OPERATOR'S MANUAL

WHEEL LOADER

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TIER III

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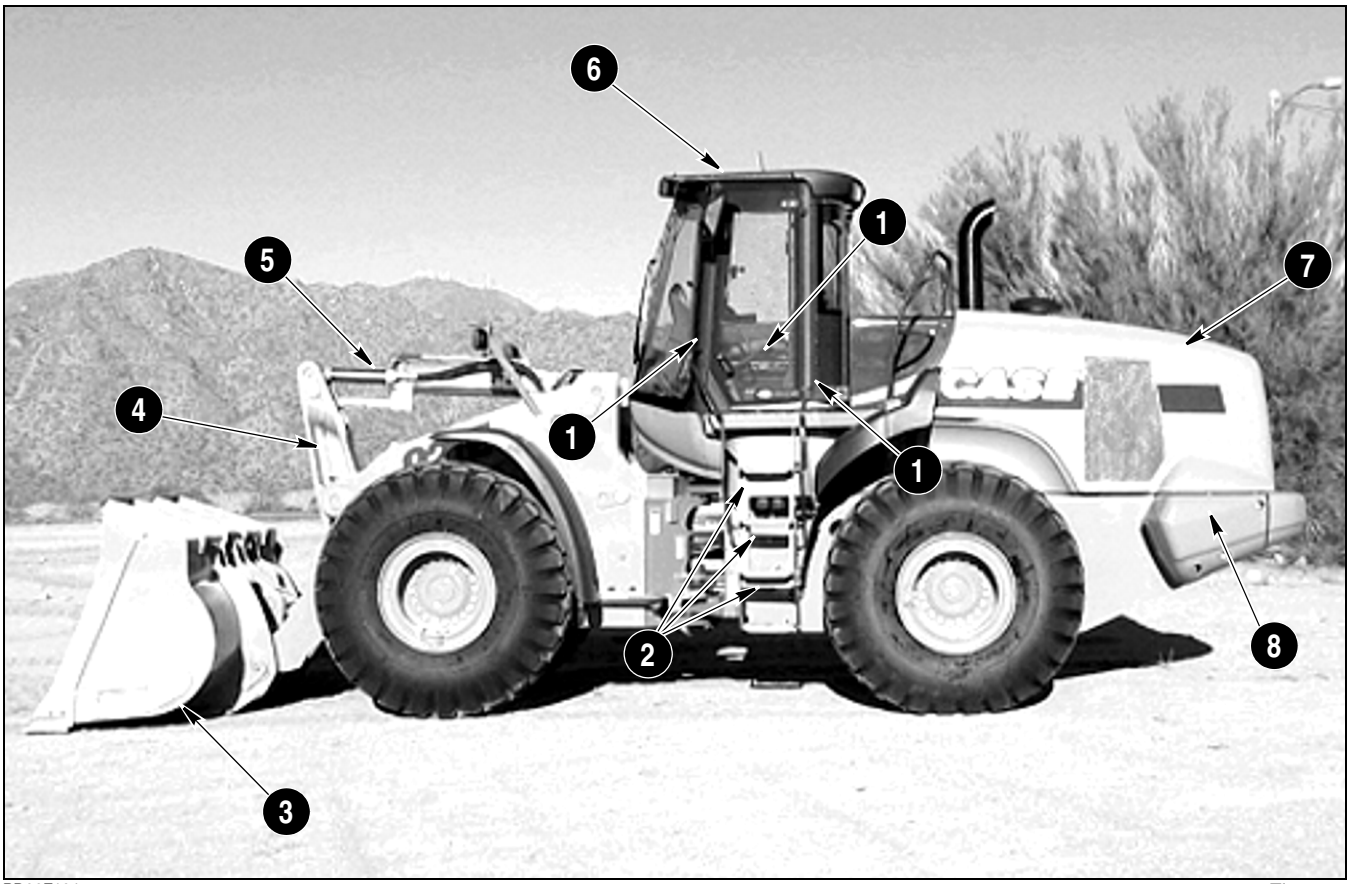
MACHINE COMPONENTS



BD06F164

Figure 6

MACHINE COMPONENTS

1. CAB DOOR AND HAND HOLDS
2. STEPS
3. BUCKET
4. BELLCRANK
5. BUCKET CYLINDER
6. ROPS CAB
7. ENGINE HOOD
8. LEFT BATTERY ACCESS

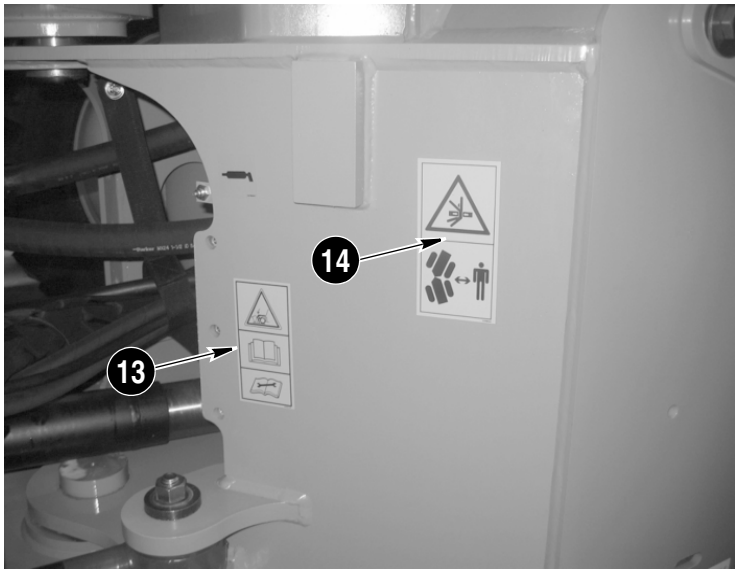
- Keep all parts of the machine a safe distance away from the power source. See the decal on the machine. You must also know any federal, state/provincial, or local safety codes or regulations that apply to the job site.

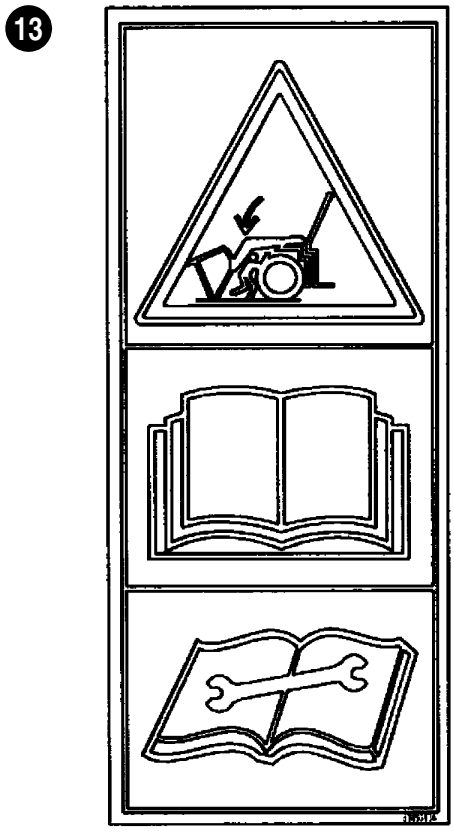
  If a part of the machine touches high voltage power:

