

KOBELCO

OPERATOR'S MANUAL
HYDRAULIC EXCAVATOR
MD120LC

Applicable: MD120LC YP-0417~

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

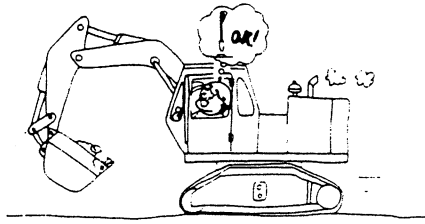
- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- 15) Be sure to engage swing lock during transportation or when travelling.



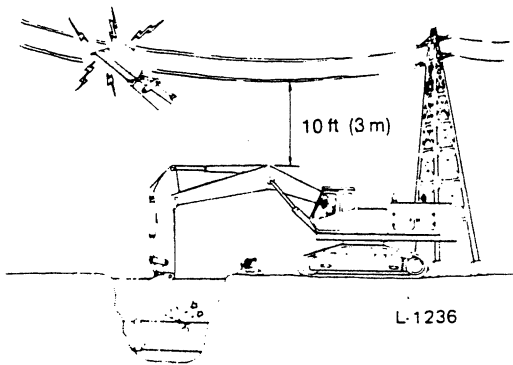
L-1663

- 16) Ascertain the exact location of buried gas pipes, water pipes and telephone lines before starting the job and appoint an experienced groundman in a good position to give signals. The operator should take instructions from this appointed groundman only.



WARNING

1. Never operate any part of machine closer than 10 ft (3 m) to any live power lines. (Check local power company codes and regulations, and conform to them if different from above)
2. The design and construction of this machine does not incorporate any electrical in-sulating members in any part of the front attachment components, that would afford protection against electrical shock and/or possible electrocution from contact with live power lines, not to mention possible machine damage that could occur under these circumstances.

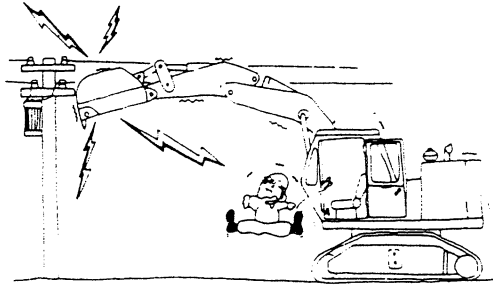


L-1236

- 17) In case the machine comes into contact with live power lines, the operator should remain in his seat until the power is cut off.

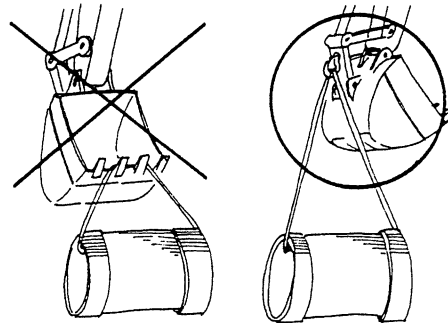
If he must leave the machine, he should jump off, not climb down.

Also, do not let anybody on the ground touch the machine. While any part of it is in contact with a live power line.



L-1664

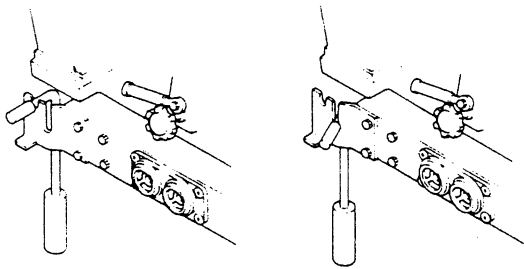
- 18) Since this machine is an excavator, please use extreme caution when handling heavy loads.



WARNING

Do not exceed the machine's capacity charts. Use only approved slings and shackles (clevises). Never lift a load from the bucket teeth.

(23) Swing lock pin



[Lock Disengaged]

[Locked]

CAUTION

Always lock the upper machinery during transportation and during self-travelling. Make sure pin is fully seated in lock up position when released.

