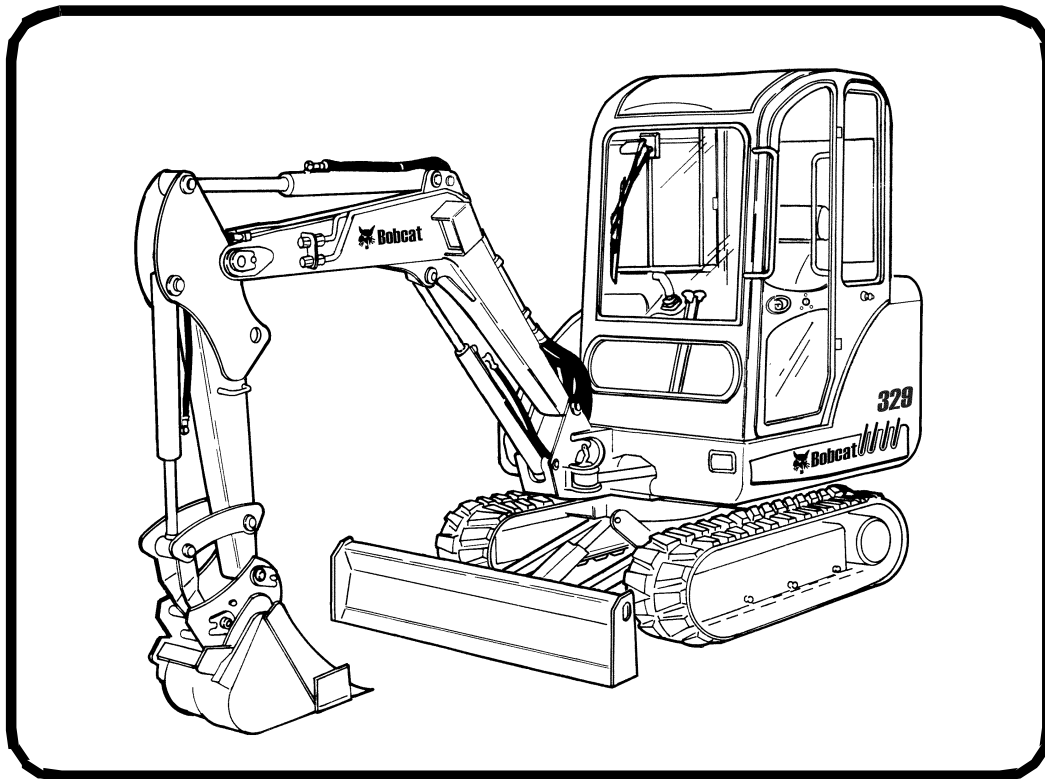




Bobcat®

Operation & Maintenance Manual 329 Compact Excavator

S/N A2PG11001 & Above



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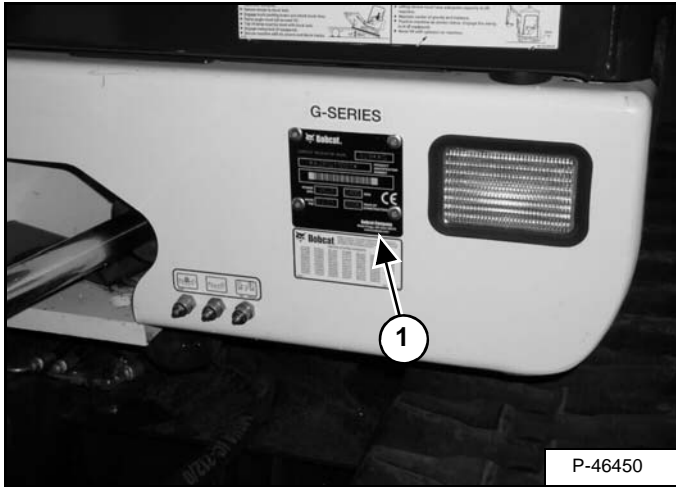
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SERIAL NUMBER LOCATIONS

Always use the serial number of the excavator 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.

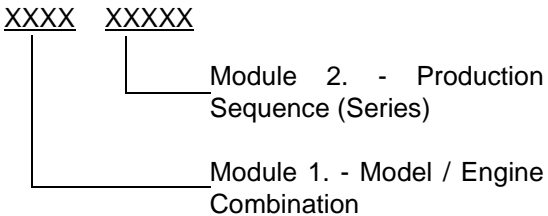
Excavator Serial Number

Figure 1



The excavator serial number plate (Item 1) [Figure 1] is located on the front right hand corner of the frame.

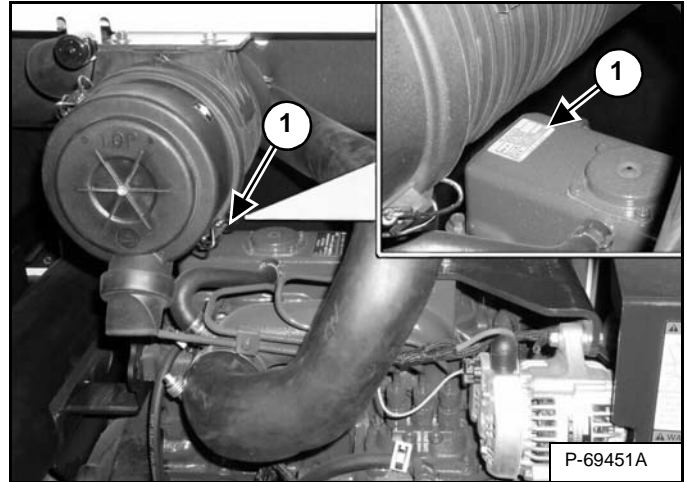
Explanation of Excavator Serial Number:



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 excavator is produced.

