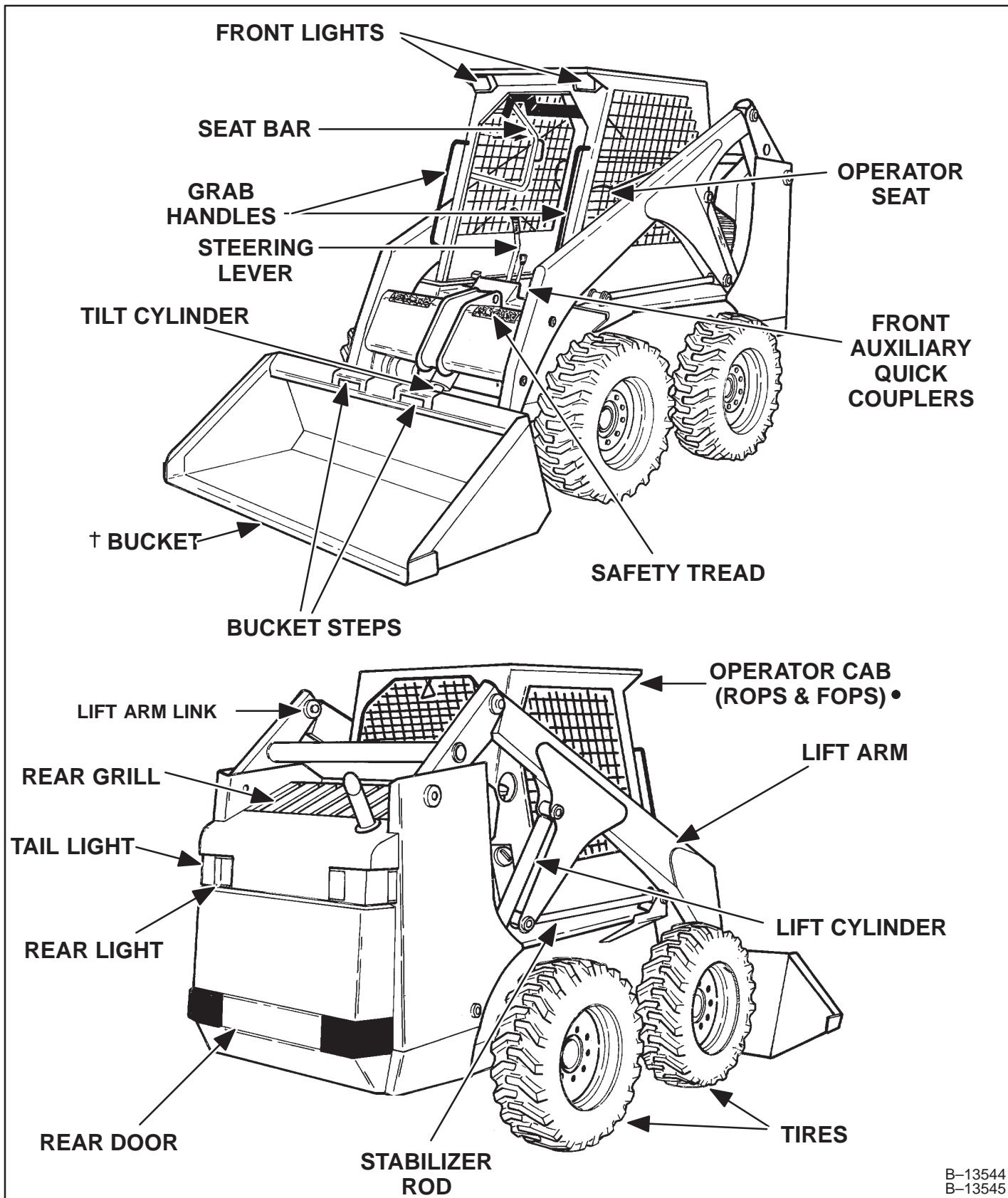


DELIVERY REPORT

The Delivery Report must be filled out by the dealer and signed by the owner or operator when the Bobcat loader is delivered. An explanation of the form must be given to the owner. Make sure it is filled out completely [D].



BOBCAT LOADER IDENTIFICATION



B-13544
B-13545

† BUCKET – Several different buckets and other attachments are available for the Bobcat loader.

- ROPS, FOPS – Roll-Over Protective Structure, Falling Object Protective Structure, per SAE J1040 and SAE J1043, ISO 3471 and ISO 3449 Level 1. Level 2 kit is available from your Bobcat dealer. The Bobcat loader is base-equipped with a standard operator cab as shown.



PREVENTIVE MAINTENANCE

PREVENTIVE MAINTENANCE

	Page Number
AIR CLEANER SERVICE	
Optional	1-7
Replacing Filter Element	1-7
Standard	1-7
ALTERNATOR BELT	
Adjusting The Alternator Belt	1-15
BATTERY	
Removal And Installation	1-16
COOLING SYSTEM	
Checking The Coolant Level	1-13
Cleaning The Coolant System	1-13
Removing Coolant From The Cooling System	1-14
DIAGNOSTIC TOOL	
Procedure	1-31
DRIVE BELT	
Adjustment	1-23
Adjusting The Drive Belt With Spring Loaded Drive Idler	1-25
Drive Belt Replacement	1-24
Replacing The Drive Belt With Spring Loaded Drive Idler	1-26
ENGINE COOLING SYSTEM	
Cleaning The Cooling System	1-13
Coolant Level	1-13
Removing Coolant From The Cooling System	1-14
ENGINE LUBRICATION SYSTEM	
Checking Engine Oil	1-11
Replacing Of Oil And Filter	1-11
FAN GEARBOX	
Checking Grease Level	1-22
FINAL DRIVE TRANSMISSION (CHAINCASE)	
Checking And Adding Oil	1-22
Removing Oil From The Chaincase	1-22
FUEL SYSTEM	
Filling The Fuel Tank	1-9
Fuel Filter	1-9
Fuel Specifications	1-9
Removing Air From The Fuel System	1-10
HYDRAULIC/HYDROSTATIC SYSTEM	
Checking And Adding Fluid	1-17
Replacing Hydraulic/Hydrostatic Filter	1-17
Checking The Hydraulic Reservoir Breather Cap	1-18
Replacing Hydraulic Fluid	1-19

Continued On Next Page

PREVENTIVE MAINTENANCE (Cont'd)

	Page Number
LIFT ARM SUPPORT DEVICE	
Installing The Lift Arm Support Device	1-4
Removing The Lift Arm Support Device	1-4
LIFTING AND BLOCKING THE LOADER	
Procedure	1-2
PIVOT PINS	
Procedure	1-29
PREVENTIVE MAINTENANCE	
Procedure	1-2
LUBRICATION OF THE BOBCAT LOADER	
Procedure	1-27
OPERATING SYSTEM SERVICE CODES	
Chart	1-32
OPERATOR CAB	
Description	1-4
Emergency Exit	1-6
Lowering The Operator Cab	1-5
Raising The Operator Cab	1-5
REMOTE START SWITCH	
Procedure	1-30
SEAT BAR SYSTEM	
Description	1-6
Seat Bar Inspection	1-6
Seat Bar Maintenance	1-6
SERVICE CODES	
Chart	1-33
SERVICE SCHEDULE	
Chart	1-1
SINGLE POINT LIFT	
Procedure	1-3
SPARK ARRESTER MUFFLER	
Cleaning Procedure	1-20
TIRE MAINTENANCE	
Tire Mounting	1-21
Tire Rotation	1-21
Wheel Nuts	1-21
TRANSPORTING THE LOADER	
Procedure	1-3
TROUBLESHOOTING THE B.O.S.S. & LCD DISPLAY	
Chart	1-35
USING A BOOSTER BATTERY (JUMP STARTING)	
Procedure	1-16

SERVICE SCHEDULE

Maintenance work must be done at regular intervals. Failure to do so may result in excessive wear and early failures. The service schedule is a guide for correct maintenance of the Bobcat loader.



WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Handbook and signs (decals) on machine. Follow warnings and instructions in the manual when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0199

ITEM	SERVICE REQUIRED	HOURS				
		8-10	50	100	250	1000
Engine Oil	Check the oil level & add oil as needed.					
Air Cleaner	Check display. Service only when required.					
Engine Cooling System	Clean debris from oil cooler, radiator & grill. Check coolant level cold in the recovery tank. Add 50/50 ethylene glycol & water as needed.					
Lift Arms, Cyl., Bob-Tach Pivot Pins & Wedges	Lubricate with multi-purpose lithium based grease (20 places).					
Engine Air System	Check for leaks & damaged components.					
Tires	Check for damaged tires & correct air pressure.					
Seat Belt, Seat Bar & Pedal Interlocks	Check the condition of seat belt. Check the seat bar & pedal interlocks for correct operation. Clean dirt & debris from moving parts.					
Safety Signs & Safety	Check for damaged signs (decals) & safety tread. Replace any signs or safety treads that are damaged or worn.					
Operator Cab	Check the fastening bolts, washers & nuts. Check the condition of cab.					
Fuel Filter	Remove the trapped water.					
Hyd. Fluid, Hoses & Tubelines	Check fluid level & add as needed. Check for damage & leaks. Repair & replace as needed.					
Final Drv Trans. (Chaincase)	Check oil level.					
Battery	Check cables & electrolyte level.					
Control Pedals & Steering	Check for correct operation. Repair or adjust as needed.					
Wheel Nuts	★ Check for loose wheel nuts & tighten to 105–115 ft.-lbs. (142–156 Nm) torque.					
Parking Brake	Check operation & adjust as needed.					
Alternator Belt	Check tension & adjust as needed.					
Engine Oil & Filter	Replace oil & filter.					
Spark Arrestor Muffler	Clean the spark chamber.					
Engine/Hydro. Drive Belt	* Check for wear or damage. Make adjustment as needed.					
Fuel Filter	Replace filter element.					
Seat Bar	Grease pivots as needed.					
Steering Shaft	Grease two fittings.					
Hyd. Hydro. Filter	• Replace the filter element.					
Hyd. Reservoir Breather Cap	Replace the reservoir breather cap.					
Fan Drive Gearbox	Check gear lube level.					
Final Drive Trans.	Replace the oil in the chaincase.					
Hyd. Reservoir	Replace the fluid.					
Case Drain Filters	Replace the filters.					

- ★ Check wheel nut torque every 8 hours for the first 24 hours.
- Also replace hydraulic/hydrostatic filter element when the transmission warning light comes “ON”.
- Or every 12 months.

* Inspect the new belt after first 50 hours.

⚠ WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance 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. Untrained operators and failure to follow instructions can cause injury or death [A].

W-2003-0199

A



B-07023

LIFTING AND BLOCKING THE LOADER

Procedure

Always park the loader on a level surface.

⚠ WARNING

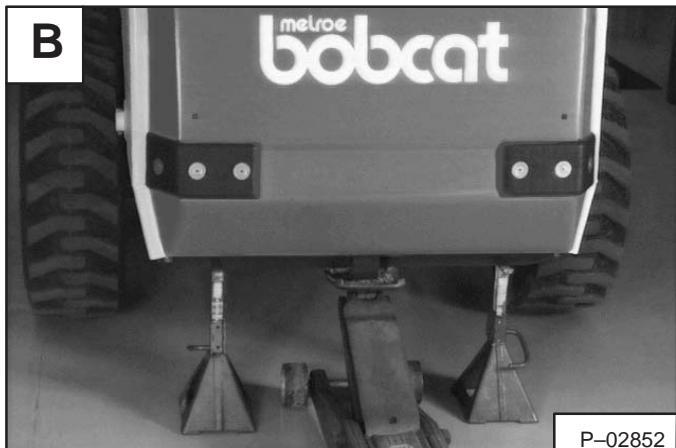
Put jackstands under the front axles and rear corners of the frame before running the engine for service. Failure to use jackstands can allow the machine to fall or move and cause injury or death.

W-2017-0286

Put the floor jack under the rear of the loader [B].

Lift the rear of the loader and install jackstands [B].

B



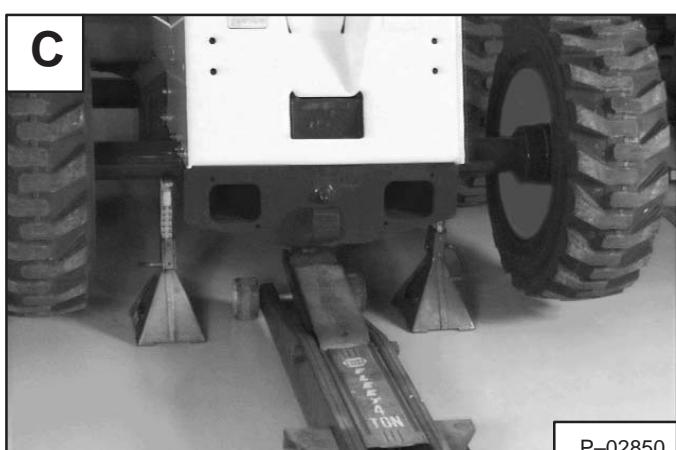
P-02852

Put the floor jack under the front of the loader [C].

Lift the front of the loader and put jackstands under the axle tubes [C].

NOTE: Make sure the jackstands do not touch the tires.

C



P-02850

TRANSPORTING THE LOADER

Procedure

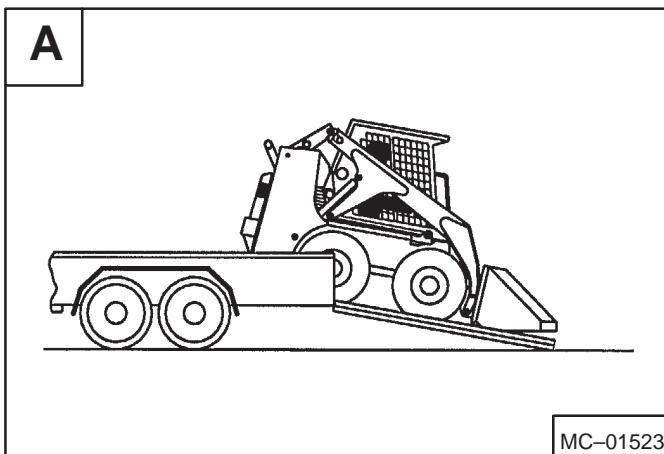


WARNING

Adequately designed ramps of sufficient strength are needed to support the weight of the machine when loading onto a transport vehicle. Wood ramps can break and cause personal injury.

