



NEW HOLLAND

COMPACT CRAWLER EXCAVATOR

E35BSR TIER 4

OPERATOR'S MANUAL

PX15-20658~
S2PX00036ZE01 NA

Issued 01Nov 08



NEW HOLLAND

CONSTRUCTION

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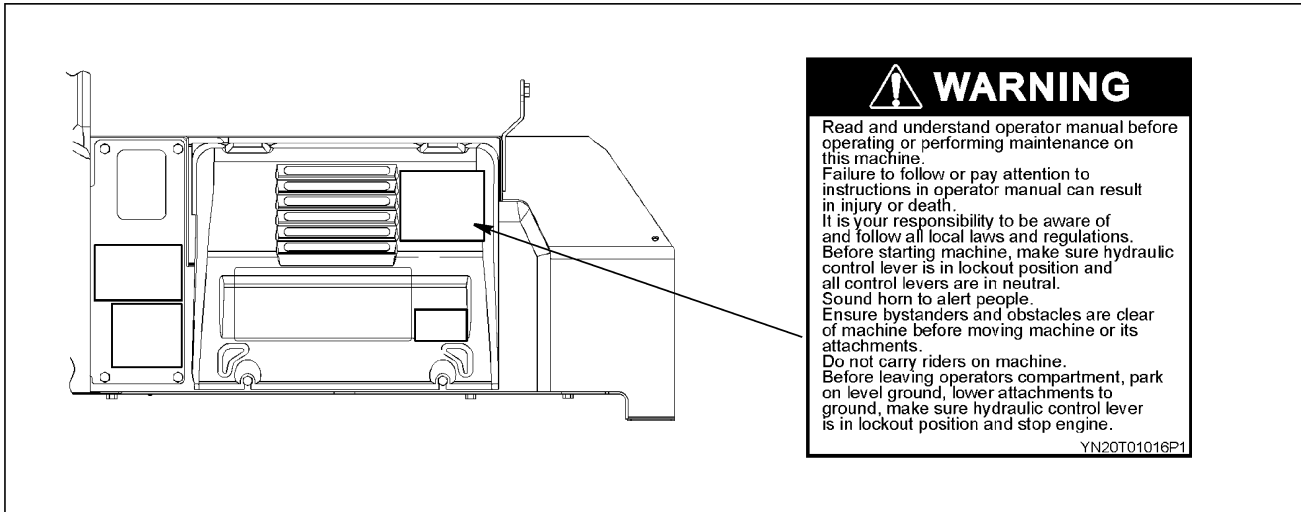
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SAFETY CONTROLS - WARNING

