PART NO. EM164-5-3

Operator's Manual

UH082

Hydraulic Excavator

Serial No. 13331~

HITACHI

1. SPECIFICATIONS

1.1 Standard Specification

Type	UH082 Hydraulic excavator
Type of front	Long arm front or short arm front
Standard bucket capacity	0.7 m^3 (7/8 cu.yd) heaped
Gross weight	18500 kg (40800 lb)
Main machine weight	15000 kg (33100 lb)
Engine	Hino EL100,77kw/1750min^{-1}(105PS/1750rpm)
A: Overall width	2760 mm (9'1")
B: Cab height	2805 mm (9'2")
C: Turning radius at rear	2700 mm (8'10")
D: Minimum ground clearance	400 mm (1'4")
E: Ground clearance under swing body	1070 mm (3'6")
F: Engine cover height	2297 mm (7'6")
G: Width of swing body	2535 mm (8'4")
H: Length of track (crawler)	3920 mm (12'10")
I: Width of track (crawler)	2760 mm (9'1")
J: Center distance between tumblers	3095 mm (10'2")
K: Standard shoe width	610 mm (Grouser shoe) (2')
Ground pressure	0.45 kg/cm^2 (6.4 psi)
Swing speed	11.6 min^{-1} (11.6 rpm)
Propelling speed	3.5 km/hour (2.2 mil/hour)
Gradeability	70% (35 degrees)

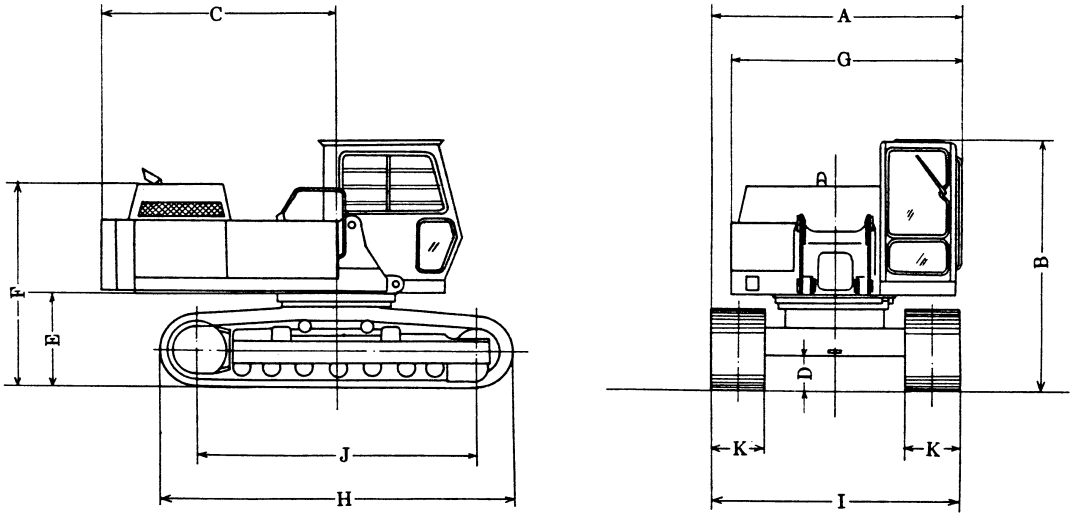


Fig. 1-1 Dimensions

2.5 Car Heater

The machine is provided with a car heater in the cab. Use it when the outdoor temperature is low. When using it, open the cock of the hot water take-off for heater on the engine, then, put the blower switch In [ON], and warm air will come out. (Fig. 2-8, 2-9)

Note: Other than the cold season, do not leave the cock open.