W-2058-0494

A loader with an empty bucket or no attachment must be loaded backward onto the transport vehicle [A].



Use the following procedure to fasten the Bobcat loader to the transport vehicle to prevent the loader from moving during sudden stops or when going up or down slopes [B]:

1. Lower the bucket or attachment to the floor. Stop the engine.
2. Engage the parking brake.
3. Install chains at the front and rear of the loader [B]. Use chain binders to tighten the chains.

SINGLE POINT LIFT



WARNING

AVOID INJURY OR DEATH

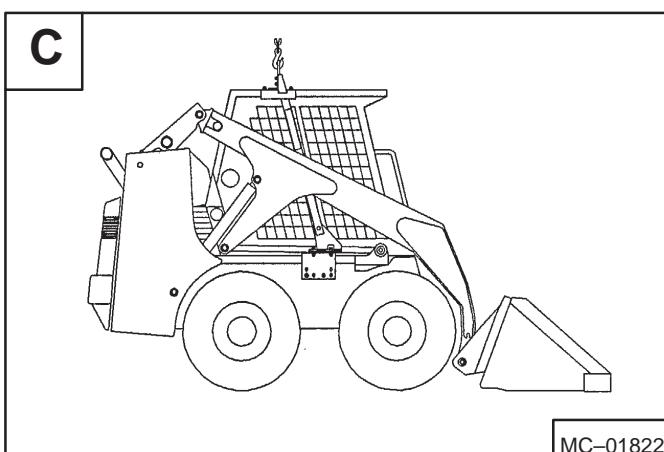
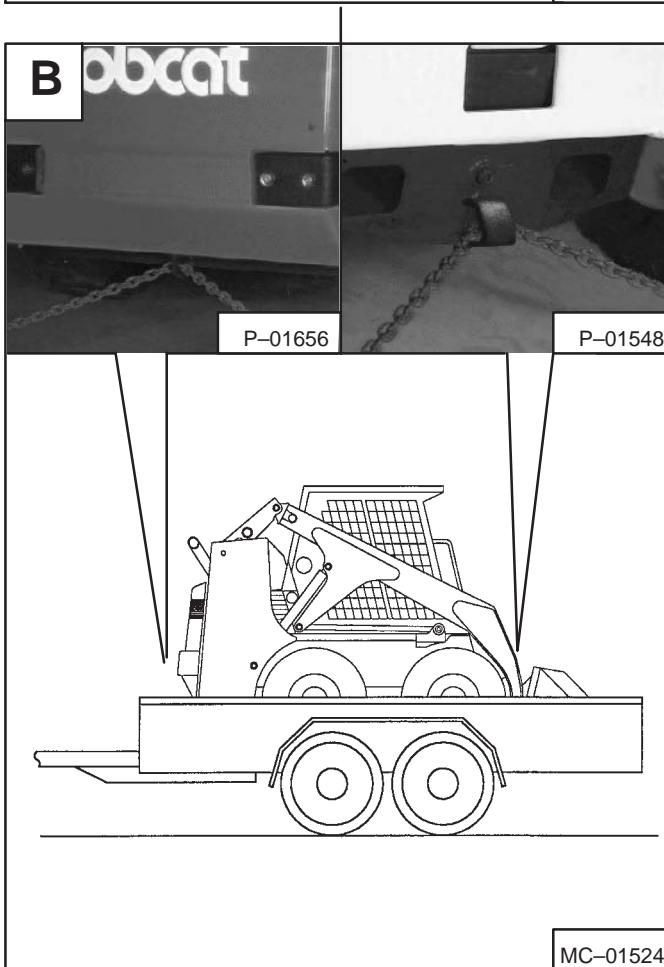
- Before lifting, check fasteners on single point lift and operator cab.
- Assemble front cab fasteners as shown in this manual.
- Never allow riders in the cab or bystanders within 15 feet (5 meters) while lifting the machine.

W-2007-0497

The loader can also be lifted with the single point lift which is available as a kit from your Bobcat loader dealer.

Install the kit and lift as shown [C].

The single point lift, supplied by Melroe Company is designed to lift and support the Bobcat loader without affecting roll over and filling object protection features of the operator cab.



LIFT ARM SUPPORT DEVICE



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

Installing Lift Arm Support Device

Put jackstands under the rear corners of the loader.

Loosen the hand wheels and remove the lift arm support device (Item 1) from storage position [A].

The operator must be in the operator's seat, with the seat belt fastened and seat bar lowered, until the lift arm support device is installed.

Start the engine and raise the lift arms all the way up. Have a second person install the lift arm support device over the rod of one of the lift cylinders [B].

The lift arm support device must be tight against the cylinder rod. Lower the lift arms slowly until the support device is held between the lift arms and lift cylinder.

Removing Lift Arm Support Device

The operator must be in the operator's seat, with the seat belt fastened and seat bar lowered until the lift arm support device is removed and the lift arms are lowered all the way down.

Start the engine and raise the lift arms all the way up. Have a second person remove the lift arm support device.

Return the lift arm support device to storage position and secure with clamping knobs.

OPERATOR CAB

Description

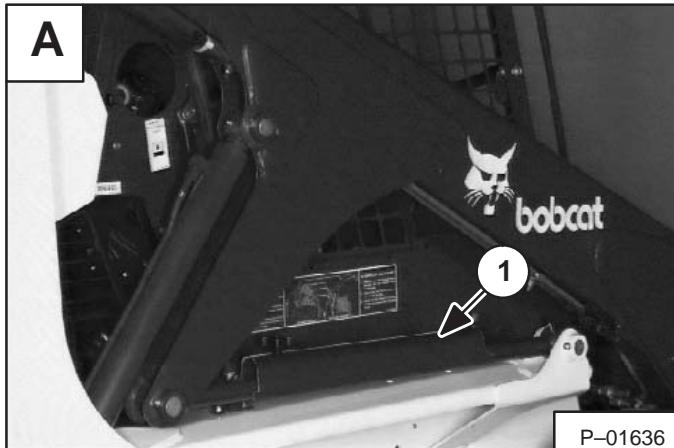
The Bobcat loader has an operator cab (ROPS and FOPS) as standard equipment to protect the operator from rollover and falling objects. Check with your dealer if the operator cab has been damaged.



WARNING

Never modify operator cab by welding, grinding, drilling holes or adding attachments unless instructed to do so by Melroe Company. Changes to the cab can cause loss of operator protection from rollover and falling objects, and result in injury or death.

W-2069-1285



P-01636



P-01637

OPERATOR CAB (Cont'd)

Raising the Operator Cab

Stop the loader on a level surface. Lower the lift arms. If the lift arms must be up while raising the operator cab, install the lift arm support device (Page 1-4).



WARNING

Before the cab or the lift arms are raised for service, jackstands must be put under the rear corners of the frame. Failure to use jackstands can allow the machine to tip backward causing injury or death.