Located on seat stand cover - Part Number YN20T01016P1

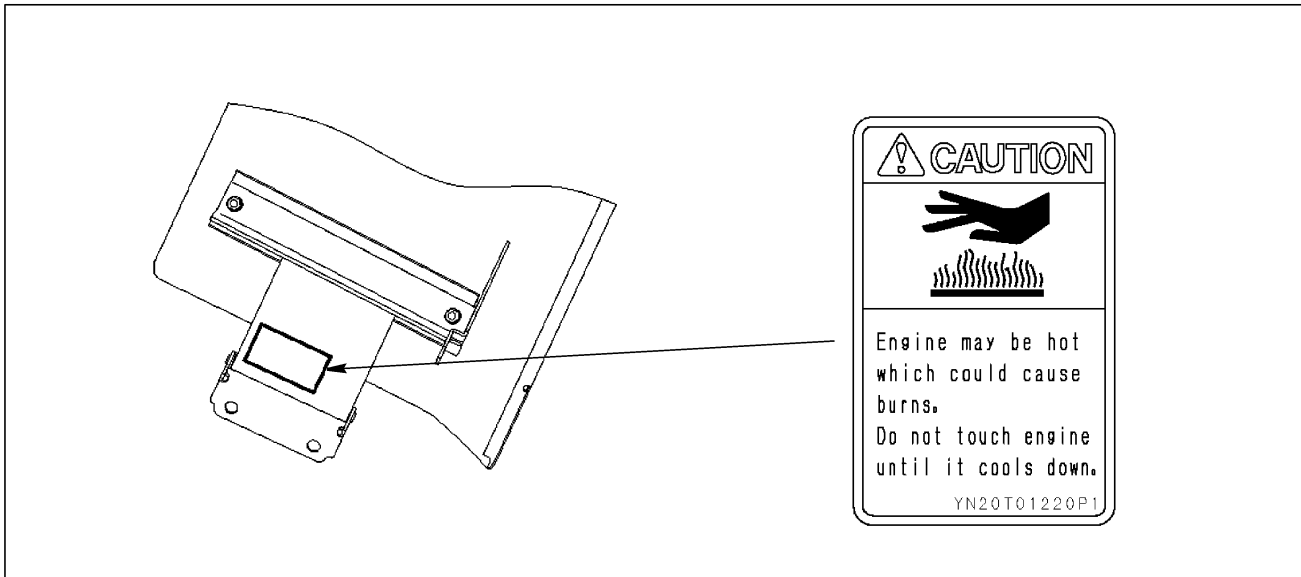


BS07M605/BS07M647

Figure 9

HOT SURFACES - CAUTION

Located on engine door hinge - Part Number YN20T01220P1

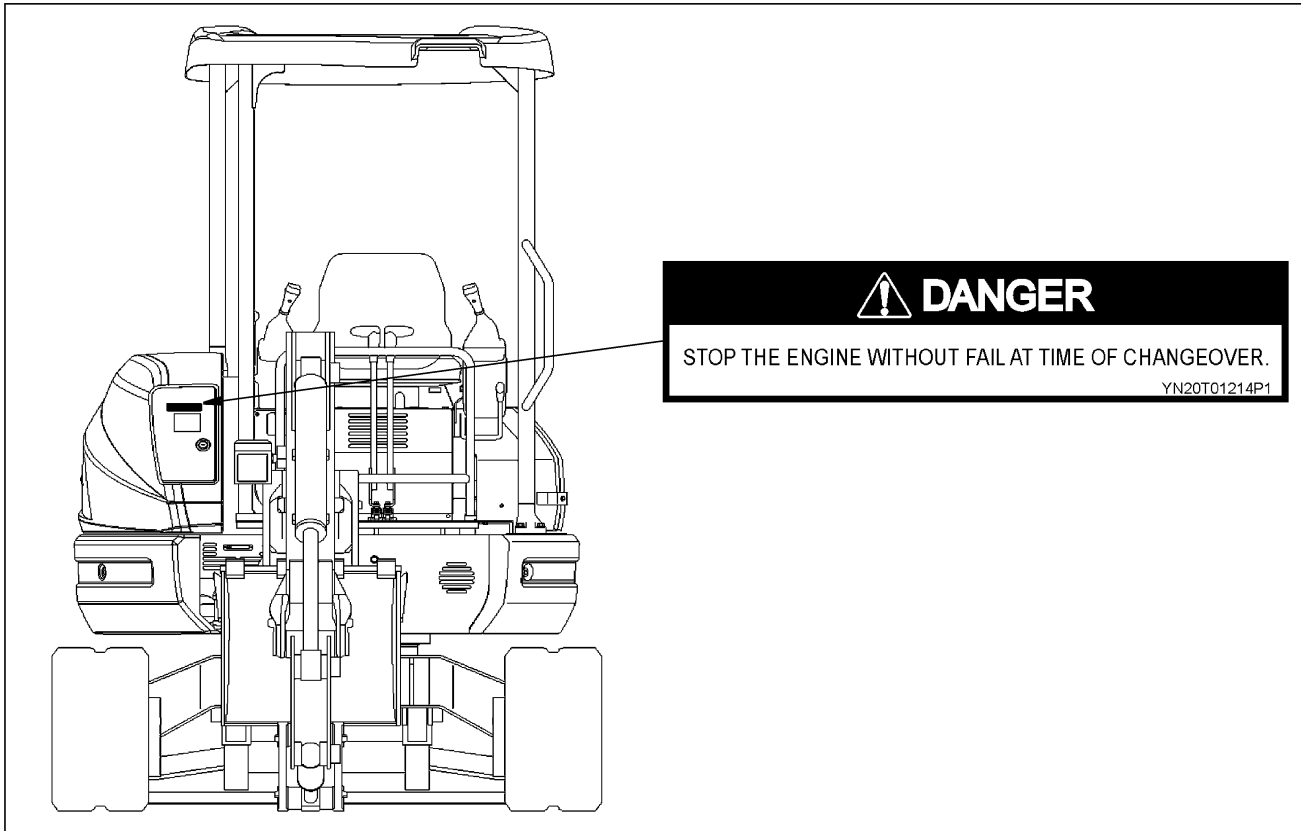


BS07M640/YN20T01220P1

Figure 10

STOP ENGINE - DANGER

Located on inside of side cover- Part Number YN20T01214P1

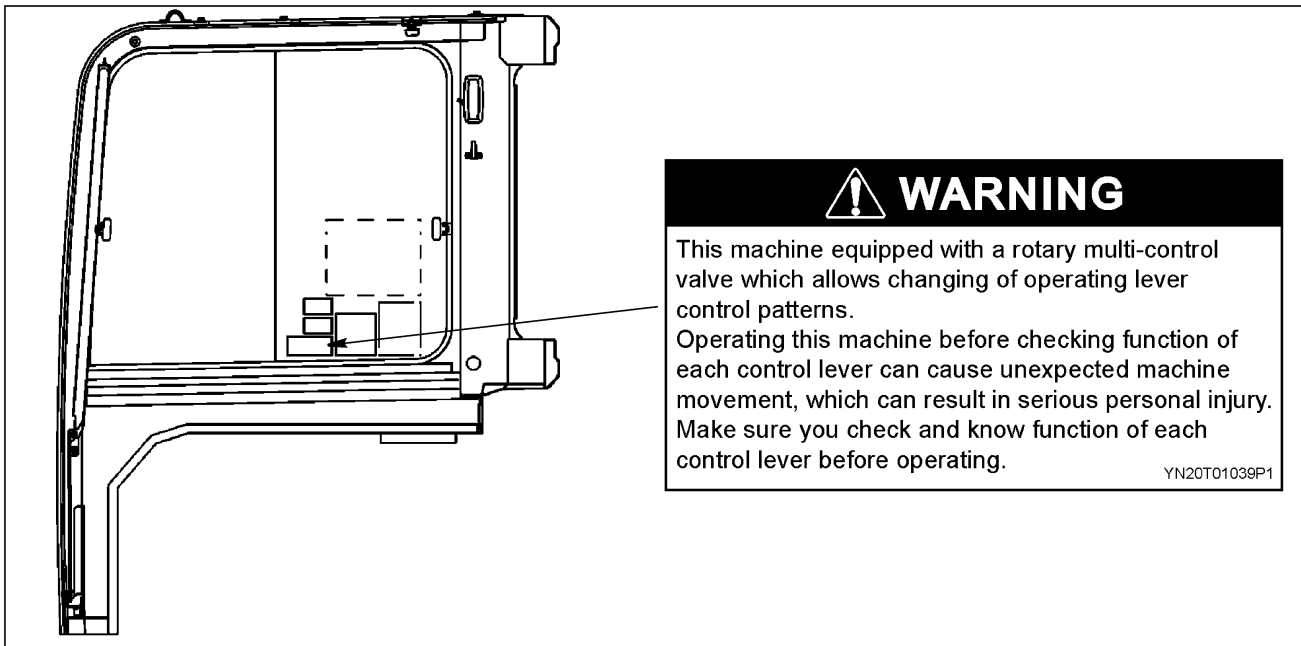


BS07M605/UPX00100031E01

Figure 29

CONFIRM ATTACHMENT MOVEMENT- WARNING

Located on inside of right window (cab). Located on ceiling (canopy) - Part Number YN20T01039P1



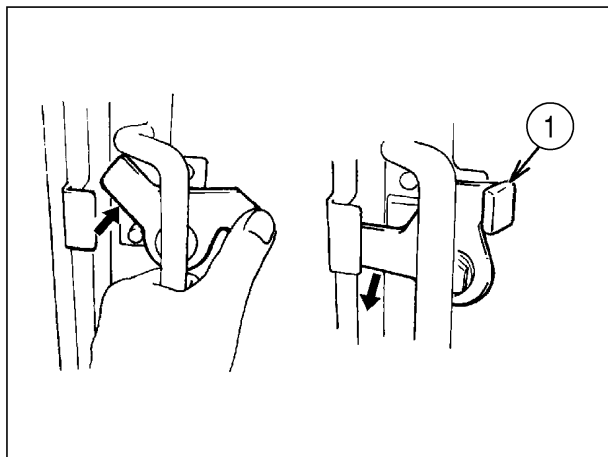
BS07M656/UPX00100032E01

Figure 30

OPENING AND CLOSING WINDSHIELD

Front window (upper) can be stored in ceiling.

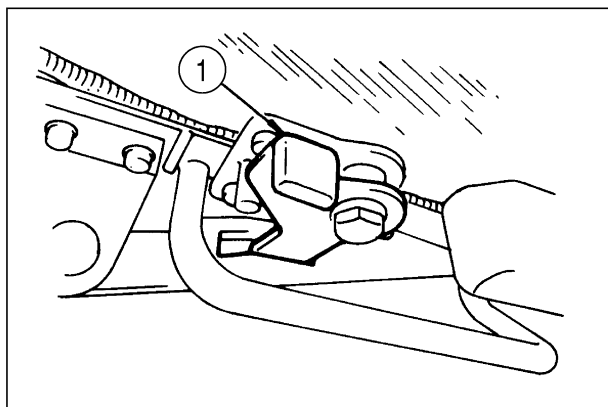
IMPORTANT: Make sure to properly lock the window frame in place, or the wiper lock may not function properly, and the wiper may be damaged because the wiper moves when the wiper motor switch is turned on.



