W14

Operator’s Manual

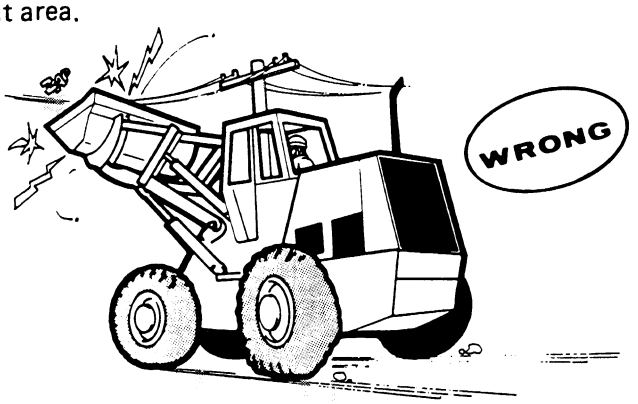
9-9360

CASE

DANGER: *Do not permit any part of the machine to come in contact with electric cables. If work must be done near electric cables, first make sure the Utility Company disconnects the power. It is not necessary for the machine to be in contact with the electric cable for the electricity to go through the machine. If the machine does come in contact with a power line, stay in the seat. Do not try to get off the machine. KEEP AWAY FROM THE METAL PARTS OF THE MACHINE.See the chart that follows.* 4-4-B

Voltage of Electric Cables	Minimum Amount of Clearance from the Electric Cables When the Machine is Working	Minimum Amount of Clearance from the Electric Cables When You Drive the Machine Between Jobs
50,000 volts or less	10 feet (3 m)	4 feet (1.2 m)
Over 50,000 volts	10 feet (3 m) plus 1/2 inch (10 mm) for every 1,000 volts over 50,000 volts	10 feet (3 m)
345,000 - 750,000 volts		16 feet (5 m)

NOTE: If the clearances in the specifications above are less than the clearances given in the rules and laws of your area, you must follow the rules and laws of that area.



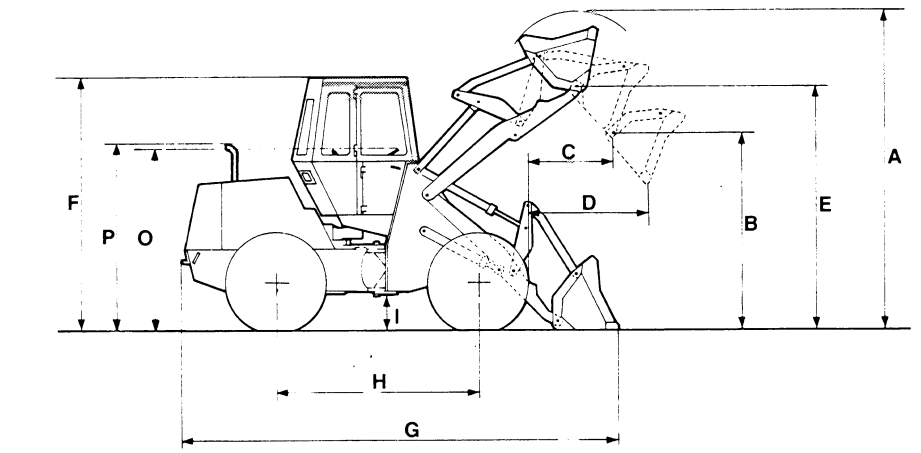
WARNING: *Keep the transmission in low gear when going down hills. Only use the right brake pedal to slow or stop the machine. The left brake pedal allows the machine to freewheel before the brake is applied. Do not allow the machine to freewheel down the hill.* 22-2-A

DO NOT OPERATE TAG

When you service, put a Do Not Operate tag on the instrument panel. A Do Not Operate tag, Case Part Number 321-4614 is included with each new machine. You can get extra tags from your Case dealer.

Fig. 1

OPERATING DIMENSIONS



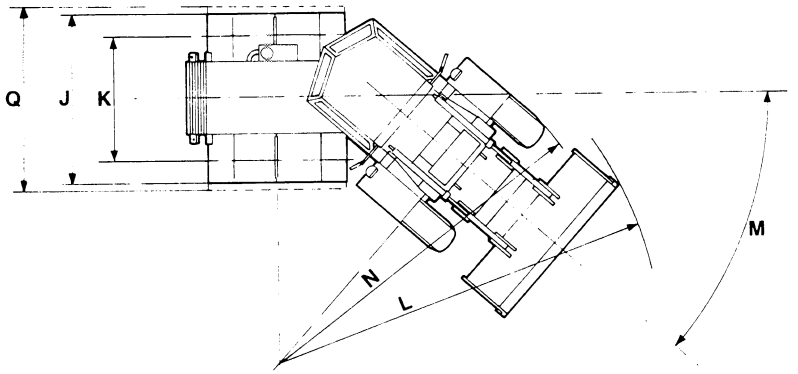


Fig. 7

WITH 1,15 m^3 BUCKET

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
4.400	2.710	813	1.260	3.400	3.200	5.710	2.540	385	2.130	1.720	4.980	40°	4.450	2.370	2.380	2.200

WITH 0.97 m^3 BUCKET

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
4.330	2.750	750	1.230	3.400	3.200	5.630	2.540	385	2.130	1.720	4.900	40°	4.450	2.370	2.380	2.200

OPERATOR'S COMPARTMENT

SPEEDOMETER: (Optional) Indicates machine speed and kilometres run. See figure 16.