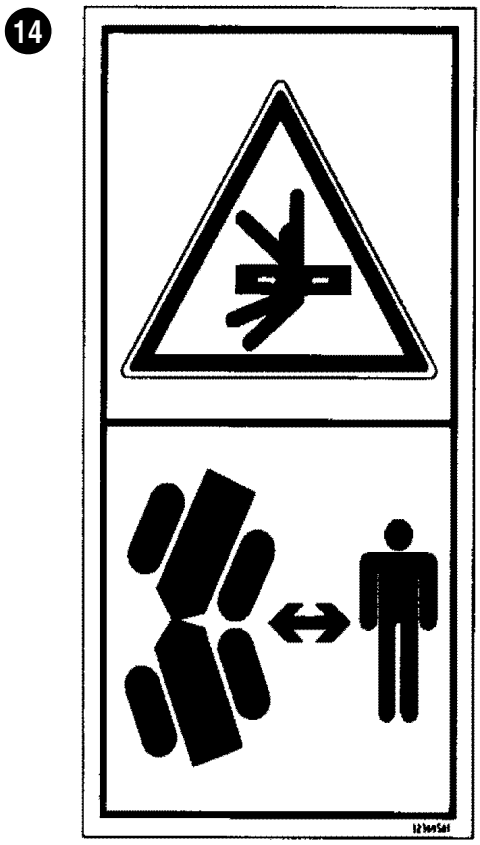
  1. Warn other workers NOT TO TOUCH THE MACHINE and to stay away from the machine.
  2. If you can break contact, reverse the operation that caused contact with the high voltage power, and move the machine away from the danger area. If you cannot break contact stay in the machine until the utility company de-energizes the line and tells you that the power is off.
- If you have extreme conditions, such as a fire, etc., and you are forced to leave the machine, do not step off the machine. Jump as far from the machine as possible with your feet together and do not touch the ground with your hands.
- Do not operate the machine if you do not feel well. This can be dangerous for you and for the people around you.
- You must make a judgment if weather, road, or earth conditions will permit safe operation on a hill, ramp, or rough ground.
- Stay away from hazardous areas such as ditches, overhangs, etc. Walk around the work area before you start and look for hazards.
- Be alert and always know the location of all workers in your area. Keep all other persons completely away from your machine. Injury or death can result if you do not follow these instructions.
- Develop fluid and smooth operating techniques, and maintain the surface condition where the machine travels in order to control vibration transfer to the operator.

MAINTENANCE PRECAUTIONS

- Do not attempt repairs unless trained. Refer to manuals and experienced repair personnel for help.
- Before you service the machine, put a DO NOT OPERATE tag on the key switch. Make sure that the machine is clearly “tagged out”.
- Wear protective glasses and other required safety equipment when servicing or repairing the machine.
- Wear gloves to protect hands when handling cable.
- Disconnect the battery before working on the electrical system. Know the consequences of disconnecting any electronic or computer devices.
- Avoid lubrication or mechanical adjustments with the machine in motion or the engine operating. If the engine must be in operation to make certain adjustments, place the transmission in neutral, apply the parking device, place the bucket/attachment in a safe position, securely block the wheels and use extreme caution.
- Securely block the machine or any component that may fall before working on the machine or component. If possible, use a back up or secondary blocking device as well.
- To prevent unexpected movement, securely block working elements when repairing or changing working tool parts such as cutting edges.
- Never make repairs on pressurized components, fluid, gas or mechanical until the pressure has been relieved according to the manufacturer’s instructions.
- Use extreme caution when removing radiator, reservoir, or tank caps, drain plugs, grease fittings or pressure taps. Park the machine and let it cool before opening a pressurized tank.
- Release all pressure before working on systems which have an accumulator.
- Use a piece of cardboard, newspaper, or wood to check for any pressurized leaks to prevent fluid penetrating the skin. Pressurize accumulators with the proper gas according to manufacturer’s recommendations.
- When inflating tires, use a self-attaching inflation chuck with remote shutoff and stand clear of the tire. Position yourself beside the tire and not beside the rim.
- Towing this machine is not recommended.
- When absolutely necessary to tow the machine, do not exceed the recommended towing speed. Be sure the towing machine has sufficient braking capacity to stop the towed load. If the towed machine cannot be braked, a towbar must be used or two towing machines must be used - one in front pulling and one in the rear to act as a brake. Avoid towing over long distances.
- Observe proper maintenance procedures.
- Whenever servicing or replacing hardened pins, etc., use a brass drift or other suitable material between the hammer and pin. Alt: Use a brass hammer, drift or suitable material on the pin, etc.
- Keep the brakes and steering systems in good operating condition.
- Replace all missing, illegible or damaged safety signs or decals as necessary. Keep all safety signs and decals clean and legible.







BD07B143/87353136/326995A1

Figure 17

13. Crush hazard warning
14. Crush hazard warning

CAB

STEPS AND HAND HOLDS

WARNING: *Always maintain three point support while getting on and off the machine and entering or exiting the operator's cab. A three point support system has been provided that enables a person to use simultaneously two hands and one foot or two feet and one hand while ascending, descending or moving about the machine. Failure to comply could result in injury or death.*

CE-NA000

WARNING: *Clean the steps and access handles and remove all traces of grease, oil, mud, and ice in winter. Failure to comply could result in injury or death.*

CE-NA000

BD06F163A Figure 7

When getting down from or getting onto the machine, use the steps and hand holds. Use at least three points of support when getting on and off the machine. The cab door must be locked into the full open or full closed position before using the door hand hold.

CAB DOOR

BD06H085 Figure 8

DOOR HANDLE AND DOOR LOCK

Use the key to lock or unlock door from outside the machine. Use the door handle to open the door from the outside.

To lock in place, open the door completely until it latches in place against the cab. To close the door, use the door release knob.

IMPORTANT: *The cab door must be locked into the full open or full closed position before using the door hand hold.*

NOTE: *The key provided with the machine can be used to lock and unlock the various panels and to activate the engine starter switch functions.*

INSIDE DOOR LATCH

BD06H086 Figure 9

To secure the door in the open position, push the door back until the door locks on the door catch at the rear of the cab.

Push the latch to open the door from the inside.

WARNING: *Always lock the cab doors in the full open or full closed position before using the handgrips on them.*

INSTRUMENT PANEL INDICATORS

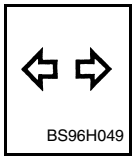
INSTRUMENT CLUSTER

The instrument cluster will check each monitored system when you turn the key switch to the ON position. All LED's (Light Emitting Diodes) will illuminate, and the warning alarm will sound for three seconds. At the end of this check all monitored systems will return to normal operation. If there is an open circuit between a sensor and the instrument cluster, on some circuits the LED will flash and the warning alarm will sound for 5 seconds.

IMPORTANT: *If during operation, the stop master warning lamp (on front console) flashes and the warning alarm is continuous, stop the machine, stop the engine, and find the problem.*

BD06F096

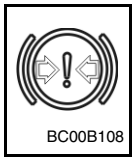
Figure 41



BS96H049

1.INDICATOR LAMP FOR FOUR-WAY FLASHER AND TURN SIGNALS:

The green indicator lamps will flash when a turn is signaled or when the four-way flashers are activated.



BC00B108

2.BRAKE PRESSURE INDICATOR:

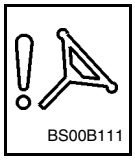
This indicator illuminates when the brake system pressure is too low. The alarm sounds continuously and the stop master indicator will be red.

Stop the machine and correct the problem.

BS98M062

3.LAMP INDICATOR:

This indicator illuminates when the driving high beam lamps are ON.



BS00B111

4.SECONDARY STEERING INDICATOR (IF EQUIPPED):

This indicator illuminates when the primary steering system pressure is too low. The alarm sounds continuously and the stop master indicator turns red.

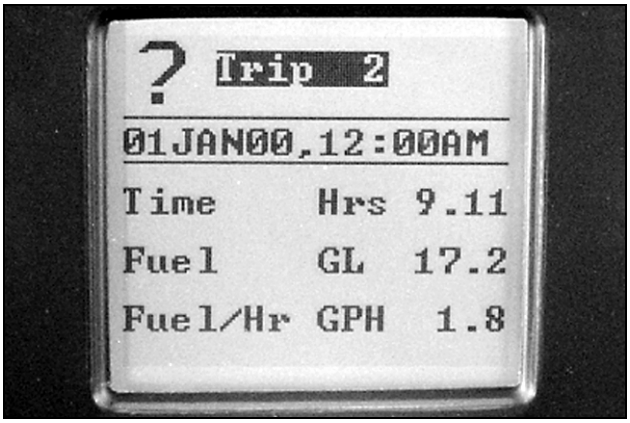
NOTE: *If this situation occurs, stop the machine immediately and contact your dealer.*

BS96H049

5.PARKING BRAKE INDICATOR:

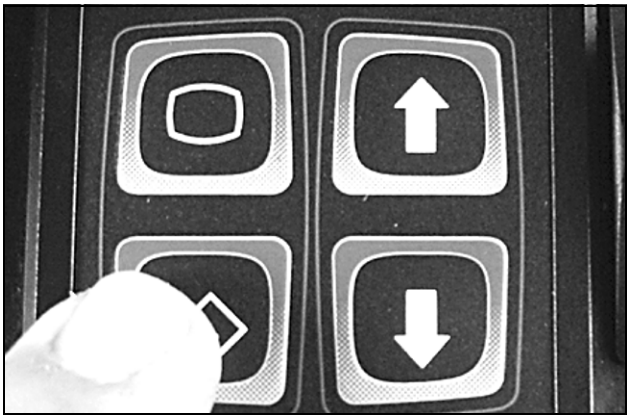
This indicator illuminates when the parking brake is applied. When the parking brake is applied and the transmission is shifted into FORWARD or REVERSE, the alarm sounds for 3 seconds and the caution master indicator turns yellow.

SETTING TRIP SCREENS



BD06F170 Figure 11

Highlight the trip screen you wish to set. (Capacity can be set in U.S. gallons, Imperial gallons, or metric liters when setting measurement preferences).

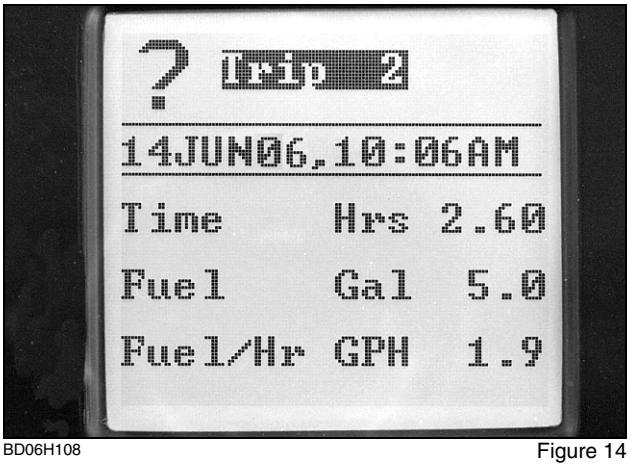


BD06F187A Figure 12

Press the confirm key to reset to the desired trip screen.

BD06F172 Figure 13

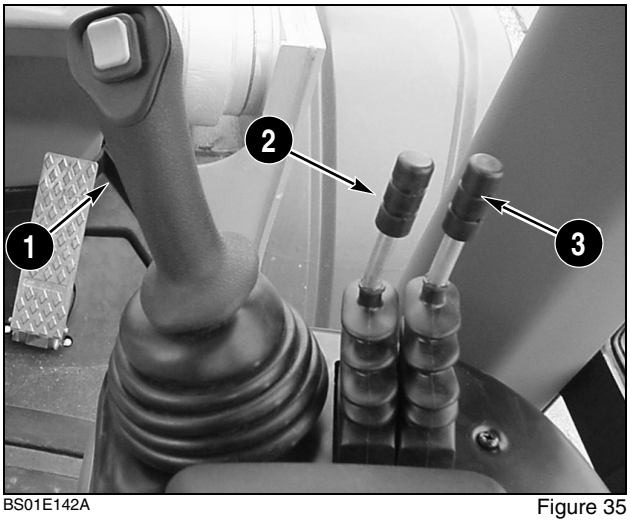
The trip screen will indicate a reset message. At this screen, press the confirm key to clear the numbers and reset the trip information. The current date and time will display automatically. The hours, fuel consumption, and fuel used per hour will reset and revert to zero.



BD06H108 Figure 14

Press the escape key to return to the main driving screen and lock settings into memory. The screen will begin to record time and fuel usage immediately.

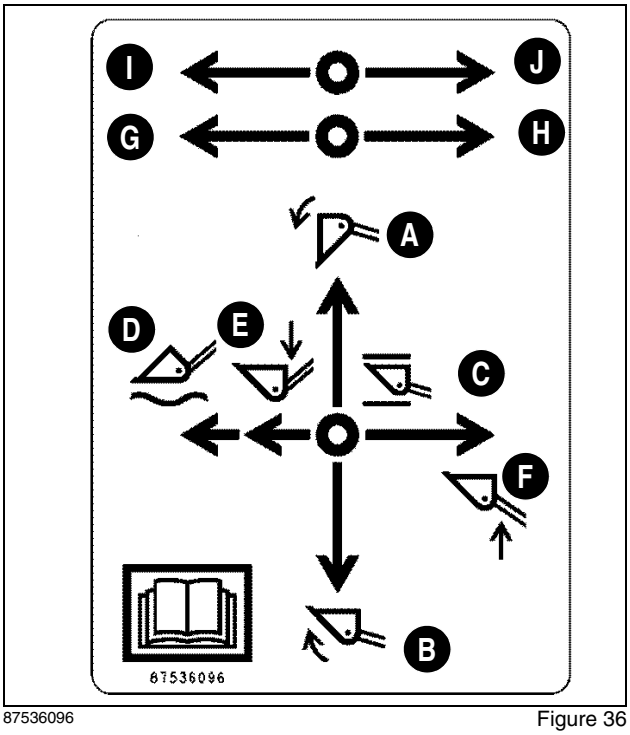
FOUR SPOOL VALVE - THREE LEVERS



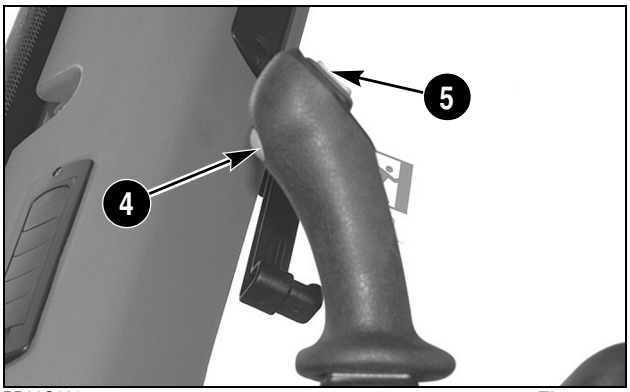
BS01E142A Figure 35

1. BUCKET AND LIFT ARM CONTROL
   - A. DUMP
   - B. ROLLBACK
   - C. HOLD: The loader arms and bucket will not move when the control lever is in the HOLD position. When released, the control lever will automatically return to the HOLD position. You must manually move the control lever from the FLOAT position to the HOLD position.
   - D. FLOAT (Detent): This is a detent position. When in the FLOAT (Detent) position, the loader bucket can follow the level of the ground without movement of the control lever.
   - E. LOWER
   - F. RAISE
2. AUXILIARY CONTROL
   - G. AUXILIARY FUNCTION
   - H. AUXILIARY FUNCTION
3. AUXILIARY CONTROL
   - I. AUXILIARY FUNCTION
   - J. AUXILIARY FUNCTION

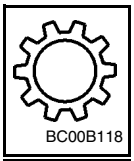
NOTE: *See Transmission Operation/Initial Machine Movement for moving the machine after start up.*



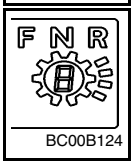
87536096 Figure 36



BD06G091 Figure 37



4. TRANSMISSION DOWNSHIFT BUTTON: Drops the transmission down one gear at a time.



5. FNR Switch: This switch will allow the operator to put the transmission in Forward, Neutral or Reverse. To activate this auxiliary F-N-R switch the proper sequence must be followed. The primary shift lever must be in the Neutral position before using the auxiliary FNR switch.Push the switch forward to place the transmission in Forward, place the switch in the middle position to place the transmission in Neutral, and pull the switch rearward to put the transmission in Reverse.

- A. Forward (Transmission)
- B. Neutral (Transmission)
- C. Reverse (Transmission)

BEFORE STARTING THE ENGINE

Perform a daily walk around and visual inspection of the machine. Check for loose connections, faulty hoses, oil leaks, debris or trash buildup, loose bolts, damaged, or missing parts that could effect the normal and safe operation of the machine. Make any necessary corrections before operating the machine.

See the Quick Reference Maintenance Chart in this manual and complete the items in the daily - 10 hour section of the chart.

Check that the machine fuel tank is filled with clean fuel that matches the specifications given in this manual.

WARNING: *Do not operate the machine while under the influence of alcohol or drugs. Failure to comply could result in serious injury or death.*

RUN-IN PERIOD

Your machine will last longer, give better and more economical performance, if you pay particular attention to the engine during the initial run-in period. (See the Quick Reference Chart in Chapter 5 Lubrication and Maintenance for further information.)

During this period:

Warm up the engine before using it under load.

Do not operate the engine at maximum power for prolonged periods of time.

Do not run the engine for a long period at idle speed.

Frequently check the instruments on the instrument panel.

Check the oil levels and coolant solution level frequently.

During the run-in period, the following checks and servicing operations should be carried out in addition to those specified in the service schedule:

IMPORTANT: *For turbocharged engines, only shut the engine down from the low idle position to prevent damage to the turbocharger.*

BEFORE OPERATING THE MACHINE

WARNING: *Do not attempt to operate this machine unless you have first read and fully understand the safety messages and instructions appearing in this manual. Failure to comply could result in serious injury or death.*

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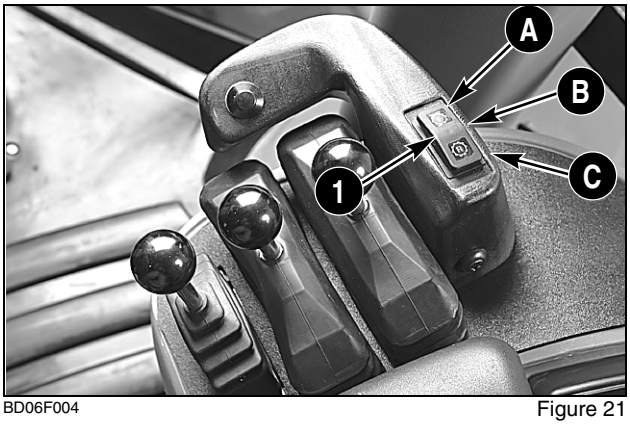
Before operating this machine, complete the following procedures:

1. Check the level of all fluids (engine oil, hydraulic fluid, and coolant) and make sure that the fluids and lubricants are suitable for prevailing conditions.
2. Carry out the daily maintenance operations.
3. Inspect the machine, look for any signs of possible leakage and check the hoses. Tighten or replace as necessary.
4. See Run-in period if the machine is new or if the engine has been reconditioned.
5. Check the tires for any visible damage. Replace or repair as necessary. Check for correct tire air pressure and adjust pressure if necessary.
6. Clean the steps and hand holds. Grease, oil, mud, or ice in winter on the steps and access handles can cause accidents. Make sure they are kept clean at all times.
7. Clean or replace any decals which are illegible. See Decals in Chapter 2.
8. Make sure that the engine access panels and all doors are properly closed and latched.
9. Secure the cab door in either fully closed or fully opened position.
10. Remove any obstructions which hinder visibility. Clean the windshield, the windows and the rear view mirrors.
11. Check that no tools or other items have been left on the machine or in the operator's compartment.
12. Make sure no one is on or under the machine. The operator must be alone on the machine.
13. Make sure no one is standing in the machine working area.
14. Find out about current safety measures in use on the work site.
15. Work out a convenient means of escape from the machine (emergency exit via the windshield, the rear or side window glass) in the event of the cab door being jammed or the machine turning over.
16. Before undertaking any travel or working operations during hours of darkness, make sure the lighting and signaling equipment is fully operative.

AUXILIARY FORWARD, NEUTRAL, REVERSE (F-N-R) SWITCH WITH THREE SPOOL VALVE THREE LEVERS



BD06F004 Figure 21

1. THREE LEVER AUXILIARY F-N-R SWITCH

   A. FORWARD

   B. NEUTRAL

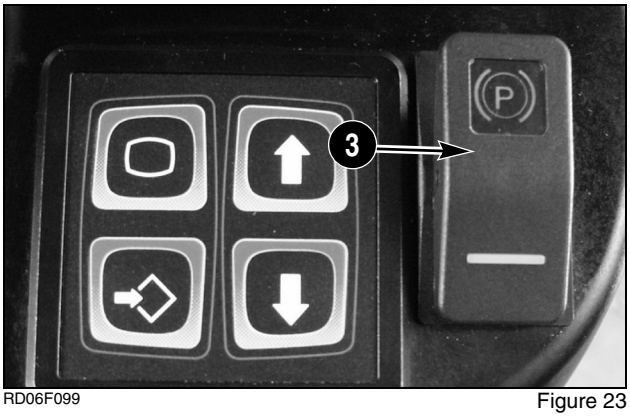
   C. REVERSE

To actuate the Auxiliary F-N-R switch the following conditions MUST be met:

1. The machine must be stopped.
2. The engine must be running.
3. The Auxiliary F-N-R Switch (1) must be in Neutral (B).

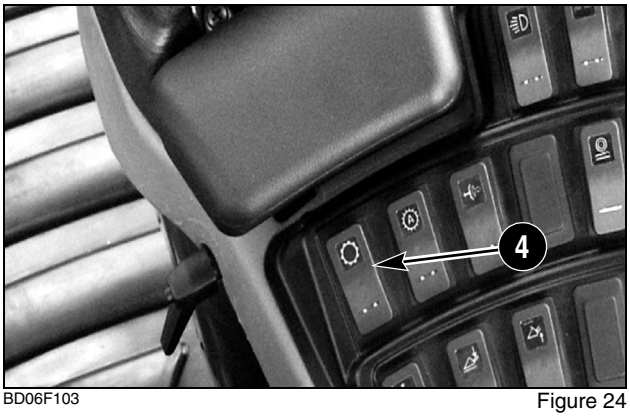
BD06F160 Figure 22

4. The Standard Transmission Control Lever (2) must be in neutral.



RD06F099 Figure 23

5. The Parking Brake must be released (3).



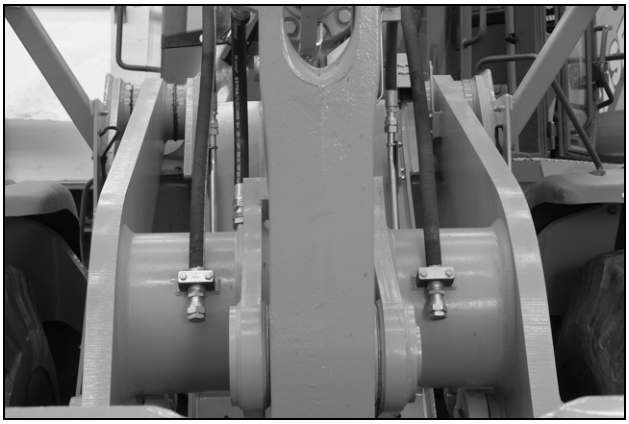
BD06F103 Figure 24

When steps 1 through 5 have been completed the transmission enable switch may be enabled by pushing down on the top of the switch (4). The indicator light on the bottom of the switch will illuminate.

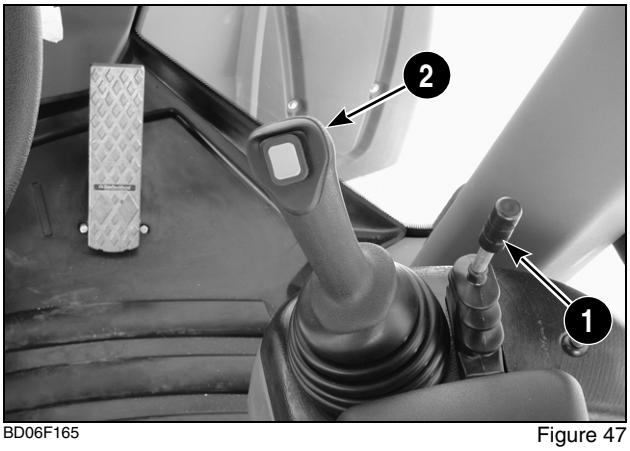
The transmission enable control will default back to the Standard Transmission Control Lever if:

1. The engine is stopped.
2. The parking brake is applied.
3. The transmission control lever is taken out of the neutral position.

AUXILIARY HYDRAULIC CONNECTION (IF EQUIPPED)



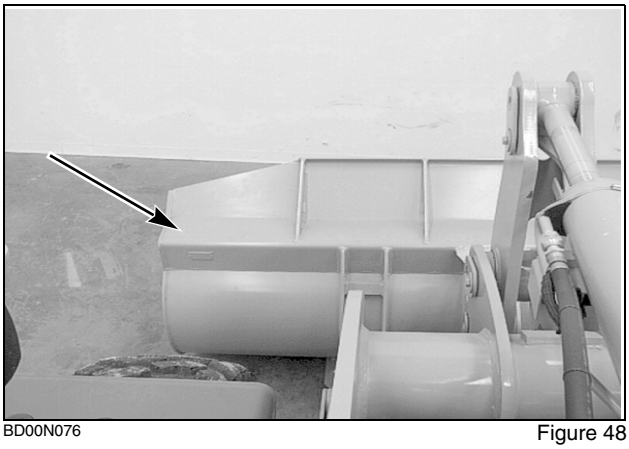
BD07A206 Figure 46



BD06F165 Figure 47

Your Wheel Loader may be equipped with an Auxiliary Hydraulic System. A control lever on the console controls flow to the auxiliary hydraulic connection points on the lift arms.The auxiliary control lever (1) used with a joystick (2) is equipped with mechanical detents to lock it into full forward, full rearward and neutral positions. Auxiliary control levers on non-joystick machines **DO NOT** have mechanical detents.

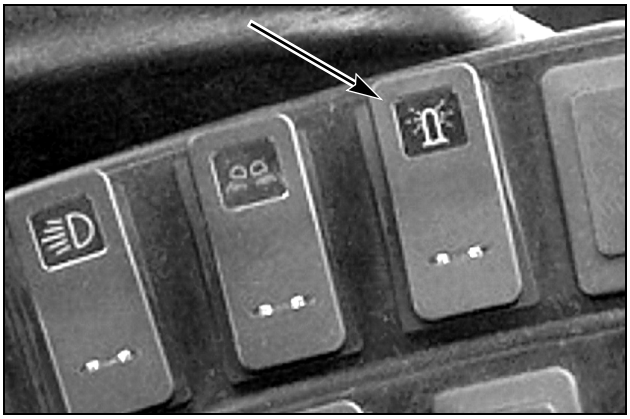
BUCKET LEVEL INDICATOR



BD00N076 Figure 48

The bottom of the bucket is parallel with the ground when the flat portion of the bucket is horizontal.

ROTATING BEACON (IF EQUIPPED)



BD06G089 Figure 49

The rotating beacon control switch is on the RH console. Push the top of the switch for ON position and push the bottom of the switch for OFF position.

Chapter 5
LUBRICATION, FILTERS, AND FLUIDS
TABLE OF CONTENTS

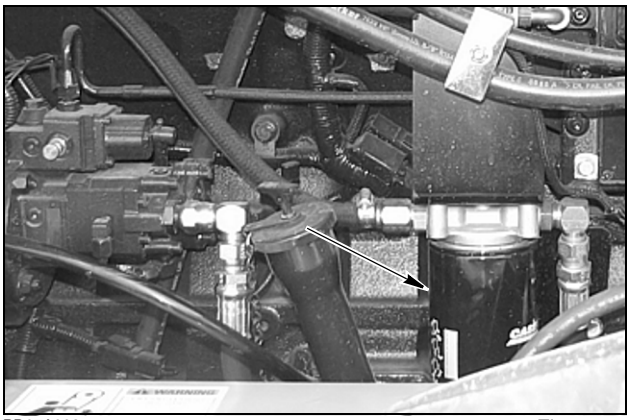
LUBRICATION AND MAINTENANCE QUICK REFERENCE CHART

SERVICE INTERVALS	PAGE	SERVICE POINTS	INITIAL NEW MACHINE	INTERVALS IN HOURS				
				CLEAN	CHECK	REPLACE	LUBRICATE	DRAIN
As Required	5-35	Air filter			AR	AR		
	6-6	Tires			AR			
Every 10 hours or shift change	5-15	Engine oil level			10			
	5-15	Air conditioner/alternator belt tension			10			
	5-15	Fuel water separator						10
	6-8	Wheel torque check (until stable)	Run-in		10			
Every 50 hours	5-16	Grease machine attachment					50	
	5-16	Hydraulic reservoir level			50			
	5-17	Transmission fluid			50			
	5-17	Coolant level			50			
Every 100 hours	5-18	Grease loader linkage					100	
	5-18	Grease steering pins					100	
	5-19	Drive shaft carrier bearing					100	
100 hours (Initial)	5-20	Engine oil and filters (initial only)	Run-in			100		
	5-21	Fuel filter (initial only)	Run-in			100		
	5-21	Hydraulic oil return filter (initial only)	Run-in			100		
	5-22	Front and rear axle oil (initial only)	Run-in			100		
	5-23	Transmission oil and filter (initial only)	Run-in			100		
Every 250 hours	5-24	Cab air filter		250				
	5-25	Coolant filter				250		
	5-25	Fuel filter				250		
Every 500 hours	5-26	Engine oil and filter				500		
	5-27	Drain fuel tank condensation						500
	5-27	Axle oil level			500			
	6-4	ROPS and seat belt			500			
	7-6	Battery fluid level			500			
Every 1000 hours	5-28	Pivot points/articulation fittings					1000	
	5-29	Axle oil (front and rear)				1000		
	5-30	Axle oil cooler filter (if equipped)				1000		
	5-31	Transmission fluid and filter				1000		
	5-32	Hydraulic oil filter				1000		
	5-32	Cab air filter				1000		
Every 1500 hours		Engine valve clearances	See your Case Dealer					
Every 2000 hours	5-33	Hydraulic fluid				2000		
	5-34	Engine coolant and filter				2000		
	5-35	Primary air filter				2000		
	5-35	Secondary air filter				2000		

100 HOUR MAINTENANCE

REPLACE FUEL FILTER (Initial)

Change the fuel filter when the hour meter registers 100 hours for a new machine during the initial run-in period. Filters should be changed every 250 hours thereafter or more frequently when operating conditions are severe.



BD07A023 Figure 37

Clean the filter head area, the outside of the filter and remove any dirt and debris around the area that might contaminate the system.

1. Keep all non-authorized personnel clear of the area. Park the machine on level ground, in neutral with the parking brake applied.
2. Lower bucket/attachment to the ground and install the transport/service link into the lock position.
3. Turn the filter counterclockwise and remove. Be sure to capture any fuel remaining in the lines or the filter and discard properly.
4. Apply a thin layer of clean oil to the gasket on the new filter.
5. Install the filter. Use your hands to tighten the filter 1/2 to 3/4 turn after the filter makes contact with the filter head.

IMPORTANT: *Never use a filter wrench to tighten a new filter on install.*

WARNING: *Engine fuel is flammable and can cause a fire or an explosion. Do not fill the fuel tank or service the fuel system near an open flame, welding, burning cigars, cigarettes, pipes, etc. Failure to comply could result in serious injury or death.*

REPLACE HYDRAULIC OIL FILTERS (Initial)

Replace the hydraulic oil filters when the hour meter registers 100 hours for a new machine during the initial run-in period. Filters should be changed every 1000 hours thereafter or more frequently when operating conditions are severe.

WARNING: *Fluid under pressure. Always rest the hydraulic bucket/attachment on the ground. Shut the engine off, turn the key to on, and move the hydraulic control levers through all movements several times to relieve residual pressure in the system. Failure to comply could result in serious injury or death.*

1. Keep all non-authorized personnel clear of the area. Park the machine on level ground, in neutral with the parking brake applied.
2. Lower bucket/attachment to the ground and install the transport/service link into the lock position.

WARNING: *Never drain oil or remove the oil filter while the engine is running. Failure to comply could result in serious injury or death.*

3. Slowly loosen the filler cap on the hydraulic reservoir to release pressure in the reservoir. Leave it loose during the procedure.
4. Turn the filters counterclockwise to remove.

BD07A024 Figure 38

(COVER BRACKET REMOVED FOR VISUAL CLARITY)

5. Lubricate the gasket of the new filter(s) with clean oil and install. After the filter makes contact with the filter head tighten 1/2 to 3/4 turns.

IMPORTANT: *Never use a filter wrench to tighten a new filter on install.*

6. Tighten the cap on the hydraulic reservoir.
7. Start the engine and run at 1000 rpm. Have an assistant check for leaks around the filter area.
8. Stop the engine, and check the hydraulic oil level. Top off if necessary.

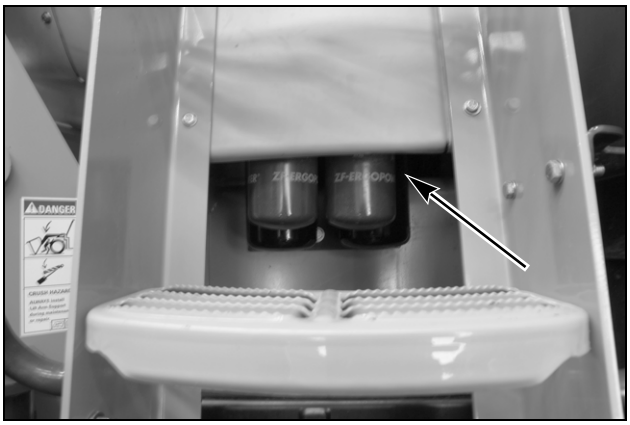
1000 HOUR MAINTENANCE

TRANSMISSION FLUID AND FILTER

Service Specifications

With filter change. . . . . 7.5 gal. (28.4 L)

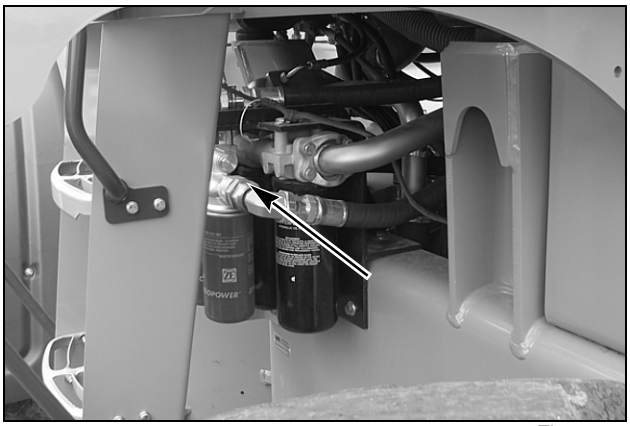
Change the transmission fluid and filter every 1000 hours or more frequently when operating conditions are severe.



BD07A195 Figure 65

TRANSMISSION FILTERS (LEFT SIDE)

1. Keep all non-authorized personnel clear of the area. Park the machine on a level surface and apply the parking brake.
2. Lower bucket/attachment to the ground and lock the pilot control lock lever.
3. Put the transport/service link into the locked service position to avoid unexpected articulation, and stop the engine.



BD07A031 Figure 66

(COVER REMOVED FOR VISUAL CLARITY)

4. Clean the area around the filter head and around the transmission drain and fill caps.
5. Remove the dipstick.
6. Have a suitable container that will hold the appropriate amount of fluid before draining.

BD02N124 Figure 67

7. Remove the drain plug and drain the oil.

BD07A024 Figure 68

(COVER REMOVED FOR VISUAL CLARITY)

8. Remove the filter.
9. Apply a film of clean transmission oil to the gasket of the new filter and install. Make sure that the proper contact is made with the base.
10. Spin the breather, located on the top of the transmission a few times.
11. If the breather is difficult to spin follow steps 12 and 13.
12. Remove the breather. Clean it with solvent and dry with compressed air.

> **WARNING:** *Wear full coverage safety glasses with side panels when using compressed air. Failure to comply could cause injury or death.*

13. Install the breather.
14. Check the oil level at the sight gauge.
15. Start the engine and check for oil leaks around the filter and drain plug.
16. Bring the transmission oil up to working temperature, and check the level again.

WHEELS AND TIRES

WARNING: *Exploding tires and / or rim parts can cause injury or death. Keep yourself and others out of the **danger area**. Stand on the tread side of the tire. Always use the correct air pressure and follow the instructions in this manual for adding air or servicing the tires.*

SD020

WARNING: *Explosive separation of the tire and / or rim parts can cause injury or death. When tire service is necessary, have a qualified tire technican service the tire.*

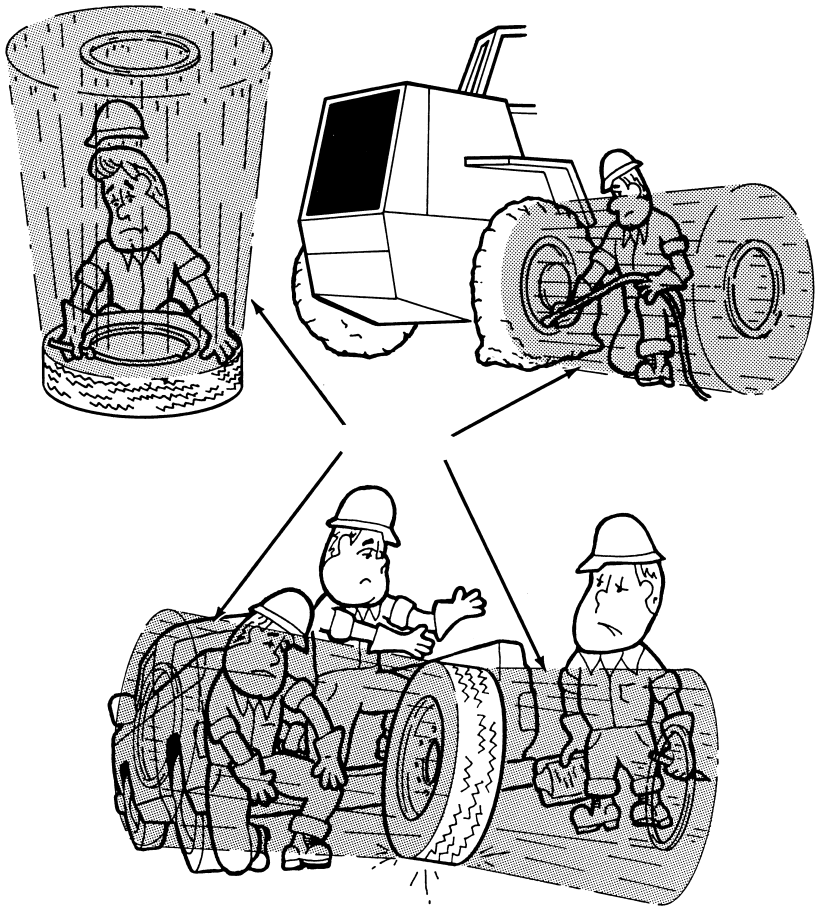
84-113

WARNING: *DO NOT weld to wheel or rim when a tire is installed. Welding will cause an explosive air / gas mixture that will be ignited with high temperatures. This can happen to tires inflated or deflated. Removing air or breaking the bead is not adequate. **Tires MUST be completely removed from the rim prior to welding.** Failure to comply could result in serious injury or death.*

SB134

BALLAST

Adding ballast to the tires of your wheel loader is **NOT** recommended. Make sure tires are properly inflated.



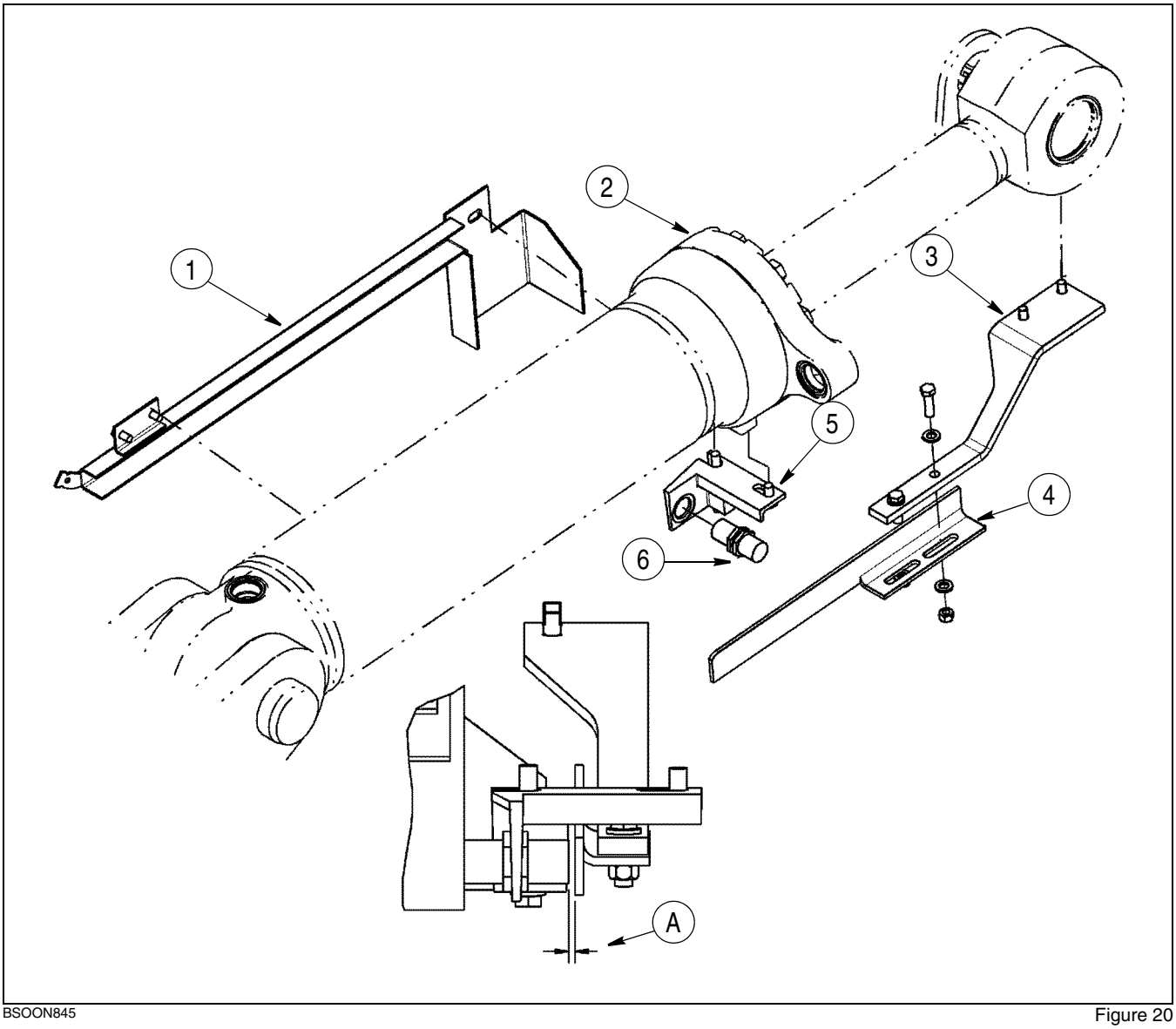
B910410J

Figure 5

The above illustration show danger areas caused by exploding tires and / or rim parts. KEEP YOURSELF AND OTHERS OUT OF THESE DANGER AREAS. Keep all non-authorized personnel clear of the area.

The next page shows the correct methods that you MUST use when adding air or servicing a tire.

RETURN TO DIG ADJUSTMENT PROCEDURE



BSOON845

Figure 20

1.TARGET MOUNTING BRACKET
2. BUCKET CYLINDER
3. TARGET BAR
4. PROMIMITY SWTICH MOUNTING BRACKET
5. PROXIMITY SWITCH
6. PROXIMITY SWITCH GUARD
A. 3.2 TO 5.0 MM (1/8 TO 3/16 INCH)

IMPORTANT: *Before adjusting the return to dig, make certain that the target bar on the bucket linkage is not damaged. Slowly roll back and dump the bucket and make certain that the target bar stays the same distance from the switch. The switch mounting bracket protects the switch. Make certain the target bar cannot touch the switch when the bucket is dumped.*

1. Keep all non-authorized personnel clear of the area. Park the machine on firm, level ground. Raise the lift arms until they are approximately horizontal. Fully dump the bucket. Lower the arms until bucket edge is on the ground. Apply the parking brake, and stop the engine.
2. Loosen the bolts holding the target mounting bracket (3) to the tilt cylinder eye. Align the target mounting bracket (3) parallel to the tilt cylinder (2), and tighten the bolts.
3. Loosen the bolts holding the proximity switch mounting bracket (5) to the tilt cylinder (2). Position the proximity switch (6) parallel to the target bar (4) and tighten the bolts.
4. Adjust the proximity switch (6) out toward the target bar (4), until an air gap of 3.2 to 5.0 mm (1/8 to 3/16 inch) (A) is obtained. Torque the jam nut to 6.0 to 7.5 N•m (4.5 to 5.5 pound-feet)

NOTE: *The proximity switch (6) must not protrude past the proximity switch guard (1).*

ELECTRICAL SYSTEM

BATTERY SAFETY

WARNING: *Before you service a battery, always wear face protection, protective gloves and protective clothing. Battery acid or battery explosion can cause serious injuries. Failure to comply can cause injury or death.*

SA046

WARNING: *Batteries give off explosive gases. Keep all open flames, sparks and cigarettes away. Insure adequate ventilation when charging batteries or when using in a confined place. Always protect your face when working near batteries. Failure to comply can cause injury or death.*

SAFETY_ID_1C02

WARNING: *Battery acid causes severe burns. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing.*

Failure to comply can cause injury or death.

Antidote - EXTERNAL: flush with water.

INTERNAL: drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call physician immediately.

EYES: flush with water for 15 minutes and get prompt medical attention.

SB032

WARNING: *When the battery electrolyte is frozen, the battery can explode if, (1) you try to charge the battery, or (2) you try to jump start and run the engine. To prevent the battery electrolyte from freezing, try to keep the battery at full charge. If you do not follow these instructions, you or others in the area can be injured. Failure to comply can cause injury or death.*

SA033

WARNING: *Connecting jump start (booster battery) cables incorrectly or short- circuiting battery terminals can cause an accident. Connect auxiliary starting cables as per the following instructions. Failure to comply can cause injury or death.*

SAFETY_ID_1C02

WARNING: *Sparks or flame can cause hydrogen gas in a battery to explode. To prevent an explosion, do the following:*

1. *When you DISCONNECT the battery cables, always disconnect the negative (1) battery cable first.*
2. *When you CONNECT the battery cables, always connect the negative (-) cable last.*
3. *Do not short circuit the battery posts with metal items.*
4. *Do not weld, grind, or smoke near a battery.*

Failure to comply can cause injury or death.

SB034

WARNING: *Do not reverse battery terminals. Connect positive cable ends to positive (+) terminals and negative cable ends to negative terminals (-). Failure to comply can cause machine damage, injury or death.*

SAFETY_ID_1C02

WARNING: *Before any operation on the components of the electrical circuit, put the key switch in the off position. When disconnecting the battery cables, always disconnect the negative (-) cable first. When reconnecting the battery cables, always connect the negative (-) cable last. Failure to comply can cause machine damage, injury or death.*

SAFETY_ID_1C02

WARNING: *Whenever carrying out a welding operation on the machine (authorized by the manufacturer and in accordance with manufacturer's instructions) or any repairs on the electrical system, disconnect the B+ and D+ wires from the alternator. When reconnecting, check the markings on the wires. Failure to comply with the following warnings could result in machine damage, serious injury, or death.*

Chapter 8

SPECIFICATIONS

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