Engine Serial Number

Figure 2



The engine serial number (Item 1) [Figure 2] is located on the top cover.

DELIVERY REPORT

Figure 3

The delivery report must be filled out by the dealer and signed by the owner or operator when the Bobcat Excavator is delivered. An explanation of the form must be given to the owner. Make sure it is filled out completely [Figure 3].

MACHINE SIGNS (DECALS)

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

6808481
JOYSTICK CONTROL PATTERN SELECTOR LEVER
CONTROL PATTERN A (STD) CONTROL PATTERN B (ISO)
6815957
6809713 (Early Models)
7126509 (Later Models)

6815945
RIGHT CONSOLE AREA
6808261

6808433
LEFT CONSOLE AREA
6808474

6903819
OPERATOR'S HANDBOOK
6808433
6808474

6808870
UNDERCARRIAGE COMPONENTS
6589129(2)

6594897
6809829

6808872(2)

6808480

6808114(2)

6533899 (2)

6808185
WARNING
Improper loading, transporting and lifting procedures can cause serious injury or death.
TRANSPORTING MACHINE
LIFTING MACHINE

INSTRUMENTS AND CONSOLES (CONT'D)

Raising And Lowering The Console

Raise the console before exiting the cab.

Figure OI-8



Pull up on the release handle [Figure OI-8]. The lift spring will assist in raising the console.

Lower the console before operating the excavator.

Push down on the console [Figure OI-8] until the latch is engaged.

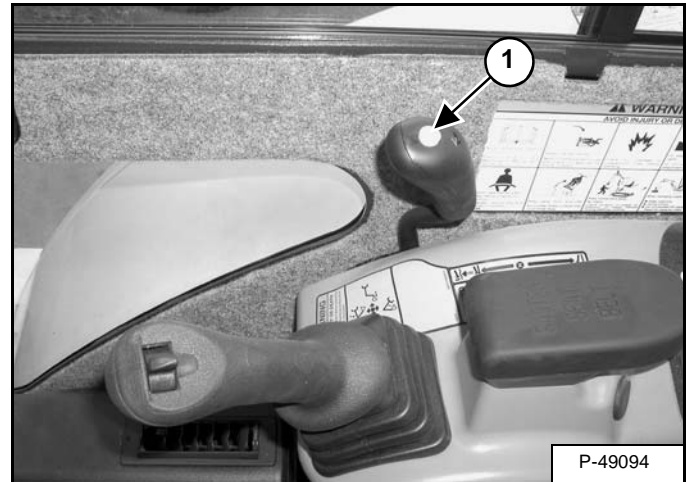
NOTE: When the console is raised, the hydraulic and traction system functions are locked and will not operate.

If the engine stops, the boom/bucket (attachments) can be lowered to the ground using hydraulic pressure in the accumulator.

The control console must be in the locked down position, and the key switch in the ON position.

Two-Speed Travel

Figure OI-9



Push the button (Item 1) [Figure OI-9] to engage the High Range.

Figure OI-10



When High Range is engaged, the two speed travel icon (Item 1) [Figure OI-10] will illuminate.

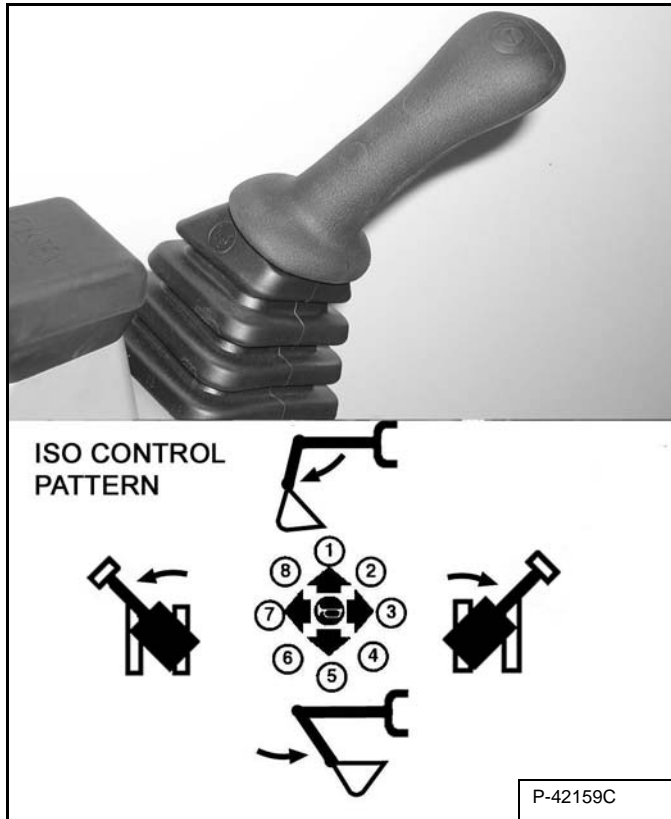
Press the button again to disengage.

HYDRAULIC CONTROLS (CONT'D)

ISO Control Pattern

Left Control Lever (Joystick)

Figure OI-35



The left lever (joystick) is used to operate the arm and slew the upperstructure [Figure OI-33].

1. Arm out.
2. Arm out and slew right.
3. Slew right.
4. Arm in and slew right.
5. Arm in.
6. Arm in and slew left.
7. Slew left.
8. Arm out and slew left.

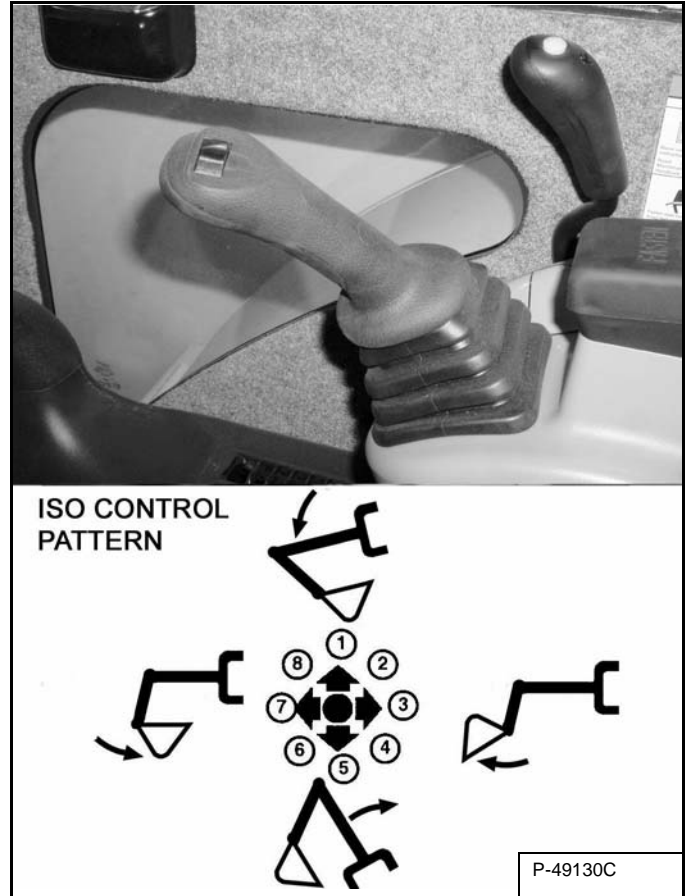
IMPORTANT

Before slewing the upperstructure, make sure the slew lock is disengaged.

I-2051-0905

Right Control Lever (Joystick)

Figure OI-36



The right lever (joystick) is used to operate the boom and bucket [Figure OI-34].

1. Boom lower.
2. Boom lower and bucket dump.
3. Bucket dump.
4. Boom raise and bucket dump.
5. Boom raise.
6. Boom raise and bucket curl.
7. Bucket curl.
8. Boom lower and bucket curl.

! WARNING

AVOID INJURY OR DEATH

Before leaving the machine:

- Lower the work equipment to the ground.
- Lower the blade to the ground.
- Stop the engine & remove the key.

W-2196-0595

STARTING THE ENGINE (CONT'D)

Keyless



AVOID INJURY OR DEATH

- Fasten seat belt, start and operate only from the operator seat.
- Never wear loose clothing when working near machine.

W-2135-1188

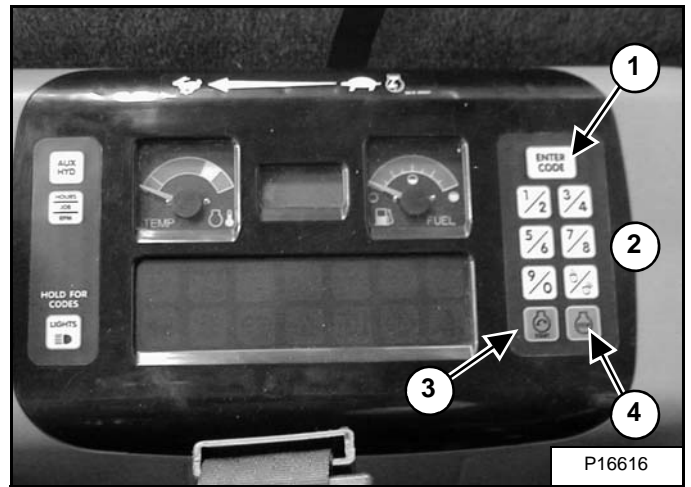
Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page OI-23.)

Figure OI-57



Move the engine speed control (Item 1) [Figure OI-57] to low idle.

Figure OI-58



Press ENTER CODE Button (Item 1) [Figure OI-58]. The display will become lighted and there will be two short beeps, CodE will appear on the LCD.

Use the keypad (Item 2) [Figure OI-58] to enter the password. For each digit that you enter, a dash will appear on the LCD. (You have 40 seconds to enter the password or the process will abort and you will need to start over.) If the password was entered correctly, there will be one long beep.

NOTE: If the password was incorrect there will be three short beeps and "Error" will appear on the LCD. Press the ENTER CODE Button again and start over. After three failed attempts, you must wait three minutes to try again.

Press the START Button (Item 3) [Figure OI-58] and hold it until the engine starts.



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

Press the STOP button (Item 4) [Figure OI-58] to stop the engine.

Stop the engine if the warning lights and alarm do not go OFF.

Check for the cause before starting the engine again.