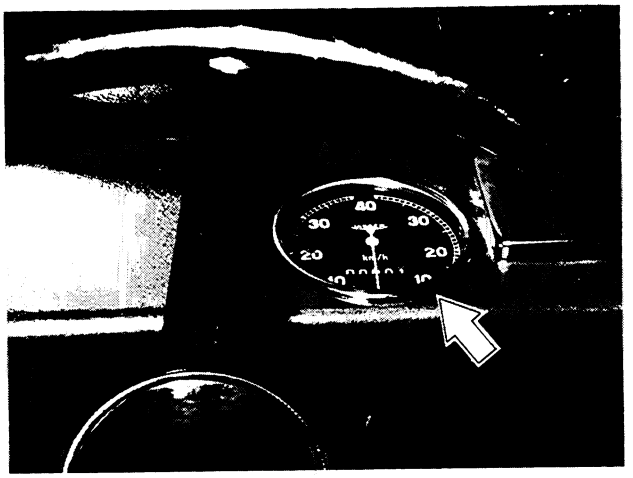
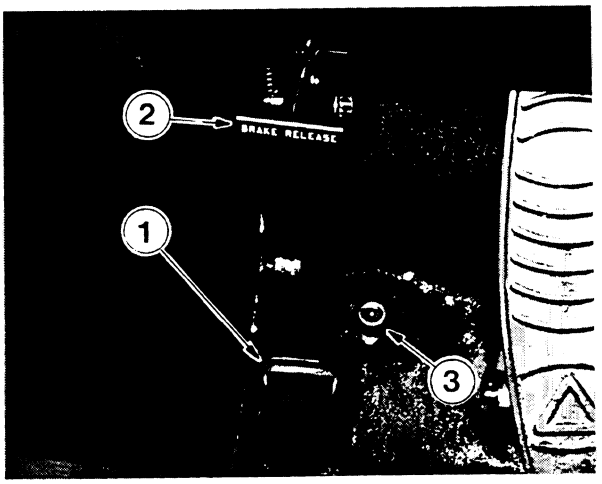


Fig. 16

PARKING BRAKE: Pushing the pedal downwards engages the parking brake. To release, pull the control out and the pedal will return to its original position. See figure 17.



1 - Pedal
2. Control
3. Horn

Fig. 17

HORN: To operate the horn, press the button. See figure 17.

OPERATOR'S SEAT BELT

(Use Seat Belt Only if Machine Has a ROPS cab)

NOTE: The illustrations that follow show the correct procedure to fasten, release, tighten and loosen the belt. Refer to page 128 for correct inspection and care of seat belt.

CAUTION: *Always fasten seat belt securely before starting engine.*
D-17-6

Fig. 29

WARNING: *Do not have a burning cigarette, cigar, etc., when you use starting fluid. Never make a hole in the starting fluid container. Do not use starting fluid near an open flame or put the starting fluid container into a fire. Use only small amounts of starting fluid. Never put starting fluid in storage in a hot area.* 1-10-A

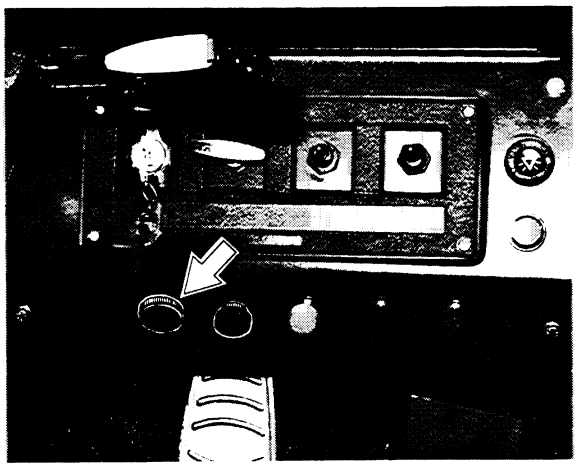


Fig. 37

1. Refer to "Starting the Engine" on pages 57.
2. Push down the foot throttle until it is 1/3 open.
3. Turn the key of the ignition switch to the Start position.
4. After the starter motor is engaged, push and release the Cold Start button two times. When the engine starts, release the key.

   NOTE: If the engine runs for a short time and then stops, engage the starter again, push and release the Cold Start button one time. If the engine does not fire, stop injecting ether and check the supply of ether in the Cold Start can.

   NOTE: When installing new ether cans, refer to pages 123.

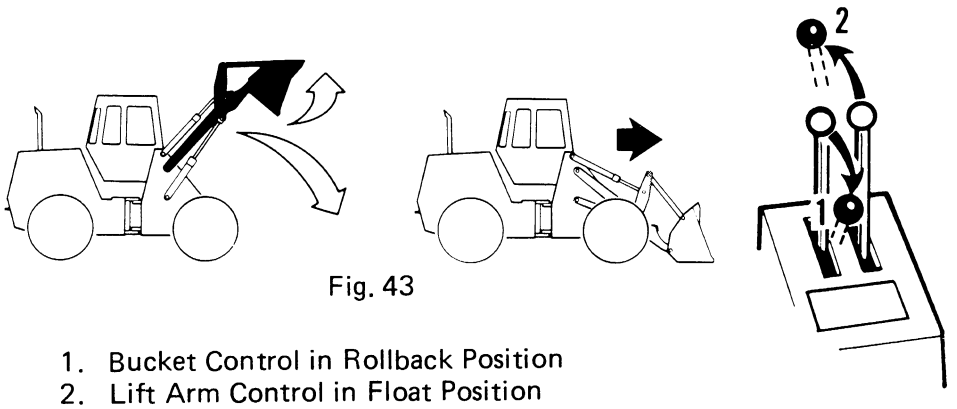


Fig. 43

1. Bucket Control in Rollback Position
2. Lift Arm Control in Float Position

At the end of the cycle, the bucket lever will automatically release from the Rollback position and return to Hold position. The lift arm lever will remain in the Float position and must be manually returned to the Hold position.

Bucket Height Control

This control enables the operator to preset the dump height of the bucket when loading hoppers, trucks, etc. Move the lift arm lever to the Raise position. In this position the lever is detented and will return automatically to the Hold position at the end of the cycle. The bucket will be raised and stopped automatically when the desired height is reached. For height adjustment, see page 136.

Clutch Cutout

A clutch cutout system is built into the brake system. The clutch cutout provides a convenient means of temporarily disengaging the transmission to make full engine power available to operate the loader.

To engage the clutch cutout, depress the left-hand brake pedal. When you let up on the pedal, the transmision is re-engaged. The right-hand brake pedal has no effect on clutch cutout.

