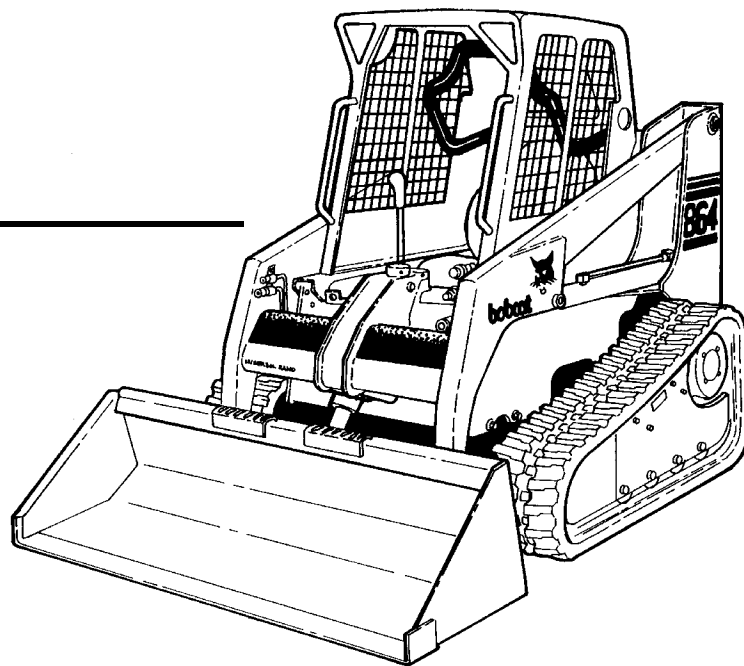


Bobcat® Operation & Maintenance Manual

S/N 518911001 thru 14999

S/N 516811001 thru 14999

S/N 517511001 thru 14999



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

6900953 (12-06) Revised (6-12) (4)



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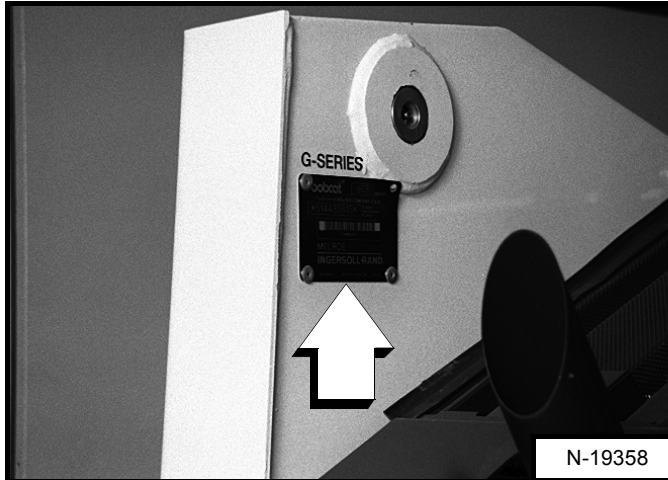
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SERIAL NUMBER LOCATIONS

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

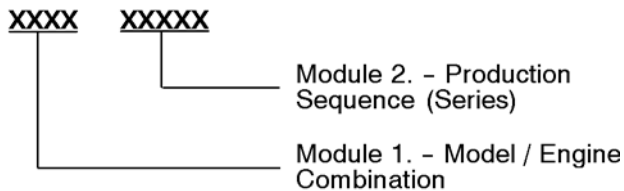
Loader Serial Number

Figure 1



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

Explanation of loader Serial Number:



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

Engine Serial Number

Figure 2

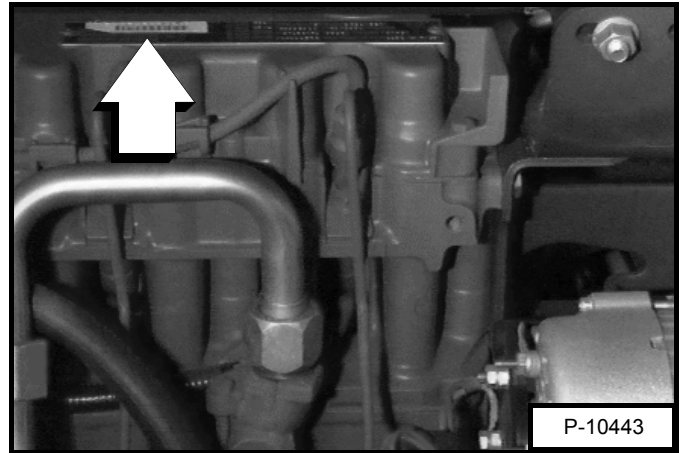
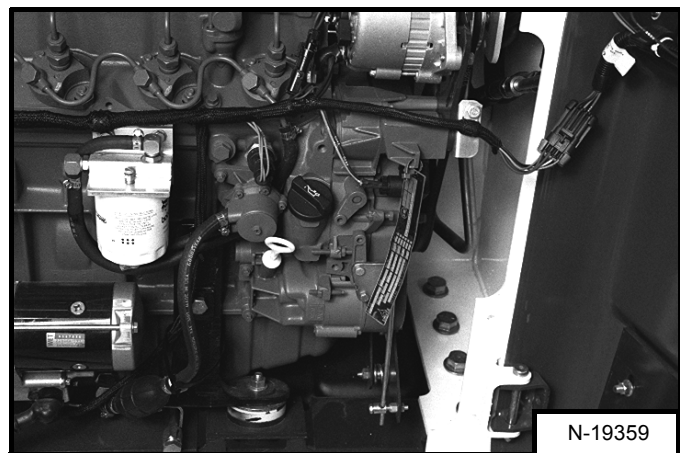


Figure 3



The engine serial number is located on the valve cover at the right side of the engine [Figure 2]. There is also an extra S/N tag attached to the engine [Figure 3].

