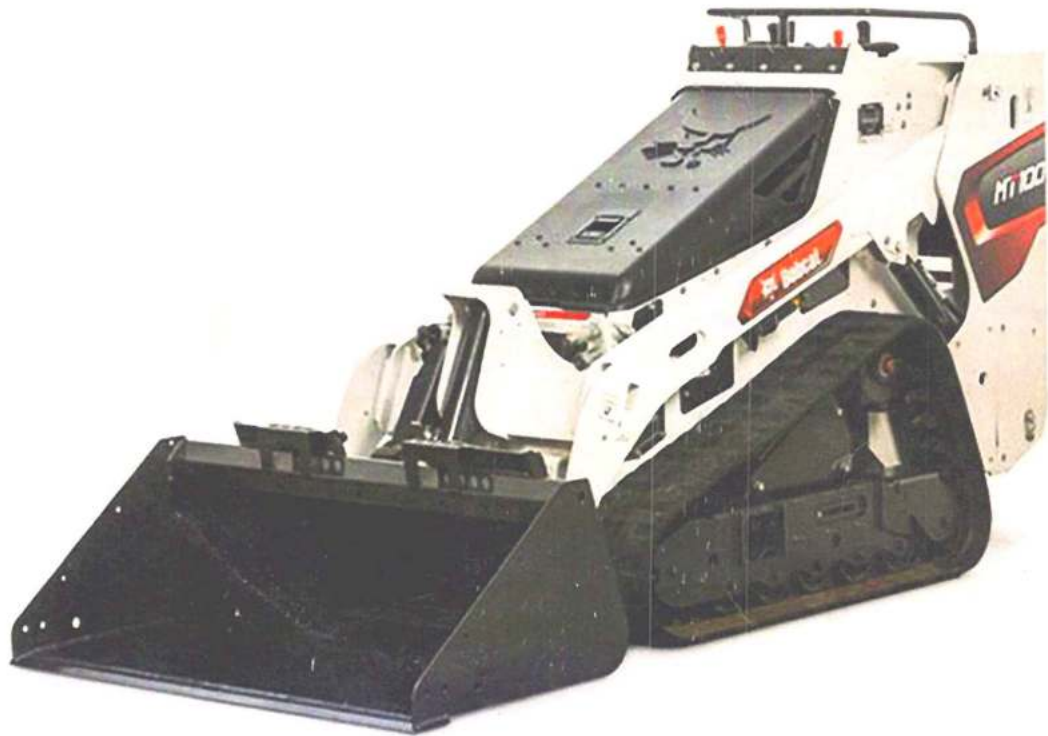




Bobcat®

Operation & Maintenance Manual



MT100

Mini Track Loader

S/N B52P11001 & Above



OPERATOR SAFETY WARNINGS



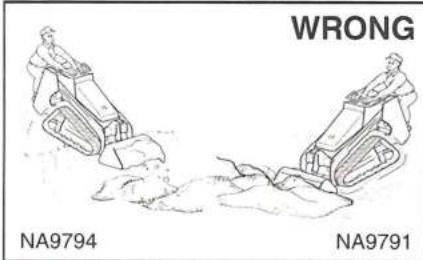
WARNING

Operator must have instructions before operating the machine. Untrained operators can cause injury or death.

W-2001-0502



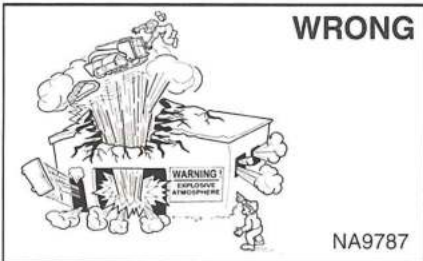
Safety Alert Symbol: This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



⚠ Never drive over drop offs or jerk on the controls.



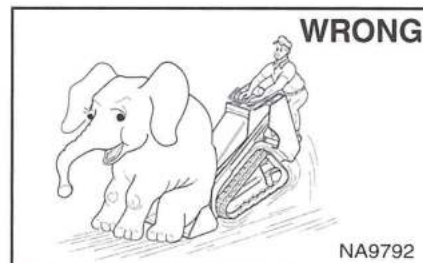
⚠ Check for utility lines before digging.



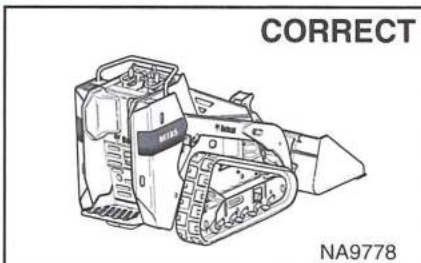
⚠ Do not use loader in atmosphere with explosive dust, explosive gas, or where exhaust can contact flammable material.



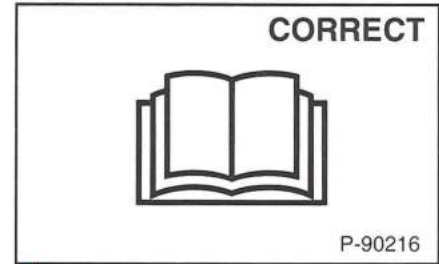
⚠ Never carry riders.
 ⚠ Keep bystanders away from work area.
 ⚠ CARRY LOAD LOW.



⚠ Never exceed Rated Operating Capacity.



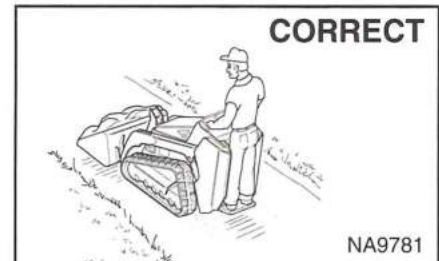
⚠ Never leave loader with engine running or with lift arms up.
 ⚠ To park, engage parking brake, lower lift arms and put attachment flat on the ground.



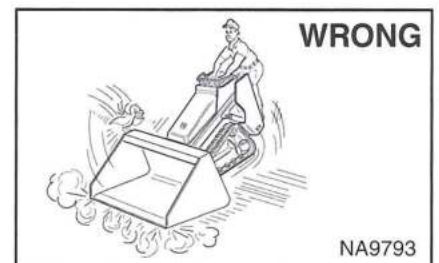
⚠ Never use the loader without instructions. See machine signs (decals) and Operation & Maintenance Manual.



⚠ Keep load level when raising lift arms to avoid spilling the load.



⚠ Do not travel or turn with lift arms up.
 ⚠ Keep heavy end uphill.



⚠ Never modify equipment.
 ⚠ Use only attachments approved by Bobcat Company for this model loader.

SAFETY EQUIPMENT

The Bobcat® loader must be equipped with safety items necessary for each job. Ask your Bobcat dealer for information on the availability and safe use of attachments and accessories.

1. SAFETY SIGNS (DECALS): Replace if damaged.
2. LIFT ARM SUPPORT DEVICE: Replace if damaged
3. PARKING BRAKE: Check function, adjust or repair if necessary.
4. CONTINUOUS FLOW SHUTOFF PEDAL: Check function, adjust or repair as necessary.

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REFERENCE INFORMATION

Write the correct information for YOUR Bobcat mini track loader in the spaces below. Always use these numbers when referring to your Bobcat mini track loader.

Loader Serial Number _____
Engine Serial Number _____

NOTES:

YOUR BOBCAT DEALER:

ADDRESS:

PHONE:

Bobcat Company
P.O. Box 128
Gwinner, ND 58040-0128
UNITED STATES OF AMERICA

Doosan Bobcat EMEA s.r.o.
U Kodetky 1810
263 12 Dobris
CZECH REPUBLIC

FOREWORD

This Operation & Maintenance Manual was written to give the owner / operator instructions on the safe operation and maintenance of the Bobcat mini track loader. READ AND UNDERSTAND THIS OPERATION & MAINTENANCE MANUAL BEFORE OPERATING YOUR BOBCAT MINI TRACK LOADER. If you have any questions, see your Bobcat dealer. This manual may illustrate options and accessories not installed on your mini track loader.

BOBCAT COMPANY IS ISO 9001 CERTIFIED	3
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Mini Track Loader Serial Number	4
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BOBCAT COMPANY IS ISO 9001 CERTIFIED












ISO 9001 is an international standard that specifies requirements for a quality management system that controls the processes and procedures which we use to design, develop, manufacture, and distribute Bobcat products.

British Standards Institute (BSI) is the Certified Registrar Bobcat Company chose to assess the company's compliance with the ISO 9001 at Bobcat's manufacturing facilities in Gwinner, North Dakota (U.S.A.), Pontchâteau (France), and the Bobcat corporate offices (Gwinner, Bismarck, and West Fargo) in North Dakota. TÜV Rheinland is the Certified Registrar Bobcat Company chose to assess the company's compliance with the ISO 9001 at Bobcat's manufacturing facility in Dobris (Czech Republic). Only certified assessors, like BSI and TÜV Rheinland, can grant registrations.

ISO 9001 means that as a company we say what we do and do what we say. In other words, we have established procedures and policies, and we provide evidence that the procedures and policies are followed.

REGULAR MAINTENANCE ITEMS

	ENGINE OIL FILTER 6671057		RADIATOR CAP 6646678
	FUEL FILTER 6667352		BATTERY 6670251
	AIR FILTER, Outer 6687262		FLUID, Hydraulic / Hydrostatic 6903117 - (2.5 U.S. gal) 6903118 - (5 U.S. gal) 6903119 - (55 U.S. gal)
	AIR FILTER, Inner 6687263		
	HYDROSTATIC FILTER 6677652		ANTI-FREEZE, Propylene Glycol 6983128 - Premixed 6983129 - Concentrate
ENGINE OIL 7023080 SAE 15W40 CE/SG (12 qt) 7023076 SAE 10W30 CE/SG (12 qt) 6903109 SAE 30W CE/SG (12 qt) 7023082 SAE 15W40 CE/SG (2.5 U.S. gal) 7023078 SAE 10W30 CE/SG (2.5 U.S. gal) 6903111 SAE 30W CE/SG (2.5 U.S. gal)		ENGINE OIL 7023081 SAE 15W40 CE/SG (1 U.S. gal) 7023077 SAE 10W30 CE/SG (1 U.S. gal) 6903110 SAE 30W CE/SG (1 U.S. gal)	

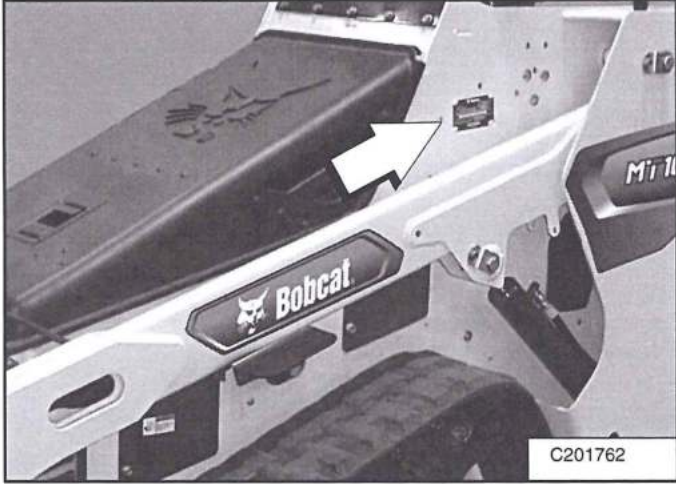
NOTE: Always verify Part Numbers with your Bobcat dealer.

SERIAL NUMBER LOCATIONS

Always use the serial number of the mini track 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.

Mini Track Loader Serial Number

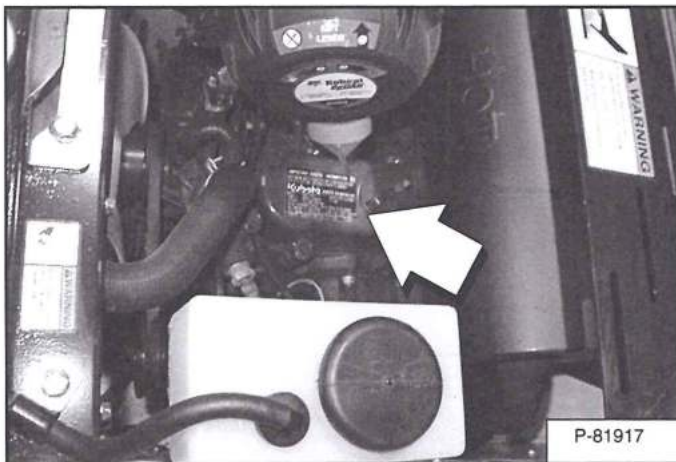
Figure 1



The mini track loader serial number plate is located on the outside of the frame [Figure 1].

Engine Serial Number

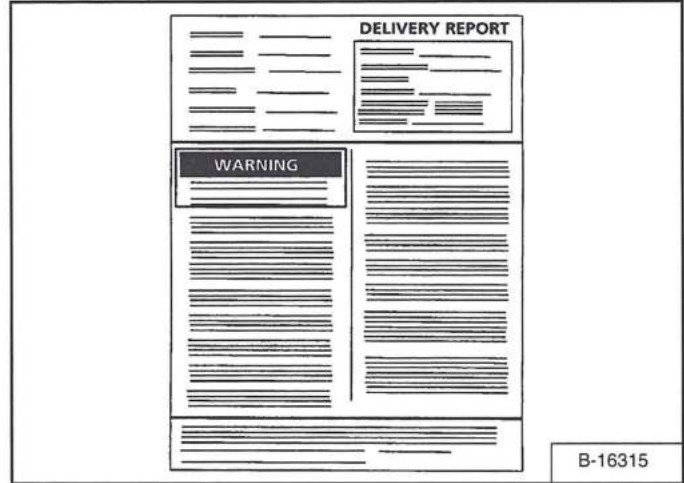
Figure 2



The engine serial number is located on the valve cover of the engine [Figure 2].

DELIVERY REPORT

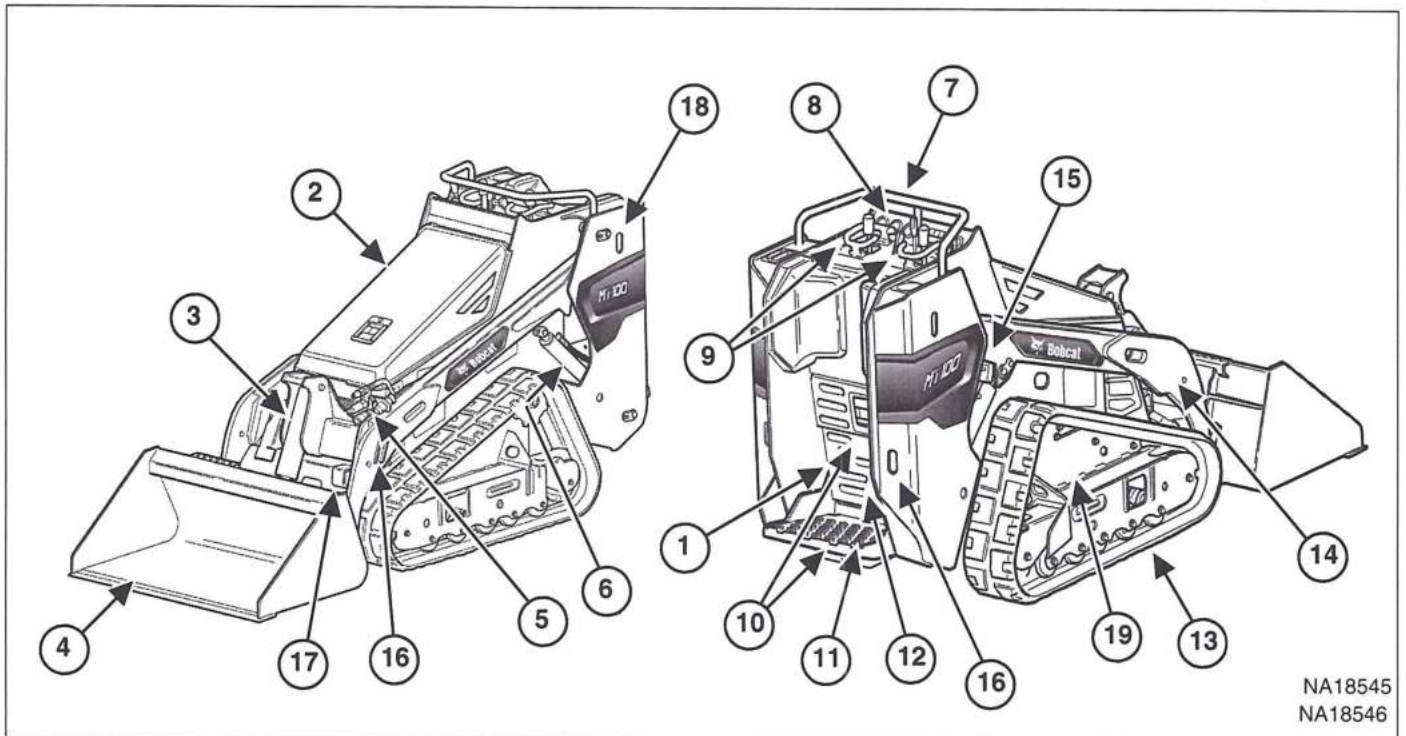
Figure 3



The delivery report [Figure 3] contains a list of items that must be explained or shown to the owner or operator by the dealer when the Bobcat mini track loader is delivered.

The delivery report must be reviewed and signed by the owner or operator and the dealer.

MINI TRACK LOADER IDENTIFICATION



NA18545
NA18546

ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	Operation & Maintenance Manual (Inside Rear Door)	11	Continuous Flow Shutoff Pedal
2	Hood	12	Rear Door
3	Tilt Cylinder	13	Tracks [2]
4	Bucket [1]	14	Lift Arms
5	Auxiliary Hydraulic Quick Couplers	15	Lift Arm Support Device Storage Position
6	Lift Cylinder	16	Tie Down
7	Grab Bar	17	Lift Point / Tie Down
8	Instrument Panel	18	Lift Point
9	Controls	19	Counterweight
10	Operator Station		

[1] BUCKETS - Several different buckets and other attachments are available for the Bobcat mini track loader.

[2] TRACKS - Optional tracks are available.

FEATURES, ACCESSORIES AND ATTACHMENTS

Standard Items

Model MT100 Bobcat Mini Track Loaders are equipped with the following standard items:

- Auxiliary Hydraulics, Front
- Instrumentation: Hourmeter, Engine Temperature, Voltmeter and Fuel Gauges, Warning Lights
- Joystick Lift and Tilt Functions
- Lift Arm Support Device
- Multifunction Drive Control Joystick
- Parking Brake
- Spark Arrester Muffler
- Ride-On Platform / Operator Station
- Storage Compartment
- Cup Holder

Options and Accessories

Below is a list of equipment available for your Bobcat Mini Track Loader as Dealer or Factory Installed Accessories and Factory Installed Options. See your Bobcat dealer for other available options, accessories and attachments.

- Attachment Control Kit
- Case Drain Kit
- Engine Block Heater
- Engine Protection Shutdown Kit
- Exhaust Purifier
- Operating Light Kit
- Bob-Tach®
- Common Industry Interface
- Rubber Tracks - 250 mm (9.8 in)
- Rubber Tracks - 180 mm (7 in)

Specifications subject to change without notice and standard items may vary.

Attachments

These and other attachments are approved for use on this model mini track loader. Do not use unapproved attachments. Attachments not manufactured by Bobcat may not be approved.

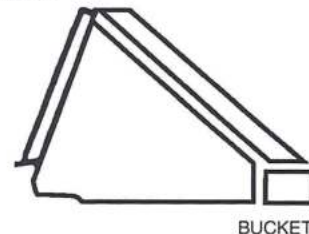
The versatile Bobcat Mini Track Loader quickly turns into a multi-job machine with available Bob-Tach / Common Industry Interface attachment couplers, and a wide variety of approved attachments.

See your Bobcat dealer for more details on these and other attachments and field accessories.

- Adapter Interface
- Angle Broom
- Auger [1]
- Boring, Mini
- Breaker [1]
- Buckets [1]
- Digger
- Landplane
- Pallet Fork [1]
- Grapple, General Purpose
- Grapple, Industrial
- Grapple, Root
- Grapple, Utility
- Snow Blower
- Soil Conditioner
- Sweeper
- Stump Grinder
- Tiller
- Trencher [1]
- Utility Blade
- Vibratory Plow
- V-Blade

[1] Available in configuration for use with the Common Industry Interface.

Buckets Available



Many bucket styles, widths and different capacities are available for a variety of different applications. They include Construction and Industry, Utility and General Purpose, to name a few. See your Bobcat dealer for the correct bucket for your Bobcat Mini Track Loader and application.

SAFETY AND TRAINING RESOURCES

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SAFETY INSTRUCTIONS

Before Operation

Carefully follow the operating and maintenance instructions in this manual.

The Bobcat mini loader is highly maneuverable and compact. It is rugged and useful under a wide variety of conditions. This presents an operator with hazards associated with off highway, rough terrain applications, common with Bobcat mini loader usage.

The Bobcat mini loader has an internal combustion engine with resultant heat and exhaust. All exhaust gases can kill or cause illness so use the mini loader with adequate ventilation.

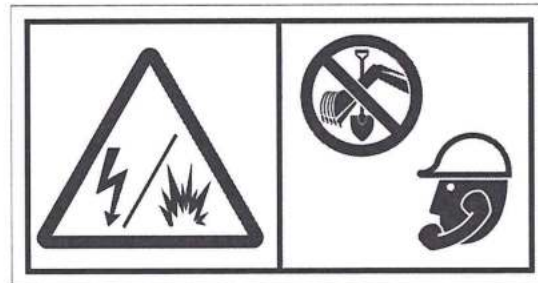
The dealer explains the capabilities and restrictions of the Bobcat mini loader and attachment for each application. The dealer demonstrates the safe operation according to Bobcat instructional materials, which are also available to operators. The dealer can also identify unsafe modifications or use of unapproved attachments. The attachments and buckets are designed for a Rated Operating Capacity (some have restricted lift heights). They are designed for secure fastening to the Bobcat mini loader. The user must check with the dealer, or Bobcat literature, to determine safe loads of materials of specified densities for the machine - attachment combination.

The following publications and training materials 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 and attachment is in safe operating condition.
- The Operation & Maintenance Manual delivered with the machine or attachment gives 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.

- See the PUBLICATIONS AND TRAINING RESOURCES Page in this manual or your Bobcat dealer for Service and Parts Manuals, printed materials, videos, or training courses available. Also check the Bobcat websites Bobcat.com/training or Bobcat.com

The dealer and owner / operator review the recommended uses of the product when delivered. If the owner / operator will be using the machine for a different application(s) he or she must ask the dealer for recommendations on the new use.



Call Before You Dig
Dial 811 (USA Only)
1-888-258-0808 (USA & Canada)

When you call, you will be directed to a location in your state / province, or city for information about buried lines (telephone, cable TV, water, sewer, gas, etc.).

SAFETY INSTRUCTIONS (CONT'D)

Safe Operation Is The Operator's Responsibility



Safety Alert Symbol

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



WARNING

Operator must have instructions before operating the machine. Untrained operators can cause injury or death.

W-2001-0502

IMPORTANT

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

I-2019-0284



DANGER

The signal word DANGER on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.

D-1002-1107



WARNING

The signal word WARNING on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

W-2044-1107

The Bobcat mini loader and attachment must be in good operating condition before use.

Check all of the items on the Bobcat Service Schedule Decal under the 8-10 hour column or as shown in the Operation & Maintenance Manual.

Safe Operation Needs A Qualified Operator

For an operator to be qualified, he or she must not use drugs or alcoholic drinks which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine.

A Qualified Operator Must Do The Following:

Understand the Written Instructions, Rules and Regulations

- The written instructions from Bobcat Company include the Delivery Report, Operation & Maintenance Manual and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements. Regulations may identify a hazard such as a utility line.

Have Training with Actual Operation

- Operator training must consist of a demonstration and verbal instruction. This training is given by your Bobcat dealer before the product is delivered.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine and attachment safely under all conditions of the work area.
- Safety Videos, which provide general information regarding safe and efficient equipment operation, are available from your Bobcat dealer.

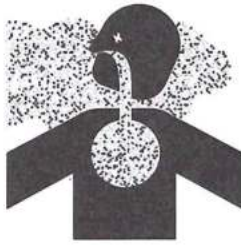
Know the Work Conditions

- Know the weight of the materials being handled. Avoid exceeding the Rated Operating Capacity (ROC) of the machine. Material which is very dense will be heavier than the same volume of less dense material. Reduce the size of the load if handling dense material.
- The operator must know any prohibited uses or work areas, for example, he or she needs to know about excessive slopes.
- Know the location of any underground lines. Call local utilities or the TOLL FREE phone number found in the *Before Operation* section of this manual.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service. Safety glasses, respiratory equipment, or hearing protection are required for some work. See your Bobcat dealer about Bobcat safety equipment.

SI ML-1016

SAFETY INSTRUCTIONS (CONT'D)

Avoid Silica Dust



Cutting or drilling concrete containing sand or rock containing quartz may result in exposure to silica dust. Do not exceed Permissible Exposure Limits (PEL) to silica dust as determined by OSHA or other job site Rules and Regulations. Use a respirator, water spray or other means to control dust. Silica dust can cause lung disease and is known to the state of California to cause cancer.

FIRE PREVENTION



Maintenance

The machine and some attachments have components that are at high temperatures 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 can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.

The operator's area, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.

All fuels, most lubricants and some coolant mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

Operation

Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.

Electrical



Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.

Battery gas can explode and cause serious injury. Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

SI ML-1016

FIRE PREVENTION (CONT'D)

Hydraulic System

Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. 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.

Fueling



Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.

Ultra Low Sulfur Diesel (ULSD) poses a greater static ignition hazard than earlier diesel formulations with higher Sulfur content. Avoid death or serious injury from fire or explosion. Consult with your fuel or fuel system supplier to ensure the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

Starting

Do not use ether or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or bystanders.

Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.

Spark Arrester Exhaust System

The spark arrester exhaust system 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.

Check the spark arrester exhaust system regularly to make sure it is maintained and working properly. Use the procedure in the Operation & Maintenance Manual for cleaning the spark arrester muffler (if equipped).

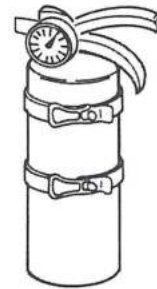
Welding And Grinding

Always clean the machine and attachment, disconnect the battery, and disconnect the wiring from the Bobcat 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 dust mask when grinding painted parts. Toxic dust or gas can be produced.

Dust generated from repairing nonmetallic parts such as hoods, fenders or covers can be flammable or explosive. Repair such components in a well ventilated area away from open flames or sparks.

Fire Extinguishers



Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

MACHINE SIGNS (DECALS)

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

WARNING
AVOID INJURY OR DEATH

MINI TRACK LOADER SERVICE SCHEDULE

IMPORTANT

7398764

WARNING
KEEP FINGERS AND OBJECTS AWAY FROM FAN.

6576048 (4)

BOBCAT HYDROSTATIC FLUID

6565990

LEVEL MOUNTING TO 1000	LIFT LOCK TO 1000	SWITCH POWER 2 TO 1000	COOLING FAN TO 1000	LIFT LOCK TO 1000	SWITCH POWER 1 TO 1000
72 20A	72 20A	72 20A	72 20A	72 20A	72 20A
72 20A	72 20A	72 20A	72 20A	72 20A	72 20A

(Inside Fuse Cover) 7157317

WARNING
Hot pressurized fluid.
Can cause serious burns.

6804233

DO NOT Add Ethylene Glycol Coolant COOLANT SYSTEM PROTECTED TO -34° F (-37° C) WITH BOBCAT-BIG COOLANT (Propylene Glycol)

6708929

WARNING
Hot surfaces can cause serious injury.
Do not touch.
Allow to cool before servicing.

6817225

S ≤ 500 mg/kg LOW SULFUR OR ULTRA LOW SULFUR DIESEL FUEL ONLY

7152748

Under Hood

WARNING
TIPPING, LOSS OF LOAD, LOADS FALLING OR LOSS OF VISIBILITY CAN CAUSE SERIOUS INJURY OR DEATH

CARRY LOAD LOW

KEEP LOAD LEVEL WHEN RAISING LIFT ARMS

7273436

TO INSTALL APPROVED LIFT ARM SUPPORT

- Remove lifting arm from carrier.
- Remove mounting pin.
- Remove lifting arm.
- Install lifting arm support on carrier.
- Install lifting arm support on carrier.
- Install lifting arm support on carrier.

TO REMOVE LIFT ARM SUPPORT

- Remove lifting arm support from carrier.
- Remove lifting arm support from carrier.
- Remove lifting arm support from carrier.

7273443

(Behind Lift Arm)

7533898 (2)

ANGER

7273434

(On Frame)

FULLY ENGAGE LOCKING LEVERS

WEDGES MUST EXTEND THROUGH MOUNTING FRAME HOLES

(Behind Bob-Tach) 6561383

FULLY ENGAGE LOCKING LEVERS

PINS MUST EXTEND THROUGH MOUNTING FRAME HOLES

(Behind CII) 7273438

6815993 (2)

6595014 (4)

WARNING
KEEP FINGERS AND OBJECTS AWAY FROM FAN.

6576048 (4)


1

7185935

NA18545

MACHINE SIGNS (DECALS) (CONT'D)

Follow the instructions on all the Machine Signs (Decals) that are on the Mini Track Loader. Replace any damaged machine signs and be sure they are in the correct locations. Machine signs are available from your Bobcat mini track loader dealer.



7273442

OPERATION

TO START ENGINE





- Drive Control must be in neutral.
- Continuous Flow Shutoff Pedal must be up.

FOR CONTINUOUS AUXILIARY HYDRAULIC FLOW

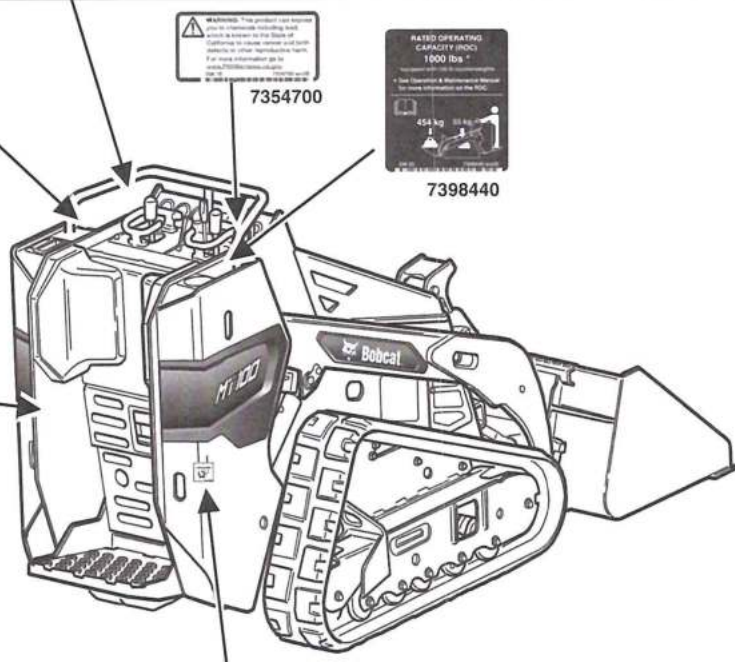
- Press and hold Continuous Flow Shutoff Pedal.
- Move auxiliary hydraulic control lever to detent position.
- Release pedal to deactivate continuous auxiliary hydraulic flow.


67321 Rev. 1/2012 ©2012 Bobcat

7282262

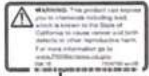
 <p>7273437</p>	 <p>6735140</p>	 <p>7282262</p>	 <p>7273444</p>
---	--	--	--

On Control and Instrument Panel






7354699



7354700




7398440

IMPORTANT


MACHINE DAMAGE HAZARD

- Install only one set of approved counterweights in the designated location.
- Use of unapproved or additional counterweights will damage machine structure.

7415971



6732148



6595014 (4)

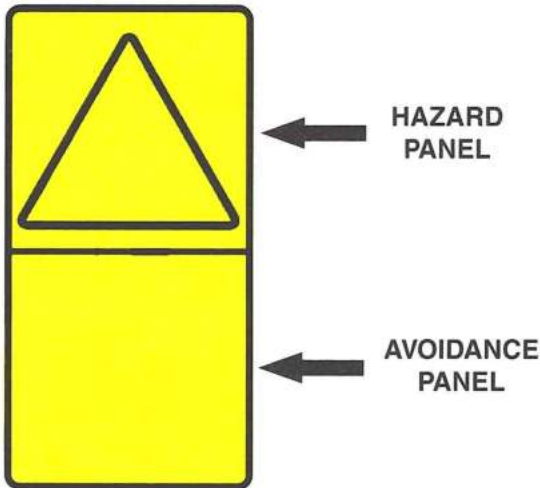
NA18546

MACHINE SIGNS (DECALS) (CONT'D)

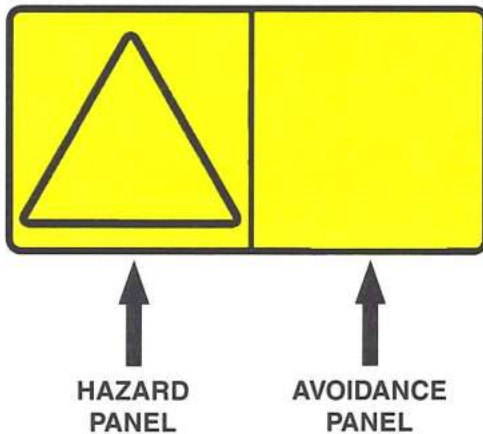
Pictorial Only Safety Signs

Safety signs are used to alert the equipment operator or maintenance person to hazards that may be encountered in the use and maintenance of the equipment. The location and description of the safety signs are detailed in this section. Please become familiarised with all safety signs installed on the machine / attachment.

Vertical Configuration



Horizontal Configuration



The format consists of the hazard panel(s) and the avoidance panel(s):

Hazard panels depict a potential hazard enclosed in a safety alert triangle.

Avoidance panels depict actions required to avoid the hazards.

safety sign may contain more than one hazard panel
↑ more than one avoidance panel.

NOTE: See the numbered **MACHINE SIGNS (DECALS)** on Page 12 and for the machine location of each correspondingly numbered pictorial only decal.

1. Hot Surface (7185935)

This safety sign is located inside the operator cab on the lower right side.



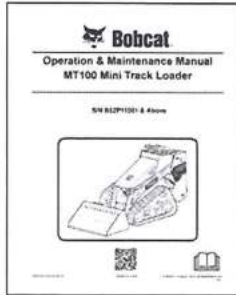
HOT SURFACES CAN CAUSE SERIOUS INJURY

- Do not touch.
- Allow to cool before servicing.

W-2533-1012

PUBLICATIONS AND TRAINING RESOURCES

The following publications are also available for your Bobcat loader. You can order them from your Bobcat dealer.



OPERATION & MAINTENANCE MANUAL

7408141enUS

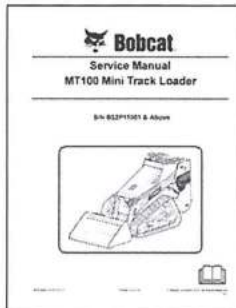
Complete instructions on the correct operation and the routine maintenance of your Bobcat Mini Track Loader.



SAFETY MANUAL

6987102 (English and Spanish)

Gives basic safety procedures and warnings for your Bobcat Mini Track Loader.



SERVICE MANUAL

7408142enUS

Complete maintenance instructions for your Bobcat Mini Track Loader.

For the latest information on Bobcat products and the Bobcat Company, visit our website at Bobcat.com/training or Bobcat.com.



OPERATOR SAFETY DVD

6904762 (English and Spanish)

DVD gives basic safety instructions for many Bobcat products including loaders.



MINI TRACK LOADER SAFETY VIDEO

(Mobile device with quick response code application required)

Scan the code above to watch the loader safety video or view at Bobcat.com/training.

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CONTROLS IDENTIFICATION

Figure 4



Reference numbers below refer to the components on the operator's console [Figure 4].

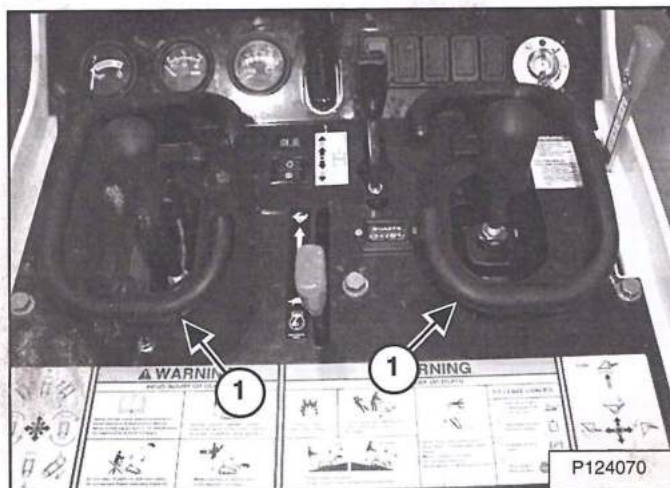
1. Temperature Gauge
2. Fuel Gauge
3. Voltmeter
4. Engine Speed Control Lever
5. Engine Oil Pressure Warning Light / Hydraulic Temperature Warning Light
6. Key Switch
7. Hourmeter
8. A - Lift Arm Bypass
B - Attachment Control (Option)
C - Attachment Control (Option)
D - Lights (Option)
E - Not Used
9. Shutdown Indicator (Option)
10. Drive / Steering Joystick Control
11. Auxiliary Hydraulic Control Lever
12. Lift / Tilt Joystick Control
13. Parking Brake Lever

OPERATOR JOYSTICK CONTROLS

Description

The operator joysticks control the drive/steering, and lift/tilt functions. Move the controls smoothly to avoid sudden starting and stopping.

Figure 5



Always use the Reference Bars (Item 1) [Figure 5] when operating the Drive/Steering Control and Lift/Tilt Control.

You can maintain better control of the functions when you use the hand bars to operate the Drive/Steering Control and Lift/Tilt Control.

WARNING

AVOID INJURY OR DEATH

When operating the machine:

- Operate only from the operator's position at the rear of the loader.
- Always keep your hands on the controls.
- Stay away from the tracks.

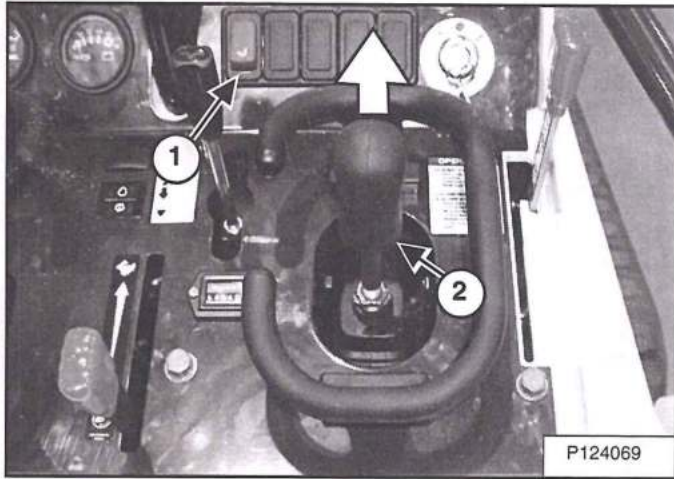
W-2407-0801

LIFT ARM BYPASS CONTROL

Operation

The lift arm bypass switch is used to lower the lift arms when the engine is not running.