Password Lockout Feature

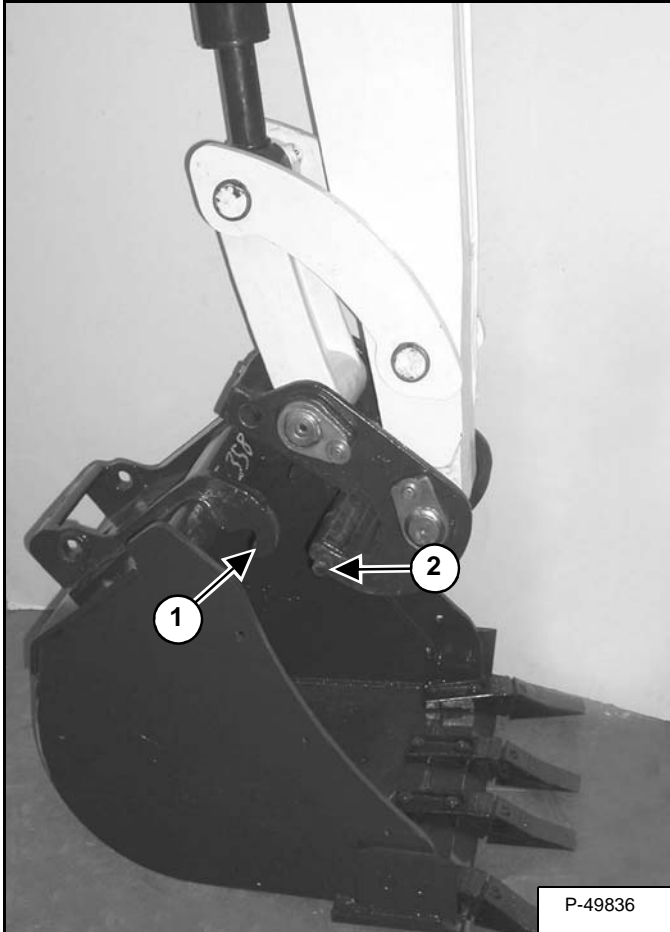
See Password Lockout Feature. (See Password Lockout Feature on Page SA-5.)

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Pin-On X-Change) (Cont'd)

Removal (Cont'd)

Figure OI-79



Fully retract the bucket cylinder and lower the boom and arm until the bucket is on the ground, and the X-Change pins (Item 1) are disengaged from the hooks (Item 2) **[Figure OI-79]**.

Move the arm toward the excavator until the X-Change pins are clear of the bucket.

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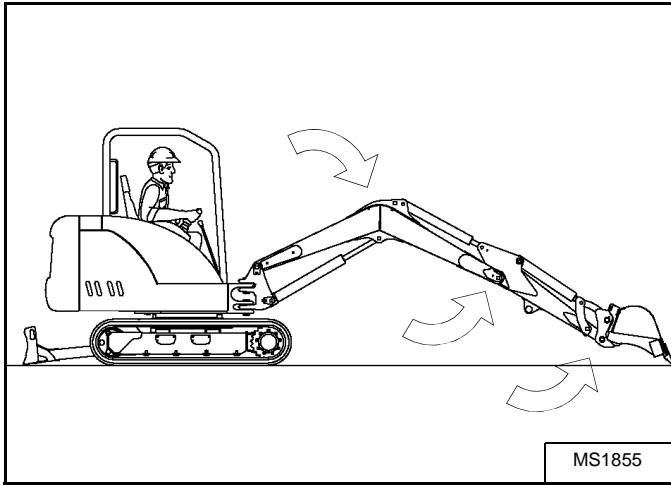
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OPERATING PROCEDURE (CONT'D)

Excavating

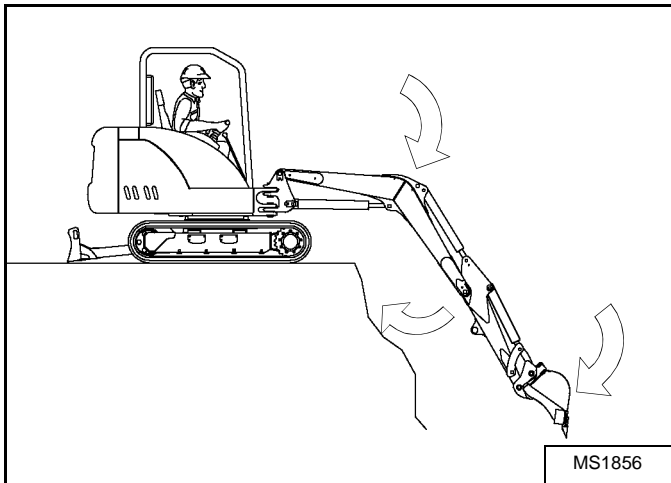
Lower the blade to provide stability.

Figure OI-98



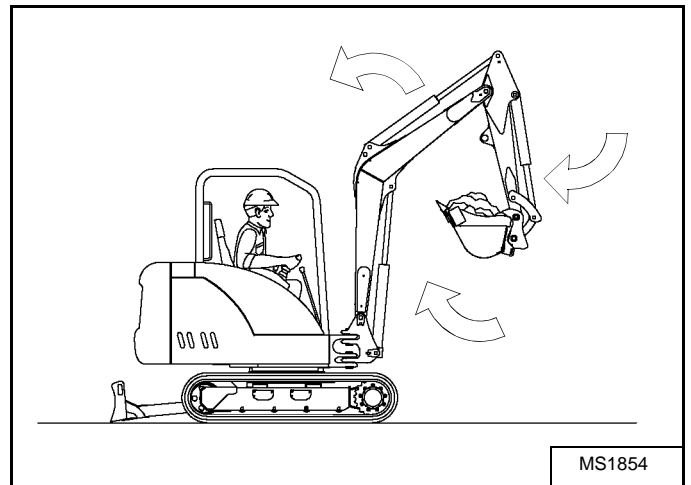
Extend the arm, lower the boom, and open the bucket [Figure OI-98].

