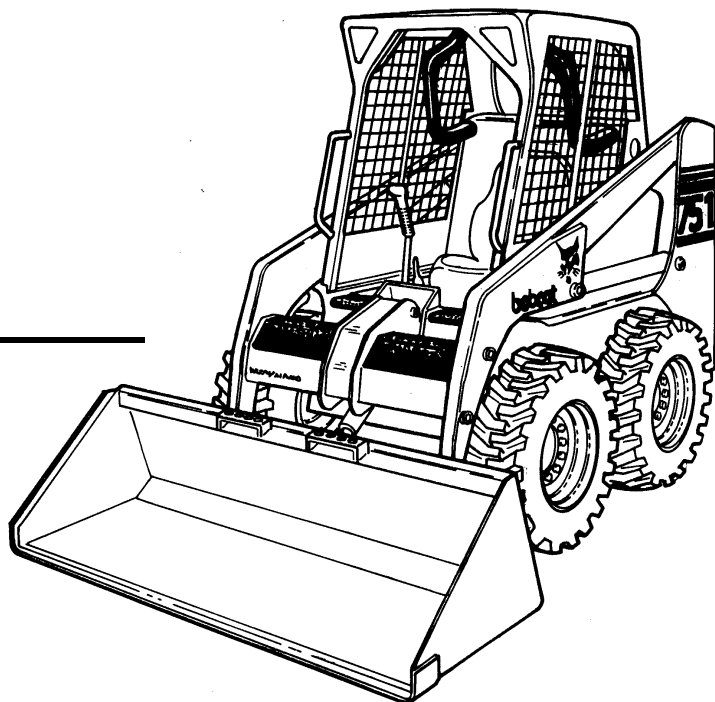




Bobcat®

Service Manual

(S/N 515730001 & Above)
(S/N 515620001 & Above)



**EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)**

IR Ingersoll Rand
Compact Vehicle Technologies
Printed in U.S.A.

MAINTENANCE SAFETY



WARNING

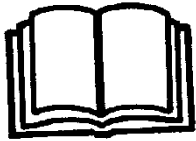
Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after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

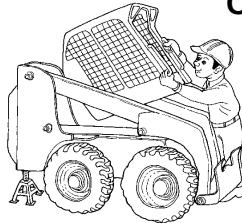
CORRECT



B-10731a

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

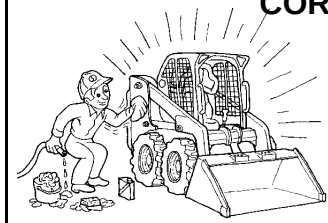
CORRECT



B-15590

- Use the correct procedure to lift or lower operator cab.

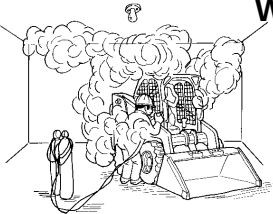
CORRECT



B-15591

- Cleaning and maintenance are required daily.

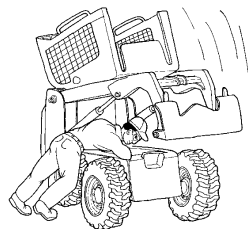
WRONG



B-15592

- 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.

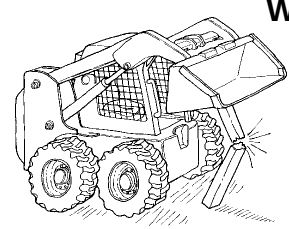
WRONG



B-15593

- 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.

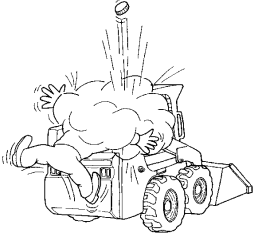
WRONG



B-15599

- 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.

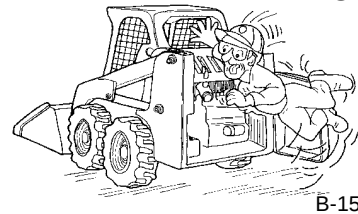
WRONG



B-15600

- 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-15601

- 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.

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**HYDROSTATIC
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**DRIVE
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MAIN FRAME

**ELECTRICAL
SYSTEM &
ANALYSIS**

**ENGINE
SERVICE**

HEATER

SPECIFICATIONS

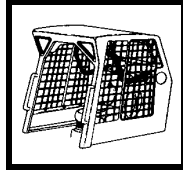
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FOREWORD

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:

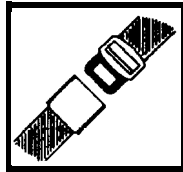
1. Check that the ROPS/FOPS (Including side screens) is in good condition and is not modified.



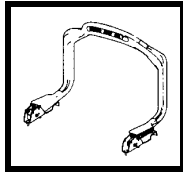
2. Check that ROPS mounting hardware is tightened and is Bobcat approved.



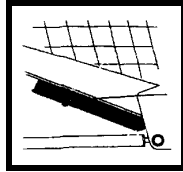
3. The seat belt must be correctly installed, functional and in good condition.



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



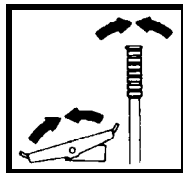
5. Check lift arm support device, replace if damaged.



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



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



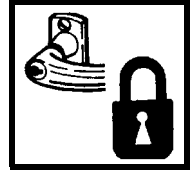
8. Check for correct function of the work lights



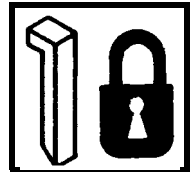
9. The parking brake must function correctly.



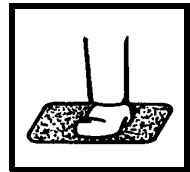
10. Enclosure door latches must open and close freely.



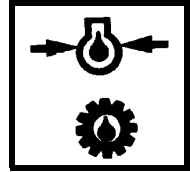
11. Bob-Tach wedges and linkages must function correctly and be in good condition.



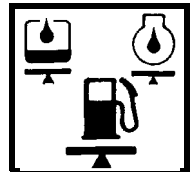
12. Safety treads must be in good condition.



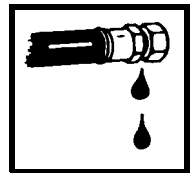
13. Check for correct function of indicator lamps (Optional on some models).



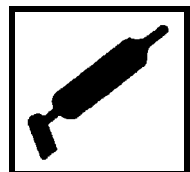
14. Check hydraulic fluid level, engine oil level and fuel supply.



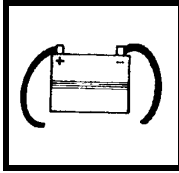
15. Inspect for fuel, oil or hydraulic fluid leaks.



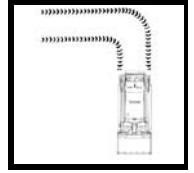
16. Lubricate the loader.



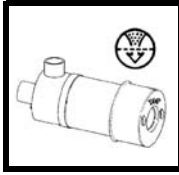
17. Check the condition of the battery and cables.



22. Operate the loader and check all functions.



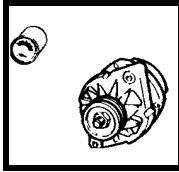
18. Inspect the air cleaner for damage or leaks. Check the condition of the element.



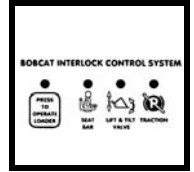
23. Check for any field modification not completed.



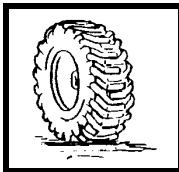
19. Check the electrical charging system.



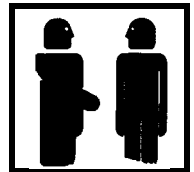
24. Check for correct function of the Bobcat Interlock Control System (BICS™) before the machine is returned to the customer.



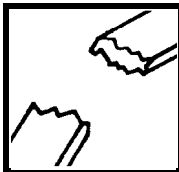
20. Check tires for wear and pressure.



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



21. Inspect for loose or broken parts or connections.



**CALIFORNIA
PROPOSITION 65 WARNING**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

SAFETY INSTRUCTIONS



Safety Alert Symbol

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



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



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

The following publications provide information on the safe use and maintenance of the Bobcat machine 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 machine or attachment contains operating information as well as routine maintenance and service procedures. It is a part of the machine and can be stored in a container provided on the machine. Replacement Operation & Maintenance Manuals can be ordered from your Bobcat dealer.
- Machine signs (decals) instruct on the safe operation and care of your Bobcat machine or attachment. The signs and their locations are shown in the Operation & Maintenance Manual. Replacement signs are available from your Bobcat dealer.
- An Operator's Handbook fastened to the operator cab. It's brief instructions are convenient to the operator. The handbook is available from your dealer in an English edition or one of many other languages. See your Bobcat dealer for more information on translated versions.
- The AEM Safety Manual delivered with the machine gives general safety information.
- The Service Manual and Parts Manual are available from your dealer for use by mechanics to do shop-type service and repair work.
- The Skid-Steer Loader Operator Training Course is available through your local dealer or at **www.training.bobcat.com** or **www.bobcat.com**. This course is intended to provide rules and practices of correct operation of the Skid-Steer Loader. The course is available in English and Spanish versions.
- Service Safety Training Courses are available from your Bobcat dealer or at **www.training.bobcat.com** or **www.bobcat.com**. They provide information for safe and correct service procedures.
- The Skid-Steer Loader Safety Video is available from your Bobcat dealer or at **www.training.bobcat.com** or **www.bobcat.com**.

SI SSL-0206 SM

SAFETY INSTRUCTIONS (CONT'D)

Fire Prevention

The machine and attachments have components that are at high temperature under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

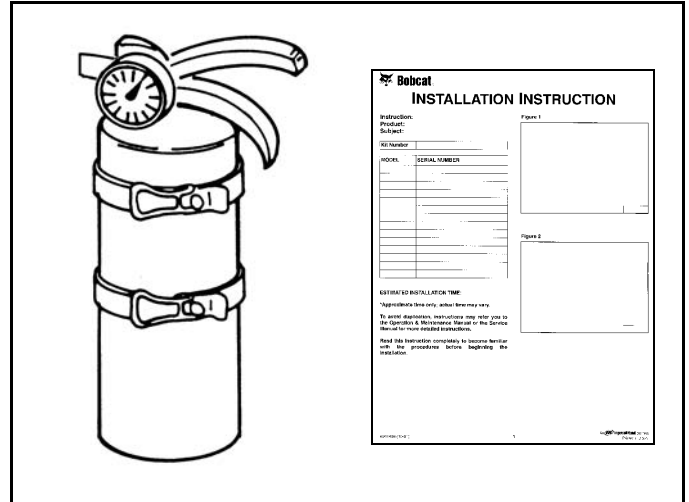
Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it will increase fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential hazard.

The spark arrestor muffler is designed to control the emission of hot particles from the engine and exhaust system, but the muffler and the exhaust gases are still hot.

- Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.
- The operator cab, engine compartment, and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazard and overheating.
- Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part.
- 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.
- Do not use ether or starting fluids on any engine which has glow plugs. These starting aids can cause explosion and injure you or bystanders.
- Always clean the machine, disconnect the battery, and disconnect the wiring from the controllers before welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the machine when welding. Have good ventilation when grinding or welding painted parts. Wear a dust mask when grinding painted parts. Toxic dust or gas can be produced.
- Stop the engine and let it cool before adding fuel. **NO SMOKING!**

- Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.
- Use the procedure in the Operation & Maintenance Manual for cleaning the spark arrestor muffler (if equipped).

Figure 1



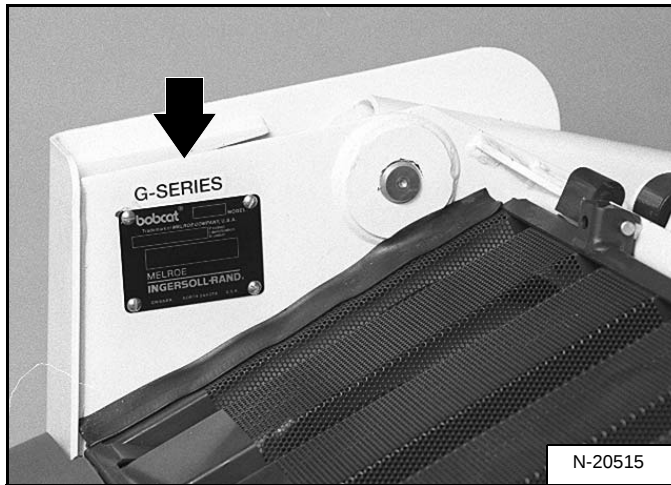
- Know where fire extinguishers and first aid kits are located and how to use them. Fire extinguishers are available from your Bobcat dealer **[Figure 1]**.

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

Figure 2



The loader serial number plate is located on the outside of the loader frame [Figure 2].

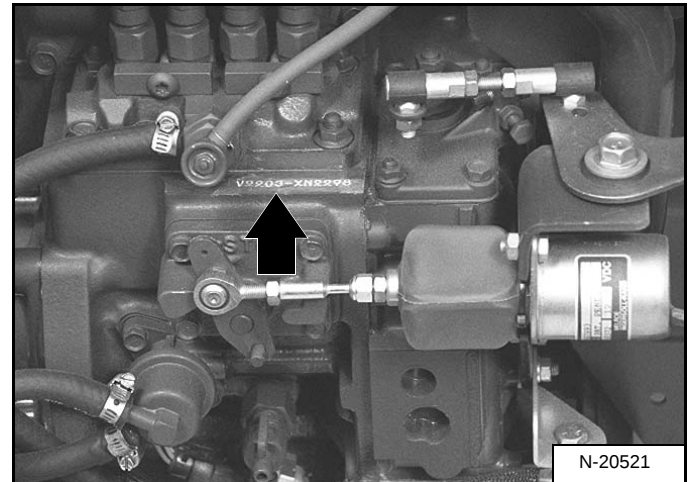
Explanation of loader Serial Number:

XXXX	XXXXX
Model 1.-Model/ Engine Combination	Model 2.-Production Sequence (Series)

1. The four digit Model/Engine Combination Module number identifies the model number and engine combination.
2. The five digit Production Sequence Number identifies the order which the loader is produced.