Figure 6



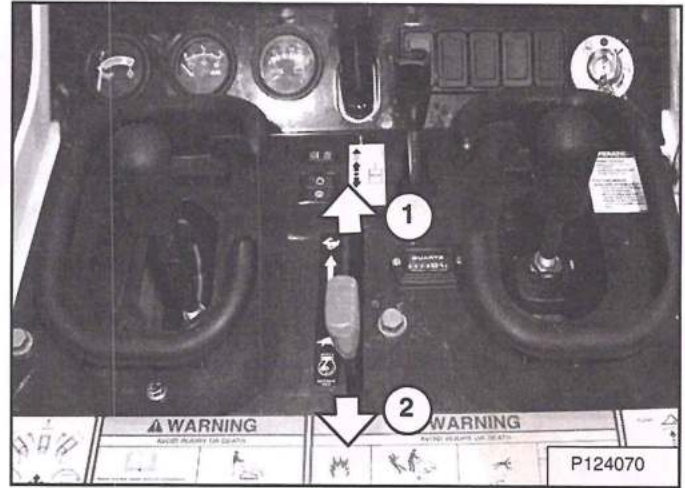
Press and hold the lift arm bypass switch (Item 1) [Figure 6].

Move the Lift / Tilt Joystick (Item 2) [Figure 6] forward to lower the lift arms.

ENGINE SPEED CONTROL

Operation

Figure 7



Move the engine speed control lever up (Item 1) to increase engine speed. Move the lever down (Item 2) [Figure 7] to decrease engine speed.

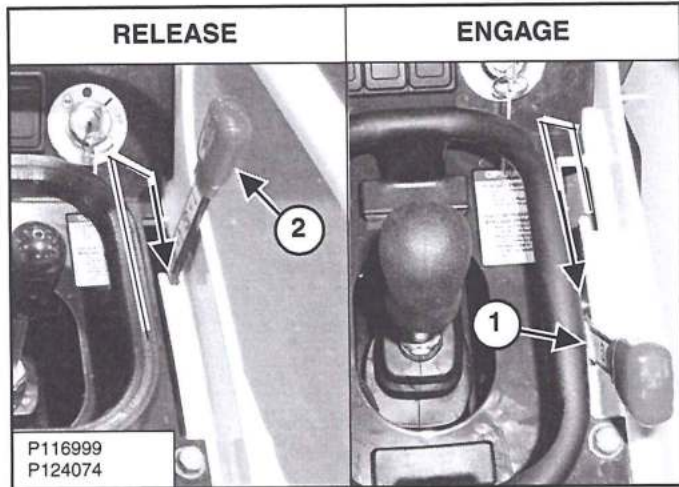
For maximum performance, run the engine at full speed while working.

PARKING BRAKE

Operation

Engage the parking brake whenever you stop the mini track loader.

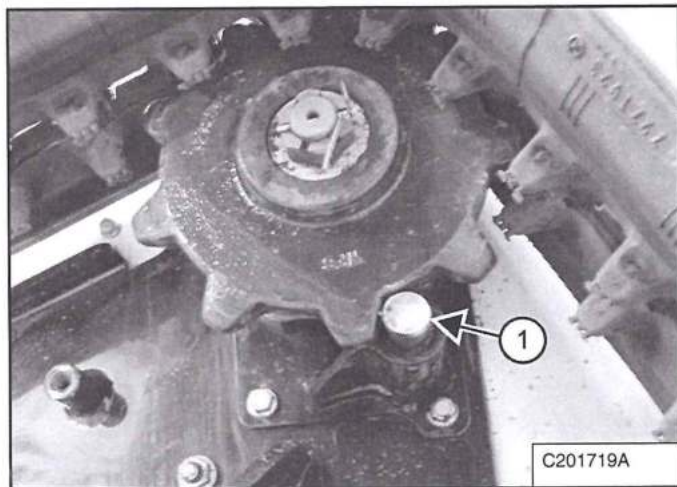
Figure 8



To Engage: Move the parking brake lever slightly forward, to the left and then FULLY backward to engage the parking brake (Item 1) [Figure 8].

To Release: Move the parking brake lever forward, to the right and then slightly backward (Item 2) [Figure 8] until the lever is inserted into the latch to release the parking brake.

Figure 9



NOTE: Move the machine forward or backward slightly to ensure both parking brake pins (Item 1) [Figure 9] are engaged (between the teeth of the track drive sprockets), or to remove load on pins when disengaging the parking brake.

OPERATOR STATION

Operation

WARNING

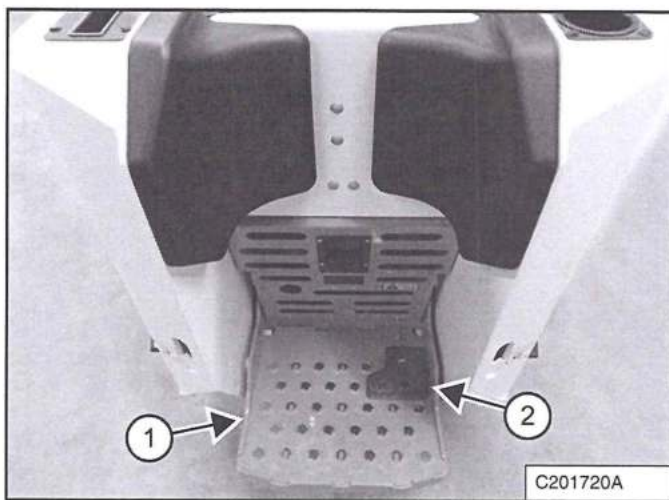
AVOID INJURY OR DEATH

When operating the machine:

- Operate only from the operator's position at the rear of the loader.
- Always keep your hands on the controls.
- Stay away from the tracks.

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Figure 10



A cushioned operator station and ride-on platform (Item 1) [Figure 10] are integrated in the rear of the machine. The operator station provides a stable area for the operator to stand while operating the machine.

Never operate the machine from the ground. Always keep your hands on the controls and feet on the platform while operating the machine.

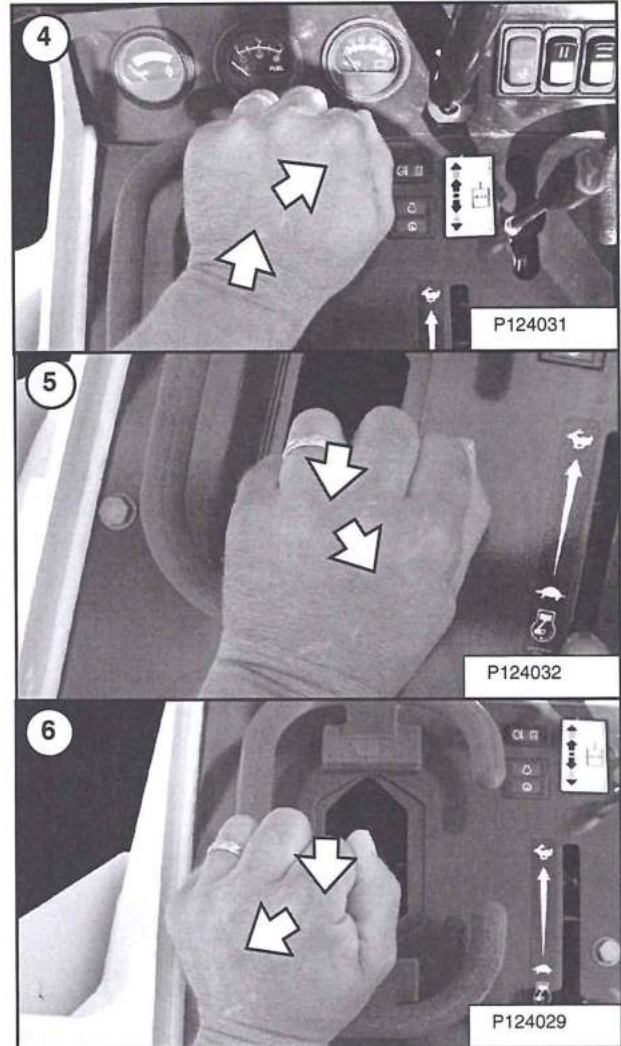
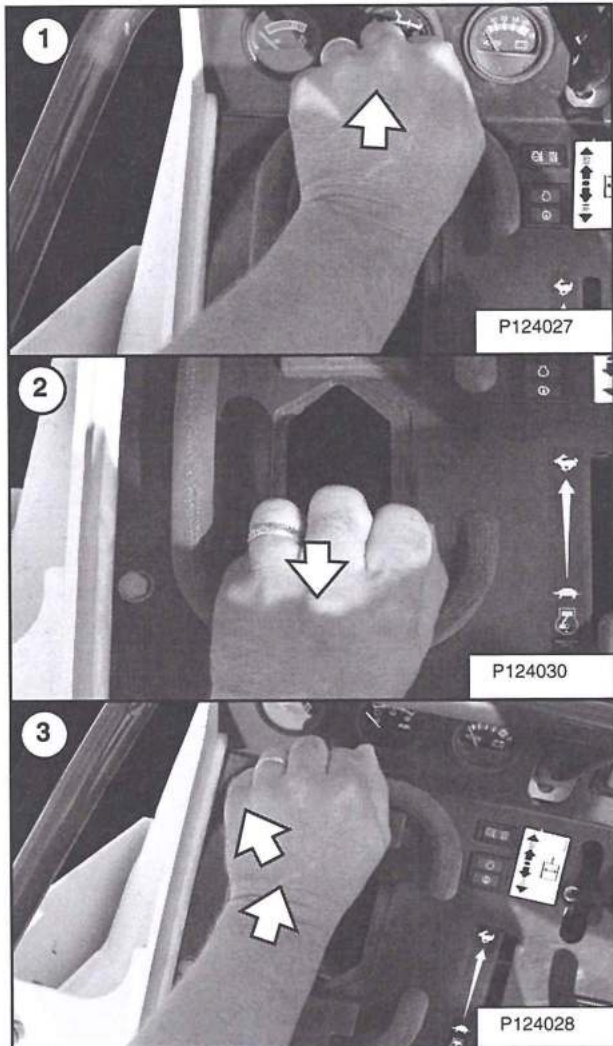
The Continuous Flow Shutoff Pedal (Item 2) is located on the ride-on platform and is activated when the pedal is pressed by the operator. The Continuous Flow Shutoff Pedal (Item 2) [Figure 10] allows the Continuous Auxiliary Hydraulic Flow Function to be used.

- When the operator occupies the Operator Platform and depresses the pedal, the Continuous Auxiliary Hydraulic Flow Function is enabled.
- When the operator releases the pedal, the Continuous Auxiliary Hydraulic Flow Function is disabled.

DRIVING AND STEERING THE MINI TRACK LOADER

Operation

Figure 11



The Drive / Steering Joystick Control is on the left side of the operator's console. Operate the Drive / Steering Joystick to function as follows:

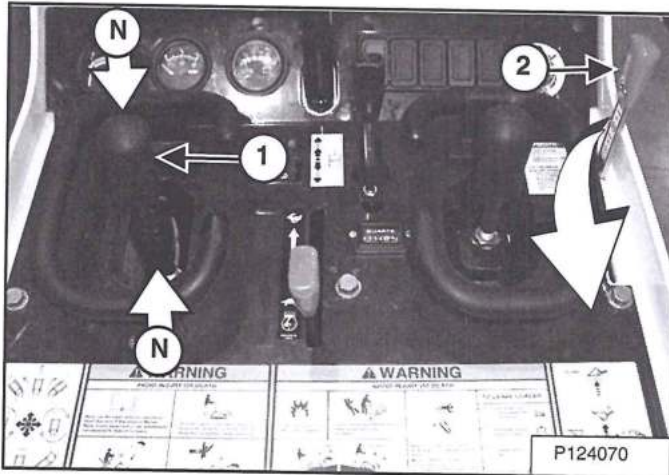
- 1 - FORWARD TRAVEL - Move the Drive / Steering Joystick forward (Item 1) [Figure 11].
- 2 - REVERSE TRAVEL - Move the Drive / Steering Joystick backward (Item 2) [Figure 11].
- 3 - FORWARD LEFT TURN - Move the Drive / Steering Joystick forward and to the left (Item 3) [Figure 11].
- 4 - FORWARD RIGHT TURN - Move the Drive / Steering Joystick forward and to the right (Item 4) [Figure 11].
- 5 - REVERSE LEFT TURN - Move the Drive / Steering Joystick backward and to the right (Item 5) [Figure 11].
- 6 - REVERSE RIGHT TURN - Move the Drive / Steering Joystick backward and to the left (Item 6) [Figure 11].

NOTE: The engine will not start unless the Drive / Steering Joystick is in NEUTRAL.

STOPPING THE MINI TRACK LOADER

Using The Drive / Steering Joystick Control

Figure 12



When the Drive/Steering Joystick Control (Item 1) [Figure 12] is moved to the NEUTRAL position, the hydrostatic drive system will act as a *service brake* to stop the mini track loader.

Engage the parking brake (Item 2) [Figure 12] whenever the mini track loader is stopped for an extended length of time or before leaving the operator's position.

WARNING

Before you leave the operator's position at the rear of the loader:

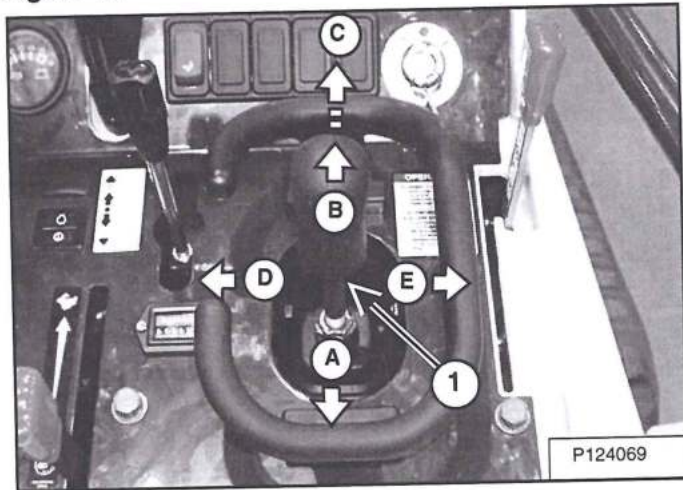
- Lower lift arms and put attachment flat on ground.
- Disengage auxiliary hydraulic system.
- Engage parking brake.
- Stop engine. Remove key.

W-2416-1015

HYDRAULIC CONTROLS

Lift / Tilt Joystick

Figure 13



The Lift / Tilt Joystick Control (Item 1) [Figure 13] controls the movement of the lift arms and the attachment tilt.

Lift Arm Operation

A - Raise Lift Arms

B - Lower Lift Arms

Lift Arm Float Position

C - Lift Arms in Float Position

Use the *float* position of the lift arms to level loose material while driving backward.

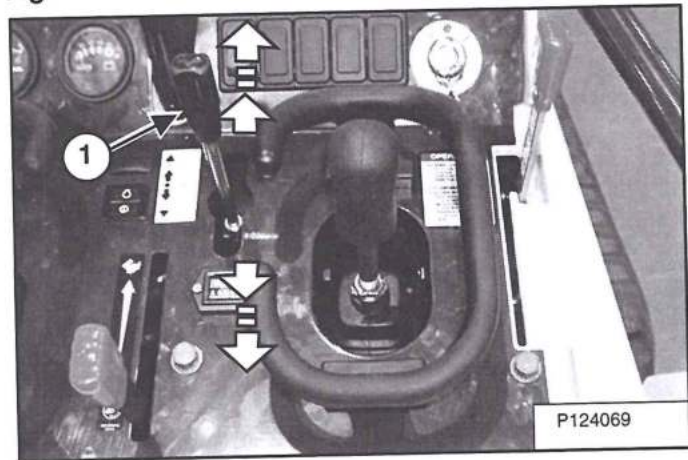
Tilt Operation

D - Tilt Attachment Backward

E - Tilt Attachment Forward

Auxiliary Hydraulic Control Operation

Figure 14

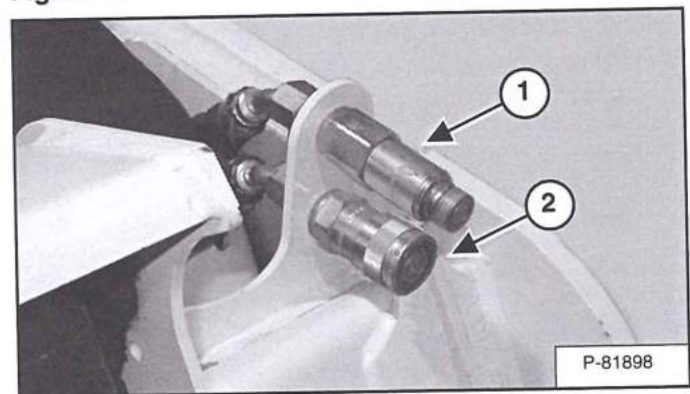


Variable Flow:

Push the Auxiliary Hydraulic Control Lever (Item 1) [Figure 14] forward for auxiliary hydraulic oil flow to the front male coupler (Item 1) [Figure 15]. Hydraulic oil flow increases to the coupler as the lever is pushed forward.

Pull the Auxiliary Hydraulic Control Lever (Item 1) [Figure 14] backward for auxiliary hydraulic oil flow to the front female coupler (Item 2) [Figure 15]. Hydraulic oil flow increases to the coupler as the lever is pushed backward.

Figure 15

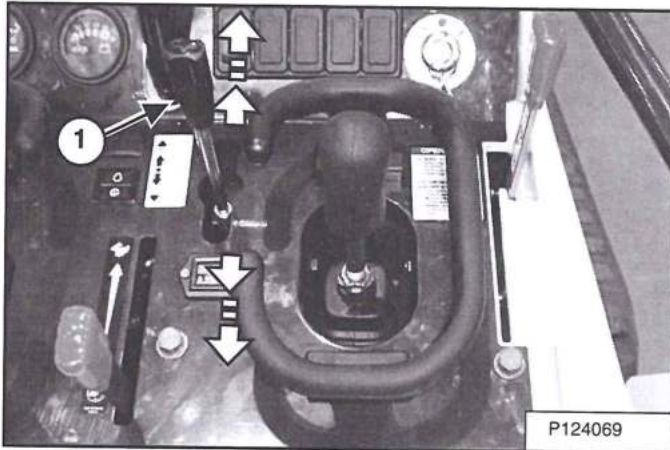


HYDRAULIC CONTROLS (CONT'D)

Auxiliary Hydraulic Control Operation (Cont'd)

Continuous Flow:

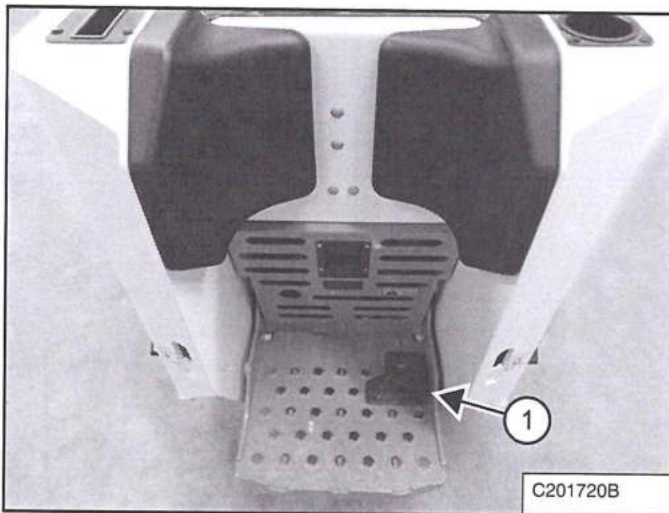
Figure 16



To resume the continuous flow operation, make sure the Auxiliary Hydraulic Control Lever (Item 1) [Figure 16] is in NEUTRAL and depress the Continuous Flow Shutoff Pedal (Item 1) [Figure 17]. Move the Auxiliary Hydraulic Control Lever (Item 1) [Figure 16] all the way forward or all the way backward until it locks (DETENT position).

NOTE: The Auxiliary Hydraulic Control Lever (Item 1) [Figure 16] must be in NEUTRAL, and the Continuous Flow Shutoff Pedal (Item 1) [Figure 17] must be released to start the engine.

Figure 17



While depressing the Continuous Flow Shutoff Pedal (Item 1) [Figure 17], push the Auxiliary Hydraulic Control Lever (Item 1) [Figure 16] all the way forward or all the way backward until it locks (DETENT position) for continuous auxiliary hydraulic oil flow for an attachment such as a tiller or trencher.

When the operator releases the Continuous Flow Shutoff Pedal (Item 1) [Figure 17] while operating in continuous flow, the Auxiliary Hydraulic Control Lever (Item 1) [Figure 16] will return to NEUTRAL after one to three seconds and the auxiliary hydraulic oil flow will stop.

HYDRAULIC CONTROLS (CONT'D)

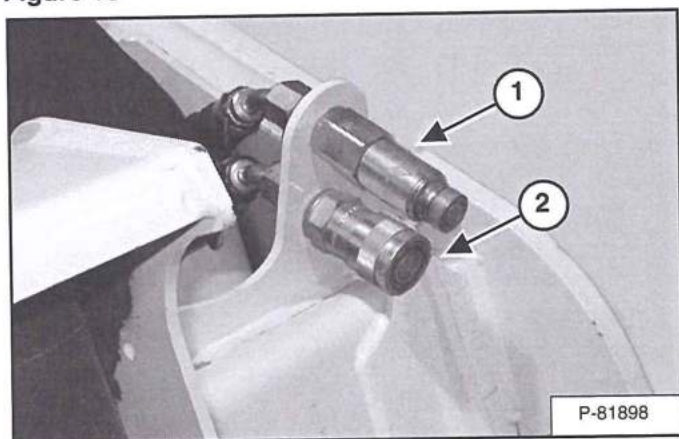
Quick Couplers

! WARNING

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

W-2145-0290

Figure 18



To Connect: Remove dirt or debris from the surface of both the male and female couplers, and from the outside diameter of the male coupler. Visually check the couplers (Item 1) and (Item 2) [Figure 18] for corroding, cracking, damage, or excessive wear. If any of these conditions exist, the coupler(s) must be replaced.

Install the male couplers into the female couplers. Full connection is made when the ball release sleeve slides forward on the female coupler.

To Disconnect: Hold the male coupler. Retract the sleeve on the female coupler until the couplers disconnect.

! WARNING

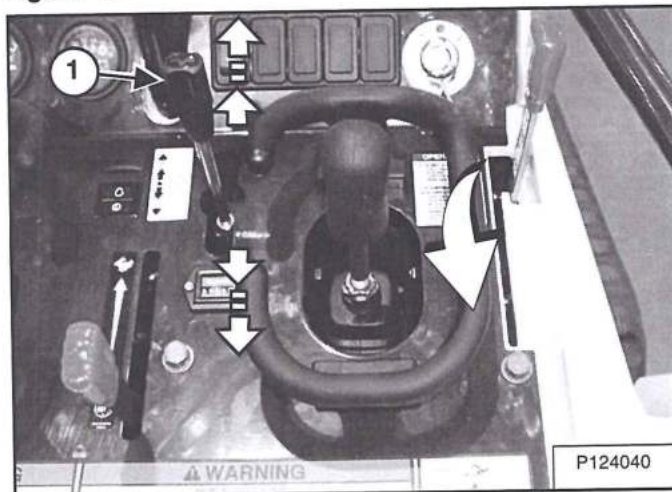
AVOID BURNS

Hydraulic fluid, tubes, fittings and quick couplers can get hot when running machine and attachments. Be careful when connecting and disconnecting quick couplers.

W-2220-0396

Relieve Hydraulic Pressure (Mini Track Loader And Attachment)

Figure 19



Mini Track Loader:

- Lower the lift arms fully and put the attachment flat on the ground. Engage the parking brake. Stop the engine.
- Move the Auxiliary Hydraulic Control Lever (Item 1) [Figure 19] forward and backward to release auxiliary hydraulic oil pressure.

Attachments:

- Follow procedure above to release pressure in the mini track loader.
- Connect male coupler from attachment to female coupler of the mini track loader then repeat procedure above. This will release pressure in the attachment.
- Connect the female coupler from the attachment to the male coupler of the mini track loader. This will release pressure in the attachment.

Hydraulic pressure in the auxiliary hydraulic system can make it difficult to engage quick couplers to an attachment.

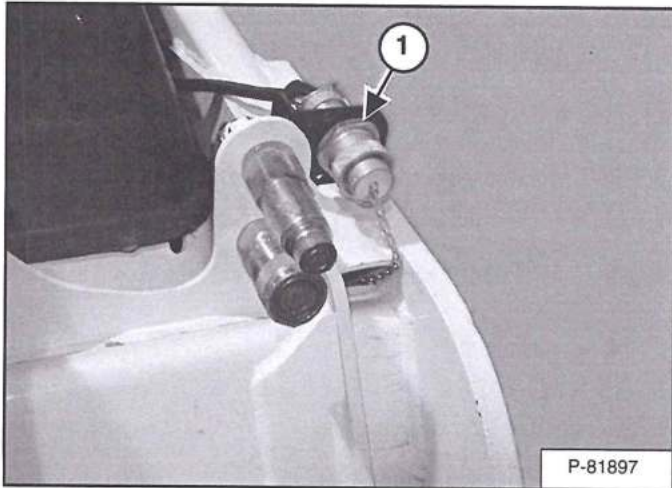
ATTACHMENT CONTROL DEVICE (ACD) (OPTIONAL EQUIPMENT)

Description

This machine may be equipped with an optional Attachment Control Device.

The attachment electrical harness is used to control functions on various attachments that can be used with the mini track loader.

Figure 20



The harness connector (Item 1) [Figure 20] will connect to the electrical harness on various attachments when the attachment is installed on the mini track loader.

The two switches (Item 1) and (Item 2) [Figure 21] are used with the electrical harness to control the movement of different functions on the various attachments.

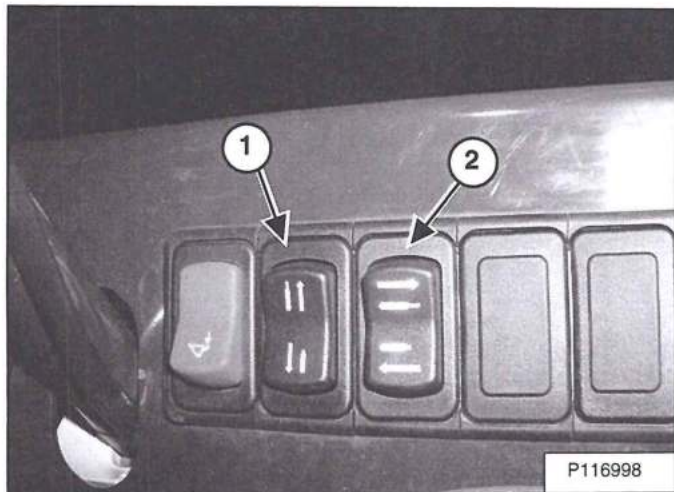
See the appropriate attachment Operation & Maintenance Manual for control details.

WARNING

Never modify equipment or use attachments that are not manufactured by Bobcat.

W-2481-1003

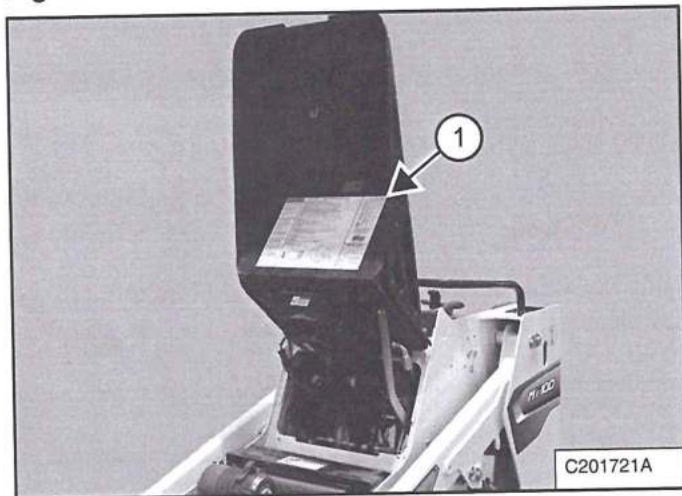
Figure 21



DAILY INSPECTION

Daily Inspection And Maintenance

Figure 22



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 mini track loader. The decal (Item 1) [Figure 22] is located on the underside of the hood.

- Engine Oil Level
- Hydraulic Fluid Level
- Engine Air Filter, Check Air System for Damage or Leaks
- Engine Coolant Level, Check System for Damage or Leaks
- Grease Pivot Pins on the Lift Arms, Cylinders, and Bob-Tach or Common Industry Interface
- Grease the Bob-Tach Locking Wedges or Common Industry Interface Locking Pins
- Grease Track Roller and Idlers
- Check Tracks for Wear or Damage
- Fuel Filter, Drain Water From Separator
- Loose or Broken Parts, Repair or Replace as Necessary
- Safety Signs (Decals) Replace as Necessary
- Lift Arm Support Device, Replace if Damaged or Missing
- Check Function of NEUTRAL Start Interlocks and Lift / Tilt Lockouts
- Check Function of the Continuous Flow Shutoff System
- Check Function of Parking Brake
- Track Tension
- Clean Engine Compartment, Oil Cooler and Radiator
- Clean Operator Platform

WARNING

Operator must have instructions before operating the machine. Untrained operators can cause injury or death.

W-2001-0502

NOTE: Fluids such as engine oil, hydraulic fluid, coolant, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for correct disposal.

IMPORTANT

PRESSURE WASHING DECALS

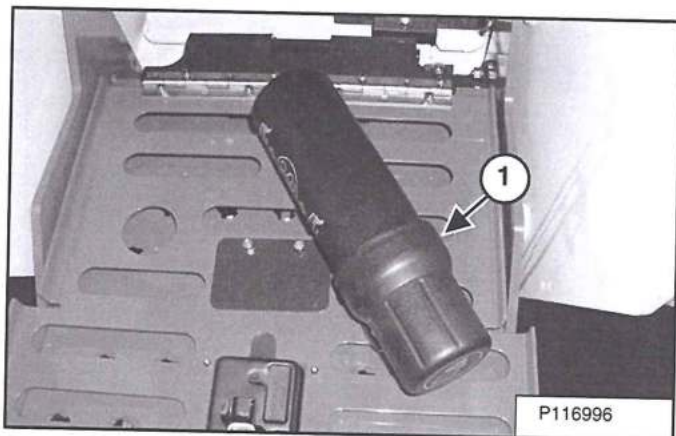
- Never direct the stream at a low angle toward the decal that could damage the decal causing it to peel from the surface.
- Direct the stream at a 90 degree angle and at least 300 mm (12 in) from the decal. Wash from the center of the decal toward the edges.

I-2226-0910

PRE-STARTING PROCEDURE

Procedure

Figure 23



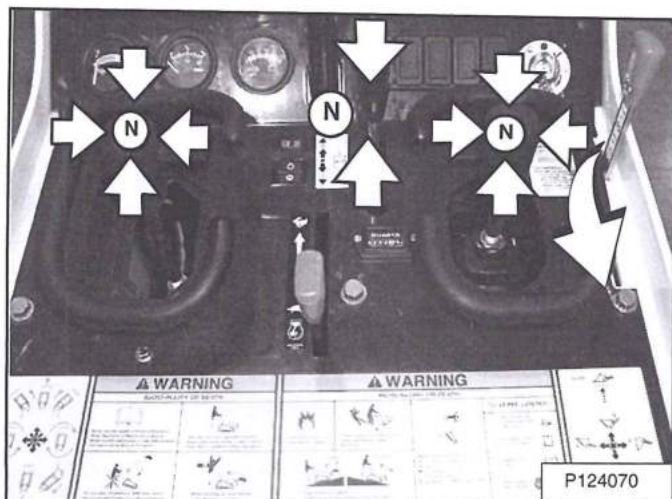
Read and understand the Operation & Maintenance Manual stored inside the manual container on the rear door (Item 1) [Figure 23] before operating the mini track loader.

! WARNING

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

W-2406-0801

Figure 24



Put all controls in NEUTRAL position [Figure 24].

Figure 25



Verify the parking brake (Item 1) [Figure 25] is engaged.

! WARNING

AVOID INJURY OR DEATH

When operating the machine:

- Operate only from the operator's position at the rear of the loader.
- Always keep your hands on the controls.
- Stay away from the tracks.

W-2407-0801

! WARNING

AVOID INJURY OR DEATH

- Movement of the attachment will occur if the tilt control is NOT in neutral when the engine is started.
- Always check that all levers are in neutral before starting the engine.

W-2482-1003

NOTE: The engine will not start unless the Drive/Steering Joystick Control and the Auxiliary Hydraulic Control are in NEUTRAL. The Continuous Flow Shutoff Pedal must NOT be depressed when starting the engine.

STARTING THE ENGINE

Key Switch

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page 29.)

Figure 26



Set the engine speed control (Item 1) [Figure 26] to the 1/2 speed position.

WARNING

EXPLOSION CAN CAUSE SERIOUS INJURY, DEATH OR SEVERE ENGINE DAMAGE

DO NOT use ether or starting fluid with glow plug or air intake heater systems.

W-2071-0415

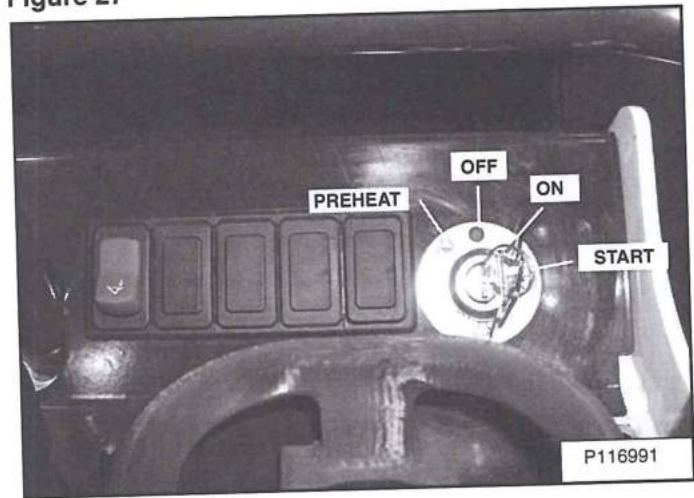
WARNING

AVOID SERIOUS INJURY OR DEATH

- Engines can have hot parts and hot exhaust gas. Keep flammable material away.
- Do not use machines in atmosphere containing explosive dust or gases.

W-2051-0212

Figure 27



Turn the key to the PREHEAT position (if required) [Figure 27]. (See Cold Temperature Starting on Page 31.)

Turn the key to START [Figure 27]. Release the key when the engine starts. The key will return to the ON position.

Stop the engine if any Warning lights stay on after the engine is running. Check for the cause of the warning before starting the engine again.

Turn the key OFF to stop the engine.

IMPORTANT

Do not engage the starter for longer than 15 seconds at a time. Longer use can damage the starter by overheating. Allow starter to cool for one minute before using starter again.

I-2034-0700

WARNING

AVOID INJURY OR DEATH

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

W-2050-0807

STARTING THE ENGINE (CONT'D)

Cold Temperature Starting

WARNING

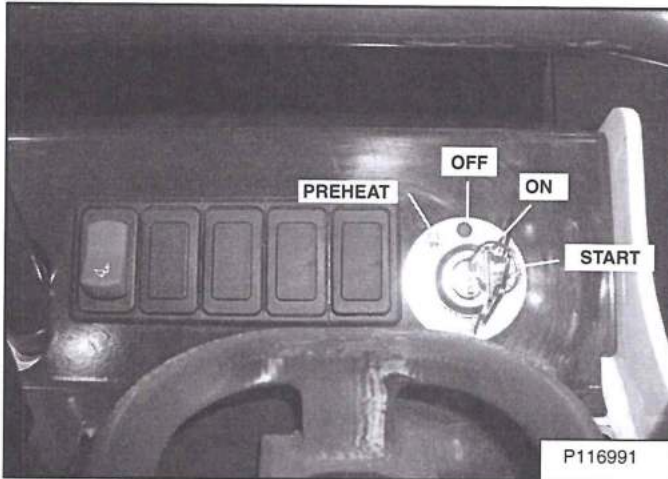
EXPLOSION CAN CAUSE SERIOUS INJURY, DEATH OR SEVERE ENGINE DAMAGE
DO NOT use ether or starting fluid with glow plug or air intake heater systems.

W-2071-0415

If the temperature is below freezing, perform the following to make starting the engine easier:

- Replace the engine oil with the correct type and viscosity for the anticipated starting temperature. (See ENGINE LUBRICATION SYSTEM on Page 69.)
- Make sure the battery is fully charged.

Figure 28



- Turn the key to the PREHEAT position [Figure 28]. Preheat for 15 seconds MAXIMUM.

Turn the key to START. Release the key when the engine starts. It will return to the ON position. [Figure 28]

Stop the engine if the Warning lights stay on after the engine is running. Check for the cause of the warning before starting the engine again.

Warming The Hydraulic / Hydrostatic System

Let the engine run at moderate speed to warm the engine and hydraulic fluid before operating the mini track loader.

IMPORTANT

When the temperature is below -30°C (-20°F), hydraulic oil must be warmed before starting. The hydraulic system will not get enough oil at low temperatures and will be damaged. Park the machine in an area where the temperature will be above -18°C (0°F) if possible.

I-2212-0910

IMPORTANT

Machines warmed up with moderate engine speed and light load have longer life.

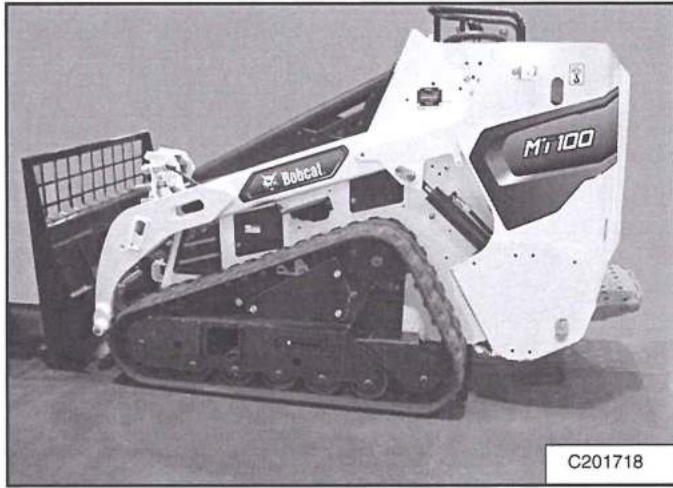
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STOPPING THE ENGINE AND LEAVING THE MINI TRACK LOADER

Procedure

Stop the mini track loader on level ground.

Figure 29



Lower the lift arms fully and put the attachment flat on the ground [Figure 29].

Disengage the auxiliary hydraulics.

Move the engine speed control fully down to decrease the engine speed.

Engage the parking brake.

Turn the key OFF [Figure 28].

Remove the key to prevent operation of the mini track loader by unauthorized personnel.

Step off of the operator platform.



WARNING

Before you leave the operator's position at the rear of the loader:

- Lower lift arms and put attachment flat on ground.
- Disengage auxiliary hydraulic system.
- Engage parking brake.
- Stop engine. Remove key.

W-2416-1015

COUNTERWEIGHTS

Description

Four counterweights are factory installed on the mini track loader. The four counterweights (two on each side) are installed on the track frame [Figure 30].

The counterweights can be removed from the track frame and installed on the sides of main frame uprights [Figure 31].

See your Bobcat dealer for information about approved mini track loader counterweights and configurations for your job application and attachment.

NOTE: Do not add additional counterweights. Only the four factory installed counterweights are approved for use on the mini track loader.

Effect On The Mini Track Loader And Operation

Proper operation of the mini track loader and attachment does not change with factory installed counterweights on this machine. Always follow the instructions provided in this manual when operating your mini track loader.

Different counterweight configurations can affect the mini track loader and its operation in some applications. Some examples are:

- Machine weight distribution.
- Increased Rated Operating Capacity (ROC)
- Harder steering
- Accelerated or uneven track wear
- Increased power consumption.