Figure OI-99



Retract the arm, while lowering boom and curling the bucket [Figure OI-99].

Figure OI-100



Raise the boom, retract the arm and curl the bucket [Figure OI-100].

Rotate the upperstructure.

NOTE: Do not allow the bucket teeth to contact the ground when swinging the upperstructure.

WARNING

Keep all bystanders 20 feet (6 m) away from equipment when operating. Contact with moving parts, a trench cave-in or flying objects can cause injury or death.

W-2119-0788

PREVENTIVE MAINTENANCE

AIR CLEANER SERVICE	PM-13
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**PREVENTIVE
MAINTENANCE
(PM)**

Continued On Next Page

CAB FILTERS

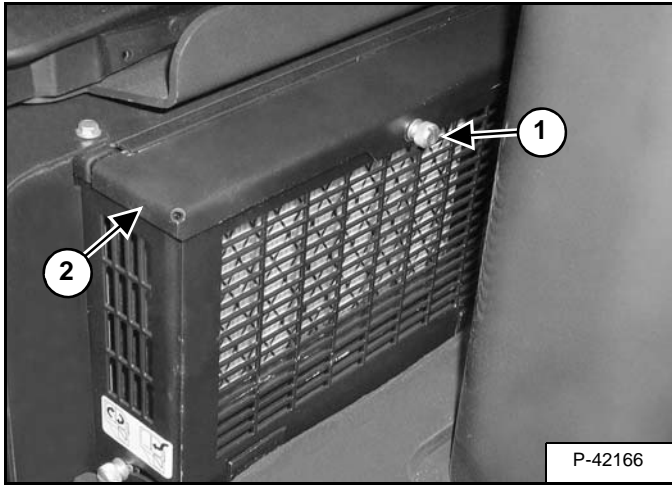
Cleaning And Maintenance

Early Models

The recirculation filter must be cleaned regularly. The filter is located at the right of the operator seat.

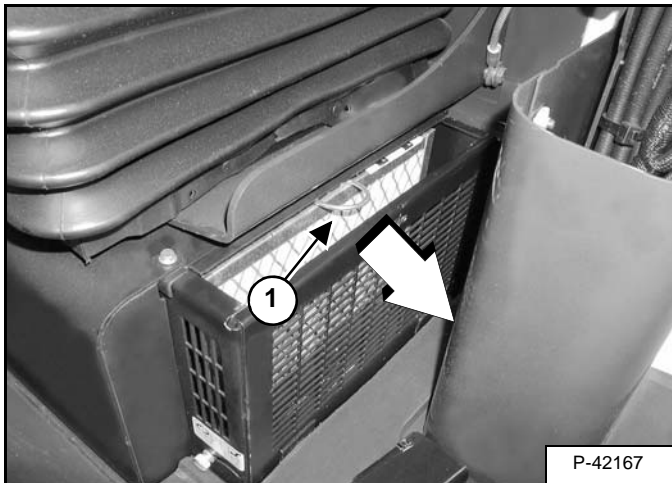
The heater filter must be cleaned regularly. The filter is located at the left of the operator seat.

Figure PM-12



Remove the screw (Item 1) and cover (Item 2) [Figure PM-12].

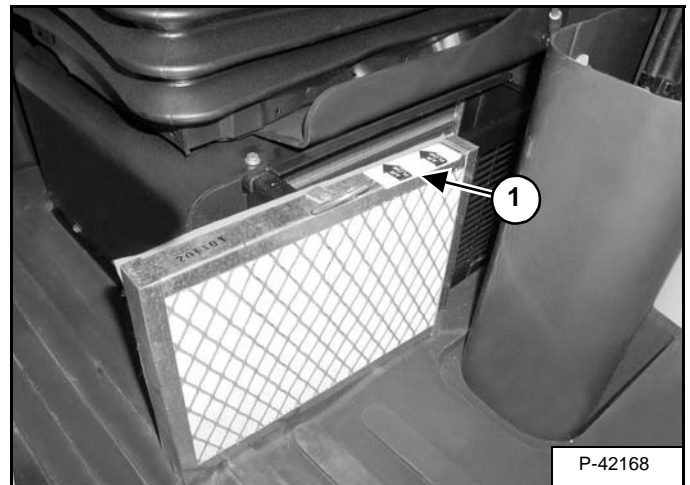
Figure PM-13



Pull the filter (Item 1) [Figure PM-13] away and out of the heater/AC housing.

Use low air pressure to clean the filter. Replace the filter when very dirty.

Figure PM-14



Installation: Install the filter with the arrows that indicate air flow direction (Item 1) [Figure PM-14] pointing towards the heater/AC housing.

The filter must be cleaned regularly.

ENGINE COOLING SYSTEM (CONT'D)

Removing And Replacing Coolant

See the SERVICE SCHEDULE for correct service intervals. (See SERVICE SCHEDULE on Page PM-5.)