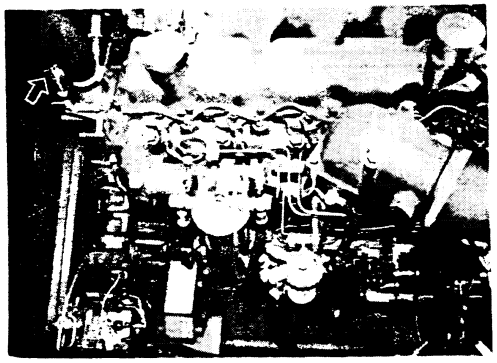


Fig. 2-8 Hot Water Take-off Cock for Heater

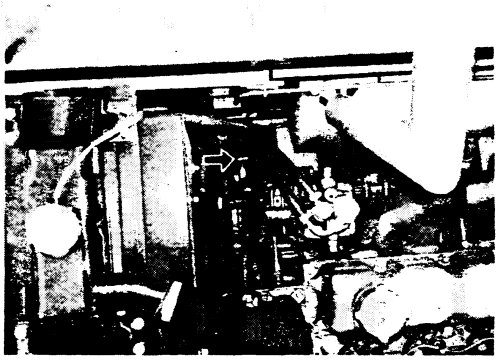


Fig. 2-9 Hot Water Return Cock for Heater

Other than above, details should be referred to name plate [How to use Hitachi car heater] posted in the cab.
Incedentally, a cooler is optional item.
If it is required, please give your order to nearest service shop.

(6) Pay attention to the followings when propelling on slopes.

(a) Prior to propelling up or down the slope, make sure the direction of the track and ground conditions, and try to drive as straight as possible.

(b) Keep the bucket 200 ∿ 300 mm (8" ∿ 12") raised off the ground when going up or down the slope.
If the machine tends to slip or come to be unstable, lower the bucket immediately, then, apply the brake.
When going up or down the slope, keep the bucket as shown in Fig. 3-12.

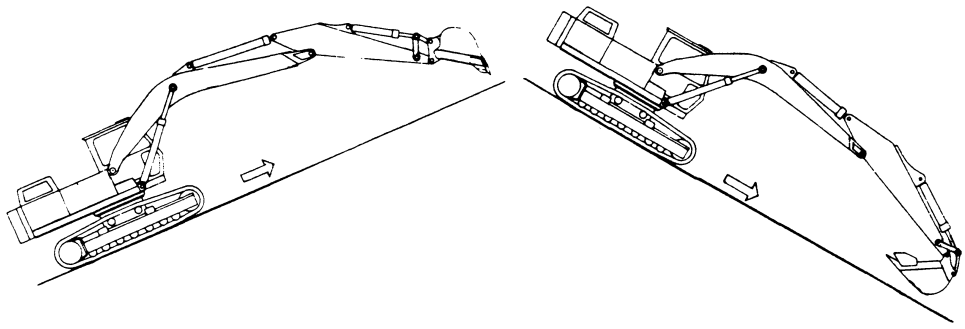


Fig. 3-12

(c) When the engine stalls on slopes, land the bucket and put each control lever in the neutral position. Then, restart the engine under this condition.

(d) When parking the machine on slopes even for a short period of time, land the bucket and return each control lever to the neutral position, then, put wedges to prevent the machines from slide down as shown in Fig. 3-13.

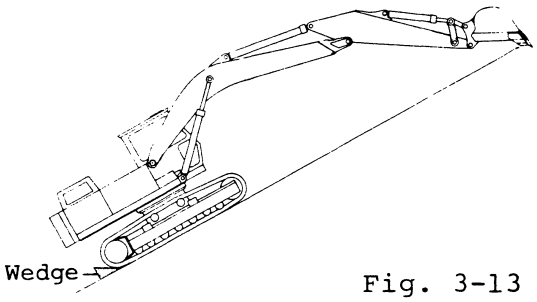


Fig. 3-13

(e) Low temperature hydraulic oil may not give sufficient gradeability to the machine.
So that, sufficient warming-up operation may be required under certain circumstances when going up a steep ascent.

(7) Propelling in the water is limited by the water depth which equals to the height of upper shoe surface from the ground.