When To Consider Track Frame Mounted Counterweights

The track frame counterweights [Figure 30] increase the downward force of the attachment for better attachment performance in some applications. Some examples are:

- Digging with buckets.
- Using Hydraulic Breakers, Scrapers, or Landplanes

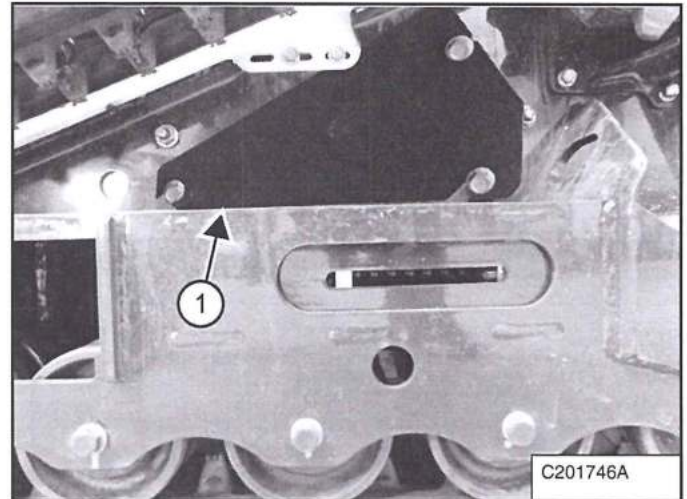
When To Consider Main Frame Upright Mounted Counterweights

Main frame mounted counterweights [Figure 31] increase the mini track loader Rated Operating Capacity (ROC) which could improve attachment performance in some applications. Some examples are:

- Using pallet fork with palletized loads.
- Using grapples.
- Using buckets to handle loose material without digging.

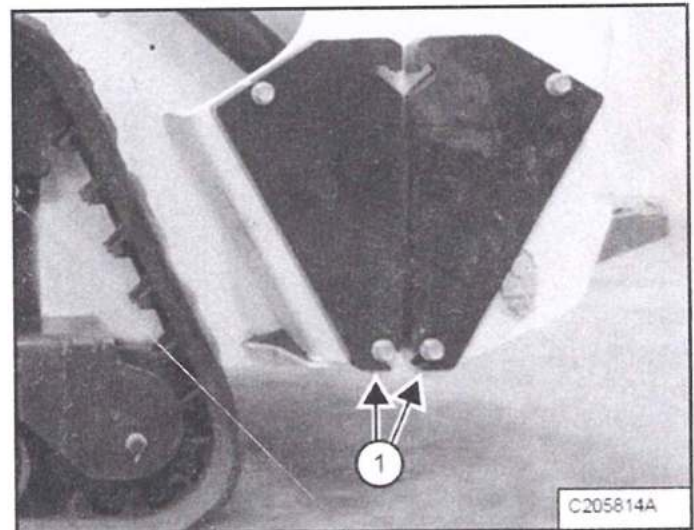
Counterweight Positions

Figure 30



Track frame position (Item 1) [Figure 30] (factory installed).

Figure 31



Main frame upright position (Item 1) [Figure 31].

NOTE: When moving the counterweights from the track frame position [Figure 30] to the upright position [Figure 31] requires different mounting bolts. The bolts are included and stored in a plastic bag tie strapped to the inside of the rear cover. Do not store the unused bolts in the frame mounting holes, place them in a secure location for future use.

Installation: Tighten the bolts to 120 - 130 N•m (90 - 100 ft-lb) torque.

ATTACHMENTS

Choosing The Correct Bucket

WARNING

AVOID INJURY OR DEATH

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

W-2052-0907

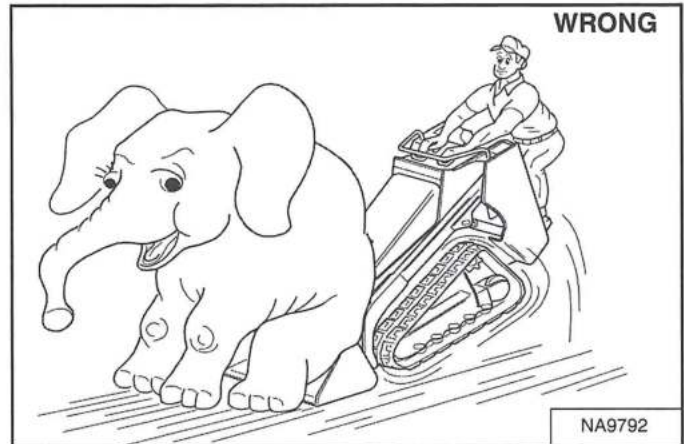
NOTE: Warranty is void if non-approved attachments are used on the Bobcat Mini Track Loader.

The dealer can identify, for each model mini track loader, the attachments and buckets approved by Bobcat. The buckets and attachments are approved for Rated Operating Capacity (ROC) and for secure fastening to the mini track loader.

The ROC for this mini track loader is shown on a decal on the machine. (See MINI TRACK LOADER SPECIFICATIONS on Page 104.)

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

Figure 32



Exceeding the ROC [Figure 32] can cause the following problems:

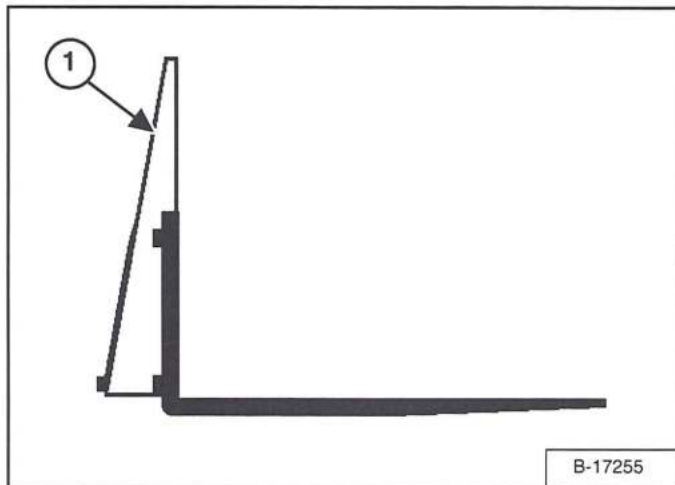
- Difficult steering.
- Faster track wear.
- Loss of stability.
- Reduced mini track loader life.

Use the correct size bucket for the type and density of material being handled. For safe handling of materials and avoiding machine damage, the attachment (or bucket) should handle a full load without going over the ROC for the mini track loader. Partial loads make steering more difficult.

ATTACHMENTS (CONT'D)

Pallet Fork

Figure 33



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

The maximum load to be carried when using a pallet fork is shown on a decal located on the pallet fork frame (Item 1) [Figure 33].

See your Bobcat Dealer for more information about pallet fork inspection, maintenance and replacement. See your Bobcat Dealer for ROC when using a pallet fork and for other available attachments.



WARNING

AVOID INJURY OR DEATH

**Do not exceed Rated Operating Capacity (ROC).
Excessive load can cause tipping or loss of control.**

W-2053-0903

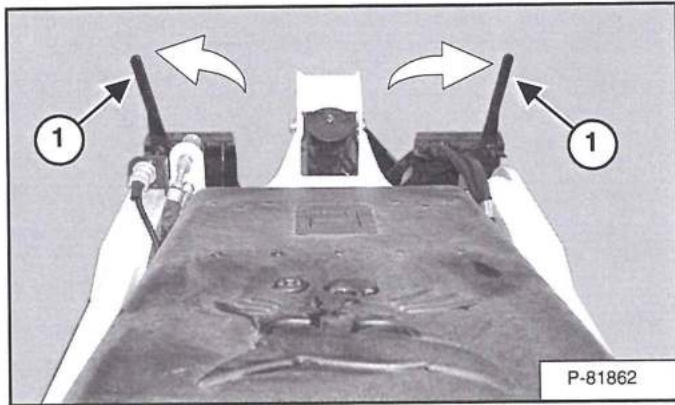
ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Bob-Tach)

The Bob-Tach is used for fast changing of buckets and other attachments. Installation and removal of a bucket is shown. See the appropriate attachment Operation & Maintenance Manual to install other attachments.

Installing

Figure 34



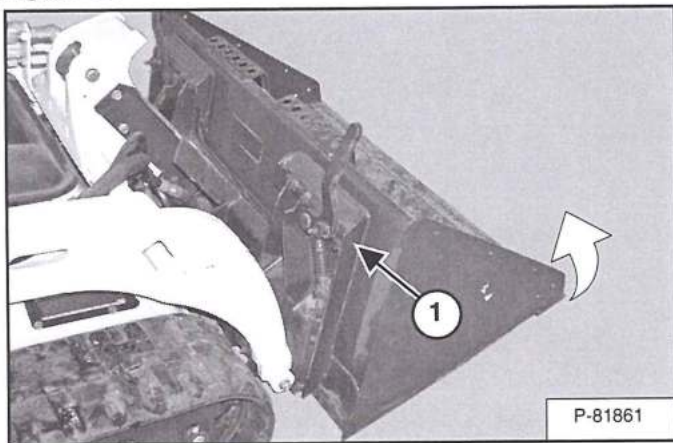
Pull the Bob-Tach levers all the way up [Figure 34].

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page 29.)

Start the engine. Release the parking brake.

Lower the lift arms and tilt the Bob-Tach forward.

Figure 35

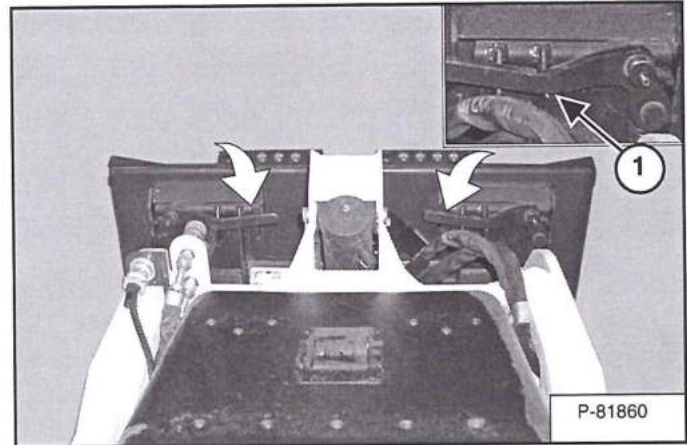


Drive forward until the top of the Bob-Tach is completely under the top flanges of the bucket (Item 1) [Figure 35] (or other attachment). Be sure the Bob-Tach levers do not hit the bucket.

Tilt the Bob-Tach backward until the cutting edge of the bucket (or other attachment) is slightly off the ground [Figure 35].

Stop the engine and engage the parking brake.

Figure 36



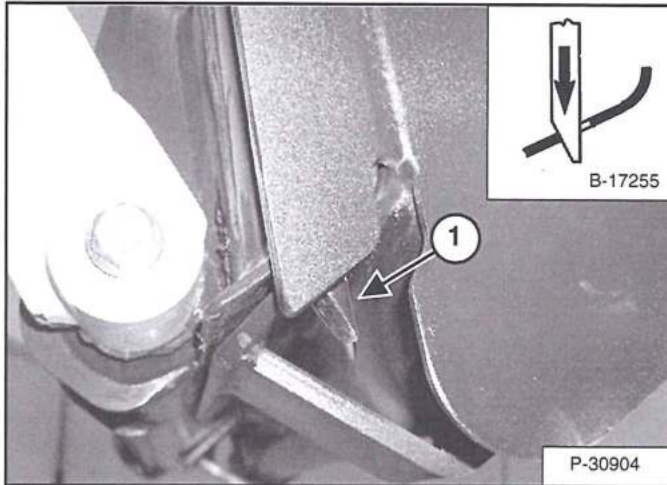
Push the Bob-Tach levers down until they are fully engaged in the locked position (Item 1) [Figure 36] (wedges fully extended).

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Bob-Tach) (Cont'd)

Installing (Cont'd)

Figure 37



The wedges (Item 1) [Figure 37] must extend through the holes in the mounting frame of the bucket (or attachment), securely fastening the bucket to the Bob-Tach.

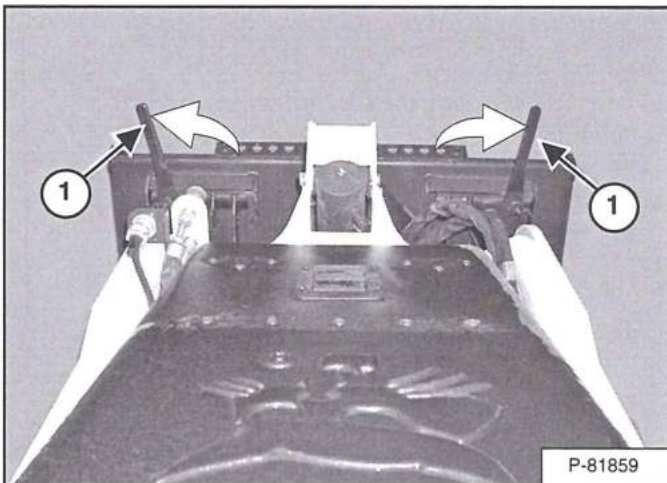
! WARNING

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

Removing

Figure 38



Lower the lift arms, put the attachment flat on the ground and lower or close the hydraulic equipment.

Stop the engine and engage the parking brake.

If the attachment is hydraulically controlled, stop the engine and relieve hydraulic pressure at the quick couplers. (See Relieve Hydraulic Pressure (Mini Track Loader And Attachment) on Page 26.)

! WARNING

Before you leave the operator's position at the rear of the loader:

- Lower lift arms and put attachment flat on ground.
- Disengage auxiliary hydraulic system.
- Engage parking brake.
- Stop engine. Remove key.

W-2416-1015

Disconnect auxiliary hydraulic hoses.

Pull the Bob-Tach levers (Item 1) [Figure 38] all the way up.

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page 29.) Start the engine. Release the parking brake.

Be sure the lift arms are all the way down. Tilt the Bob-Tach forward. Move backward, away from the bucket or attachment.

! WARNING

Bob-Tach levers have spring tension. Hold lever tightly and release slowly. Failure to obey warning can cause injury.

W-2054-1285

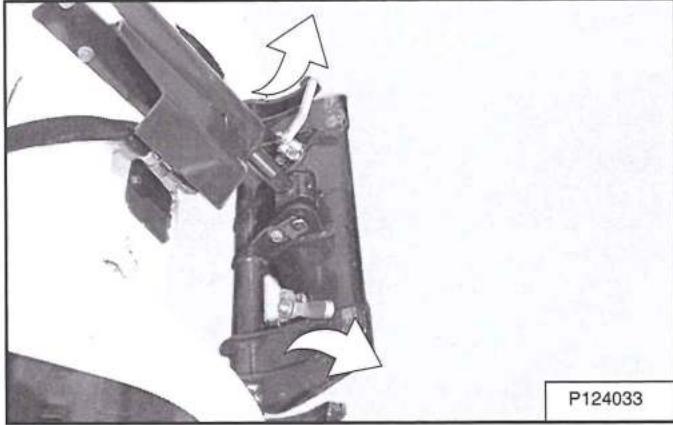
ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Common Industry Interface)

The Common Industry Interface (CII) is used for fast changing of buckets and other attachments. See the appropriate attachment Operation & Maintenance Manual for further instructions.

Installing

Figure 39



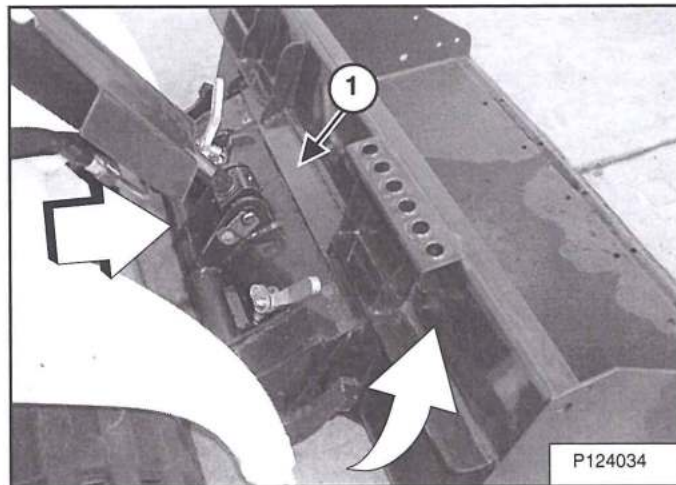
Pull the CII locking pin levers all the way up [Figure 39].

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page 29.)

Start the engine. Release the parking brake.

Lower the lift arms and tilt the CII forward.

Figure 40

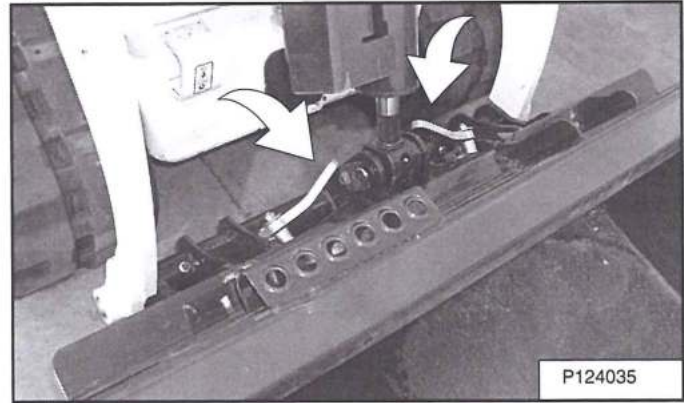


Drive forward until the top of the CII is completely under the top flange of the bucket (Item 1) [Figure 40] (or other attachment).

Tilt the CII backward until the front of the bucket (or other attachment) is slightly off the ground.

Stop the engine and engage the parking brake.

Figure 41



Push the CII locking pin levers down until they are fully engaged in the locked position [Figure 41] (pins fully extended).

WARNING

The Common Industry Interface locking pins must extend through the holes in attachment frame. Levers must be fully down and locked. Failure to secure the locking pins can allow attachment to come off and cause serious injury or death.

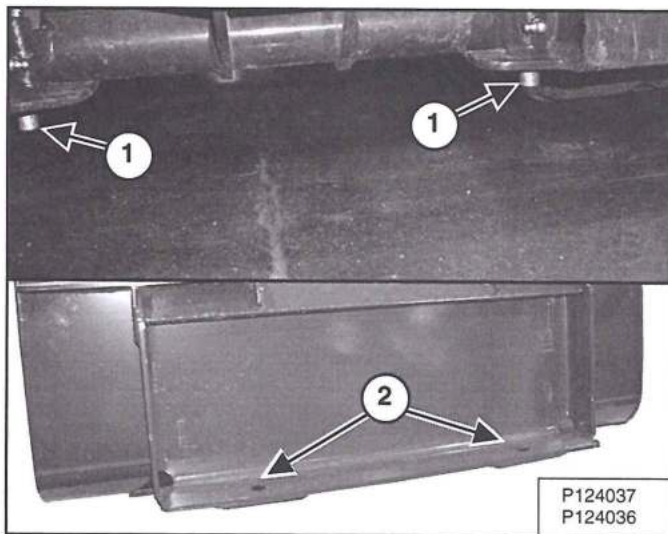
W-2996-1015

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Common Industry Interface) (Cont'd)

Installing (Cont'd)

Figure 42



The pins (Item 1) must extend through the holes in the mounting frame of the bucket (or other attachment) (Item 2) [Figure 42], securely fastening the attachment to the interface.

! WARNING

The Common Industry Interface locking pins must extend through the holes in attachment frame. Levers must be fully down and locked. Failure to secure the locking pins can allow attachment to come off and cause serious injury or death.

W-2996-1015

Removing

Lower the lift arms, put the attachment flat on the ground and lower or close the hydraulic equipment.

Stop the engine and engage the parking brake.

If the attachment is hydraulically controlled (combination bucket, tiller, etc.) stop the engine and relieve hydraulic pressure at the quick couplers. (See Relieve Hydraulic Pressure (Mini Track Loader And Attachment) on Page 26.) Disconnect auxiliary hydraulic hoses.

! WARNING

Before you leave the operator's position at the rear of the loader:

- Lower lift arms and put attachment flat on ground.
- Disengage auxiliary hydraulic system.
- Engage parking brake.
- Stop engine. Remove key.

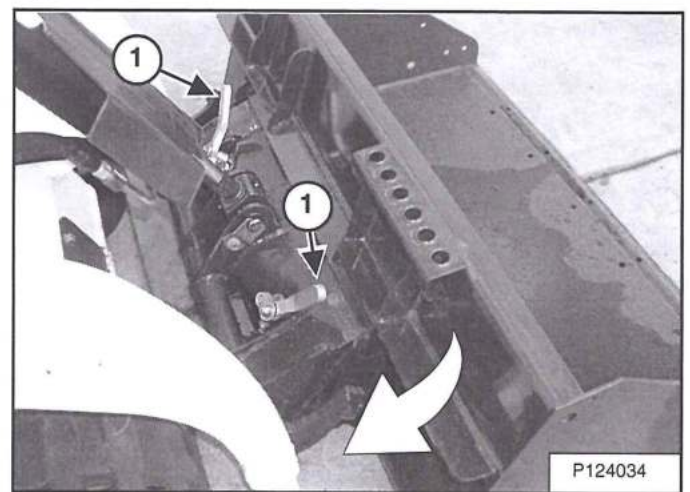
W-2416-1015

! WARNING

Locking pin levers have spring tension. Hold lever tightly and release slowly. Failure to obey warning can cause injury.

W-2997-1015

Figure 43



Pull the CII locking pin levers (Item 1) [Figure 43] all the way up.

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page 29.) Start the engine. Release the parking brake.

Be sure the lift arms are all the way down. Tilt the Bob-Tach forward. Move backward, away from the bucket or attachment.

OPERATING PROCEDURE

Inspect The Work Area

Before beginning operation, inspect the work area for unsafe conditions.

Look for sharp drop-offs or rough terrain. Have underground utility lines (gas, water, sewer, irrigation, etc.) located and marked.

Remove objects or other construction material that could damage the mini track loader or cause personal injury.

Always check ground conditions before starting your work:

- Inspect for signs of instability such as cracks or settlement.
- Be aware of weather conditions that can affect ground stability.
- Check for adequate traction if working on a slope.

Basic Operating Instructions

Always warm the engine and hydrostatic system before operating the mini track loader.

IMPORTANT

Machines warmed up with moderate engine speed and light load have longer life.

I-2015-0284

Operate the mini track loader with engine at full speed for maximum horsepower. Move the Drive / Steering Controls only a small amount to operate the mini track loader slowly.

New operators must operate the mini track loader in an open area without bystanders. Operate the controls until the mini track loader can be handled at an efficient and safe rate for all conditions of the work area.

Operating Near An Edge Or Water

Keep the mini track loader as far back from the edge as possible and the mini track loader tracks perpendicular to the edge so that if part of the edge collapses, the mini track loader can be moved back.

Always move the mini track loader back at any indication the edge may be unstable.



WARNING

MACHINE TIPPING OR ROLLOVER CAN CAUSE SERIOUS INJURY OR DEATH

- **Keep the lift arms as low as possible.**
- **Do not travel or turn with the lift arms up.**
- **Turn on level ground. Slow down when turning.**
- **Go up and down slopes, not across them.**
- **Keep the heavy end of the machine uphill.**
- **Do not overload the machine.**
- **Check for adequate traction.**

W-2018-1112

OPERATING PROCEDURE (CONT'D)

Driving On Rough Terrain And Over Curbs

Drive slowly when operating on rough terrain. Always carry the bucket or attachment as low as possible.

Figure 44

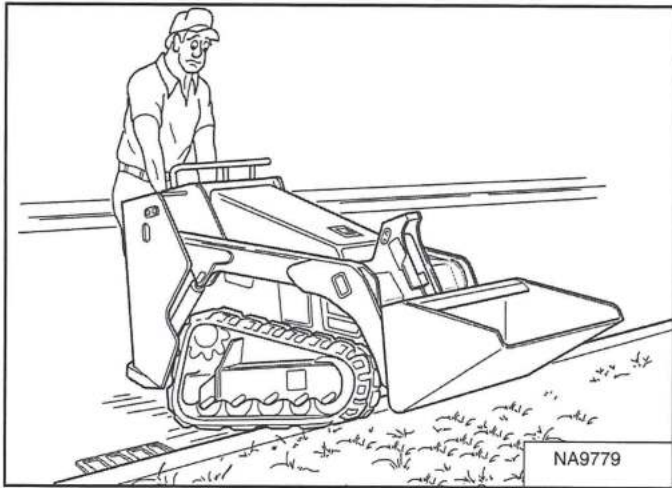
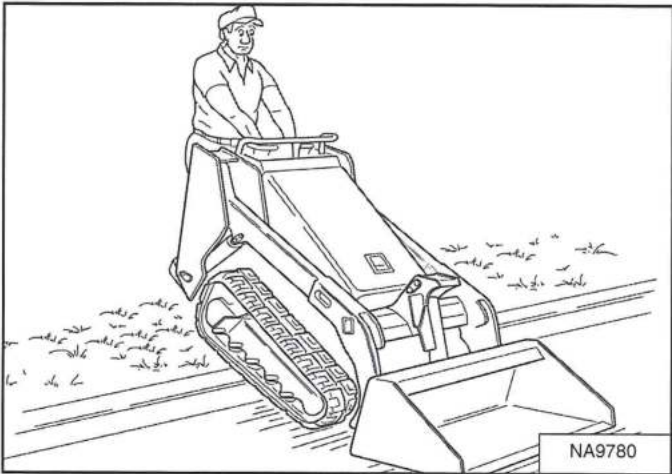


Figure 45



When the mini track loader climbs over a curb and the center of gravity goes past the curb, it will tip forward (or backward) quickly [Figure 44] and [Figure 45]. Be careful to keep your feet and body inside the operator station and away from the tracks at all times.

WARNING

AVOID INJURY OR DEATH

When operating the machine:

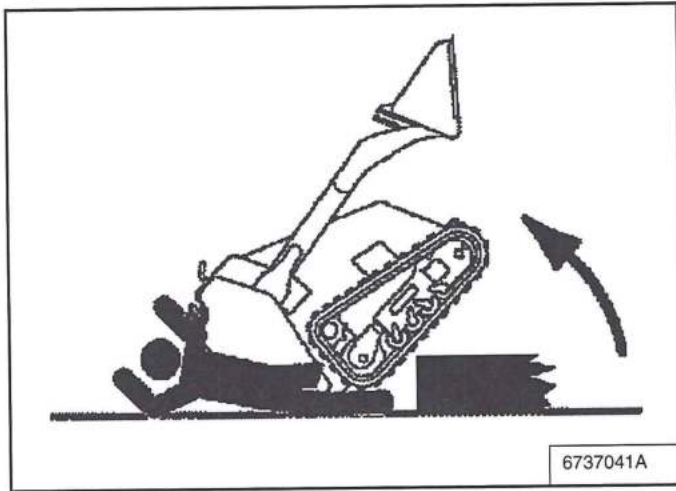
- Operate only from the operator's position at the rear of the loader.
- Always keep your hands on the controls.
- Stay away from the tracks.

W-2407-0801

OPERATING PROCEDURE (CONT'D)

Driving On Rough Terrain And Over Curbs (Cont'd)

Figure 46



Never back off a curb or step with no load or with lift arms raised [Figure 46].

If you will be repeatedly driving over a curb or slope, build a ramp with dirt to make the ascent more gradual.

NOTE: Always keep the heavy end uphill.

Always warm the engine and hydraulic system before operating the mini track loader.

IMPORTANT

Machines warmed up with moderate engine speed and light load have longer life.

I-2015-0284

For maximum performance, run the engine at full speed while working.

Move the Drive / Steering Joystick Control only a small amount to operate the mini track loader slowly.

New operators must operate the mini track loader in an open area without bystanders. Operate the controls until the mini track loader can be handled at an efficient and safe rate for all conditions of the work area.

OPERATING PROCEDURE (CONT'D)

Driving With An Auger Attachment Installed

Only light duty auger bits are approved by Bobcat Company for use on the mini track loader. (Light duty auger bits are factory painted white.)

WARNING

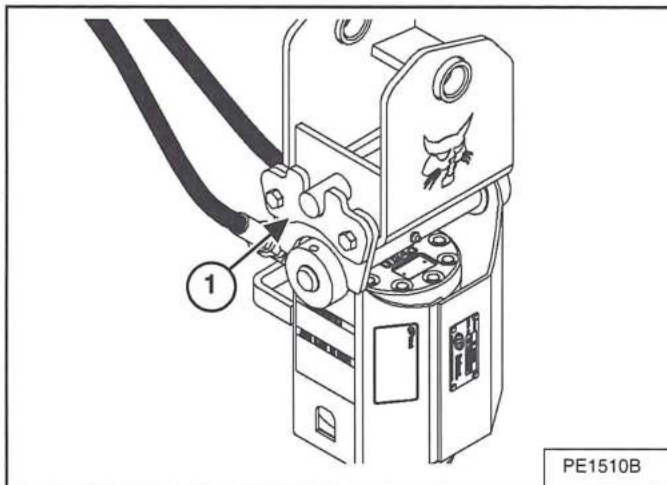
AVOID INJURY OR DEATH

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

W-2052-0907

The swing stop kit must be installed on the auger before installing on the mini track loader. Drive slowly with the auger installed. Always carry the auger as low as possible.

Figure 47



The auger swing stop kit (Item 1) [Figure 47] must be installed on the auger before using this attachment on the mini track loader.

Figure 48



When driving the mini track loader with the auger installed, always have the attachment interface rolled back fully [Figure 48].

Lower the mini track loader arms [Figure 48] so that the auger bit is just off the ground. Slow down when traveling.

See the Direct Drive Auger Operation & Maintenance Manual for additional information.

OPERATING PROCEDURE (CONT'D)

Operating With A Full Bucket

Figure 49

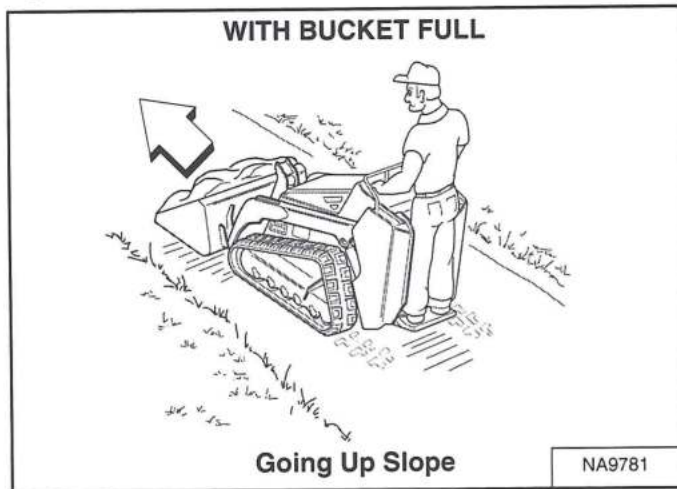
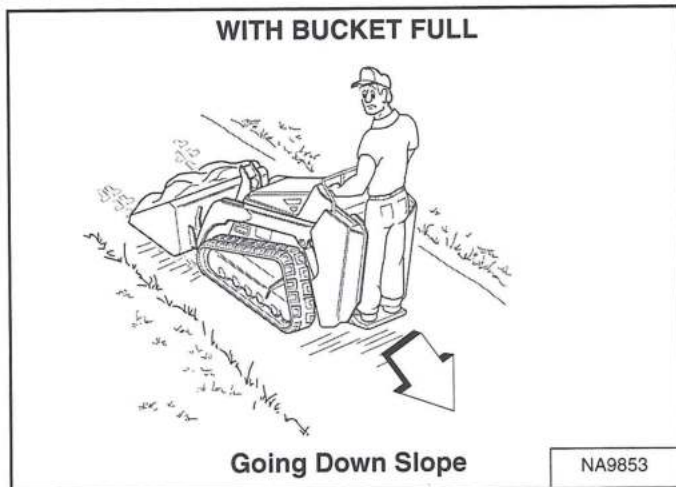


Figure 50



Keep the heavy end uphill. With a full bucket, the front of the machine is the heavy end [Figure 49] and [Figure 50].

Operating With An Empty Bucket

Figure 51

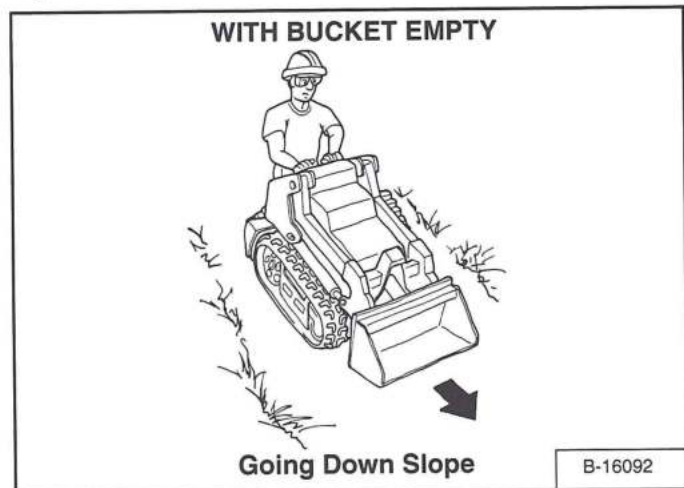
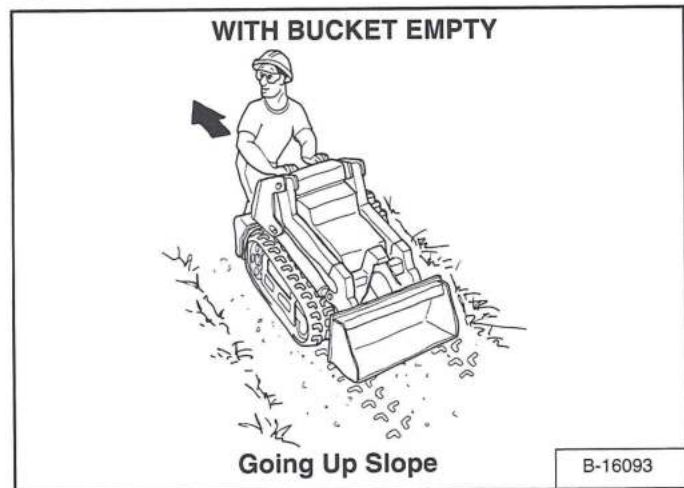


Figure 52



Keep the heavy end uphill. With empty bucket, the rear of the machine is the heavy end [Figure 51] and [Figure 52].

Go directly up or down a slope; never across a slope or curb.

WARNING

MACHINE TIPPING OR ROLLOVER CAN CAUSE SERIOUS INJURY OR DEATH

- Keep the lift arms as low as possible.
- Do not travel or turn with the lift arms up.
- Turn on level ground. Slow down when turning.
- Go up and down slopes, not across them.
- Keep the heavy end of the machine uphill.
- Do not overload the machine.
- Check for adequate traction.

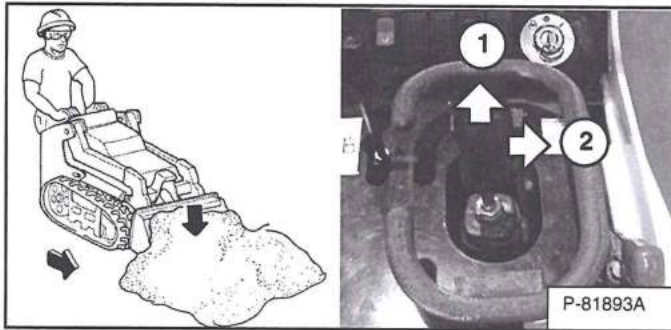
W-2018-1112

OPERATING PROCEDURE (CONT'D)

Filling And Emptying The Bucket

Filling

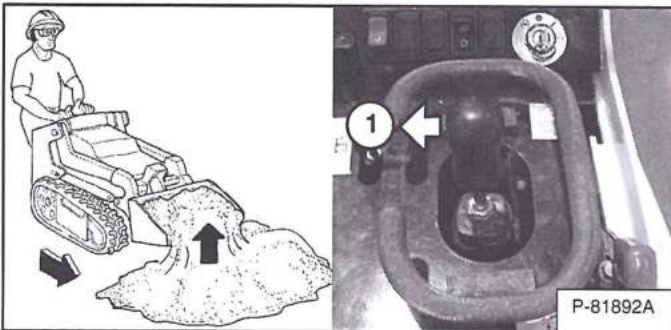
Figure 53



Move the Lift Arm / Tilt Joystick forward (Item 1) [Figure 53] until the lift arms are all the way down.

Move the joystick to the right (Item 2) [Figure 53] to put the cutting edge of the bucket on the ground.

Figure 54



Drive slowly forward into the material and move the joystick to the left (Item 1) [Figure 54] to raise the front of the bucket.

Drive backward away from the material.

Raise the bucket only high enough to avoid obstructions on rough ground.

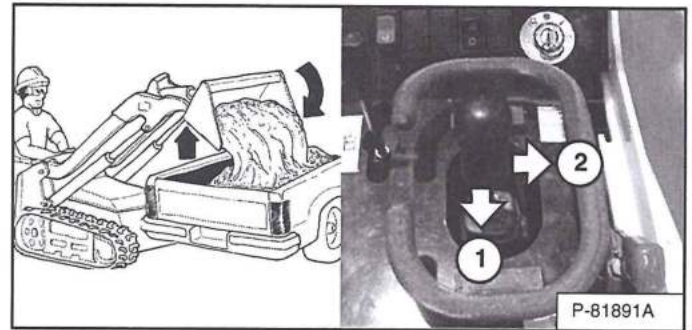
! WARNING

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

W-2420-0102

Emptying

Figure 55



Move the Lift Arm / Tilt Joystick backward (Item 1) [Figure 55] to raise the lift arms. Move the joystick to the right (Item 2) [Figure 55] while raising the lift arms to level the bucket or attachment and help prevent material from falling off the back of the bucket or attachment.

Drive forward slowly until the bucket is over the top of the truck box or bin.

Move the joystick to the right (Item 2) [Figure 55] until the bucket is empty. If all the material is near the side of the truck or bin, push it to the other side with the bucket.

! WARNING

AVOID INJURY OR DEATH

Falling loads can cause serious injury or death.

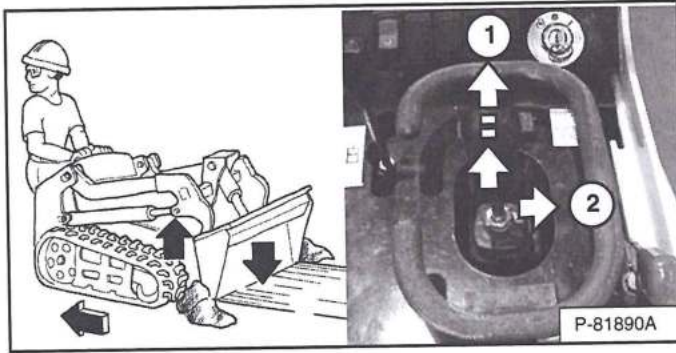
Keep load level when raising lift arms.

W-2623-1104

OPERATING PROCEDURE (CONT'D)

Leveling The Ground Using Float

Figure 56



Move the Lift Arm / Tilt Joystick (Item 1) [Figure 56] all the way forward until the lever is in the locked position to put the lift arms in the *float* position.

Move the joystick to the right (Item 2) [Figure 56] to change the position of the bucket cutting edge.

With the bucket tilted farther forward, there is more force on the cutting edge and more loose material can be moved.

Drive backward to level loose material.

Move the Lift Arm / Tilt Joystick backward to the NEUTRAL position to unlock from the *float* position.

IMPORTANT

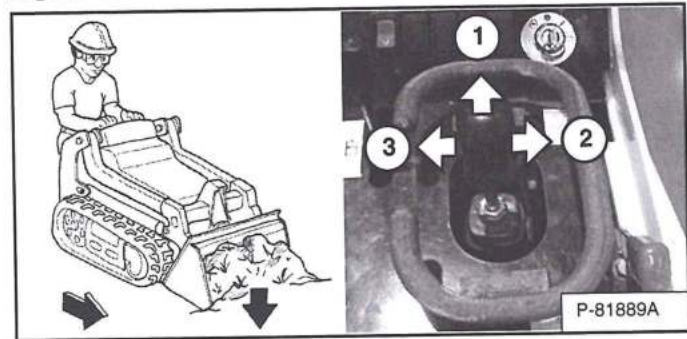
Never drive forward when the hydraulic control for lift arms is in float position.

I-2005-1285

Digging And Filling A Hole

Digging

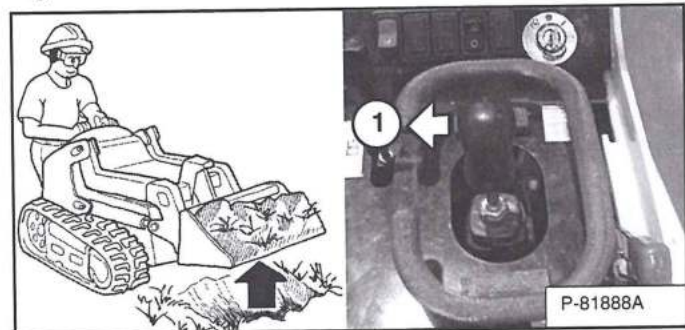
Figure 57



Move the Lift Arm / Tilt Joystick forward (Item 1) to put the lift arms all the way down. Move the Lift Arm / Tilt Joystick to the right (Item 2) [Figure 57] until the bucket cutting edge is on the ground. Drive forward slowly and continue to tilt the bucket down until it enters the ground.

Move the Lift Arm / Tilt Joystick to the left (Item 3) a small amount to increase traction and keep an even digging depth. Continue to drive forward until the bucket is full. When the ground is hard, raise and lower the cutting edge of the bucket (Items 2 and 3) [Figure 57] while driving forward slowly.

Figure 58



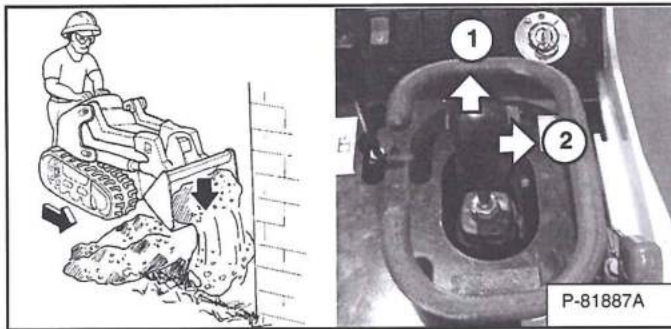
Move the Lift Arm / Tilt Joystick to the left (Item 1) [Figure 58] to tilt the bucket backward as far as it will go when the bucket is full.

OPERATING PROCEDURE (CONT'D)

Digging And Filling A Hole (Cont'd)

Filling

Figure 59



Move the Lift Arm / Tilt Joystick forward (Item 1) [Figure 59] to lower the lift arms.

Move the Lift Arm / Tilt Joystick to the right (Item 2) [Figure 59] to put the bucket cutting edge on the ground. Drive forward to the edge of the hole to push the material into the hole.

Move the Lift Arm / Tilt Joystick to the right (Item 2) [Figure 59] to tilt the bucket forward as soon as it is past the edge of the hole.

If necessary, raise the lift arms to empty the bucket.

WARNING

AVOID INJURY OR DEATH

Falling loads can cause serious injury or death.

Keep load level when raising lift arms.

W-2623-1104

TOWING THE MINI TRACK LOADER

Procedure

Because of the design of the mini track loader, there is not a recommended towing procedure.

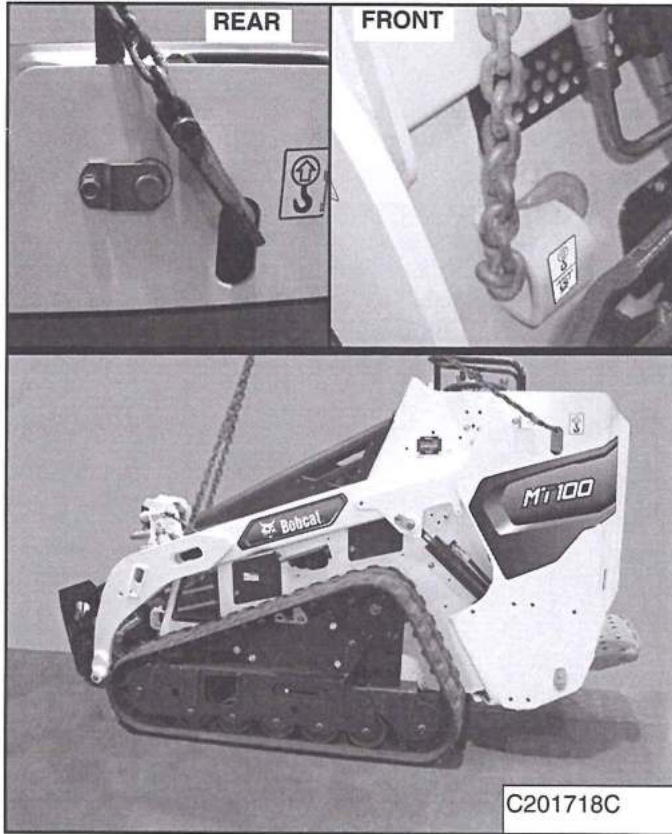
- The mini track loader can be lifted onto a transport vehicle.
- The mini track loader can be skidded a short distance to move for service (EXAMPLE: Move onto a transport vehicle.) without damage to the hydrostatic system. (The tracks will not turn.) There might be slight wear to the tracks when the mini track loader is skidded.

The towing chain (or cable) must be rated at 1.5 times the weight of the mini track loader. (See Performance on Page 106.)

LIFTING THE MINI TRACK LOADER

Four Point Lift

Figure 60



The mini track loader can be lifted using four attachment points; two at the lower front of the mini track loader frame and two at the upper end of the uprights [Figure 60].

Be sure the lifting devices are of adequate strength to lift the mini track loader. For weight of mini track loader (See Performance on Page 106.)



WARNING

AVOID INJURY OR DEATH

Never allow bystanders within 5 m (15 ft) while lifting the machine.

W-2710-0910

TRANSPORTING THE BOBCAT MINI TRACK LOADER

Loading And Unloading

! WARNING

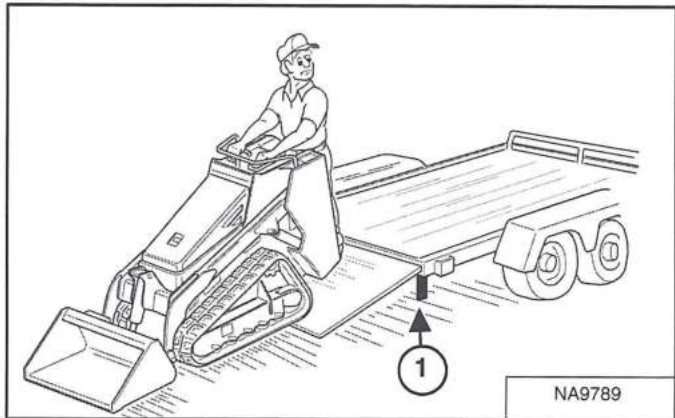
AVOID SERIOUS INJURY OR DEATH

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-2058-0807

Be sure the trailer or vehicle and ramps are of adequate size and capacity. (See Performance on Page 106.)

Figure 61



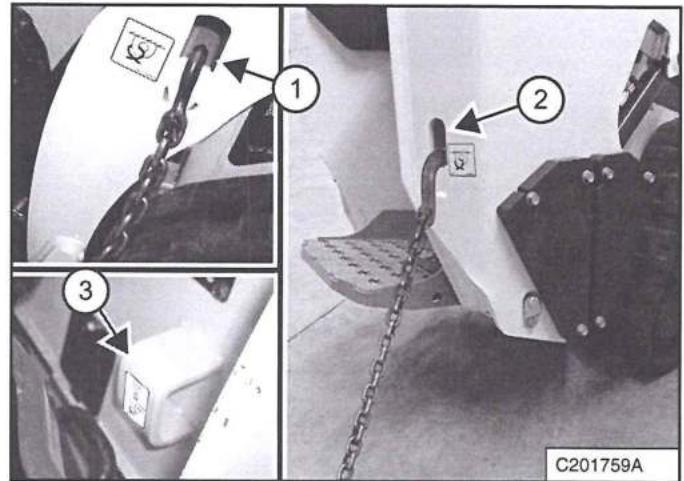
A mini track loader with an empty bucket or no attachment must be loaded backward onto the transport vehicle [Figure 61].

When using adjustable ramps, be sure the ramp width and spacing adequately covers the tread width. Do not attempt to mount ramps that are spaced too wide or too narrow.

The rear of the trailer must be blocked or supported (Item 1) [Figure 61] when loading or unloading the mini track loader to prevent the front end of the trailer from raising up.

Fastening

Figure 62



Fasten the mini track loader to the transport vehicle to prevent it from moving during sudden stops or when going up or down slopes [Figure 62].

- Lower the bucket or attachment fully.
- Stop the engine.
- Install chains at the front (Item 1) and rear tie down (Item 2) positions (both sides). The alternate front tie down (Item 3) [Figure 62] can also be used.
- Fasten each end of the chain to the transport vehicle.
- Use load binders to tighten the chains.

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MAINTENANCE SAFETY

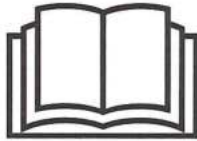


WARNING

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-2003-0807

CORRECT



P-90216

- ⚠ Never service the Bobcat Mini Track Loader without instructions.



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

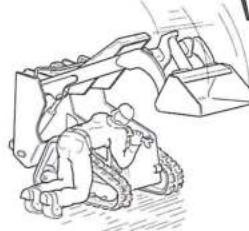
WRONG



B-23041

- ⚠ 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.

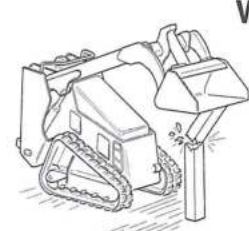
WRONG



NA9783

- ⚠ 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



NA9784

- ⚠ 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



NA9785

- ⚠ 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



NA9786
NA9782

- ⚠ 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.

MSW45-1015

SERVICE SCHEDULE

Maintenance Intervals

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 mini track loader.



WARNING

AVOID INJURY OR DEATH

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-2003-0807

Every 10 Hours (Before Starting The Mini Track Loader)

- **Engine Oil** - Check level and add as needed. (See Page 69.)
- **Engine Air Filters and Air System** - Check air filter condition indicator. Service filters only when required. Check for leaks and damaged components. (See Page 63.)
- **Engine Cooling System** - Clean debris from radiator and oil cooler areas. Check coolant level COLD and add premixed coolant as needed. (See Page 72.)
- **Fuel Filter** - Drain water and sediment from filter. (See Page 67.)
- **Hydraulic Fluid** - Check fluid level and add as needed. Do not over fill. (See Page 80.)
- **Lift Arms, Cylinders, Bob-Tach Pivot Pins & Wedges / CII Pivot Pins & Mounting Pins** - Lubricate with multipurpose lithium based grease. (See Page 88.)
- **Reverse Stop Panel (MT55 Only), Neutral Start Interlocks, and Lift / Tilt Lockouts Systems** - Check for correct function. Clean dirt and debris from moving parts. (See Page 56.), and (See Page 57.)
- **Parking Brake** - Check for proper function. (See Page 20.)
- **Indicators and Lights** - Check for function. Clean or repair as needed. (See Page 18.)
- **Safety Signs** - Check for damaged signs (decals). Replace any signs that are damaged. (See MACHINE SIGNS (DECALS) on Page 12.)
- **General** - Clean dirt and debris from the operator position. Check for loose or broken parts, instrument operation, loose bolts or nuts, and oil leaks.
- **Continuous Flow Shutoff Lever** - Check for proper function. (See Page 59.)

First 50 Hours

- **Engine Oil and Filter** - Replace oil and filter. (See Page 69.)

Every 50 Hours

- **Hydraulic Fluid, Hydraulic Hoses and Tubelines** - Check for damage and leaks. Repair or replace as needed. (See Page 81.)
- **Controls** - Check for correct operation. Adjust, repair or replace as needed.
- **Undercarriage** - Check for loose bolts and nuts.
- **Track Tension** - Check tension and adjust as needed. (See Page 84.)

SS MTL-0520

SERVICE SCHEDULE (CONT'D)

Maintenance Intervals (Cont'd)

Every 100 Hours

- **Engine Oil and Filter** - Replace oil and filter. (See Page 69.)
- **Battery** - Check battery for damage. Check cables, connections, and electrolyte level; add distilled water as needed. (See Page 75.)
- **Drive Belts (Alternator / Water Pump / Fan Drive)** - Check condition. Replace as needed. (See Page 85.)
- **Spark Arrestor Muffler** - Clean spark chamber. (See Page 83.)

Every 250 Hours Or Every 12 Months

- **Fuel Filter** - Replace filter. (See Page 67.)
- **Lift Arm Lockout** - Check function of manual bypass control.

First 500 Hours Or First 12 Months

- **Engine Valves** - Adjust the engine valve clearance. (See dealer for service.)

Every 500 Hours Or Every 12 Months

- **Hydraulic Filter and Hydraulic Reservoir Breather Cap** - Replace the hydraulic filter and the reservoir breather cap. (See Page 81.)
- **Drive Belt (Hydrostatic)** - Check condition. Adjust or replace as needed. (See Page 85.)

Every 1000 Hours Or Every 12 Months

- **Engine Valves** - Adjust the engine valve clearance. (See dealer for service.)
- **Hydraulic Fluid and Filters** - Replace hydraulic fluid and filters. (See Page 81.)

Every 24 Months

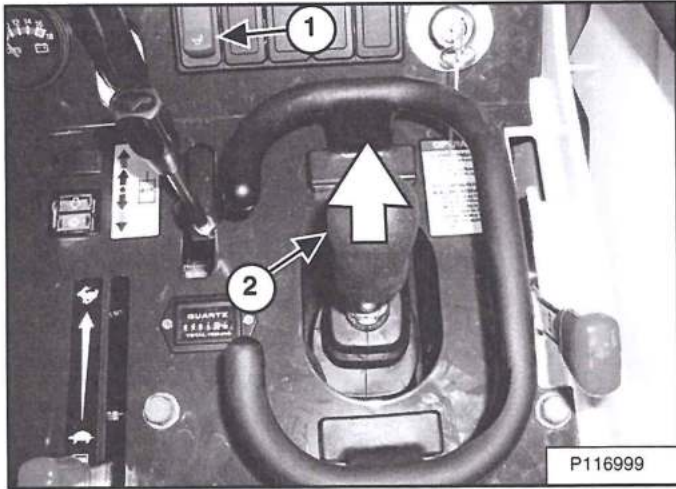
- **Coolant** - Replace the coolant. (See Page 73.)

SS MTL-0520

LIFT ARM BYPASS CONTROL

Inspection

Figure 63



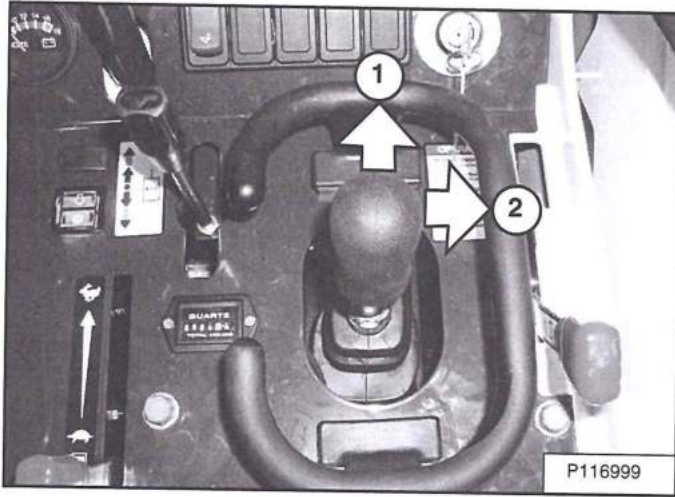
1. Stand at the operator station, start the engine and raise the lift arms about 914, mm (3 ft) off the ground. Stop the engine. Engage the parking brake.
2. Make sure the area around the machine is clear of bystanders.
3. Press and hold the switch for the lift arm bypass (Item 1) [Figure 63].
4. Move the Lift Arm / Tilt Joystick forward slightly (Item 2) [Figure 63]. The lift arms should slowly lower. See your Bobcat dealer for repair if bypass does not function correctly.

LIFT AND TILT FUNCTION LOCKOUTS

Inspection

1. Stand on the Operator Platform and start the engine.
2. Raise the lift arms about 914 mm (3 ft) off the ground.
3. Turn the key OFF and wait for the engine to come to a complete stop. Engage the parking brake.
4. Make sure the area around the machine is clear of bystanders.

Figure 64



5. Move the Lift Arm / Tilt Joystick forward to lower the lift arms (Item 1) [Figure 64]. The lever must not move and the lift arms must not lower.
6. Move the Lift Arm / Tilt Joystick right to tilt the bucket (or attachment) forward (Item 2) [Figure 64]. The lever must not move and the bucket must not tilt forward.

NOTE: See your Bobcat dealer for repair if the lift / tilt lockout does not function properly.

WARNING

The Neutral Start Interlock, Auxiliary Hydraulic Interlock, and Lift / Tilt Lockouts must function properly.

- The Neutral Start Interlock must prohibit the engine from cranking when the Drive / Steering Joystick is not in the NEUTRAL position.
- The Auxiliary Hydraulic Interlock must prohibit the engine from cranking when the Auxiliary Hydraulic Control Lever is not in the center position.
- The Lift / Tilt Lockouts must deactivate the lift and tilt functions when engine is off.

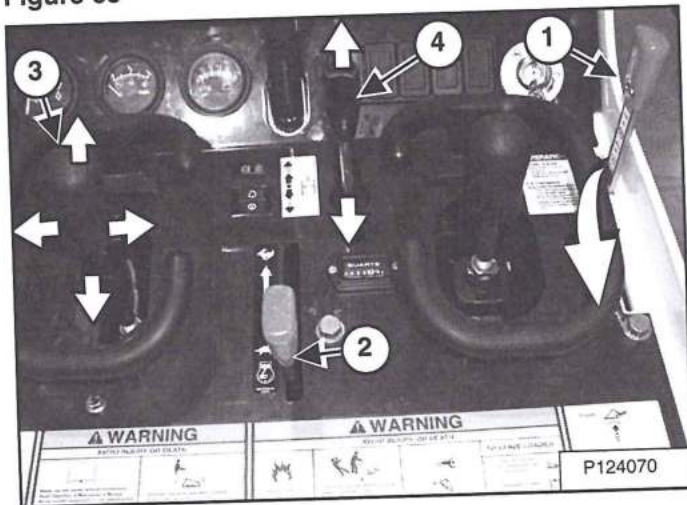
If any of these do not function properly, contact your dealer for service. DO NOT modify system.

W-2998-1015

NEUTRAL START INTERLOCKS

Inspecting Traction Drive Interlock

Figure 65



1. Stop the engine, engage the parking brake (Item 1) [Figure 65] and place all controls in NEUTRAL.
2. Make sure the area around the machine is clear of bystanders.
3. Set the engine speed to slow (Item 2) [Figure 65].
4. Partially move the Drive / Steering Joystick (Item 3) [Figure 65] in the forward direction and turn the key switch to START position.
5. The starter must not engage.
6. Repeat procedure with the Drive / Steering Joystick being moved in the backward direction.
7. Repeat procedure with the Drive / Steering Joystick being moved in the right direction.
8. Repeat procedure with the Drive / Steering Joystick being moved in the left direction.

Inspecting Auxiliary Hydraulic Interlock

1. Stop the engine, engage the parking brake (Item 1) [Figure 65] and place all controls in NEUTRAL.
2. Make sure the area around the machine is clear of bystanders.
3. Set the engine speed lever (Item 2) [Figure 65] to slow.
4. Push and hold the Auxiliary Hydraulic Control Lever forward (Item 4) [Figure 65] and turn the key switch to START position.
5. The starter must not engage.
6. Repeat procedure with the Auxiliary Hydraulic Control Lever pulled backward.

NOTE: If any of the controls in these previous inspection procedures do not function properly, contact your dealer for service. **DO NOT** modify the system.

WARNING

The Neutral Start Interlock, Auxiliary Hydraulic Interlock, and Lift / Tilt Lockouts must function properly.

- The Neutral Start Interlock must prohibit the engine from cranking when the Drive / Steering Joystick is not in the NEUTRAL position.
- The Auxiliary Hydraulic Interlock must prohibit the engine from cranking when the Auxiliary Hydraulic Control Lever is not in the center position.
- The Lift / Tilt Lockouts must deactivate the lift and tilt functions when engine is off.

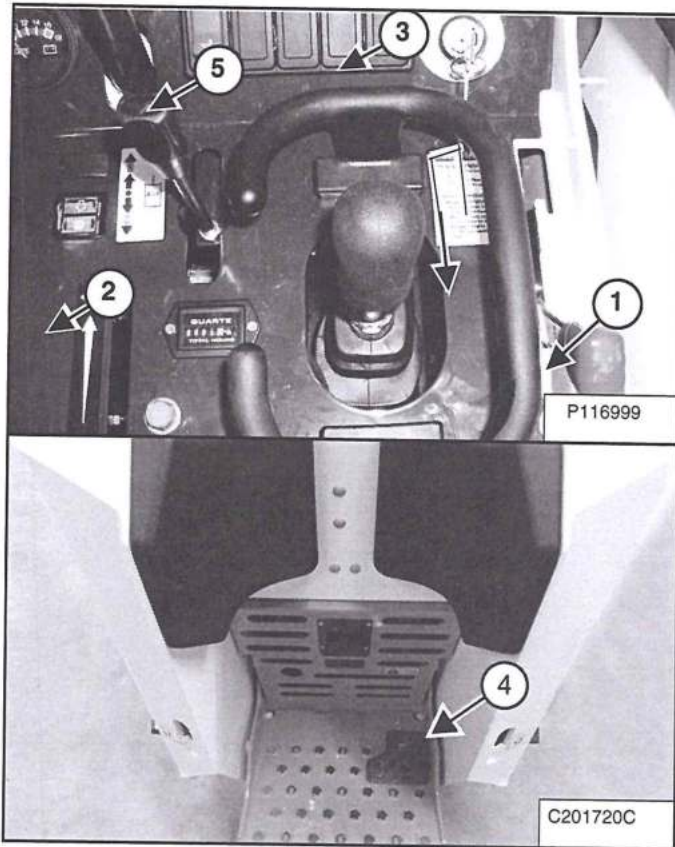
If any of these do not function properly, contact your dealer for service. **DO NOT** modify system.

W-2998-1015

AUXILIARY HYDRAULIC CONTROL SYSTEM

Inspecting The Continuous Flow Shutoff Pedal

Figure 66



1. Stop the engine and engage the parking brake (Item 1) [Figure 66].
2. Make sure the area around the machine is clear of bystanders.
3. Set the engine speed to slow (Item 2) [Figure 66].
4. Turn the key to the ON position but DO NOT start the engine.
5. Stand on the Operator Platform and depress the Continuous Flow Shutoff Pedal (Item 4) [Figure 66].
6. Move the Auxiliary Hydraulic Control Lever (Item 5) [Figure 66] fully forward into the locked (DETENT) position.
7. Release the Continuous Flow Shutoff Pedal (Item 4) [Figure 66].
8. The Auxiliary Hydraulic Control Lever (Item 5) [Figure 66] must return to the NEUTRAL position in approximately one to three seconds.
9. Repeat the procedure with the Auxiliary Hydraulic Control Lever (Item 5) [Figure 66] fully backward into the locked (DETENT) position.

NOTE: Contact your dealer for service if the Continuous Flow Shutoff System does not function properly.

LIFT ARM SUPPORT DEVICE

Installing

! 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

Repair the support device if damaged or if parts are missing. Using a damaged support device or with missing parts can cause lift arms or boom to fall causing serious injury or death.

W-2271-1007

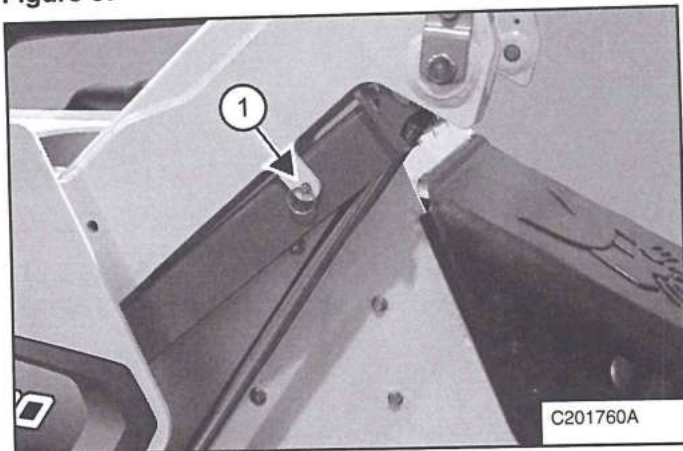
Stop the loader on a flat, level surface. Engage the parking brake.

Remove any attachment from the loader. (See Installing And Removing The Attachment (Bob-Tach) on Page 36.)

Start the engine, and raise the lift arms all the way up.

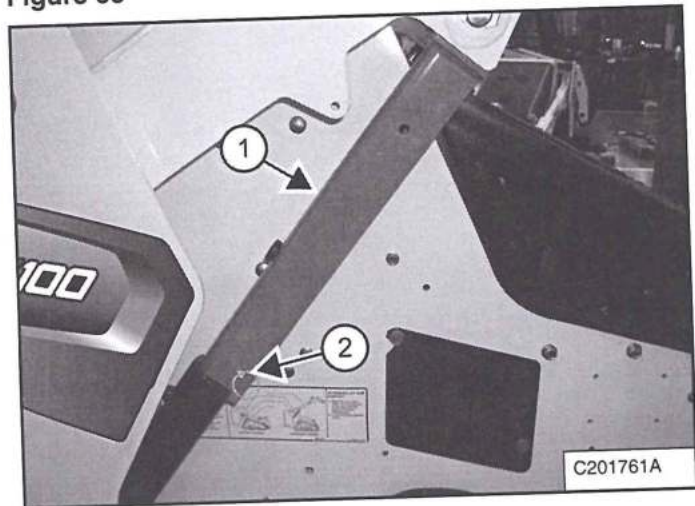
Stop the engine and exit the operator station.

Figure 67



Remove the retainer pin (Item 1) [Figure 67] and lower the lift arm support device from the storage position.

Figure 68



Place the lift arm support device (Item 1) over the hydraulic cylinder as shown in [Figure 68].

Install the retaining pin (Item 2) [Figure 68] into the rear of the lift arm support device below the cylinder rod.

Enter the operator station and start the engine.

Slowly lower the lift arms until movement stops.

Stop the engine.

Removing

Remove the retaining pin (Item 2) [Figure 68] from the lift arm support device.

Start the engine and raise the lift arms off the lift arm support device.

Stop the engine and exit the operator station.

Return the lift arm support device to the storage location and secure it with the retaining pin (Item 1) [Figure 67].

Enter the operator station and start the engine.

Lower the lift arms and stop the engine.

HOOD

Operation

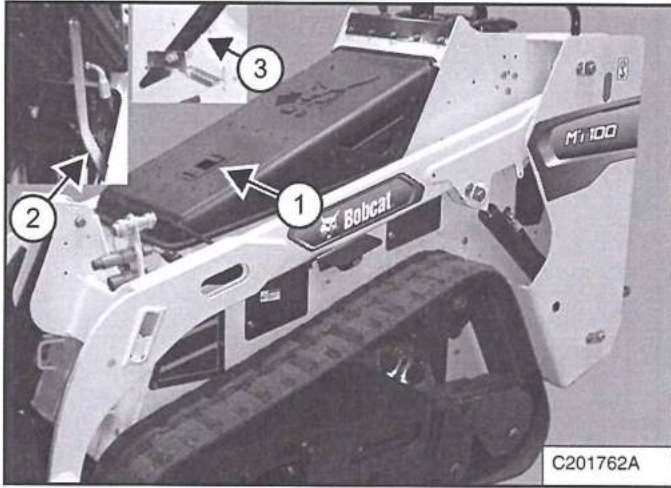
! WARNING

AVOID INJURY OR DEATH

Never service or adjust the machine when the engine is running unless instructed to do so in the manual.

W-2012-0497

Figure 69



Release the hood latch (Item 1). Raise and open the hood until the prop bar (Item 2) [Figure 69] engages.

Raise the hood slightly and push the prop backward to disengage (Item 3) [Figure 69], and lower the hood.

NOTE: Lift arms must be lowered, or fully raised with lift arm support device installed before opening the hood.

! WARNING

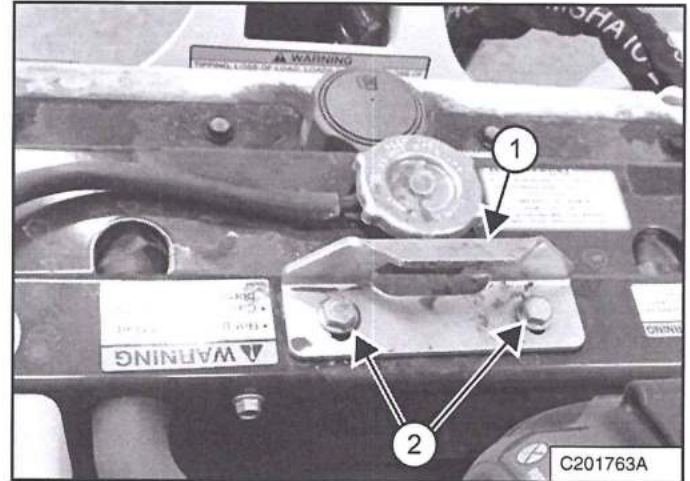
Keep the engine cover closed when operating the machine. Failure to do so could seriously injure the operator.

W-2409-0801

Push firmly down on the hood to engage the latch.

Striker Adjustment

Figure 70



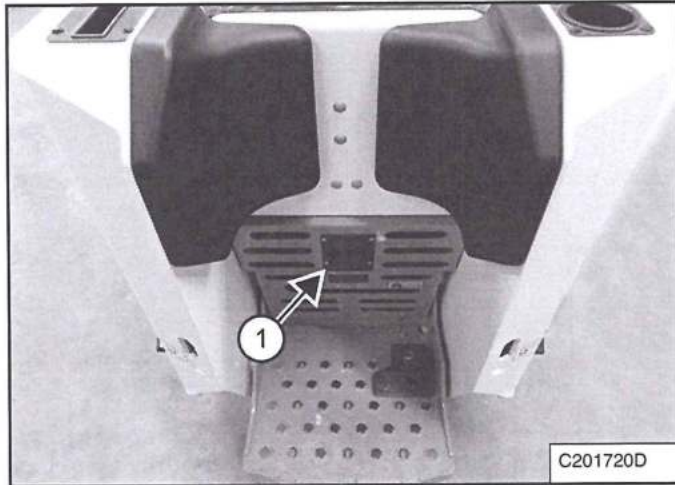
The hood latch striker (Item 1) is adjusted by loosening the two bolts (Item 2) [Figure 70] and sliding the striker forward and back until the proper engagement is obtained.

When the proper engagement is obtained, tighten the bolts.

REAR DOOR

Opening And Closing

Figure 71



Release the latch (Item 1) [Figure 71].

Figure 72



The rear door will pivot down to provide access for maintenance [Figure 72].

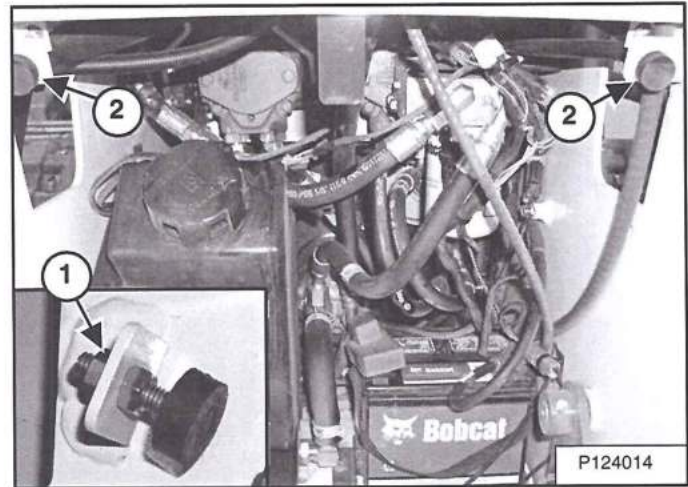
WARNING

Keep the rear door closed when operating the machine. Failure to do so could seriously injure the operator.

W-2410-0107

Bumper Adjustment

Figure 73



Loosen jam nut (Item 1) [Figure 73].

Adjust the bumpers (Item 2) [Figure 73] until the rear door latches properly and there is no movement after the rear door is closed.

When the adjustments are completed, tighten the jam nut (Item 1) [Figure 73].

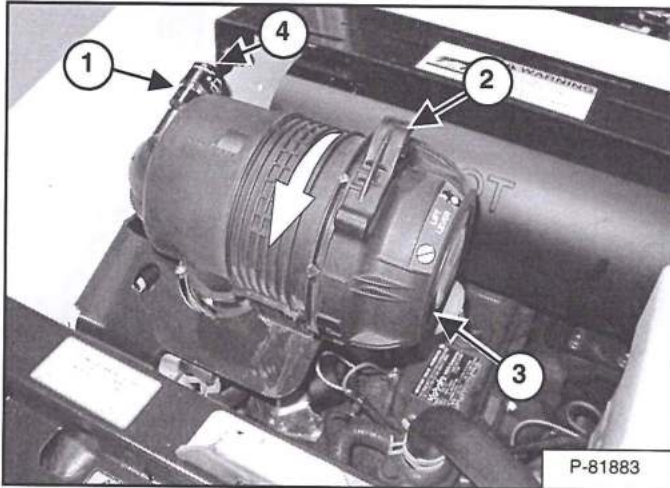
AIR CLEANER SERVICE

Replacing The Filter Elements

It is important to change the air filter element at regular intervals.

For the correct service interval (See SERVICE SCHEDULE on Page 54.)

Figure 74



Replace the outer filter only when the red ring shows in the condition indicator window (Item 1) [Figure 74].

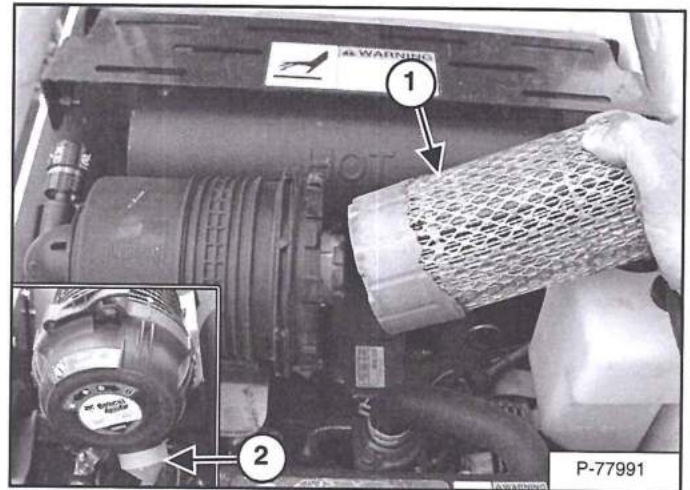
Replace the inner filter every third time the outer filter is replaced or as indicated below.

Outer Filter

Pull up on the locking lever (Item 2) and hold while turning the dust cover (Item 3) [Figure 74] counterclockwise.

Remove and clean the dust cover.

Figure 75



Remove the outer filter element (Item 1) [Figure 75].

NOTE: Make sure all sealing surfaces are free of dirt and debris. Do not use air pressure to clean.

Install a new outer filter element.

Install the dust cover. Be sure the air cleaner valve (Item 2) [Figure 75] is down. Turn the dust cover clockwise and engage the locking lever.

Check the air intake hose and the air cleaner housing for damage. Make sure all connections are tight.

Press the button (Item 4) [Figure 74] to reset the condition indicator.

AIR CLEANER SERVICE (CONT'D)

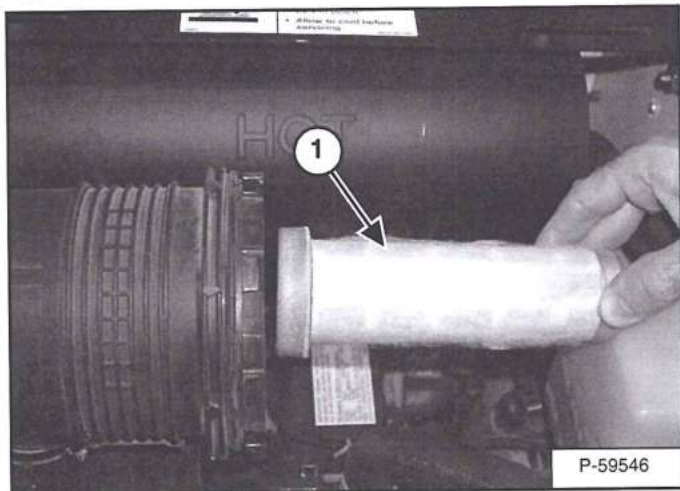
Replacing The Filter Elements (Cont'd)

Inner Filter

Only replace the inner filter under the following conditions:

- Replace the inner filter every *third* time the outer filter is replaced.
- After the outer filter has been replaced, press the button (Item 4) [Figure 74] on the top of the condition indicator and start the engine. Run at full rpm, then reduce engine speed and stop the engine. If the red ring shows in the condition indicator, replace the inner filter.

Figure 76



Remove the dust cover, outer filter and inner filter.

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

Install the new inner filter (Item 1) [Figure 76].

Install the outer filter.

Install the dust cover. Be sure the air cleaner valve (Item 2) [Figure 75] is down. Turn cover clockwise 1/8 turn to engage the latch.

Press the button (Item 4) [Figure 74] on the condition indicator to remove the red ring.

FUEL SYSTEM

Fuel Specifications

NOTE: Contact your local fuel supplier to receive recommendations for your region.

At a minimum, low sulfur diesel fuel must be used in this machine. Low sulfur is defined as 500 mg/kg (500 ppm) sulfur maximum.

U.S. Standard (ASTM D975)

Use only clean, high quality diesel fuel, Grade Number 2-D or Grade Number 1-D.

Ultra low sulfur diesel fuel may also be used in this machine. Ultra low sulfur is defined as 15 mg/kg (15 ppm) sulfur maximum.

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

TEMPERATURE	GRADE 2-D	GRADE 1-D
Above -9°C (+15°F)	100%	0%
Down to -21°C (-5°F)	50%	50%
Below -21°C (-5°F)	0%	100%

NOTE: Biodiesel blend fuel may also be used in this machine. Biodiesel blend fuel must contain no more than five percent biodiesel mixed with ultra low sulfur petroleum based diesel. This biodiesel blend fuel is commonly marketed as B5 blended diesel fuel. B5 blended diesel fuel must meet ASTM specifications.

E.U. Standard (EN590)

Use only clean, high quality diesel fuel that meets the specifications listed below:

- Low sulfur diesel fuel defined as 500 mg/kg (500 ppm) sulfur maximum
- Diesel fuel with cetane number of 51.0 and above.

Clean, high quality diesel fuel that meets the EN590 specification may also be used.

NOTE: Biodiesel blend fuel may also be used in this machine. Biodiesel blend fuel must contain no more than seven percent biodiesel mixed with ultra low sulfur petroleum based diesel. This biodiesel blend fuel is commonly marketed as B7 blended diesel fuel. B7 blended diesel fuel must meet EN590 specifications.

Biodiesel Blend Fuel

Biodiesel blend fuel has unique qualities that should be considered before using in this machine:

- Cold weather conditions can lead to plugged fuel system components and hard starting.
- Biodiesel blend fuel is an excellent medium for microbial growth and contamination which can cause corrosion and plugging of fuel system components.
- Use of biodiesel blend fuel may result in premature failure of fuel system components, such as plugged fuel filters and deteriorated fuel lines.
- Shorter maintenance intervals may be required, such as cleaning the fuel system and replacing fuel filters and fuel lines.
- Using biodiesel blended fuels containing more than five percent biodiesel can affect engine life and cause deterioration of hoses, tubelines, injectors, injector pump and seals.