W-2014-0895



WARNING

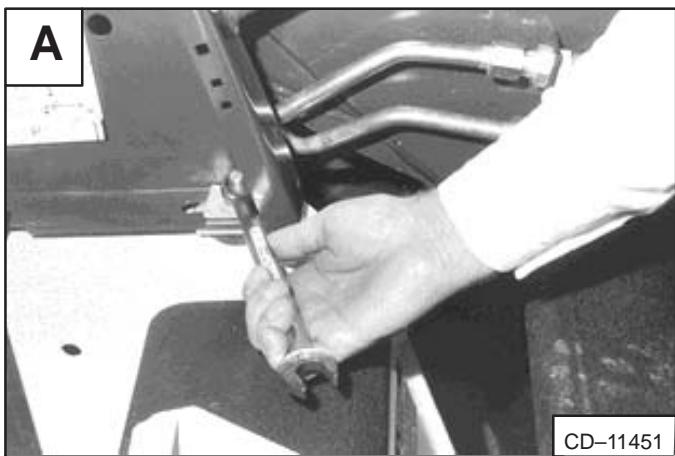
AVOID INJURY OR DEATH

Accidental movement of the loader, the lift arms or the attachment can occur if the lift or tilt control handles are not positioned correctly before lifting or lowering the cab.

Move control linkage to top hole in handles as shown, so cab does not hit handles when being lifted or lowered.

6703403

Loosen the nut (both sides) at the front corner of the operator cab **[A]**.



CD-11451



CD-11452



P-01631

Remove the nut and plate (both sides) **[B]**.



P-03264

P-01644

Lift on the grab handle and bottom of the operator cab slowly until the cab latching mechanism engages and the cab is all the way up **[C]**.

Lowering the Operator Cab

Pull down on the bottom of the operator cab until it stops at the latching mechanism. Release the latching mechanism and pull the cab all the way down **[D]**.

Install the plate and nut (both sides) **[B]**. Tighten the nuts to 40–50 ft.-lbs. (54–68 Nm) torque.

OPERATOR CAB (Cont'd)

Emergency Exit

The front opening on the operator cab and rear window provide exits.

To exit through the rear window, use the following procedure:

1. Pull on the tag at the top of the rear window to remove the rubber cord [A].
2. Push the rear window out of the operator cab.
3. Exit through the rear of the operator cab [B].

SEAT BAR RESTRAINT SYSTEM

Description

The seat bar restraint system has a pivoting seat bar with arm rests and has spring loaded interlocks for the lift and tilt control pedals. The operator controls the use of the seat bar. The seat bar in the down position helps to keep the operator in the seat. The interlocks require the operator to lower the seat bar in order to operate the foot pedal controls. When the seat bar is up, the lift and tilt pedals are locked when returned to the neutral position.



WARNING

AVOID INJURY OR DEATH

The seat bar system must lock the lift and tilt control pedals in neutral when the seat bar is up. Service the system if pedals do not lock correctly.

W-2105-1285

Seat Bar Inspection

Sit in the seat and fasten the seat belt. Engage the parking brake. Pull the seat bar all the way down. Start the engine, activate the lift arm operation button. Operate each foot pedal to check both the lift and tilt functions. Raise the lift arms until the bucket is about 2 feet (600 mm) off the ground.

Raise the seat bar. Try to move each foot pedal. Pedals must be firmly locked in neutral position. There must be no motion of the lift arms or tilt (bucket) when the pedals are pushed.

Pull the seat bar down, activate the lift arm operation button, lower the lift arms and place the bucket flat on the ground. Stop the engine. Raise the seat bar and operate the foot pedals to be sure that the pedals are firmly locked in the neutral position. Unbuckle the seat belt.

Seat Bar Maintenance

See the Service Schedule (Page 1-1) and on the loader for correct service interval.

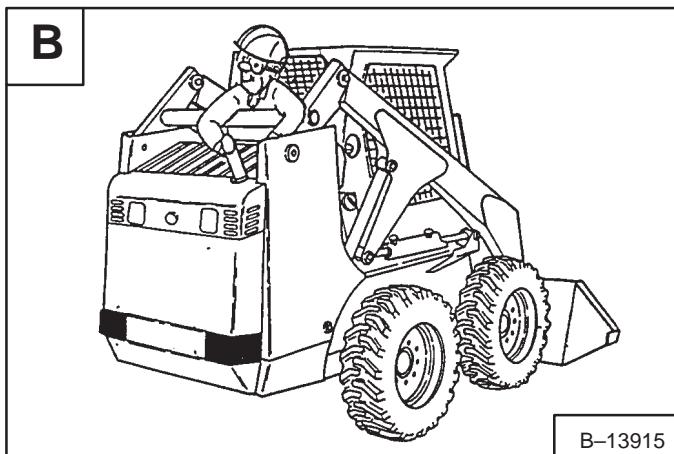
Clean any debris or dirt from the moving parts [C] & [D].

Inspect the linkage bolts and nuts for tightness. The correct torque is 25–28 ft.-lbs. (34–38 Nm).

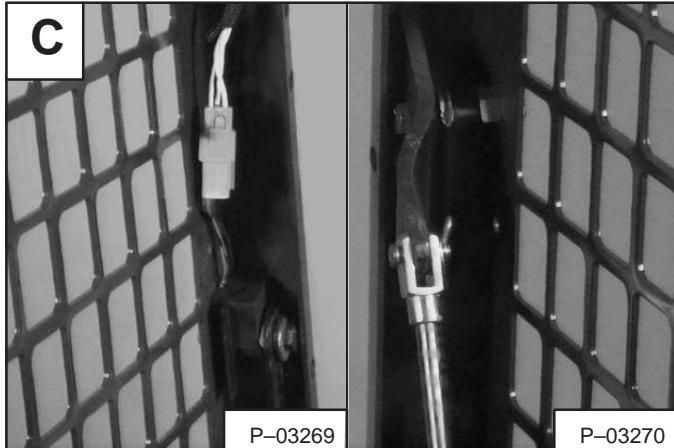
If the seat bar system does not function correctly, check for free movement of each linkage part. Check for excessive wear [C]. Adjust pedal control linkage. Replace parts that are worn or damaged. Use only genuine Melroe replacement parts.



P-00660

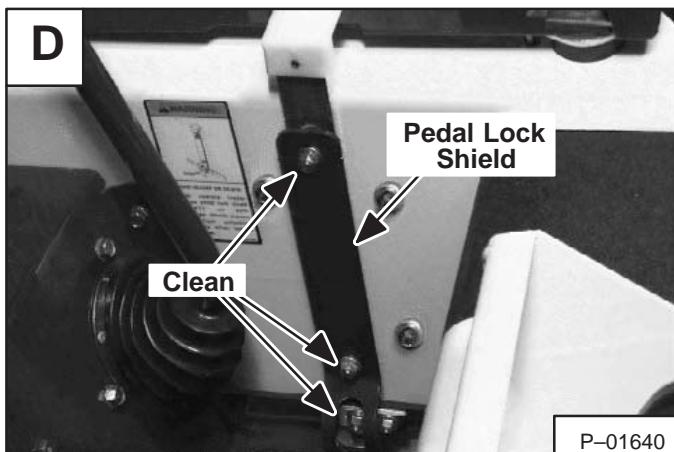


B-13915



P-03269

P-03270



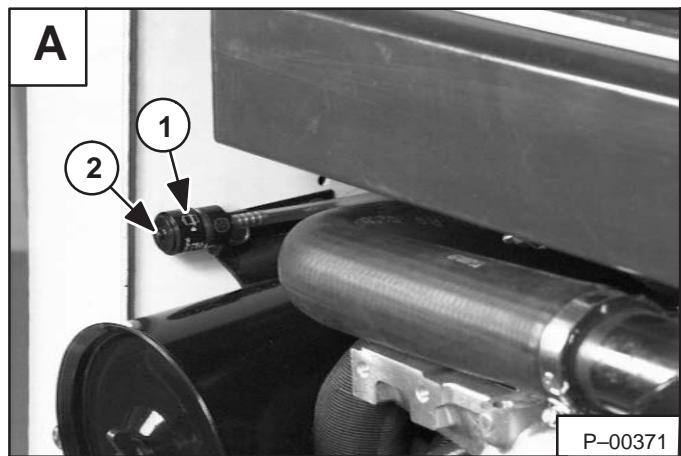
P-01640

AIR CLEANER

(Standard)

Replace the large (outer) filter element only when the red ring shows in the window of the condition indication (Item 1) [A].