UPW00200038J01

Figure 4

1. Pull lock lever down (1) on front window upper section to unlock the window.



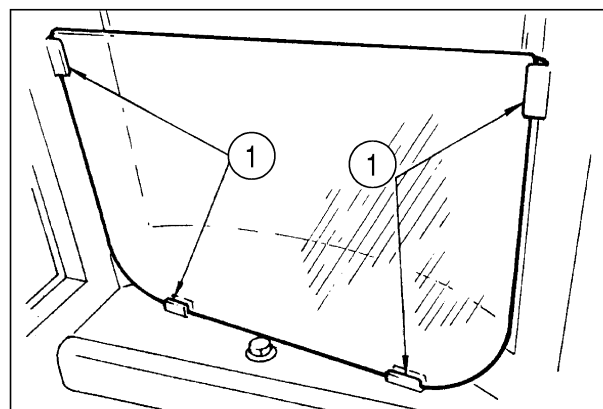
BS07M661

Figure 5

1. LOCK LEVER
2. Hold handles on left and right sides of the front window. Lift the front window up and slide overhead all the way to the back. The window will automatically lock when in position.

WARNING: Special attention must be paid not to injure hands and others when the front window is closed. Always make sure to properly lock the front window in place to avoid injury. Failure to comply could result in injury or death.

REMOVING AND STORING LOWER FRONT WINDOW



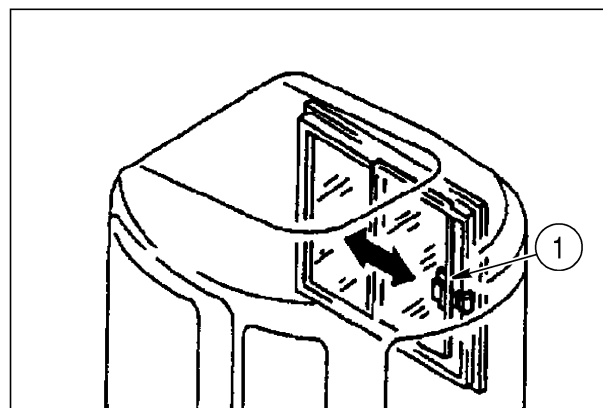
DC04D662

Figure 6

1. LOWER FRONT WINDOW

1. After placing upper front window in ceiling, and locking it in place, remove lower front window by hand, lifting it from the window frame.
2. Securely store the removed lower front window in the holder in the rear of cab behind the operator's seat.
3. To store it, insert the right and left sides of glass in holder in front of the rear window. Make certain it is secure in front of the retaining tabs.

OPENING RIGHT WINDOW GLASS

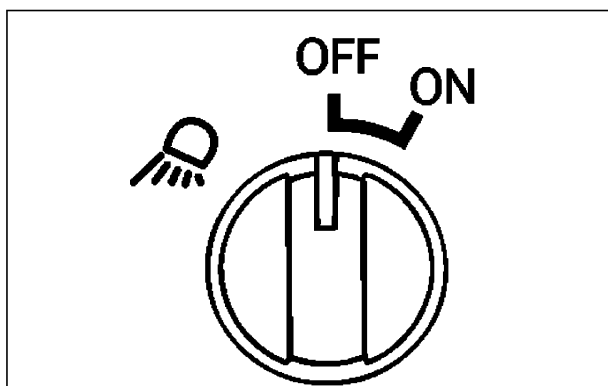


BS07M663

Figure 7

1. LOCK

1. Open right window by releasing lock and sliding the window.
2. Close the glass sliding it to LOCK position, then lock it.

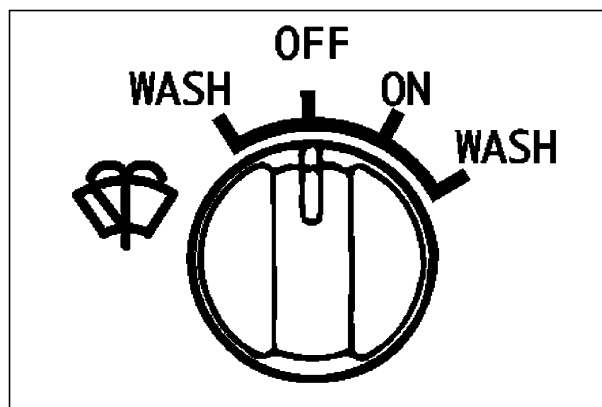


BS07M786

Figure 31

WORK LAMP SWITCH

Use the work lamp switch (5) for turning the boom and machine work lights on and off.



BS07M778

Figure 33

WIPER AND WASHER SWITCH

Use the washer/wiper switch (7) to spray washer fluid or turn on the windshield wipers. The switch has four settings.

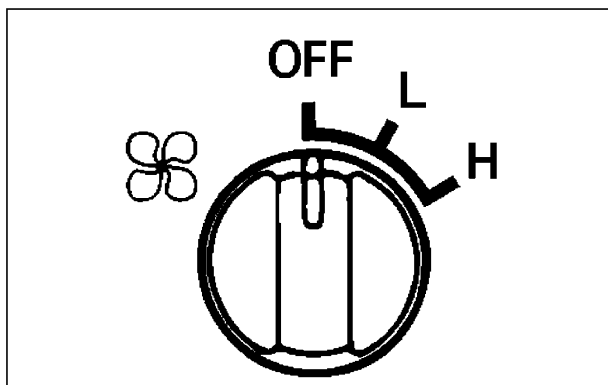
Wash: (left): Sprays washer fluid

Off: Stop

On: Operates wipers only

Wash (right) Operates washer fluid and wipers

NOTE: Do not use the washer for more than 20 seconds continually or without washer fluid, as the washer tank motor may be damaged.

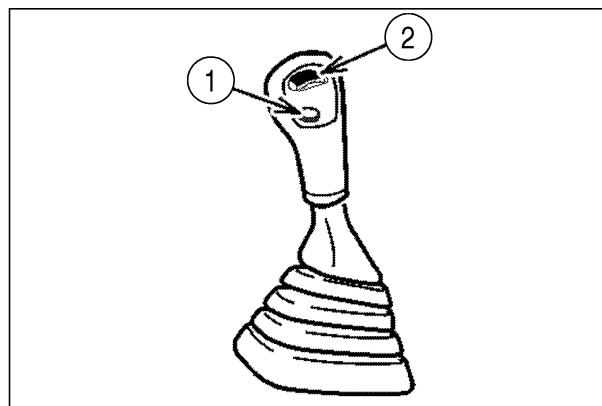


BS07M787

Figure 32

HEATER SWITCH (OPTIONAL)

Use the heater switch (6) to turn the optional heater on or off. The switch has three settings: OFF, (L) low fan speed, and (H) high fan speed.



BS08J519

Figure 34

BREAKER OPERATING SWITCH

The breaker operating switch (8) is used to operate the breaker. Use the button (1) and the grip of the right control lever.

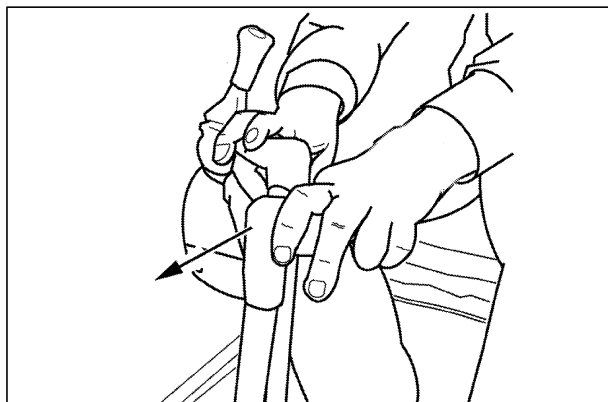
Make certain the selector valve is switched to breaker mode. Working in the incorrect mode can cause a malfunction and/or machine damage.