Apply the following guidelines if biodiesel blend fuel is used:

- Ensure the fuel tank is as full as possible at all times to prevent moisture from collecting in the fuel tank.
- Ensure that the fuel tank cap is securely tightened.
- Biodiesel blend fuel can damage painted surfaces, remove all spilled fuel from painted surfaces immediately.
- Drain all water from the fuel filter daily before operating the machine.
- Do not exceed engine oil change interval. Extended oil change intervals can cause engine damage.
- Before vehicle storage; drain the fuel tank, refill with 100% petroleum diesel fuel, add fuel stabilizer and run the engine for at least 30 minutes.

NOTE: Biodiesel blend fuel does not have long term stability and should not be stored for more than three months.

FUEL SYSTEM (CONT'D)

Filling The Fuel Tank

! WARNING

AVOID INJURY OR DEATH

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

W-2063-0807

! WARNING

AVOID INJURY OR DEATH

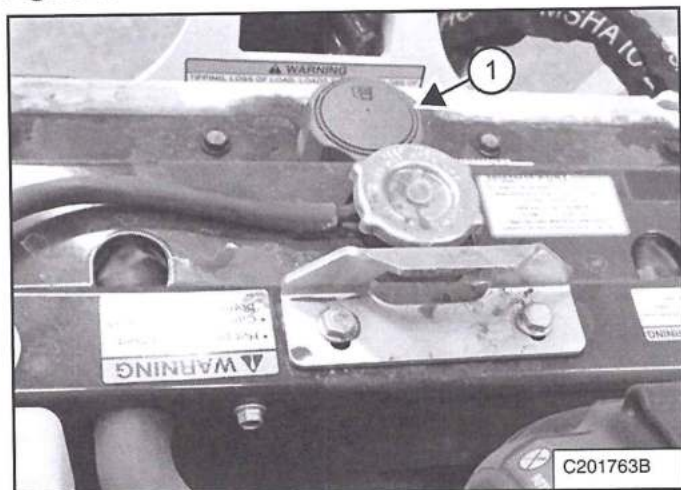
Always clean up spilled fuel or oil. Keep heat, flames, sparks or lighted tobacco away from fuel and oil. Failure to use care around combustibles can cause explosion or fire.

W-2103-0508

Be sure engine is cool then open the hood.

NOTE: Lift arms must be lowered, or fully raised with lift arm support device installed before opening the hood.

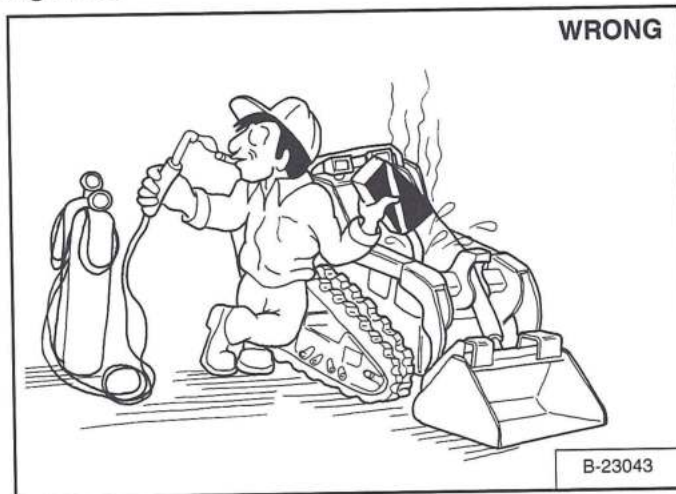
Figure 77



Open the hood.

Remove the fuel fill cap (Item 1) [Figure 77].

Figure 78



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 78].

Install and tighten the fuel fill cap (Item 1) [Figure 77].

Close and latch hood.

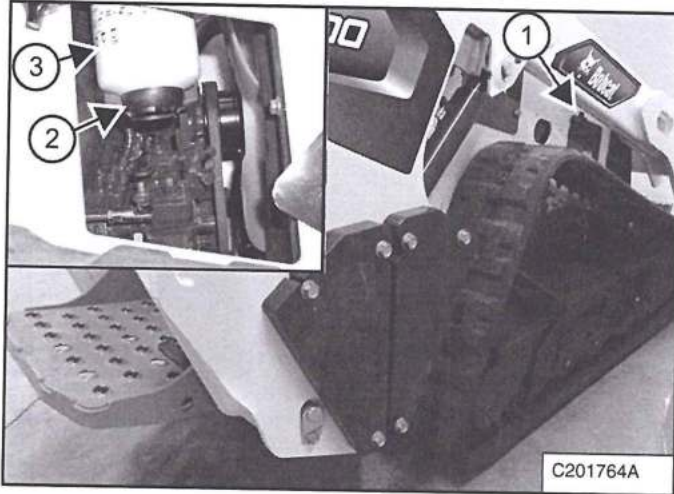
FUEL SYSTEM (CONT'D)

Fuel Filter

See the Service Schedule for the service interval for removing water from, or replacing the fuel filter. (See SERVICE SCHEDULE on Page 54.)

Removing Water

Figure 79



Loosen the thumb screw (Item 1) [Figure 79] and open the access cover on the right side of the machine .

Loosen the drain (Item 2) [Figure 79] at the bottom of the filter to remove water from the filter. Tighten the drain.

Dispose of fuel in an environmentally safe manner.

Replacing Element

Remove the filter element (Item 3) [Figure 79].

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

Remove the air from the fuel system.

FUEL SYSTEM (CONT'D)

Removing Air From The Fuel System

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

! WARNING

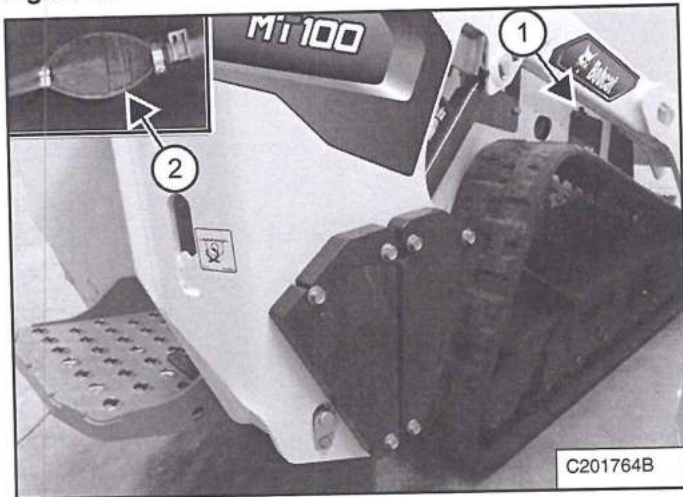
AVOID INJURY OR DEATH

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-2072-0807

Engine and muffler must be cool before beginning.

Figure 80



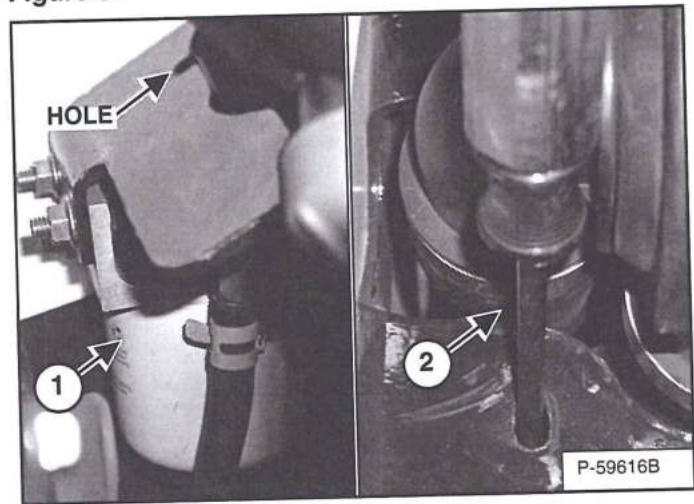
Loosen the thumb screw (Item 1) [Figure 80] and open the access cover on the right side of the machine.

Operate the hand pump (priming bulb) (Item 2) [Figure 80] until the hand pump feels solid.

Start the engine. It may be necessary to operate the hand pump again to get the engine started.

If the engine still fails to start, you might need to loosen the vent on the top of the fuel filter while cranking the engine.

Figure 81



Open the hood.

The fuel filter (Item 1) [Figure 81] is located under the air cleaner mounting bracket.

Use a screwdriver (Item 2) [Figure 81] through the hole in the bracket to loosen the fuel filter vent.

Crank the engine until it starts.

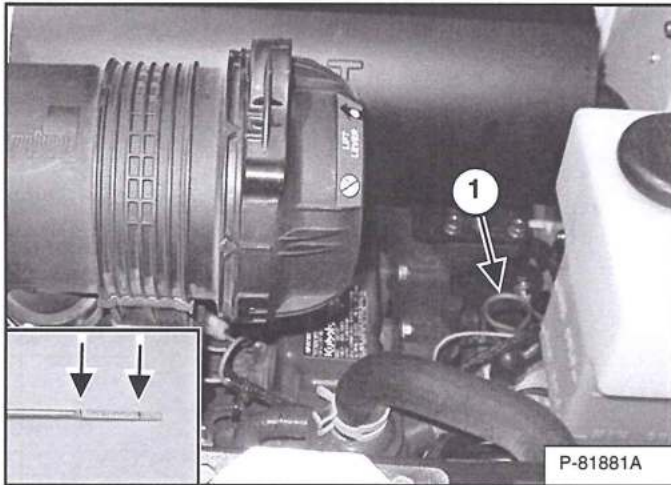
Tighten the vent and close the hood.

ENGINE LUBRICATION SYSTEM

Checking And Adding Engine Oil

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

Figure 82



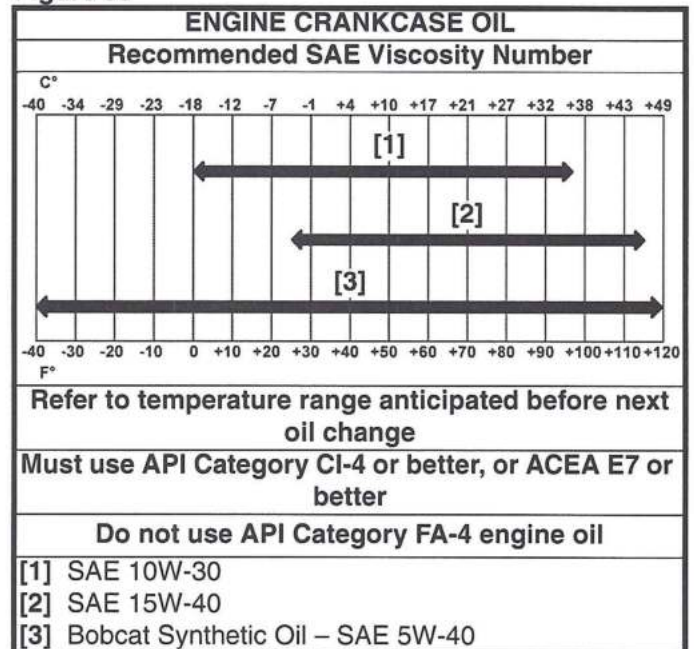
Open the hood and remove the dipstick (Item 1) [Figure 82].

Keep the oil level between the marks on the dipstick [Figure 82].

Install the dipstick and close the hood.

Engine Oil Chart

Figure 83



Bobcat engine oils are recommended for use in this machine. If Bobcat engine oil is not available, use a good quality engine oil that meets API Service Category of CI-4 or better, or ACEA E7 or better [Figure 83].

IMPORTANT

AVOID ENGINE DAMAGE

Use of API Service Category FA-4 engine oil is not approved and may cause irreversible damage to the engine.

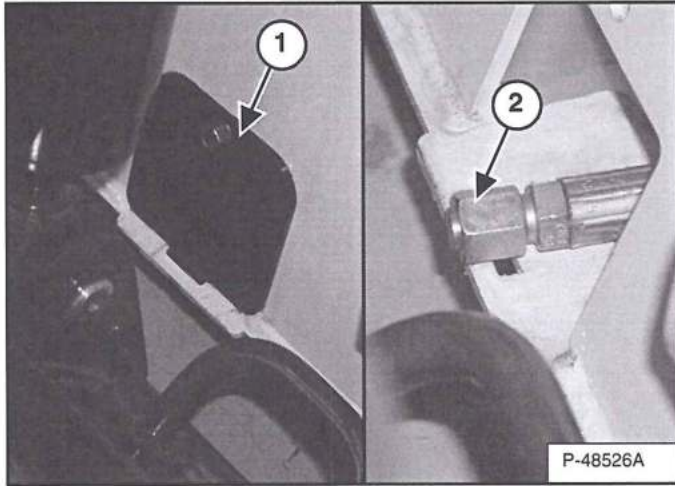
I-2384-0916

ENGINE LUBRICATION SYSTEM (CONT'D)

Removing And Replacing Oil And Filter

For the service interval for replacing the engine oil and filter (See SERVICE SCHEDULE on Page 54.)

Figure 84



Remove the access cover (Item 1) [Figure 84] (located behind the tilt cylinder) and route the oil drain hose to a container at the front of the machine.

Remove the cap from the drain hose (Item 2) [Figure 84] and drain the oil. Dispose of the oil in an environmentally safe manner.

Install the cap on the drain hose and push the hose back into the machine.

Install the access cover.

WARNING

AVOID INJURY OR DEATH

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.

W-2103-0508

Figure 85

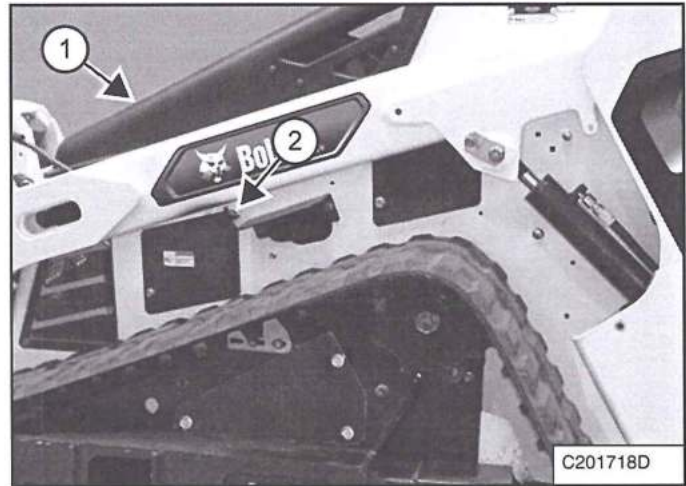
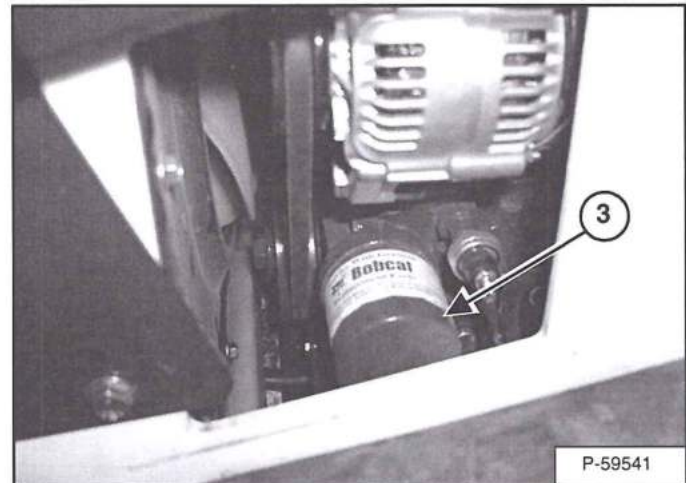


Figure 86



Open the hood (Item 1). Loosen the thumb screw (Item 2) [Figure 85] and open the access cover on the left side of the machine.

Remove the oil filter (Item 3) [Figure 86] (located under the alternator) and clean the filter housing surface.

Put clean oil on the oil filter gasket. Install the filter and hand tighten.

WARNING

AVOID INJURY OR DEATH

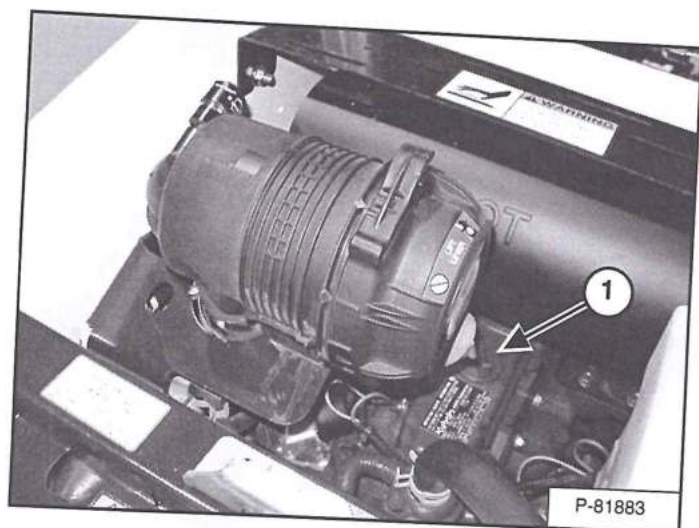
Never service or adjust the machine when the engine is running unless instructed to do so in the manual.

W-2012-0497

ENGINE LUBRICATION SYSTEM (CONT'D)

Removing And Replacing Oil And Filter (Cont'd)

Figure 87



Remove the fill cap (Item 1) [Figure 87].

Put oil in the engine. (See Capacities on Page 107.) (See Engine Oil Chart on Page 69.)

Install the fill cap.

Start the engine and let it run for several minutes.

Stop the engine and check for leaks at the oil filter.

Remove the dipstick and check the oil level.

Add oil as needed if the oil level is not at the top mark on the dipstick.

Install the dipstick and close the hood.

Close the side access cover.



WARNING

AVOID INJURY OR DEATH

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.

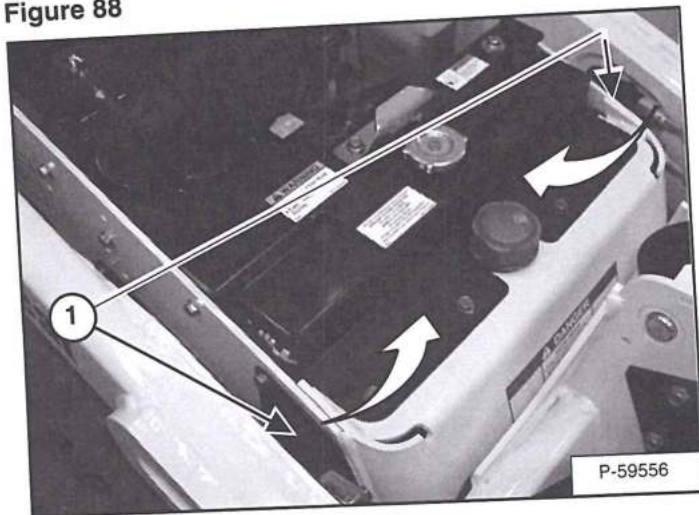
W-2103-0508

ENGINE COOLING SYSTEM

Cleaning

Open the hood. (See HOOD on Page 61.)

Figure 88



Remove screen covers (Item 1) [Figure 88] from both sides of the machine.

Use low air pressure or water pressure to clean the radiator through the side screens.

Install screen covers.

Close and latch the hood.

WARNING

AVOID INJURY

Use safety goggles when using air or water under pressure. Do not use cold water to clean a hot engine.

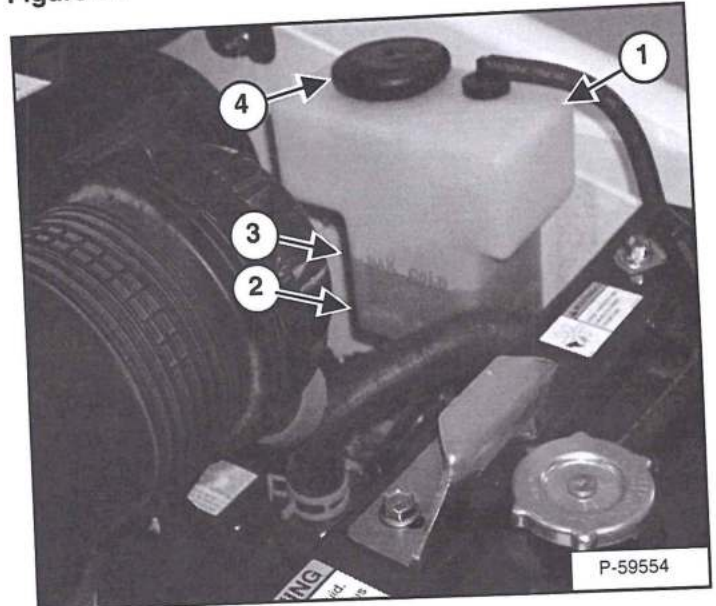
W-2064-0907

Checking Level

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

Make sure the engine is cool.

Figure 89



Open the hood. (See HOOD on Page 61.)

Check coolant level in the recovery tank (Item 1) [Figure 89].

The coolant level needs to be between the MIN COLD (Item 2) and the MAX COLD (Item 3) [Figure 89] marks on the recovery tank.

Remove the cap (Item 4) [Figure 89] from the recovery tank.

Add premixed coolant to the recovery tank until it is at the MAX level. (See Removing And Replacing The Coolant (Cont'd) on Page 74.)

ENGINE COOLING SYSTEM (CONT'D)

Removing And Replacing The Coolant

Removing

Raise the hood. (See HOOD on Page 61.)

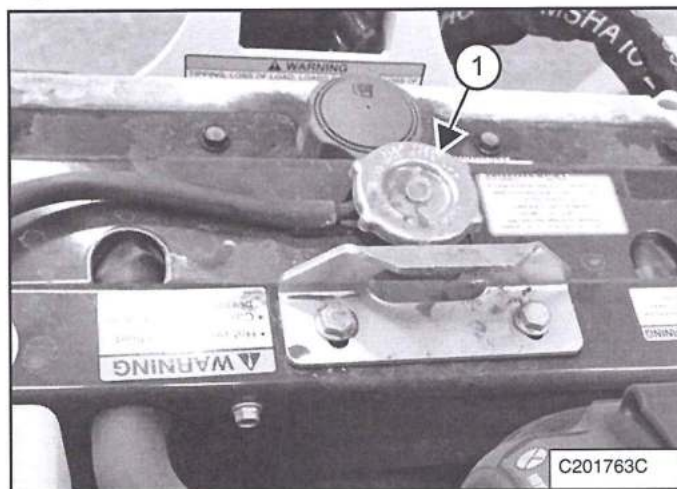
WARNING

AVOID BURNS

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

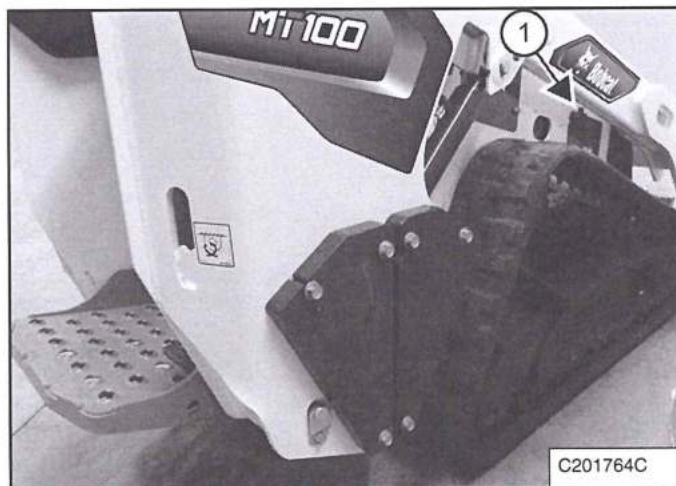
W-2070-1203

Figure 90



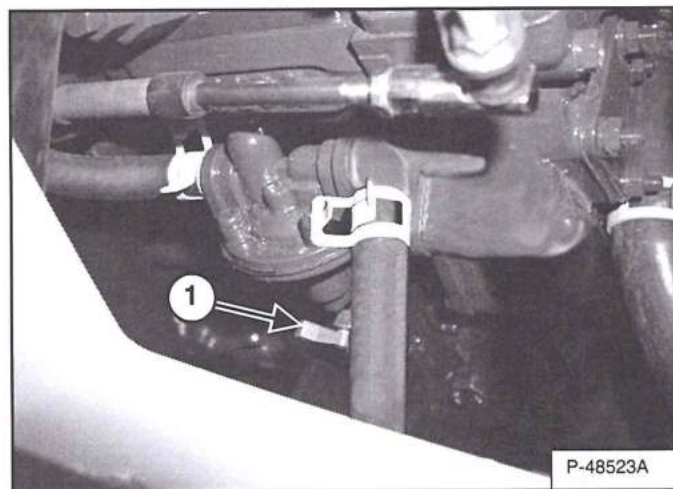
With the engine is cool, slowly remove the radiator cap (Item 1) [Figure 90].

Figure 91



Loosen the thumb screw (Item 1) [Figure 91] and open the access cover.

Figure 92



Connect a hose to the engine block drain valve (Item 1) [Figure 92] on the right side of the engine.

Open the valve and drain the coolant into a container. After the coolant is removed, close the drain valve and remove the hose.

Recycle or dispose of coolant in an environmentally safe manner.

ENGINE COOLING SYSTEM (CONT'D)

Removing And Replacing The Coolant (Cont'd)

Replacing

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

IMPORTANT

AVOID ENGINE DAMAGE

Always use the correct ratio of water to antifreeze.

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.

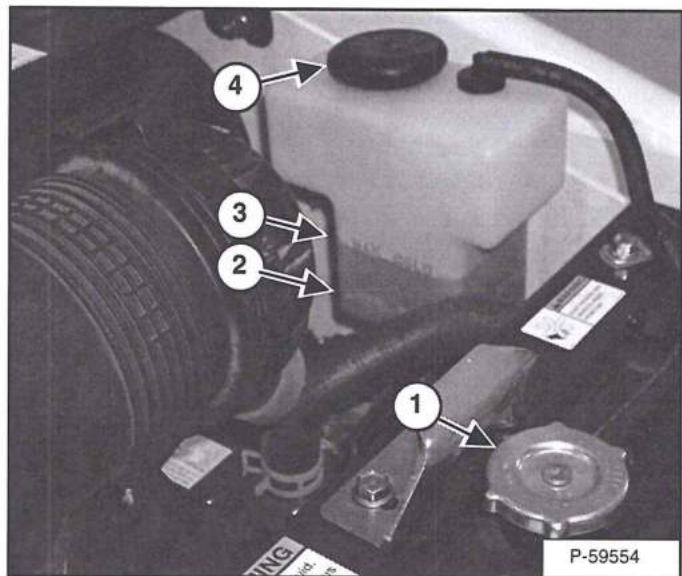
Always add a premixed solution. Adding full strength concentrated coolant can cause serious premature engine damage.

I-2124-0497

Mix new coolant in a separate container. (See Capacities on Page 107.)

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 (47% water and 53% propylene glycol) to provide a -37°C (-34°F) freeze protection.

Figure 93



With the engine cool, remove the radiator cap (Item 1) [Figure 93].

Add premixed coolant, to the radiator. Install the radiator cap (Item 1) [Figure 93].

Add premixed coolant to the coolant recovery tank (Item 4). Fill the recovery tank until the coolant level is between the MAX COLD (Item 3) and the MIN COLD (Item 2) [Figure 93] marks on the recovery tank.

Use a refractometer to check the condition of propylene glycol in your cooling system.

Run the engine until it is at operating temperature. Stop the engine. Check the coolant level when cool. Add coolant as needed. (See Checking Level on Page 72.)

Close the hood.

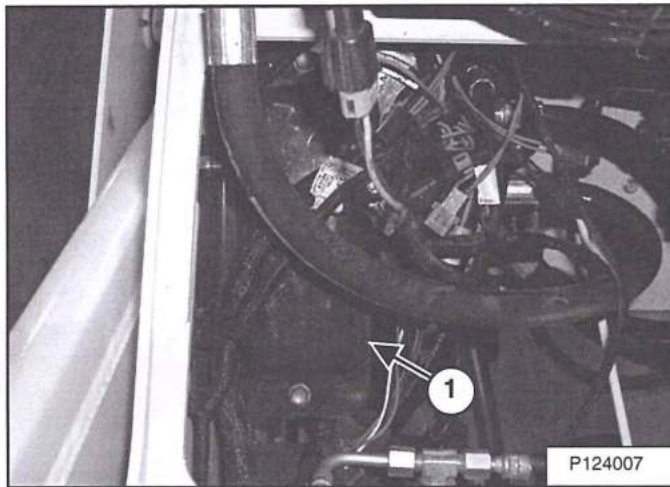
ELECTRICAL SYSTEM

Description

The mini track loader has a 12 volt, negative ground alternator charging system. The electrical system is protected by fuses and relays. The fuses protect the electrical system when there is an electrical overload. The reason for the overload must be found before starting the engine again.

Fuse And Relay Location / Identification

Figure 94

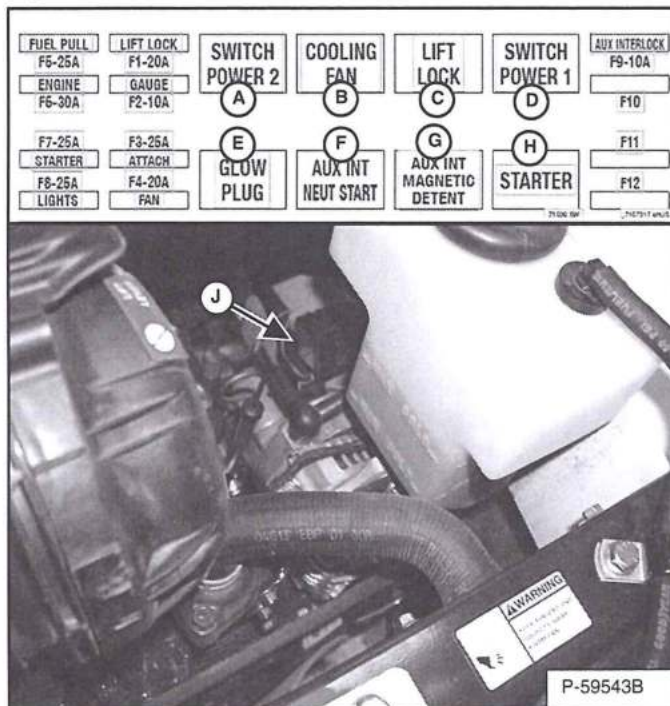


Raise the hood.

The fuse panel is located under the hood at the right rear side of the machine (Item 1) [Figure 94].

Remove the fuse panel cover.

Figure 95



Fuses

[Figure 95]

REF.	DESCRIPTION	AMP
F1	Lift Lock / Fan	20
F2	Gauges	10
F3	Attachment	25
F4	Cooling Fan	20
F5	Fuel Pull	25
F6	Engine	30
F7	Starter	25
F8	Lights	25
F9	Aux Interlock	10
F10	Not Used	
F11	Not Used	
F12	Not Used	

Relays

[Figure 95]

REF.	DESCRIPTION
A	Switched Power 2
B	Cooling Fan
C	Lift Lock
D	Switched Power 1
E	Glow Plug
F	Aux Int Neutral Start
G	Aux Int Magnetic Detent
H	Starter
J	Fuel Timer

IMPORTANT

Do Not use silicone base sprays and / or sealants on harness connectors or components.

I-2123-0397

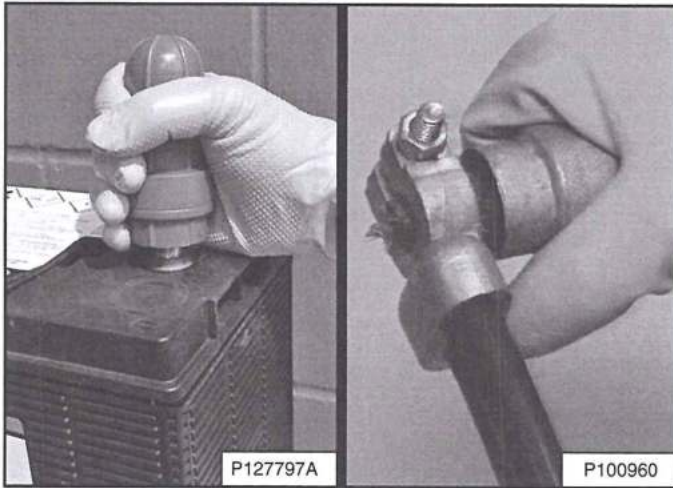
ELECTRICAL SYSTEM (CONT'D)

Battery Maintenance

See the SERVICE SCHEDULE for the correct service interval. (See Battery Maintenance on Page 76.)

The Bobcat brand battery supplied with your machine is sealed and does not require watering. Proper charging and storage are important to maximize the life of all batteries.

Figure 96



Simple steps for reliability and long battery life:

- Keep battery posts and terminals clean [Figure 96].
- Keep terminals tight.
- Remove corrosion from battery and terminals with sodium bicarbonate (baking soda) and water solution.
- Put Bobcat Battery Saver or grease on the battery terminals and cable ends to prevent corrosion.
- Operate the machine for at least 15 minutes to recover from the battery drain caused by engine start up whenever practical.
- Maintain the battery charge level. This is a key factor for long battery life.
- Charge a severely discharged battery with a battery charger instead of relying on the machine charging system. (See Battery Charging on Page 77.)
- Check the battery state of charge every 30 days on machines that are not frequently used. (See Battery Testing on Page 77.)

WARNING

AVOID INJURY OR DEATH

Batteries contain acid which burns eyes and skin on contact. Wear goggles, protective clothing and rubber gloves to keep acid off body.

In case of acid contact, wash immediately with water. In case of eye contact get prompt medical attention and wash eye with clean, cool water for at least 15 minutes.

If electrolyte is taken internally drink large quantities of water or milk! DO NOT induce vomiting. Get prompt medical attention.

W-2065-0807

Maintaining Battery Charge Level

All batteries will self-discharge over time. This machine has features that require battery power even when the machine is not being used. Use of a quality battery maintainer is highly recommended to ensure that your machine is ready to start when you need it and avoid costly battery replacement.

Battery Maintainers

Use a good quality battery maintainer to keep the battery above 12.4 volts for machines that are not frequently used. Batteries below 12.4 volts must first be charged using a battery charger. Solar maintainers should have a minimum capacity of 10 watts to be effective.

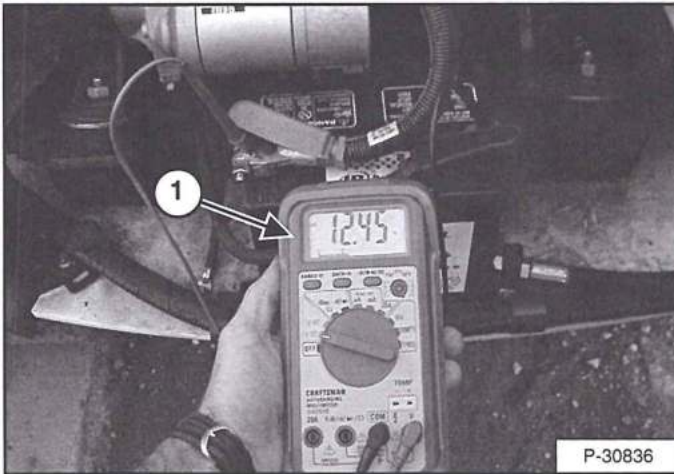
Battery Service During Machine Storage

Remove the battery if storing the machine for an extended period of time. Fully charge the battery. Store the battery in a cool dry place above freezing and boost charge periodically. If battery removal is not desired, a good quality battery maintainer must be used to compensate for battery self-discharge and parasitic loads from machine controllers, accessories, and features such as connected machine intelligence.

ELECTRICAL SYSTEM (CONT'D)

Battery Testing

Figure 97



The simplest and most common check to determine battery state of charge is to use a digital multimeter or voltmeter (Item 1) [Figure 97].

A battery found below 12.4 volts must be charged to 100% charge per the battery charger's recommendation. **Allow at least 60 minutes after operating the machine or charging the battery to get an accurate reading.**

If the reading is less than 12.4 volts after the battery has been charged for several hours, see your Bobcat dealer to have a more thorough battery test performed.

The freezing point of battery electrolyte is dependent on the battery state of charge. Keeping the battery voltage above 12.4 volts will help prevent batteries from freezing, even at extremely low temperatures.

If the battery freezes, the internal grid may be damaged and the case will be distorted or cracked. If this happens, dispose of the battery according to local regulations.

Battery Charging

A battery charger designed for 12 volt charging systems is recommended. Follow the battery charger manufacturer's instructions to charge the battery to 12.6 volts (100% charge). Batteries should be charged at room temperature to avoid an undercharge or overcharge condition. Never attempt to charge a frozen battery.

The following table can be used to identify the approximate amount of time required to charge a discharged battery. Allow at least 60 minutes after operating the machine or charging the battery to get an accurate reading.

BATTERY VOLTAGE	STATE OF CHARGE	CHARGER MAXIMUM RATE		
		30 Amps	20 Amps	10 Amps
12.6 V	100%	READY TO USE		
12.4 V	75%	0.9 hr.	1.3 hr.	2.5 hr.
12.2 V	50%	1.9 hr.	2.7 hr.	5.1hr.
12.0 V	25%	2.9 hr.	4.3 hr.	7.8 hr.
11.8 V	0%	4.0 hr.	5.7 hr.	10.7 hr.

NOTE: Use a good quality automatic charger to avoid battery damage from overcharging.

WARNING

BATTERY GAS CAN EXPLODE AND CAUSE SERIOUS INJURY OR DEATH

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

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

W-2066-0910

ELECTRICAL SYSTEM (CONT'D)

Using A Booster Battery (Jump Starting)

! WARNING

AVOID INJURY OR DEATH

Batteries contain acid which burns eyes and skin on contact. Wear goggles, protective clothing and rubber gloves to keep acid off body.

In case of acid contact, wash immediately with water. In case of eye contact get prompt medical attention and wash eye with clean, cool water for at least 15 minutes.

If electrolyte is taken internally drink large quantities of water or milk! DO NOT induce vomiting. Get prompt medical attention.

W-2065-0807

If it is necessary to use a booster battery to start the engine, BE CAREFUL! The key switch must be OFF when connecting jumper cables. The booster battery must be 12 volt.

! WARNING

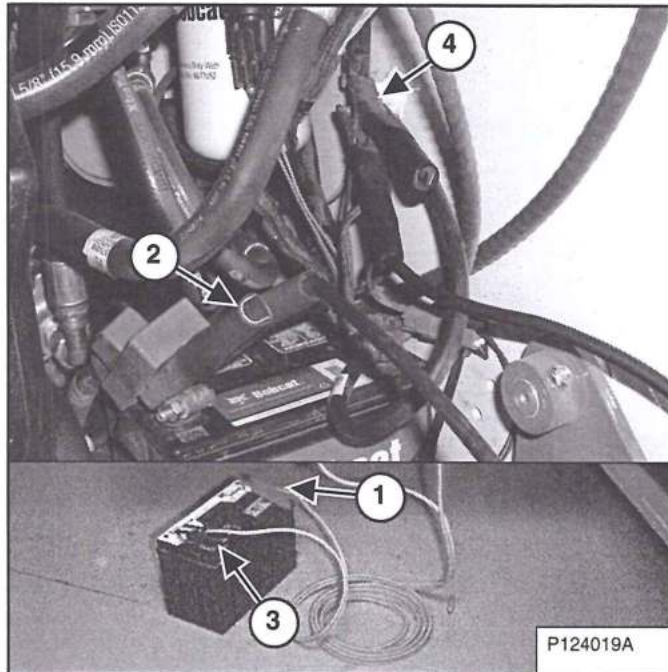
BATTERY GAS CAN EXPLODE AND CAUSE SERIOUS INJURY OR DEATH

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

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

W-2066-0910

Figure 98



Connect the end of the first cable (Item 1) [Figure 98] to the positive (+) terminal of the booster battery. Connect the other end of the same cable (Item 2) [Figure 98] to the positive (+) terminal on the loader battery.

Connect the end of the second cable (Item 3) [Figure 98] to the negative (-) terminal of the booster battery. Connect the other end of the same cable (Item 4) [Figure 98] to the loader frame.

Keep cables away from moving parts. Start the engine.

After the engine has started, remove the ground (-) cable (Item 4) [Figure 98] first.

Remove the cable from the positive terminal (Item 2) [Figure 98].

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

ELECTRICAL SYSTEM (CONT'D)

Removing And Installing The Battery

WARNING

AVOID INJURY OR DEATH

Batteries contain acid which burns eyes and skin on contact. Wear goggles, protective clothing and rubber gloves to keep acid off body.

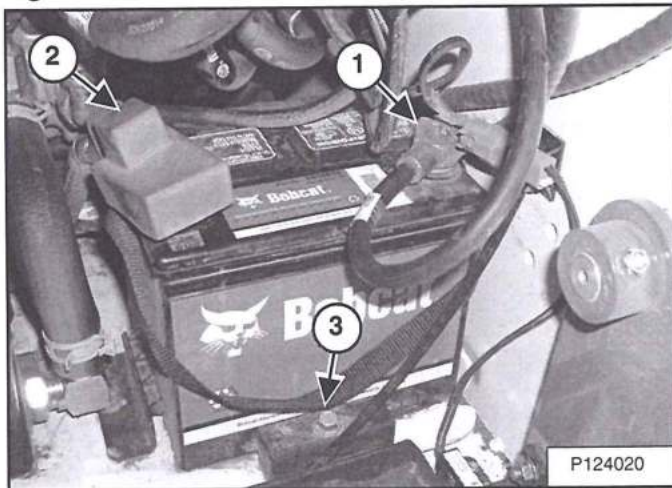
In case of acid contact, wash immediately with water. In case of eye contact get prompt medical attention and wash eye with clean, cool water for at least 15 minutes.

If electrolyte is taken internally drink large quantities of water or milk! DO NOT induce vomiting. Get prompt medical attention.

W-2065-0807

Open the rear door.

Figure 99



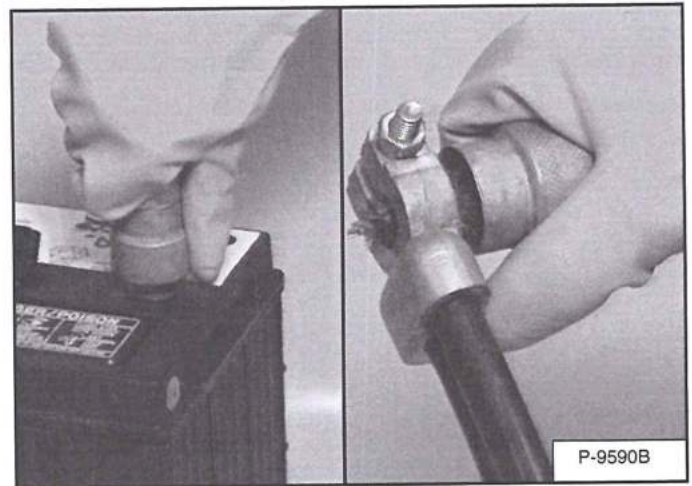
Disconnect the negative (-) battery cable (Item 1) [Figure 99].

Disconnect the positive (+) battery cable (Item 2) [Figure 99].

Remove the battery hold-down clamp (Item 3) [Figure 99].

Remove the battery from the loader.

Figure 100



Always clean the battery terminals and cable ends when installing the battery [Figure 100].

When installing the battery in the loader, do not touch any metal parts with the battery terminals.

NOTE: Always connect the negative (-) cable last and remove it first to prevent sparks.

Connect the positive (+) battery cable. Tighten the battery terminal nut to 5,5 – 6,8 N•m (4 – 5 ft-lb) torque.

Connect the negative (-) cable last to prevent sparks. Tighten the battery terminal nut to 5,5 – 6,8 N•m (4 – 5 ft-lb) torque.

Close the rear door before operating the mini track loader.

HYDRAULIC / HYDROSTATIC SYSTEM

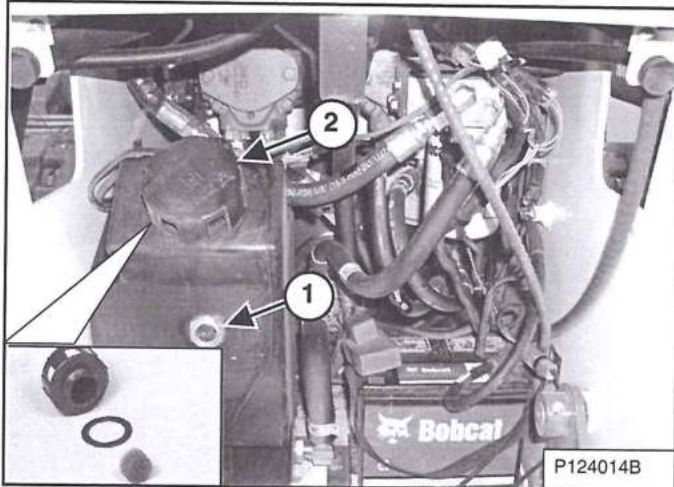
Checking And Adding Fluid

Use only recommended fluid in the hydraulic system. (See MINI TRACK LOADER SPECIFICATIONS on Page 104.)

Stop the loader on a level surface. Lower the lift arms and tilt the attachment interface fully back.

Set the parking brake, stop the engine, and open the rear door.

Figure 101



Check the fluid level in the sight gauge (Item 1) [Figure 101]. The correct level is at the center of the sight gauge.

Clean the area around the fill cap (Item 2) [Figure 101]. Add fluid until the correct hydraulic fluid level is reached.

Install the fill cap. Be sure rubber gasket is installed (Inset) [Figure 101].

WARNING

AVOID INJURY OR DEATH

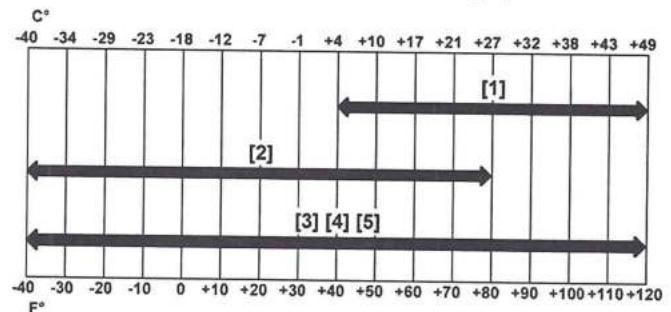
Diesel fuel or hydraulic fluid under pressure can penetrate skin or eyes, causing serious injury or death. Fluid leaks under pressure may not be visible. Use a piece of cardboard or wood to find leaks. Do not use your bare hand. Wear safety goggles. If fluid enters skin or eyes, get immediate medical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

W-2072-0807

Hydraulic / Hydrostatic Fluid Chart

Figure 102

HYDRAULIC / HYDROSTATIC FLUID RECOMMENDED ISO VISCOSITY GRADE (VG) AND VISCOSITY INDEX (VI)



TEMPERATURE RANGE ANTICIPATED DURING MACHINE USE

[1] VG 100; Minimum VI 130

[2] VG 46; Minimum VI 150

[3] BOBCAT All-Season Fluid

[4] BOBCAT Synthetic Fluid

[5] BOBCAT Biodegradable Hydraulic / Hydrostatic Fluid (Unlike biodegradable fluids that are vegetable based, Bobcat biodegradable fluid is formulated to prevent oxidation and thermal breakdown at operating temperatures.)

Bobcat hydraulic fluids are recommended for use in this machine. If Bobcat hydraulic fluid is not available, use a good quality hydraulic fluid meeting the viscosity grade and viscosity index shown in the chart [Figure 102].

WARNING

AVOID INJURY OR DEATH

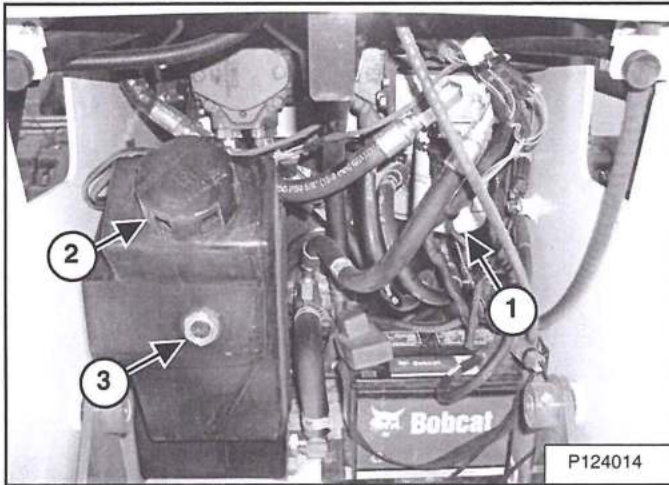
Always clean up spilled fuel or oil. Keep heat, flames, sparks or lighted tobacco away from fuel and oil. Failure to use care around combustibles can cause explosion or fire.

W-2103-0508

HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

Removing And Replacing Hydraulic / Hydrostatic Filter

Figure 103



For the correct service intervals (See SERVICE SCHEDULE on Page 54.)

Open the rear door.

Place a suitable container under the filter to catch any fluid.

Remove the filter (Item 1) [Figure 103].

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

Put clean oil on the seal of the new filter.

Install and hand tighten the filter.

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

Check the hydraulic fluid level is visible in the sight glass (Item 3) [Figure 103] and add as necessary.

Close the rear door.

Removing And Replacing Hydraulic Fluid

For the service interval (See SERVICE SCHEDULE on Page 54.)

The fluid must be replaced if it becomes contaminated or after major repairs. If the fluid is replaced, the hydraulic filter must be replaced.

Remove the reservoir fill cap (Item 2) [Figure 103]. Put a suction hose into the fill tube to remove the hydraulic fluid.

Replace the hydraulic filter (Item 1) [Figure 103].

Add the correct fluid to the reservoir until the fluid level is visible in the reservoir sight glass (Item 3) [Figure 103] (Do not overfill). Install fill cap.

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

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

WARNING

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

W-2145-0290

WARNING

AVOID INJURY OR DEATH

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.

W-2103-0508

HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

Hydraulic Reservoir Breather

The reservoir fill cap (Item 2) [Figure 103] is also the hydraulic breather. Replace the breather cap according to the interval given. (See SERVICE SCHEDULE on Page 54.)

SPARK ARRESTER MUFFLER

Cleaning Procedure

For the service interval for cleaning the spark arrester muffler (See SERVICE SCHEDULE on Page 54.)

Do not operate the loader with a defective exhaust system.

! WARNING

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

W-2011-1285

! WARNING

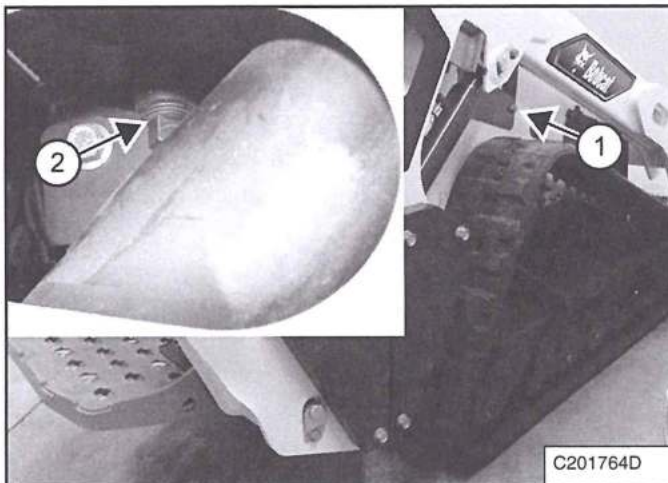
AVOID INJURY OR DEATH

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

W-2050-0807

Stop the engine and open the hood.

Figure 104



Open the side access cover (Item 1) [Figure 104].

Remove the plug (Item 2) [Figure 104] from the bottom of the muffler.

! WARNING

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

W-2068-1285

Start the engine.

Wear safety goggles. Hold a block of wood over the outlet of the muffler (with the engine running) for about 10 seconds.

This will force contaminants out through the clean-cut hole.

Stop the engine, allow the muffler to cool and install the plug. Install the side access cover and close the hood.

! WARNING

When the engine is running during service, the steering lever and hydraulic control levers must be in neutral and the parking brake engaged.

W-2484-1003

IMPORTANT

This machine is factory equipped with a U.S.D.A. Forestry Service approved spark arrester exhaust system.

The spark arrester muffler, if equipped, must be cleaned to keep it in working condition. The spark arrester muffler must be serviced by dumping the spark chamber every 100 hours of operation.

On some models, the turbocharger functions as the spark arrester and must operate correctly for proper spark arrester function.

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

I-2284-0111

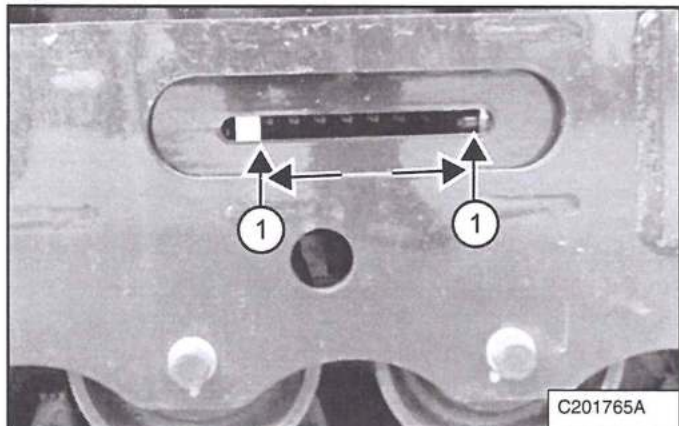
TRACK TENSION

Adjustment

Track tension is important for good performance and to prevent the tracks from coming off.

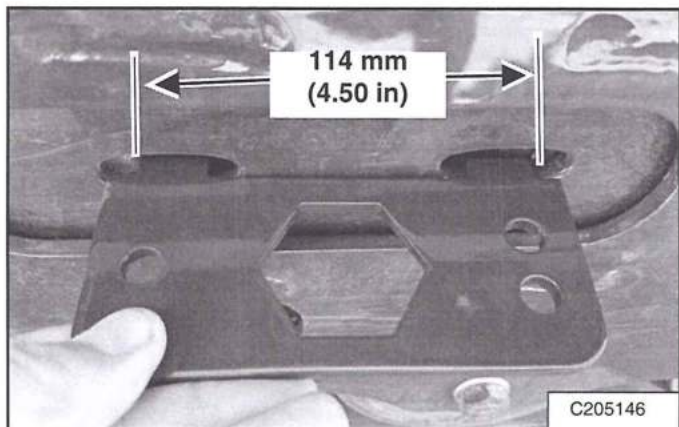
NOTE: The wear of track rollers vary with the working conditions and different types of soil conditions.

Figure 105



The track tension is measured between the blocks (Item 1) [Figure 105].

Figure 106



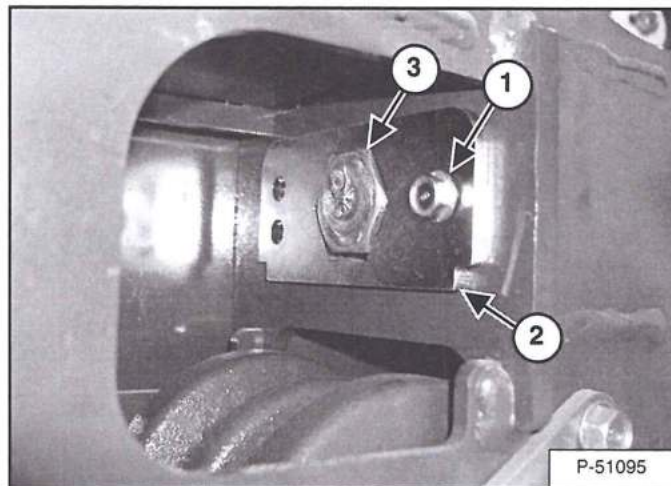
The tracks are adjusted correctly when the measurement between the blocks is 114 mm (4.50 in) [Figure 106].

NOTE: The retainer plate (Item 2) [Figure 107] has notches in the corners that are spaced at 114 mm (4.50 in) and is used for measuring the correct distance between the blocks. Adjust the track tension so the notched corners of the retainer plate fit snugly between the blocks (Item 1) [Figure 106].

Park the loader on a level surface and engage the parking brake.

Raise one side of the machine so that the track is about 50 mm (2 in) off the ground. Lower the machine to jackstands. Be sure the jackstands do not touch the tracks.

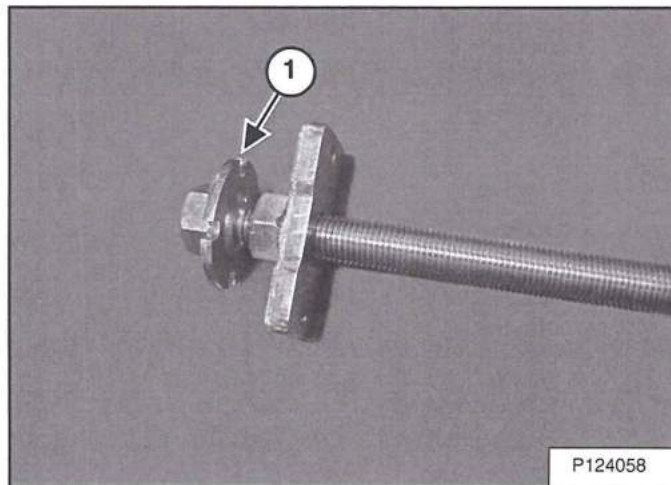
Figure 107



Remove the locking bolt (Item 1) and retainer plate (Item 2) [Figure 107].

Turn the adjustment bolt (Item 3) [Figure 107] counterclockwise to tighten the track. (Decrease the distance between the blocks [Figure 105].) Turn clockwise to loosen the track. (Increase the distance between the blocks [Figure 105].)

Figure 108



Turn until the correct measurement is obtained [Figure 106] and the nearest notch (Item 1) [Figure 108] is aligned with the hole for the locking bolt (Item 1) [Figure 107]. Install the retainer plate (Item 2) [Figure 107] and the locking bolt (Item 1) [Figure 107].

ALTERNATOR BELT

Belt Adjustment

IMPORTANT

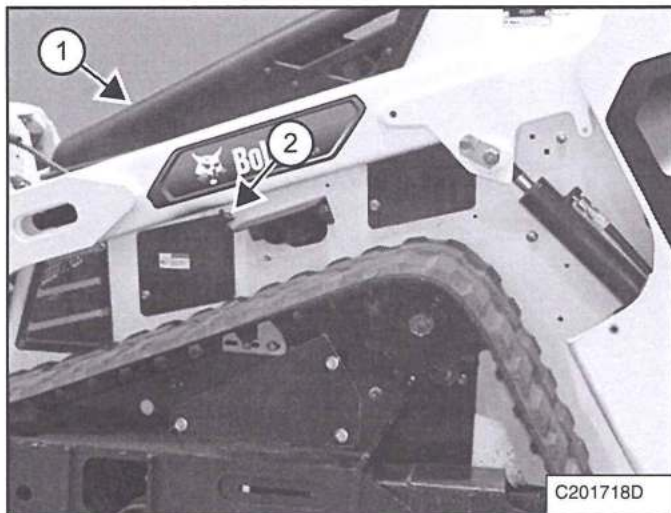
Damage to the alternator can occur if:

- 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.

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Stop the engine.

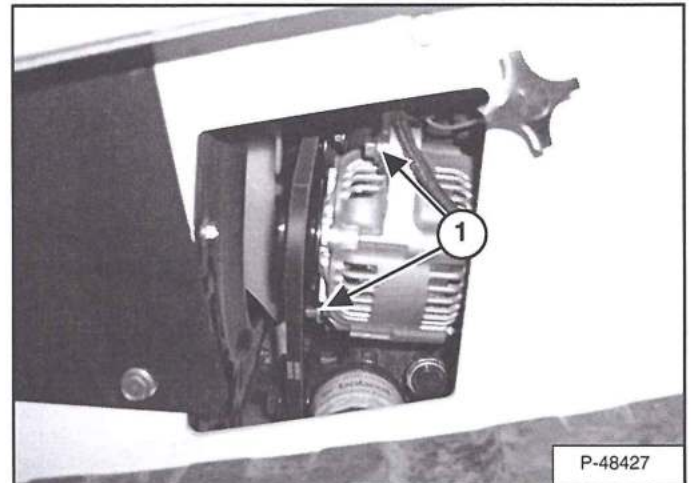
Figure 109



Open the hood (Item 1) [Figure 109].

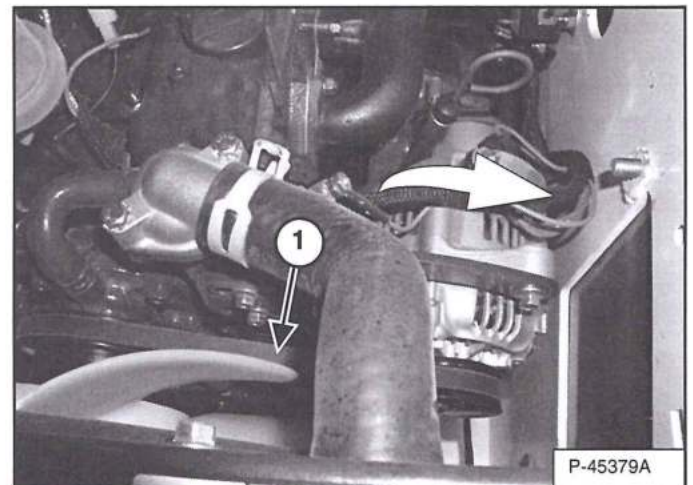
Loosen the thumb screw (Item 2) [Figure 109] and open the access cover on the left side of the machine.

Figure 110



Loosen the adjustment and mounting bolts for the alternator (Item 1) [Figure 110].

Figure 111



Move the alternator away from the engine [Figure 111] to increase belt tension.

Move the alternator until the belt has 8,0 mm (5/16 in) movement at the middle of the belt span (Item 1) [Figure 111] with 66 N (15 lb) of force.

Tighten the adjustment and mounting bolts (Item 1) [Figure 110].

Belt Replacement

Loosen the adjustment and mounting bolts for the alternator (Item 1) [Figure 110] and loosen the belt fully.

Remove the belt and install a new belt.

Adjust belt as shown above.

DRIVE BELT

Description

The drive belt makes the mechanical connection from the engine flywheel to the hydrostatic pump pulleys.

The belt is a cord-reinforced rubber design.

Constant tension is applied to the belt by the use of a spring-loaded belt tensioner.

Adjusting

To adjust the drive belt tension, use the following procedure:

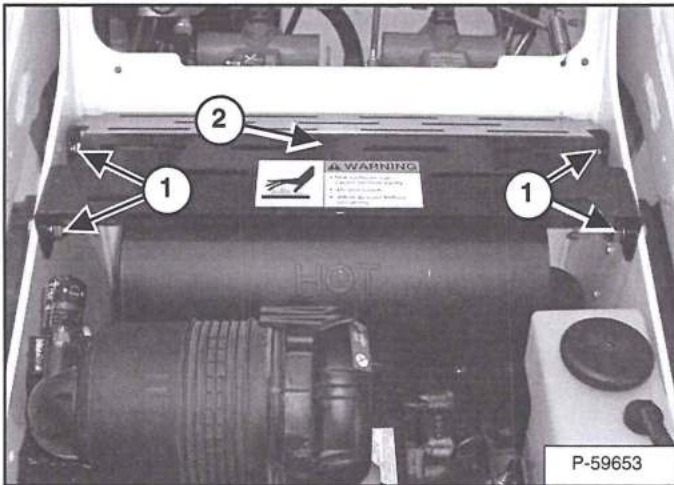
Raise the lift arms and install the lift arm support device. (See LIFT ARM SUPPORT DEVICE on Page 60.)

Stop the engine.

Open the rear access and disconnect the negative (-) battery cable. (See Removing And Installing The Battery on Page 79.)

Open the hood.

Figure 112

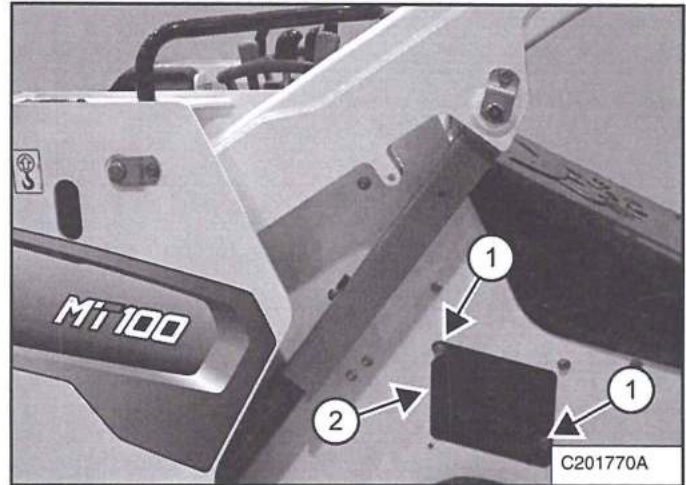


Loosen the four belt shield fasteners (Item 1) [Figure 112].

Remove the belt shield (Item 2) [Figure 112].

Installation: Ensure the belt shield is not resting on the drive belt or the drive belt pulleys.

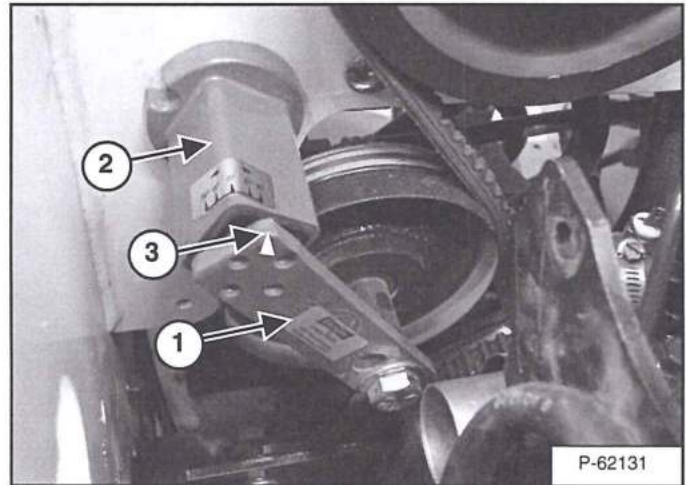
Figure 113



Loosen the two screws (Item 1) and rotate the cover (Item 2) [Figure 113].

Rotate the access cover open.

Figure 114

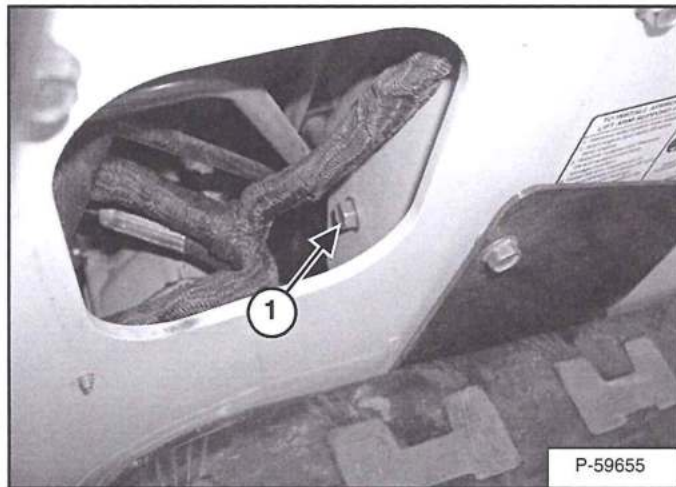


The pulley tensioner (Item 1) [Figure 114] is located just under the right hydrostatic pump pulley.

DRIVE BELT (CONT'D)

Adjusting (Cont'd)

Figure 115



Loosen tensioner mounting bolt (Item 1) [Figure 115] located on the back side of tensioner.

While facing the idler pulley, place a wrench on the square base portion (Item 2) [Figure 114] of the idler pulley.

Rotate the idler until the pointer (Item 3) [Figure 114] reaches 23°.

While holding the idler with the pointer (Item 3) [Figure 114] at the proper position (23°), tighten the idler mounting bolt (Item 1) [Figure 115] to 34 - 38 N•m (25 - 28 ft-lb) torque.

NOTE: The pointer (Item 3) [Figure 114] will be set at 23° when under proper tension.

Reconnect the negative (-) battery cable. (See Removing And Installing The Battery on Page 79.)

Run the engine for a few minutes. Stop the engine and and recheck the pointer position.

Readjust if necessary.

Install the belt shield and tighten the four fasteners.

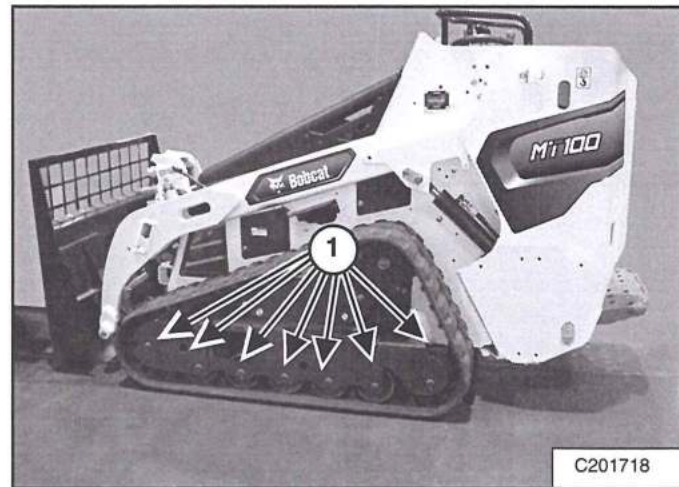
Close the side access cover and tighten the two bolts.

Remove the lift arm support device. (See LIFT ARM SUPPORT DEVICE on Page 60.)

TRACK ROLLER AND IDLER LUBRICATION

Procedure

Figure 116



The track rollers and idlers use lubricated for life bearings (Item 1) [Figure 116] and require no lubrication.

LUBRICATING THE MINI TRACK LOADER

Lubrication Locations

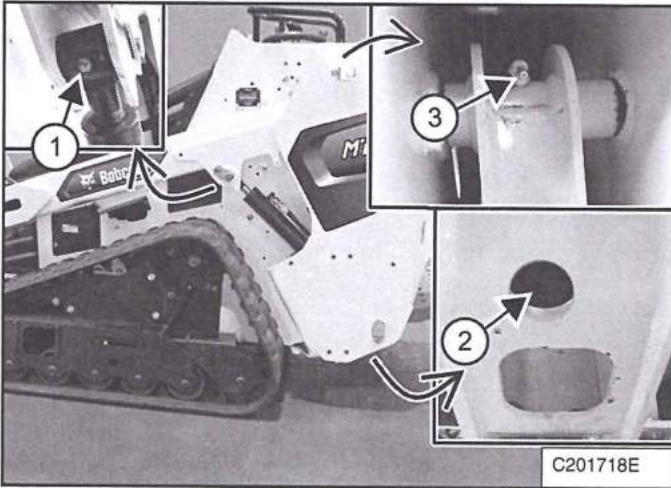
Lubricate the loader as specified for the best performance of the mini track loader. (See SERVICE SCHEDULE on Page 54.)

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

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

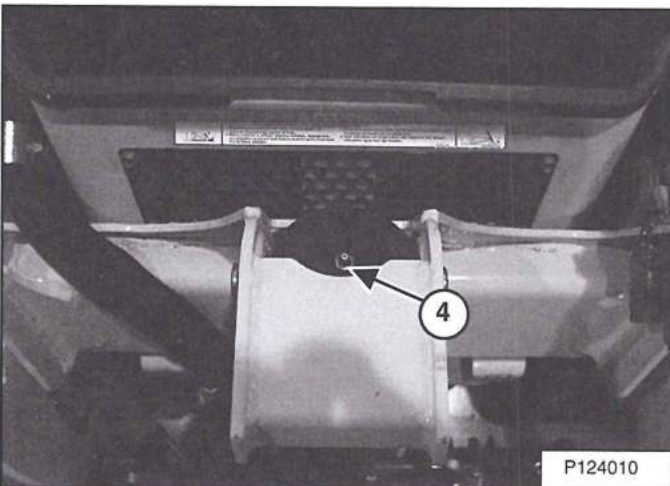
Lubricate the following locations:

Figure 117



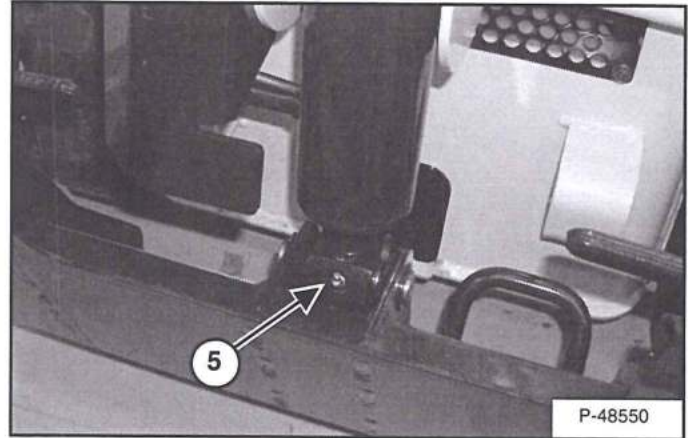
1. Lift Cylinder Rod End (Both Sides) [Figure 117]
2. Lift Cylinder Base End (Both Sides) [Figure 117]
3. Lift Arm Pivot (Both Sides) [Figure 117]

Figure 118



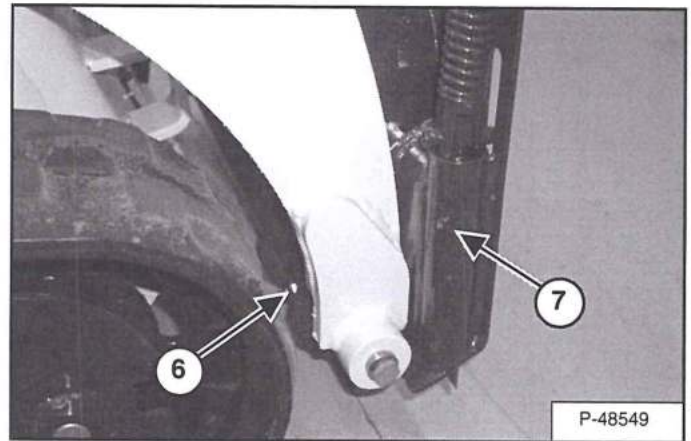
4. Tilt Cylinder Base End [Figure 118]

Figure 119



5. Tilt Cylinder Rod End [Figure 119]

Figure 120

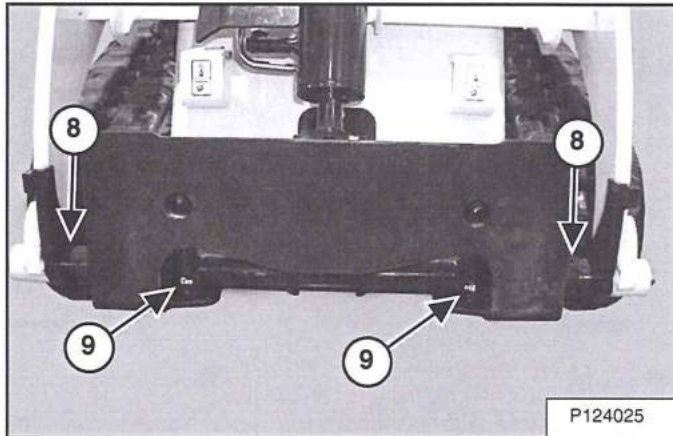


6. Bob-Tach Pivot Pin (Both Sides) [Figure 120] (if equipped).
7. Bob-Tach Wedge (Both Sides) [Figure 120] (if equipped).

LUBRICATING THE MINI TRACK LOADER (CONT'D)

Lubrication Locations (Cont'd)

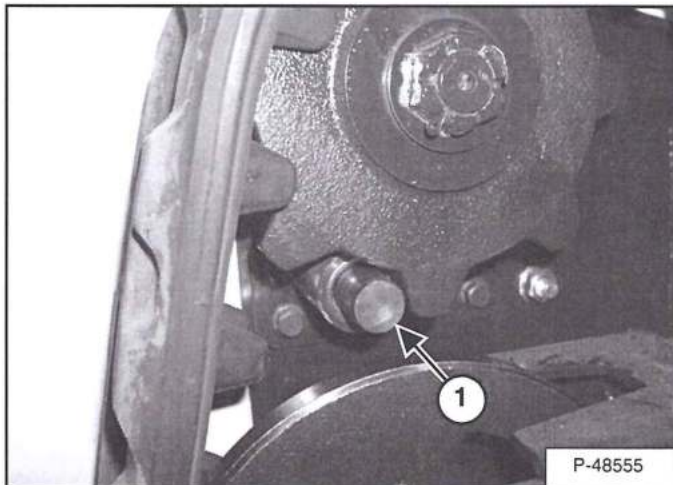
Figure 121



8. Common Industry Interface Pivot Pin (Both Sides) [Figure 121] (if equipped).
9. Common Industry Interface Locking Pin (Both Sides) [Figure 121] (if equipped).

Parking Brake Lubrication

Figure 122



Lubricate the parking brake pin (Item 1) [Figure 122] with anti-seize compound only.

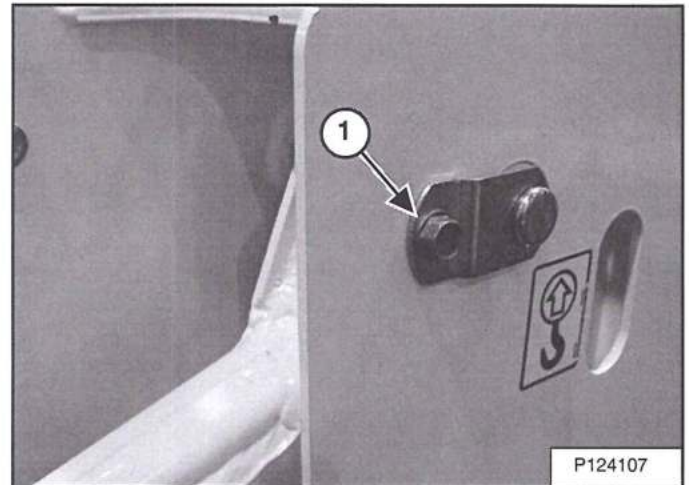
Move the parking brake lever back and forth to spread the lubricant over the entire pin area.

Repeat the lubrication for the parking brake pin on the other side.

PIVOT PINS

Inspection And Maintenance

Figure 123



All lift arm and cylinder pivots have a large pin held in position with a retainer and bolt (Item 1) [Figure 123].

Check that the bolts are tightened to 24 - 27 N•m (18 - 20 ft-lb) torque.

BOB-TACH

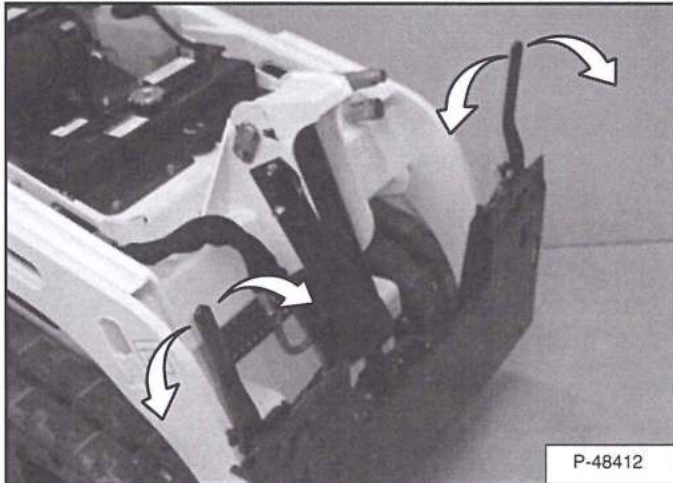
Inspection And Maintenance

! 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.