Stop the engine. Open the tailgate



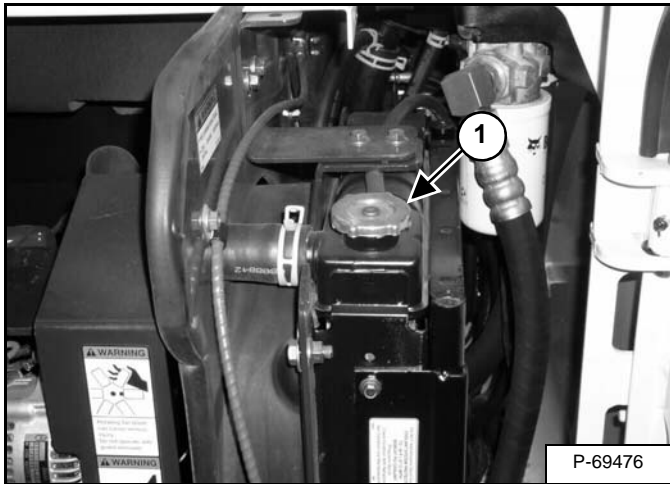
WARNING

AVOID BURNS

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

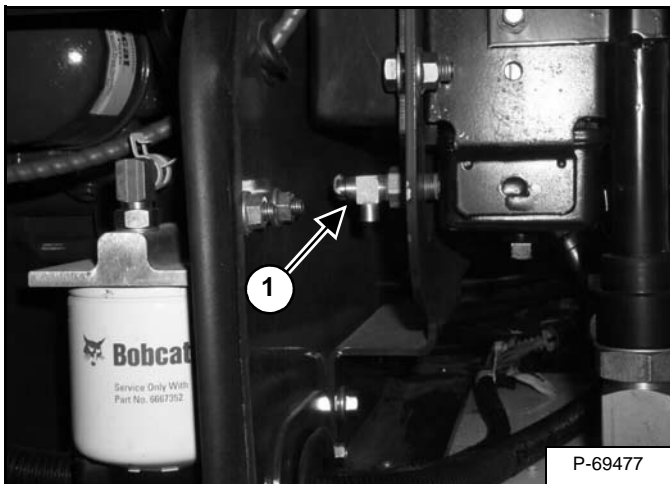
W-2070-1003

Figure PM-34



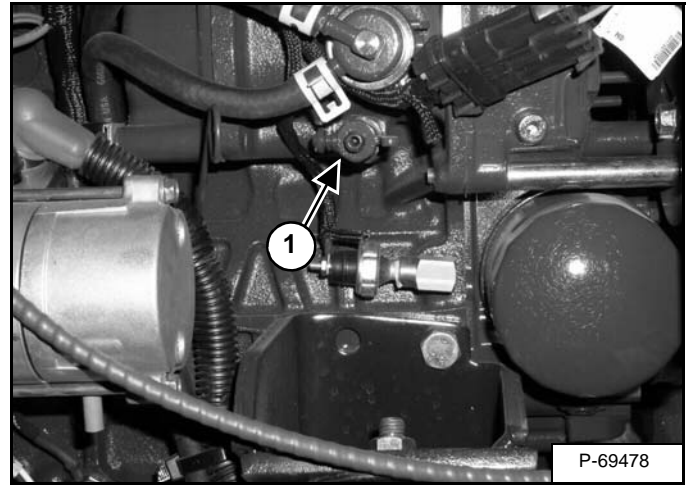
When the engine is cool, loosen and remove the radiator cap (Item 1) [Figure PM-34].

Figure PM-35



Put a hose on the drain valve at the bottom of the radiator. Open the drain valve (Item 1) [Figure PM-35] and drain the coolant into a container.

Figure PM-36



Put a hose on the drain valve on the engine block. Open the drain valve (Item 1) [Figure PM-36] and drain the coolant into a container.

After all the coolant is removed, close both drain valves.

Recycle or dispose of the used coolant in an environmentally safe manner.

Mix the coolant in a separate container. (See Capacities on Page SPEC-7.)

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

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

One gallon and one pint of propylene glycol mixed with one gallon of water is the correct mixture of coolant to provide a -34°F (-37°C) freeze protection.

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

Add premixed coolant until the level is correct.

Run the engine until it is at operating temperature. Stop the engine. Check the coolant level and add as needed. Be sure the radiator cap is tight.

Add coolant to the recovery tank as needed.

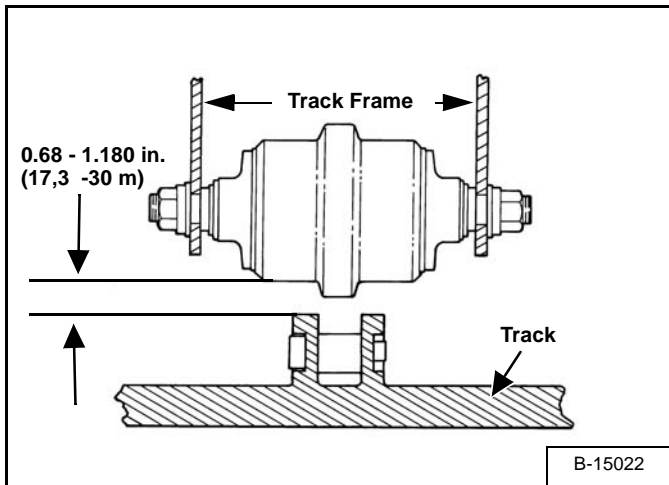
Close the tailgate.