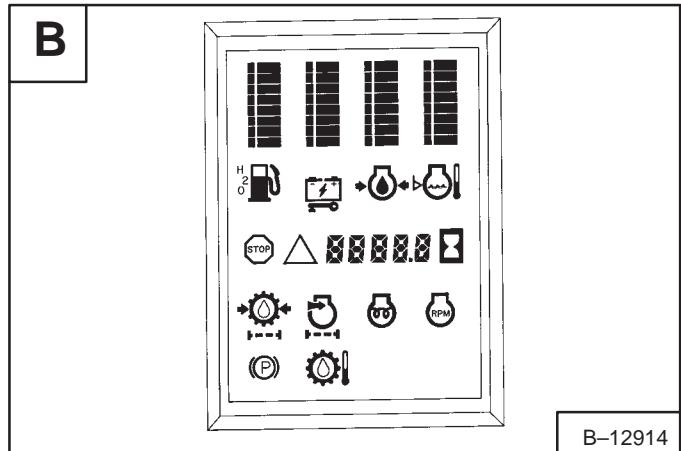
NOTE: Before replacing the filter element, push the button on the condition indicator (Item 2) [A], start the engine. If the red ring does not show, do not replace the filter element.



(Optional)

It is important to change the air filter element only when the service codes (on the optional instrument panel) shows the symbols AF 2 [B].

Replace the inner filter every third time the outer filter is replaced or when the red ring still shows in the indicator window after the outer filter has been replaced.



Replacing the Filter Element

Service the air cleaner as follows:

Remove the dust cover wing nut [C].



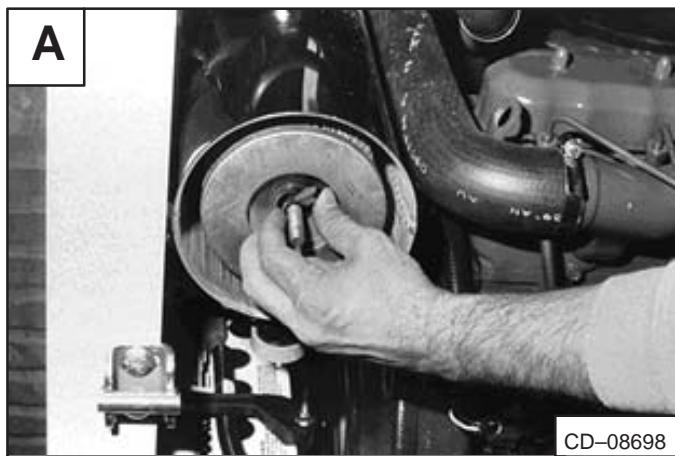
Remove the dust cover [D].



AIR CLEANER (Cont'd)

Replacing the Filter Element (Cont'd)

Remove the wing nut holding the large air filter element [A].



Remove the large filter element [B].

NOTE: Make sure all sealing surfaces are free of dirt and debris.

Install a new filter element and tighten the wing nut.

NOTE: Be sure sealing washer is in place.

Install the dust cover and tighten the wing nut.

Check the air intake hose for damage. Check the air cleaner housing for damage. Check to make sure all connections are tight.



Remove the inner filter wing nut [C].



Remove the inner filter [D].

Install a new filter and tighten with wing nut.

Only replace the inner filter element under the following conditions:

1. Replace the inner filter element every third time the outer filter element is replaced.
2. Replace the inner filter element when the service codes show symbols (Page 1-32, [B], after the outer filter element has been replaced and the engine speed is at full RPM.



FUEL SYSTEM

Fuel Specifications

Use only clean, high quality diesel fuel, Grade No. 1 or Grade No. 2.

The following is a suggested blending guideline which should prevent fuel gelling problems:

Temp. F°/C°	No. 2	No. 1
+15°/-9° and above	100%	0%
down to -20°/-29°	50%	50%
below -20°/-29°	0%	100%

We recommend an operator contact their fuel supplier for local recommendations.

Filling the Fuel Tank



WARNING

Stop and cool the engine before adding fuel. NO SMOKING! Failure to obey warnings can cause an explosion or fire.

W-2063-0887

Remove the fuel fill cap [A].

Use a clean, approved safety container to add fuel of the correct specifications. Add fuel only in an area that has free movement of air and no open flames or sparks. NO SMOKING! [B].

Install and tighten the fuel fill cap [A].

Fuel Filter



WARNING

Always clean up spilled fuel or oil. Keep heat, flames, sparks or lighted tobacco away from fuel and oil. Failure to use care around combustibles can cause explosion or fire which can result in injury or death.

W-2103-1285

See the Service Schedule (Page 1-1) for the service interval when to remove the water from the fuel filter.

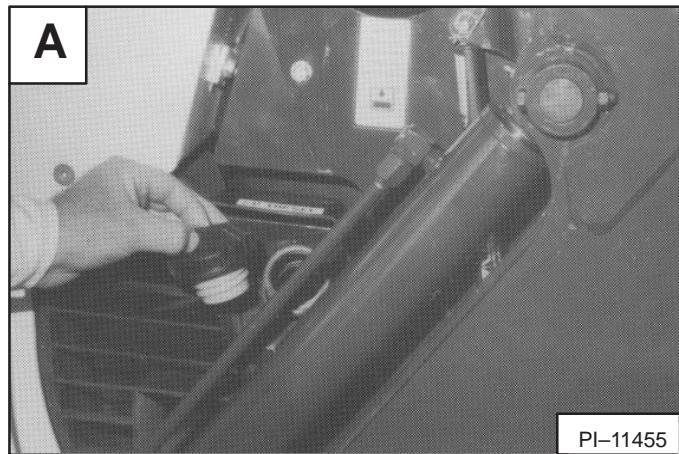
Loosen the drain (Item 1) at the bottom of the filter element to drain any water from the filter [C].

See the Service Schedule (Page 1-1) for the service interval when to replace the fuel filter.

To replace the fuel filter element, use a filter wrench to remove the filter element (Item 2) [C].

Clean the area around the filter housing. Put oil on the seal of the new filter element. Install the fuel filter, and hand tightened.

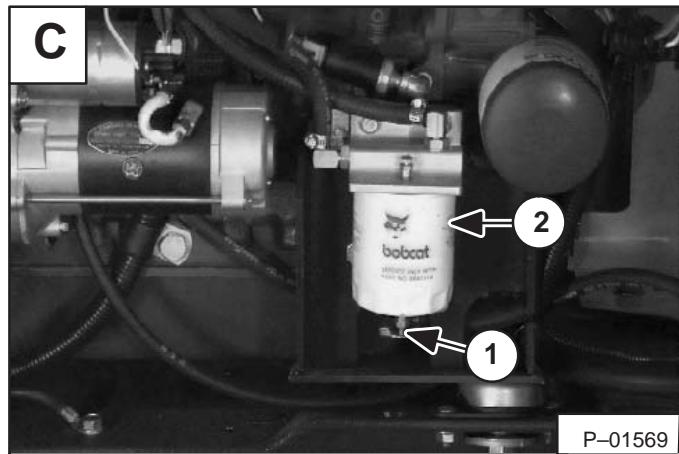
Remove the air from the fuel system.



PI-11455



B-13579



P-01569

FUEL SYSTEM (Cont'd)

Removing Air from the Fuel System

After replacing the fuel filter element or when the fuel tank has run out of fuel, the air must be removed from the fuel system prior to starting the engine.



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

Open the vent (Item 1) on the fuel filter housing [A].

Operate the hand pump (priming bulb) until the fuel flows from the vent with no air bubbles [B].

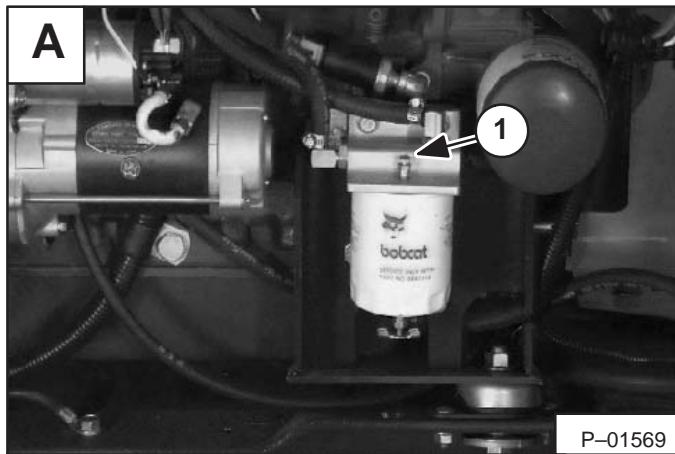
Close the vent (Item 1) on the fuel filter housing [A].

Open the vent (Item 1) on the fuel injection pump [C].

Operate the hand pump (priming bulb) until the pump feels solid [B].

Tighten the vent plug [C].

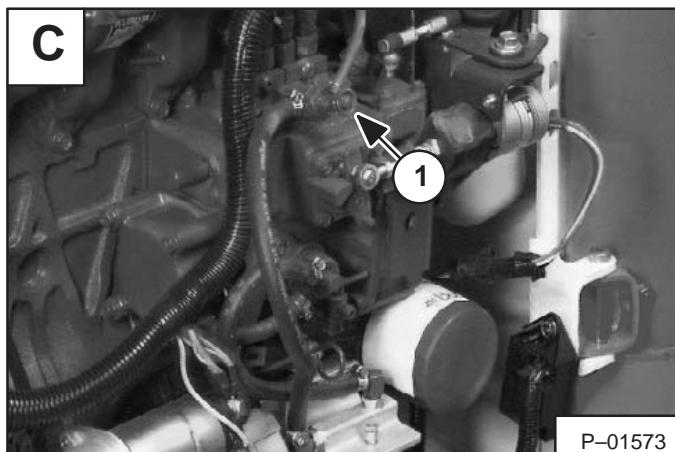
Start the engine. It may be necessary to open the vent, at the fuel injection pump, briefly, until the engine runs smoothly.



P-01569



P-01576



P-01573

ENGINE LUBRICATION SYSTEM

Checking Engine Oil

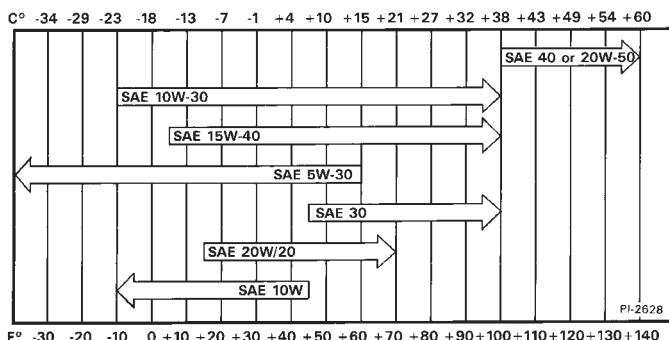
Check the engine oil level every day.

Before starting the engine for the work shift, open the rear door. Remove the dipstick **[A]**.

Keep the oil level between the marks on the dipstick.

Use a good quality motor oil that meets API Service Classification of CC, CD or CE (See Oil Chart below).

RECOMMENDED SAE VISCOSITY NUMBER (LUBRICATION OILS FOR ENGINE CRANKCASE)

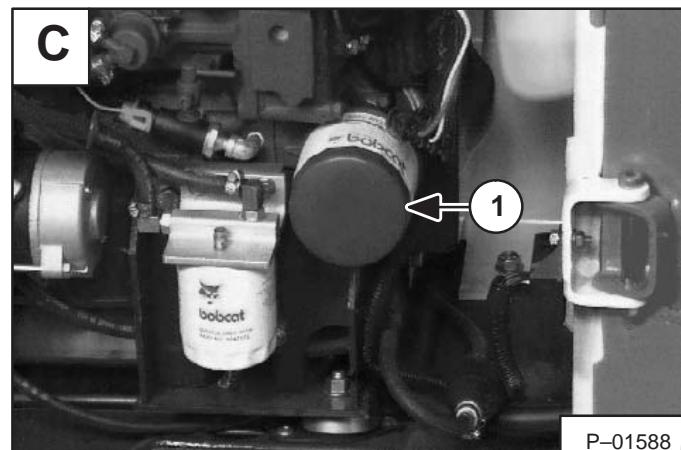


TEMPERATURE RANGE ANTICIPATED BEFORE NEXT OIL CHANGE (DIESEL: USE API CLASSIFICATION CC, CD or CE)

Replacing of Oil and Filter

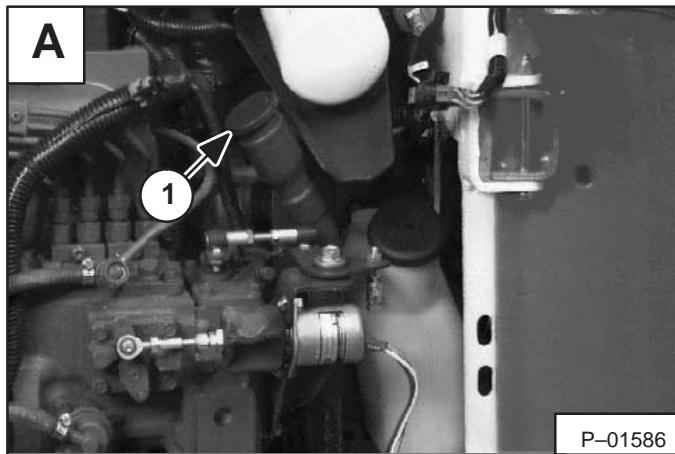
See the Service Schedule (Page 1-1) for the service interval for replacing the engine oil and filter.

1. Run the engine until it is at operating temperature. Stop the engine.
2. Open the rear door. Remove the drain plug **[B]**. Drain the oil into a container.
3. Remove the oil filter (Item 1) **[C]**.
4. Clean the filter housing surface. Put clean oil on the new oil filter gasket. Install the filter and hand tighten.
5. Install and tighten the drain plug.



ENGINE LUBRICATION SYSTEM (Cont'd)

Remove the filler cap (Item 1) from the oil fill tube [A].



Put 7.5 qts. (7,1 L) of oil in the engine (See Oil Chart, Page 1-11) [B].

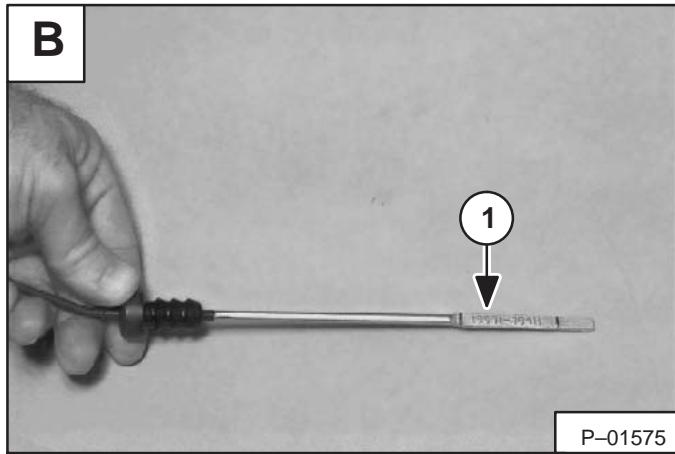
Start the engine and let it run for several minutes. Stop the engine. Check for leaks and check the oil level. Add oil as needed if it is not at the top mark (Item 1) on the dipstick [B].



WARNING

Always clean up spilled fuel or oil. Keep heat, flames, sparks or lighted tobacco away from fuel and oil. Failure to use care around combustibles can cause explosion or fire which can result in injury or death.

W-2103-1285



COOLING SYSTEM

Check the cooling system every day to prevent over-heating, loss of performance or engine damage.



WARNING

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

W-2019-1285

Cleaning the Cooling System

Raise the rear grill.

Use air pressure or water pressure to clean the top of the oil cooler **[A]**.

Raise the oil cooler and clean the top of the radiator **[B]**.

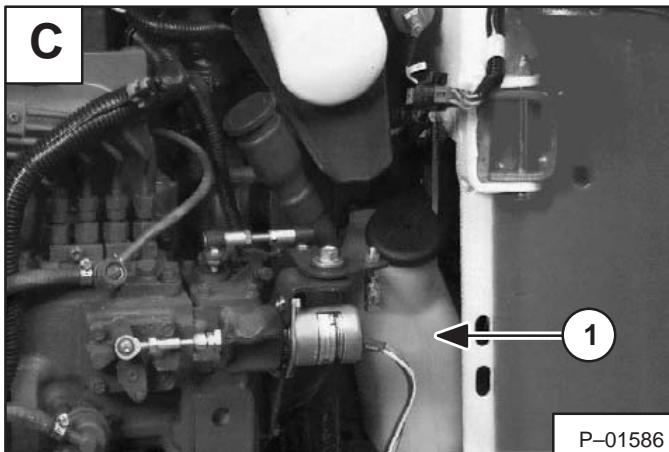
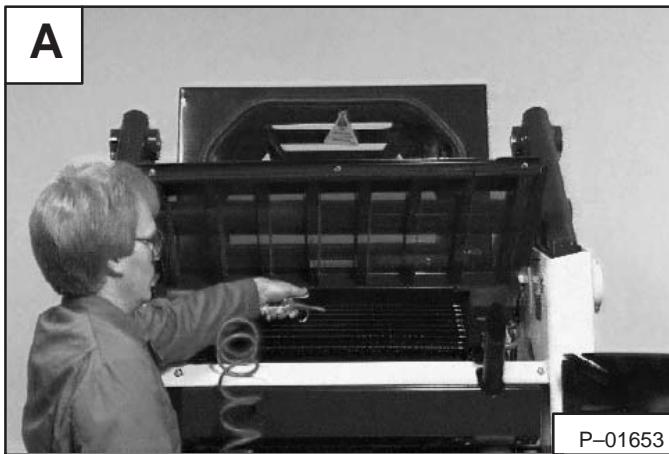
Check the cooling system for leaks.

Checking the Coolant Level

Open the rear door. Check the coolant level in the coolant recovery tank (Item 1) on the right side of the engine **[C]**.

The coolant recovery tank must be 1/3 full.

Add pre-mixed coolant, 50% water and 50% ethylene glycol to the recovery tank if the coolant level is low.



COOLING SYSTEM (Cont'd)

Removing Coolant from the Cooling System



WARNING

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

W-2070-1285

Open the rear door. Open the rear grill.

Remove the radiator cap (Item 1) [A].

Connect a hose to the engine block drain valve (Item 1) [B]. Open the drain valve and drain the coolant into a container.

After all the coolant is removed, close the drain valve.

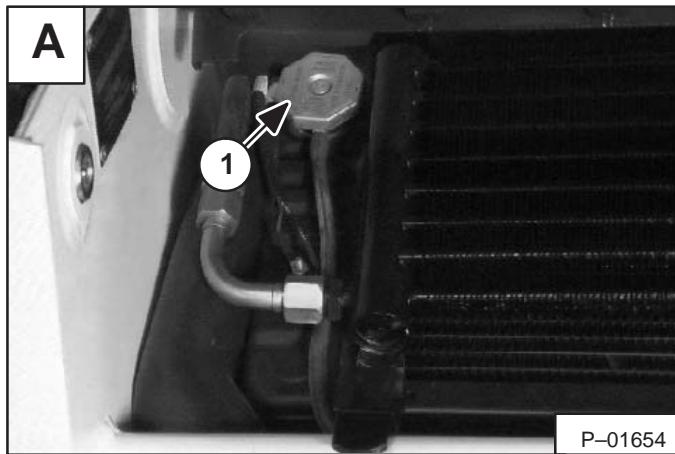
NOTE: Protect the cooling system by adding pre-mixed 50% ethylene glycol and 50% water to the system. This mixture will protect the cooling system to -34° F. (-36° C.).

Mix the coolant in separate container (See Specifications for correct capacity, Page 8-2).

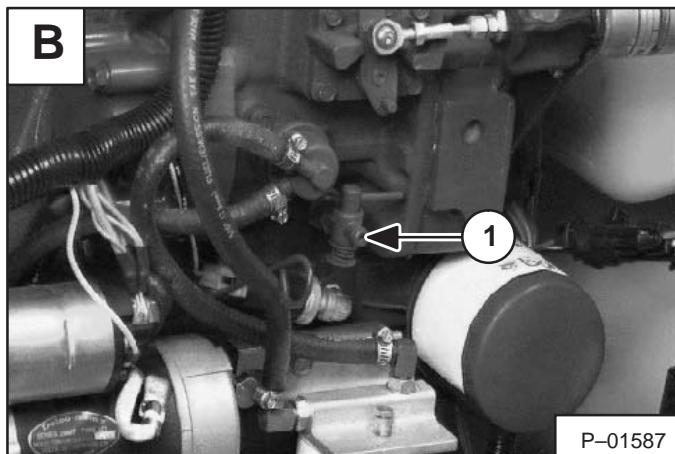
Fill the radiator with a pre-mixed coolant. Install the radiator cap.

Fill the coolant recovery tank 1/3 full.

Run the engine until it is at operating temperature. Stop the engine. Check the coolant level in the recovery tank when cool. Add coolant to the recovery tank as needed.



P-01654



P-01587

ALTERNATOR BELT

Adjusting the Alternator Belt

To adjust the belt tension for the alternator, use the following procedure:

Stop the engine.

Raise the operator cab (Page 1-5).

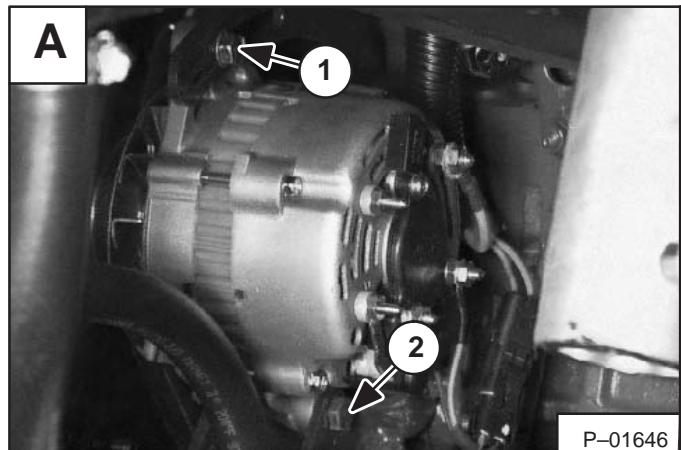
Loosen the alternator mounting bolt (Item 1) [A].

Loosen the adjusting bolt (Item 2) [A].

Move the alternator until the belt has 5/16" (8,0 mm) movement at the middle of the belt span with 15 lbs. (66 N) of force.

Tighten the adjustment bolt and mounting bolt.

Lower the operator cab.



P-01646

WARNING

Keep arcs, sparks, flames and lighted tobacco away from batteries. When *jumping* from booster battery make final connection (negative) at engine frame.

Do not jump start or charge a frozen or damaged battery. Warm battery to 60°F. (16°C.) before connecting to a charger. Unplug charger before connecting or disconnecting cables to battery. Never lean over battery while boosting, testing or charging.

Battery gas can explode and cause serious injury.

W-2066-1296

Connect the end of the first cable (Item 1) to the positive (+) terminal of the booster battery [A]. Connect the other end of the same cable (Item 1) to the positive terminal on the loader battery [B].

Connect the end of the second cable (Item 2) to the negative (-) terminal of the booster battery [A]. Connect the other end of the same cable (Item 2) to the starter mounting bolt that is grounded to the loader [B].

Keep cables away from moving parts. Start the engine (Also see "Starting the Engine" in the Operation & Maintenance Manual).

After the engine has started, remove the ground (-) cable (Item 2) first [B]. Remove the cable from the positive terminal on the loader battery.

IMPORTANT

Damage to the alternator can occur if:

- Engine is operated with battery cables disconnected.
- Battery cables are connected when using a fast charger or when welding on the loader. (Remove both cables from the battery.)
- Extra battery cables (booster cables) are connected wrong.

I-2023-1285

BATTERY

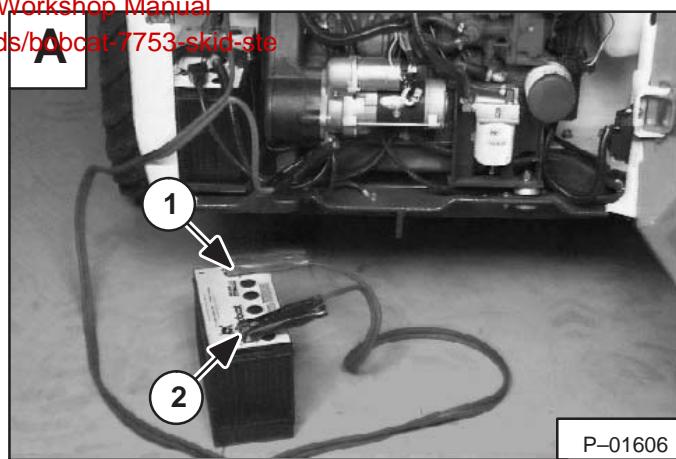
Removal and Installation

Open the rear door.

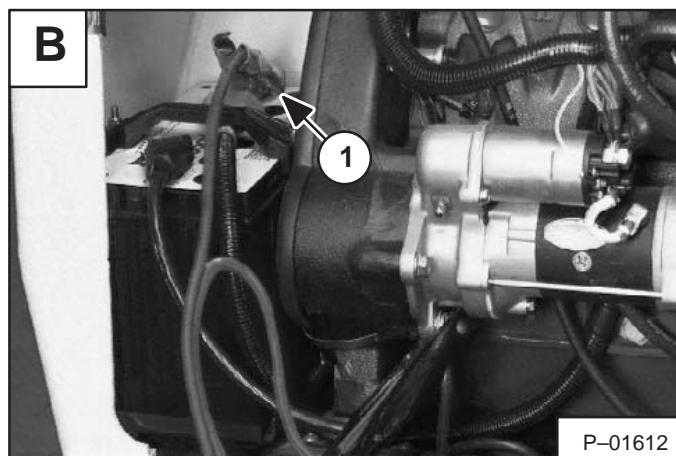
Disconnect the negative (-) battery cable [C].

Sample of Manual. Download All 332 pages at:

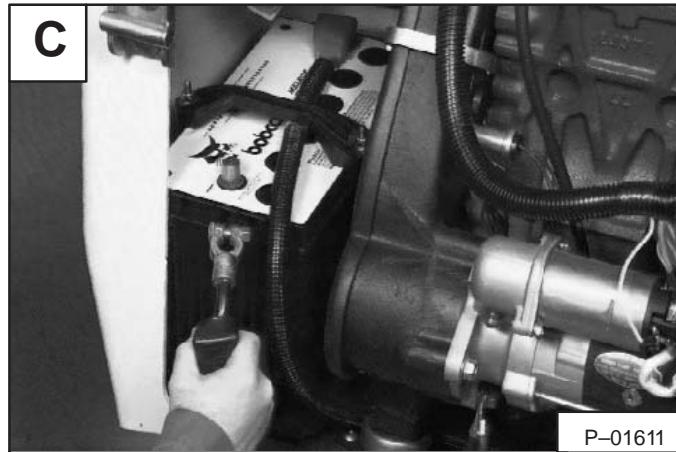
<https://www.arepairmanual.com/downloads/bobcat-7753-skid-steer-loader-service-repair-workshop-manual/>



P-01606



P-01612



P-01611



P-01609