(24) Control lever lock

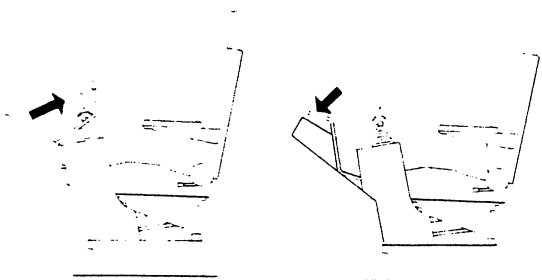
If the control lever lock located on the lefthand side of the seat is brought to the lock position, the machine does not operate even though the attachment lever is operated after starting the engine. Set it at the lock position when not operating to insure safety.

Always release the lever from its locked condition before start of operation.



WARNING

Pull the lock lever to its lock position. Note that the lock lever is dangerous in its middle position as the lock may be released in that position.



[Locked]

[Lock Disengaged]



WARNING

The travel control pedals operate after start of the engine even if the control lever lock is applied.

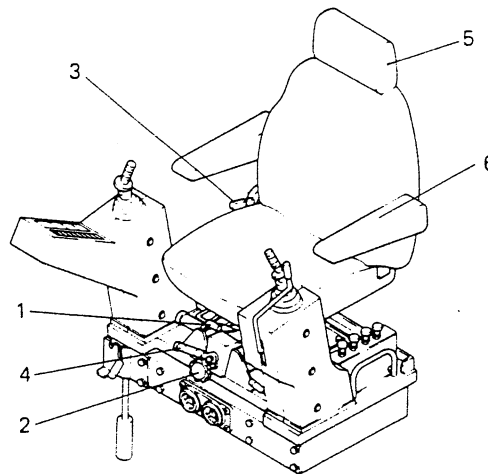
CAUTION

Always lock the control lever after completion of work and at transportation of the machine.

(25) Horn Switch

ADJUSTMENT OF OPERATOR'S SEAT

The operator's seat is of reclining type. Adjust it so you can operate the machine in a comfortable position.



(1) Front/rear adjustment

Pull the lever on the front side upwards to make front/rear adjustment.

Adjusting stroke: 80 mm (3.1")

(2) Height adjustment

Turn the knob for vertical adjustment according to operators height.

Adjusting stroke:

Height riser: 100 mm (3.9") (STD)

Suspension: 50 mm (2.0") (Option)

(3) Reclining adjustment

Lifting the adjust lever upwards permits front/rear adjustment. The reclining adjustment is possible in fourteen steps.

(4) Cushion Spring Adjustment

Turn the ratchet handle (+) or (-). Seat spring can be adjusted to 'hard' or 'soft' by turning the handle.

NOTE

Covering the entire radiator is also a method to aid warm-up. If necessary, especially in cold areas, cover part of the radiator to maintain sufficient warmth during operation.

- 3) In accordance with the Engine Manual, use engine oil with a suitable viscosity.
- 4) In low temperatures, low viscosity fuel must be used. Select a suitable fuel from the "Lubrication" chart in this manual.
- 5) Use hydraulic oil suitable to the climate in accordance with the "Lubrication" chart.

CAUTION

When hydraulic oil is cold, move all the control levers slowly.

- 6) When there is a sudden drop in temperature in winter or in cold areas, the cooling water can freeze and result in damage to the radiator, cylinder block or cylinder head.

In order to prevent this, use a permanent type antifreeze for year-round protection.
To fill anti-freeze, proceed as follows.



WARNING

Use extreme caution when removing the radiator cap, as hot water may gush out when the engine is hot.

- a) Open the drain plugs of the radiator and the engine block to completely drain the cooling water in the system.
- b) Then, tighten each drain plug sufficiently and fill in a fifth of the volume of the cooling water.
- c) Add the required quantity of anti-freeze specified in the mixing table and fill it to the level directly below the overflow pipe of the radiator. Thereafter, open the lid of the sub-tank and fill it in to the "FULL" line.

NOTE

1. The anti-freeze mixture to be refilled should be of the same concentration as that originally filled.

2. Decide the concentration of the anti-freeze so that its freezing point is 41°F (5°C) lower than the lowest anticipated temperature of the area in which your machine is working.
3. Take in to consideration the wind chill factor when deciding protection temperature. Also, keep in mind that transportation of unit by truck in winter can subject it to much lower wind chill temperatures !