TRACK TENSION (CONT'D)

Adjusting (Cont'd)

Steel Track Clearance

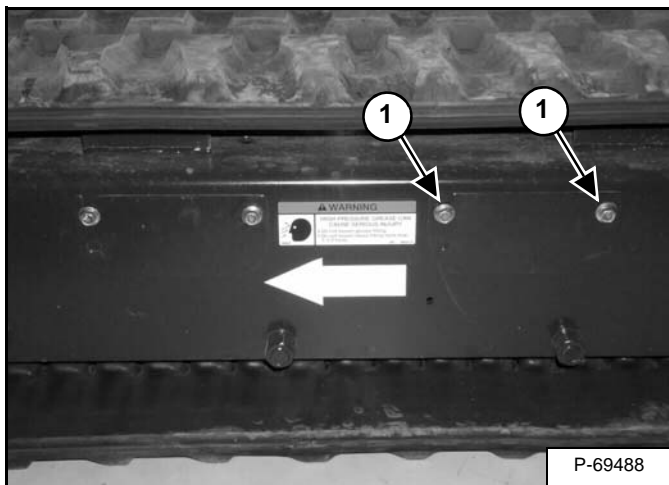
Figure PM-53



Measure the track clearance at the middle track roller. Do not get fingers into pinch points between the track and the track roller. Use a bolt or dowel of the appropriate size to check the gap between the contact edge of the roller and the top edge of the track guide [Figure PM-53].

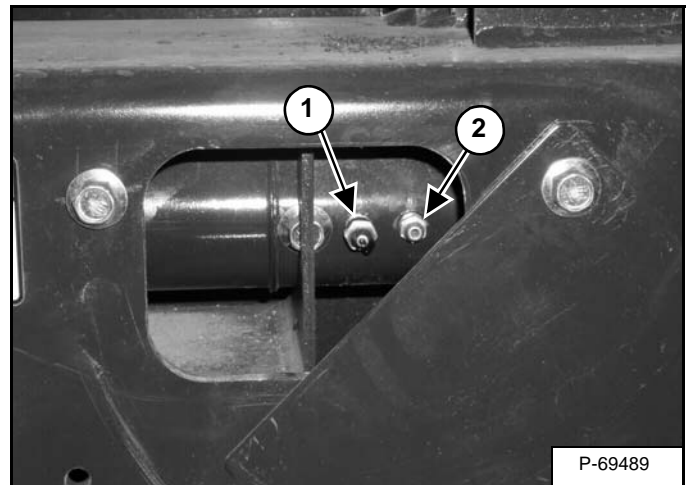
Steel Track Clearance - 0.68 - 1.18 in. (17,3 - 30 mm).

Figure PM-54



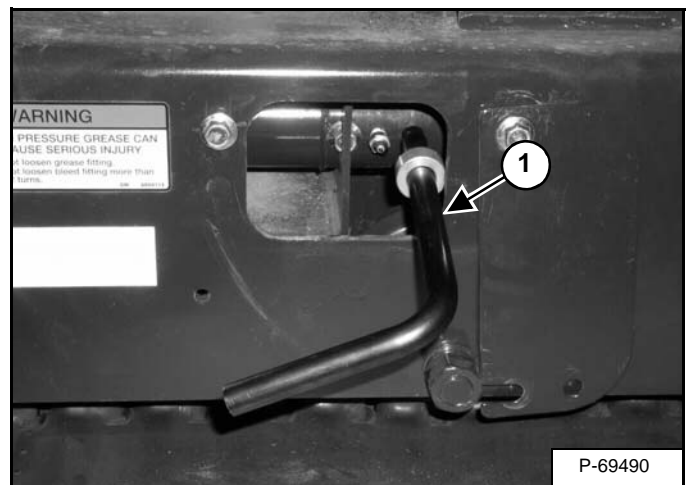
Loosen the two bolts from the cover (Item 1) [Figure PM-54]. Pivot the cover downward.

Figure PM-55



Add grease to the fitting (Item 1) [Figure PM-55] until the track tension is correct.

Figure PM-56



Use tool MEL1560 (Item 1) [Figure PM-56] to loosen the bleed fitting (Item 2) [Figure PM-55] to release tension from the track.

NOTE: Do not loosen the grease fitting (Item 1) [Figure PM-55].

Repeat the procedure for the other side.

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

6804114

SYSTEM SETUP AND ANALYSIS

DISPLAY CONTROLLER PANEL SETUP	SA-4
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Service Codes List.	SA-3

**SYSTEM SETUP
& ANALYSIS**

ATTENTION

TOUTE SURCHARGE PEUT FAIRE BASCULER LA PELLE ET PROVOQUER DES BLESSURES GRAVES, VOIRE MORTELLES

- Ne jamais lever ni porter de charges qui dépassent ces capacités au rayon et à la hauteur spécifiés.
- Le chiffre indiqué représente la charge nominale totale. Le poids des équipements de levage doit être déduit pour calculer la charge nette de levage possible.