Engine Serial Number

Figure 3



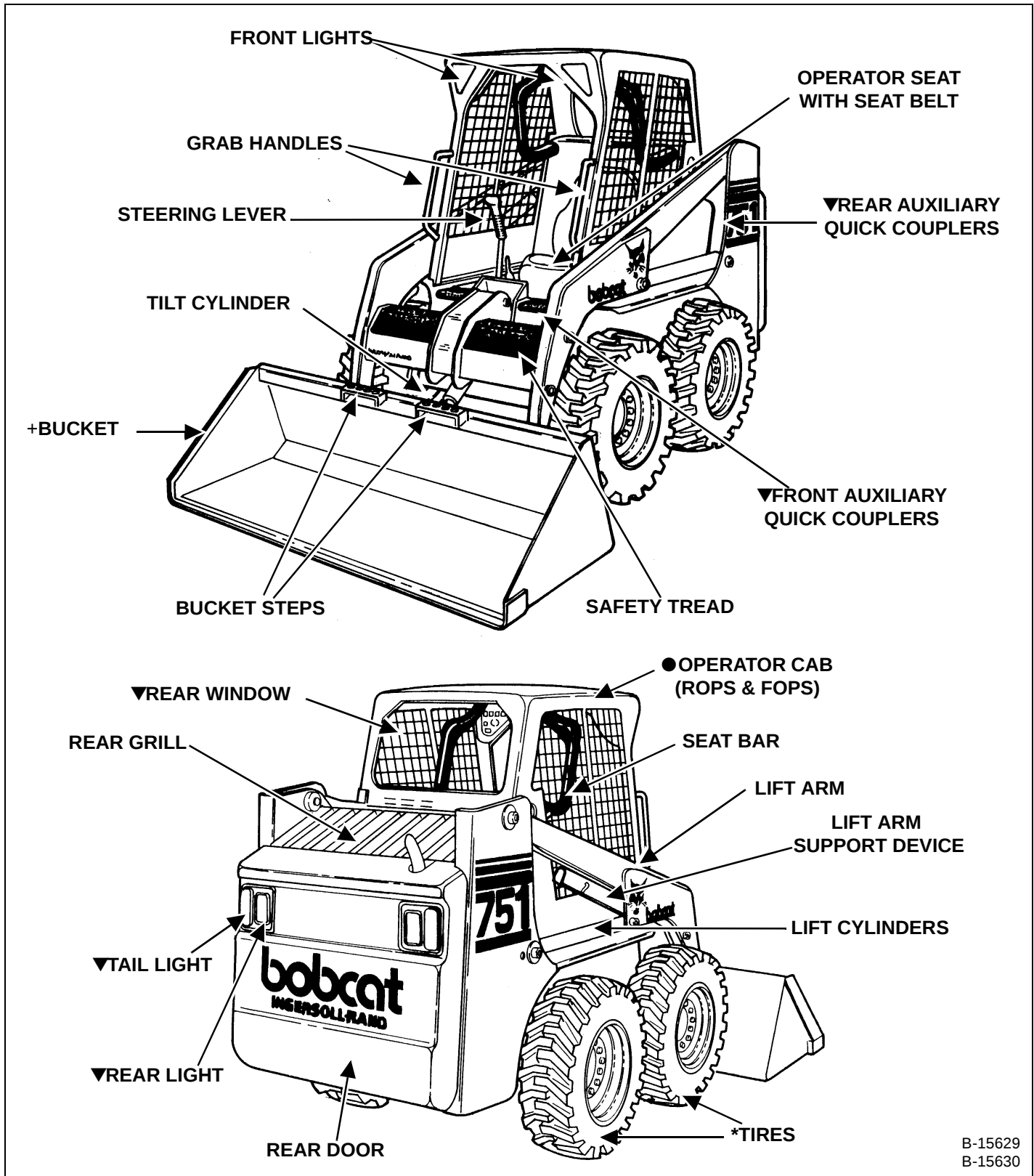
The engine serial number is in the location shown [Figure 3].

DELIVERY REPORT

Figure 4

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 [Figure 4].

LOADER IDENTIFICATION



B-15629
B-15630

▼ OPTIONAL OR FIELD ACCESSORY (Not Standard Equipment)

* TIRES - Flotation tires (Optional) are shown. The Bobcat loader is factory equipped with standard tires.

+ BUCKET - Several different buckets and other attachments are available for the Bobcat loader.

● ROPS, FOPS - Roll Over Protective Structure, per SAE J1040 and ISO 3471, and Falling Object Protective Structure per SAE J1043 and ISO 3449, Level I. Level II is available. The Bobcat loader is base-equipped with a standard operator cab as shown. Extra insulated cab is available as an option (Reduced noise level).

SAFETY & MAINTENANCE

SAFETY & MAINTENANCE

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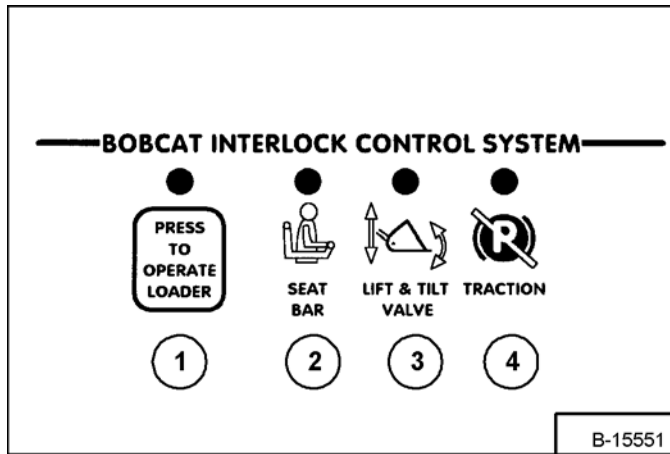
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TIRE MAINTENANCE	10-160-1
Mounting	10-160-1
Rotating	10-160-1
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TOWING THE LOADER	10-40-1
Procedure	10-40-1
TRANSPORTING THE BOBCAT LOADER	10-30-1
Procedure	10-30-1

BOBCAT INTERLOCK CONTROL SYSTEM (BICS™)

Inspecting The BICS™ Controller (Engine STOPPED - Key ON)

Figure 10-10-5



1. Sit in the operator's seat. Turn key ON (*Standard Panel*), press RUN / ENTER Button (*Deluxe Panel*), lower the Seat Bar and disengage the parking brake pedal. Press the PRESS TO OPERATE LOADER Button. Three BICS lights (Items 1, 2, & 3) [Figure 10-10-5] [PRESS TO OPERATE LOADER, SEAT BAR, and LIFT & TILT VALVE] on left instrument panel should be ON [Figure 10-10-5].
2. Raise the Seat Bar fully. All four BICS lights (Items 1, 2, 3, & 4) [Figure 10-10-5] [PRESS TO OPERATE LOADER, SEAT BAR, LIFT & TILT VALVE and TRACTION*] on left instrument panel should be OFF [Figure 10-10-5].

NOTE: Record what lights are blinking (if any) and the number of light flashes. (See BICS™ SYSTEM on Page 60-90-1.)

Inspecting Deactivation Of The Auxiliary Hydraulics System (Engine STOPPED - Key ON)

3. Sit in the operator's seat, lower the Seat Bar, and press the PRESS TO OPERATE LOADER Button. Press the auxiliary hydraulics FLOW Button. The auxiliary FLOW Button light will come ON. Raise the Seat Bar. The light should be OFF.

Inspecting The Seat Bar Sensor (Engine RUNNING)

4. Sit in the operator's seat, lower the seat bar, engage the parking brake pedal and fasten the seat belt.
5. Start the engine and operate at low idle. Press the PRESS TO OPERATE LOADER Button. While raising the lift arms, raise the Seat Bar fully. The lift arms should stop. Repeat using the tilt function.

Inspecting The Traction Lock (Engine RUNNING)

6. Fasten the seat belt, disengage the parking brake pedal, press the PRESS TO OPERATE LOADER Button and raise the Seat Bar fully. Move the steering levers slowly forward and backward. The TRACTION lock should be engaged. Lower the Seat Bar. Press the PRESS TO OPERATE LOADER Button.
7. Engage the parking brake pedal and move the steering levers slowly forward and backward. The TRACTION lock should be engaged.

NOTE: *The TRACTION light on the left instrument panel will remain OFF until the engine is started, the PRESS TO OPERATE LOADER Button is pressed and the parking brake is disengaged.

Inspecting The Lift Arm By-Pass Control

8. Raise the lift arms 6 feet (2 meters) off the ground. Stop the engine. Turn the lift arm by-pass control knob clockwise 1/4 turn. Pull up and hold the lift arm by-pass control knob until the lift arms slowly lower.

Additional Inspection For Loaders With Advanced Hand Controls (AHC)

9. Sit in the operator's seat and fasten the Seat Belt. Lower the Seat Bar, start the engine and press the PRESS TO OPERATE LOADER Button.
10. Raise the lift arms about 6 feet (2 meters) off the ground.
11. Turn key OFF (*Standard Panel*), press the STOP Button (*Deluxe Panel*), and wait for the engine to come to a complete stop.
12. Turn key ON (*Standard Panel*), press RUN/ENTER Button (*Deluxe Panel*). Press the PRESS TO OPERATE LOADER Button, move the left hand control toward the operator. The lift arms should not lower.
13. Move the right hand control away from the operator. The bucket (or attachment) should not tilt forward.



AVOID INJURY OR DEATH

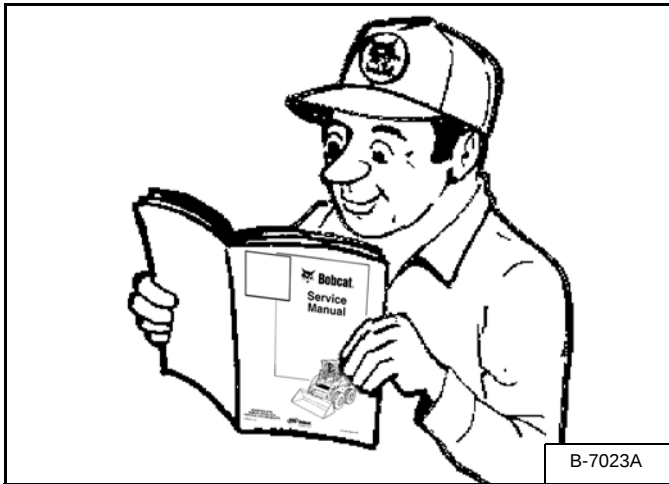
The Bobcat Interlock Control System (BICS) must deactivate the lift, tilt and traction drive functions. If it does not, contact your dealer for service. DO NOT modify the system.

W-2151-0394

LIFTING AND BLOCKING THE LOADER

Procedure

Figure 10-20-1



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. Failure to follow instructions can cause injury or death [Figure 10-20-1].

W-2003-1298

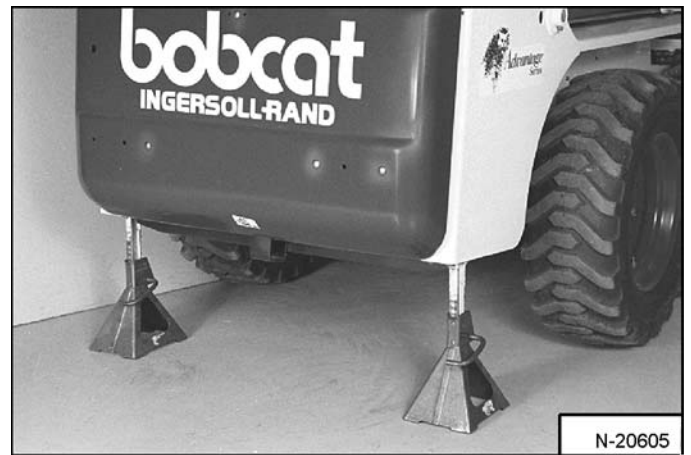
Always park the loader on a level surface.

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

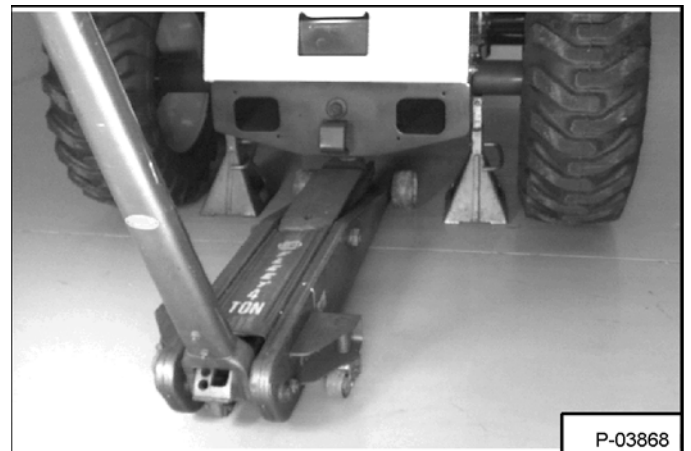
Figure 10-20-2



Put floor jack under the rear of the loader [Figure 10-20-2].

Lift the rear of the loader and install jackstands [Figure 10-20-2].

Figure 10-20-3



Put the floor jack under the front of the loader [Figure 10-20-3].

Lift the front of the loader and put jackstands under the axle tubes [Figure 10-20-3].

NOTE: Make sure the jackstands do not touch the tires. Make sure tires clear floor or any obstacles.

TRANSPORTING THE BOBCAT LOADER

Procedure

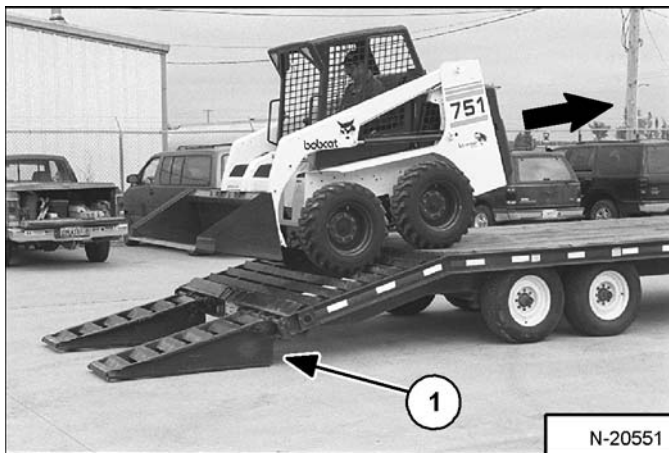
! WARNING

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

Be sure the transport and towing vehicles are of adequate size and capacity (See Performance on Page SPEC-10-1 for weight of loader.).

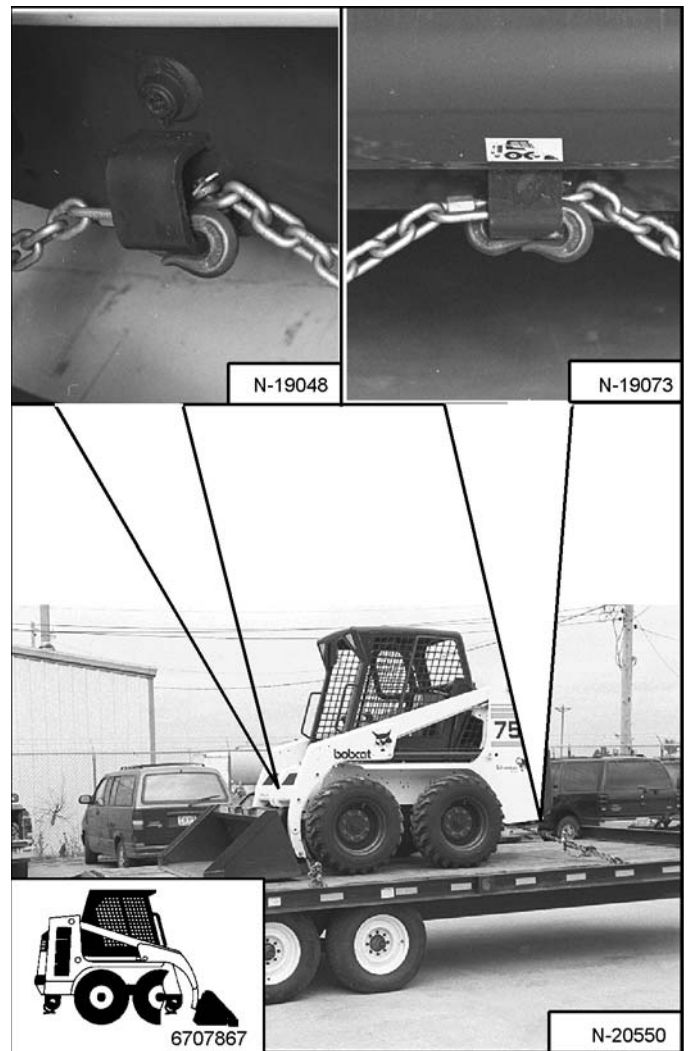
Figure 10-30-1



A loader with an empty bucket or no attachment must be loaded backward onto the transport vehicle [Figure 10-30-1].