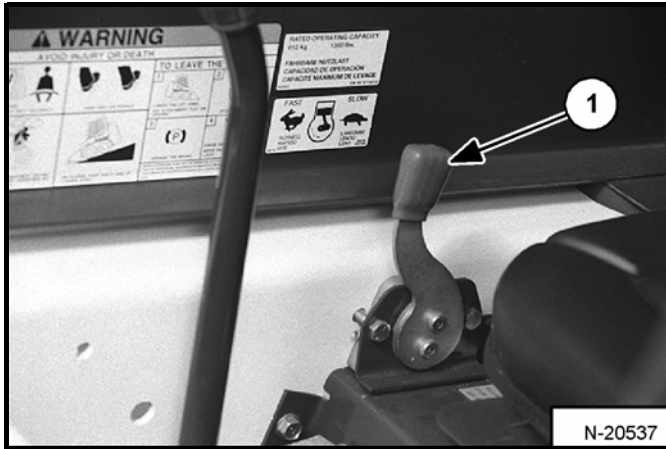
DELIVERY REPORT

Figure 4

The Delivery Report must be filled out by the dealer and signed by the owner or operator when the Bobcat Loader is delivered. An explanation of the form must be given to the owner. Make sure it is filled out completely [Figure 4].

ENGINE SPEED CONTROL

Figure OI-12

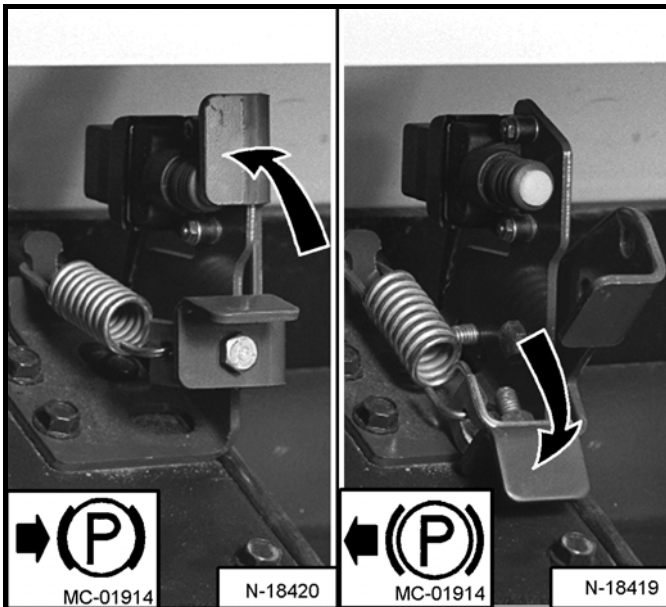


The speed control lever is at the right side of the operator's seat (Item 1) [Figure OI-12].

Move the lever forward to increase engine speed. Move backward to decrease engine speed.

PARKING BRAKE (EARLY MODELS)

Figure OI-13

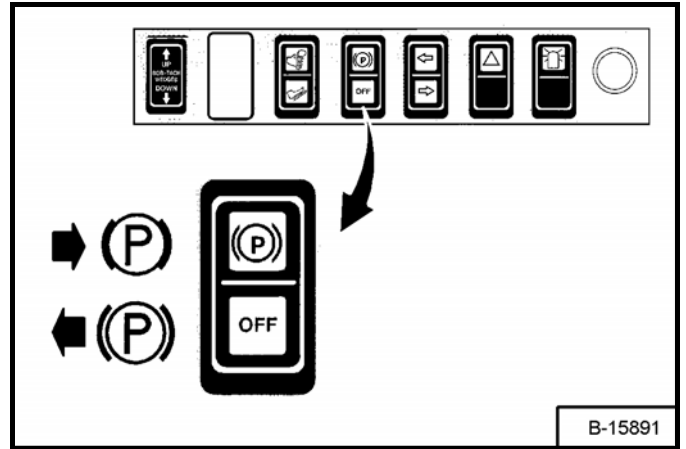


Push on the top of the pedal [Figure OI-13] to engage the parking brake. The traction drive system will be locked.

Push on the bottom of the pedal [Figure OI-13] to release the parking brake. The traction drive system will be unlocked.*

PARKING BRAKE (LATER MODELS)

Figure OI-14



Press the top of the switch [Figure OI-14] to engage the parking brake. The traction drive system will be locked.

Press the bottom of the switch [Figure OI-14] to disengage the parking brake. The traction drive system will be unlocked.

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

DAILY INSPECTION

Figure OI-36

WARNING

AVOID INJURY OR DEATH

- Keep door 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.