The breaker can be operated by sliding the option switch (2) to the left.

CHAPTER 4 - OPERATING INSTRUCTIONS

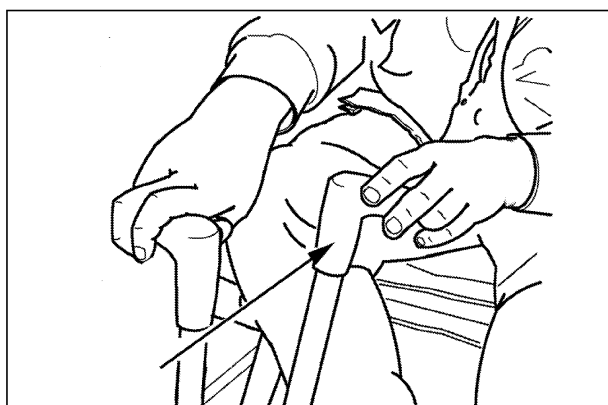
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TURNING THE MACHINE



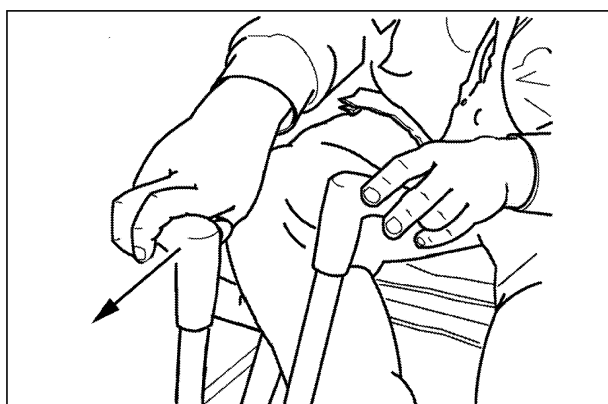
DC04D479 Figure 16

- a. Push the left travel lever toward front of machine to turn machine to the **RIGHT in forward motion**.



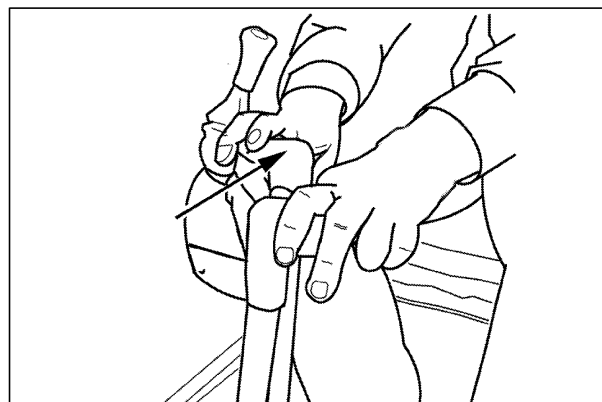
DC04D480 Figure 17

- b. Pull the left travel lever back toward operator seat to turn machine to the **LEFT in reverse motion**.



DC04D481 Figure 18

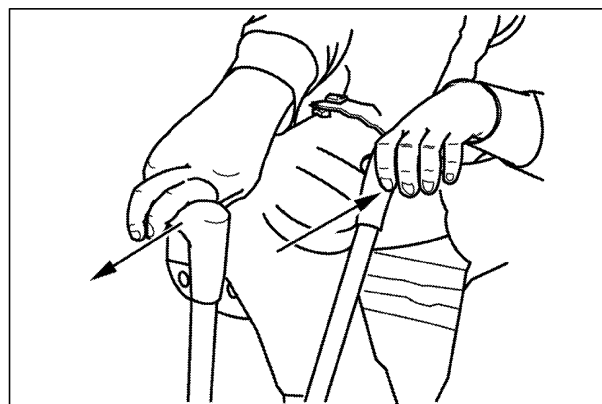
- c. Push the right travel lever toward front of machine to turn machine to the **LEFT in forward motion**.



DC04D482 Figure 19

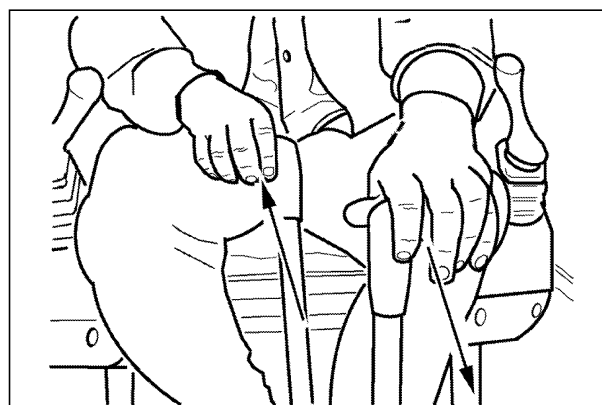
- d. Pull right travel lever toward operator seat to turn machine to the **RIGHT in reverse motion**

COUNTER ROTATING MACHINE



DC04D483 Figure 20

- a. Pull left travel lever **BACK** and push right travel lever **FORWARD** to counter rotate machine to the **LEFT**.



DC04D484 Figure 21

- b. Pull right travel lever **BACK** and push left travel lever **FORWARD** to counter rotate machine to the **RIGHT**.

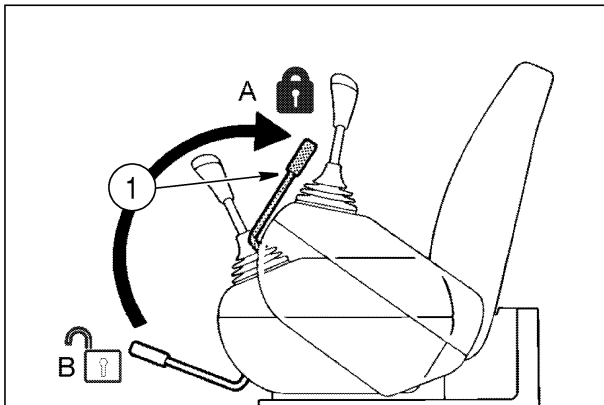
NOTE: All functions explained with use of travel levers can also be performed using the travel pedals.

2. Loading the Machine



WARNING: *Never attempt to load or unload machine without ramps. Failure to comply could result in injury or death.*

- a. Apply parking brakes on tractor and trailer and chock trailer wheels before attempting to load or unload machine.
- b. Lower ramps of trailer.
- c. Start the machine.
- d. Set travel speed to LOW - 1st speed.
- e. Move throttle control to low idle position.
- f. Raise the attachment and slowly move machine up trailer ramps and over rear axles of trailer.
- g. Slowly move machine completely onto trailer until in proper transport position.
- h. Slowly swing machine 180° until attachment is toward rear of trailer.
- i. Slowly lower boom until attachment rests on trailer bed.
- j. Do not have bucket and arm cylinder at full stroke during transport as this may cause damage to cylinders.



DC04C344

Figure 41

1. FUNCTION CANCELLATION LEVER

- k. Place hydraulic function cancellation lever in the LOCKED (up) position.
- l. Turn machine OFF, remove key and lock all doors, filler caps and access panels.