The rear of the trailer must be blocked or supported (Item 1) [Figure 10-30-1] when loading or unloading the loader to prevent the front end of the trailer from raising up.

Figure 10-30-2



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 [Figure 10-30-2].

- Lower the bucket or attachment to the floor.
- Stop the engine.
- Engage the parking brake.
- Install chains at the front and rear loader tie down positions (Inset) [Figure 10-30-2].
- Fasten each end of the chain to the transport vehicle.

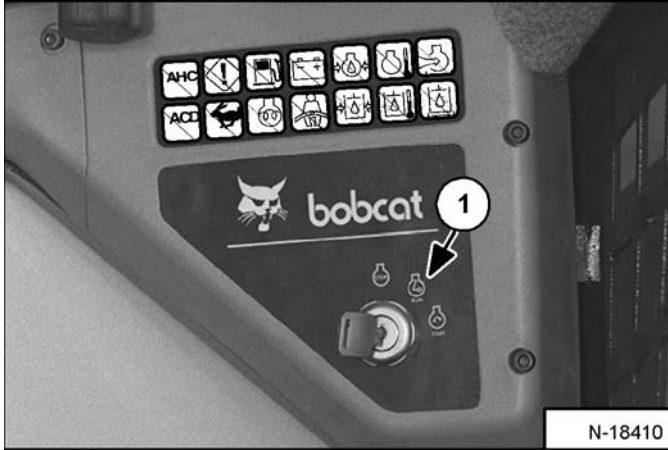
TOWING THE LOADER

Procedure

To prevent damage to the loader's hydrostatic system, the loader must be towed only a short distance at slow speed. (Example: Moving the loader onto a transport vehicle).

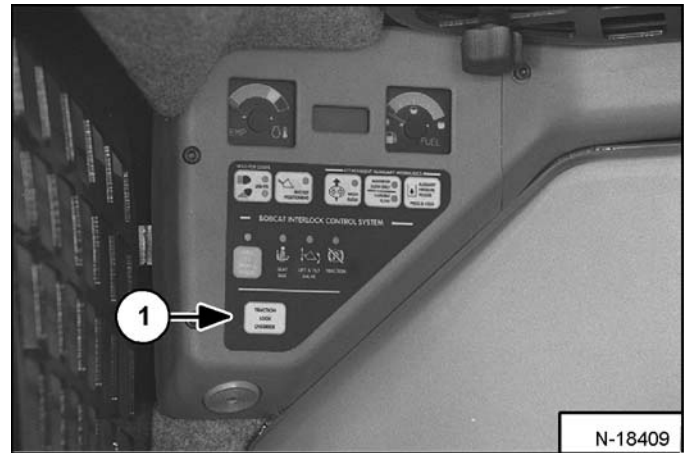
The towing chain (or cable) must be rated at 1 & 1/2 times the weight of the loader. (See Performance on Page SPEC-10-1.)

Figure 10-40-1



- Turn the key switch to RUN (Item 1) **[Figure 10-40-1]** (Standard Panel) OR press the RUN/ENTER Button (Deluxe Panel).

Figure 10-40-2



- Press the TRACTION LOCK OVERRIDE Button (Item 1) **[Figure 10-40-2]**.
- Tow the Bobcat at 2 MPH (3,2 km/hr) or less for not more than 25 feet (7,6 meters).

If the electrical system is not functioning or the engine does not run part of the brake system must be disassembled to move the loader. (See TRACTION LOCK on Page 60-110-1 for Removal And Installation procedure.)

LIFT ARM SUPPORT DEVICE

Engaging The 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.

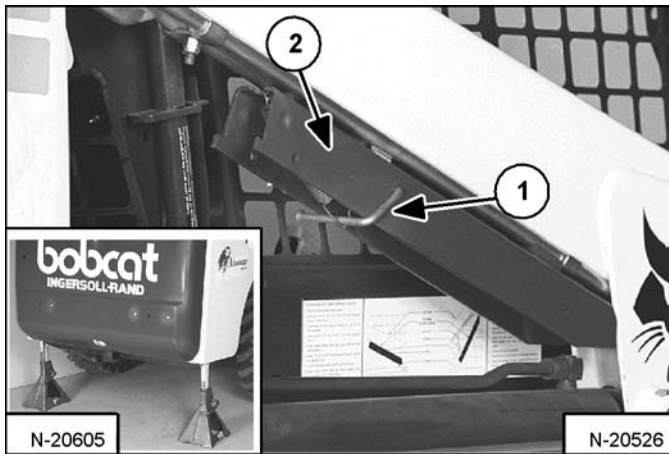
W-2059-0598

! WARNING

Service lift arm support device if damaged or if parts are missing. Using a damaged lift arm support or with missing parts can cause lift arms to drop causing injury or death.

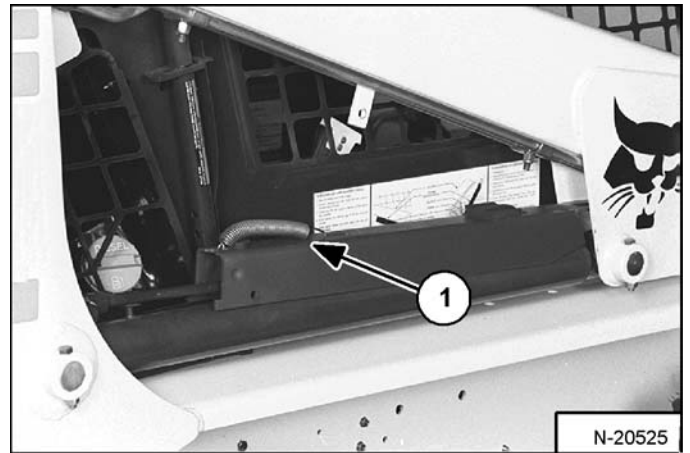
W-2271-1197

Figure 10-50-1



Install jackstands under the rear of the loader frame (Inset) [Figure 10-50-1]. Disconnect the spring from the lift arm support device retaining pin (Item 1) [Figure 10-50-1]. Support the lift arm support device (Item 2) [Figure 10-50-1] with your hand and remove the retaining pin.

Figure 10-50-2



Lower the lift arm support device on top of the lift cylinder. Hook the free end of the spring (Item 1) [Figure 10-50-2] to the lift arm support device so there will be no interference with the support device engagement.

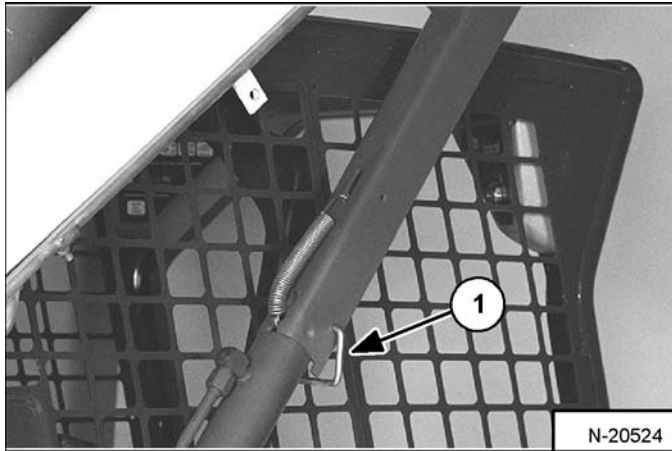
With the operator in the seat, seat belt fastened and seat bar lowered, start the engine.

Press the PRESS TO OPERATE LOADER button.

LIFT ARM SUPPORT DEVICE (CONT'D)

Engaging The Lift Arm Support Device (Cont'd)

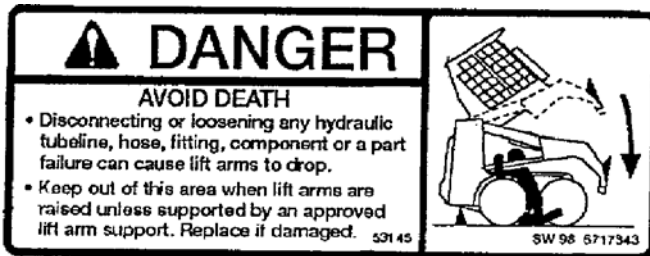
Figure 10-50-3



Raise the lift arms, until the lift arm support device drops onto the lift cylinder rod [Figure 10-50-3].

Lower the lift arms slowly until the support device is held between the lift arm and the lift cylinder. Stop the engine. Raise the seat bar and move pedals or the hand controls until both pedals lock.

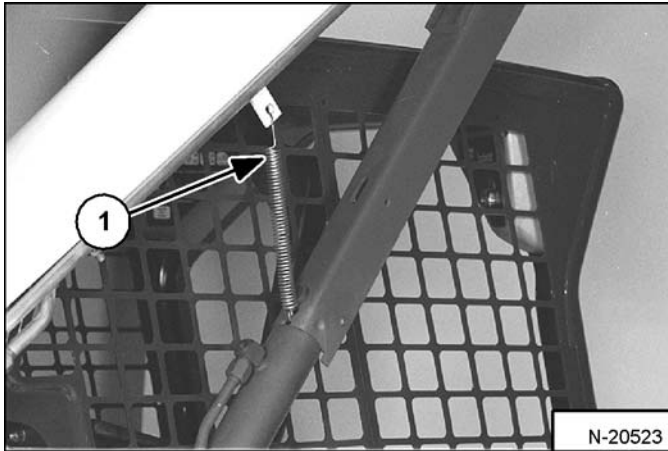
Install pin (Item 1) [Figure 10-50-3] into the rear of the lift arm support device below the cylinder rod.



LIFT ARM SUPPORT DEVICE (CONT'D)

Disengaging The Lift Arm Support Device

Figure 10-50-4



Remove the pin from the lift arm support device.

Connect the spring (Item 1) [Figure 10-50-4] from the lift arm support device to the bracket below the lift arms.

With the operator in the seat, seat belt fastened and seat bar lowered, start the engine.

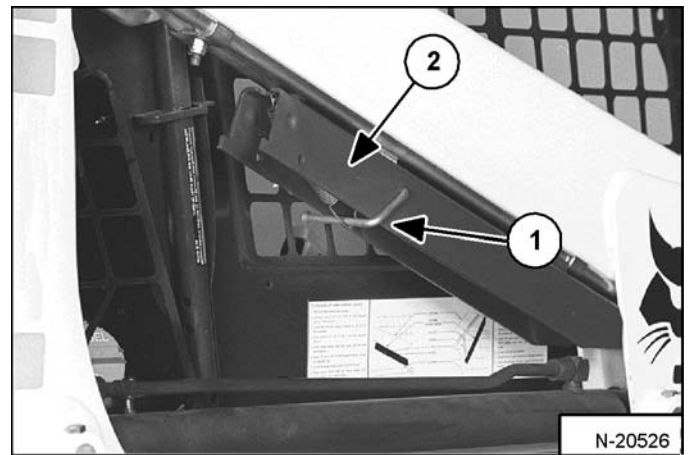
Press the PRESS TO OPERATE LOADER button.

Raise the lift arms a small amount and the spring will lift the support device off the lift cylinder rod. Lower the lift arms. Stop the engine.

Raise the seat bar and move pedals (or hand controls) until both pedals lock.

Disconnect the spring from the bracket.

Figure 10-50-5



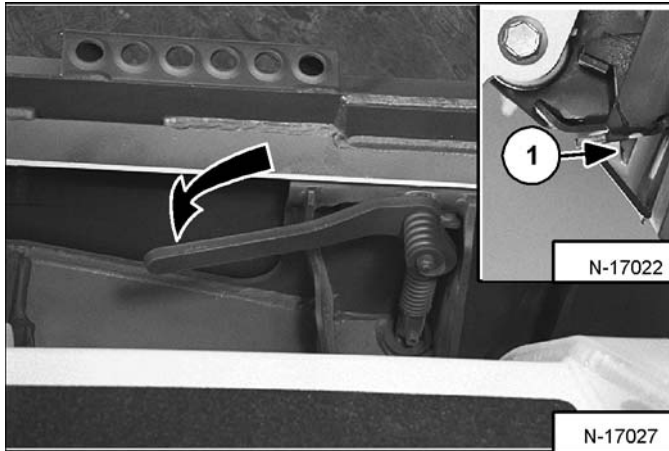
Raise the support device into storage position and insert pin (Item 1) [Figure 10-50-5] through lift arm support device (Item 2) [Figure 10-50-5] and bracket. Connect spring to pin.

Remove jackstands.

BOB-TACH

Inspection and Maintenance

Figure 10-60-1



Move the Bob-Tach levers to engage the wedges **[Figure 10-60-1]**. The levers and wedges must move freely.

The wedges must extend through the holes in the attachment mounting frame (Item 1) **[Figure 10-60-1]**.

WARNING

Bob-Tach wedges must extend through the holes in attachment. Lever(s) must be fully down and locked. Failure to secure wedges can allow attachment to come off and cause injury or death.

W-2102-0497

Figure 10-60-2

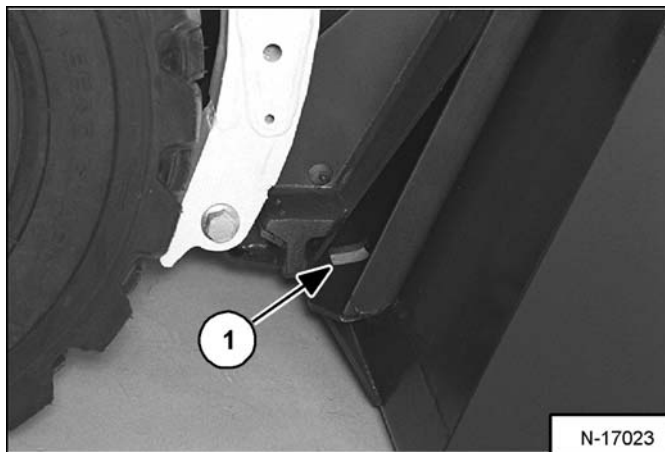
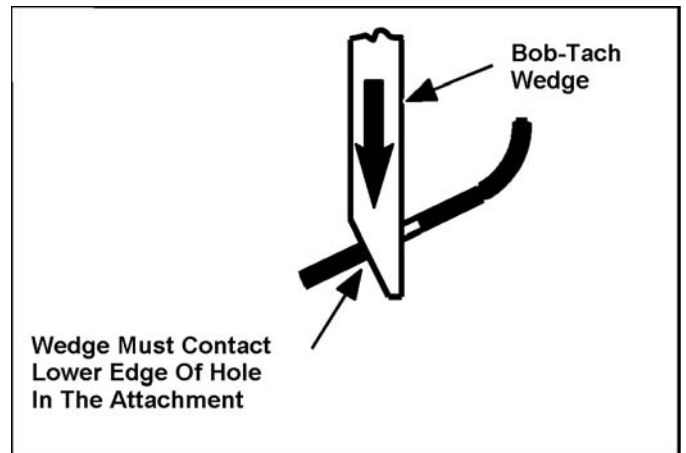


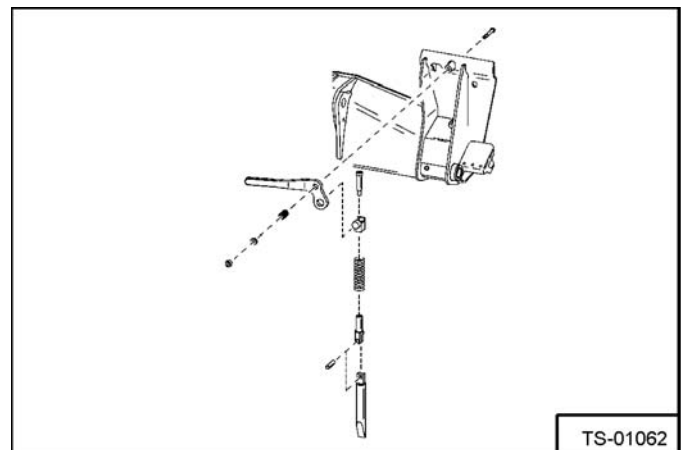
Figure 10-60-3



The spring loaded wedge (Item 1) **[Figure 10-60-1]** must contact the lower edge of the hole in the attachment (Item 1) **[Figure 10-60-2]** and **[Figure 10-60-3]**.