SERVICE SCHEDULE

EVERY 45 HOURS BEFORE STARTING THE LOADER

- ENGINE OIL** - Check level and add as needed. Do not overfill.
- ENGINE AIR FILTER** - Check gauge and/or display. Service only when required.
- ENGINE AIR SYSTEM** - Check for leaks and damaged components.
- ENGINE COOLANT SYSTEM** - Clean debris from of cooler and grille. 500's & 700's - Check coolant level and add 50% propylene glycol premixed with 47% water as needed.
- FUEL FILTER** - Remove trapped water.
- LOADER LIFT ARM, LIFT LINKS, CYLINDERS, BOBTACH PIVOT AND WEDGES** - Lubricate with multipurpose lithium based grease.
- SEAT BELT, SEAT BAR AND CONTROL INTERLOCKS** - Check function. Repair or replace as needed. Clean dirt and debris from mounting parts.
- BICS™** - Check for function. Clean dirt, debris and objects from under and/or behind the operator seat as required.
- TIRES** - Check air pressure. Inflate tires to **MAXIMUM** pressure shown on the tire sidewall. Except 864.
- GENERAL** - Check for loose or broken parts, damaged operator cab, instrument operation, loose wheel nuts, oil leaks, damaged or missing safety signs. Repair or replace as needed.

EVERY 20 HOURS

- HYDRAULIC FLUID, HOSES AND TUBELINES** - Check the fluid level. Check for damage and for leaks. Repair or replace as needed.
- FINAL DRIVE TRANSMISSION (CHAINCASE)** - Check the fluid level. Except 864.
- HYDRAULIC CONTROLS, PEDALS OR HANDS AND STEERING** - Check operation. Adjust as needed.
- WHEEL NUTS/SPROCKET** - Check for loose wheel nuts and tighten per Operation and Maintenance Manual.
- TRACK TENSION** - 864 Only. Check, adjust if needed.

EVERY 100 HOURS

- SPARK ARRESTOR/MUFFLER** - 500's and 700's only. Empty spark chamber, connections and electrode level. Add distilled water as needed.
- BATTERY** - Check battery for damage, hold down, cables, connections and electrolyte level.
- STEERING LEVER PIVOTS** - Lubricate with multipurpose lithium based grease. (3 places)
- ENGINE/HYD. DRIVE BELT** - 700's. Check for wear and damage. Adjust or replace as needed.

EVERY 250 HOURS (OR EVERY 12 MONTHS)

- Check replacement drive belts after 50 hours of operation and adjust if needed.
- DRIVE LINE** - 800's only. Lubricate U-joint.
- PAWL DRIVE GEARBOX** - Check fluid level.
- HYDRAULIC RESERVOIR** - Replace fluid.
- FINAL DRIVE TRANSMISSION (CHAINCASE)** - Replace fluid. Except 864.
- ROLLER, IDLER ASSEMBLIES** - 864 Only. Replace fluid.

EVERY 500 HOURS (OR EVERY 12 MONTHS)

- Replace rearview breather cap.
- HYDRAULIC RESERVOIR** - Replace fluid.
- FINAL DRIVE TRANSMISSION (CHAINCASE)** - Replace fluid. Except 864.
- ROLLER, IDLER ASSEMBLIES** - 864 Only. Replace fluid.

* See Operation & Maintenance Manual for more information and instructions. * Voir le Manuel de l'opérateur et des instructions pour d'autres renseignements.

SERVICE PARTS CHART

U.S. No.	Symbol	Description	553		700's		800's		864	
			Part Number	Replacement AS REQ.	Part Number	Replacement AS REQ.	Part Number	Replacement AS REQ.	Part Number	Replacement AS REQ.
1	Oil	Engine Oil	666547	AS REQ.	663496	AS REQ.	666575	AS REQ.	666575	AS REQ.
2	Air Filter	Engine Air Filter	666548	AS REQ.	663497	AS REQ.	666576	AS REQ.	666576	AS REQ.
3	Hydraulic Fluid	Hydraulic Fluid	666124	500*	666124	500*	666124	500*	666124	500*
4	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
5	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
6	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
7	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
8	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
9	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
10	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
11	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
12	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
13	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
14	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
15	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
16	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
17	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
18	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
19	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*
20	Final Drive	Final Drive Gearbox Oil	666124	500*	666124	500*	666124	500*	666124	500*

* Do not use compressed air to clean elements. * See Your Local Bobcat Dealer * See Operation & Maintenance Manual For More Information * Filter element must be replaced sooner if transmission warning indicator remains on for more than 5 minutes after hydraulic fluid is at operating temperature. * First oil change at 50 hours

6718398

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and early failures. The Service Schedule [Figure OI-36] is a guide for correct maintenance of the Bobcat Loader. It is located inside the rear door of the loader and also in the MACHINE SIGN TRANSLATION Section.

Daily Inspection and Maintenance

- Engine Oil Level
- Hydraulic/Hydrostatic Fluid Level
- Engine Air Filter, Check Air System for Damage or Leaks
- Engine Coolant System, Check System for Damage or Leaks
- Operator Cab and Cab Mounting Hardware
- Seat Belt
- Seat Bar and Control Interlocks
- Grease Pivot Pins (Lift Arms, Bob-Tach, Cylinders, Bob-Tach Wedges)
- Tires, Check for Wear, Damage, Correct Air Pressure
- Fuel Filter, Remove Trapped Water
- Loose or Broken Parts, Repair or replace as necessary
- Safety Treads and Safety Signs (Decals), Replace as necessary
- Lift Arm Support Device. Replace if damaged
- Bobcat Interlock Control System (BICS)

WARNING

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

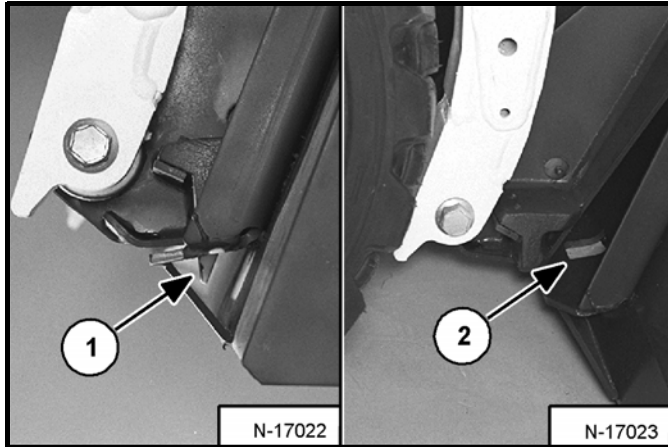
W-2001-0502

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.