IMPORTANT: *Place a cover over the exhaust pipe of the machine and secure to avoid water entering the engine.*

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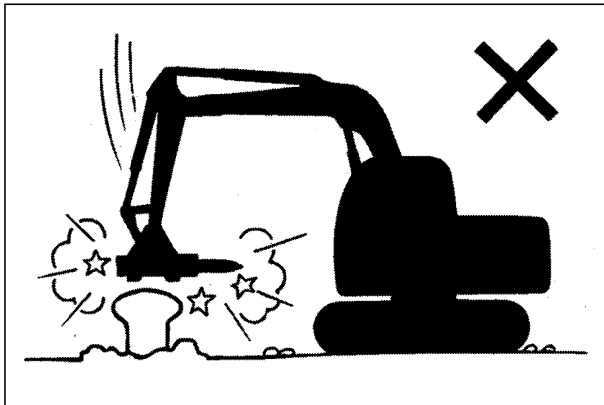
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SAFETY PRECAUTIONS

The following safety precautions should be used in conjunction with other safety precautions found in this manual.

WARNING: Read, understand and follow all safety precautions and operating procedures found in this manual before operating the machine or any attachment.

A. USE FOR INTENDED PURPOSE



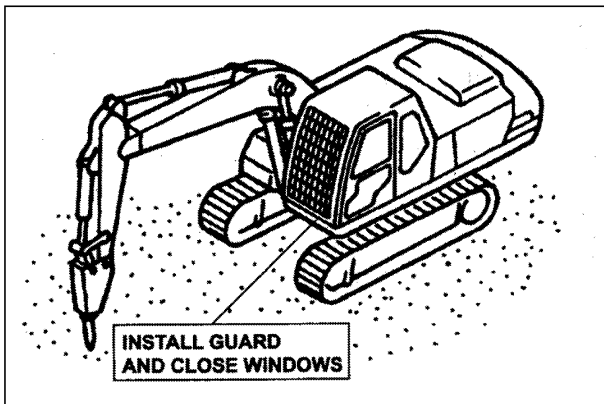
DC04E061 Figure 60

Use the attachment only for its intended purpose. If not used in accordance with the manufacturer's instructions, the excessive pressure exerted on the boom, arm and frame structure of the machine will cause premature failure of the components.

B. PASSENGERS

Never allow passengers on the attachment or machine.

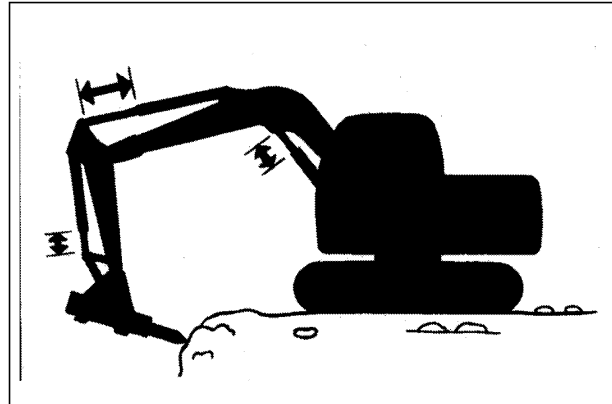
C. PROTECTIVE EQUIPMENT



DC04E062 Figure 61

When operating attachments that produce flying debris, installing protective guards on the machine is highly recommended. Close all windows to protect the operator from flying debris. Also the operator and all personnel in the vicinity of the machine should wear protective gear such as safety shoes, hard hat, gloves and face shield or goggles.

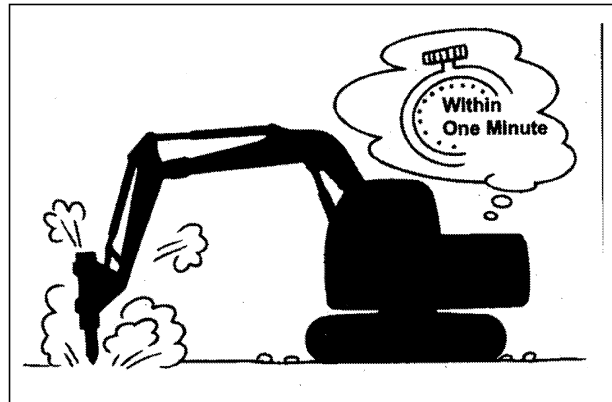
D. CYLINDERS



DC04E063 Figure 62

DO NOT OPERATE boom, arm or bucket cylinders at stroke ends when using a breaker attachment. Doing this can cause undue stress on the cylinder rods and result in damage.

E. AVOID CONTINUOUS OPERATION



DC04E064 Figure 63

Operate the nibbler/breaker in one (1) minute intervals. Operation for longer than one (1) minute at a time can cause high oil temperatures and damage the accumulators, cylinder seals and/or pump damage.

When you use Bio-degradable Oil (BIO OIL), refer to the following information:

1. There are two types of BIO OIL available; vegetable based and synthetic based. Synthetic based type is recommended, as the vegetable based oil has a maximum usage temperature of 80°C (176°F). The degradation of vegetable based oil occurs more rapidly and causes reduced service life.
2. Do not mix either type of BIO OIL with the original factory filled mineral oil. If BIO OIL is used, it is required to flush the hydraulic system that was filled with mineral oil twice, before adding bio oil.
3. If you use BIO OIL, swing and propel parking brake performance will be reduced, because of the lower friction of BIO OIL compared to that mineral oil.
4. For further information about recommended Bio-degradable oil, please contact local dealer.

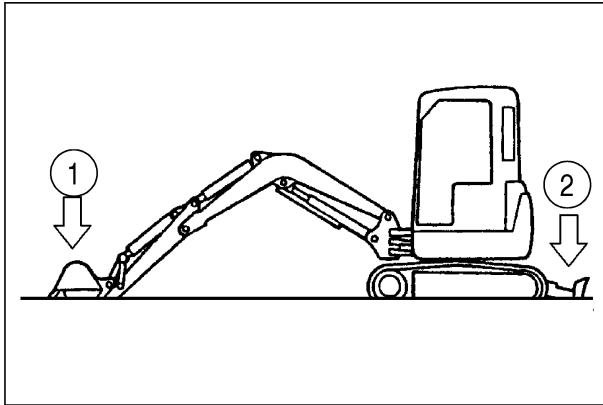
DAILY INSPECTION AND MAINTENANCE

The following procedures are to be performed every 8 hours or daily, before starting the machine.



WARNING: Be cautious of hot fluids and surfaces. Wear goggles, safety shoes, hard hat, work clothes, and work gloves to perform inspection and maintenance on this machine.

GREASE MACHINE AND ATTACHMENTS

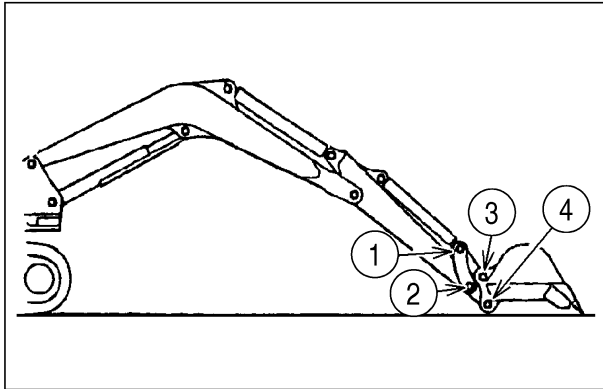


BS07M861

Figure 9

During the initial 50 hours of operation during the run-in period, grease bucket, boom, arm cylinder and dozer every 8 hours. After the initial run-in period, grease every 50 hours.