WARNING: *Keep the transmission in low gear when going down hills. Only use the right brake pedal to slow or stop the machine. The left brake pedal allows the machine to freewheel before the brake is applied. Do not allow the machine to freewheel down the hill.*

22-2-A

Safety Decals on the Machine

Make sure that you can read all safety decals and all instruction decals. Check these decals every 10 hours of operation. Clean these decals if you cannot read the words.

When you clean the decals, use only a cloth, water and soap. Do not use solvent, gasoline, etc.

You must replace a decal if (1) the decal is damaged, (2) the decal is missing or (3) the decal cannot be read.

If a decal is on a part that is replaced, make sure you install a new decal on the new part. See your Case dealer for new decals.

Do Not Operate Tag

When you service, put a Do Not Operate tag on the instrument panel. A Do Not Operate tag, Case Part Number 321-4614, is included with each new machine. You can get extra tags from your Case dealer.

Fig. 48

ENGINE COOLING SYSTEM

Coolant Level

CAUTION: *Pressure cooling system. Remove cap slowly and only when engine is cool or painful burns could result.* D-28-2

Check the coolant level every 10 hours of operation or each day. When the coolant is cold, the coolant must be two inches (50 mm) below the level of the radiator opening. Add coolant if necessary. Do not add coolant above the correct level.

Ethylene Glycol Coolant

A mixture a 50 % ethylene glycol and 50 % water must be used in this machine. This mixture is used if the lowest ambient temperature is above -34° F (-37° C). If the ambient temperature is lower, adjust the mixture. It is recommended that ethylene glycol and water be used in your machine all year.

IMPORTANT: Mix the ethylene glycol and water completely by running the engine at operating temperature for approximately five minutes. This procedure must be done before the machine is put outside in temperatures below 32° F (0° C).

Cleaning the System

Clean the cooling system as required. Clean more often in areas where hard water, containing scale forming minerals is all that is available.

1. While the coolant is still hot, open the radiator drain valve and the engine block drain valve. Remove radiator cap to aid draining. Drain coolant thoroughly and close drain valves.
2. Add a radiator cleaner to the system and refill with clean water. Use a cleaner marketed by a reputable manufacturer. Follow directions provided with the cleaner.
3. Check hoses, elbows, pump and water manifold for leakage.
4. Drain the cleaning solution and water. Flush the system with clean water.
5. Clean dirt off exterior of radiator. Blow out dirt between fins with compressed air.
6. Refill cooling system with the recommended coolant.

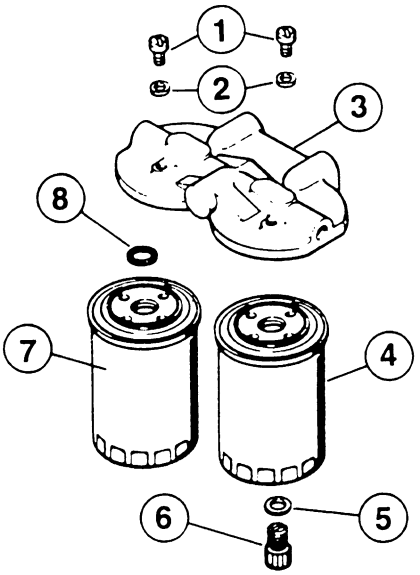


Fig. 65

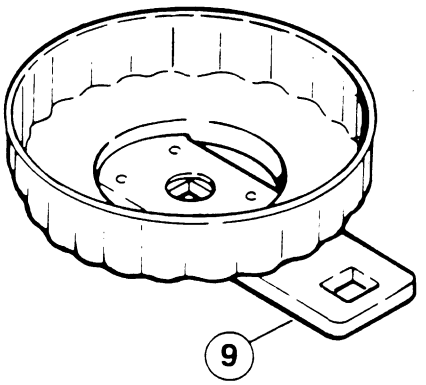


Fig. 66

1. Bleed valve
2. Washer
3. Filter head
4. First stage filter
5. Washer
6. Drain plug
7. Second stage filter
8. Stud gasket
9. Filter wrench (A64761)

Hydraulic Oil Change

Every 1000 hours of operation or every six months, whichever comes first (1) change the hydraulic reservoir oil, (2) change the hydraulic filter and (3) clean the suction screen.

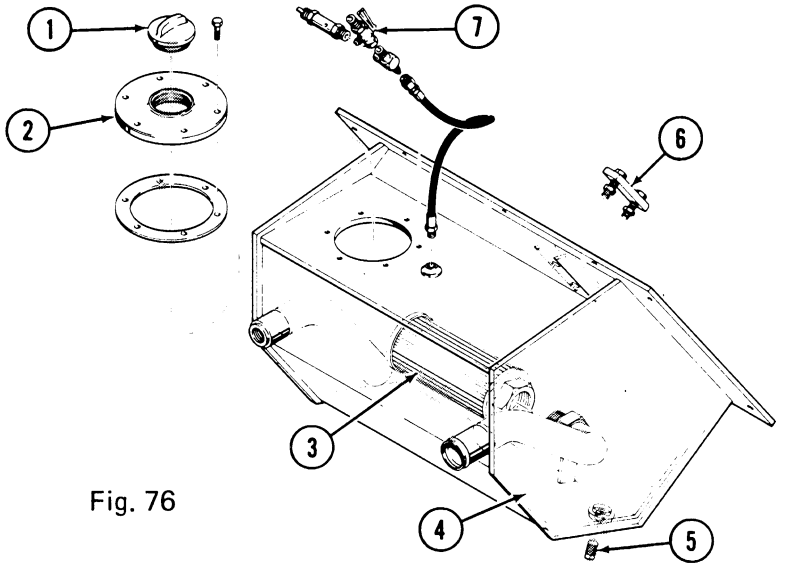


Fig. 76

1. Fill Cap With O-ring
2. Access Cover With O-ring
3. Suction Screen
4. Hydraulic Reservoir
5. Drain Plug
6. Sight Gauge for Oil Level
7. Air Pressure Valve

1. Make sure the oil is at operating temperature.
2. Lower the loader bucket to the ground.
3. Stop the engine and put a Do Not Operate tag on the key switch.
4. Open the access door to the hydraulic reservoir.
5. Put a container under the drain plug that will hold 61 litres.
6. Turn the air pressure valve 90° to the Off position.