CAUTION

If coolant in the radiator become discolored due to rust and other matter, clean the cooling system thoroughly and pressure test cooling system and radiator to check for possible problems causing rust to form.

- 7) When using the heater in cold weather, always open the heater cock.
- 8) Keep the battery fully charged at all times. A discharged battery will freeze before a fully charged battery.

CAUTION

1. Keep the battery terminal connections clean and free from snow and ice. Otherwise the terminals may short circuit. If the cable connector and battery terminals are corroded, use a soda solution to remove the corrosion.
 2. When leaving the machine out-of-doors overnight or for an extended period of time in cold weather, it is advisable to remove the batteries and store them in a warm area.
- 9) After completion of work, clean the crawlers and drive the machine onto wooden planks to prevent crawlers from being frozen to the ground. Extend the boom, arm and bucket as much as possible so as to reduce the exposed areas of the cylinder rods. Also, wipe off any water on the exposed part of the cylinder rods.

8. 250 HOUR MAINTENANCE

In addition to "8 hour, 50 hour and 120 hour maintenance," perform the following.

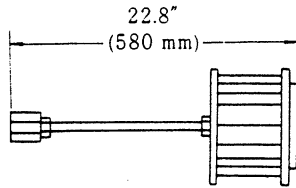
No.	Item (Location Code)	Contents	Remarks
1	Air cleaner (E-6)	Clean element.	Refer to page 4-16.
2	Return filter (H-2)	Replace element.	Refer to page 4-17.
3	Engine oil pan (E-2)	Change engine oil.	Refer to Engine Manual.
4	Engine (E-8)	Check.	Refer to Engine Manual.
5	Swing bearing (L-8)	Lubricate.	Refer to page 4-13.
6	Cap screws and nuts	Check and retighten.	Refer to page 4-24.

9. 500 HOUR MAINTENANCE

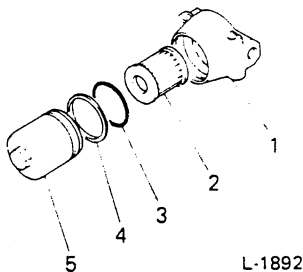
In addition to "8 ~ 250 hour maintenances," perform the following.

No.	Item (Location Code)	Contents	Remarks
1	Radiator and oil cooler (E-5)	Check and clean.	Refer to page 4-11.
2	Radiator (E-1)	Change cooling water.	Refer to page 4-11.
3	Engine oil filter (E-3)	Replace element.	Replace the element if the engine oil filter lamp lights within 500 hours.
4	Fuel filter (E-4)	Replace element.	Refer to Engine Manual.
5	Engine (E-8)	Check.	Refer to Engine Manual.
6	Swivel boots (U-9)	Check for wear and damage.	Refer to page 4-12.
7	Swing grease bath (L-5)	Drain water.	Refer to page 4-13.
8	Swing gear and swing pinion (L-6)	Check for wear and damage.	Refer to page 4-13.
9	Swing reduction unit (U-10)	Change oil (First).	Refer to page 4-22.
10	Travel reduction unit (L-7)	Change oil (first).	Refer to page 4-22.
11	Drain filter (H-3)	Replace cartridge.	Refer to page 4-18.
12	Hydraulic oil tank (H-4)	Drain water.	Refer to page 4-17.

- 4) Reassemble the suction strainer ass'y following the reverse procedure of disassembly and insert this into the tank.
- 5) Install new O ring (11) and then install flange (8).



REMOVAL AND INSTALLATION OF PILOT LINE FILTER



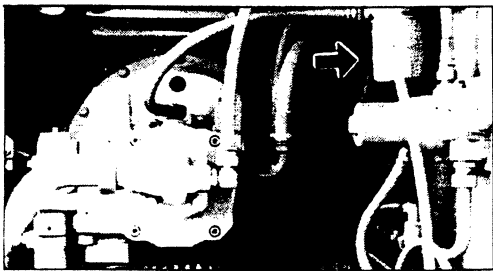
- 1) Remove case (5) with a wrench.
- 2) Pull out filter element (2).
- 3) After cleaning or replacing the element, install new O ring (3) and back-up ring (4) on to case (5), then screw it into head (1).