	Services	Description. Reference Page
UPPER WORKS	10. Check drain air tank and air filter.	53
	11. Check for loose or missing bolts and nuts.	61
	12. Check for loose or missing attaching bolt of swing circle.	61
UNDERCARRIAGE	1. Check tracks for looseness, wear or damage.	54
	2. Check both upper and lower rollers, idlers, tumblers for oil leaks and wear.	
	3. Check for deformed, or damaged track frame.	
	4. Check quantity and quality of oil in propelling unit; check the unit for abnormal noise.	46
	5. Check for loose or missing bolts and nuts.	61
	6. Check proper propelling.	
	7. Check function of track adjusting device.	
FRONT ATTACHMENT	1. Cylinders pipings and hoses for oil leaks or damage.	
	2. Check for deformed, or damaged boom or arm.	
	3. Check bucket for wear or damage.	
	4. Check for loose, worn or broken bucket teeth.	58 59 60
	5. Check for proper lubrication.	57 58
	6. Check pins and bushes for wear and damage.	
	7. Check for damaged hydraulic cylinders and for damaged or deformed rods.	
	8. Check for loose or missing bolts and nuts.	61

4.3.2 Engine oil (Fig. 4-3)

Prior to the engine start, check engine oil level. The oil level should be in the middle of the hole of the oil level gauge.
If the level is low, add specified oil through the oil filler, and check it again.

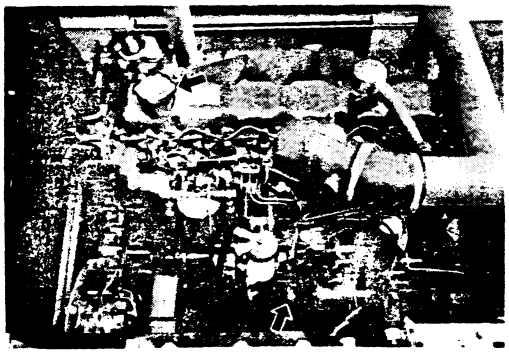


Fig. 4-3

4.3.3 Engine oil filter (Fig. 4-4)

Throughly wash and clean the filter case and O-ring in an approved solvent whenever the filter element is to be replaced.
Replace the filter element after the first 50 service hours and thereafter every 500 service hours as per the instructions given in the Hino EL100 Diesel Engine Operation Manual.

Fig. 4-4

4.3.4 Fuel filter (Fig. 4-5)

Water and sediments should be drained by removing the drain plug equipped on the bottom of the filter and water separator respectively.

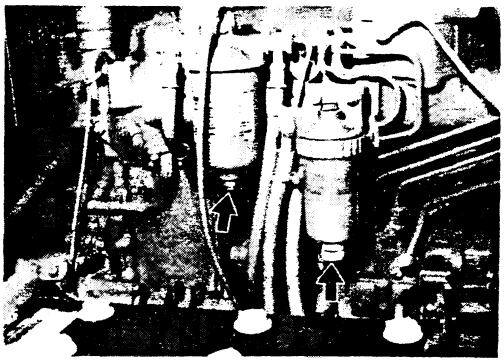


Fig. 4-5

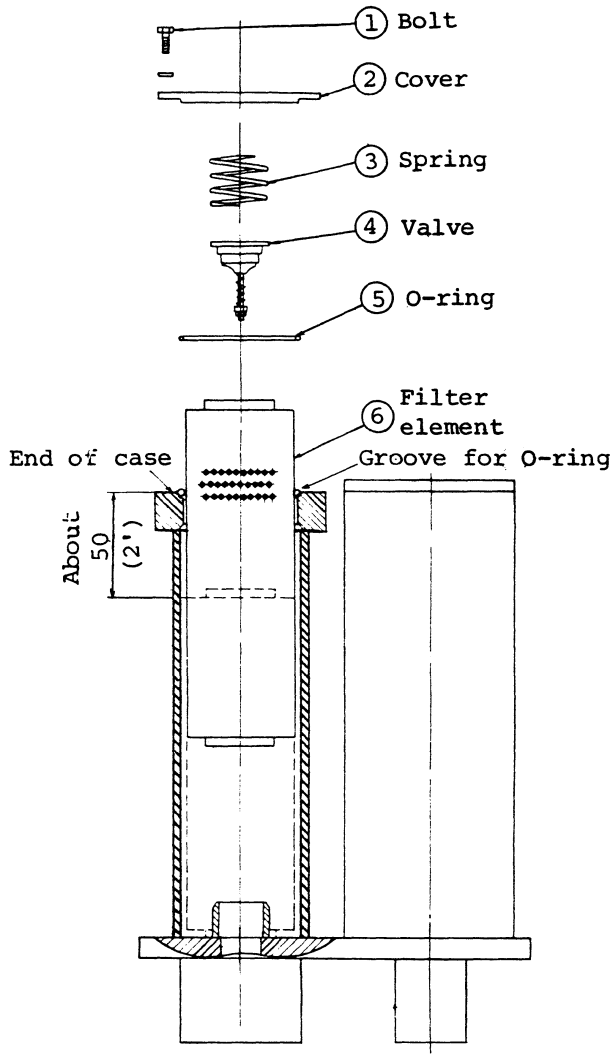
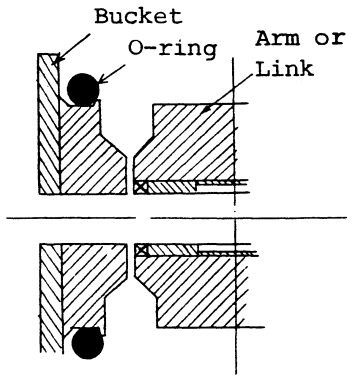


Fig. 4-27 Disassembly and Assembly of Full-flow Filter

(3) Drain filter

The drain filter is located at the rear of the hydraulic tank as shown in Fig. 4-28.
To service the drain filter, follow the procedure as described in (2).
It is, however, important that the center nut at the cover not be loosened.
The filter is designed to trap foreign matter which is present in oil drained from the pumps and swing and propelling motores. Metal particles found trapped by this filter, therefore, mean that there are abnormalities in these parts, calling for immediate attention. Contact your nearest Hitachi Dealer or Service Shop for repaire.



Fi.g 4-52

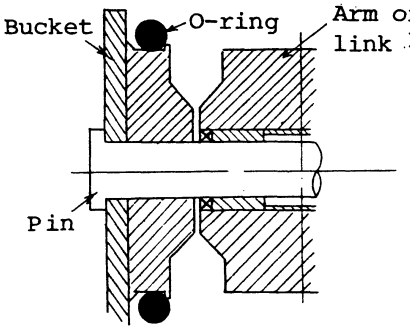


Fig. 4-53

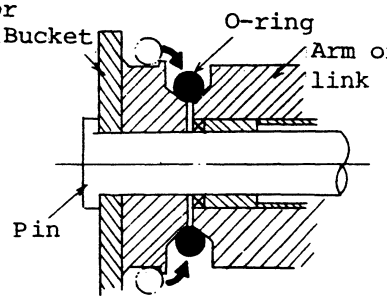


Fig. 4-54

4.3.24 Retightening bolts and nuts

The correct torque is essential for the correct fit of assembled parts. The following bolts and nuts should be checked for tightness and retightened to the proper torque after the first 50 hours and, thereafter, every 30 days.

Table 4-4 Torque Chart

Ref. No.	Items to be retightened	Dia.	Q'ty	Tool	Torque kg.m(ft.lb)
1	Engine insulation rubber attaching bolts	16	8	24	21 (152)
	"	14	4	22	14 (101)
2	Engine bracket attaching bolts	14	12	22	18 (130)
	"	12	8	19	11 (79)
3	Oil tank mounting bolts	16	8	24	21 (152)
4	High pressure hose union	PF3/4		32,36	18 (130)
		PF1		41	21 (152)
5	Transmission attaching bolts	10	9	17	5 (36)
6	Control valve attaching bolts	12	14	19	9 (65)
7	Swing unit attaching bolts	22	15	32	75 (541)
8	Battery attaching bolts	10	2	17	5 (36)
9	Cab attaching bolts	16	4	24	21 (152)
10	Swing bearing attaching bolts	20	71	30	55 (397)
11	Reduction gear attaching bolts	16	32	24	27 (195)
12	Upper roller attaching bolts	16	16	24	21 (152)
13	Track roller attaching bolts	16	56	24	27 (195)
14	Shoe bolts	18	376	27	55 (397)
15	Front pin lock nut	16	2	24	27 (195)