1. Park the machine on a firm, level surface with both attachments resting on the ground. Turn the engine off. Place the cancellation lever in the locked position. Keep all unauthorized personnel clear of the area.



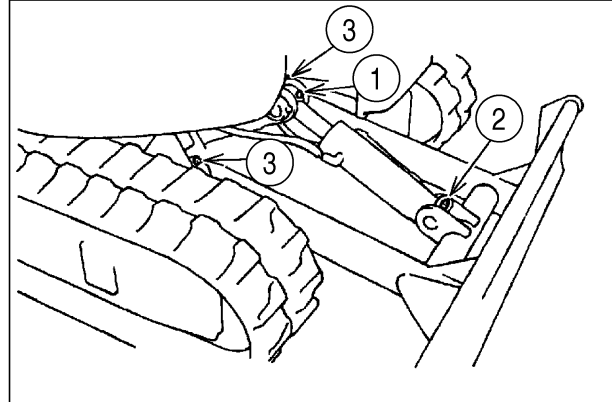
BS07N028

Figure 10

1. BUCKET CYLINDER ROD PIN
2. IDLER LINK/ARM CONNECTING PIN
3. BUCKET LINK PIN
4. ARM/BUCKET CONNECTING PIN

2. Clean the grease fitting before greasing. Replace any damaged grease fitting.
3. Lubricate with a grease gun through the grease fittings shown. Wipe off any grease that leaks out of the pin connection.

DOZER PIN GREASE POINTS

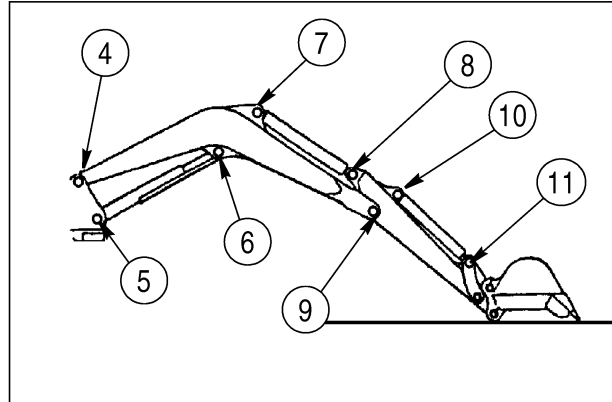


BS07N035

Figure 11

1. DOZER CYLINDER ROD PIN (1)
2. DOZER CYLINDER FOOT PIN (1)
3. DOZER FOOT PIN (2)

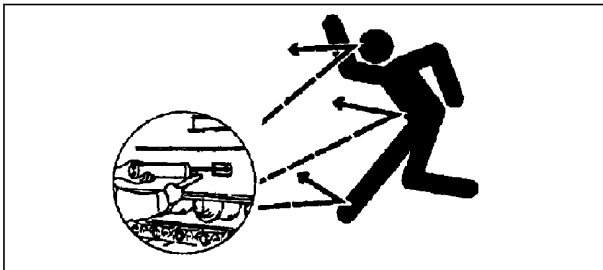
BOOM, ARM, AND ATTACHMENT GREASE POINTS



BS07N033

Figure 12

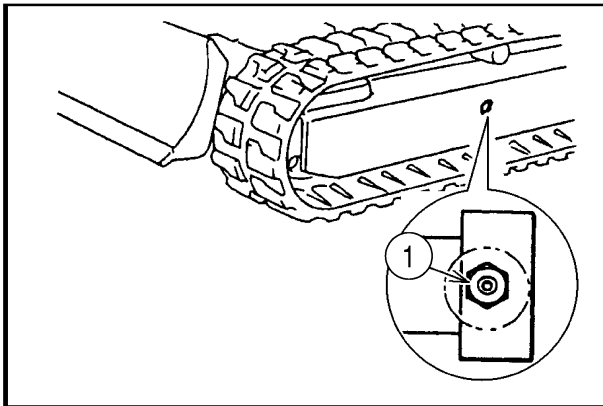
4. BOOM FOOT PIN (1)
5. BOOM CYLINDER FOOT PIN (3)
6. BOOM CYLINDER ROD PIN (1)
7. ARM CYLINDER FOOT PIN (1)
8. ARM CYLINDER ROD PIN (1)
9. BOOM/ARM CONNECTING PIN (2)
10. BUCKET CYLINDER FOOT PIN (1)
11. BUCKET CYLINDER ROD PIN (1)



DC04C307

Figure 35

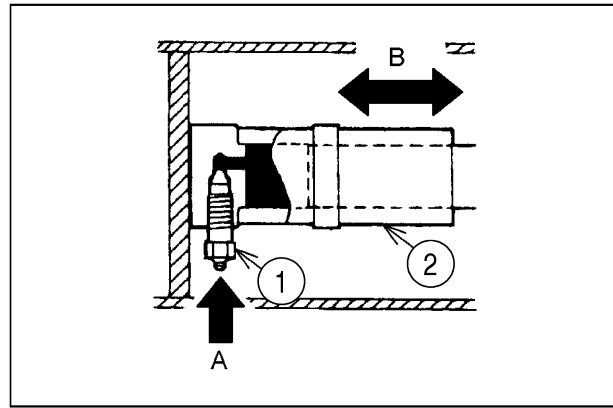
WARNING: Grease in track tensioning mechanism is under extreme pressure and can penetrate skin causing severe injury. Keep face and body away from grease fitting area. Never loosen grease fitting more than one (1) complete turn. If grease does not release after one (1) turn of the fitting, call your authorized dealer for assistance. Failure to comply could result in injury or death.



BS07N044

Figure 36

5. Grease in track tensioning mechanism is under extreme pressure and can penetrate skin causing severe injury. Keep face and body away from grease fitting area. Never loosen grease fitting more than one (1) complete turn. If grease does not release after one (1) turn of the fitting, call your authorized dealer for assistance.

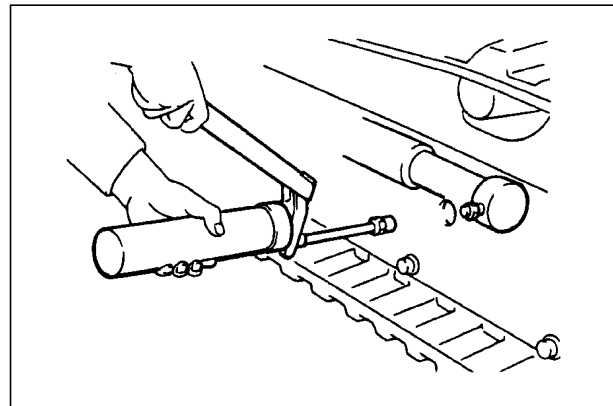


BS07N045

Figure 37

- 1. GREASE FITTING
- 2. GREASE CYLINDER
- A. GREASE FILL
- B. PRESSURE

INCREASING TRACK TENSION



BS07N046

Figure 38

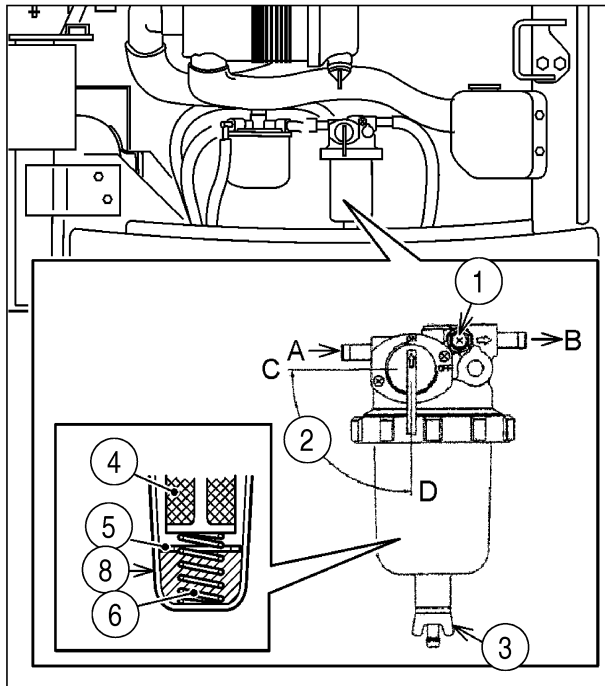
6. To increase track tension, inject extreme pressure No. 2 grease into idler adjustment grease fitting (1) with a grease gun until proper tension is reached.

IMPORTANT: If the adjustment to the track cannot be maintained, the grease cylinder may need repair. Contact your authorized dealer.

500 HOUR MAINTENANCE

CLEAN AND DRAIN WATER SEPARATOR

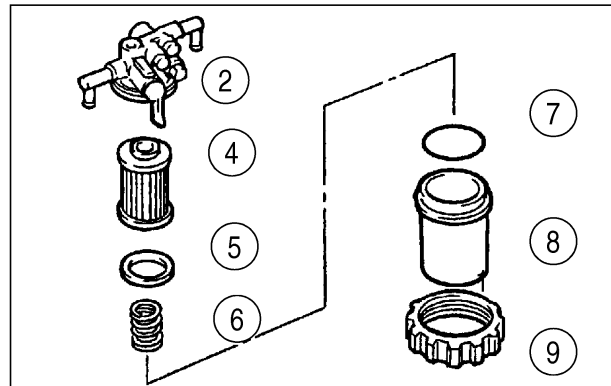
Check the water separator every 8 hours. Clean and Drain the engine water separator every 500 hours.



BS07N135

Figure 64

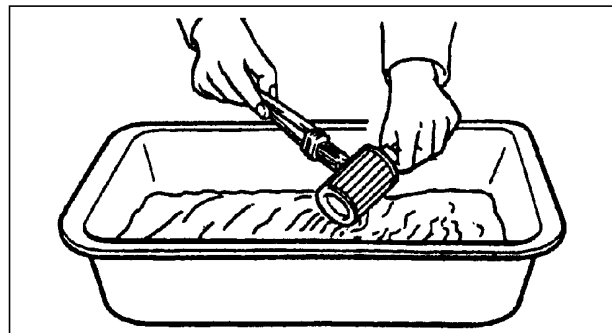
1. Park the machine on a firm, level surface with both attachments resting on the ground. Turn the engine off. Place the cancellation lever in the locked position. Keep all unauthorized personnel clear of the area.
2. Visually inspect separator. If red ring (1) sinks to bottom of case, no water is present.
3. When ring is floating, drain water and sediment.
4. Open valve (2) and drain until clean fuel is discharged.
5. The components of the water separator must be removed to clean. Take care not to lose red ring and spring. Do not use gasoline to clean the filter elements. Wipe off any spilled fuel.



BS07N136

Figure 65

1. AIR BREATHER PLUG
2. HANDLE (FUEL VALVE)
3. DRAIN VALVE
4. ELEMENT
5. RING (RED)
6. SPRING
7. O-RING
8. CASE
9. RING
- A. IN
- B. OUT
- C. FUEL VALVE CLOSED
- D. FUEL VALVE OPEN



BS07N137

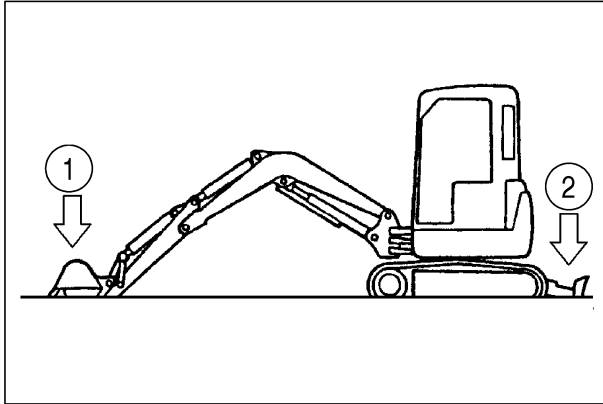
Figure 66

6. Push the handle (2) of the water separator upward to the CLOSE position (C).
7. Loosen the ring (9) to remove the case (8) and drain water out.
8. When the water is drained, clean the element (4) inside and out. Replace the O-ring with a new one.
9. Install the element (4) to the water separator body. Place the O-ring 7 on the case (8), reassemble, then tighten.
10. Push the handle (2) downward to set at OPEN.
11. After draining water and cleaning, bleed air from the fuel system.

PILOT VALVE AND SOLENOID VALVE

Clean the pilot valve filter and solenoid filter when the hour meter registers 2000 hours.

The P port of right and left pilot valves (for operation and travel) and the solenoid valve are equipped with a connector with a filter. Dirt that adheres on the filter will decrease oil flow.



BS07M861

Figure 85



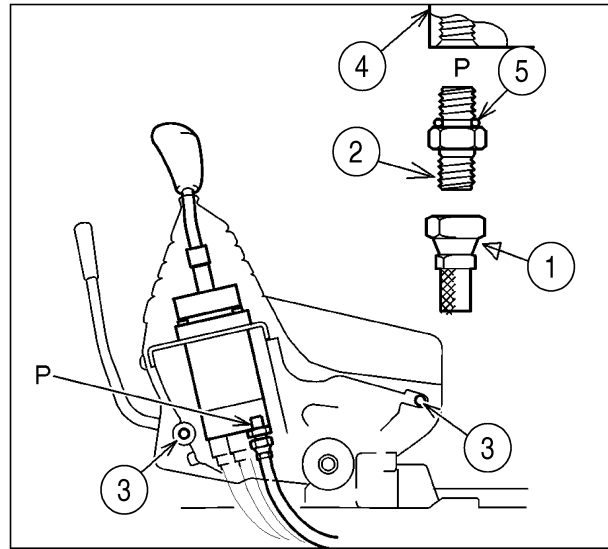
WARNING: Do not perform any service work on a machine that is hot. Allow the machine and components to cool before performing any work on fluids and oils. Failure to comply could result in injury or death.

1. Park the machine on a firm, level surface with both attachments resting on the ground. Turn the engine off. Place the cancellation lever in the locked position. Keep all unauthorized personnel clear of the area.



WARNING: Hydraulic fluid is under extreme pressure. Make certain all pressure is released in the hydraulic system. Failure to comply could result in injury or death.

2. Release all pressure to the hydraulic system.

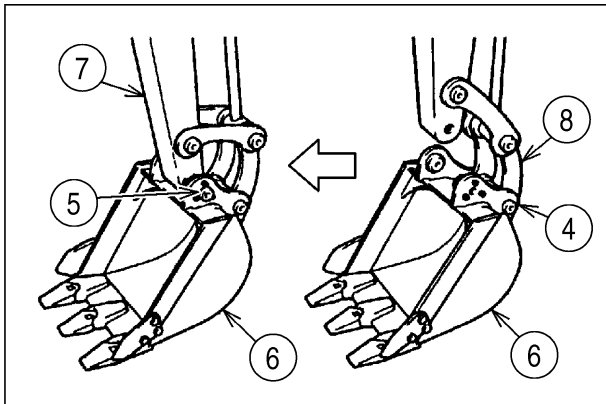


BS07N147

Figure 86

3. Loosen 2 bolts (3) on the operating box to remove the cover.
4. Disconnect the hose (1) connected to P port on the pilot valve (4), then remove connector with filter (2).
5. After removal, put a plug into the bore to prevent entry of foreign matter.
6. Wear face protection, wash the filter with cleaning solvent. Use compressed air to remove any material.

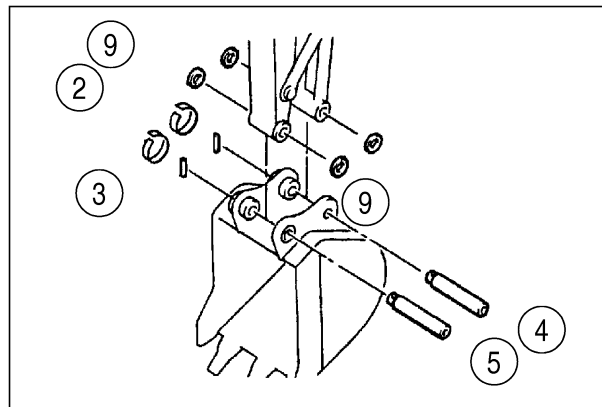
INSTALLING BUCKET



BS07N277

Figure 109

1. Clean each pin and pin hole and grease sufficiently.
2. Move the bucket cylinder to match the pin bores or the bucket (6) and bucket link (8) with each other, then insert the pin (4).
3. Raise the boom and slightly raise the bucket from the ground.



BS07N278

4. Align bucket (6) with the pin hole of arm (7) moving arm (7), and insert pin (5).
5. Insert pin (3) and fit lock ring (2).
Fit O-ring (1) to the normal position.
6. Apply grease on the grease nipples for respective pin until the grease comes out through the gap between pins and bore.



WARNING: When replacing a bucket tooth or side cutters, securely block the bucket to avoid injury. Do not insert fingers to align pin bores. Align visually or with a tool. Failure to comply could result in injury or death.

NOTES

LIFT CAPACITIES CANOPY MODEL

4 ft. 4 in (1.32 m) Arm

Lift capacities calculated using 11.8 in (300 mm) shoes 196 lb (89 kg) bucket, blade down.

Load (Lift Point) Height	5 ft (1.5 m) END - SIDE		7.5 ft (2.3 m) END - SIDE		10 ft (3.0 m) END - SIDE		12.5 ft (3.8 m) END - SIDE		15 ft (4.6 m) END - SIDE	
	+ 10 ft (3.0 m)							1190 lb 540 kg	1120 lb 510 kg	
+7.5 ft (2.3 m)					1380 lb 620 kg	1380 lb 620 kg	1280 lb 580 kg	1100 lb 500 kg		
+5 ft (1.52 m)			2760 lb 1250 kg	2380 lb 1080 kg	1830 lb 830 kg	1510 lb 680 kg	1480 lb 670 kg	1050 lb 470 kg		
+2.5 ft (0.8 m)			3760 lb 1700 kg	2180 lb 990 kg	2270 lb 1030 kg	1420 lb 640 kg	1690 lb 760 kg	1000 lb 450 kg	1390 lb 630 kg	750 lb 340 kg
Ground Level	2550 lb 1150 kg	2550 lb 1150 kg	4020 lb 1820 kg	2120 lb 960 kg	2520 lb 1140 kg	1360 lb 610 kg	1820 lb 820 kg	970 lb 440 kg		
-2.5 ft (-0.8 m)	4080 lb 1850 kg	4080 lb 1850 kg	3830 lb 1740 kg	2120 lb 960 kg	2520 lb 1140 kg	1340 lb 610 kg	1800 lb 810 kg	960 lb 430 kg		
-5.0 ft (-1.52 m)	5790 lb 2620 kg	4550 lb 2060 kg	3290 lb 1490 kg	2150 lb 970 kg	2210 lb 1000 kg	1360 lb 620 kg				
-7.5 ft (-2.3 m)	3470 lb 1570 kg	3470 lb 1570 kg	2110 lb 950 kg	2110 lb 950 kg						

* Rated loads are hydraulic limits rather than tipping load limits

LIFT CAPACITIES CAB MODEL

4 ft. 4 in (1.32 m) Arm

Lift capacities calculated using 11.8 in (300 mm) shoes (196 lb (89 kg) bucket, blade down.

Load (Lift Point) Height	5 ft (1.5 m) END - SIDE		7.5 ft (2.3 m) END - SIDE		10 ft (3.0 m) END - SIDE		12.5 ft (3.8 m) END - SIDE		15 ft (4.6 m) END - SIDE	
	+ 10 ft (3.0 m)							1190 lb 540 kg	1190 lb 540 kg	
+7.5 ft (2.3 m)							1280 lb 580 kg	1160 lb 530 kg		
+5 ft (1.52 m)			2760 lb 1250 kg	2510 lb 1140 kg	1830 lb 830 kg	1600 lb 720 kg	1480 lb 670 kg	1120 lb 500 kg		
+2.5 ft (0.8 m)			3760 lb 1700 kg	2310 lb 1050 kg	2270 lb 1030 kg	1500 lb 680 kg	1690 lb 760 kg	1070 lb 480 kg	1390 lb 630 kg	800 lb 360 kg
Ground Level	2550 lb 1150 kg	2550 lb 1150 kg	4020 lb 1820 kg	2250 lb 1020 kg	2520 lb 1140 kg	1450 lb 650 kg	1820 lb 820 kg	1040 lb 470 kg		
-2.5 ft (-0.8 m)	4080 lb 1850 kg	4080 lb 1850 kg	3830 lb 1740 kg	2250 lb 1020 kg	2520 lb 1140 kg	1430 lb 650 kg	1800 lb 810 kg	1030 lb 460 kg		
-5.0 ft (-1.52 m)	5790 lb 2620 kg	4800 lb 2180 kg	3290 lb 1490 kg	2280 lb 1030 kg	2210 lb 1000 kg	1450 lb 660 kg				
-7.5 ft (-2.3 m)	3470 lb 1570 kg	3470 lb 1570 kg	2110 lb 950 kg	2110 lb 950 kg						

* Rated loads are hydraulic limits rather than tipping load limits

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