Oil Change

Intervals between changes

The interval between oil changes is 1000 hours. The oil and the filter elements should be replaced more frecuently when the oil is contaminated or overheated. The presence of dirt, water or foreign matter in the oil may damage the transmission or give unsatisfactory performance.

To change the oil

The transmission should be hot to get a better flow. Remove the drain plug, see figure 91, and the mesh filter and oil filter assembly. Allow the system to thoroughly drain before replacing the plug. Clean the mesh filter. Replace the oil filter cartridge according to the instructions on page 117.

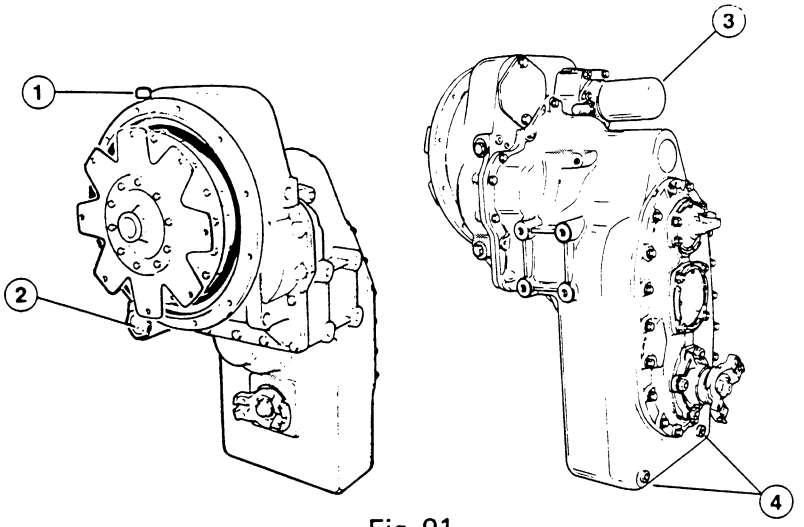


Fig. 91

1. Breather
2. Mesh filter
3. Oil filter
4. Drain plug

With the mesh filter and the filter element correctly installed, replace the drain plug and fill with 23.5 litres of oil through dipstick filler plug.

DANGER: *Keep clear of this area when engine is running. Machine could pivot unless the frame pivot safety link is in its lock position. After servicing is completed, unlock the safety link and secure in place on the rear frame pivot.* D-32-4

Operator's Seat and Trim

Your Case Cab is equipped with an optional soft fabric trimmed seat and panels of soft foam material for maximum operator comfort. The care and maintenance of these parts will ensure many satisfactory hours of comfort.

CARE AND CLEANING - Dust and loose dirt that accumulates on seat fabric should be removed frequently with a vacuum cleaner, wisk broom or soft brush. Normal cleanable soilage, spots or stain can be cleaned with the proper use of fabric cleaners.

Before attempting to remove spots or stains from upholstery, determine as accurately as possible the nature and age of the spot or stain. Some spots or stains can be removed satisfactorily with water or mild soap solution.

For best results, spots or stains should be removed as soon as possible. Some types of stains or soilage such as oil and certain types of grease are extremely difficult and, in some cases, impossible to completely remove. When cleaning this type of stain or soilage, care must be taken not to enlarge the soiled area. It is sometimes more desirable to have a small stain than an enlarged stain as a result of careless cleaning.

CAUTION: *When cleaning interior soft trim do not use volatile cleaning solvents such as acetone, lacquer thinner, carbon tetracholoride, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents. Never use gasoline or naptha for any cleaning purpose. These materials may be toxic or flammable, or may cause damage to interior trim.* 32-2-A

CLEANING WITH CLEANING FLUID - This type of cleaner should be used for cleaning stains containing grease, oil or fats. Excess stain should be gently scraped off trim with a clean dull knife or scraper. Use very little cleaner, light pressure, and clean cloths (preferably cheese cloth). Cleaning action with cloth should be from outside of stain towards center and constantly changing to a clean section of cloth.

When stain is cleaned from fabric, immediately wipe area briskly with a clean absorbent towel or cheese cloth to help dry area and prevent a cleaning ring. If ring forms, immediately clean entire area.

NOTE: Sometimes a difficult spot may require a second application of cleaning fluid followed immediately by a soft brush to completely remove the spot.

2. While the engine is still hot, drain the coolant from the cooling system. When engine has cooled, put in clean, soft water and permanent type antifreeze in the porportions recommended by the antifreeze manufacturer for the lowest expected temperature. Start engine, get it up to operating temperature and run it for several minutes to thoroughly mix water with antifreeze.

Batteries

DANGER: *Batteries produce explosive gases. Keep sparks, flame and cigarettes away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.* D-38-14

After charging batteries to near full charge, remove them from machine and store in a dry, moderately cool place. Place batteries on a wood pallet or similar insulating material and, if possible, store them in a building where temperatures remain above freezing (32° F, 0° C). Periodically check batteries for proper electrolyte level and test electrolyte with a hydrometer. When hydrometer readings near 1,200, the battery is close to complete discharge. When necessary, recharge batteries to keep readings well above 1,200 so that the electrolyte will not freeze.

Equipment Hydraulic System

1. Place wood planking on the ground and lower the loader bucket on it.

2. After engine has stopped, move bucket control levers through several cycles to relieve pressure in hydraulic system.

3. Coat the hydraulic cylinder rods with special Case rust and corrosion preventative.

4. Open the drain-cock on the bottom of the air reservoir to drain out water and sediment and relieve the air pressure in the tank. When reservoir is completely depressurized, the air pressure gauge reading should be zero.

5. Loosen the dipstick SLOWLY at the top of the hydraulic reservoir and relieve air pressure in the tank.

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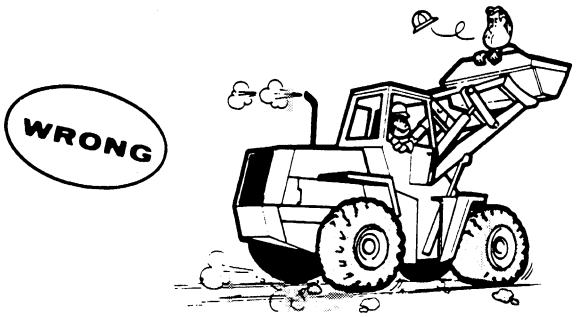
WARNING: *A warning light in the machine will come on if the air pressure in the brake system is decreased below normal.*

CAUTION: *Never allow riders.* D-17-9



CAUTION: *Keep all personnel clear of loader arms, attachments and articulated joint area.* D-46-71

WARNING: *Operate the controls only from the operator's seat. Personal injury can be caused if you operate the controls from any other location.* 2-5-A

CAUTION: *Keep hands on proper controls at all times while operating.* D-46-69

CAUTION: *Be careful when you leave the machine. Use the hand rails and steps on the machine. Any other method can cause injury.* 27-2-B

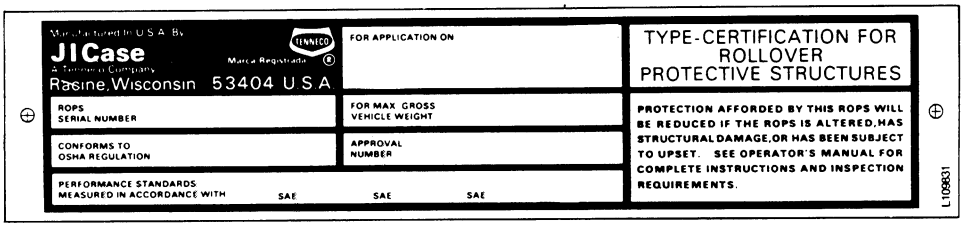
CAUTION: *Always carry load low.* D-9-10

ROPS Safety Precautions

WARNING: *Do not remove the ROPS except for service. Install the ROPS correctly before you operate the machine again.* 3-10-A

WARNING: *Do not modify ROPS in any manner. Unauthorized modifications such as welding, drilling, cutting or adding attachments could weaken the structure and reduce your protection. Replace ROPS if subjected to rollover or damage. Do not attempt to repair. See operator's manual for complete instructions and inspection requirements.* D-46-91

WARNING: *Do not install attachments that will cause the total gross vehicle weight of the machine to exceed the weight shown in the "FOR MAXIMUM GROSS VEHICLE WEIGHT" space on the ROPS label.* D-46-56-A



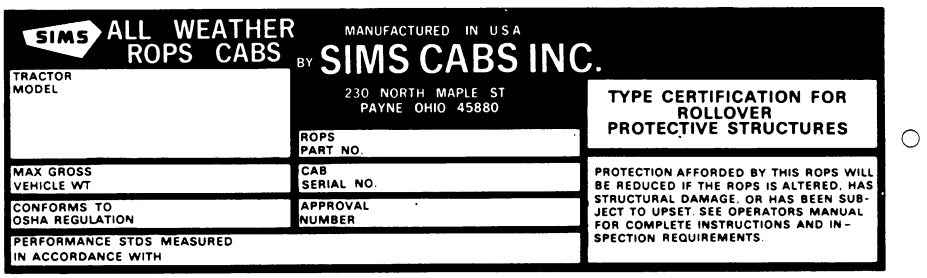


Fig. 2

WARNING: *Special hardware is used to fasten the ROPS to the machine. You must use only the replacement parts shown in the Case parts catalog for this machine.* 4-9-A

WARNING: *Always fasten the seat belt before you start the engine. Make sure the buckle for the seat belt is fastened correctly.* 8-5-A

LOADER OPERATING DATA AND DIMENSIONS (WITH 0,97 m³ BUCKET)

DIMENSIONS

A	Overall operating height	170,4" (4.330 mm.)
	Maximum dump angle. Full height	50'
B	Dump clearance at maximum height, 45° dump	108,2" (2.750 mm.)
	Dump reach:	
C	At maximum height 45° dump	29,5" (750 mm.)
D	At 7' (2134 mm) dump height, 45° dump	48,4" (1.230 mm.)
E	Height to bucket hinge pin	133,8" (3.400 mm.)
F	Height to top of cab	125,9" (3.200 mm.)
G	Overall length, bucket on ground	221,6" (5.630 mm.)
H	Wheel base	100" (2.540 mm.)
I	Ground clearance	15,1" (385 mm.)
J	Width to outside of tires	83,8" (2.130 mm.)
K	Tread, standard tires	67,7" (1.720 mm.)
L	Turning radius to bucket outside	192,9" (4.900 mm.)
M	Turning angle, left or right	40°
N	Turning radius to the outside of tires	175,1" (4.450 mm.)
O	Height from the steering wheel to the ground	93,3" (2.370 mm.)
P	Height from the exhaust to the ground	93,7" (2.380 mm.)
Q	Rubber fenders (only Germany)	86,6" (2.200 mm.)

GENERAL SPECIFICATIONS (WITH 0,97 m³ BUCKET)

SAE Operating weight	16.005 lbs. (7.260 kgs.)
Efforts	
Lift capacity at ground level	16.644 lbs. (7.550 kgs.)
Lift capacity to maximum height	8.421 lbs. (3.820 kgs.)
Breakout force at the bucket	13.889 lbs. (6.300 kgs.)
Max. tipping load with the machine straight	12.125 lbs. (5.500 kgs.)
Tipping load, full turn	10.405 lbs. (4.720 kgs.)

To calculate the operation load of the machine, take half of the tipping load in any of the several positions.

Cycle times

Raising	6"
Dumping	4"
Lowering	2"
TOTAL	12"

TACHOMETER: The engine tachometer is located on the front panel above the restriction indicator (see figure 20). The gauge indicates engine speed in hundreds of rpm's. An engine hourmeter is located in the lower half of the gauge which indicates hours and tenths of hours the engine has run.

AIR CLEANER RESTRICTION INDICATOR: This gauge indicates the amount of dirt and dust in the air cleaner. When the red band shows full in the window, stop the engine and service the air cleaner elements. After the air cleaner has been serviced, push in the reset button. See figure 20.

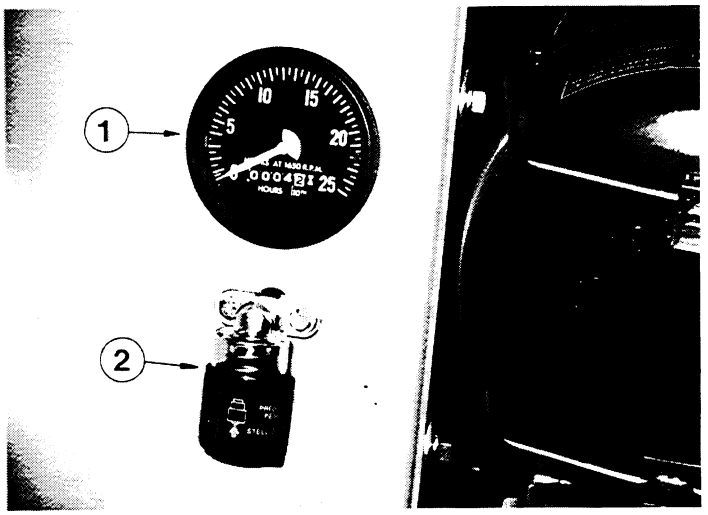


Fig. 20

1 - Tachometer
2 - Air cleaner restriction indicator

The levers are held by electromagnets in the Raise and Rollback (Crowd) positions and must be returned to Hold manually.

NOTE: When loading the bucket (Tilt lever in Rollback position) on units equipped with Return-To-Dig, hold the lever in position manually. It is possible for the lever to return to Hold before you get the desired amount of rollback.

When the control lever is placed in the Float position, the bucket is free to follow the contour of the ground.

4-In-1 Bucket Controls (Optional)

Clam Control Lever

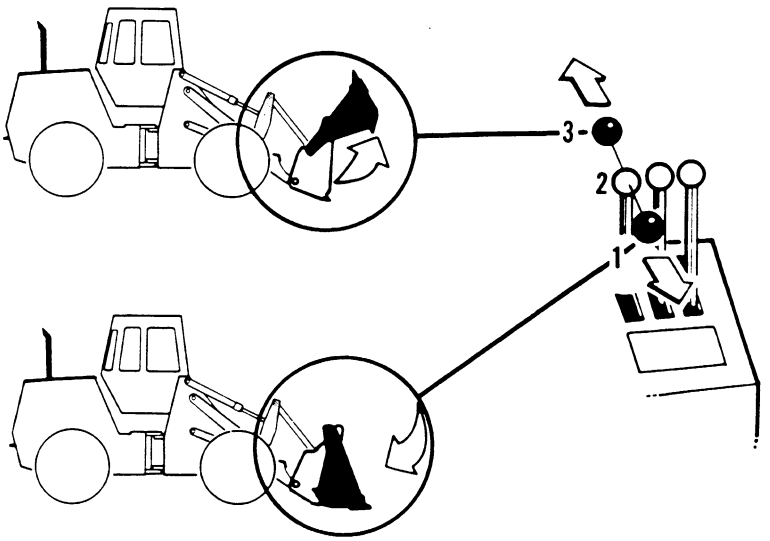


Fig. 31

1. Close
2. Hold (Neutral)
3. Open

OPERATING THE MACHINE

When the engine is warm, decrease the engine speed to idle and do the following:

1. Check the instruments.

2. Raise the loader bucket about two feet (600 mm) above the ground.

3. Test the parking brake:

   a. Put the transmission control in High Range position.

   b. Engage the parking brake.

   c. Increase the engine speed to full throttle. The machine must not move.

   IMPORTANT: If the machine moves, see your Case dealer or refer to the service manual for this machine and service the brakes.

4. Release the parking brake after the air pressure gauge pointer is in the green area.

Converter Overheating

To avoid converter overheating and possible transmission damage, especially in severe, hot working conditions, avoid operating the machine continuously at or near a stall speed contition (engine wide open but wheels not turning).

If the machine has been operating in high range and the converter temperature gauge needle nears the red zone, downshift from high to low range to avoid overheating.

If the temperature gauge needle enters the red zone, stop machine immediately, place transmission in neutral and run engine at full speed until the needle goes back into the green zone.

If the converter continues to overheat, see your Case dealer.

FUELS AND LUBRICANTS

DIESEL ENGINE

In temperatures above 32° F (0° C), use number 2 diesel fuel in your Case diesel engine. See NOTE. When you operate in temperatures below 32° F (0° C), use number 1 diesel fuel.

NOTE: If the temperature lowers to the "Cloud Point" of the diesel fuel, wax particles will be in the fuel. These wax particles will cause a restriction of the fuel filters. Then, the engine power will decrease. See your fuel dealer for more information.

Diesel Fuel Specifications

Different manufacturers can have diesel fuels of different specifications. All diesel fuel used in Case diesel engines must be the same quality as specification D975 of the American Society for Testing Materials. See the following chart.

Diesel Fuel Specification Chart

Cloud point, maximum (No. 2 diesel fuel)	-10° F (-23° C)
Pour point, maximum	10 Fahrenheit degrees (6 Celsius degrees) below lowest atmospheric temperature at which engine must start and operate.
Cetane number, minumum	40 (45-55 for winter or high altitudes)
Sulphur, by weight, maximum	50 of 1 %
Water and sediment, by volume, maximum	05 of 1 %
Ash, by weight, maximum	01 of 1 %
Carbon residue on 10 %, maximum	20 of 1 %
Distillation, 90 % point	540° -625° F (282° - 329° C)
End point	675° F (357° C)
Flash point, minimum	125° F (51° C) or legal
Viscosity, centistokes at 100° F (38° C)	2.0-4.3
Saybolt Universal Seconds at 100° F (38° C)	32-40
Corrosion, copper strip, 3 hours at 212° F (100° C)	No. 3 ASTM
API gravity, minimum	30

WARNING: *Do not put fuel into the machine if (1) the engine is running, (2) you are near an open flame or (3) you have a burning cigarette, cigar, etc. You can cause a fire and a serious injury.*

6-6-A

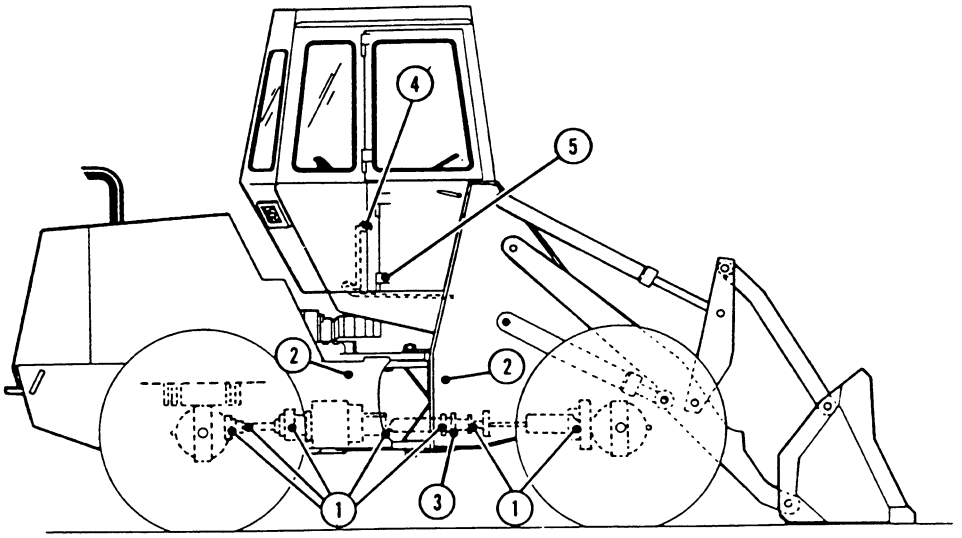


Fig. 50

1. Driveshaft universals and slip spline 7
2. Steering cylinder pivots (2 each side) 4
3. Front shaft support bearing 1
4. Control lever pivots (1 each lever) 2-3
5. Cab door hinges 4
   (use powdered graphite)
6. Suspension seat 9
   (See illustration, lubricate slide rails with Lubriplate)

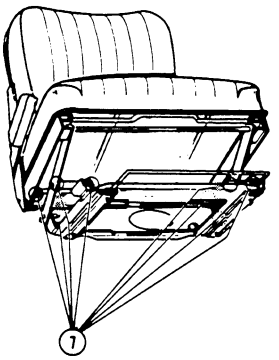


Fig. 51

DRIVE BELTS

WARNING: *Rotating fan and belts: Contact can injure. Keep clear.*
D-39-13

Your machine is equipped with the following belts:

1. Matched set of fan and alternator belts.
2. Brake system compressor belt.
3. Air conditioner compressor belt (if machine is equipped with air conditioning).

Fan Belts

Check the matched set of engine fan belts after every 500 hours of operation. If too tight, the belts can cause rapid wear of alternator and water pump bearings. If too loose, the belts may slip, wear fast, and permit engine overheating and battery run-down.

Belt Tension

Properly adjusted fan belts can be depressed 1/2 inch (12 mm) midway between the fan pulley and the crankshaft pulley. A belt tension gauge, used between the two pulleys, should give a tension reading of 110 pounds (50 kg) on a new belt, and 90 pounds (41 kg) on a belt that has been run-in. To tighten belts, loosen the adjusting bolt at the strap on top of the alternator, and swing the alternator away from the engine. When adjusting belts, pry against pulley housing only.

Parking, stop, turn signal, number plate and fog lights

To replace light bulbs, unscrew the plastic holder and remove the bulb Reinstall plastic holder after replacing bulbs.

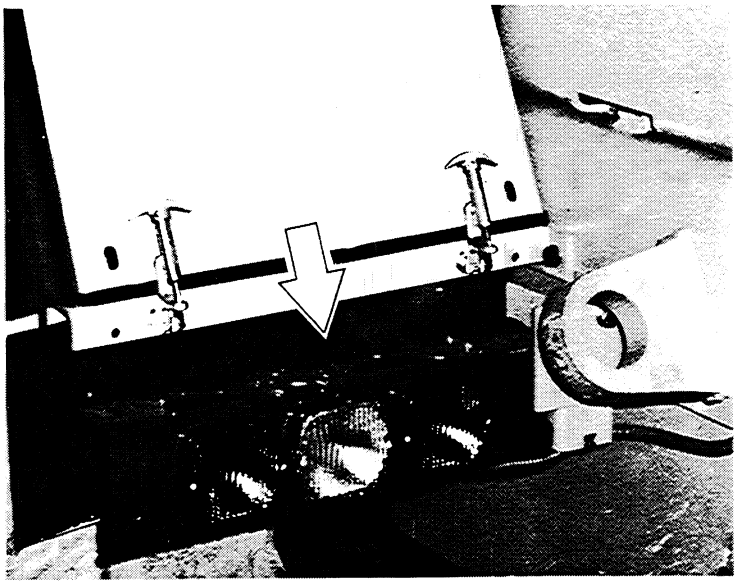


Fig. 69

Cab Dome Light

To replace the bulb, remove the lens retaining screws and remove lens. Install new bulb and reinstall lens.

BRAKING SYSTEM

Left pedal

Using the left pedal disconnects the drive to the transmission at the same time as applying the brakes. This allows full engine power to be diverted from the transmission to the hydraulic circuit if required.

Right pedal

The right pedal is for normal braking and should be used when negotiating steep slopes or other rough ground.