If the wedge does not contact the lower edge of the hole **[Figure 10-60-2]** and **[Figure 10-60-3]**, the attachment will be loose and can come off the Bob-Tach.

Figure 10-60-4



Inspect the mounting frame on the attachment and the Bob-Tach, linkages and wedges for excessive wear or damage **[Figure 10-60-4]**. Replace any parts that are damaged, bent, or missing. Keep all fasteners tight.

Look for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

Lubricate the wedges. (See SERVICE SCHEDULE and LUBRICATION OF THE BOBCAT LOADER on Page 10-170-1.)

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. The seat belt must be worn for roll over protection.

ROPS/FOPS - Roll Over Protective Structure per SAE J1040 and ISO 3471, and Falling Object Protective Structure per SAE J1043 and ISO 3449, Level I. Level II is available.

Level I - Protection from falling bricks, small concrete blocks, and hand tools encountered in operations such as highway maintenance, landscaping, and other construction site services.

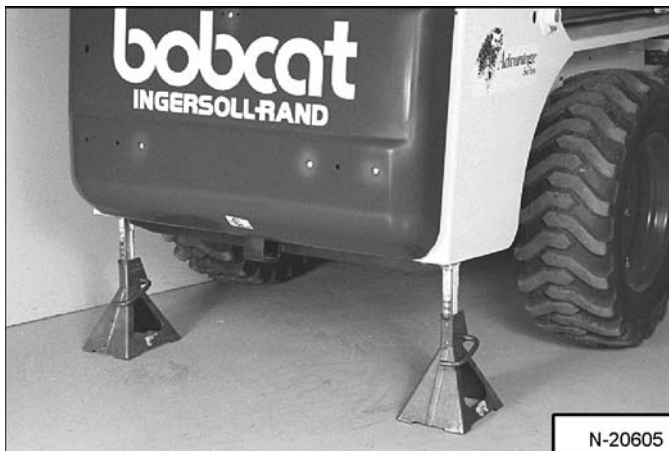
Level II - Protection from falling trees, rocks; for machines involved in site clearing, overhead demolition or forestry.

Raising The Operator Cab

Always stop the engine before raising or lowering the cab.

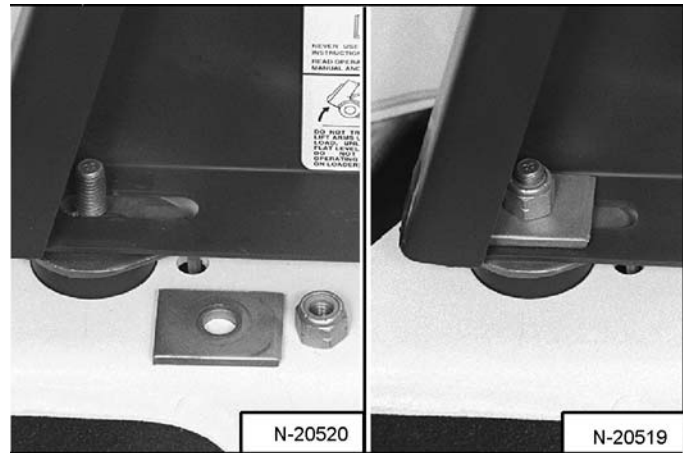
Stop the loader on a level surface. Lower the lift arms. If the lift arms must be up while raising the operator cab, install the lift arm support device. (See LIFT ARM SUPPORT DEVICE on Page 10-50-1.)

Figure 10-70-1



Install jackstands under the rear of the loader frame [Figure 10-70-1].

Figure 10-70-2



Loosen the nut (both sides) at the front corners of the operator cab [Figure 10-70-2].

Remove the nuts and plates [Figure 10-70-2] (both sides).

Figure 10-70-3



Lift on the grab handle and bottom of the operator cab slowly until the cab is all the way up and the latching mechanism engages [Figure 10-70-3].

OPERATOR CAB (CONT'D)

Raising The Operator Cab (Cont'd)

Advanced Hand Controls Only

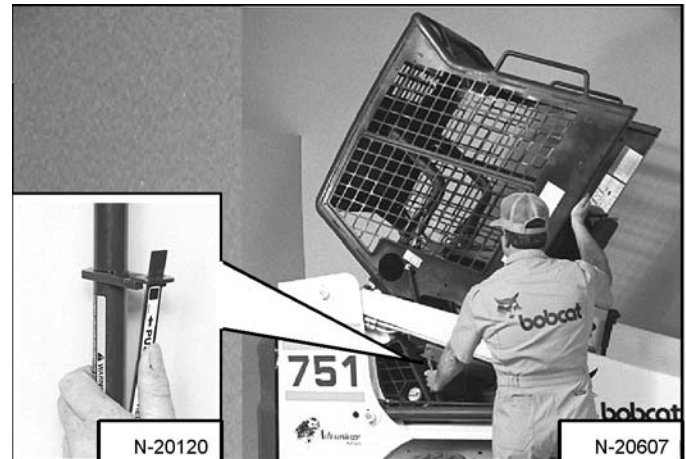


Lowering The Operator Cab

Always stop the engine before raising or lowering the cab.

NOTE: Make sure the seat bar is fully raised or lowered when lowering the cab. Always use the grab handles to lower the cab.

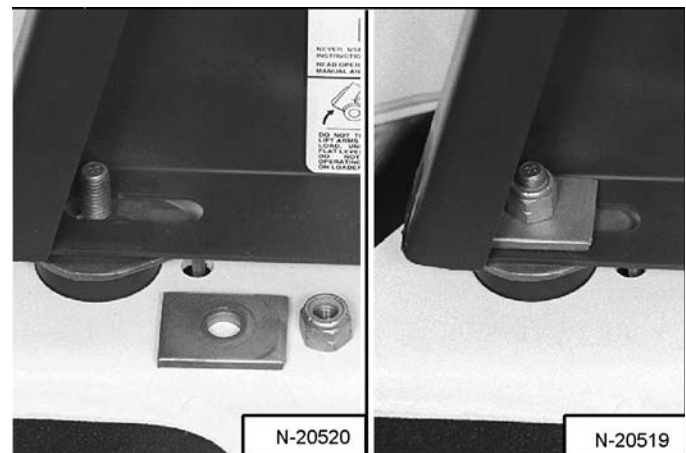
Figure 10-70-4



Pull down on the bottom of the operator cab until it stops at the latching mechanism [Figure 10-70-4].

Release the latching mechanism (Inset) [Figure 10-70-4] and pull the cab all the way down.

Figure 10-70-5



Install the plates and nuts [Figure 10-70-5] (both sides).

Tighten the nuts to 40-50 ft.-lbs. (54-68 Nm) torque.



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

OPERATOR CAB (CONT'D)

Emergency Exit

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

Rear Window (If Equipped)

Figure 10-70-6



Pull on the tag on the top of the rear window to remove the rubber cord [Figure 10-70-6].

Push the rear window out of the rear of the operator cab.

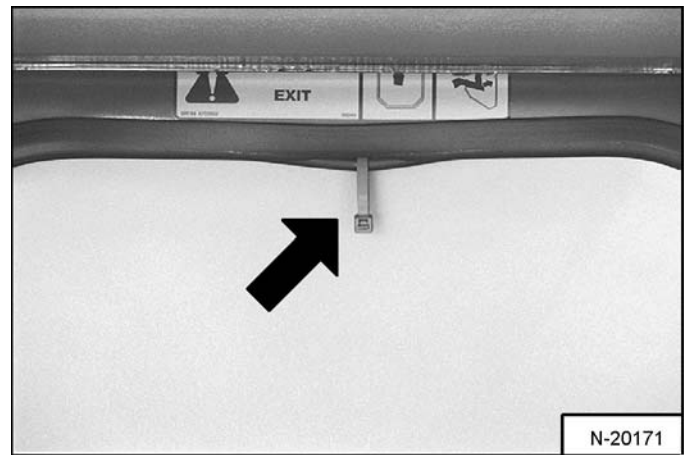
Figure 10-70-7



Exit through the rear of the operator cab [Figure 10-70-7].

Front Door (If Equipped)

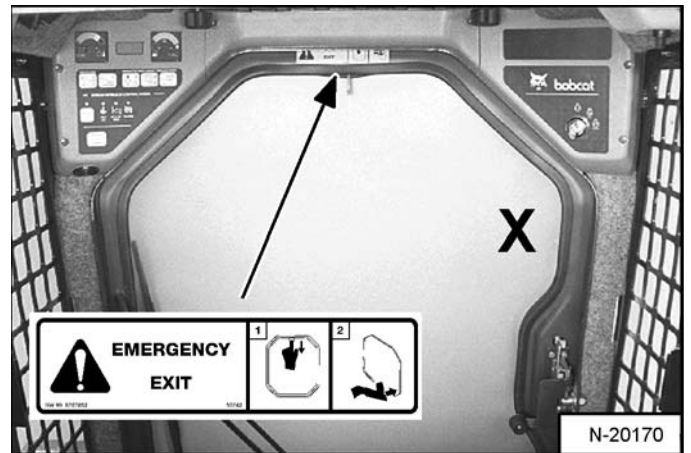
Figure 10-70-8



NOTE: When an Operator Cab Enclosure Kit is installed, the window of the front door can be used as an emergency exit. [Figure 10-70-8]

Pull the plastic loop at the top of the window in the front door to remove the rubber cord [Figure 10-70-8].

Figure 10-70-9



Push the window out with your foot [Figure 10-70-9] at any corner of the window.

Exit through the front door.

SEAT BAR RESTRAINT SYSTEM (FOOT PEDALS)

Description

The seat bar restraint system has a pivoting seat bar with arm rests and hydraulic valve spool interlocks for the lift and tilt functions.

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 spool interlocks require the operator to lower the seat in order to operate the foot pedal controls (if equipped).

When the seat bar is down, the PRESS TO OPERATE LOADER Button is activated and the engine is running, the lift, tilt, and traction drive functions can be operated.

When the seat bar is up, the lift and tilt control pedals are locked when returned to the NEUTRAL position.

Inspecting the Seat Bar

Sit in the seat and fasten the seat belt. Engage the parking brake. Pull the seat bar all the way down. Start the engine. Press the PRESS TO OPERATE LOADER Button. Operate each foot pedal to check that both the lift and tilt functions operate correctly. Raise the lift arms until the attachment is about 2 feet (600 mm) off the ground.

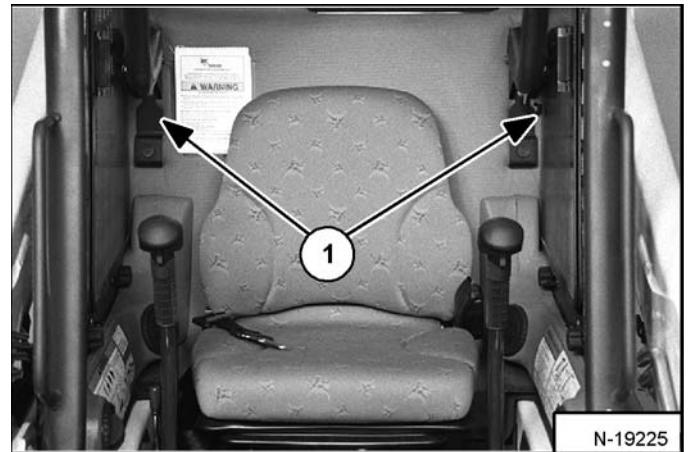
Raise the seat bar. Try to move each foot pedal. Pedals must be firmly locked in the NEUTRAL position. There must be no motion of the lift arms or tilt (attachment) when the controls are moved.

Pull the seat bar down, press the PRESS TO OPERATE LOADER Button, lower the lift arms. Operate the lift control. While the lift arms are going up, raise the seat bar. The lift arms must stop.

Lower the seat bar, press the PRESS TO OPERATE LOADER Button, lower the lift arms and put the attachment 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. Unfasten the seat belt.

Maintaining the Seat Bar

Figure 10-80-1



See SERVICE SCHEDULE on Page 10-100-1, and on the loader for correct service interval.

Use compressed air to clean any debris or dirt from the pivot points (Item 1) [Figure 10-80-1]. Do not lubricate. Inspect all mounting hardware. The correct bolt torque is 26 ft.-lbs. (35 Nm).

If the seat bar system and hydraulic valve spool interlocks do not function correctly check all electrical wiring and connections. Replace parts that are worn or damaged. Use only genuine Bobcat replacement parts.

WARNING

AVOID INJURY OR DEATH

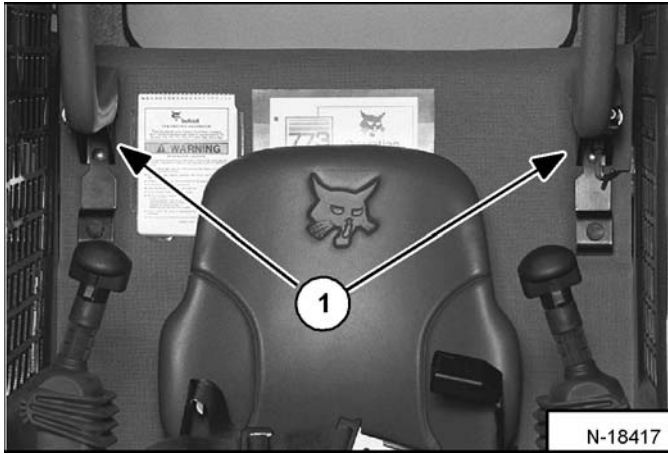
- The seat bar system must lock the lift and tilt control pedals in neutral when the seat bar is up. Service the system if pedals do not lock correctly.

W-2105-1285

SEAT BAR RESTRAINT SYSTEM (ADVANCED HAND CONTROLS)

Description

Figure 10-81-1



The seat bar restraint system [Figure 10-81-1] has a pivoting seat bar with arm rests .

The operator controls the use of the seat bar. The seat bar in the down position helps to keep the operator in the seat.

When the seat bar is down, engine running and the PRESS TO OPERATE LOADER Button is pressed, the lift, tilt, and traction drive functions can be operated.

When the seat bar is up, the lift, tilt and traction drive functions are deactivated.

Inspecting the Seat Bar

Sit in the seat. Turn the key ON (*Standard Panel*), press RUN /ENTER Button (*Deluxe Panel*), lower the seat bar and press the PRESS TO OPERATE LOADER Button.

Move each hand control back and forth. You should hear the zip-zip sound of the lift and tilt actuators moving the control valve spools (under the seat).

Raise the seat bar fully. Move each hand control back and forth. There must be no zip-zip sound of the lift or tilt actuators. If either actuator makes a sound while the seat bar is raised, contact your dealer for service.

Maintaining the Seat Bar

See SERVICE SCHEDULE on Page 10-100-1, and on the loader for correct service interval.

Use compressed air to clean any debris or dirt from the pivot parts (Item 1) [Figure 10-81-1]. Do not lubricate. Inspect all mounting hardware. The correct bolt torque is 26 ft.-lbs. (35 Nm).

If the seat bar system does not function correctly, replace parts that are worn or damaged. Use only genuine Bobcat replacement parts.

WARNING

The seat bar system must deactivate the lift and tilt control functions when the seat bar is up. Service the system if hand controls do not deactivate.

W-2355-0799

REMOTE START

Procedure

The tool listed will be need to do the following procedure:

MEL1563: Remote Start Tool Kit

Figure 10-90-1



The remote start (Item 1) [Figure 10-90-1] is required when the operator cab is in the raised position for service and the service technician needs to turn the key switch on or start the engine. Example: adjusting the steering linkage.

Lift and block the loader. (See LIFTING AND BLOCKING THE LOADER on Page 10-20-1.)

Raise the lift arms (if required by the procedure) and install an approved lift arm support device. (See LIFT ARM SUPPORT DEVICE on Page 10-50-1.)

Raise the operator cab (if required by the procedure). (See Raising The Operator Cab on Page 10-70-1.)

Open the rear door of the loader.

Figure 10-90-2

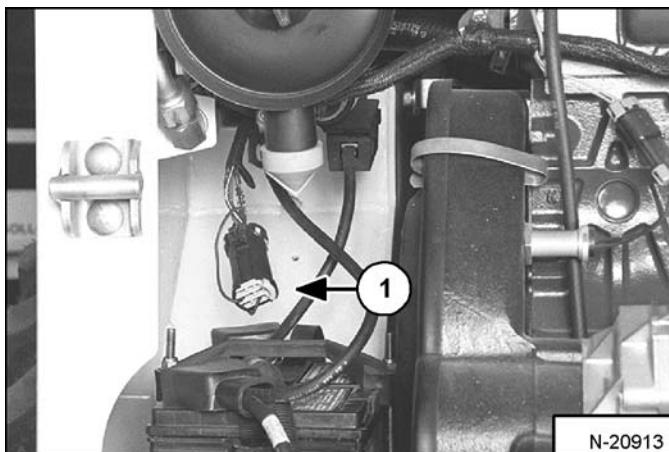
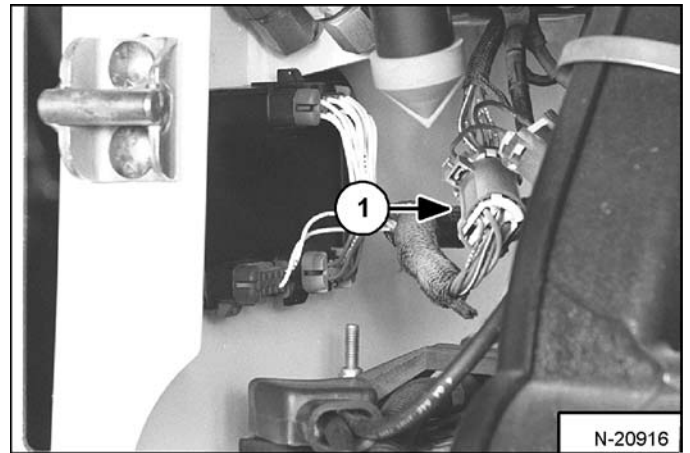
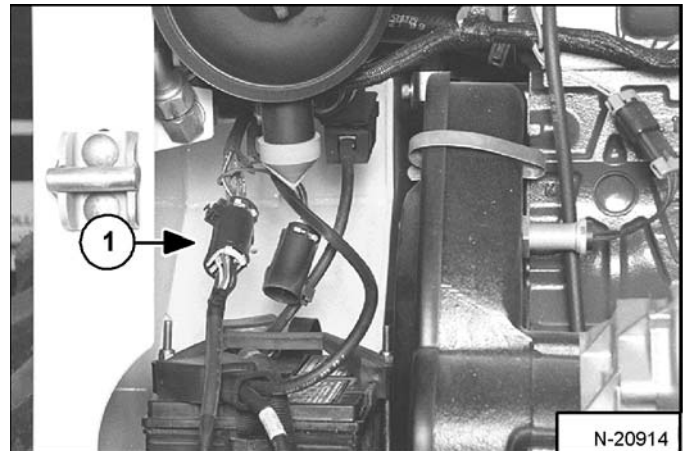


Figure 10-90-3



Remove the plug (Item 1) [Figure 10-90-2] or disconnect the attachment control harness (Item 1) [Figure 10-90-3] if connected.

Figure 10-90-4



Connect the remote start tool to the engine harness connector (Item 1) [Figure 10-90-4].

NOTE: The key switch on the right-hand side operator panel must be in the off position or the Remote Start Kit will not operate.

WARNING

AVOID INJURY OR DEATH

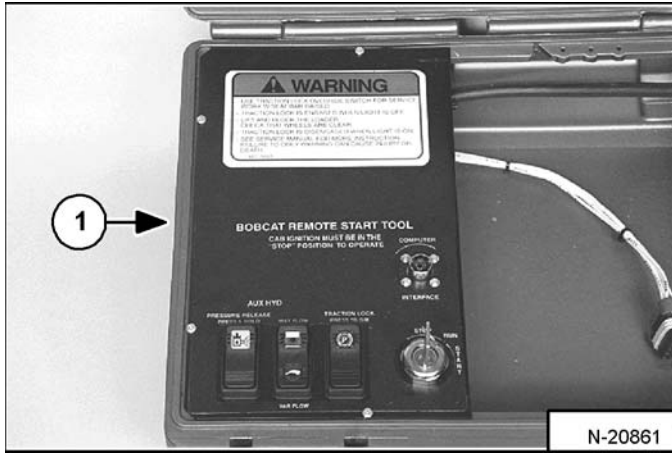
With the 7-pin connector plugged into the loader and the Remote Start Key Switch in the OFF position, the loader can still be started from the operator panel inside the cab. Placing the key switch of the remote start tool in the run position disconnects the operator panel key switch from the start circuit. If the service technician will be working in the engine area it is important to remove the operator panel keys.

W-2357-0899

REMOTE START (CONT'D)

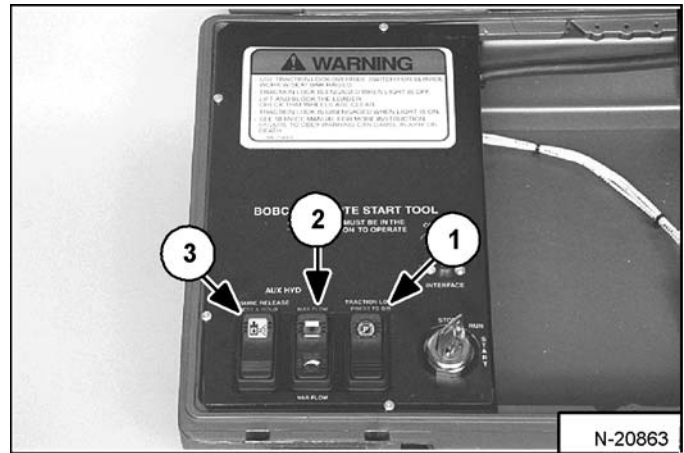
Procedure (Cont'd)

Figure 10-90-5



The remote start tool (Item 1) [Figure 10-90-5] has three rocker switches.

Figure 10-90-6



The traction lock switch (Item 1) [Figure 10-90-6] is used to turn traction lock on or off. Push the switch to the override position. The switch will illuminate to indicate traction lock **VERRIDE**, in this position the wheels are able to turn.

The maximum flow/variable flow switch (Item 2) [Figure 10-90-6] is used to activate the auxiliary hydraulics. Pressing the switch once will activate variable flow. Pressing the switch again will activate maximum flow. The switch will illuminate to indicate which flow rate is active. Pressing the switch a third time will turn the flow **OFF**. The switch is used when checking pressures and flow rate.

The auxiliary pressure release (Item 3) [Figure 10-90-6] is used to release hydraulic pressure to the front and/or rear auxiliary couplers. To release pressure; push and hold the switch for three seconds.

NOTE: With the engine running; pushing and holding the pressure release switch this will cause the engine to stop in three seconds. To relieve the pressure; continue to press the switch after the engine has stopped.

WARNING

- USE TRACTION LOCK OVERRIDE SWITCH FOR SERVICE WORK W/SEAT BAR RAISED.
- TRACTION LOCK IS ENGAGED WHEN LIGHT IS OFF.
- LIFT AND BLOCK THE LOADER. CHECK THAT WHEELS ARE CLEAR.
- TRACTION LOCK IS DISENGAGED WHEN LIGHT IS ON.
- SEE SERVICE MANUAL FOR MORE INSTRUCTION. FAILURE TO OBEY WARNING CAN CAUSE INJURY OR DEATH.

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SERVICE SCHEDULE

Chart

Maintenance work must be done at regular intervals. Failure to do so will 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 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

SERVICE SCHEDULE		HOURS					
ITEM	SERVICE REQUIRED	8-10	50	100	250	500	1000
Engine Oil	Check the oil level and add oil as needed.						
Engine Air Filter and Air System	Check display panel for lighted icon and/or Service Code. Service only when required. Check for leaks and damaged components.						
Engine Cooling System	Clean debris from oil cooler, radiator & grill. Check coolant level in recovery tank when engine is cold. Add 53% propylene glycol premixed with 47% water as needed.						
Tires	Check for damaged tires and correct air pressure. Inflate to MAXIMUM pressure shown on tire sidewall.						
Seat Belt, Seat Bar and Control Interlocks	Check the condition of seat belt. Check the seat bar and control interlocks. Clean dirt and debris from moving parts.						
Safety Signs and Safety Treads	Check for damaged signs (decals) and safety treads. Replace any signs or safety treads that are damaged or worn.						
Indicators & Lights (Opt.)	Check for correct operation of all indicators and lights.						
Operator Cab	Check the fastening bolts, washers and nuts. Check the condition of the cab.						
Lift Arms, Cylinders, Bob-Tach Pivot Pins and Wedges	Lubricate with multi-purpose lithium based grease.						
Fuel Filter	Remove the trapped water.						
Heater Filters	Clean or replace filters as needed during heating/cooling season.						
Bobcat Interlock Control System (BICS™)	Check the four (4) BICS™ indicator lights and functions are activated. See details in this Manual.						
Hydraulic Fluid, Hoses and Tubelines	Check fluid level and add as needed. Check for damage and leaks. Repair or replace as needed.						
Final Drive Trans. (Chaincase)	Check oil level. Check for correct operation. Repair or adjust as needed.						
Foot Pedals or Hand Controls and Steering Levers	Check for correct operation. Repair or adjust as needed.						
Wheel Nuts	☐ Check for loose wheel nuts and tighten to 105-115 ft.-lbs. (142-156 Nm) torque						
Parking Brake	Check operation.						
Spark Arrestor Muffler	Clean the spark chamber.						
Battery	Check cables, connections and electrolyte level. Add distilled water as needed.						
Steering Lever Pivots	Grease two fittings.						
Engine/Hydrostatic Drive Belt	* Check for wear or damage. Adjust as needed.						
Fan Drive Gearbox	Check gear lube level. Add as needed.						
Alternator Belt	Check belt tension and adjust as needed.						
Engine Oil and Filter	^ Replace oil and filter. Use CD or better grade oil and Bobcat filter.						
Fuel Filter	Replace the filter element.						
Bobcat Interlock Control System (BICS™)	Check the function of the lift arm by-pass control						
Hydraulic Reservoir Breather Cap	Replace the reservoir breather cap.						
Hyd./Hydro. Filter	● Replace the filter element.						
Hydraulic Reservoir	Replace the fluid						
Final Drive Trans. (Chaincase)	Replace the fluid						
Case Drain Filters	■ Replace the filters						

☐ Check wheel nut torque every 8 hours for the first 24 hours.

* Inspect the new belt after first 50 hours.

● Replace filter element after the first 50 hours and when the transmission warning light comes ON.

^ First oil and filter change must occur at 50 hours; 250 hours thereafter.

■ Or every 12 months.

FUEL SYSTEM

Fuel Specifications

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

The following is one suggested blending guideline which should prevent fuel gelling during cold temperatures:

Temp. F° (C°)	No. 2	No.1
+15°(9°)	100%	0%
Down to -20° (-29°)	50%	50%
Below -20° (29°)	0%	100%

Contact your fuel supplier for local recommendations.

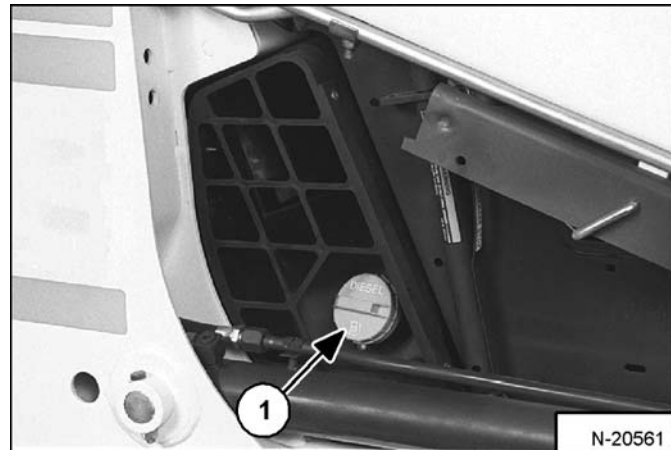
Filling the Fuel Tank



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

W-2063-0887

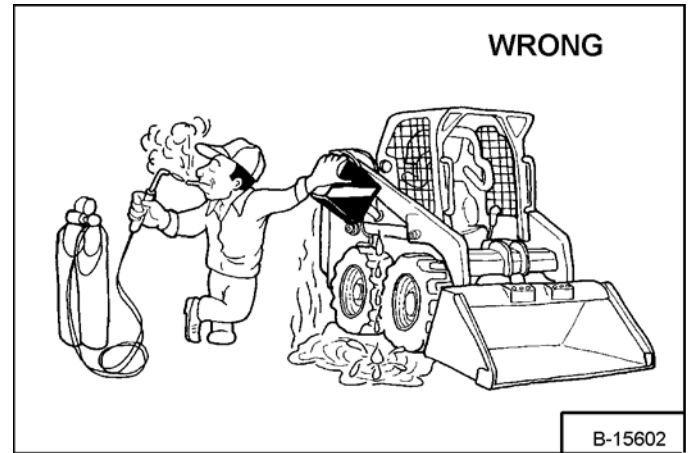
Figure 10-110-7



Open the rear door.

Remove the fuel fill cap (Item 1) [Figure 10-110-7].

Figure 10-110-8



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!** [Figure 10-110-8].

Install and tighten the fuel fill cap (Item 1) [Figure 10-110-7].



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.

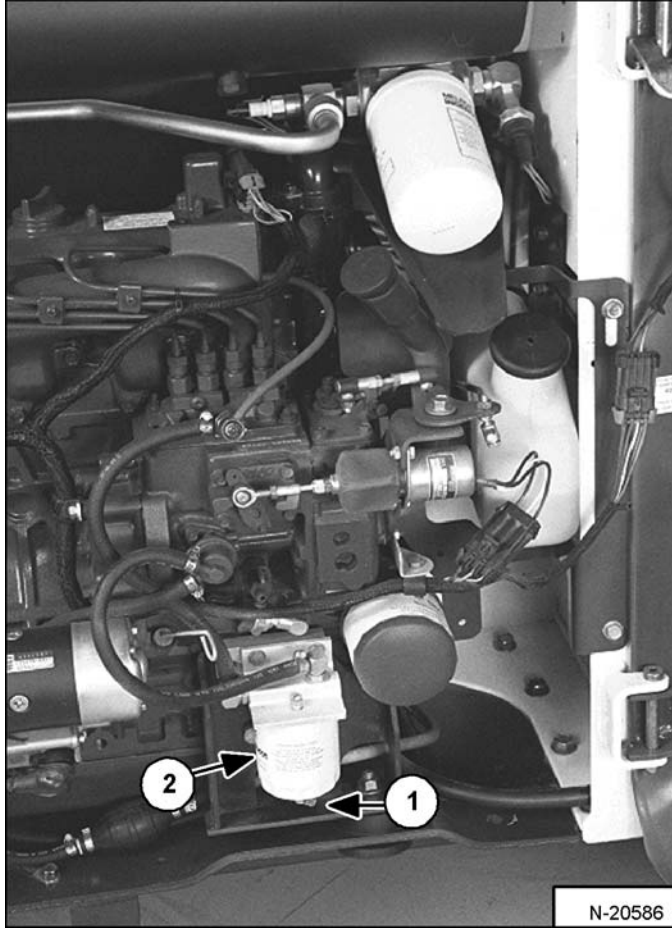
W-2103-1285

FUEL SYSTEM (CONT'D)

Fuel Filter

See SERVICE SCHEDULE on Page 10-100-1, for the service interval for removing water from, or replacing the fuel filter.

Figure 10-110-9



Loosen the drain (Item 1) **[Figure 10-110-9]** at the bottom of the filter element to remove water from the filter.

Remove the filter element (Item 2) **[Figure 10-110-9]**.

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

Remove the air from the fuel system. (See Removing Air From The Fuel System on Page 10-110-3.)

FUEL SYSTEM (CONT'D)

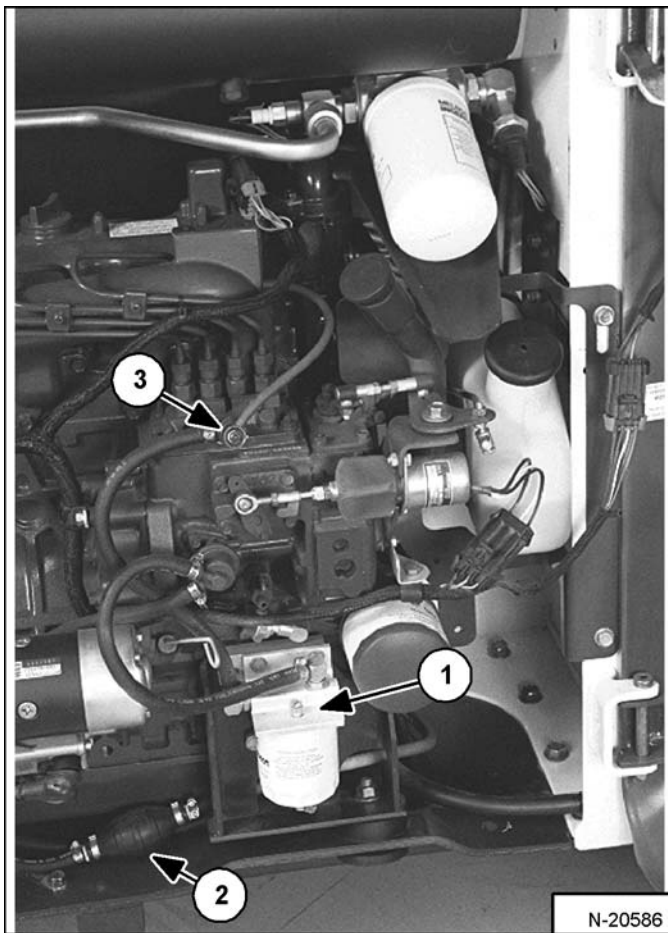
Removing Air From The Fuel System

! 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

Figure 10-110-10



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

Open the vent (Item 1) [Figure 10-110-10] on the fuel filter housing.

Squeeze the hand pump (priming bulb) (Item 2) [Figure 10-110-10] until fuel flows from the vent with no air bubbles.

Close the vent (Item 1) [Figure 10-110-10] on the fuel filter housing.

Open the vent (Item 3) [Figure 10-110-10] on the fuel injection pump.

Squeeze the hand pump (priming bulb) (Item 2) [Figure 10-110-10] until the pump feels solid.

Tighten the vent plug (Item 3) [Figure 10-110-10].

Start the engine.

It may be necessary to open the vent plug (Item 3) [Figure 10-110-10] briefly while the engine is running. Close the vent when the engine runs smoothly.

AIR CLEANER SERVICE

Checking

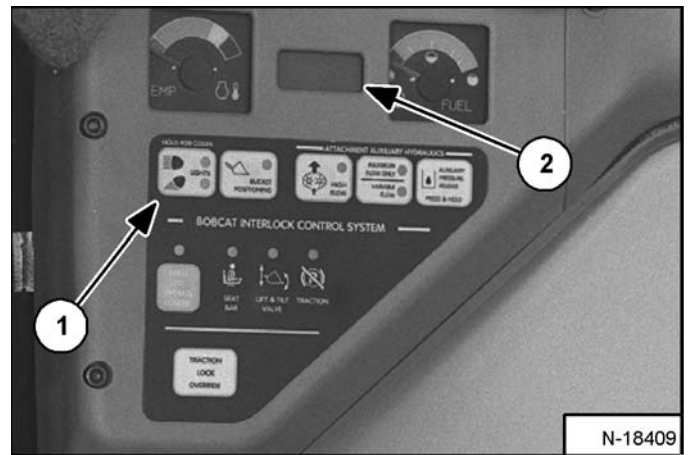
Figure 10-120-1



It is important to change the air filter element only when the Air Cleaner icon in the right panel is ON (Item 1) [Figure 10-120-1] and you hear three beeps from the alarm.

Replace the inner filter every third time the outer filter is replaced or as indicated on Contents Page 70-01.

Figure 10-120-2



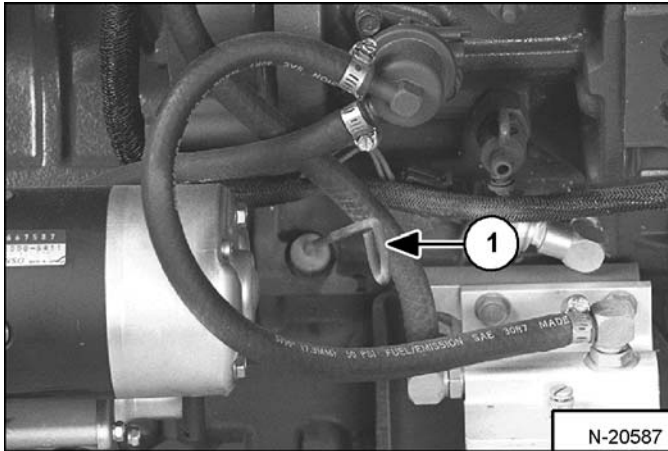
Press and hold the LIGHT Button (Item 1) [Figure 10-120-2] for two seconds.

If the filter element needs replacement, the CODE [01-17] (Air Filter Plugged) will show in the HOURMETER / CODE DISPLAY (Item 2) [Figure 10-120-2].

ENGINE LUBRICATION SYSTEM

Checking Engine Oil

Figure 10-130-1



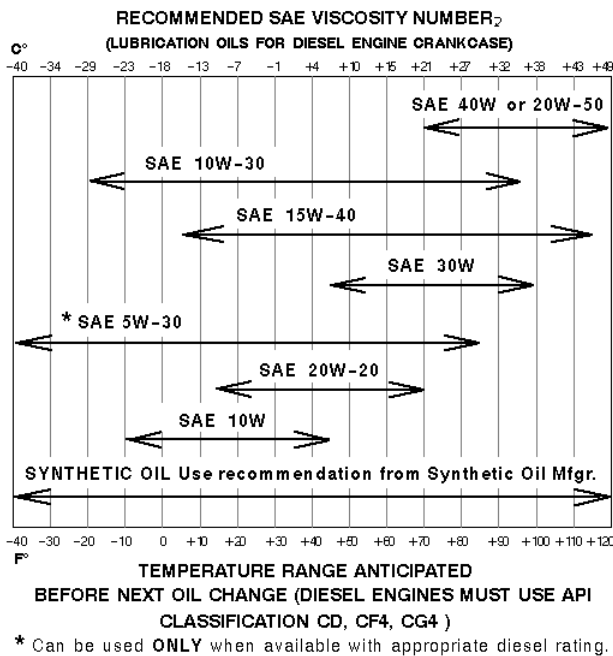
Check the engine oil level every day before starting the engine for the work shift.

Open the rear door and remove the dipstick (Item 1) [Figure 10-130-1].

Keep the oil level between the marks on the dipstick.

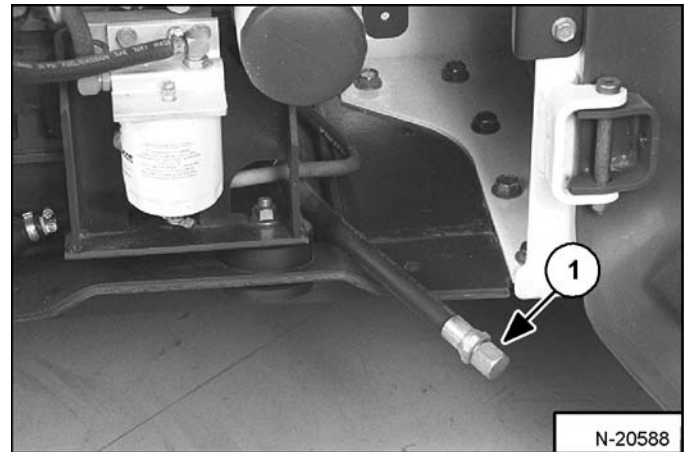
Use a good quality motor oil that meets API Service Classification of CD or better (See Oil Chart below).

Oil Chart



Replacing Oil And Filter

Figure 10-130-2



See SERVICE SCHEDULE on Page 10-100-1 for the service interval for replacing the engine oil and filter.

Run the engine until it is at operating temperature. Stop the engine.

Open the rear door.

Remove the drain plug (Item 1) [Figure 10-130-2].

Drain the oil into a container and dispose of used oil in an environmentally safe manner.

ENGINE LUBRICATION SYSTEM (CONT'D)

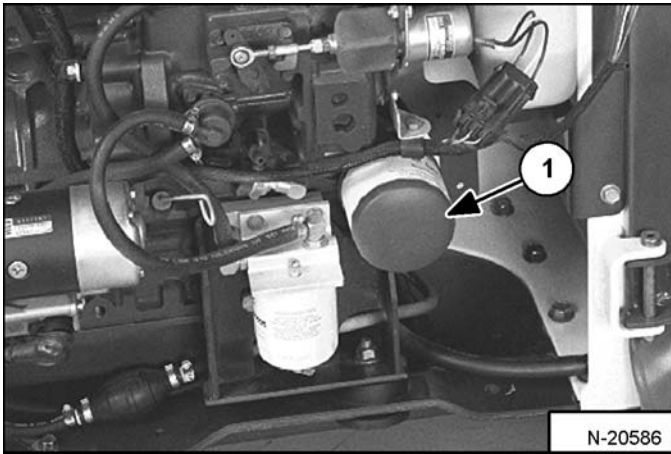
Replacing Oil And Filter (Cont'd)

! 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.

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Figure 10-130-3



Remove the oil filter (Item 1) [Figure 10-130-3].

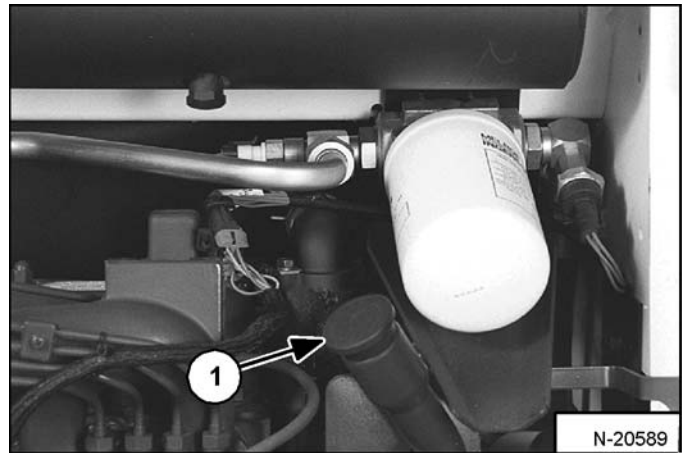
Clean the filter housing surface.

Put clean oil on the new oil filter gasket.

Install the filter and hand tighten.

Install and tighten the drain plug.

Figure 10-130-4



Remove the filler cap (Item 1) [Figure 10-130-4].

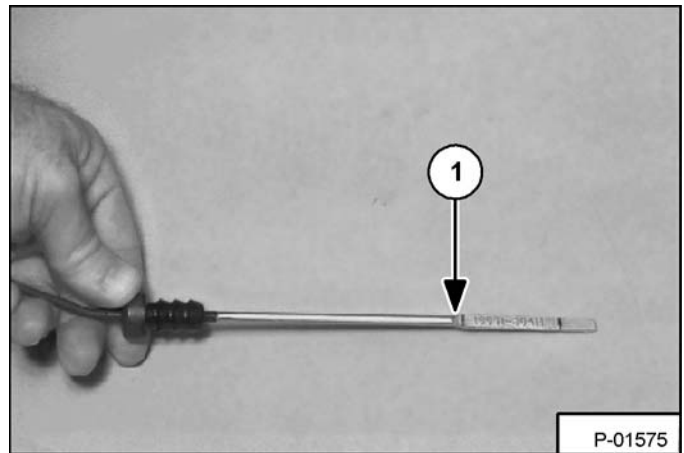
Put oil in the engine. (See LOADER SPECIFICATIONS on Page SPEC-10-1 for Capacity). (See Oil Chart on Page 10-130-1.)

Start the engine and let it run for several minutes.

Stop the engine.

Check for leaks at the oil filter and check the oil level.

Figure 10-130-5



Add oil as needed if it is not at the top mark (Item 1) [Figure 10-130-5] on the dipstick.

ENGINE COOLING SYSTEM

Check the cooling system every day to prevent overheating, 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.

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IMPORTANT

AVOID ENGINE DAMAGE

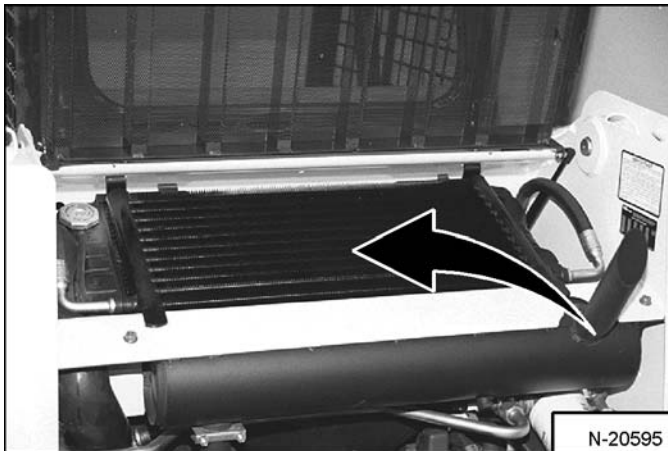
Always use the correct ratio of water to anti freeze. Too much antifreeze reduces cooling system efficiency and may cause serious premature engine damage.

Too little antifreeze reduces the additives which protect the internal engine components; reduces the boiling point and freeze protection of the system. Always add a premixed solution. Adding full strength concentrated coolant can cause serious premature engine damage.

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Cleaning The Cooling System

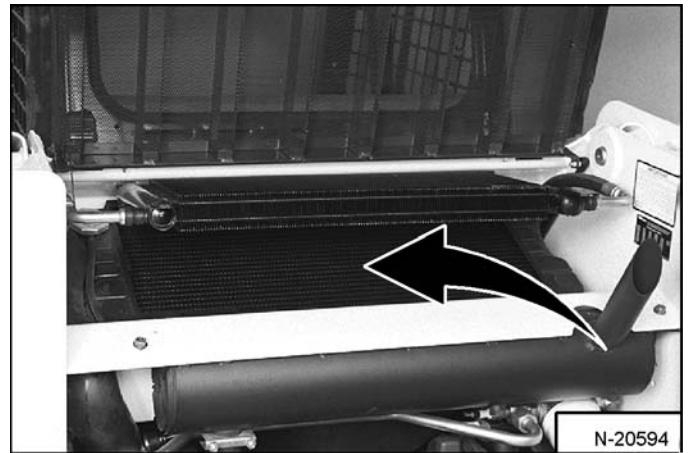
Figure 10-140-1



Raise the rear grill.

Use air pressure or water pressure to clean the top of the oil cooler [Figure 10-140-1].

Figure 10-140-2

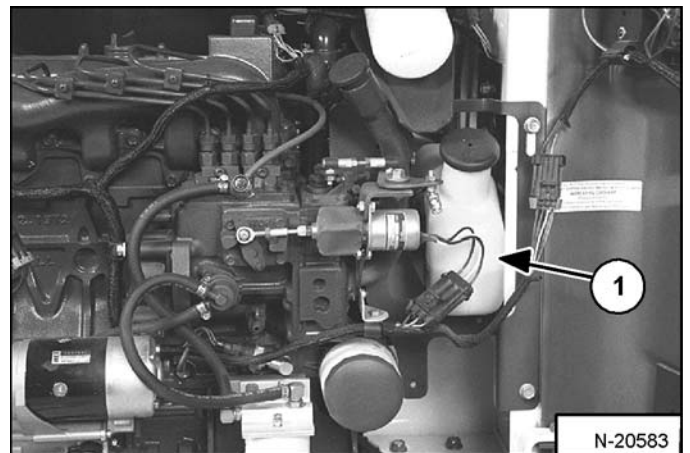


Raise the oil cooler and clean the top of the radiator [Figure 10-140-2].

Check cooling system for leaks.

Checking The Coolant Level

Figure 10-140-3



Open the rear door.

Check the coolant level in the coolant recovery tank (Item 1) [Figure 10-140-3].

The coolant level must be between the MIN and MAX marks on the coolant recovery tank when the engine is cold.

ENGINE COOLING SYSTEM (CONT'D)

Replacing The Coolant

! WARNING

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

W-2070-1285

IMPORTANT

AVOID ENGINE DAMAGE

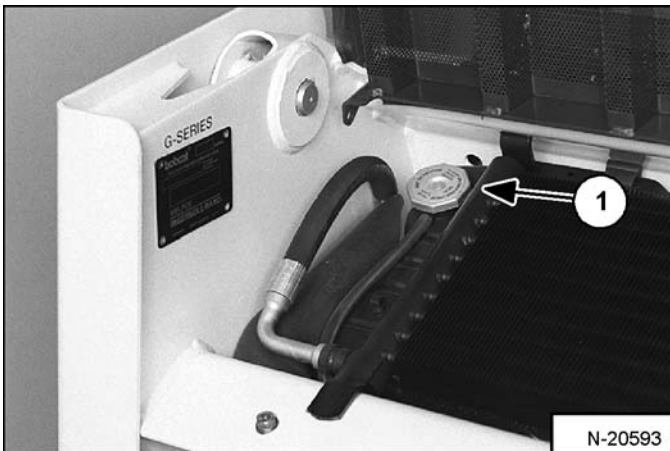
Always use the correct ratio of water to anti freeze. Too much antifreeze reduces cooling system efficiency and may cause serious premature engine damage.

Too little antifreeze reduces the additives which protect the internal engine components; reduces the boiling point and freeze protection of the system. Always add a premixed solution. Adding full strength concentrated coolant can cause serious premature engine damage.

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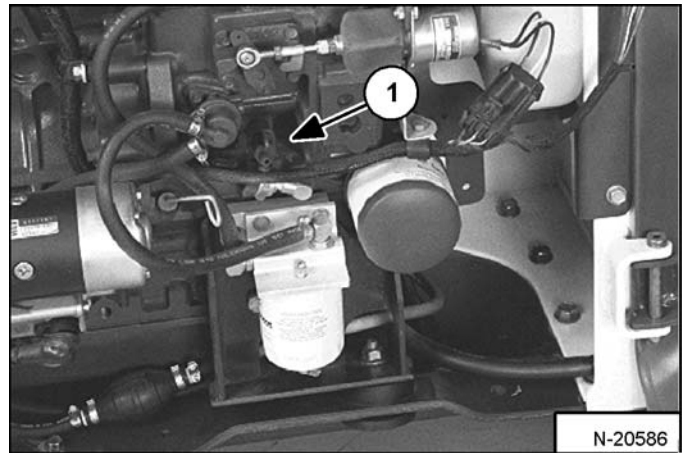
Open the rear door. Open the rear grill.

Figure 10-140-4



Remove the radiator cap (Item 1) [Figure 10-140-4].

Figure 10-140-5



Connect a hose to the engine block drain valve (Item 1) [Figure 10-140-5].

Open the drain valve and drain all of the coolant into a container.

Close the drain valve.

Mix the coolant in a separate container. (See Capacities on Page SPEC-10-3, for correct capacity.)

NOTE: The loader is factory filled with propylene glycol coolant (purple color). DO NOT mix propylene glycol with ethylene glycol.

Add premixed coolant, 47% water and 53% propylene glycol to the recovery tank if the coolant level is low.

One gallon and one pint (4,3 L) of propylene glycol mixed with one gallon (3,8 L) of water is the correct mixture of coolant to provide a -34°F (-37°C) freeze protection. Use a refractometer to check the condition of propylene glycol in your cooling system.

Fill the radiator with the premixed coolant. Install the radiator cap.

Add coolant to the recovery tank. The coolant level must be between the MIN and MAX marks on the coolant recovery tank.

Run the engine until it is at operating temperature.

Stop the engine.

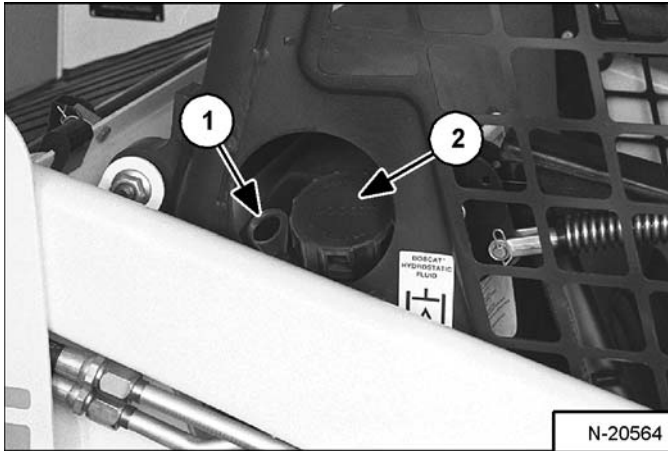
Check the coolant level in the recovery tank when cool.

Add coolant to the recovery tank as needed.

HYDRAULIC/HYDROSTATIC SYSTEM

Checking And Adding Fluid

Figure 10-150-6



Use only recommended fluid in the hydraulic system.
(See Hydraulic System on Page SPEC-10-2.)

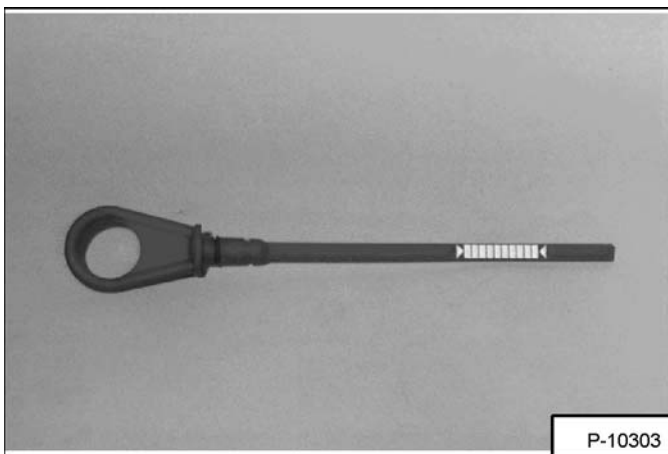
Stop the loader on a level surface. Lower the lift arms and tilt the Bob-Tach fully back.

Stop the engine.

Remove the dipstick (Item 1) [Figure 10-150-6]. Check the fluid level.

Remove the fill cap (Item 2) [Figure 10-150-6].

Figure 10-150-7



Add the fluid as needed to bring the level to the top mark on the dipstick [Figure 10-150-7]. Do not fill above the top mark.

Figure 10-150-8

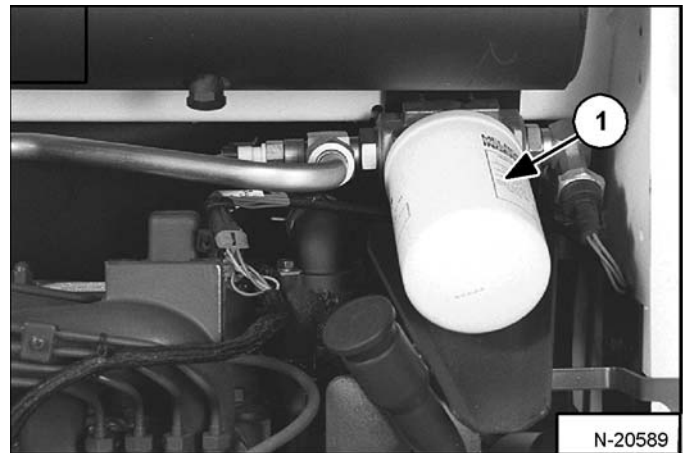


Remove the screen [Figure 10-150-8] & clean with solvent as needed.

Install the fill cap.

Replacing Hydraulic/Hydrostatic Filter

Figure 10-150-9



See SERVICE SCHEDULE on Page 10-100-1 for the correct service intervals.

Open the rear door.

Remove the filter element (Item 1) [Figure 10-150-9].

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

Put clean oil on the seal of the new filter element.

Install and hand tighten the filter element.

Close the rear door before operating the loader.

HYDRAULIC/HYDROSTATIC SYSTEM (CONT'D)

Replacing Hydraulic Fluid and Case Drain Filters

WARNING

Hydraulic fluid escaping under pressure can have sufficient force to enter a person's body by penetrating the skin and cause serious injury and possibly death if proper medical treatment by a physician familiar with this injury is not received immediately.

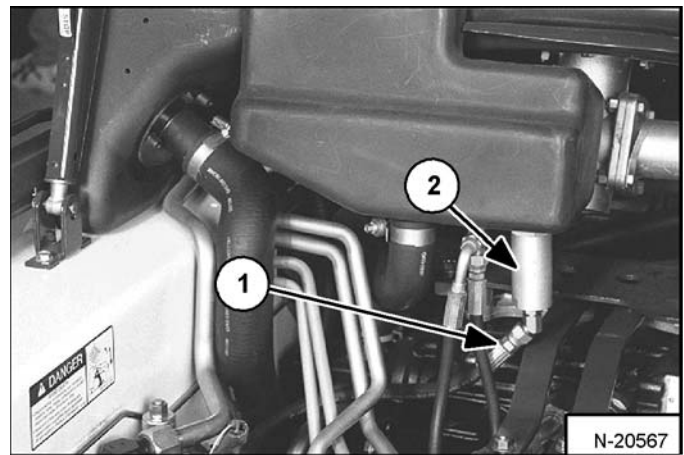
W-2145-0290

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.

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Figure 10-150-11

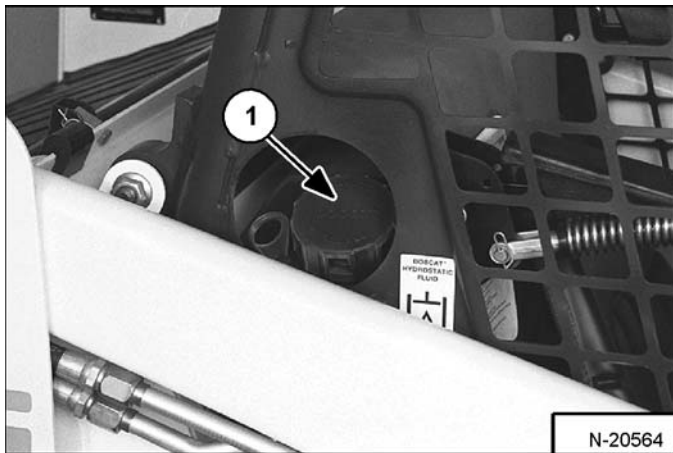


Disconnect the hose (Item 1) [Figure 10-150-11] from the case drain filter located on the reservoir. Use a cap on the hose to prevent leakage.

Remove the case drain filter (Item 2) [Figure 10-150-11]. Drain the fluid into a container.

Drain the fluid into a container and recycle or dispose in an environmentally safe manner.

Figure 10-150-10



See SERVICE SCHEDULE on Page 10-100-1 for the correct service intervals.

The fluid must be replaced if it becomes contaminated or after major repairs. If the fluid is replaced, the hydrostatic filter and both case drain filters must be replaced.

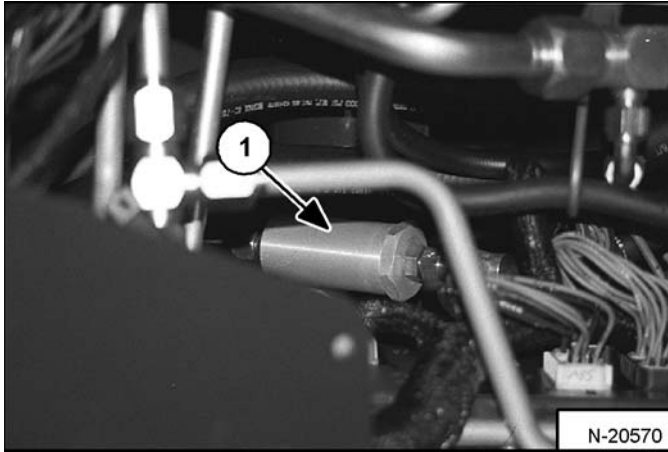
Remove the reservoir fill cap (Item 1) [Figure 10-150-10]

Raise the operator cab. (See Raising The Operator Cab on Page 10-70-1.)

HYDRAULIC/HYDROSTATIC SYSTEM (CONT'D)

Replacing Hydraulic Fluid and Case Drain Filters (Cont'd)

Figure 10-150-12



Remove the left case drain filter (Item 1) [Figure 10-150-12] and drain the fluid into a container.

Recycle or dispose of the fluid in an environmentally safe manner.

Replace the hydraulic/hydrostatic filter element. (See Replacing Hydraulic/Hydrostatic Filter on Page 10-150-1.)

Install new hydrostatic motor case drain filters (Item 2) [Figure 10-150-11] & (Item 1) [Figure 10-150-12] and reconnect the hoses.

Add the correct fluid to the reservoir until the fluid level is between the marks on the dipstick. DO NOT fill above the top mark on the dipstick.

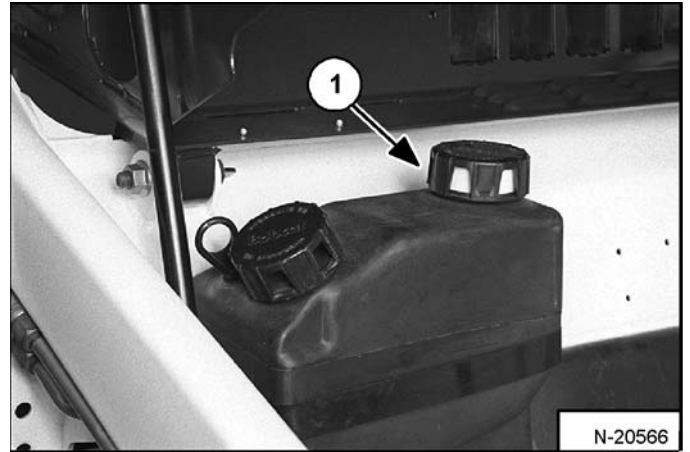
Lower the operator cab. (See Lowering The Operator Cab on Page 10-70-2.)

Start the engine and operate the loader hydraulic controls. Stop the engine and check for leaks.

Check the fluid level in the reservoir and add as needed.

Breather Cap

Figure 10-150-13

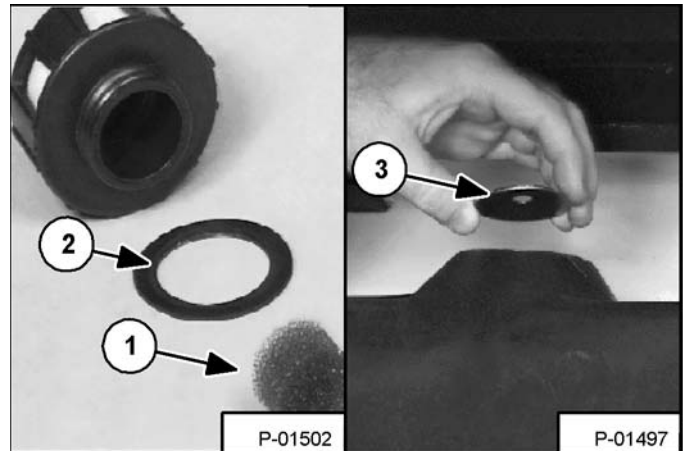


See SERVICE SCHEDULE on Page 10-100-1, for the correct service interval.

Raise the cab. (See Raising The Operator Cab on Page 10-70-1.)

Remove the breather cap (Item 1) [Figure 10-150-13].

Figure 10-150-14



Clean the filter (Item 1) [Figure 10-150-14] in the breather cap.

NOTE: Be sure the rubber gasket (Item 2) is installed on the cap and the baffle washer (Item 3) [Figure 10-150-14] is installed over the opening of the hydraulic reservoir.

Install the breather cap.

Lower the cab. (See Lowering The Operator Cab on Page 10-70-2.)

TIRE MAINTENANCE

Wheel Nuts

Figure 10-160-1

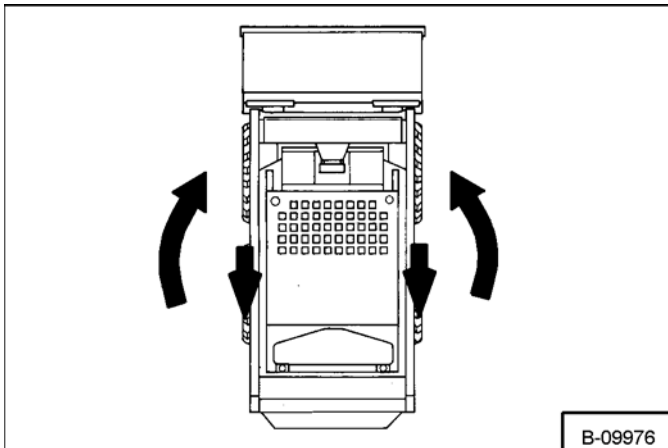


See Wheel Nuts on Page 10-160-1 for the service interval to check the wheel nuts. The correct torque is 105-115 ft.-lbs. (142-156 Nm) torque [Figure 10-160-1].

Rotating

Check the tires regularly for wear, damage and pressure. (See Tires on Page SPEC-10-3 for the correct tire pressure.)

Figure 10-160-2



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 [Figure 10-160-2].

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.

Mounting

! WARNING

Do not inflate tires above specified pressure. Failure to use correct tire mounting procedure can cause an explosion which can result in injury or death.

W-2078-1285

IMPORTANT

Inflate tires to the MAXIMUM pressure shown on the sidewall of the tire. DO NOT mix brands of tires used on the same loader.

I-2057-0794

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 excessive 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.

LUBRICATION OF THE BOBCAT LOADER

Procedure

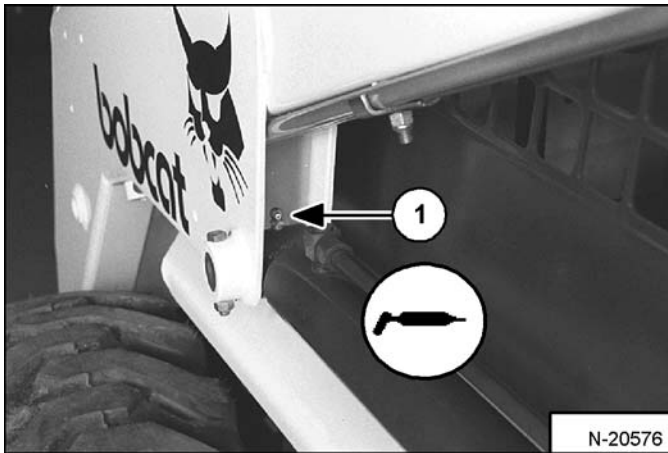
Lubricate the loader as specified in the *SERVICE SCHEDULE* Contents Page 10-01 for the best performance of the loader.

Record the operating hours each time you lubricate the Bobcat loader.

Always use a good quality lithium based multi-purpose grease. Apply lubricant until extra grease shows.

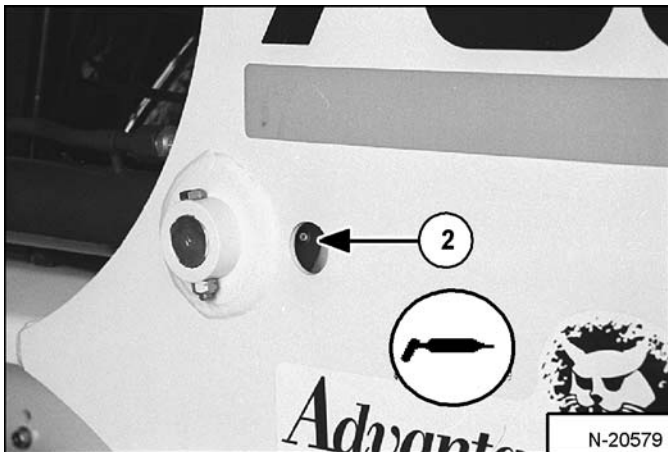
Lubricate the following locations on the loader:

Figure 10-170-1



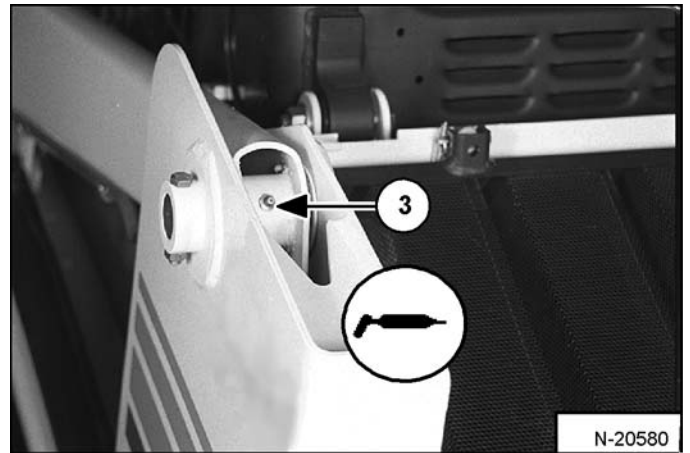
1. Rod End Lift Cylinder (Both Sides) [Figure 10-170-1].

Figure 10-170-2



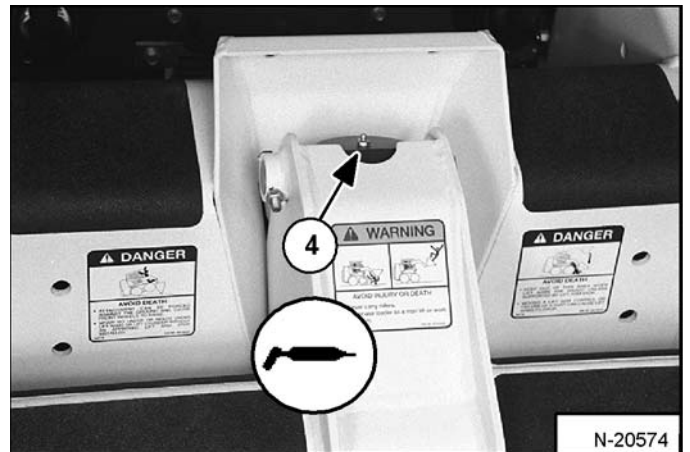
2. Base End Lift Cylinder (Both Sides) [Figure 10-170-2].

Figure 10-170-3



3. Lift Arm Pivot Pin (Both Sides) [Figure 10-170-3].

Figure 10-170-4

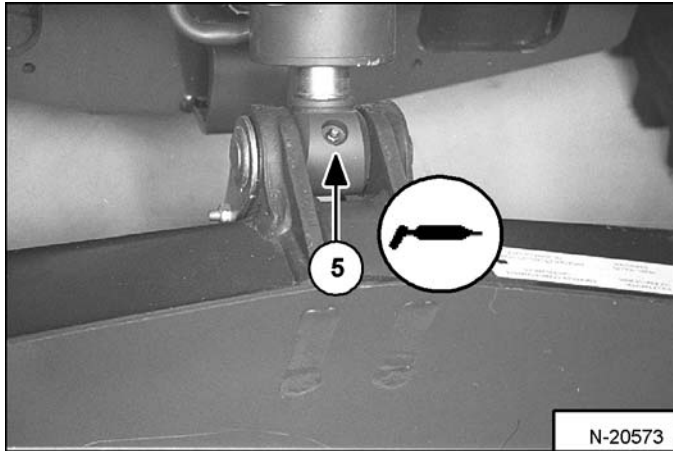


4. Base End Tilt Cylinder (Both Sides) [Figure 10-170-4].

LUBRICATION OF THE BOBCAT LOADER (CONT'D)

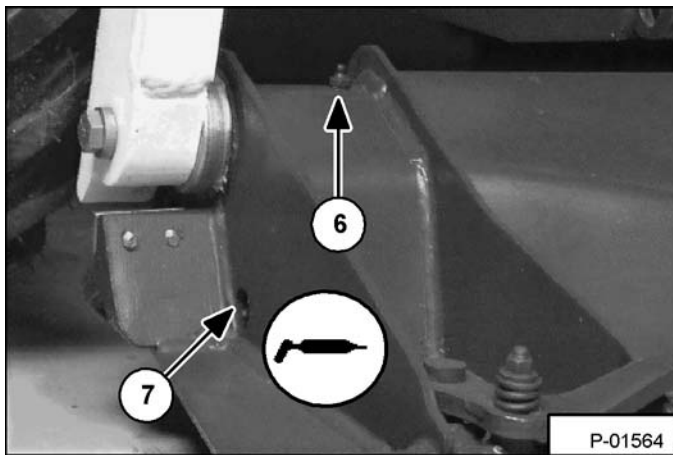
Procedure (Cont'd)

Figure 10-170-5



5. Rod End Tilt Cylinder [Figure 10-170-5].

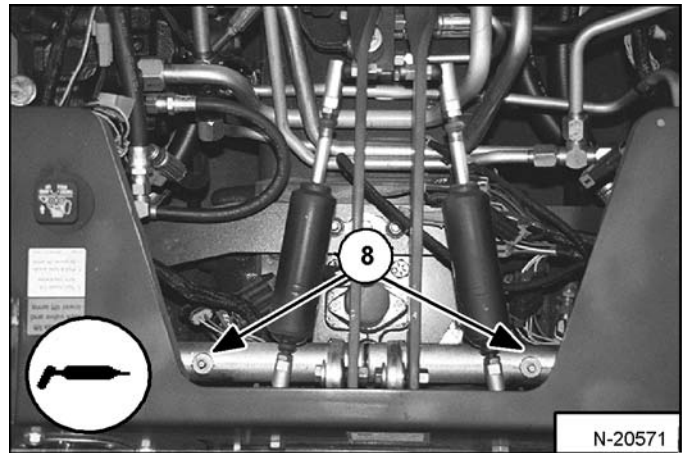
Figure 10-170-6



6. Bob-Tach Pivot Pin (Both Sides) [Figure 10-170-6].

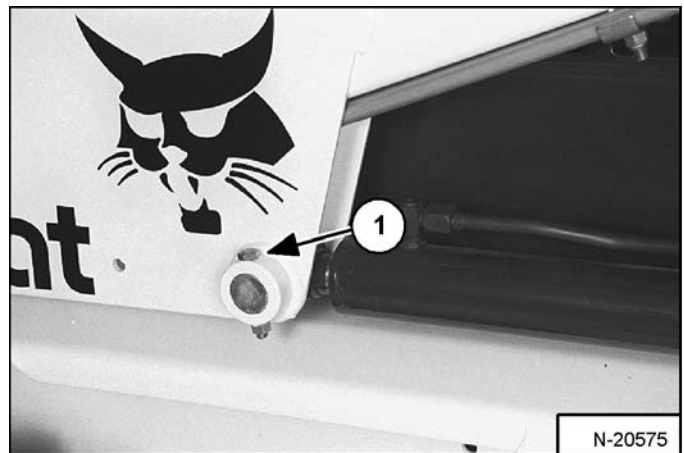
7. Bob-Tach Wedge (Both Sides) [Figure 10-170-6].

Figure 10-170-7



8. 250 Hours: Steering Lever Shaft (2) [Figure 10-170-7].

Figure 10-170-8



All lift arm and cylinder pivots have a large pin held in position with a retainer bolt and lock nut (Item 1) [Figure 10-170-8].

Check that the lock nuts are tightened to 18-20 ft.-lbs. (24-27 Nm) torque.

HYDRAULIC SYSTEM

HYDRAULIC SYSTEM

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TIGHTEN ALL HARDWARE PER SIZE TO GRADE 5 TORQUE (SEE TORQUE SPECIFICATIONS FOR BOLTS ON PAGE SPEC-40-1.) UNLESS OTHERWISE SPECIFIED.

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