ATTACHMENTS AND BUCKETS (CONT'D)

Hand Lever Bob-Tach (Cont'd)

Figure OI-58



The wedges (Item 1) [Figure OI-58] must extend through the holes (Item 2) [Figure OI-58] 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 The Bucket Or Attachment

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

- If the attachment is hydraulically controlled (combination bucket, backhoe, etc.), stop the engine and relieve hydraulic pressure in the auxiliary circuit (See Releasing Hydraulic Pressure (Loader and Attachment) on Page OI-14.)

Raise the seat bar, unfasten the seat belt, set the parking brake and exit the loader.

WARNING

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

W-2054-1285

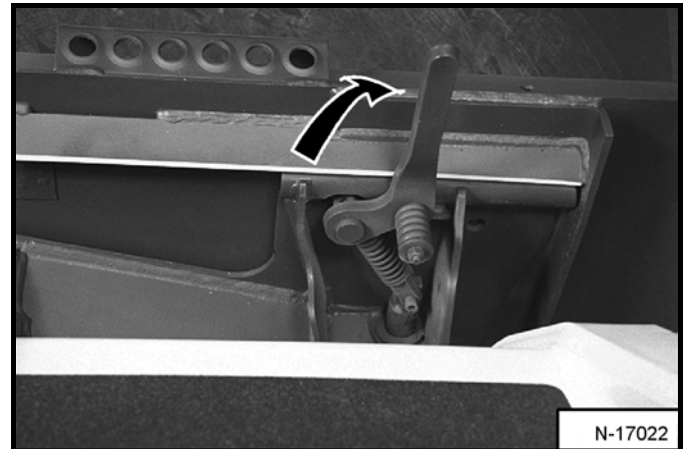
WARNING

Before you leave the operator's seat:

- Lower the lift arms, put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise seat bar.
- (Foot Pedal Controls) Move pedals until both lock.
- (Advanced Hand Controls) Move the hand controls to the **NEUTRAL POSITION** to make sure that both lift and tilt functions are deactivated. The seat bar system must deactivate the lift and tilt control functions when the seat bar is up. Service the system if hand controls do not deactivate.

W-2327-0798

Figure OI-59



Pull the Bob-Tach levers [Figure OI-59] all the way up.

Enter the loader.

Perform the **PRE-STARTING PROCEDURE**. (See **PRE-STARTING PROCEDURE** on Page OI-20.)

Start the engine.

Release the parking brake.

Be sure the lift arms are all the way down. Tilt the Bob-Tach forward.

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TOWING THE LOADER

⚠ 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

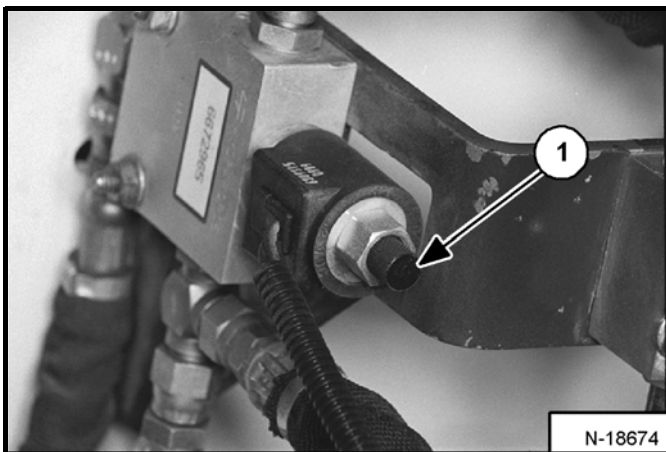
Tow the loader only a short distance at slow speed. (Example: Moving the loader onto a transport vehicle).

The towing chain (or cable) must be rated at 1 & 1/2 times the weight of the loader. (See 864/864H COMPACT TRACK LOADER SPECIFICATIONS on Page SPEC-3.)

The hydraulic brakes must be disengaged to allow towing of the loader.

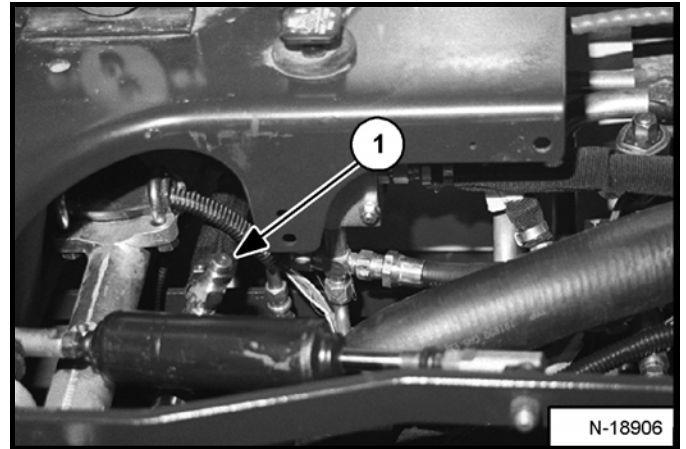
- Raise the cab. (See Raising The Operator Cab on Page PM-10.)

Figure OI-83



- Disengage the parking brake solenoid valve by pushing IN on the red Traction Lock By-Pass Knob (Item 1) [Figure OI-83] and turning it 1/4 TURN counterclockwise. The knob will come out to release the solenoid valve.

Figure OI-84

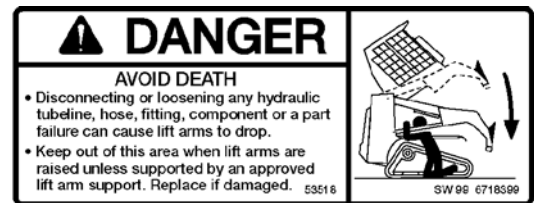


- Connect a Port-a-Power to the quick coupler located near the brake block (Item 1) [Figure OI-84].

- Operate the Port-a-Power to 400 PSI (2758 kPa) to release the brake.

- Lower the cab and tow the loader.

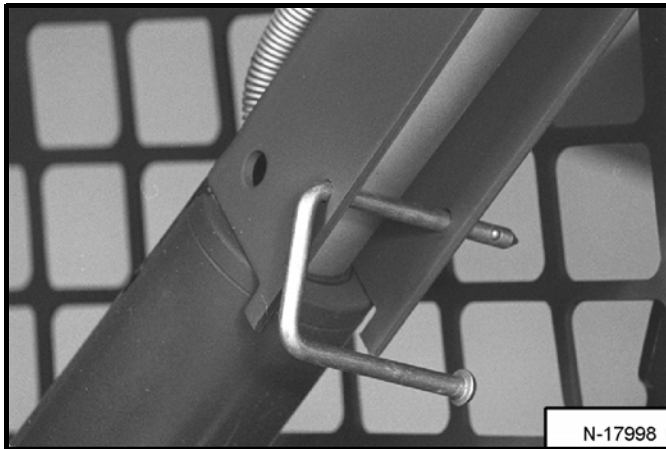
- Before operating the loader again, disconnect the Port-a-Power and engage the parking brake solenoid valve, by pushing IN on the red Traction Lock By-Pass Knob (Item 1) [Figure OI-83] and turning it 1/4 TURN clockwise.



LIFT ARM SUPPORT DEVICE (CONT'D)

Engaging The Lift Arm Support Device (Cont'd)

Figure PM-4

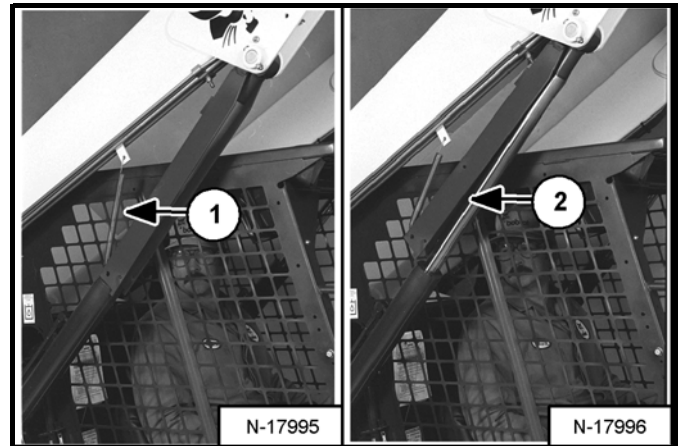


Install pin (Item 1) [Figure PM-4] into the rear of the lift arm support device below the cylinder rod.

Disengaging The Lift Arm Support Device

Remove the pin from the lift arm support device.

Figure PM-5



Connect the spring (Item 1) [Figure PM-5] from the lift arm support device to the bracket below the lift arms.

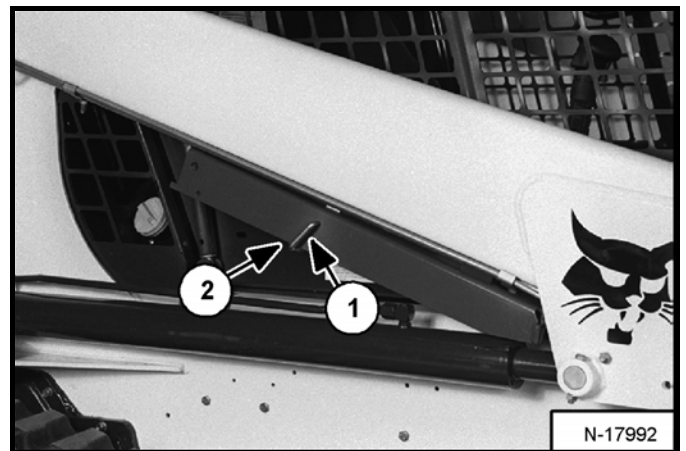
With the operator in the seat, seat belt fastened and seat bar lowered, start the engine.

Raise the lift arms a small amount. The spring will lift the support device off the lift cylinder rod (Item 2) [Figure PM-5]. Lower the lift arms. Stop the engine.

Raise the seat bar and move pedals (if equipped) until both pedals lock.

Disconnect the spring from the bracket.

Figure PM-6

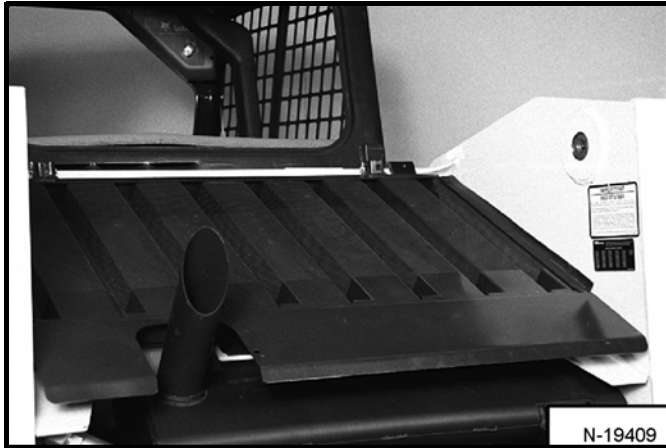


Raise the support device into storage position and insert pin (Item 1) [Figure PM-6] through lift arm support device and bracket.

Connect spring to pin (Item 2) [Figure PM-6].

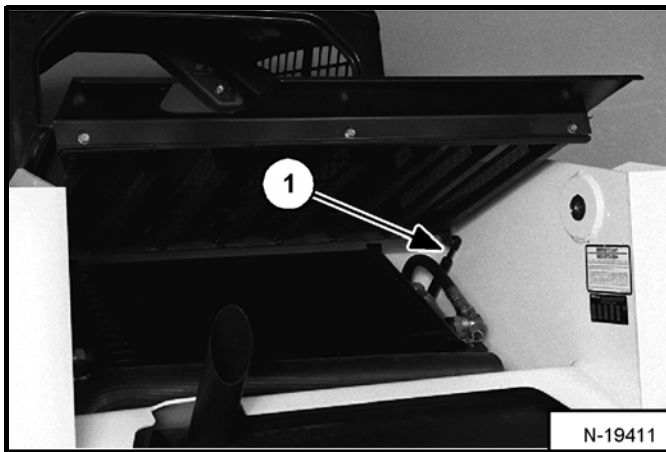
REAR GRILL

Figure PM-26



Open the rear door [Figure PM-26].

Figure PM-27

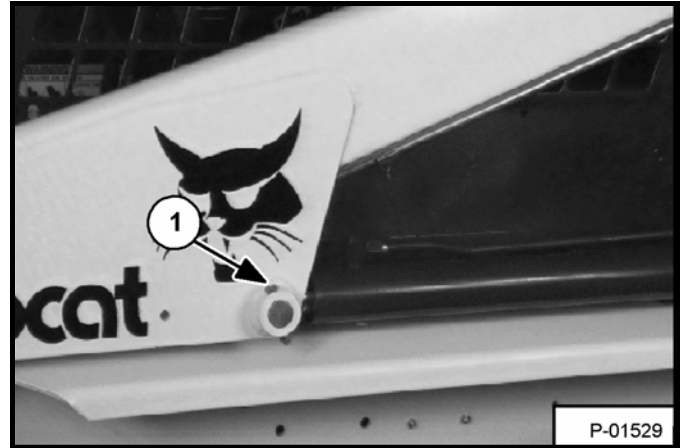


Raise the rear grill [Figure PM-27].

The rear grill is held open by a cylinder (Item 1) [Figure PM-27].

PIVOT PINS

Figure PM-28



All lift arm and cylinder pivots have a large pin held in position with a retainer bolt and lock nut (Item 1) [Figure PM-28].

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

ELECTRICAL SYSTEM (CONT'D)

Using A Booster Battery (Jump Starting) (Cont'd)

After the engine has started, remove the ground (-) cable (Item 4) [Figure PM-51] first.

Remove the cable from the positive terminal (Item 2) [Figure PM-51].

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

Removing And Installing The Battery

! WARNING

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

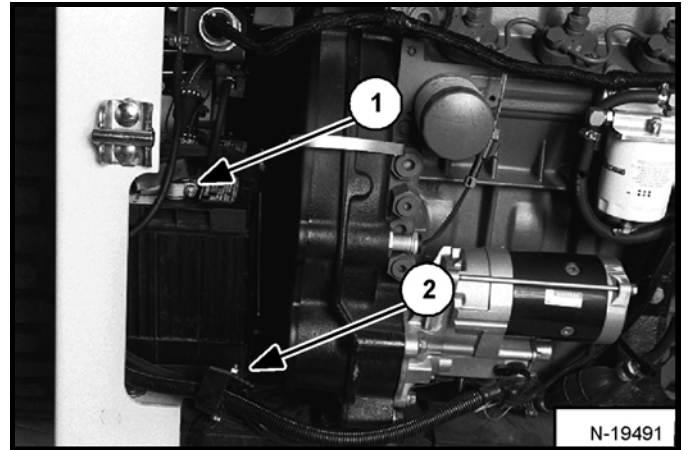
In case of acid contact, wash immediately with water. In case of eye contact get prompt medical attention and wash eye with clean, cool water for at least 15 minutes.

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

W-2065-1296

Open the rear door.

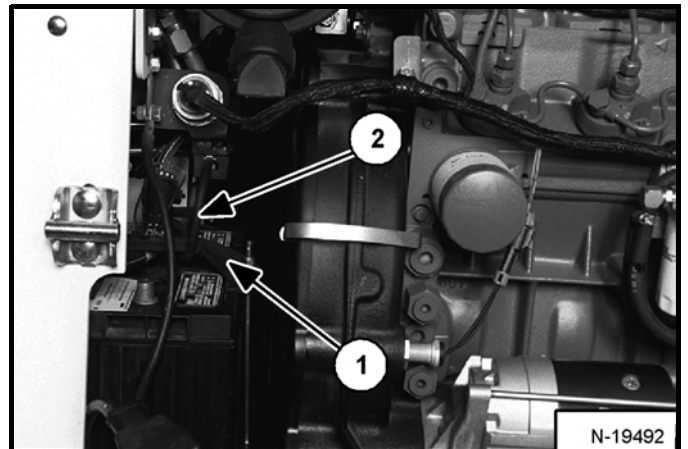
Figure PM-52



Disconnect the negative (-) cable (Item 1) [Figure PM-52].

Disconnect the main frame ground bolt and cable clamp (Item 2) [Figure PM-52].

Figure PM-53



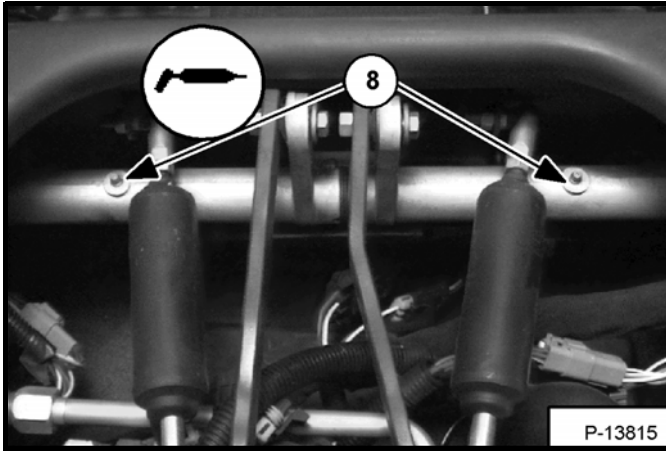
Remove the battery hold down clamp (Item 1) [Figure PM-53].

Disconnect the positive (+) cable (Item 2) [Figure PM-53] from the battery.

Remove the battery from the loader.

LUBRICATION OF THE BOBCAT LOADER (CONT'D)

Figure PM-79

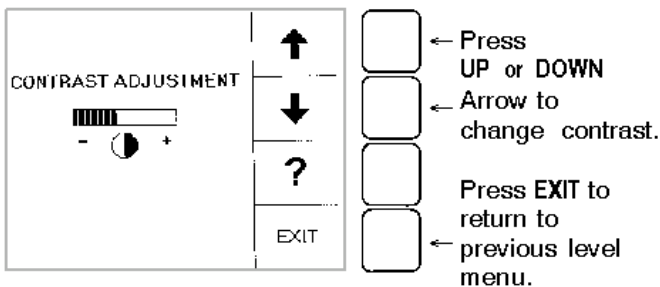
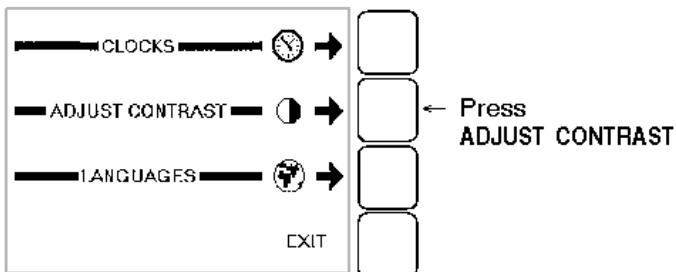
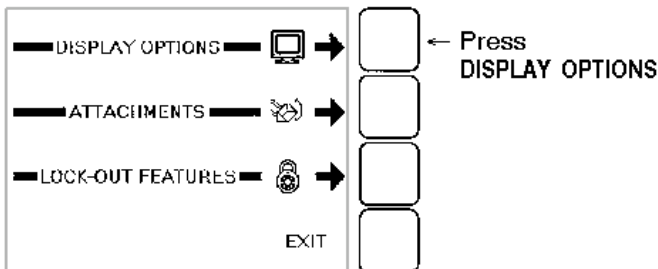
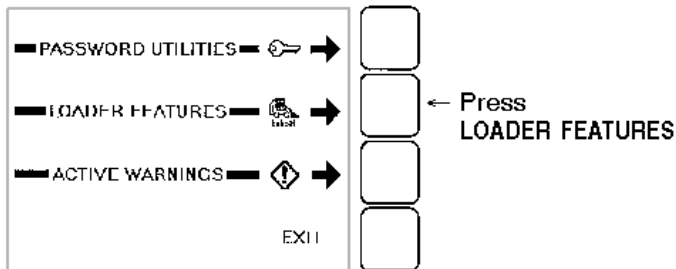
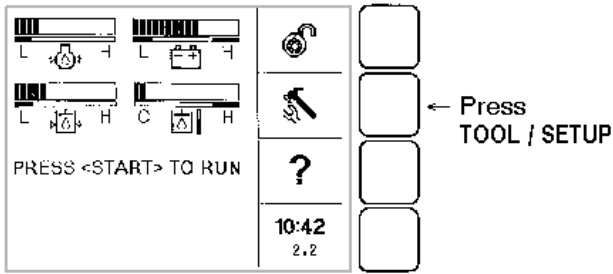


8. 250 hours: steering lever shaft (2) [Figure PM-79].

DELUXE INSTRUMENTATION PANEL SETUP (CONT'D)

Deluxe Panel Setup

Display Options



ADJUST CONTRAST SHORTCUT: Press either the left or right arrow keys to adjust the contrast lighter or darker.

All new machines with Deluxe Instrumentation arrive at Bobcat Dealerships with the panel in locked mode. This means that a password must be used to start the engine.

Passwords

For security purposes, your dealer may change the password and also set it in the locked mode. Your dealer will provide you with the password.

Master Password: A permanent, randomly selected password set at the factory. Allows full use of the loader and to setup the Deluxe Panel.

Owner Password: Allows for full use of the loader and to setup the Deluxe Panel. Owner can select a password to allow starting & operating the loader and modify the setup of the Deluxe Panel. Owner should change the password as soon as possible for security of the loader.

User Password: Allows starting and operating the loader; cannot change password or any of the other setup features.

DANGER (6718392)

	⚠ DANGER
	<p>AVOID DEATH</p> <ul style="list-style-type: none"> Attachment can be forced against the ground and cause front frame to raise. Never go under or reach under lift arms or lift cylinder without an approved lift arm support device installed. <p>62702 6718392D enUS</p>

	⚠ PELIGRO
	<p>EVITE ACCIDENTES FATALES</p> <ul style="list-style-type: none"> El implemento se puede forzar contra el suelo y así, elevar el marco delantero. Jamás se meta debajo o alcance algo debajo de los brazos de elevación o el cilindro de elevación sin tener un dispositivo de soporte aprobado instalado. <p>SW 01 6718392 AR</p>

	⚠ DANGER
	<p>EVITER LA MORT</p> <ul style="list-style-type: none"> L'ACCESSOIRE PEUT ETRE APPUYE CONTRE LE SOL ET SOULEVER LES ROUES AVANT. NE JAMAIS ALLER SOUS NI METTRE LES MAINS SOUS LES BRAS OU LE VERIN DE LEVAGE SANS QU'UN ARRET DE BRAS DE LEVAGE APPROUVE SOIT INSTALLE. <p>VM-99-6718392-FR</p>


DANGER (6718393)

⚠ DANGER	
<p>AVOID DEATH</p> <ul style="list-style-type: none"> Keep out of this area when lift arms are raised unless supported by an approved lift arm support device. Moving lift arm control or failure of a part can cause lift arms to drop. <p>62702 6718393D enUS</p>	


⚠ PELIGRO	
<p>EVITE ACCIDENTES FATALES</p> <ul style="list-style-type: none"> Manténgase fuera de esta área cuando los brazos de elevación están arriba, a menos que estén apoyados en un soporte aprobado. Mover el control del brazo de elevación o la falla de una parte puede causar la caída de los brazos de elevación. <p>SW 01 6718393 AR</p>	

⚠ DANGER	
<p>EVITER LA MORT</p> <ul style="list-style-type: none"> EVITEZ CETTE ZONE LORSQUE LES BRAS DE LEVAGE RELEVÉS NE SONT PAS ASSURÉS PAR DES ARRETS DE BRAS DE LEVAGE. UNE PEDALE ACTIONNÉE OU UNE PIÈCE DÉFECTUEUSE PEUT PROVOQUER L'ABAISSÉMENT DES BRAS DE LEVAGE. <p>VM-00-6718393-FR</p>	


DANGER (6717343)

⚠ DANGER	
<p>AVOID DEATH</p> <ul style="list-style-type: none"> Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop. Keep out of this area when lift arms are raised unless supported by an approved lift arm support. Replace if damaged. <p>57051 SW 02 6717343</p>	


⚠ PELIGRO	
<p>EVITE LA MUERTE</p> <ul style="list-style-type: none"> La desconexión o el aflojamiento de cualquier tubería, manguera, conector, componente hidráulico o la falla de una parte puede ocasionar la caída de los brazos de elevación. Manténgase alejado del área cuando los brazos de elevación se encuentren elevados, a menos que estén sostenidos por medio de un soporte para brazos de elevación aprobado. Cámbielo si está dañado. <p>53145 SW 01 6717343 AR</p>	

⚠ DANGER	
<p>EVITER LA MORT</p> <ul style="list-style-type: none"> Le desserrement ou le débranchement d'une conduite hydraulique, d'un flexible, d'un raccord ainsi qu'un composant ou une pièce défectueux peuvent provoquer la chute des bras de levage. Ecartez-vous de cette zone si les bras de levage relevés ne sont pas soutenus par un arrêt de bras de levage approuvé. <p>53145 DV-99-6717343-FR</p>	

WARNING (6804114)

⚠ WARNING	
<p>HIGH PRESSURE GREASE CAN CAUSE SERIOUS INJURY</p> <ul style="list-style-type: none"> Do not loosen grease fitting. Do not loosen bleed fitting more than 1-1/2 turns. <p>39894 SW 98 6804114</p>	

⚠ ADVERTENCIA	
<p>LA GRASA A ALTA PRESIÓN PUEDE CAUSAR LESIONES GRAVES</p> <ul style="list-style-type: none"> No afloje la grasera. No afloje el drenaje de la grasera en más de 1-1/2 vueltas. <p>39894 SW 01 6804114 AR</p>	

⚠ AVERTISSEMENT	
<p>LA GRAISSE SOUS HAUTE PRESSION PEUT CAUSER DES BLESSURES GRAVES</p> <ul style="list-style-type: none"> Ne desserrez pas le graisseur. Ne desserrez pas le purgeur de plus de 1-1/2 tour. <p>39894 DV-99-6804114-FR</p>	

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