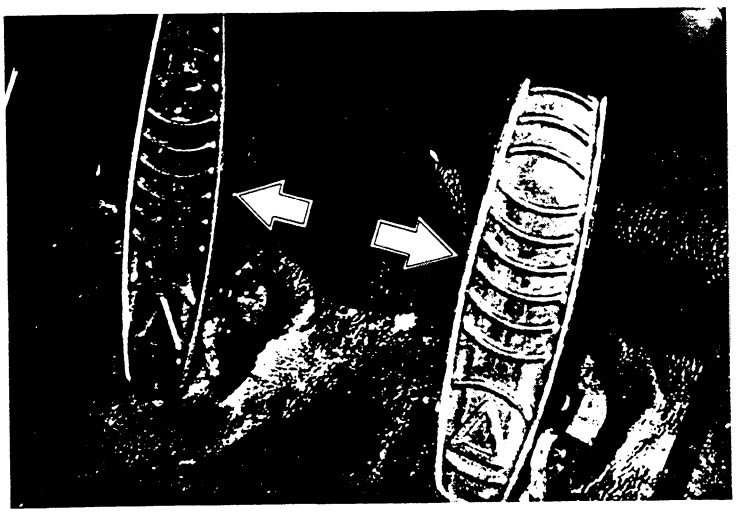


Fig. 77

ATTENTION: When working in difficult conditions or on steep gradients never use the left brake pedal because the engine cannot be used as a brake through its retarding effect. To prevent this always use the right brake pedal so that full retardation can be used.

FRONT AND REAR AXLES

The differential and planetary ends of each axle share a common oil level. Circulation of lubricant between wheel ends and the center bowl is partially restricted by gears, bearings, washers and other components. The lubricant MUST be checked as specified; and the lubricant MUST be installed correctly, especially if the machine is to be used immediately after an exle oil refill.

Oil Level

Every 250 hours check the oil level in each axle.

The oil level can be checked at either wheel end of an axle. Park the machine on a LEVEL surface, so that the oil level lines on one wheel end are parallel to the ground. Remove the oil fill plug. The oil level should be even with the bottom of the plug opening.

NOTE: If one planetary is lower than the other, check oil level at center bowl fill plug.

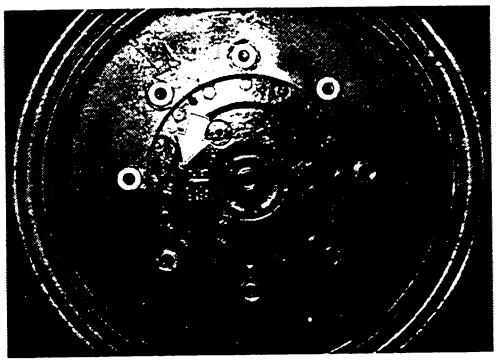


Fig. 93

Oil Change

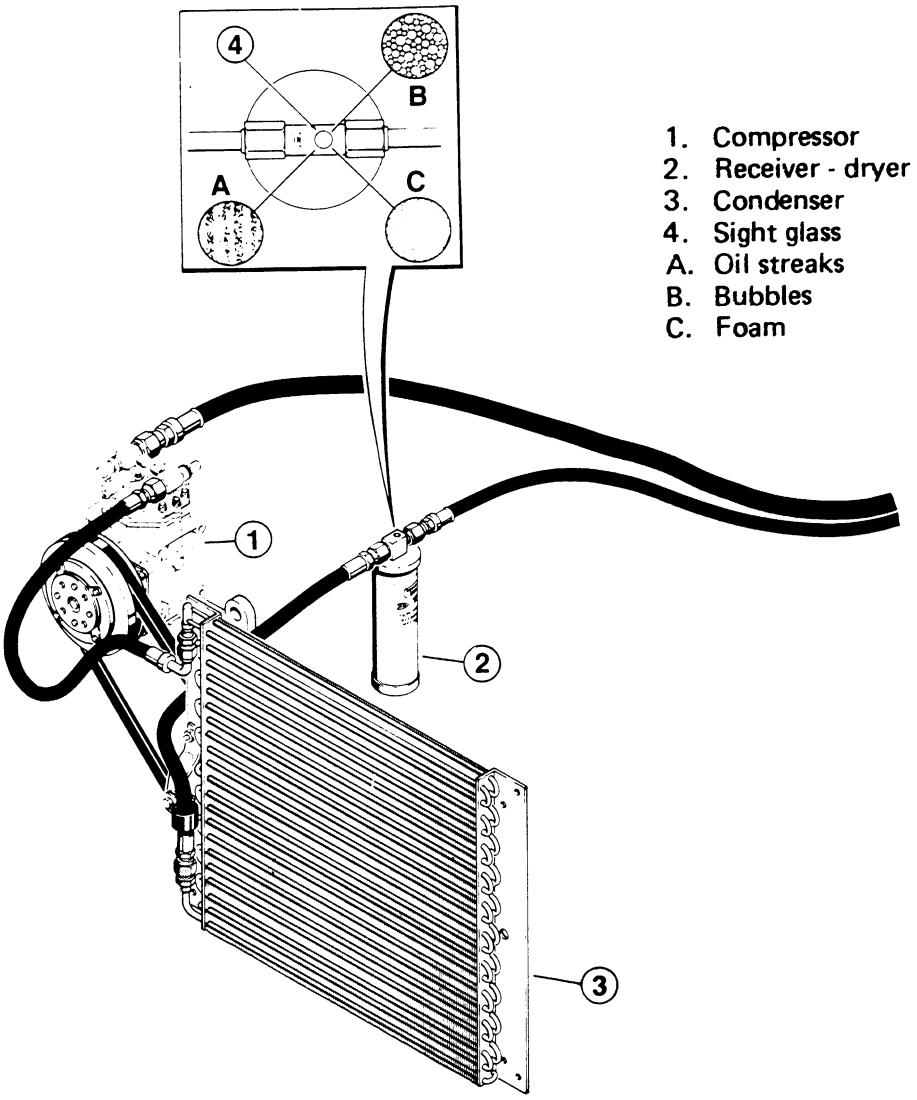
Change the axle oil every 1000 hours of operation or each year.

Draining

1. Park the machine on a level surface with the drain plug on each wheel end in the bottom position. If necessary, jack up the axle and move the wheels into position by hand.

Checking Refrigerant (Optional Equipment)

The refrigerant sight glass, which is located in the top of the receiver drier, should be checked before the start of the summer season and whenever a noticeable loss of cooling is experienced.



1. Compressor
2. Receiver - dryer
3. Condenser
4. Sight glass

A. Oil streaks
B. Bubbles
C. Foam

Fig. 98