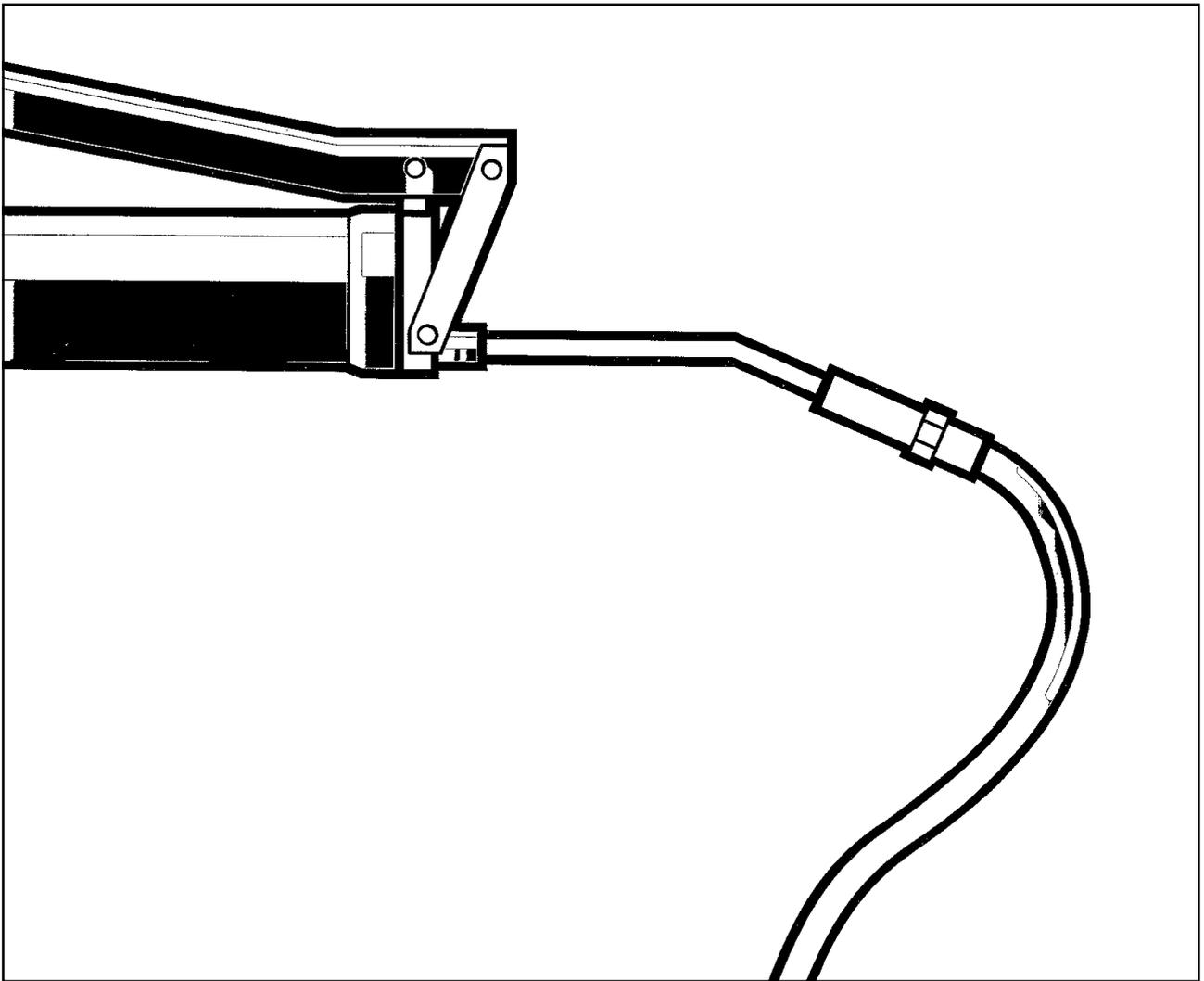


SVEDALA COMPACTION AND PAVING

DYNAPAC CC100

MAINTENANCE

M100EN1



SVEDALA

 **DYNAPAC**
Svedala Compaction Equipment AB

Box 504, SE-371 23 Karlskrona, Sweden

Telephone +46 455 30 60 00

Telefax +46 455 30 60 30

Vibratory Roller

CC100

Maintenance M100EN1, 99-10-15

Diesel Engine:

CC 100 Deutz F2L 1011F, Isuzu 3 LD1PW-05

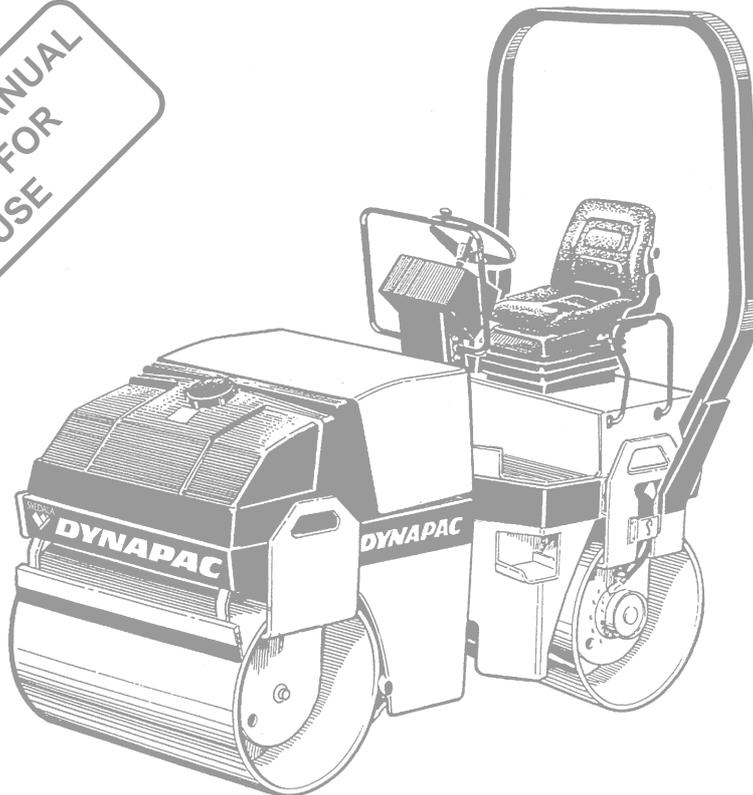
These instructions apply from:

CC 100

Deutz PIN (S/N) *60710100*

Isuzu PIN (S/N) *60750100*

KEEP THIS MANUAL
AVAILABLE FOR
FUTURE USE



CC 100 are primarily designed for repair work on asphalt but are also ideal for the compaction of new layers on small streets, pavements and cycle tracks. They are frequently used as a complement to larger rollers for the compaction of transverse joints and areas with limited access.

CONTENS

	Page
Lubricants, Symbols	3
Other symbols	3
Specifications	4, 5
Maintenance Schedule	6
Maintenance Measures	7, 8
Every 10 hours (Daily)	7, 9, 10, 11, 12
Every 50 hours (Weekly)	7, 13, 14
Every 250 hours (Monthly)	8, 15, 16
Every 500 hours (Every third month)	8, 17, 18, 19
Every 1000 hours (Every six month)	8, 20, 21, 22
Every 2000 hours (Yearly)	8, 23, 24
Long-Term Parking	25
Special instructions	26
Electrical systems, Fuses	27

WARNING SYMBOLS



WARNING -Personal safety may be involved.



CAUTION - Damage to componente or machine.

GENERAL



Read all the instruction thoroughly before carrying out any servicing operations.



Ensure that ventilation is adequate (extractor) when running the engine indoors.

Proper care of the roller is essential to ensure satisfactory operation. Keep the machine clean so that any leakage, loose bolts or loose connections can be easily detected.

TAKE CARE OF THE ENVIRONMENT Do not spill oil or fuel, or leave anything else that could be detrimental to the environment.

This manual contains directions for periodical servicing which should normally be carried out by the operator.



In addition, instructions in the manual provided by the engine manufacturer also apply. This is included in the product folder accompanying the roller. List of Contens.



This roller is fitted with an alternator. See the "MAINTENANCE" manual and decal on the machine for instructions with regard to any electric welding.

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

LUBRICANTS, SYMBOLS



Always use high quality lubricants in the quantities stipulated. Too much oil or grease may result in overheating and subsequent excessive wear.

	ENGINE OIL, Ambient temperature -10°C to +50°C (+14°F to +122°F)	Shell Rimula SAE 15W/40 or equivalent API Service CD/SE, CD/SF
	HYDRAULIC FLUID ambient air temperature -10°C – +40°C (14°F - 104°F) ambient air temperature above +40°C (above 104°F)	Shell Tellus Oil TX68 or corresponding Shell Tellus Oil T100 or corresponding
 Bio-Hydr.	BIODEGRADABLE HYDRAULIC FLUID	BP Biohyd SE-S 68, Shell Naturelle HF-E68. On delivery from the factory the machine may have been filled with biodegradable fluid. The same type must be used when changing or topping up the fluid
	DRUM OIL, Ambient temperature -15°C to +40°C (+5°F to +104°F) Ambient temperature above +40°C (+104°F)	Shell Spirax SAE 80W/90, HD API, GL-5 Shell Spirax HD85W/140 or equivalent
	GREASE	Shell Calithia EPT2 or equivalent
	FUEL	See engine manual
	COOLANT, (Isuzu) mixed 50/50 with water	Shell Anti Freeze 402 or equivalent Anti-freeze down to about -35°C.



Other lubricants are required when operating at extremely high or low temperatures. See chapter, "Special instructions", or get in touch with Dynapac.

	Engine, oil level		Air cleaner
	Engine, oil filter		Battery
	Hydraulic reservoir, level		Hydraulic filter
	Sprinkler		Sprinkler water
	Drum, oil level		Lubricating oil
	Fuel filter		Recycle
	Coolant level		

SPECIFICATIONS

Weight, Dimensions

Weight CECE, standard equipped roller kg, Deutz(lbs)	2350 (5.181)
Length, standard equipped roller mm (in)	2395 (94.29)
Width, standard equipped roller mm (in)	1150 (45.27)
Height, standard equipped roller mm (in)	1755 (69.09)
Height, roller with ROPS mm (in)	2640 (103.93)
Height, roller with cab mm (in)	2590 (101.96)

Fluid volumes

Litres

(gal or qts)

Hydraulic reservoir	40	(10.6 gal)
Fuel tank	50	(13.2 gal)
Water tank	160	(42.2 gal)
Water tank	200	(52.8 gal)
Diesel Engine (Deutz F2L 1011F)	6,5	(6.9 qts)
Diesel Engine (Isuzu 3 LD1PW-05)	6,5	(6.9 qts)
Drum	4,0	(4.2 qts)
Coolant (Isuzu 3 LD1PW-05)	2,5	(2.7 qts)

Electrical system

Battery	12 V 75 Ah
Alternator	12 V 60 A
Fuses	5, 7,5, 10, 15 A

Vibration data

Static linear load	kg/cm(pli)	10,3 (57.7)
Amplitude	mm(in)	0,50 (0.02)
Frequency	Hz(vmp)	56,0 (3,360)
Centrifugal force	kN(lb)	21,5(4.83)

Traction

Deutz

Isuzu

Speed range km/h	0-10,0	0-10,0
Climbing ability (theoretical) %	0,50	

SPECIFICATIONS Contd.

Tightening torque

Tightening torque in Nm, for oiled bolts when using torque wrench.

M Thread	STRENGTH CLASS	
	8.8	10.9
M4	2,5	3,4
M5	4,9	7,0
M6	8,4	12
M8	21	28
M10	40	56
M12	70	98
M16	169	240
M20	330	470
M24	570	800
M30	1130	1580
M36	1960	2800

ROPS

The ROPS bolts must **always** be torque-tightened dry.
 Bolt size: M16
 Strength class: 10.9
 Tightening torque: 240 Nm

Hydraulic system

Opening pressure MPa

Drive system	33
Supply system	2
Vibration system	20
Steering system	17
Brake release	1.4

Noise levels (ISO 6394)

NOISE LEVEL WITHOUT VIBRATION (dBA) (Measured on hard supporting surface)

Sound-proofed roller

Operator's position	LpA: 76
Seven metres from machine	LpA: 71

Operator's position - Vibrations (ISO 2631)

Measured with vibration switched on and on a foam rubber mat

Vibration on the operator's seat is 0.06 m/s²
 Vibration on the floor of the operator's position is 0.06 m/s²
 (The limit value is 0.5 m/s²).

MAINTENANCE SCHEDULE

Read all the instructions thoroughly before carrying out any servicing operations.

Proper care of the roller is essential to ensure satisfactory operation. Keep the machine clean so that any leakage, loose bolts or loose connections can be easily detected. Make a habit of inspecting the roller every day before starting up by checking all round and underneath the machine to detect any sign of leakage or other faults.

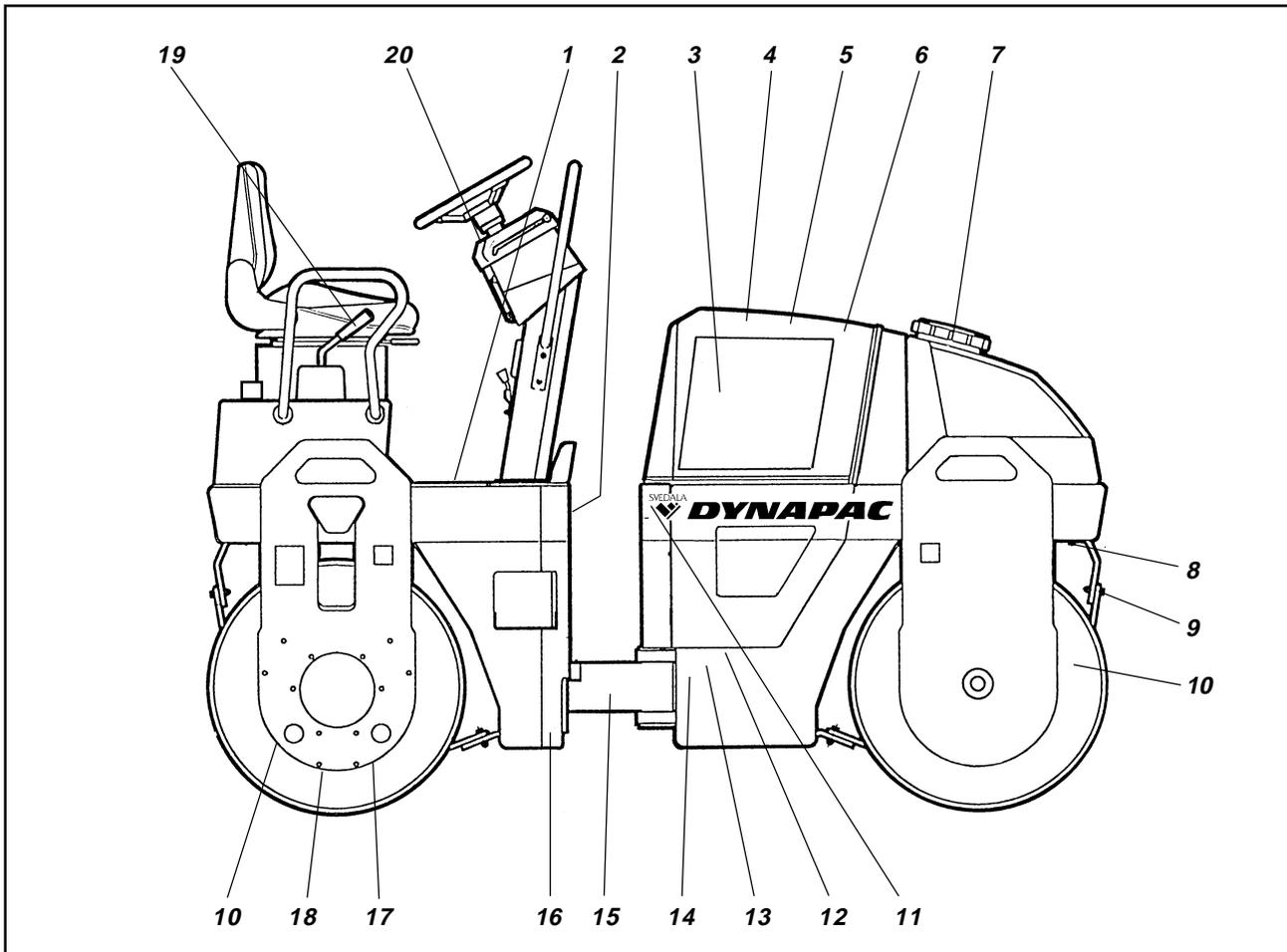


Fig. 1 Service points

- | | |
|---------------------------------------|--------------------------------|
| 1 Fuel tank | 11 Hydraulic fluid filling |
| 2 Refuelling | 12 Hydraulic fluid reservoir |
| 3 Radiator | 13 Hydraulic fluid filter |
| 4 Air cleaner | 14 Hydraulic fluid sight glass |
| 5 Battery | 15 Steering joint |
| 6 Diesel engine | 16 Steering cylinder mounts |
| 7 Water tank | 17 Filling plugs, drum |
| 8 Sprinkler system/drum | 18 Oil level in drum |
| 9 Scrapers/drum | 19 Forward/Reverse lever |
| 10 Rubber elements and mounting bolts | 20 Reserve/parking brake knob |

MAINTENANCE MEASURES

The periodic measures should be carried out primarily on reaching the stated number of operating hours, and secondarily in connection with the periods daily, weekly, etc.



Always clean off the surrounding dirt before filling or checking oil and fuel, and before lubricating with oil or grease.



The manufacturer's instructions noted in the engine manual also apply. For diesel engines.

Every 10 hours of operation (Daily)

Item in Fig. 1	Measures	See page	Comments
	Before first start each day		
6	Check oil level in diesel engine		See engine manual
3	Check that circulation of cooling air is unobstructed	9	
3	Check coolant level, (Isuzu)	9	
20	Check the brakes	9	
1	Fill the fuel tank	10	
9	Check setting of the scraper/Drum	10	
14	Check level in hydraulic reservoir	10	
8	Check the sprinkler system/Drum	11	

Every 50 hours of operation (Weekly)

Item in Fig. 1	Measures	See page	Comments
4	Check air cleaner indicator	13	
	Check that air hoses are intact and connections are tight	13	
15	Lubricate the steering joints	14	
16	Lubricate the steering cylinder mounts	14	
	 After the first 50 hours of operation, change all oil filters and lubricating oils. But not the hydraulic fluid.		

MAINTENANCE MEASURES

Every 250 hours of operation (Monthly)

Item in Fig. 1	Measure	See page	Comments
3	Clean the outside of the hydraulic fluid cooler	15	
5	Check the battery	15	
6	Change the lubricating oil of the diesel engine (Isuzu)	16	See engine manual
6	Clean the engine cooling fins		See engine manual

Every 500 hours of operation (Every 3 months)

Item in Fig. 1	Measure	See page	Comments
18	Check oil level in rear drum	17	
11	Check the cap/vent of the hydraulic reservoir	17	
10	Lubricate controls and pivots	17	
19	Check rubber elements and bolted joints	18	
6	Change the lubricating oil of the diesel engine (Deutz)	18	See engine manual
6	Change engine oil filter	19	See engine manual
6	Check engine V-belts	19	See engine manual
6	Change the engine fuel filter (Isuzu)	19	See engine manual

Every 1000 hours of operation (Every 6 months)

Item in Fig. 1	Measure	See page	Comments
13	Change the hydraulic filter	20	
12	Drain off condense water from the hydraulic reservoir	21	
4	Change the main filter in the air cleaner	21	
6	Change the engine fuel filter (Deutz)	21	
6	Change the engine pre-filter	22	
6	Check the engine cogged V-belt		See engine manual
6	Check engine valve clearance		See engine manual

Every 2000 hours of operation (Yearly)

Item in Fig. 1	Measure	See page	Comments
12	Change the fluid in hydraulic reservoir	23	
18	Change oil in rear drum	23	
7	Clean the water tank	23	
1	Clean the fuel tank	24	

EVERY 10 HOURS OF OPERATION (Daily)

Coolant level - Check, filling (Circulation of cooling air)

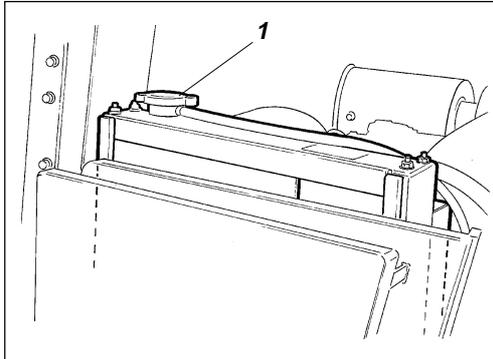


Fig. 2 Radiator
1. Radiator cap

ISUZU



Take the greatest care if the radiator cap must be opened while the engine is hot. Danger of being scalded. Wear protective gloves and goggles.

When filling or topping up, use coolant that consists of a mixture of 50% water and 50% anti-freeze medium. See page 3 in this manual and in the engine manual.



Change the coolant and flush the system every other year. Ensure that air can flow unrestricted through the radiator.

Air circulation - Checking

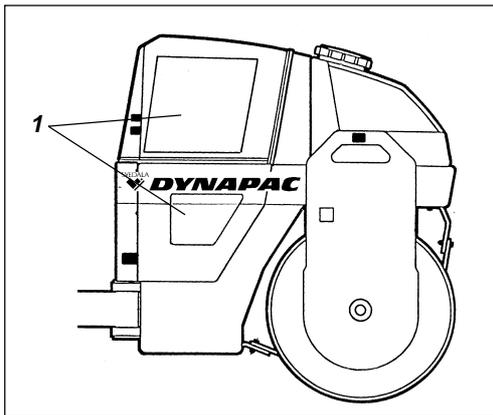


Fig. 3 Right side of roller
1. Air grill

Ensure that the air grille is not clogged and that cooling air flows freely round the engine.

Brakes - Check

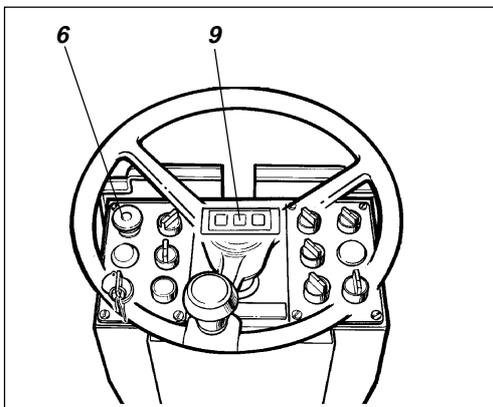


Fig. 4 Instrument panel
6. Reserve/parking brake knob
9. Brake warning lamp



Check the brakes as follows:

1. Drive the roller **slowly** forward.
2. Push the reserve/parking brake knob (6). The brake warning lamp (9) shall light and the roller shall stop.
3. After checking the brakes, put the forward/reverse lever in neutral before resetting the reserve/parking brake knob.
4. Pull out the reserve/parking brake knob.

EVERY 10 HOURS OF OPERATION (Daily)

Fuel tank - Filling

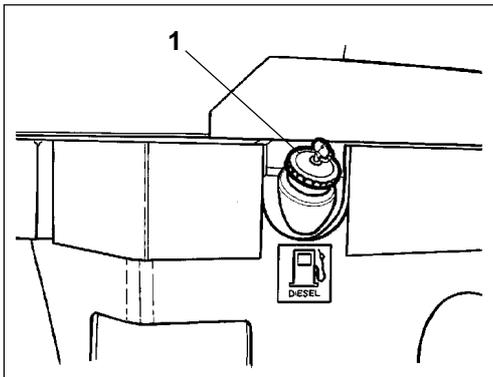


Fig. 5 Fuel tank
1. Filler cap

Refuel the roller every day before starting work. Fill fuel up to the lower edge of the filler pipe. Use diesel fuel.



Stop the engine. Press the filler nozzle against the filler pipe (1) to earth it while refuelling.

(See the engine manufacturer's recommendations with regard to quality of the fuel.)

Scrapers

Checking - Adjustment

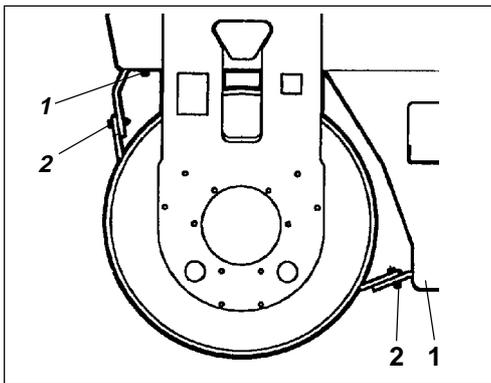


Fig. 6 Drum
1. Mounting bolts
2. Adjusting screws

Ensure that the scrapers are undamaged. Adjust the scraper as follows:

1. Loosen the mounting bolts (1) and adjust the scraper in relation to the drum, tighten the mounting bolts.
2. If the scraper does not make contact all the way across the drum, loosen the adjusting screws (2) and push the scraper against the drum and then tighten the adjusting screws.

Hydraulic reservoir - Checking

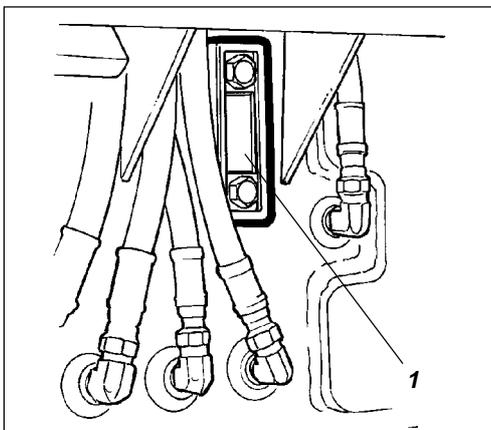


Fig. 7 Hydraulic fluid reservoir
1. Fluid level glass

1. Position the roller on a level surface and check the fluid level in the sight glass (1).
2. Top up with fresh hydraulic fluid if the level is 20 mm (0,8 in) or more below the upper edge of the sight glass, or if no fluid is visible in the sight glass.

EVERY 10 HOURS OF OPERATION (Daily)

Hydraulic reservoir - Filling

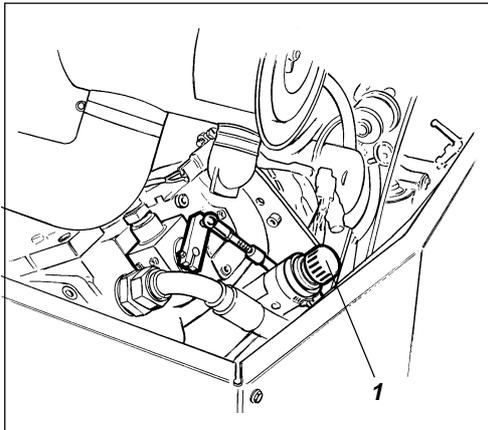


Fig. 8 Engine compartment
1. Filling hydraulic fluid

Open the engine hood fully and screw off the filler cap (1) and top up with fresh fluid as required. See page 3 with regard to the right grade of hydraulic fluid.

Sprinkler system/drum Checking - Cleaning

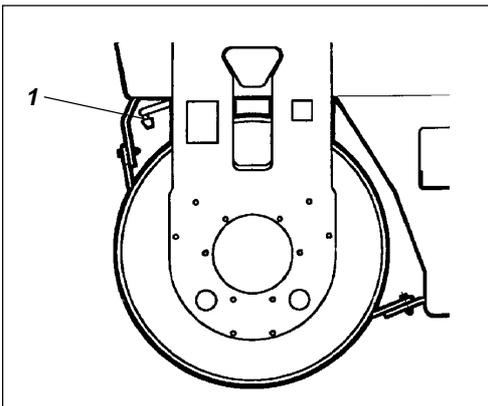


Fig. 9 Drum
1. Nozzle



Fill with fresh water through the tank filter.

Make sure the sprinkler nozzles (1) are not clogged. Clean the nozzles as required, and the water filter that is located adjacent to the water pump, see fig. 10 and 11 below.

Nozzle Dismantling - Cleaning

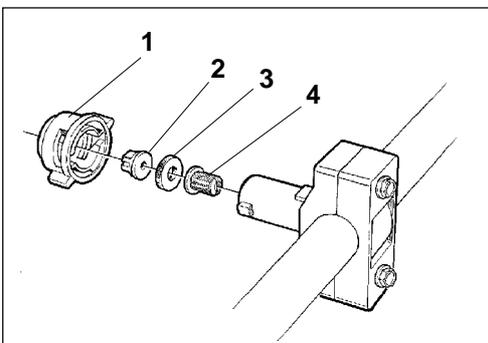


Fig. 10 Nozzle
1. Sleeve
2. Nozzle
3. Seal
4. Strainer

Dismantle the clogged nozzle. Blow the nozzle and strainer clean with compressed air, or replace with clean items and then clean the parts that are removed at a later opportunity.



Wear protective goggles when working with compressed air.

EVERY 10 HOURS OF OPERATION (Daily)

Pump system/drum Checking - Cleaning

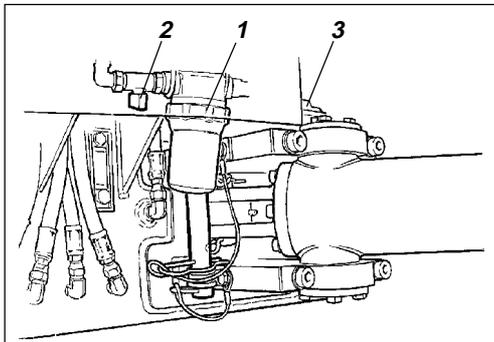


Fig. 11 Pump system

1. Waterfilter
2. Stop cock
3. Waterpump

To clean, close the stop cock (2). Loosen the filter housing (1). Clean the insert and filter housing with water. Place one hand on the water pump, or listen, to check that the pump is working. There is also a drain cock on the end piece of the water pump.

EVERY 50 HOURS OF OPERATION (Weekly)

Air cleaner Checking the indicator

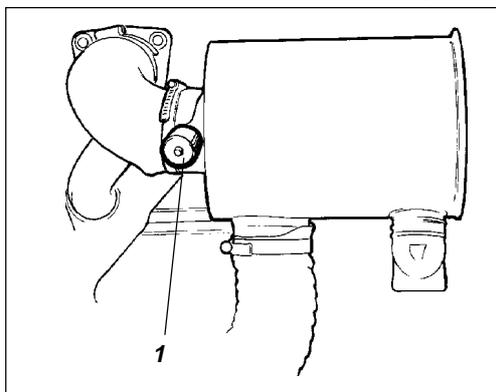


Fig. 12 Air cleaner
1. Indicator

Make sure that the engine hood is fully open. Change or clean the main filter (4) fig.13 of the air cleaner when the indicator (1) is in the red zone while the engine is running at full revs.

Air cleaner Dismantling - Assembly

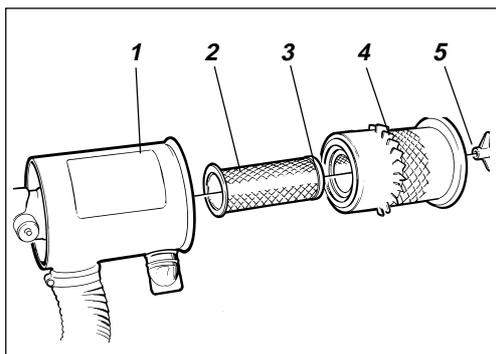


Fig. 13 Air cleaner
1. Filter housing
2. Backup filter
3. Wing nut
4. Main filter
5. Wing nut

1. Loosen the wing nut (5) and pull out the main filter (4). Do not remove the backup filter (2).
2. Wipe the outside of the filter housing clean with a clean rag. Change or clean the main filter.



Fit a new backup filter every third time the main filter is changed, or after cleaning it three times. The backup filter cannot be cleaned and reused.

Main filter - Cleaning with compressed air

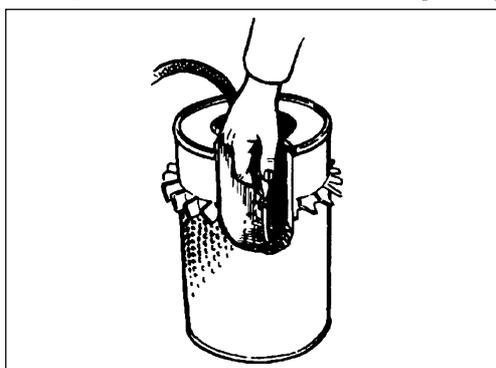


Fig. 14 Main filter

3. Blow up and down the inside of the filter element. Hold the nozzle at least 20 or 30 mm (0.8 or 1.2 in) away from the pleats to avoid tearing the paper.



Change the main filter after cleaning it five times.



Wear protective goggles when working with compressed air.

Steering cylinder and steering joint - Lubrication

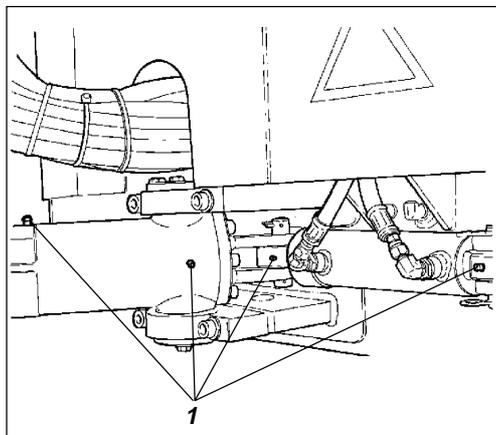


Fig. 15 Steering joint
1. Lubricating nipples



Risk of injury. Keep everyone clear of the articulated steering mechanism while the engine is running.

1. Turn the steering wheel fully to the left to gain access to all four lubricating nipples on the right-hand side of the machine. Switch off the engine and electric power.
2. Wipe all the nipples clean and lubricate each nipple with five strokes of the grease gun. Make sure that grease penetrates the bearings. Use grease recommended on page 3. Leave a little grease on the nipples after greasing. This will prevent dirt from entering the nipples.

EVERY 250 HOURS OF OPERATION (Monthly)

Hydraulic fluid cooler Checking - Cleaning

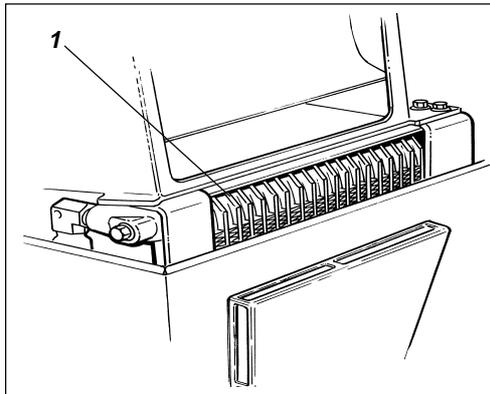


Fig. 16 Engine compartment
1. Hydraulic fluid cooler

Ensure that the flow of air through the cooler is not obstructed.
Clean a dirty cooler using compressed air or a high-pressure washing unit.
Blow or wash the cooler in the opposite direction to the normal flow of cooling air.



Take care when using a high-pressure washing unit, hold the nozzle at a safe distance from the cooler.



Wear protective goggles when working with compressed air or high-pressure wash.

Battery Checking the electrolyte level

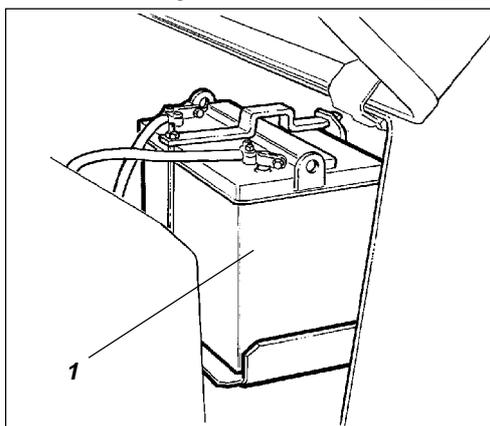


Fig. 17 Battery shelf
1. Battery



Never use an open flame when checking the battery. The electrolyte emits explosive gas while the alternator is charging.

1. Open the engine cover fully.
2. Wipe the top of the battery.



Wear protective goggles. The battery contains corrosive acid. Flush with water if acid comes in contact with the body.

3. Take off the cell caps and check that electrolyte level is about 10 mm (1/2 in) above the plates. Check the level of all cells. Top up with distilled water as required to the correct level. If ambient temperature is below freezing, the engine should be run for a while after topping up with distilled water, ie, there is otherwise a risk that the battery fluid will freeze.
4. Make sure the venting holes in the cell caps are not clogged. Refit the caps.
5. Battery terminals must be clean and well tightened. Clean the terminals if corroded and grease them with acid-free Vaseline.

Battery cells

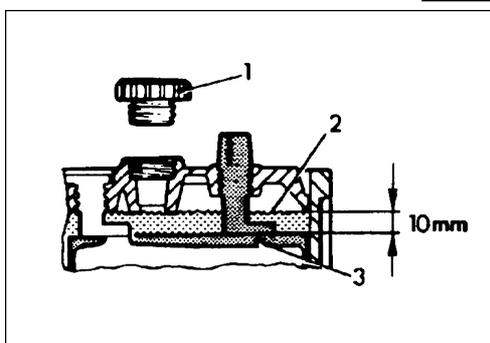


Fig. 18 Electrolyte level in battery
1. Cell cap
2. Electrolyte level
3. Plate



Always release the negative cable first when disconnecting the battery.
When connecting the battery, always fit the positive cable first.



Dispose of the old battery properly when replacing it. The battery contains lead which is detrimental to the environment.

EVERY 250 HOURS OF OPERATION (Monthly)

Diesel engine - Oil change

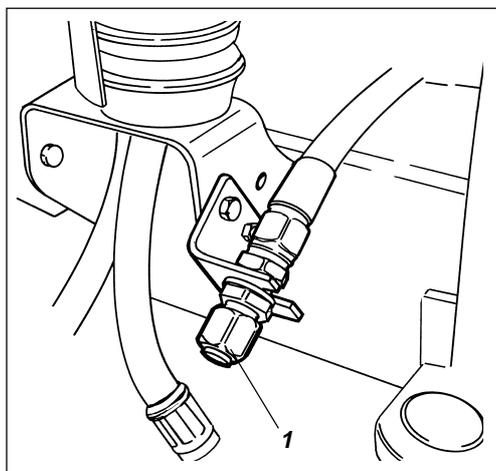


Fig. 19 Engine compartment,
right-hand side
1. Oil drain

ISUZU

1. Run the engine warm before draining.



Ensure that ventilation is adequate (extractor) when running the engine indoors. (Hazardous carbon dioxide fumes).



Switch off the engine and push the reserve/parking brake knob.

2. Place a receptacle for at least 8 litres underneath the drain plug.



Risk of scalding when draining hot oil. Protect your hands and arms.

3. Unscrew the drain plug (1) and allow all of the oil to drain off. Refit the plug.
4. Fill with fresh engine oil, see page 3 or the engine manual with regard to the right grade of oil.

EVERY 500 HOURS OF OPERATION (Every 3 months)

Hydraulic reservoir cap Checking

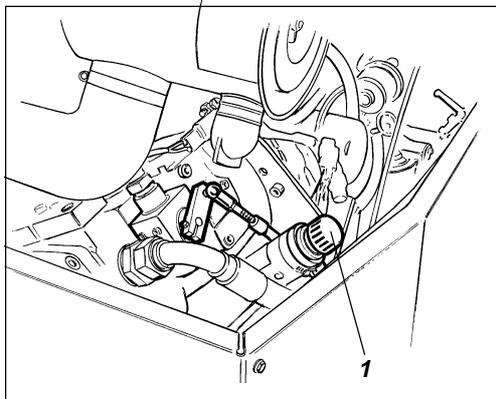


Fig. 20 Engine compartment
1. Reservoir cap

Make sure that the reservoir cap is not clogged. Air must be able to flow freely in both directions through the cap. Clean with a little diesel oil if either direction is clogged, and blow clear with compressed air to ensure free flow. Replace the cap with a new one if this cannot be done.



Wear protective goggles when working with compressed air.

Drum - Checking the oil level

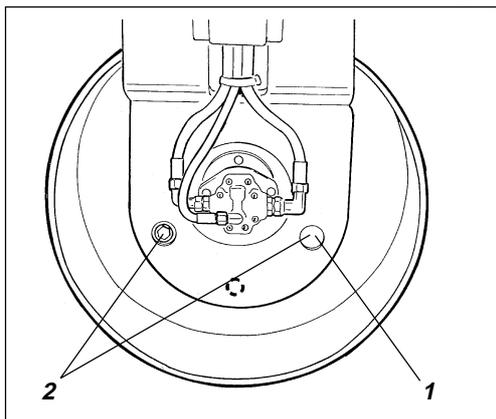


Fig. 21 Drum, vibrator side
1. Oil plug
2. Inspection hole

1. Position the roller on a level surface and drive slowly forward until the oil plug (1) is in line with one of the inspection holes (2).



Switch off the engine and push the reserve/parking brake knob.

2. Screw out the plug and ensure that the oil level reaches the lower edge of the hole. Top up with fresh transmission oil as required, see page 3 with regard to the right quality of the oil.
3. Clean the magnetic oil plug (1) to remove any metal particles and then refit the plug.

Rubber elements and fastening bolts - Checking

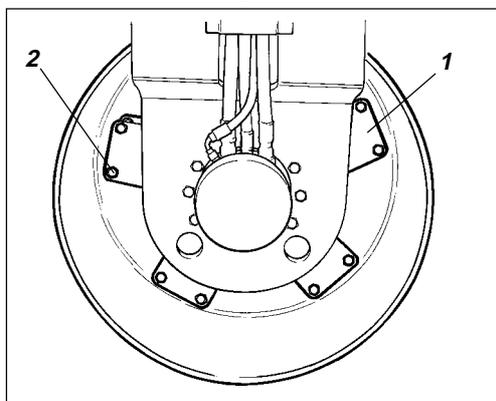


Fig. 22 Drum suspension
1. Rubber element
2. Fastening bolts

1. Make sure that the rubber elements are undamaged and free from cracks.
2. Check that the mounting bolts are tight.
3. Change all the elements if more than 25% on one side of the drum have cracks that are deeper than 10 to 15 mm. (1/2 in.)
4. Check the rubber elements on both sides of the drum.

EVERY 500 HOURS OF OPERATION (Every 3 months)

Controls - Lubrication

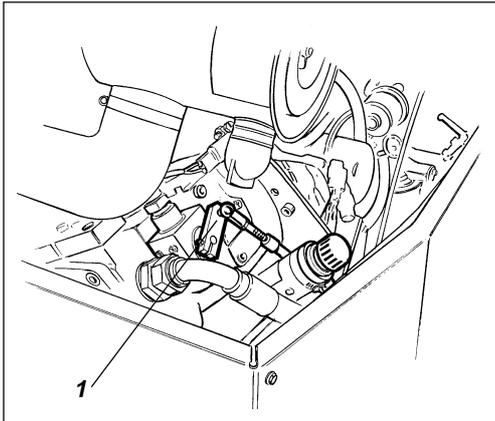


Fig. 23 Engine compartment
1. Forward/Reverse controls

Lubricate the forward/reverse controls in the engine compartment with a few drops of oil.
If the controls start to become stiff after a long period of use, take off the cover and the forward/reverse lever at the operator's station and lubricate the mechanism.

Controls - Lubrication

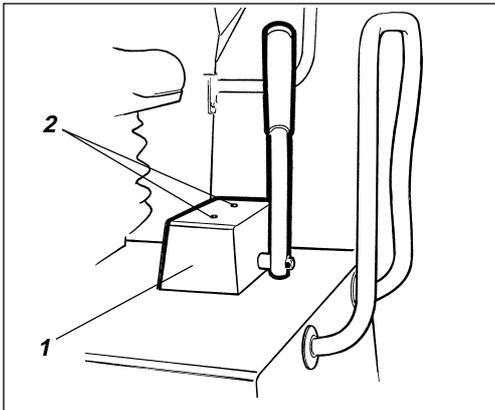


Fig. 24 Operator's position
1. Forward/Reverse control
2. Mounting screws

Lubricate the forward/reverse control mechanism. Take off the protective cover (1) by removing the screws (2) at the top of the cover, and lubricate the mechanism with oil.

Diesel engine - Oil change

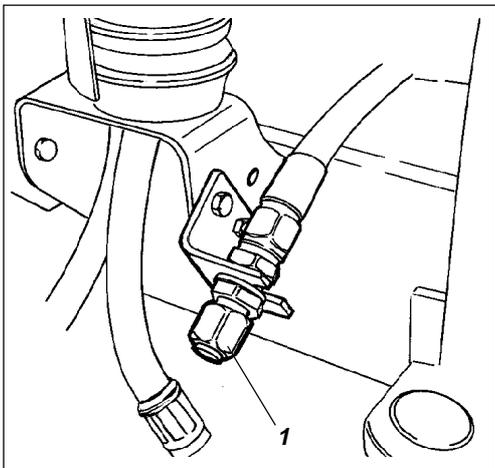


Fig. 25 Engine compartment, right-hand side
1. Oil drain

DEUTZ

1. Run the engine warm before draining.



Ensure that ventilation is adequate (extractor) when running the engine indoors. (Hazardous carbon dioxide fumes).



Place the roller on a level surface, switch the engine OFF and apply the reserve/parking brake.

2. Place a receptacle for at least 8 litres underneath the drain plug.



Risk of scalding when draining hot oil. Protect your hands and arms.

3. Unscrew the drain plug (1) and allow all of the oil to drain off. Refit the plug.

4. Fill with fresh engine oil, see page 3 or the engine manual with regard to the right grade of oil.

EVERY 500 HOURS OF OPERATION (Every 3 months)

Oil filter - Change

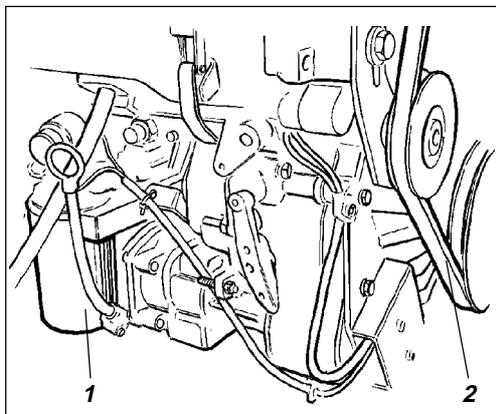


Fig. 26 Diesel engine (Deutz)

1. Oil filter
2. V-belt

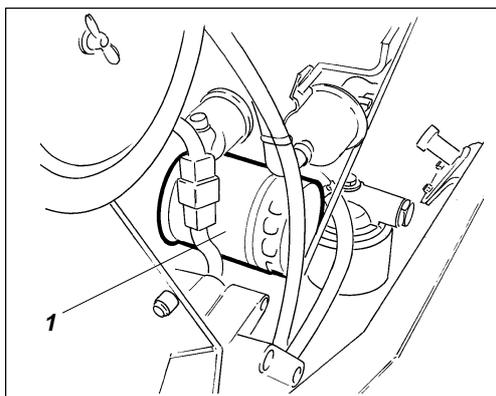


Fig. 27 Diesel engine (Isuzu)

1. Oil filter

Changing the fuel filter

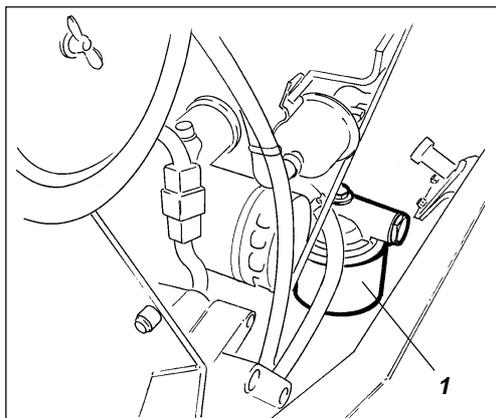


Fig. 28 Engine compartment

1. Fuel filter

1. Remove the oil filter (1), discard it and fit a new one.
2. Ensure that the belt (2) is not cracked or otherwise damaged. Replace as required.
3. Check the belt tension. Tension the belt if it can be pressed down with the thumb by more than 10 mm at the middle between the two pulleys.



See the engine manual for detailed instructions with the regard to changing the oil and filter, and tensioning the V-belt.

4. Start the engine and ensure that there is no leakage from the oil filter or drain plug.



Ensure that ventilation is adequate (extractor) when running the engine indoors. (Hazardous carbon dioxide fumes).

5. Refit the engine protective plate.

ISUZU

1. Loosen, screw off and discard the fuel filter (1), and fit a new one.
2. Collect the fuel that runs out.



See the engine manual for detailed instructions for changing the fuel filter.

3. Start the engine and ensure that the fuel filter is tight.



Ensure that ventilation is adequate (extractor) when running the engine indoors. (Hazardous carbon dioxide fumes).

EVERY 500 HOURS OF OPERATION (Every 3 months)

Hydraulic fluid filter - Change

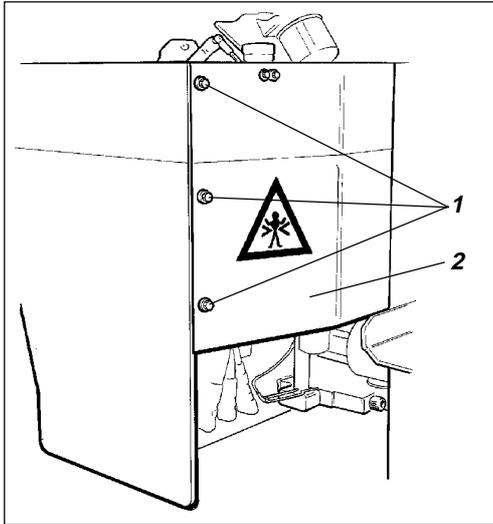


Fig. 29 Engine compartment

1. Mounting screws
2. Safety plate

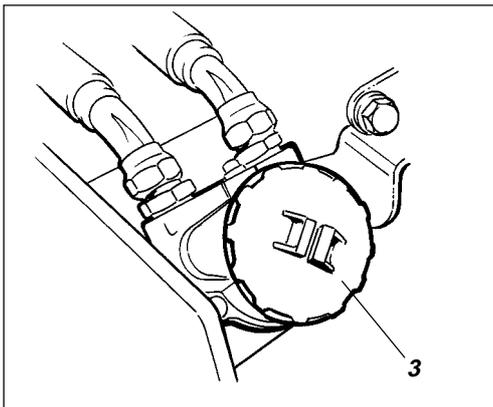


Fig. 30 Hydraulic fluid filter

3. Cover

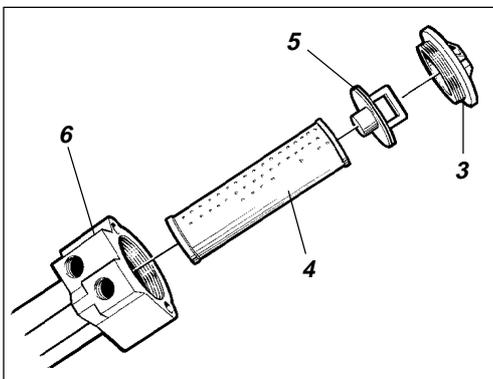


Fig. 31 Hydraulic fluid filter

3. Cover
4. Filter cartridge
5. Grip
6. Filter holder

1. Loosen the six mounting screws (1).
2. Remove the protective plate (2).

3. Loosen the red cover (3) and pull up the filter cartridge (4).
4. Refit the red cap temporarily to prevent dust and dirt from entering the reservoir.

5. Loosen the filter cartridge (4) from the grip (5) and discard the cartridge.
6. Fit a new cartridge to the grip and insert the unit into the filter holder (6). Refit the red cover.
7. Start the engine and allow it to run at full revs for half a minute and ensure that the filter cover (3) does not leak.



Ensure that ventilation is adequate (extractor) when running the engine indoors. (Hazardous carbon dioxide fumes).

EVERY 1000 HOURS OF OPERATION (Yearly)

Hydraulic reservoir - Changing the oil

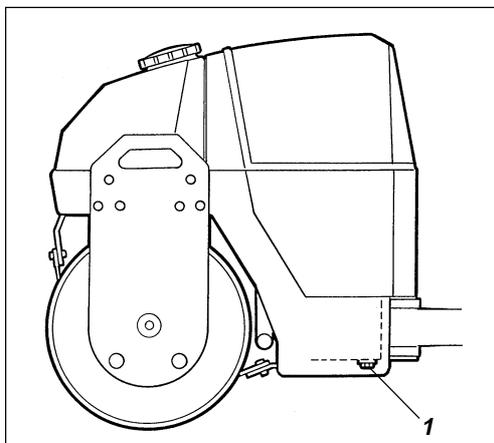


Fig. 32 Left side of frame
1. Drain plug

Drain off condensed water from the hydraulic reservoir via the drain plug (1).



Be careful when draining off the water. Do not drop the plug so that hydraulic fluid runs out.

Drain as follows:

1. Put a can underneath the plug.
2. Loosen the plug and allow any water to run out.
3. Tighten the plug.

Changing the air cleaner

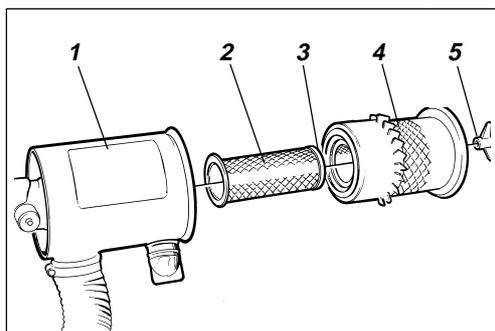


Fig. 33 Air cleaner
1. Filter housing
2. Backup filter
3. Wing nut
4. Main filter
5. Wing nut

Change the main filter of the air cleaner even if it has not yet been cleaned the specified five times. See page 13 with regard to changing the filter.

Changing the fuel filter

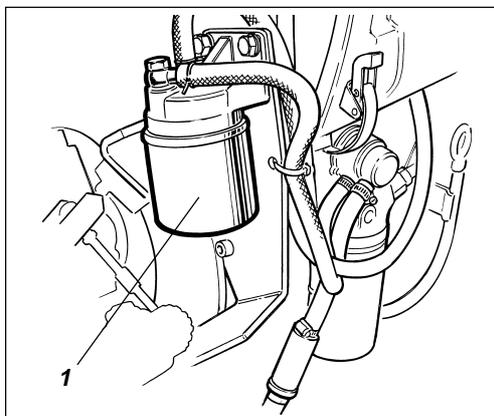


Fig. 34 Engine compartment
1. Fuel filter

DEUTZ

1. Loosen, screw off and discard the fuel filter (1), and fit a new one.
2. Collect the fuel that runs out.



See the engine manual for detailed instructions for changing the fuel filter.

3. Start the engine and ensure that the fuel filter is tight.



Ensure that ventilation is adequate (extractor) when running the engine indoors. (Hazardous carbon dioxide fumes).

EVERY 1000 HOURS OF OPERATION (Yearly)

Changing the engine pre-filter

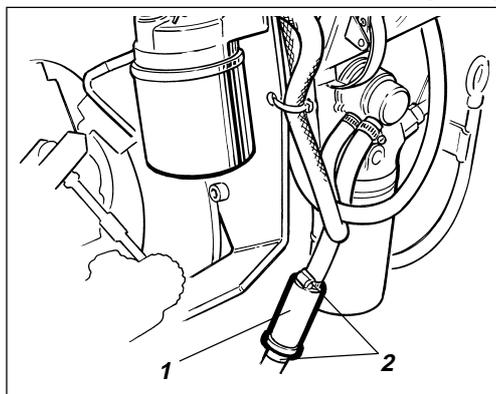


Fig. 35 Engine compartment
1. Pre-filter
2. Hose clips

1. Loosen the hose clips (2) with the aid of a screwdriver.
2. Remove and discard the pre-filter (1).
3. Collect fuel that runs out.
4. Fit a new pre-filter and tighten the hose clips.
5. Start the engine and ensure that the pre-filter is tight.



Ensure that ventilation is adequate (extractor) when running the engine indoors. (Hazardous carbon dioxide fumes).

EVERY 2000 HOURS OF OPERATION (Yearly)

Hydraulic fluid reservoir - Changing the fluid

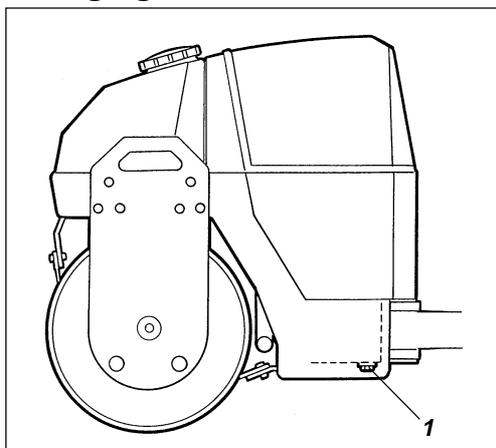


Fig. 36 Left side of roller
1. Drain plug



**Risk of scalding when draining hot oil.
Protect your hands.**

1. Arrange a vessel of at least 40 litres to drain the fluid.
2. Unscrew the drain plug (1) and allow all the fluid to run out and then refit the plug.
3. Fill with fresh hydraulic fluid in accordance with the quality recommendations on page 3.
4. Change the hydraulic filter, see page 20.
5. Start the engine and operate the various hydraulic functions, check the fluid level and top up as required, see page 10.



**Ensure that ventilation is adequate
(extractor) when running the engine indoors.
(Hazardous carbon dioxide fumes).**

1. Position the roller on a level surface and slowly drive the roller till the oil plug (1) is at the bottom.



**Risk of scalding when draining hot oil.
Protect your hands.**

2. Place a vessel for at least 6 litres under the plug.
3. Unscrew the plug and allow all the oil to drain off.
4. See page 17 with regard to filling with oil.

Drum - Changing the oil

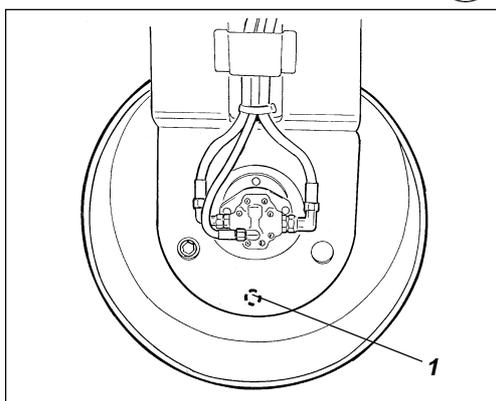


Fig. 37 Drum, vibrator side
1. Oil plug

Water tank - Draining

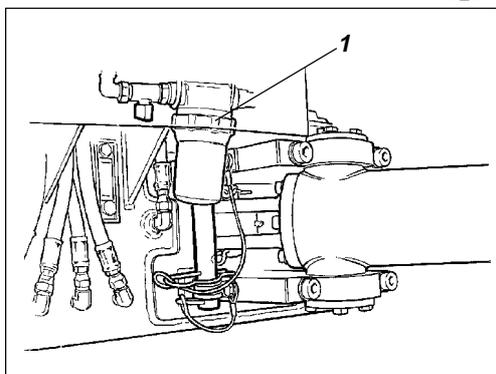


Fig. 38 Pump system
1. Water filter



**Remember the risk of freezing during the
winter period. Drain the water tank, pumps and
piping.**

1. The water tank is drained most easily by screwing off the water filter (1).
(A drain plug is also provided at the bottom of the tank).

EVERY 2000 HOURS OF OPERATION (Yearly)

Water pump - Draining

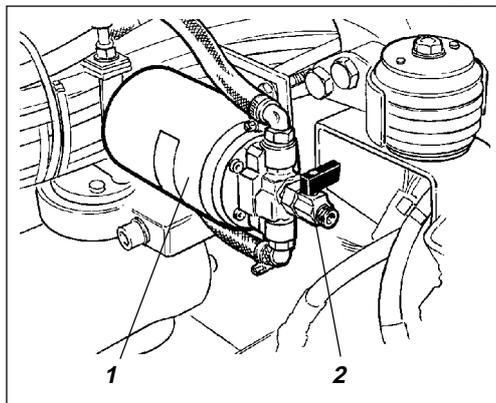


Fig. 39 Pump system

1. Water pump
2. Drain cock

1. Open the drain cock (2) to empty the water pump (1).

Water tank - Cleaning

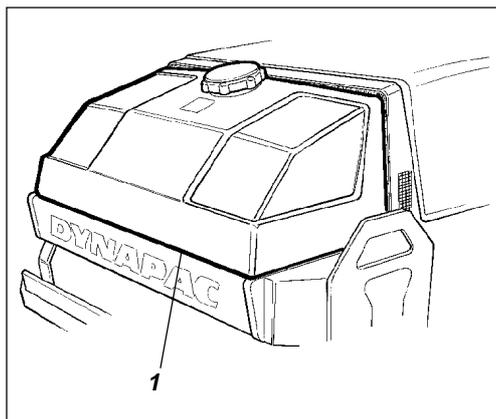


Fig. 40 Water tank

1. Drain plug

1. Clean the inside of the tank with water, mixed with a suitable detergent for cleaning the plastic surface.
2. Refit the water filter, or the drain plug, and check for leakage.



The water tank is made of polythene plastic and is recyclable.

Fuel tank - Cleaning

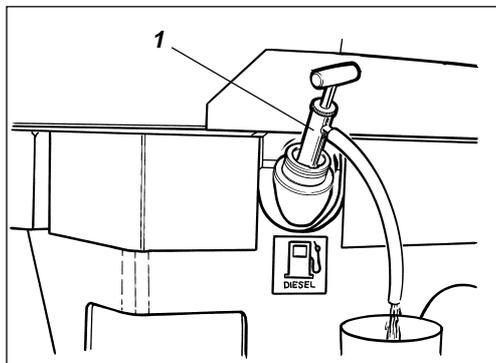


Fig. 41 Fuel tank

1. Oil draining pump

The tank is easiest to clean when it is almost empty. Empty any remaining fuel and sediment using a suitable pump, eg, an oil draining pump (1). Collect the contents in a suitable receptacle.



The fuel tank is made of polythene plastic and is recyclable.

LONG-TERM PARKING

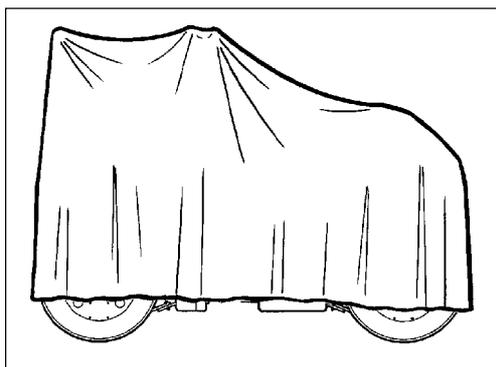


Fig. 42 Weather-protected roller



The following directions must be followed when parking the machine for longer periods than one month.

The measures described apply for a standstill of up to six months.

Before reusing the roller again the items marked * must be attended to.

Diesel engine

- * See the manufacturer's instructions in the engine manual that accompanies the roller.

Battery

- * Remove the battery from the roller, clean the outside, ensure that the electrolyte level is correct and trickle-charge the battery once every month.

Air cleaner, exhaust pipe

- * Cover the air cleaner, or its intake opening, with plastic foil or tape. Cover the opening of the exhaust pipe. This must be done to prevent the penetration of moisture into the engine.

Fuel tank

Fill the fuel tank fully, ie, to prevent condensation and rust.

Hydraulic reservoir

Drain off any condense water from the hydraulic reservoir

Sprinkler system

- * Drain all water from the tank. Hoses, filter housing, and water pump must also be drained. Remove all sprinkler nozzles of the drum and wheels. Also drain the emulsion tank and hoses, filter housing and pump.

Steering cylinder, hinges, etc.

Lubricate the steering joint bearings, and both bearings of the steering cylinder with grease. Coat the piston rod of the steering cylinder with rust preventive grease.

Also grease the hinges of the engine hood, seat guides, revs control and both ends (bright parts) of the forward/reverse control.

Covers, tarpaulin

- * Lower the instrument shield on the steering column. Cover the whole machine with a tarpaulin. NOTE: The tarpaulin must hang free from the ground (see figure 42). Store the roller indoors if possible, preferably at an even temperature.

SPECIAL INSTRUCTIONS

Standard oils and other recommended fluids

On leaving the factory the various systems and components are filled with oil or fluid as indicated on page 3 and are thus suitable for operation in ambient temperatures between -10°C (+15°F) and +40°C (+104°F).

The following recommendations apply for operation in higher ambient temperatures up to a maximum of +50°C (+122°F):

Higher ambient temperature, maximum +50°C (+122°F)

The engine can be used at this temperature using normal oil but for other components the following oils must be used:

Hydraulic system: Shell Tellus Oil T100 or equivalent.
Other components using transmission oil: Shell Spirax HD 85W/140 or equivalent.

Temperature

Temperature limits apply to standard versions of the roller.

Rollers equipped with additional fittings such as noise absorbents, etc., may require extra observation in the higher temperature ranges.

High-pressure wash



Do not direct the water jet at the filler cap (applies to both fuel tank and the hydraulic reservoir). This is especially important when using a high-pressure jet.

Put a plastic bag over the filler cap and secure with an elastic band. This will prevent water under pressure from being forced through the breather hole, which would otherwise cause malfunctioning, eg, clogging of the filter. Do not direct the jet against electric components or the instrument panel.

Fire fighting

In the event of fire on the machine the ABE powder type extinguisher should preferably be used. The BE carbon dioxide type extinguisher is also suitable.

Protection frame (ROPS), safety cab

If the roller is equipped with a protection frame (ROPS, Roll Over Protecting Structure), or a safety cab, then no welding or drilling of holes whatsoever is permitted on the protection frame or the cab. Never attempt to repair a damaged frame or cab, it must be replaced with a new one.

Starting assistance

When using an auxiliary starting battery, always connect its positive terminal to the positive terminal of the roller battery, and negative to negative.

Fuses

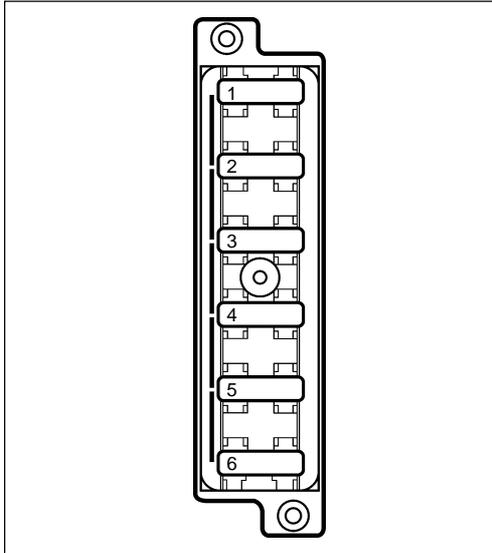


Fig. 43 Left fuse box (Standard)

- 10 A 1. Brake valve, warning panel, hour meter
- 10 A 2. Vibration valve
- 7,5 A 3. Water pump
- 7,5 A 4. Horn
- 7,5 A 5. Water pump (combi)
6. Reversing signal

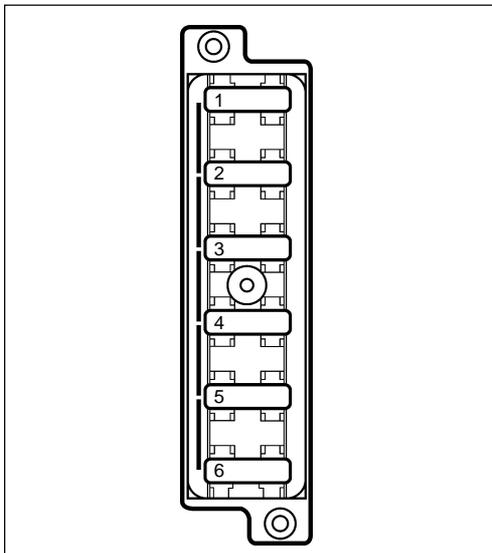


Fig. 44 Right fuse box (Accessories)

- 10 A 1. Front headlights, position light, left, rear light, right
- 10 A 2. Rear headlights, position light, right rear light, left, number plate-illumination
- 5 A 3. Direction indicators, right
- 5 A 4. Direction indicators, left
- 10 A 5. Hazard beacon
- 10 A 6. Direction indicator relay

The machine is equipped with a 12 volt electrical system and an alternator.



Connect the battery to the correct polarity. (- to ground).

The cable between the alternator and battery must not be disconnected while the engine is running.



Before carrying out any electric welding on the machine, disconnect the battery grounding cable and then all terminals to the alternator.

The electrical regulating and control system is protected by flat-pin fuses fitted in the fuse boxes located on the steering column.

Fig. 43 and 44 show the ampere rating of the various fuses and their function.

The left-hand fuse box is fitted on all machines.

The right-hand fuse box is fitted only on machines that are equipped with electrical accessories.