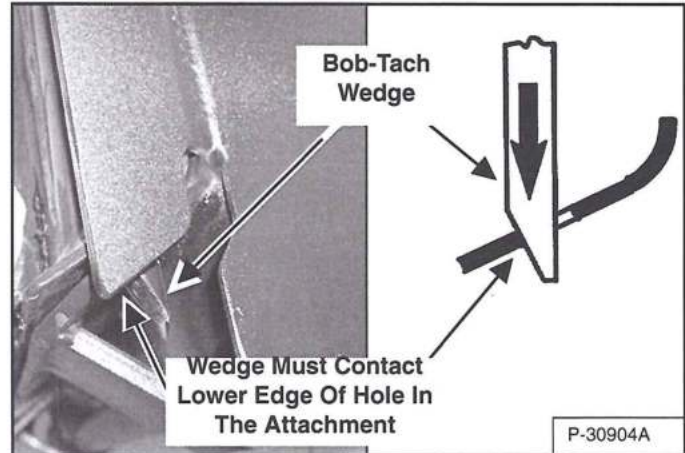
W-2102-0497

Figure 124



Move the Bob-Tach levers to engage and disengage the wedges [Figure 124]. The levers and wedges must move freely.

Figure 125

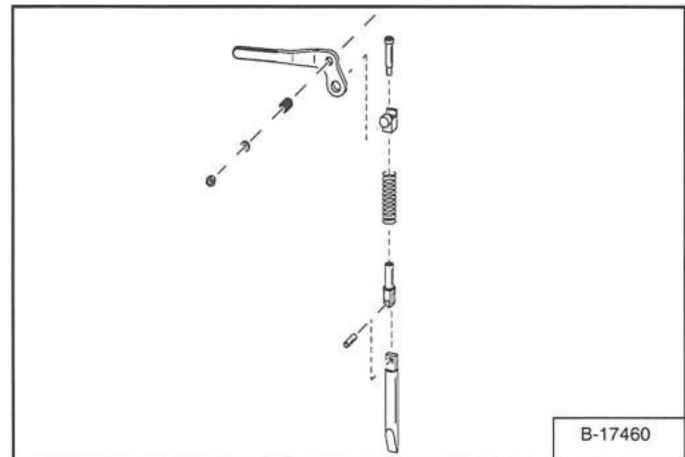


The wedges must extend through the holes in the attachment mounting frame [Figure 125].

The spring loaded wedge must contact the lower edge of the hole in the attachment [Figure 125].

If the wedge does not contact the lower edge of the hole [Figure 125], the attachment will be loose and can come off the Bob-Tach.

Figure 126



Inspect the mounting frame on the attachment and the Bob-Tach, linkages and wedges for excessive wear or damage [Figure 126]. 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 on Page 54.) (See LUBRICATING THE MINI TRACK LOADER on Page 88.)

COMMON INDUSTRY INTERFACE

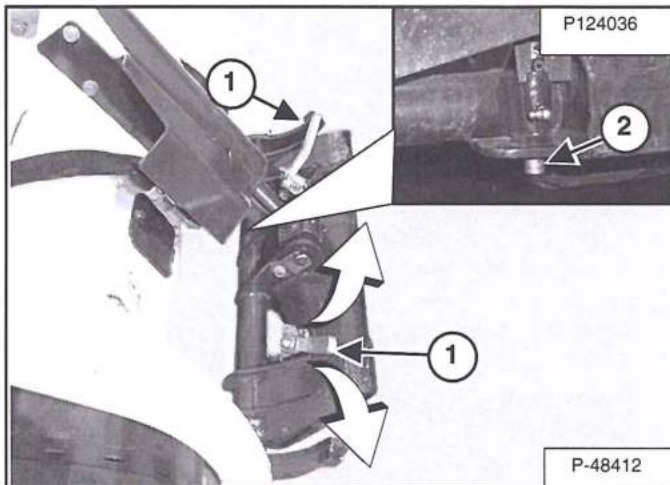
Inspection And Maintenance

! WARNING

The Common Industry Interface locking pins must extend through the holes in attachment frame. Levers must be fully down and locked. Failure to secure the locking pins can allow attachment to come off and cause serious injury or death.

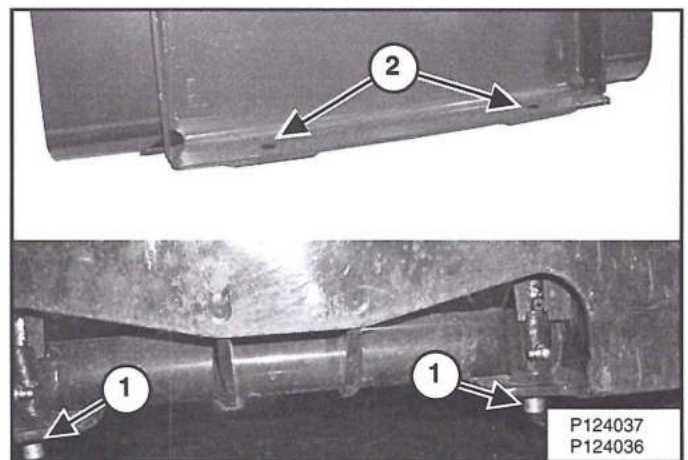
W-2996-1015

Figure 127



Move the Common Industry Interface (CII) levers (Item 1) to engage and disengage the locking pins (Item 2) [Figure 127]. The levers and pins must move freely.

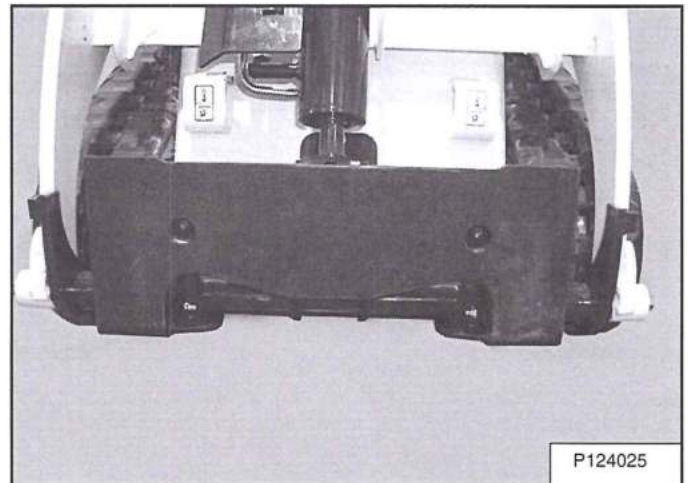
Figure 128



The pins (Item 1) must extend through the holes in the attachment mounting frame (Item 2) [Figure 128].

If the pin does not fully engage the attachment mounting frame hole [Figure 128], the attachment will be loose and can come off the interface.

Figure 129



Inspect the mounting frame on the attachment and the Common Industry Interface, linkages, springs, and pins for excessive wear or damage [Figure 129]. 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 pins. (See SERVICE SCHEDULE on Page 54.) (See LUBRICATING THE MINI TRACK LOADER on Page 88.)

MINI TRACK LOADER STORAGE AND RETURN TO SERVICE

Storage

Sometimes it may be necessary to store your Bobcat Mini Track Loader for an extend period of time. Below is a list of items to perform before storage.

- Thoroughly clean the mini track loader including the engine compartment.
- Lubricate the mini track loader.
- Replace worn or damaged parts.
- Drive the mini track loader onto planks in a dry protected shelter.
- Lower the lift arms fully with the bucket flat on the ground.
- Put grease on any exposed cylinder rods.
- Put fuel stabilizer in the fuel tank and run the engine a few minutes to circulate the stabilizer to the pump and fuel injectors.
- Drain and flush the cooling system. Refill with premixed coolant.
- Replace all fluids and filters (engine, hydraulic).
- Replace all filters (i.e.: air cleaner, oil, etc.).
- Put all controls in NEUTRAL position.
- Remove the battery. Be sure the electrolyte level is correct then charge the battery. Store it in a cool dry place above freezing temperatures and charge it periodically during storage.
- Cover the exhaust pipe opening.
- Tag the machine to indicate that it is in storage condition.

Return To Service

After the Bobcat Mini Track Loader has been in storage, it is necessary to follow a list of items to return the mini track loader to service.

- Check the engine and hydraulic oil levels; check coolant level.
- Install a fully charged battery.
- Remove grease from exposed cylinder rods.
- Check all belt tensions.
- Be sure all shields and guards are in place.
- Lubricate the mini track loader.
- Remove cover from the exhaust pipe opening.
- Start the engine and let run for a few minutes while observing the instrument panels and systems for correct operation.
- Drive the mini track loader off of the planks.
- Operate machine, check for correct function.
- Stop the engine and check for leaks. Repair as needed.

MACHINE SIGN TRANSLATIONS

MACHINE SIGN TRANSLATIONS	94
Service Schedule (7398764)	94
Warning (7273437)	97
Warning (7273436)	98
Warning (7273434)	99
Lift Arm Support Device (7273443)	100
Warning (6576048)	101
Warning (6817225)	101
Warning (6804233)	101
Low Sulfur (7152748)	101
Warning (7282262)	102
Warning (7415971)	102

WARNING

AVOID INJURY OR DEATH

- Hot surfaces can cause serious injury. Allow to cool before servicing.
- Keep cover closed except for service.
- Keep engine clean of flammable material.
- Keep body, loose objects and clothing away from electrical contacts, moving parts, hot parts and exhaust.
- Do not use loader in space with explosive dusts or gases or with flammable material near exhaust.
- All exhaust gases can kill. Always ventilate.
- Never use ether or starting fluid on diesel engine with glow plugs. Use only starting aids as approved by engine manufacturer.
- Leaking fluids under pressure can enter skin and cause serious injury. Immediate medical attention is required. Wear goggles. Use cardboard to check for leaks.
- Battery acid causes severe burns. Wear goggles. If acid contacts eyes, skin or clothing, flush well with water. For contact with eyes flush and get medical attention.
- Battery makes flammable and explosive gas. Keep arcs, sparks, flames and lighted tobacco away.
- For jump start, connect negative cable to the loader engine last (never at the battery). After jump start, remove negative connection at the engine first.

MINI TRACK LOADER SERVICE SCHEDULE

EVERY 10 HOURS (BEFORE STARTING THE LOADER)

- ENGINE OIL - Check level and add as needed. Do not overfill.
- ENGINE AIR FILTER - Check cleaner condition indicator. Service only when required.
- ENGINE AIR SYSTEM - Check for leaks and damaged components.
- ENGINE COOLING SYSTEM - Open hood. Clean debris from oil cooler and radiator areas. Check coolant level cold, add 53% propylene glycol premixed with 47% water as needed.
- FUEL FILTER - Remove trapped water.
- HYDRAULIC FLUID - Check level at site gauge and add as needed. Do not overfill.
- LOADER LIFT ARMS, CYLINDERS, BOBTACH PIVOT PINS AND WEDGES/CII PIVOT PINS AND MOUNTING PINS - Lubricate with multipurpose lithium based grease.
- NEUTRAL START INTERLOCKS, AND LIFT/TILT LOCKOUTS - Check function. Clean dirt or debris from moving parts. Refer to Operation and Maintenance Manual.
- PARKING BRAKE - Check for function. Clean or repair as needed.
- GENERAL - Clean dirt and debris from rear door area. Check for loose or broken parts, instrument operation, loose bolts or nuts, oil leaks, and damaged or missing safety signs. Repair or replace as needed.
- CONTINUOUS FLOW SHUTOFF SYSTEM - Check function. Refer to Operation and Maintenance Manual.
- MT55 ONLY. UNDERCARRIAGE ROLLERS AND IDLERS - Lubricate with multipurpose lithium based grease.

EVERY 50 HOURS

- HYDRAULIC FLUID, HOSES, AND TUBELINES - Check the fluid level. Check for damaged components and for leaks. Repair or replace as needed.
- CONTROLS - Check for correct operation. Adjust, repair or replace as needed.
- UNDERCARRIAGE - Check for loose bolts and nuts.
- TRACK TENSION - Check, adjust if needed per Operation and Maintenance Manual.

EVERY 100 HOURS

- BATTERY - Check battery for damage. Check hold downs, cables, connections and electrolyte level. Add distilled water as needed.
- ENGINE WATER PUMP/ALTERNATOR/FAN DRIVE BELT - Check and adjust or replace as required.
- ENGINE OIL AND FILTER - Drain oil and replace filter. Wait until engine is cool before replacing oil filter. Note: first oil & filter change at 50 hours.
- SPARK ARRESTOR MUFFLER - Empty spark chamber.

EVERY 250 HOURS

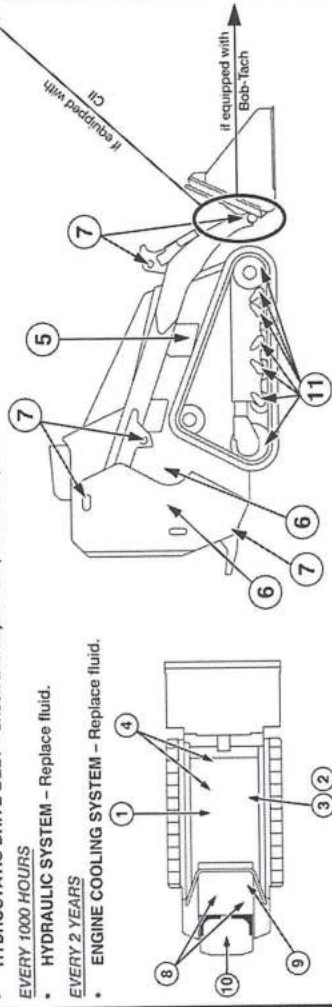
- FUEL FILTER - Replace filter element.
- LIFTARM LOCKOUT - Check function of manual bypass control.

EVERY 500 HOURS

- HYDRAULIC SYSTEM - Replace hydraulic filter. Replace reservoir breather cap.
- HYDROSTATIC DRIVE BELT - Check and adjust or replace as required.

EVERY 1000 HOURS

- HYDRAULIC SYSTEM - Replace fluid.
- EVERY 2 YEARS
- ENGINE COOLING SYSTEM - Replace fluid.

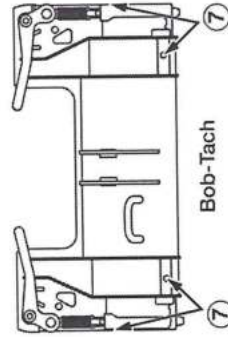
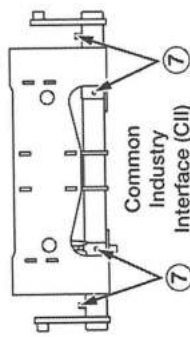


See Operation and Maintenance Manual for additional information, correct fluid specifications, and replacement component part numbers.
 Siehe Betriebs- und Wartungsanleitung für weitere Informationen, die richtige Flüssigkeits Spezifikationen und Ersatzkomponente Teilnummern.
 Ver operación y mantenimiento para obtener información adicional, especificaciones de fluidos correctos, y los números de parte de los componentes de repuesto.
 Voir exploitation et d'entretien pour plus d'informations, spécifications liquide et le remplacement références de composant.

IMPORTANT

THIS MACHINE IS FACTORY EQUIPPED WITH A U.S.D.A. FORESTRY SERVICE APPROVED SPARK ARRESTOR MUFFLER. THE SPARK ARRESTOR MUFFLER MUST BE CLEANED TO KEEP IT IN WORKING CONDITION. THE SPARK ARRESTOR MUFFLER MUST BE SERVICED BY DUMPING THE SPARK CHAMBER EVERY 100 HRS OF OPERATION.

IF THIS MACHINE IS OPERATED ON FLAMMABLE FOREST, BRUSH, OR GRASS COVERED LAND, IT MUST BE EQUIPPED WITH A SPARK ARRESTOR ATTACHED TO THE EXHAUST SYSTEM AND MAINTAINED IN WORKING ORDER. FAILURE TO DO SO WILL BE IN VIOLATION OF CALIFORNIA STATE LAW, SECTION 4442, PRC. REFER TO LOCAL LAWS AND REGULATIONS FOR SPARK ARRESTOR REQUIREMENTS.
 SEE THE OPERATION AND MAINTENANCE MANUAL FOR MORE INSTRUCTIONS.



ADVERTENCIA

EVITE LESIONES O FATALIDADES

- Las superficies calientes pueden provocar lesiones graves.
- Mantenga la puerta cerrada excepto para dar servicio a la máquina.
- Mantenga el motor libre de material inflamable.
- Mantenga el cuerpo, objetos y ropa holgados alejados de contactos eléctricos, partes que se mueven, partes calientes y el escape.
- No use el cargador en espacios con polvo o gases explosivos o con material inflamable cerca del escape.
- Todos los gases de escape pueden matar. Ventílese siempre.
- Nunca use éter o líquido de arranque en un motor diésel con bujías precalentadoras o calentadores de aire de admisión. Use solo ayudas de arranque que sean aprobadas por el fabricante del motor.
- Los líquidos que se fugan a presión pueden penetrar la piel y provocar quemaduras graves. Se requiere atención médica inmediata. Use gafas. Use cartón para revisar la presencia de fugas.
- El ácido de la batería provoca quemaduras graves. Use gafas de seguridad. Si el ácido hace contacto con los ojos, piel o ropa, lave bien con agua. Si el ácido hace contacto con los ojos, lave bien y busque atención médica.
- La bacteria produce gas inflamable y explosivo. Mantenga la batería alejada de arcos, chispas, llamas y tabaco encendido.
- Para arranques en puente, conecte de último el cable negativo en el motor del cargador (nunca en la batería). Después del arranque en puente, retire primero la conexión negativa en el motor.

PROGRAMA DE MANTENIMIENTO DEL MINICARGADOR CON ORUGAS

CADA 10 HORAS (ANTES DE ENCENDER EL CARGADOR)

- ACEITE DE MOTOR - Revise el nivel y agregue, si es del caso. No llene excesivamente.
- FILTRO DE AIRE DEL MOTOR - Revise la condición del limpiador. Dé servicio solo cuando se requiera.
- SISTEMA DE AIRE DEL MOTOR - Revise la presencia de jugas y componentes averiados.
- SISTEMA DE ENFRÍAMIENTO DEL MOTOR - Abra el capó. Limpie los escombros de las áreas del enfriador de aceite y el radiador. Revise el nivel del enfriador frío. Agregue 53% de propilenglicol premezclado con 47% de agua, si es del caso.
- FILTRO DE COMBUSTIBLE - Retire el agua atrapada.
- FLUIDO HIDRÁULICO - Revise el nivel en el indicador y agregue, si es del caso. No llene excesivamente.
- BRAZOS ELEVADORES DEL CARGADOR, CILINDROS, PINES DE PIVOTE Y CUÑAS DEL BOB-TACH/PINES DE PIVOTE CIL Y PINES DE FIJACION, RODILLOS Y POLEAS TENSORAS DEL CHASIS INFERIOR - Lubrique con grasa multipropósito a base de litio.
- ENCLAVAMIENTOS DE ENCENDIDO EN POSICIÓN NEUTRAL, Y SISTEMAS DE SEGURIDAD DE ELECCIÓN/INCLINACIÓN - Revise su funcionamiento. Retire la suciedad o escombros de las piezas que se mueven. Consulte el Manual de operación y mantenimiento.
- FRENO DE PARQUEO - Revise su funcionamiento. Limpie o repare, si es del caso.
- GENERAL - Limpie la suciedad y escombros del área de la compuerta trasera. Revise la presencia de piezas flojas o rotas, la operación de los instrumentos, pernos o tuercas flojas, fugas de aceite, y avisos de seguridad dañados o que faltan. Repare o reponga, si es del caso.
- SISTEMA DE CIERRE DE FLUJO CONTINUO - Revise su funcionamiento. Consulte el Manual de operación y mantenimiento.

CADA 50 HORAS

- FLUIDO, MANGUERAS Y TUBERÍAS HIDRÁULICAS - Revise el nivel del fluido. Revise la presencia de componentes averiados y fugas. Repare o cambie, si es del caso.
- CONTROLES - Revise su correcto funcionamiento. Ajuste, repare o reponga, si es del caso.
- CHASIS INFERIOR - Revise la presencia de pernos y tuercas flojas.
- TENSION DE LAS ORUGAS - Revise y ajuste, si es del caso, de acuerdo con el Manual de operación y mantenimiento.

CADA 100 HORAS

- BATERÍA - Revise que la batería no esté averiada. Revise las mordazas de amarrar, cables, conexiones, y el nivel electrolítico. Agregue agua destilada, si es del caso.
- BOMBA DE AGUA/ALTERNADOR/CORREA DE TRANSMISIÓN DEL VENTILADOR DEL MOTOR - Revise y ajuste o reponga, si es del caso.
- ACEITE Y FILTRO DEL MOTOR - Drene el aceite y reponga el filtro. Espere hasta que el motor se enfríe antes de reponer el filtro de aceite. Nota: El primer cambio del aceite y filtro es a las 50 horas.
- SILENCIADOR DEL SISTEMA PARACHISPAS - Vacíe la cámara de chispas.

CADA 250 HORAS

- FILTRO DE COMBUSTIBLE - Reponga el elemento del filtro.
- SISTEMA DE SEGURIDAD DEL BRAZO ELEVADOR - Revise el funcionamiento del control de deriva manual.

CADA 500 HORAS

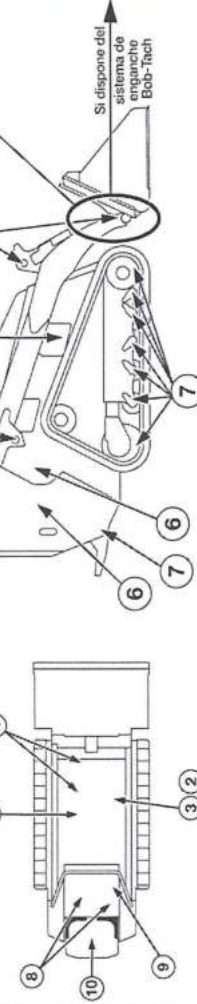
- SISTEMA HIDRÁULICO - Reponga el filtro hidráulico. Reponga la tapa de desfogue del reservorio.
- CORREA DE TRANSMISIÓN HIDROSTÁTICA - Revise y ajuste o reponga, si es del caso.

CADA 1000 HORAS

- SISTEMA HIDRÁULICO - Reponga el filtro hidráulico.

CADA 2 AÑOS

- SISTEMA DE ENFRÍAMIENTO DEL MOTOR - Cambie el fluido.



See Operation and Maintenance Manual for additional information, correct fluid specifications, and replacement component part numbers.
 Siehe Betriebs- und Wartungsanleitung für weitere Informationen, die richtige Flüssigkeiten Spezifikationen und Ersatzkomponenten Teilnummern.
 Ver operation y mantenimiento para obtener información adicional, especificaciones de fluidos correctos, y los números de parte de componentes de repuesto.
 Voir exploitation et d'entretien pour plus d'informations, spécifications liquides et le remplacement références de composants.

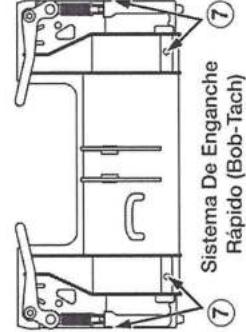
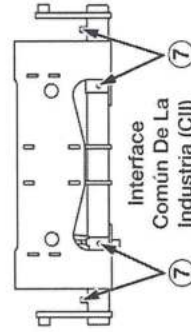
IMPORTANTE

ESTA MAQUINA ESTÁ DOTADA EN FABRICA CON UN SILENCIADOR DEL SISTEMA PARACHISPAS APROBADO POR EL SERVICIO DE SILVICULTURA DE LA U.S.A. ESTE SILENCIADOR DEBE LIMPIARSE PARA MANTENERSE EN CONDICIONES DE TRABAJO. EL PARACHISPAS DEBE SER MANTENIDO VACIANDO LA CÁMARA DE CHISPAS CADA 100 HORAS DE OPERACIÓN.

SI ESTA MAQUINA SE USA EN BOSQUES INFLAMABLES DEBE DOTARSE CON PARACHISPAS EN EL SISTEMA DE ESCAPE, Y MANTENERSE EN CONDICIONES DE TRABAJO. DE LO CONTRARIO, REPRESENTA UNA VIOLACIÓN DE LA LEY ESTATAL DE CALIFORNIA SECCIÓN 4442, PRC. REFIERASE A LAS LEYES Y REGLAMENTOS LOCALES PARA CONOCER LOS REQUISITOS DEL USO DE PARACHISPAS. PARA MAYORES INSTRUCCIONES, CONSULTE EL MANUAL DE OPERACIÓN Y MANTENIMIENTO.



Use Repuestos Originales Bobcat®



97691 SW 72734398 esAR

IMPORTANT

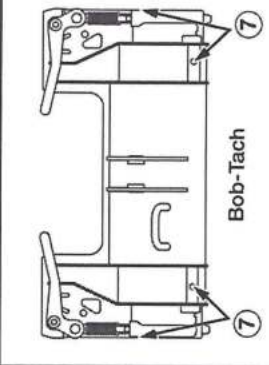
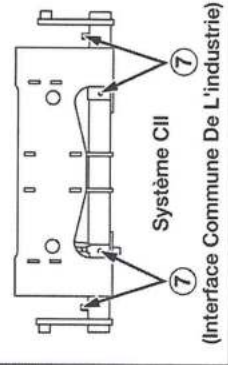
CE T ENGIN EST ÉQUIPÉ EN USINE D'UN SYSTÈME DE SILENCIEUX PARE-ÉTINCELLES APPROUVÉ PAR LE SERVICES DES FORÊTS DES ÉTATS-UNIS (USDA FORESTRY SERVICE). LE SILENCIEUX PARE-ÉTINCELLES DOIT ÊTRE NETTOYÉ POUR LE MAINTIEN EN BON ÉTAT DE FONCTIONNEMENT. CET ENTRETIEN CONSISTE À REMPLACER LA CHAMBRE À ÉTINCELLES TOUTES LES 100 HEURES D'EXPLOITATION.

SI CET ENGIN EST UTILISÉ EN ZONE DE FORÊTS, DE BROUSSAILLES OU D'HERBAGES PRÉSENTANT DES RISQUES D'INCENDIE, IL DOIT ÊTRE ÉQUIPÉ D'UN PARE-ÉTINCELLES AJOUTÉ AU CIRCUIT D'ÉCHAPPEMENT ET MAINTIENU EN BON ÉTAT DE MARCHÉ. LE NON RESPECT DE CETTE OBLIGATION CONTRAIENT A LA LOI DE L'ÉTAT DE CALIFORNIE, SECTION 4442, PRC. REPORTEZ-VOUS AUX RÉGLEMENTATIONS LOCALES POUR LES EXIGENCES APPLICABLES DANS VOTRE CAS EN MATIÈRE DE PARE-ÉTINCELLES.

CONSULTEZ LE MANUEL D'UTILISATION ET D'ENTRETIEN POUR DES INSTRUCTIONS SUPPLÉMENTAIRES.



Utilisez des pièces de rechange Bobcat® d'origine



97691 SW
7273439B rCA

TOUTES LES 10 HEURES (AVANT DE DÉMARRER LA CHARGEUSE)

- **HUILE MOTEUR** - Vérifiez le niveau et faites l'appoint au besoin. Ne dépassez pas le niveau indiqué.
- **FILTRE À AIR MOTEUR** - Vérifiez le témoin d'état du filtre. N'effectuez que l'entretien nécessaire.
- **CIRCUIT D'AIR MOTEUR** - Contrôlez l'étanchéité et l'état des composants.
- **CIRCUIT DE REFROIDISSEMENT MOTEUR** - Ouvrez le capot. Éliminez les débris aux alentours du radiateur et du refroidisseur d'huile. Vérifiez le niveau de réfrigérant à froid et faites l'appoint de liquide prémélangé à 53 % de propylène glycol et 47 % d'eau selon le besoin.
- **FILTRE À CARBURANT** - Purgez l'eau piégée.
- **FLUIDE HYDRAULIQUE** - Vérifiez le niveau sur la jauge et faites l'appoint nécessaire. Ne dépassez pas le niveau indiqué.
- **BRAS DE LEVAGE, VÉRINS, AXES PIVOT ET CALES DU BOBTACH/AXES PIVOT DU CII ET AXES DE MONTAGE, GALETS ET ROUES DE TENSION DU TRAIN ROULANT** - Lubrifiez avec de la graisse multi-usages à base de lithium.
- **ASSERVISSEMENT DE DÉMARRAGE AU POINT MORT ET VERROUILLAGES DE LEVAGE/CAVAGE** - Vérifiez le fonctionnement. Éliminez les saletés et les débris des pièces mobiles. Reportez-vous au manuel d'utilisation et d'entretien.
- **FREIN DE STATIONNEMENT** - Vérifiez le fonctionnement. Nettoyez ou réparez selon le besoin.
- **GÉNÉRALITÉS** - Nettoyez la saleté et les débris sur la zone de la porte arrière. Vérifiez l'absence de pièces desserrées ou cassées, le fonctionnement des instruments, le serrage des boulons et écrous, les luites d'huile, et les autocollants de sécurité endommagés ou manquants. Effectuez les réparations ou les remplacements éventuellement requis.
- **SYSTÈME D'ARRÊT DU DÉBIT CONTINU** - Vérifiez le fonctionnement. Reportez-vous au manuel d'utilisation et d'entretien.

TOUTES LES 50 HEURES D'UTILISATION

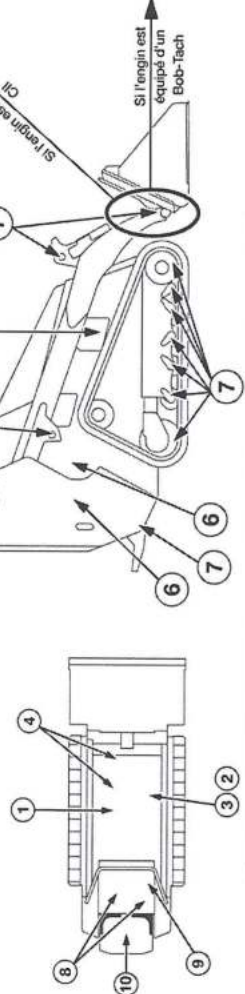
- **FLUIDE, FLEXIBLES ET CONDUITES HYDRAULIQUES** - Vérifiez le niveau du fluide. Vérifiez pour toute présence de fuite ou de dommage des composants. Effectuez les réparations ou les remplacements éventuellement requis.
- **COMMANDES** - Vérifiez leur bon fonctionnement. Réglez, réparez ou remplacez selon le besoin.
- **TRAIN ROULANT** - Vérifiez le serrage des boulons et écrous.
- **TENSION DES CHENILLES** - Vérifiez, ajustez au besoin selon le manuel d'utilisation et d'entretien.
- **BATTERIE** - Vérifiez la batterie pour toute présence de dommage. Vérifiez les fixations, les câbles, les connexions et le niveau d'électrolyte. Faites éventuellement l'appoint d'eau distillée.
- **MOTEUR : POMPE À EAU/ALTERNATEUR/COURROIE DE VENTILATEUR** - Vérifiez et réglez ou remplacez au besoin.
- **HUILE ET FILTRE MOTEUR** - Vidangez le moteur. Laissez le moteur refroidir avant de remplacer le filtre à huile. Remarque : premier changement d'huile et de filtre à 50 heures de service.
- **SILENCIEUX PARE-ÉTINCELLES** - Videz la cuve à étincelles.

TOUTES LES 250 HEURES D'UTILISATION

- **FILTRE À CARBURANT** - Remplacez l'élément du filtre.
- **VERROUILLAGE DE BRAS DE LEVAGE** - Vérifiez le fonctionnement de la commande de dérivation manuelle.
- **CIRCUIT HYDRAULIQUE** - Remplacez le bouchon reniflard du réservoir.
- **COURROIE D'ENTRAÎNEMENT HYDROSTATIQUE** - Vérifiez et réglez ou remplacez selon le besoin.
- **CIRCUIT HYDRAULIQUE** - Remplacez le fluide.

TOUTES LES 1 000 HEURES D'UTILISATION

- **CIRCUIT DE REFROIDISSEMENT MOTEUR** - Remplacez le fluide.



Consultez le manuel d'utilisation et d'entretien pour les détails, spécifications sur les fluides et le numéro des pièces de rechange. See Operation and Maintenance Manual for additional information, correct fluid specifications, component part numbers. Siehe Betriebs- und Wartungsanleitung für weitere Informationen, die richtige Flüssigkeiten, Spezifikationen und Ersatzteile. Ver operación y mantenimiento para obtener información adicional, especificaciones de fluidos correctos, y los números de pieza de componentes de repuesto.

AVERTISSEMENT

RISQUE DE BLESSURE OU DE MORT

- Les surfaces brûlantes peuvent provoquer des blessures graves. Laissez-les refroidir avant tout entretien.
- Gardez le capot fermé sauf pour l'entretien.
- Gardez le moteur à l'écart de tout matériel inflammable.
- Gardez le corps, les objets mobiles et les vêtements à l'écart des contacts électriques, des pièces mobiles, des pièces brûlantes et de l'échappement.
- N'utilisez pas la chargeuse dans des lieux contenant des poussières ou des gaz explosifs ou avec des matériaux inflammables à proximité de l'échappement.
- Tous les gaz d'échappement sont mortels. Veillez à toujours aérer la zone.
- N'utilisez jamais d'éther ou de liquide d'aide au démarrage sur les moteurs diesel équipés de bougies de préchauffage. Utilisez uniquement des aides au démarrage approuvées par le fabricant du moteur.
- En cas de fuite, le liquide sous pression peut pénétrer dans la peau et provoquer des blessures graves. Dans ce cas, consultez immédiatement un médecin. Portez des lunettes de protection. Utilisez un morceau de carton pour repérer les fuites.
- L'acide contenu dans une batterie provoque des brûlures graves. Portez des lunettes de protection. En cas de contact d'acide sur les yeux, la peau ou les vêtements, rincez abondamment à l'eau. En cas de contact sur les yeux, rincez-les abondamment et consultez un médecin.
- La batterie génère des gaz inflammables et explosifs. Maintenez-la à l'écart des arcs, des étincelles, des flammes et des cigarettes allumées.
- En cas de démarrage forcé, connectez le câble négatif au moteur de la chargeuse en dernier (jamais à la batterie). Après un démarrage forcé, retirez en premier la connexion négative au moteur.

Warning (7273437)

<p>FLOAT</p>		<p>FLOAT</p>	
<p>▲ WARNING AVOID INJURY OR DEATH</p>		<p>▲ WARNING AVOID INJURY OR DEATH</p>	
<p>Never use the loader without instructions. Read Operation & Maintenance Manual. Do not use attachments not approved by Bobcat Company.</p>	<p>Operate only from operator's position. Keep both hands firmly on the controls. Keep feet on platform while operating.</p>	<p>Check swing area before turning. Keep bystanders away.</p>	<p>Never drive over obstructions. Slow down on rough and uneven terrain. Move controls smoothly. Do not jerk controls. Avoid abrupt STARTS and STOPS.</p>
<p>Do not step off platform with load raised. Do not exceed Rated Operating Capacity.</p>	<p>While backing up, look behind in the direction of travel.</p>	<p>Check for utility lines before digging.</p>	<p>Unload</p> <p>Check swing area before turning. Keep bystanders away.</p>
<p>TO LEAVE LOADER:</p> <ol style="list-style-type: none"> Lower lift arms and put attachment flat on the ground. Disengage auxiliary hydraulic system. Engage parking brake. Stop engine. Remove Key. 	<p>LOADED</p> <p>Keep heavy end uphill. Travel up and down slopes not across them.</p>	<p>UNLOADED</p>	<p>TO LEAVE LOADER:</p> <ol style="list-style-type: none"> Lower lift arms and put attachment flat on the ground. Disengage auxiliary hydraulic system. Engage parking brake. Stop engine. Remove Key.

7273437A, eUS
97501 SW

<p>POSICIÓN FLOTANTE</p>		<p>POSICIÓN FLOTANTE</p>	
<p>▲ ADVERTENCIA EVITE LESIONES O FATALIDADES</p>		<p>▲ ADVERTENCIA EVITE LESIONES O FATALIDADES</p>	
<p>Nunca use el cargador sin instrucciones. Lea el Manual de operación y mantenimiento. Nunca modifique el equipo o use aditivos que no sean aprobados por Bobcat Company.</p>	<p>Opere la unidad solo desde la posición del operador. Mantenga ambas manos en los controles con firmeza. Mantenga los pies en la plataforma mientras opera la unidad.</p>	<p>Revisar la presencia de líneas de servicios públicos antes de excavar.</p>	<p>Nunca conduzca sobre obstrucciones. Despaciene en terrenos difíciles. Mueva los controles suavemente. No mueva los controles con brusquedad. Evite ARRANCAR y PARAR abruptamente.</p>
<p>No abandone la plataforma con la carga arriba. No supere la capacidad de operación nominal (ROO).</p>	<p>Al retroceder la unidad, volteo a mirar en la dirección que va.</p>	<p>CON CARGA</p> <p>Mantenga la punta pesada cuesta arriba. Suba y baje en forma recta los terrenos empinados, no los cruce perpendicularmente.</p>	<p>PARA ABANDONAR EL CARGADOR:</p> <ol style="list-style-type: none"> Descienda el brazo de adarmando de cara en el suelo. Desahable el sistema de los auxiliares hidráulicos. Aplique el freno de parqueo. Detenga el motor. Retire la llave.

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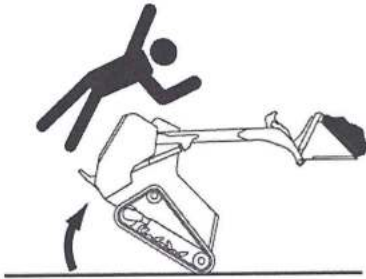
<p>FLOTTEMENT</p>		<p>FLOTTEMENT</p>	
<p>▲ AVERTISSEMENT RISQUE DE BLESSURE OU DE MORT</p>		<p>▲ AVERTISSEMENT RISQUE DE BLESSURE OU DE MORT</p>	
<p>Ne jamais jamaix sans instructions. Lire le Manuel d'opération et de maintenance. Ne modifiez jamais l'équipement et n'utilisez jamais d'accessoires qui ne sont pas approuvés par Bobcat Company.</p>	<p>Manipulez l'équipement uniquement depuis la position de l'opérateur. Gardez les deux mains sur les commandes. Gardez les pieds sur la plateforme lors de l'utilisation de l'équipement.</p>	<p>Ne passez jamais sur des obstructions. Répétez lorsque vous conduisez sur un terrain accidenté ou irrégulier. Déplacer les commandes en douceur. Ne sautez pas les commandes. Évitez les DÉMARRAGES ET ARRÊTS brusques.</p>	<p>POUR QUITTER LA CHARGEUSE :</p> <ol style="list-style-type: none"> Baissez les bras de l'attelage à plat sur le sol. Disengagez le système hydraulique auxiliaire. Serrez le frein de stationnement. Arrêtez le moteur. Retirez la clé.
<p>Ne quittez pas la plateforme lorsqu'une charge est soulevée. Ne dépassez pas la capacité opérationnelle nominale (ROO).</p>	<p>Lorsque vous reculez, regardez dans la sens de déplacement.</p>	<p>CON CARGA</p> <p>Mantenez l'extrémité lourde vers le haut de la pente. Montez et descendez les pentes dans l'axe et non en diagonale.</p>	<p>POUR QUITTER LA CHARGEUSE :</p> <ol style="list-style-type: none"> Baissez les bras de l'attelage à plat sur le sol. Disengagez le système hydraulique auxiliaire. Serrez le frein de stationnement. Arrêtez le moteur. Retirez la clé.