REPLACEMENT OF DRAIN FILTER

Remove the cartridge turning it counterclockwise with the provided tool, clean the dirt accumulated at the bottom of the filter rest and install a new cartridge element. To install the cartridge, turn it about 2/3 of a turn after the packing of the cartridge contacts the seal surface of the filter rest. Be sure to tighten this with your hands only.

CAUTION

Be careful not to overtighten at the time of installation.



[Drain Filter]

OIL LEVEL OF HYDRAULIC OIL TANK

Refer to "Check Hydraulic Oil Level" in "Pre-operation /8 Hour Maintenance" for the hydraulic oil tank level. Always maintain the proper level.

CHANGE OF HYDRAULIC OIL

- 1) Remove the drain plug and drain the oil into a suitable container. Allow sufficient time for all the oil to drain from the walls of the tank.



WARNING

Before opening the tank release all air pressure from the tank.

- 2) Remove the cover from the top of the tank and clean the inside of the tank manually.
- 3) Install the drain plug. Fill the tank with hydraulic oil.
- 4) Cycle the machine through all excavator functions including travelling several times in both directions.
- 5) Release air pressure and remove the drain plug and drain the flushing hydraulic oil from the tank.
- 6) Disconnect the hoses attached to the retract side of the boom cylinders, and raise the boom to its maximum elevation slowly. This will force the flushing oil from the cylinders.



WARNING

This operation must be done slowly to avoid flushing oil gushing out of the hoses. This applies to 9 and 10 below also.

- 7) Reconnect the hoses to the boom cylinders, and lower the boom to a horizontal position. Add clean oil to the tank as required to maintain the proper oil level.
- 8) Disconnect the hoses attached to the retract side of the arm cylinder. Extend the arm cylinder to force the flushing oil from the arm cylinder.
- 9) Reconnect the arm cylinder retract hose and retract the arm cylinder. Add oil to the tank, as required, to maintain the proper level.
- 10) Disconnect the hose attached to the retract side of the bucket cylinder, and extend the cylinder. This will force the flushing oil from the cylinder.

25. STORAGE OF MACHINE

It is very important to store the machine with the greatest care after the machine has been removed from service for an extended period of time to keep the machine in good condition.

Store the machine indoors in a dry atmosphere. If circumstances do not permit the machine to be stored inside, place the machine on dry, solid and level ground and cover it with sheets.

PREPARATION FOR STORAGE

- 1) Clean the entire machine.
- 2) Check the machine for loose or lost parts. If necessary, retighten or replace.
- 3) Lubricate the machine in accordance with the "Lubrication" chart. Be sure to flush swing bearing thoroughly until old grease oozes out.
- 4) Fully extend the bucket. Fully extend the arm and lower the boom. Coat the exposed portions of the cylinder piston rods with anti-rust grease.
- 5) Fill the fuel tank.
- 6) Remove the battery, clean it thoroughly and store it in a cool, dry location where the temperature will not fall below 0°C.
- 7) If there is a possibility of freezing weather, either add anti freeze to the cooling water or drain the water out completely. Be sure to place a "No Water" sign on the machine.
- 8) Check and service all tools for proper storage.

DURING STORAGE

- 1) Run the engine once a month for a short while to allow oil to circulate throughout the engine.
Be sure to wipe off grease from the hydraulic cylinder rods and check the cooling water before starting the engine.
- 2) Check the charged condition of the battery once a month and if necessary, charge the battery.

BEFORE RE-USE

- 1) Clean all dirt accumulated during storage.
- 2) Check the condition of the air cleaner element.
- 3) Drain water from the fuel tank, engine oil pan and hydraulic oil tank.
- 4) Open the drain plugs of the various gear cases and clean out water deposits and dirt, and then refill with the prescribed amount of oil to the gear cases.
- 5) Wash off anti-rust grease coated over the exposed parts with light oil.
- 6) Install a fully charged battery and connect the terminals.
- 7) Before performing the first run after being removed from storage, make a thorough visual inspection of the machine. Check particularly for damage and/or deterioration of the hydraulic hoses.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL