

Maintenance

Inspection window
for main valve



Inspection window
for transmission



PARTS SUBJECT TO WEAR THAT PERIODICALLY NEED CHANGING

The parts subject to wear such as filters, bucket teeth, etc. must be replaced according to the periodic maintenance intervals prescribed or when they reach the wear limit.

The timely change of these parts ensures an economic use of the machine.

Use only Komatsu genuine parts, which alone can guarantee excellent quality and interchangeability.

ITEM	CODE	DESCRIPTION	Q.ty	CHANGE INTERVAL
Hydraulic oil drain filter	42N-62-15470	Cartridge	1	EVERY 500 HOURS OF OPERATION
Engine oil filter	EA504074043	Cartridge	1	
Fuel filter	EA504073234	Cartridge	1	
Converter oil filter	CA0040952	Cartridge	1	EVERY 1000 HOURS OF OPERATION
Air filter	848101189	Main cartridge	1	WHEN REQUIRED
	848101190	Safety cartridge	1	WHEN REQUIRED
Front bucket	312204054	Tooth	AR	—
	801580085	Screw	AR	—
	801703012	Nut	AR	—
Backhoe bucket	312204054	Central tooth	AR	—
	801580085	Screw	AR	—
	801703012	Nut	AR	—
	312204052	Right tooth	1	—
	312204053	Left tooth	1	—
	801580085	Screw	AR	—
	801014184	Side screw	4	—
801703012	Nut	AR	—	

Oil Factory Filling

FLUID	SPECIFICATIONS
• Engine oil	SAE 15W-40 Specifications: API CI-4, ACEA E7
• Hydraulic system oil	SAE 10W-30 Specifications: API CF - CF2 - CD
• Biodegradable hydraulic system oil (Only for machines in which synthetic biodegradable oil type HEES not of plant origin is used)	SHELL NATURELLE HFX-32
• Hydraulic transmission oil	GM DEXRON® II D
• Front and rear axle oil	UTTO FLUID
• Braking system oil	GM DEXRON® II D
• Fuel	With ambient temperature over -10° C: ASTM D975 N. 2 diesel oil
	With ambient temperature under -10°C: ASTM D975 N. 1 diesel oil
• Radiator	Special permanent antifreeze, biodegradable, ethylene glycol based with corrosion inhibitor and with no silicates, borates, nitrates, phosphates and amines. Red antifreeze suitable for aluminium radiators, diluted with water (50%) to ensure protection down to -36°C.

GM DEXRON® II D (DEXRON® is a registered trademark of General Motors Corporation)

FUEL, COOLANT AND LUBRICANTS

TANK / RESERVOIR	FLUID	AMBIENT TEMPERATURE										CAPACITY (l)		
		-30	-20	-10	0	10	20	30	40	50°C	1 st filling	Change		
		-22	-4	14	32	50	68	86	104	122°F				
Engine oil pan	OIL ACEA E5 ACEA E4	SAE 5W-30										13	13	
	OIL API CI-4 ACEA E7	SAE 15W-40												
Hydraulic system	OIL API CD, CF, CF2	SAE 10W-30										98	40	
Hydraulic system with biodegradable oil	see «4.3.1»											98	40	
Front axle: Differential	OIL UTTO FLUID											7	7	
Final reduction gear (ea)												0,75	0,75	
Rear axle: Differential and final reduction gears												15	15	
Hydraulic transmission	OIL GM DEXRON® II D <small>(DEXRON® is a registered trademark of General Motors Corporation)</small>											20	20	
Braking system												0,8	0,8	
Fuel tank	DIESEL OIL	★											150	—
Engine cooling system	PERMANENT COOLANT (★★)											15	—	

- ★ ASTM D975 N. 1
- ★★ Special red permanent antifreeze suitable for aluminium radiators. If pure, dilute with water (50%).

LUBRICATION WITH GREASE

LUBRICATION POINTS	CONSISTENCY	TYPE
Joints, transmissions, fork guides, door hinges	NLGI 2	Lithium EP + MoS ₂
Hydraulically-controlled sliding plate guides (if installed)	NLGI 1	Mineral oil + graphite + aluminium complex soap

IMPORTANT
 • When the diesel oil sulphur content is less than 0,5%, change the engine oil according to the periodic maintenance intervals indicated in the operation and maintenance manual. If the diesel oil sulphur content exceeds 0.5%, change the engine oil according to the following table:

Sulphur content	Engine oil change interval
from 0.5 to 1.0%	1/2 of regular interval
over 1.0%	1/4 of regular interval

- Use engine oil with API CI-4 or ACEA E7, E5, E4 classification, to ensure the correct and constant operation of the engine.
- Use Komatsu genuine products whose characteristics have been specifically formulated and approved for use in the engine, in the work equipment hydraulic circuit, in the transmission, in the axles and in the brakes.

First filling quantity: total quantity of oil, including the oil for the components and pipes.
Oil change quantity: quantity of oil necessary to fill the system or unit during the normal inspection and maintenance operations.

ASTM: American Society of Testing and Materials
 SAE: Society of Automotive Engineers
 API: American Petroleum Institute
 UTTO: Universal Tractor Transmission Oil
 NLGI: National Lubricant Grease Institute

HOMOLOGATED SYNTHETIC BIODEGRADABLE LUBRICANTS “HEES”

Komatsu machines can be filled with synthetic biodegradable hydraulic oil type HEES not of plant origin and therefore the use of the oils indicated in the following table is authorized and recommended: .

SUPPLIER	SYNTHETIC BIODEGRADABLE OIL “HEES”
KOMATSU	BO 46 G4 (KES 07.872)
AGIP	—
ARAL	—
AVIA	—
BP	—
CONDAT	CONDAT D 46 K
ELF	—
ESSO	—
FINA	BIOHYDRAN SE 46
FUCHS	—
KENDALL	—
KUWAIT PETROLEUM K8	—
MOBIL	EAL SYNDRAULIC
MOBIL (USA)	—
PAKELO	—
PANOLIN	HLP SYNTH 46
SHELL	NATURELLE HFX-32
TAMOIL	—
TEXACO	—
TOTAL	HYDROBIO 46
VALVOLINE	—