7273437A, ICA
97501 SW

Warning (7273436)

⚠ WARNING

TIPPING, LOSS OF LOAD, LOADS FALLING OR LOSS OF VISIBILITY CAN CAUSE SERIOUS INJURY OR DEATH



**CARRY
LOAD
LOW**



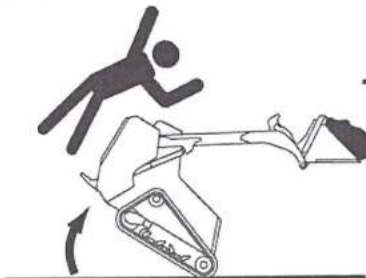
**KEEP LOAD
LEVEL WHEN
RAISING LIFT
ARMS**

95805 SW

7273436 enUS

⚠ ADVERTENCIA

EL LADEO, PÉRDIDA DE CARGA, CARGAS QUE CAEN O PÉRDIDA DE VISIBILIDAD PUEDEN PROVOCAR LESIONES GRAVES O FATALIDADES



**TRANSPORTE
LA CARGA
BAJA**



**MANTENGA LA CARGA
NIVELADA CUANDO
SUBA LOS BRAZOS
ELEVADORES**

95805 SW

7273436 esAR

⚠ AVERTISSEMENT

UN BASCULEMENT, UNE PERTE OU CHUTE DE LA CHARGE, OU LA PERTE DE VISIBILITÉ PEUT ENTRAÎNER DES BLESSURES GRAVES VOIRE MORTELLES



**GARDEZ LA
CHARGE PRÈS
DU SOL**



**GARDEZ LA CHARGE
DE NIVEAU LORSQUE
VOUS LEVEZ LES
BRAS DE LEVAGE**

95805 SW

7273436 frCA

MACHINE SIGN TRANSLATIONS (CONT'D)

Warning (7273434)

⚠ DANGER		
	AVOID DEATH <ul style="list-style-type: none">• Keep out of this area when lift arms are raised.• Disconnecting or loosening any hydraulic tubeline, hose, fitting or part can cause lift arms to drop.	<ul style="list-style-type: none">• Attachment can be forced against the ground and cause front of machine to raise.• Always use an approved lift arm support device. 
	97501 SW	7273434A enUS

⚠ PELIGRO		
	EVITE LA MUERTE <ul style="list-style-type: none">• Manténgase alejado de esta área cuando los brazos elevadores están arriba.• Desconectar o aflojar alguna tubería, manguera, accesorios o pieza hidráulica puede provocar que los brazos caigan.	<ul style="list-style-type: none">• El aditamento se puede forzar contra el suelo y así, levantar el frente de la máquina.• Use siempre un dispositivo de soporte del brazo elevador que sea aprobado. 
	97501 SW	7273434A esAR

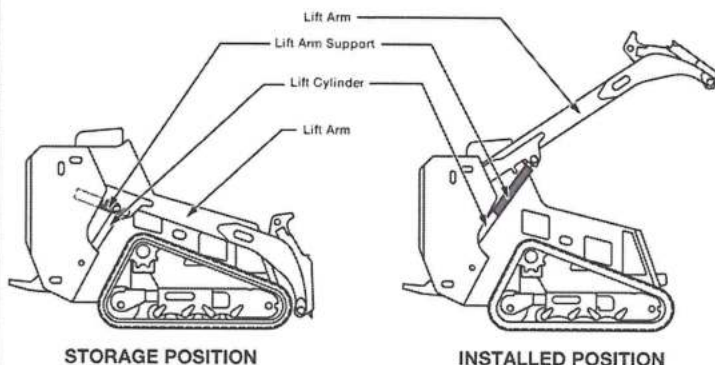
⚠ DANGER		
	RISQUE MORTEL <ul style="list-style-type: none">• Restez éloigné de cette zone lorsque les bras de levage sont levés.• Le débranchement ou le desserrage de conduite, raccord, tuyau ou pièce hydrauliques peut entraîner une chute des bras de levage.	<ul style="list-style-type: none">• Un accessoire peut être forcé contre le sol et provoquer le soulèvement de l'avant de l'engin.• Installez un arrêtoir de bras de levage approuvé. 
	97501 SW	7273434A frCA

MACHINE SIGN TRANSLATIONS (CONT'D)

Lift Arm Support Device (7273443)

TO INSTALL APPROVED LIFT ARM SUPPORT P/N 7274954:

1. Remove attachment from loader.
2. Removing retaining pin to allow lift arm support to rest on cylinder.
3. Raise lift arms until lift arm support is positioned against cylinder rod.
4. Lower lift arms slowly until lift arm support is held securely between lift arm and cylinder.



STORAGE POSITION

INSTALLED POSITION

95805 SW

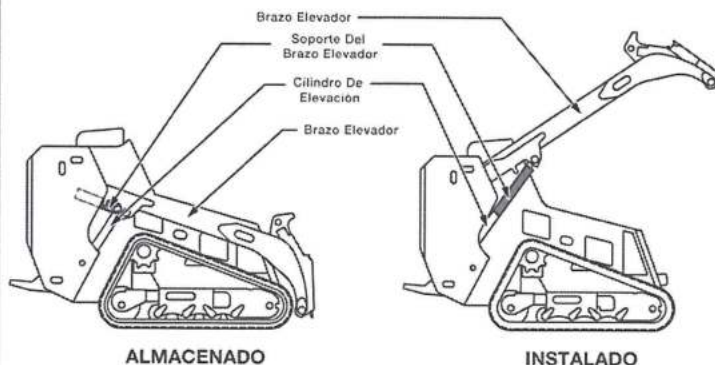
7273443 enUS

TO REMOVE LIFT ARM SUPPORT:

1. Raise lift arms and return lift arm support to storage position and secure with retaining pin.
2. Lower lift arms against stops.

PARA INSTALAR EL SOPORTE APROBADO DEL BRAZO ELEVADOR P/N 7274954:

1. Retire el aditamento del cargador.
2. Retire el pasador de retención para que el soporte pueda descansar en el cilindro.
3. Suba el brazo hasta que el soporte quede contra la varilla del cilindro.
4. Baje el brazo lentamente hasta que el soporte quede sostenido con firmeza entre el brazo y el cilindro.



ALMACENADO

INSTALADO

95805 SW

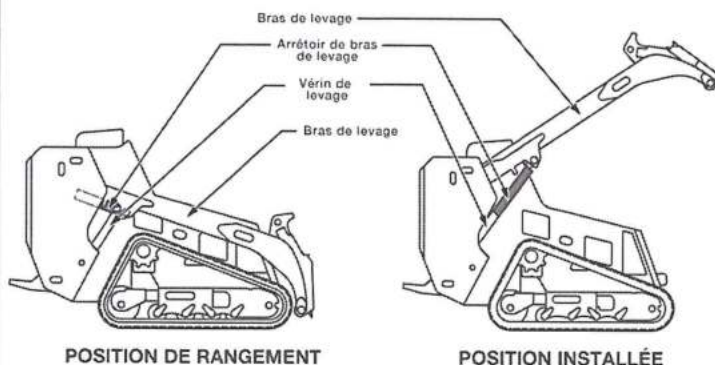
7273443 esAR

PARA DESINSTALAR EL SOPORTE DEL BRAZO ELEVADOR:

1. Suba el brazo y coloque el soporte de nuevo en la posición de almacenamiento, y asegúrelo con el pasador de retención.
2. Baje el brazo contra los topes.

INSTALLATION DE L'ARRÊTOIR DE BRAS DE LEVAGE APPROUVÉ, PIÈCE N° 7274954 :

1. Retirez l'accessoire de la chargeuse.
2. Retirez la cheville de retenue pour que l'arrêteoir de bras de levage repose sur le vérin.
3. Relevez les bras de levage jusqu'à ce que l'arrêteoir de bras de levage se positionne contre la tige du vérin.
4. Baissez lentement les bras de levage jusqu'à ce que l'arrêteoir soit bien maintenu entre le bras et le vérin.



POSITION DE RANGEMENT

POSITION INSTALLÉE

95805 SW

7273443 frCA

RETRAIT DE L'ARRÊTOIR DE BRAS DE LEVAGE :

1. Levez les bras de levage et remettez l'arrêteoir de bras de levage en position de rangement et fixez-le avec la cheville de retenue.
2. Baissez les bras de levage en les posant contre les butées.

MACHINE SIGN TRANSLATIONS (CONT'D)

Warning (6576048)



WARNING

KEEP FINGERS AND OBJECTS AWAY FROM FAN.

43594 SW 02 6576048



ADVERTENCIA

EVITE LESIONES MANTENGA LOS DEDOS Y OBJETOS ALEJADOS DEL VENTILADOR.

43594 SW 6576048 AR



AVERTISSEMENT

GARDEZ LES DOIGTS ET LES OBJETS À DISTANCE DU VENTILATEUR.

43594 SW 6576048 frCA

Warning (6817225)



WARNING

- Hot surfaces can cause serious injury.
- Do not touch.
- Allow to cool before servicing.

43820 SW 03 6817225



ADVERTENCIA

- Las superficies calientes pueden provocar lesiones graves.
- No las toque.
- Permita que se enfríen antes de dar servicio.

43820 SW 6817225 AR



AVERTISSEMENT

- Les surfaces brûlantes peuvent provoquer des blessures graves.
- Ne pas toucher.
- Laisser refroidir avant toute opération d'entretien.

43820 G7-6817225-FR

Warning (6804233)

WARNING

- Hot pressurized fluid.
- Can cause serious burns.

39894 SW 6804233

ADVERTENCIA

- Fluido presurizado caliente.
- Puede provocar quemaduras graves.

39894 SW 6804233 AR

AVERTISSEMENT

- Fluide chaud sous pression.
- Peut gravement brûler.

39894 SW 6804233 frCA

Low Sulfur (7152748)



S ≤ 500 mg/kg LOW SULFUR OR ULTRA LOW SULFUR DIESEL FUEL ONLY




只允许使用低硫柴油

86147 SW 7152748A enUS

LOW SULFUR OR ULTRA LOW SULFUR DIESEL FUEL ONLY

ÚNICAMENTE COMBUSTIBLE DIESEL DE BAJO CONTENIDO EN AZUFRE O MUY BAJO CONTENIDO EN AZUFRE

70783 SW 7152748 esAR

LOW SULFUR OR ULTRA LOW SULFUR DIESEL FUEL ONLY




SOLO COMBUSTIBLE DIESEL CON BAJO O ULTRA BAJO CONTENIDO DE SULFURO

70783 SW 7152748fr

MACHINE SIGN TRANSLATIONS (CONT'D)

Warning (7282262)

OPERATION

TO START ENGINE

- Drive Control must be in neutral.
- Continuous Flow Shutoff Pedal must be up.

FOR CONTINUOUS AUXILIARY HYDRAULIC FLOW

- Press and hold Continuous Flow Shutoff Pedal.
- Move auxiliary hydraulic control lever to detent position.
- Release pedal to deactivate continuous auxiliary hydraulic flow.

97501 SW 7282262 enUS

Warning (7415971)

IMPORTANT

MACHINE DAMAGE HAZARD

- Install only one set of approved counterweights in the designated locations.
- Use of unapproved or additional counterweights will cause machine damage.

SW 20 7415971 enUS

Spanish and French Canadian Decals not available at time of printing.

OPERACIÓN

PARA ENCENDER EL MOTOR

- El control de mando debe estar en posición neutral.
- El pedal que cierra el caudal continuo debe estar arriba.

PARA CAUDAL CONTINUO DE LOS AUXILIARES HIDRÁULICOS

- Oprima y sostenga el pedal que cierra el caudal continuo.
- Coloque la palanca de control de los auxiliares hidráulicos a la posición de freno mecánico.
- Suelte el pedal para desactivar el caudal continuo de los auxiliares hidráulicos.

97501 SW 7282262 esAR

UTILISATION

DÉMARRAGE DU MOTEUR

- La commande de translation doit être au point mort.
- La pédale d'arrêt du débit continu doit être relevée.

POUR LE DÉBIT CONTINU DE L'HYDRAULIQUE AUXILIAIRE

- Enfoncez la pédale d'arrêt du débit continu et maintenez-la ainsi.
- Placez le levier de la commande hydraulique auxiliaire à la position d'encliquetage.
- Relâchez la pédale pour désactiver le débit continu de l'hydraulique auxiliaire.

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SPECIFICATIONS

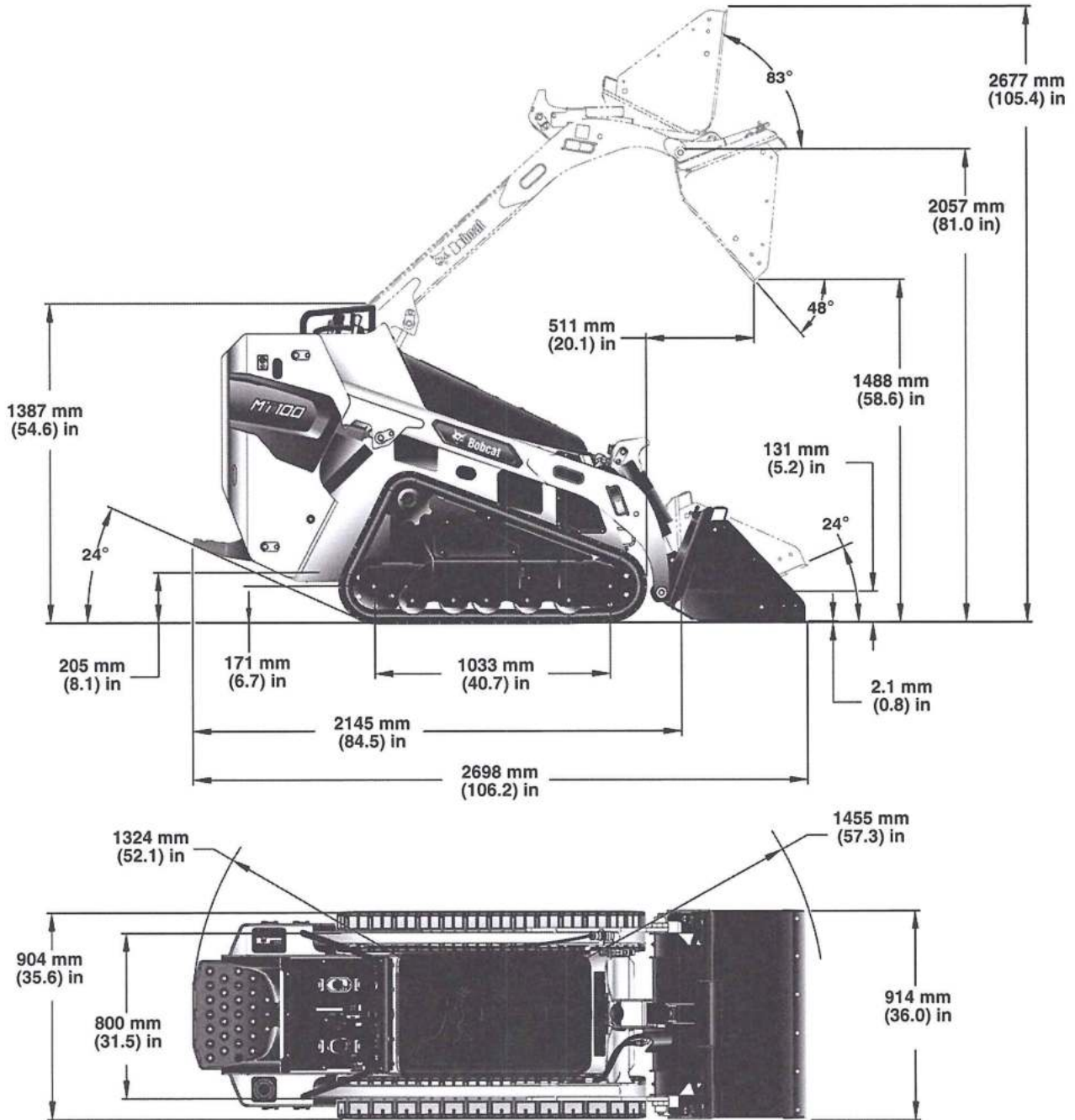
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Certain specification(s) are based on engineering calculations and are not actual measurements. Specification(s) are provided for comparison purposes only and are subject to change without notice. Specification(s) for your individual Bobcat equipment will vary based on normal variations in design, manufacturing, operating conditions, and other factors.

MINI TRACK LOADER SPECIFICATIONS

Dimensions (Narrow Track)

- Dimensions are given for mini track loader equipped with standard tracks and dirt bucket and may vary with other bucket types.
- Where applicable, specifications conform to SAE or ISO standards and are subject to change without notice.



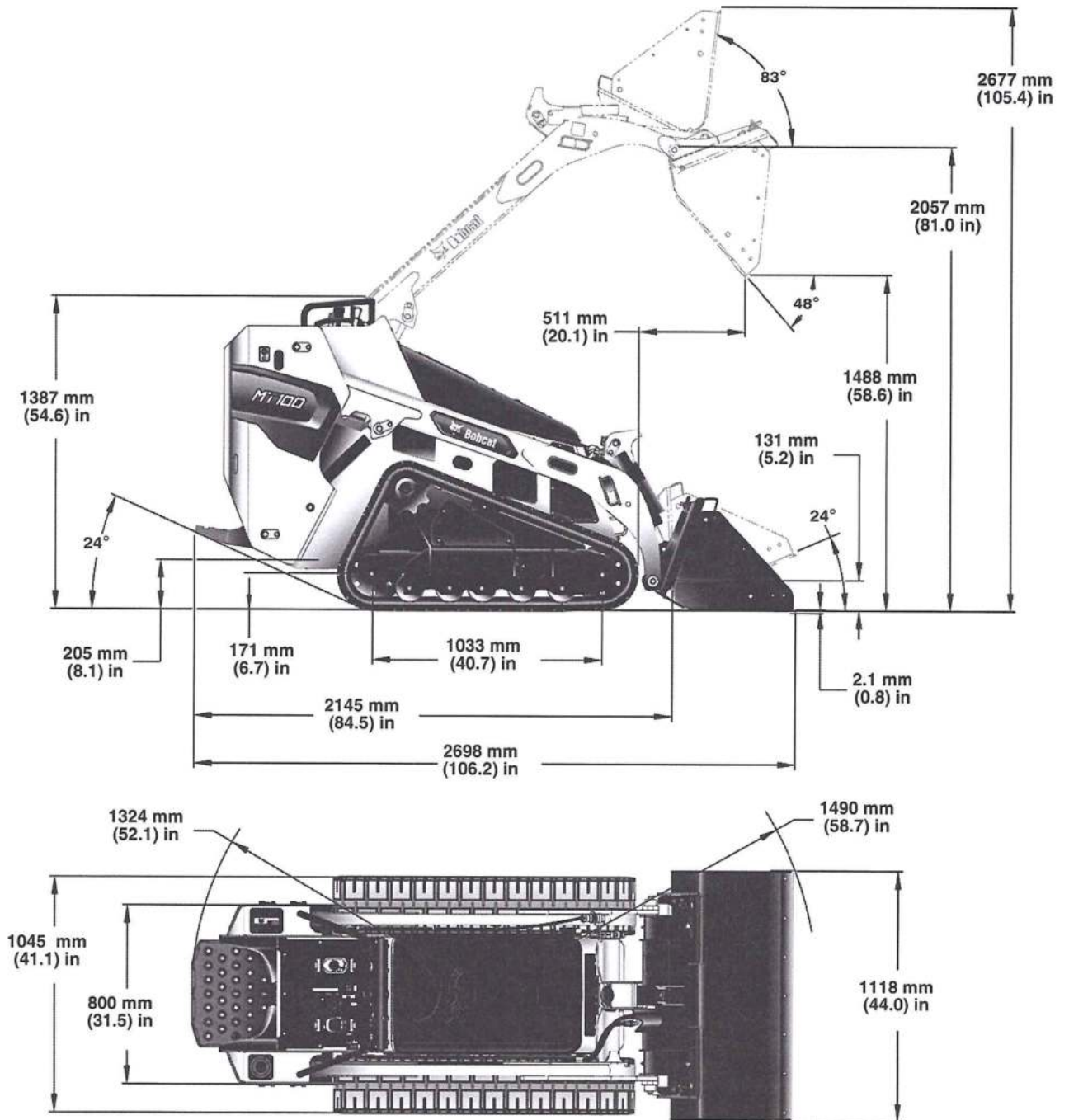
NA18547

Changes of structure or weight distribution of the loader can cause changes in control and steering response and can cause failure of the loader parts.

MINI TRACK LOADER SPECIFICATIONS (CONT'D)

Dimensions (Wide Track)

- Dimensions are given for mini track loader equipped with wide tracks and dirt bucket and may vary with other bucket types.
- Where applicable, specifications conform to SAE or ISO standards and are subject to change without notice.



NA18548

Changes of structure or weight distribution of the loader can cause changes in control and steering response and can cause failure of the loader parts.

MINI TRACK LOADER SPECIFICATIONS (CONT'D)

Performance

	With Standard Narrow Tracks and Bucket	With Optional Wide Tracks and Bucket
Rated Operating Capacity	454 kg (1000 lb) (With the factory installed counterweights installed on the track frame)	454 kg (1000 lb) (With the factory installed counterweights installed on the track frame)
Tipping Load	1116 kg (2458 lb)	1131 kg (2494 lb)
Operating Weight (with bucket)	1538 kg (3390 lb)	1609 kg (3548 lb)
Breakout Force - Lift	14812 N (3330 lbf)	15417 N (3466 lbf)
Breakout Force - Tilt	11561 N (2599 lbf)	11916 N (2679 lbf)
Travel Speed		
Forward	0 - 6,6 km/h (0 - 4.1 mph)	0 - 6,6 km/h (0 - 4.1 mph)
Reverse	0 - 4,7 km/h (0 - 2.9 mph)	0 - 4,7 km/h (0 - 2.9 mph)

Controls

Machine Steering	Direction and speed controlled by one multifunction handle
Mini Track Loader Hydraulics - Lift and Tilt - Front Auxiliary (Std.)	Controlled by joystick Controlled by fore and aft movement of hand lever
Auxiliary Pressure Release	Controlled by fore and aft movement of hand lever
Engine	Hand lever speed control; key-type starter switch
Service Brake	Two independent hydrostatic circuits controlled by one multifunction handle
Secondary Brake	One of the hydrostatic transmissions
Parking Brake (Std.)	Hand lever operation

Engine

Make / Model	Kubota D902-E4B-BC-1
Fuel / Cooling	Diesel (Low Sulfur) / Liquid
Horsepower - ISO 9249 EEC / SAE J1349 Net - ISO 14396 Gross - SAE J1349 Gross	17,5 kW (23.5 hp) @ 3600 rpm 18,2 kW (24.4 hp) @ 3600 rpm 18,5 kW (24.8 hp) @ 3600 rpm
Torque - ISO 9249 EEC / SAE J1349 Net - SAE J1349 Gross	54,2 N•m (39.9 ft-lb) @ 2600 rpm 56,1 N•m (41.4 ft-lb) @ 2600 rpm
Number of Cylinders	3
Displacement	0,899 L (54.9 in ³)
Bore / Stroke	72,0 mm / 73,6 mm (2.83 / 2.90)
Lubrication	Gear Pump Pressure System with Filter
Crankcase Ventilation	Closed
Air Cleaner	Dual dry replaceable paper cartridges
Ignition	Diesel-Compression
Low Idle	1025 - 1125 rpm
High Idle	3770 - 3870 rpm
Engine Coolant	Propylene Glycol / Water Mixture

MINI TRACK LOADER SPECIFICATIONS (CONT'D)

Hydraulic System

Pump Type	Engine driven, gear type
Pump Capacity	45,4 L/min (12 U.S. gpm) @ High Idle
System Relief at Quick Couplers	19900 kPa (199 bar) (2900 psi)
Filter (Hydraulic)	Full flow replaceable, 10-micron synthetic media element
Hydraulic Cylinders	Double-acting; tilt cylinders have cushioning feature on dump and rollback
Bore Diameter: Lift Cylinder (2)	50,8 mm (2.00 in)
Tilt Cylinder (2)	76,2 mm (3.00 in)
Rod Diameter: Lift Cylinder (2)	25,4 mm (1.00 in)
Tilt Cylinder (2)	31,8 mm (1.25 in)
Stroke: Lift Cylinder (2)	482,6 mm (19.00 in)
Tilt Cylinder (1)	268,2 mm (10.56 in)
Control Valve	3-Spool, open center type with float detent on lift
Fluid Type	Bobcat Fluid, Hydraulic / Hydrostatic 6903117 - (2.5 U.S. gal container) 6903118 - (5 U.S. gal container) 6903119 - (55 U.S. gal container)
Fluid Lines	SAE Standard tubelines, hoses and fittings
Hydraulic Function Time:	
Raise Lift Arms	3.2 seconds
Lower Lift Arms	2.1 seconds
Bucket Dump	1.7 seconds
Bucket Rollback	1.5 seconds

Electrical

Starting Aid	Glow Plugs
Alternator	12 volt, 40 Amp open frame w/ internal regulator
Battery	12 volt - 540 CCA @ -18°C (0°F)
Starter	12 volt; gear reduction, 2,7 kW (3.62 hp)
Instrumentation	Gauges: Hourmeter, Fuel Level, Engine Coolant Temperature, Voltmeter Warning lights: Engine Oil Pressure, Hydraulic Oil Temperature Other: Lights, Opt. / Accessory Switches or Indicators

Drive System

Drive System	Fully hydrostatic, track drive
Transmission	Infinitely variable tandem hydrostatic piston pumps, driving two fully reversing hydrostatic motors

Capacities

Fuel	26,5 L (7 U.S. gal)
Engine Lubrication and Filter	3,6 L (3.8 qt)
Engine Cooling System	4,73 L (5 qt)
Hydraulic / Hydrostatic Reservoir Only (Center of Sight Glass)	9,5 L (2.5 U.S. gal)
Hydraulic / Hydrostatic System	20,0 L (5.3 U.S. gal)

MINI TRACK LOADER SPECIFICATIONS (CONT'D)

Tracks

Standard	180 mm (7.1 in) Rubber
Wide (Optional)	250 mm (9.8 in) Rubber

Ground Pressure

Standard Track And 36" Bucket	34,0 kPa (0.340 bar) (4.9 psi)
Wide Track And 44" Bucket	24,0 kPa (0.240 bar) (3.5 psi)

WARRANTY

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WARRANTY

Bobcat Mini Track Loaders

Bobcat Company warrants to its authorized dealers and authorized dealers of Bobcat Equipment Ltd., who in turn warrant to the owner, that each new Bobcat mini track loader will be free from proven defects in material and workmanship with respect to (i) all components of the product except as otherwise specified herein for twelve (12) months, (ii) the drive belt from the hydrostatic pump to the engine, for thirty six (36) months, provided that after the initial twelve month warranty period, such warranty shall be limited to parts only and does not include labor, (iii) tracks for twelve (12) months on a prorated basis based on the remaining depth of the track at the time any defect is discovered, (iv) Bobcat brand batteries, for an initial twelve (12) month warranty period and for an additional twelve (12) months thereafter, Bobcat Company shall reimburse a fixed portion of the cost of replacing the battery as designated by Bobcat in the event of a proven defect and (v) auxiliary hydraulic quick couplers for six (6) months or 200 hours of use, whichever occurs first. The foregoing time periods shall all commence after delivery by the authorized Bobcat dealer to the original buyer.

During the warranty period, the authorized Bobcat dealer shall repair or replace, at Bobcat Company's option, without charge for parts and labor, any part of the Bobcat product except as otherwise specified herein which fails because of defects in material or workmanship. The owner shall provide the authorized Bobcat dealer with prompt written notice of the defect and allow reasonable time for repair or replacement. Bobcat Company may, at its option, require failed parts to be returned to the factory. Travel time of mechanics and transportation of the Bobcat product to the authorized Bobcat dealer for warranty work are the responsibility of the owner. The remedies provided in this warranty are exclusive.

This warranty does not cover replacement of scheduled service items such as oil, filters, tune-up parts, and other high-wear items. This warranty does not cover damages resulting from abuse, accidents, alterations, use of the Bobcat product with any accessory or attachment not approved by Bobcat Company, air flow obstructions, or failure to maintain or use the Bobcat product according to the instructions applicable to it.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND CONDITIONS, EXCEPT THE WARRANTY OF TITLE. BOBCAT COMPANY DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL BOBCAT COMPANY OR THE AUTHORIZED BOBCAT DEALER BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, LOSS OR INTERRUPTION OF BUSINESS, LOST PROFITS, OR LOSS OF MACHINE USE, WHETHER BASED ON CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, STATUTE OR OTHERWISE, EVEN IF BOBCAT COMPANY OR THE AUTHORIZED BOBCAT DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE TOTAL LIABILITY OF BOBCAT COMPANY AND THE AUTHORIZED BOBCAT DEALERS WITH RESPECT TO THE PRODUCT AND SERVICES FURNISHED HEREUNDER SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT UPON WHICH SUCH LIABILITY IS BASED.



WARRANTY (CONT'D)

In this emissions limited warranty, the term "Manufacturer" means Kubota Corporation as the holder of the U.S. Environmental Protection Agency (U.S. EPA) Certificate of Conformity and California Executive Order for the vehicle. The emission control limited warranty is in addition to the standard limited warranty for your vehicle.

Your Bobcat dealer is authorized to perform all warranty and service repairs on your diesel engine. To locate a Bobcat dealer, visit www.bobcat.com or call 1-800-743-4340.

KUBOTA Corporation FEDERAL & CALIFORNIA EMISSION CONTROL SYSTEMS LIMITED WARRANTY for NON-ROAD ENGINES (CI)

The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and KUBOTA Corporation (KUBOTA) are pleased to explain the Federal and California Emission Control System Warranty on your non-road engine or marine engine. In California, new 2020 model year heavy duty off-road engines must be designed, built and equipped to meet California's stringent anti-smog standards adopted by the Air Resources Board pursuant to its authority in Chapter 1 and 2, Part 5, Division 26 of the California Health and Safety Code. In other states of the U.S.A., new non-road engines subject to the provisions of 40 CFR 1039 subpart A and new marine engines subject to the provisions of 40 CFR 1042 subpart A must be designed, built and equipped, at the time of sale, to meet the U.S. EPA regulations. KUBOTA must warrant the emission control system on your Compression Ignition engine for the period of time listed below provided there has been no abuse, vandalism, neglect, improper maintenance or unapproved modifications to your engine. This emission warranty is applicable in all states of the U.S.A., its provinces and territories regardless of whether an individual state, province, or territory has enacted warranty provisions that differ from the Federal warranty provisions. This emission warranty is also applicable in all provinces and territories of CANADA.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, KUBOTA will repair your engine at no cost to you, including diagnosis (if the diagnostic work is performed at an authorized dealer), parts and labor.

EMISSION DESIGN AND DEFECT WARRANTY COVERAGE

The emissions warranty period for the engine begins on the original date of sale to the initial purchaser and continues for each subsequent purchaser for the period mentioned below.

If any emission related part on your engine is defective, the part will be repaired or replaced by KUBOTA free of charge.

1. For non-road engines

The emissions warranty period for all engines rated under 19kW (25 Hp) is 2000 hours of operation or two (2) years of use, whichever first occurs.

The emissions warranty period for constant speed engines rated under 37kW (50Hp) with rated speeds greater than or equal to 3000 rpm is 2000 hours of operation or two (2) years of use, whichever first occurs.

The emissions warranty period for all other engines not already listed is 3000 hours of operation or five (5) years of use, whichever first occurs.

2. For marine engines (commercial Category 1)

The emissions warranty period for all engines rated under 19kW (25 Hp) is 1500 hours of operation or two and a half (2.5) years of use, whichever first occurs.

The emissions warranty period for all engines rated at or above 19 kW (25 Hp) and under 37kW (50 Hp) is 2500 hours of operation or three and a half (3.5) years of use, whichever first occurs.

The emissions warranty period for all engines rated at or above 37kW (50 Hp) is 5000 hours of operation or five (5) years of use, whichever first occurs.

OWNER'S WARRANTY RESPONSIBILITIES

(a) As the engine owner, you are responsible for the performance of the required maintenance listed in your KUBOTA operator's manual. KUBOTA recommends that you retain all receipts covering maintenance on your engine, but KUBOTA cannot deny a warranty claim solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

(b) As the engine owner, you should be aware, however, that KUBOTA may deny your warranty coverage if your engine or a part has failed due to abuse, vandalism, neglect, improper maintenance or unapproved modifications.

(c) Your engine is designed to operate on Ultra Low Sulfur Diesel Fuel only. Use of any other fuel may result in your engine no longer operating in compliance with Federal or California's emissions requirements.

(d) You are responsible for presenting your engine to the nearest dealer or service station authorized by KUBOTA when a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

(e) If you have any questions regarding your warranty rights and responsibilities or the location of the nearest authorized dealer or distributor, you should contact: KUBOTA ENGINE AMERICA CORPORATION, Service Department at 1-800-532-9808, kea_g_ewrf@kubota.com or KUBOTA TRACTOR CORPORATION, National Service Department at 1-800-558-2682, KubotaEmissionsWarranty@kubota.com or KUBOTA CANADA LTD at (905) 294-7477.

COVERAGE

KUBOTA warrants to the initial purchaser and each subsequent purchaser that your engine will be designed, built and equipped, at the time of sale, to meet all applicable regulations. KUBOTA also warrants to the initial purchaser and each subsequent purchaser that your engine shall be free from defects in materials and workmanship which cause the engine to fail to conform to applicable regulations for the period mentioned above from the original date of sale.

KUBOTA shall remedy warranty defects at any authorized KUBOTA engine dealer or warranty station. Any authorized work done at an authorized dealer or warranty station shall be free of charge to the owner if such work determines that a warranted part is defective. Any KUBOTA approved or equivalent replacement part (including any KUBOTA approved aftermarket part) may be used for any warranty maintenance or repairs on emission related parts, and must be provided free of charge to the owner if the part is still under warranty.

KUBOTA is liable for damages to other engine components caused by the failure of a warranted part still under warranty. The use of replacement parts not equivalent to the original parts may impair the effectiveness of your engine emission control system. If such a replacement part is used in the repair or maintenance of your engine, and KUBOTA determines it is defective or causes a failure of a warranted part, your claim for repair of your engine may be denied.

Listed below are the parts covered by the Federal and California Emission Control Systems Warranty. Some parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part. The warranted parts are (if applicable):

- | | | |
|--|---|---|
| 1) Air-Induction System | 4) Electronic Control System | 7) Advanced Oxides of Nitrogen (NOx) Controls |
| a) Intake Manifold | a) ECU | a) Selective Catalytic Reduction (SCR) Catalyst |
| b) Turbocharger System | b) Engine Speed / Timing Sensor | b) Reductant (urea) Containers |
| c) Charge Air Cooling System (Intercooler) | c) Accelerator Position Sensor | c) Dispensing Systems |
| 2) Catalyst or Thermal Reactor System | d) Coolant Temperature Sensor | d) NOx Sensor |
| a) Catalytic converter | e) Atmospheric Pressure Sensor | e) SCR Temperature Sensor |
| b) Exhaust manifold | f) Intake Pressure Sensor | f) Any Sensor for Diesel Exhaust Fluid |
| 3) Fuel Injection System | g) Intake Manifold Temperature Sensor | 8) Miscellaneous Items |
| a) Fuel Supply Pump (Common Rail System) | h) Intake Air Flow Sensor | a) Closed Breather System |
| b) Injector | i) Common Rail Pressure Sensor | b) Hoses*, Clamps*, Fittings, Tubing* |
| c) Injection Pipe | 5) Exhaust Gas Recirculation System | c) Gaskets, Seals |
| d) Common Rail | a) EGR Valve | d) Kubota supplied engine Wiring Harnesses |
| e) Smoke Puff Limiter | b) EGR Cooler | e) Kubota supplied engine Elec. Connectors |
| f) Speed Timer | c) EGR Valve Opening Rate Sensor | f) Air Cleaner Element*, Fuel Filter Element* |
| g) Cold Advance Timer | 6) Particulate Controls | g) Emission Control Information Labels |
| h) Injection Pump | a) Any device used to capture particulate emissions. | |
| | b) Any device used in the regeneration of the particulate control device. | |
| | c) Control Device Enclosures and Manifolding | |
| | d) Diesel Particulate Filter Temperature Sensor | |
| | e) Differential Pressure Sensor | |

*Warranty period is equivalent to manufacturer's recommended first replacement interval as stated in the applicable model's operator's manual and/or service (workshop) manual.

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MAINTENANCE REQUIREMENTS

The owner is responsible for the performance of the required maintenance as defined by KUBOTA in the operator's manual.

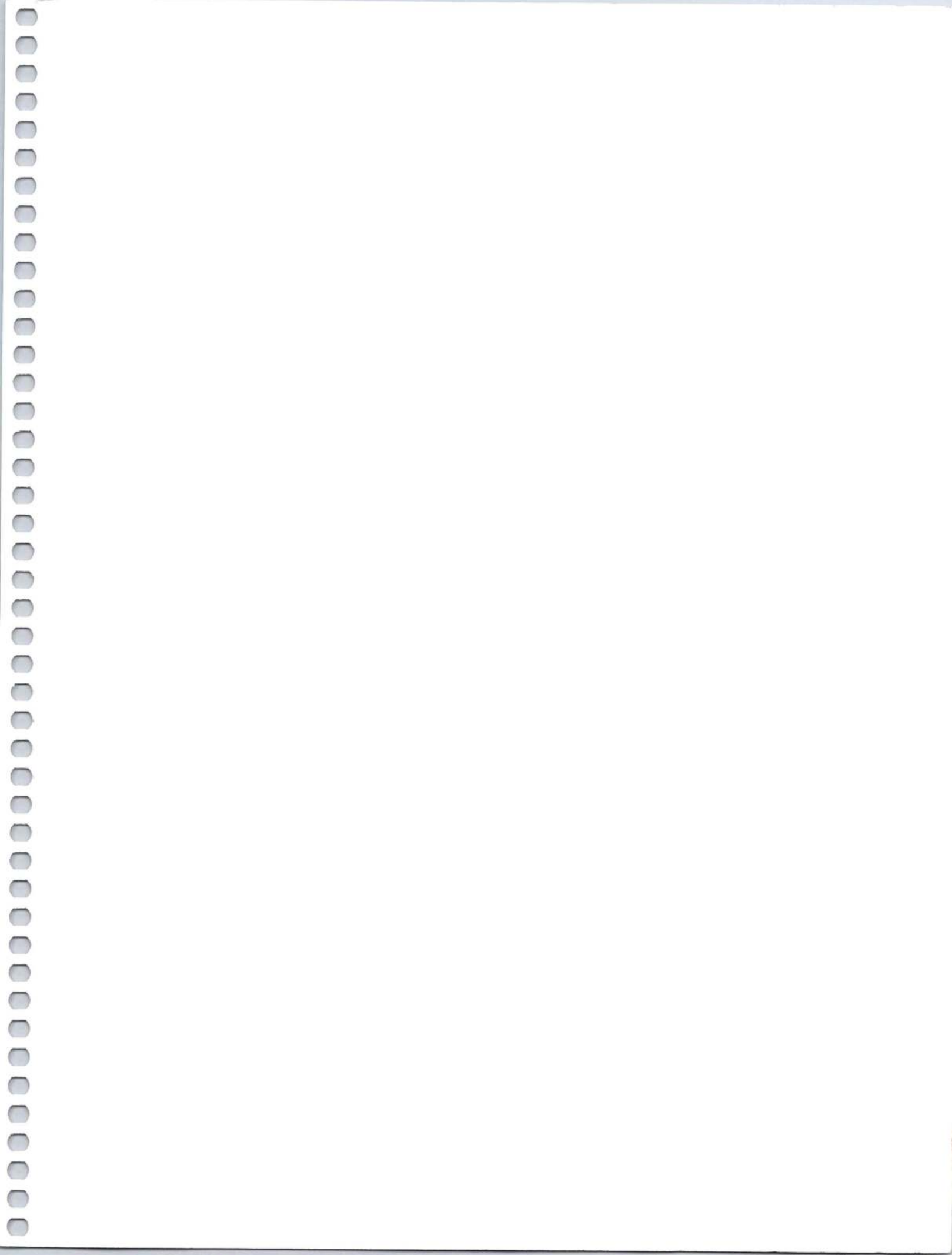
LIMITATIONS

This Emission Control System Warranty shall not cover any of the following:

- (a) Repair or replacement required because of misuse or neglect, improper maintenance, repairs improperly performed or replacements not conforming to KUBOTA specifications that adversely affect performance and/or durability, and alteration or modifications not recommended or approved in writing by KUBOTA.
- (b) Replacement of parts and other services and adjustments necessary for required maintenance at and after the first scheduled replacement point.

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WARNING: Cancer and Reproductive Harm.

For more information go to www.P65Warnings.ca.gov.



WARNING: Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.