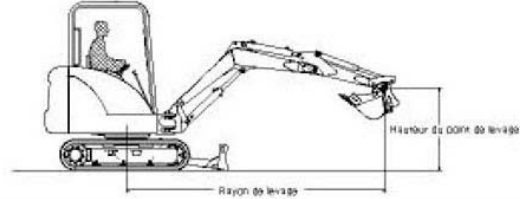


Dans la mesure du possible, les caractéristiques sont conformes aux normes ISO. Elles sont susceptibles d'être modifiées sans préavis. Le point de levage s'entend comme le point d'articulation du godet avec le vérin de godet en extension complète.

PELLE MODELE 329

PRESSIION DES CIRCUITS
 EN EFFORT 172 bar (2500 psi)
 EN MAINTIEN 230 bar (3335 psi)

LONGUEUR DE FLECHE 2400 mm (94,5 pouces)
 LONGUEUR DE BRAS 1200 mm (47,2 pouces)
 CONTREPOIDS 235 kg (517 lb)
 GODET STANDARD 609 mm (24,0 pouces)
 97,5 kg (215 lb)



HAUTEUR DU POINT DE LEVAGE	CAPACITE NOMINALE DE LEVAGE EN BOUT AVEC LAME ABAISSEE - kg (lb.)				CAPACITE NOMINALE DE LEVAGE EN BOUT AVEC LAME RELEVÉE - kg (lb.)				CAPACITE NOMINALE DE LEVAGE LATERAL AVEC LAME RELEVÉE - kg (lb.)			
	RAYON DE LEVAGE - mm (pouces)			CAPACITE DE LEVAGE AU RAYON MAXI, kg (lb) / mm (pouces)	RAYON DE LEVAGE - mm (pouces)			CAPACITE DE LEVAGE AU RAYON MAXI, kg (lb) / mm (pouces)	RAYON DE LEVAGE - mm (pouces)			CAPACITE DE LEVAGE AU RAYON MAXI, kg (lb) / mm (pouces)
	2000 (78,7)	3000 (118,1)	4000 (157,5)		2000 (78,7)	3000 (118,1)	4000 (157,5)		2000 (78,7)	3000 (118,1)	4000 (157,5)	
3000 (118,1)				*416 (918) @ 3770(148)				*381 (840) @ 3770(148)				*398 (878) @ 3770(148)
2000 (78,7)		*496 (1094)	*471 (1040)	*475 (1048) @ 4190(165)		*471 (1038)	338 (746)	320 (705) @ 4190(165)		*496 (1094)	287 (634)	277 (610) @ 4190(165)
1000 (39,4)		*758 (1670)	*559 (1232)	*538 (1186) @ 4215(166)		544 (1200)	322 (711)	293 (647) @ 4215(166)		477 (1051)	278 (613)	254 (561) @ 4215(166)
Sol	*1626 (3586)	*924 (2038)	*622 (1371)	*598 (1318) @ 4054(160)	938 (2068)	500 (1102)	318 (701)	301 (663) @ 4054(160)	793 (1749)	443 (977)	274 (604)	252 (557) @ 4054(160)
-1000 (-39,4)	*1708 (3766)	*972 (2143)		*707 (1559) @ 3639(143)	980 (2161)	502 (1107)		377 (832) @ 3639(143)	831 (1832)	440 (970)		323 (713) @ 3639(143)

* Capacité nominale de levage hydraulique

66677

SW 06 7125436

USING THE X-CHANGE SYSTEM (7102651)

PIN ON STYLE X-CHANGE™ SYSTEM		BOLT ON STYLE X-CHANGE™ SYSTEM	
<p>ATTACHMENT REMOVAL</p> <ol style="list-style-type: none"> 1. Position ARM VERTICAL, lower attachment to ground and stop engine. 2. Turn key to ON position (not start) and move both joysticks to relieve hydraulic pressure. 3. Remove retainer pin. 4. Remove pin. 5. Start engine. Lift boom to disengage attachment. 6. Fully Retract Bucket Cylinder. 7. Lower Boom Until Pins Disengage From hooks. 8. Move arm toward operator. 		<p>ATTACHMENT REMOVAL</p> <ol style="list-style-type: none"> 1. Lower attachment to ground and stop engine. 2. Remove two bolts and plate. 3. Start engine. Lift boom to disengage attachment. 4. Fully retract bucket cylinder. 5. Lower boom until pins disengage from hooks. 6. Move arm toward operator. 	
<p>ATTACHMENT INSTALLATION</p> <ol style="list-style-type: none"> 1. Fully retract bucket cylinder. 2. Engage pins into hooks. 3. Lift boom and extend bucket cylinder until X-Change contacts attachment back. 4. Lower boom and attachment to ground WITH ARM VERTICAL until X-Change is fully engaged. 5. Stop engine, turn key to ON position (not start) and move both joysticks to relieve hydraulic pressure. 6. Install pin. 7. Install retainer pin. 8. Check for proper installation. Lift attachment and fully extend and retract bucket cylinder. 		<p>ATTACHMENT INSTALLATION</p> <ol style="list-style-type: none"> 1. Fully retract bucket cylinder. 2. Engage pins into hooks. 3. Lift boom and extend bucket cylinder until X-change contacts attachment back. 4. Lower boom and attachment to ground WITH ARM VERTICAL until X-Change fully engages. 5. Stop engine. 6. Insert two bolts through plate and torque to 140 ft-lbs (190 N-m). 7. Check for proper installation. Lift attachment and fully extend and retract bucket cylinder. 	
<p>SEE OPERATION & MAINTENANCE MANUAL FOR MORE INSTRUCTIONS AND USE WITH OTHER ATTACHMENTS</p>			

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