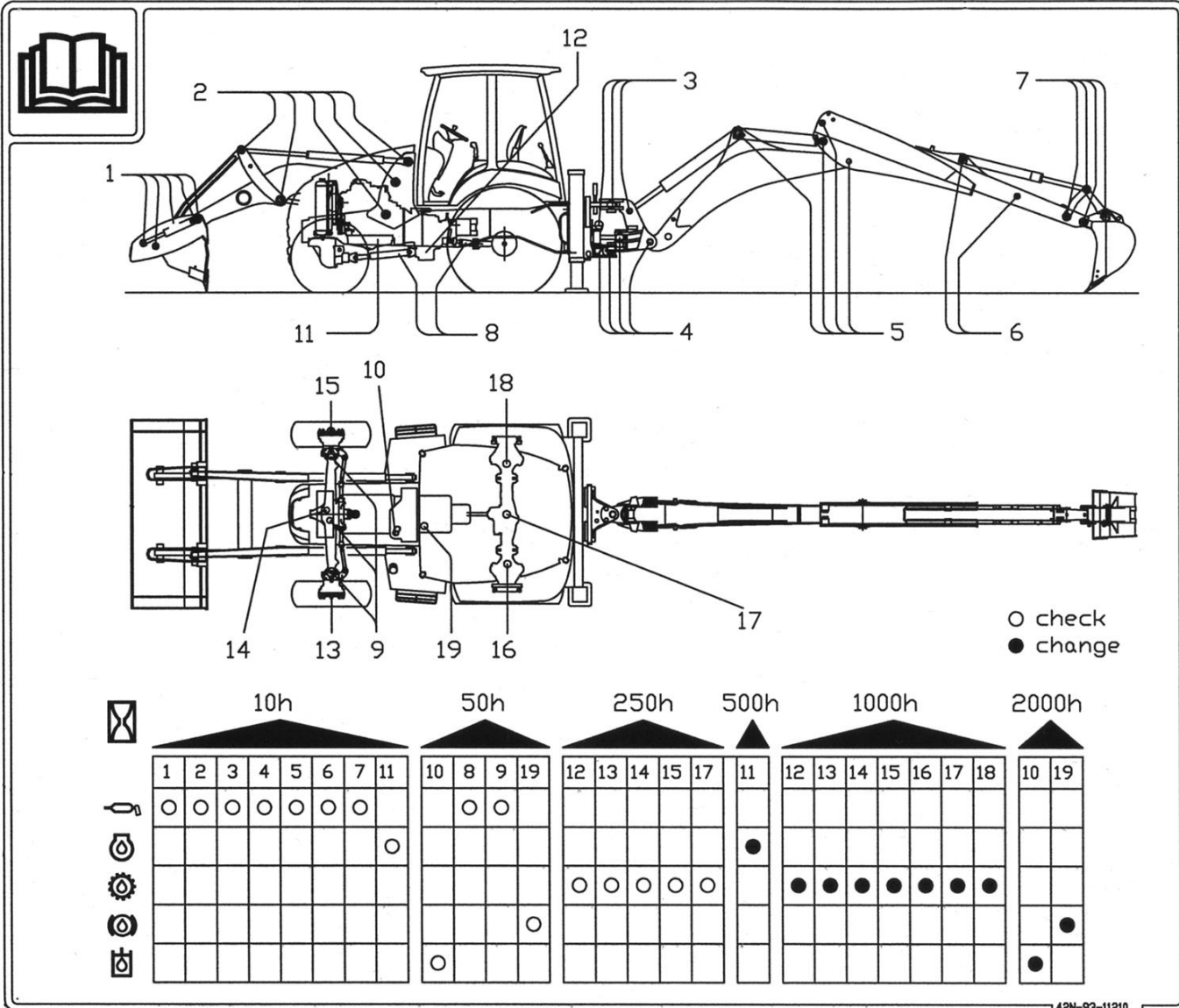
CAUTION

- It is not possible to mix the synthetic biodegradable oil type HEES with ordinary hydraulic oils, since when the temperature increases insoluble compounds are generated, which are deposited on the filters and clog them (the maximum concentration of ordinary oil must not exceed 1% of the total quantity of oil).
- Biodegradable oil can be used only in the hydraulic system; it cannot be used for the engine, the transmission, the braking system, etc.
- Before introducing biodegradable oil in the hydraulic system, empty the system completely, disconnecting the cylinders and all the parts that may contain conventional oil, and replace the drain filter with a new one.
- Start the engine and let it idle without using the work equipment, wait until the oil reaches a temperature of at least 40°C, then start moving the equipment, so that all the parts of the system are filled with oil.
- Stop the engine and check the oil level (see “4.8.6.a CHECKING THE HYDRAULIC OIL LEVEL”).

Customer Service Department

Maintenance : Lubrication Diagram

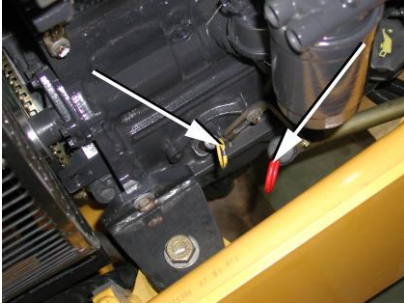
WB93/97R-5



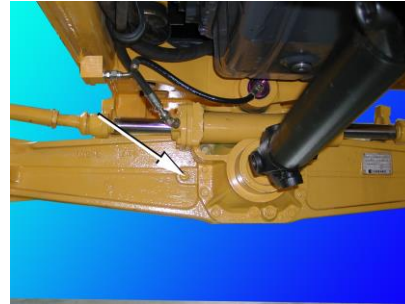
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Customer Service Department

Maintenance : Check Levels



Engine & Trasmision Oil



Front & Rear Oil



Front Final Drive Oil



Brake Oil

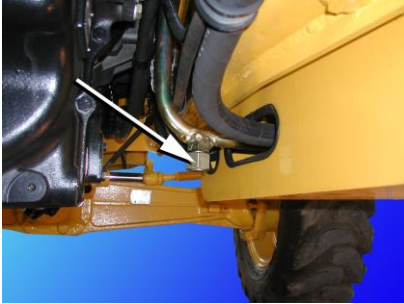


Cooling



Hydraulic Oil

Maintenance : Drain



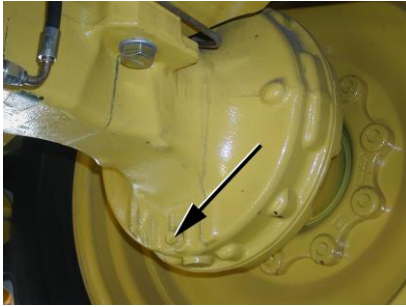
Hydraulic oil



Oil front axle



Front axle oil reduction



Rear axle oil



Fuel tank



Engine oil



Radiator liquid



Transmission oil

Maintenance : Fill Liquid



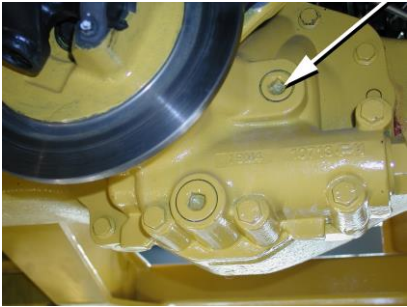
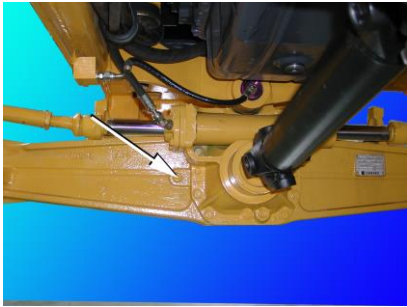
Fuel



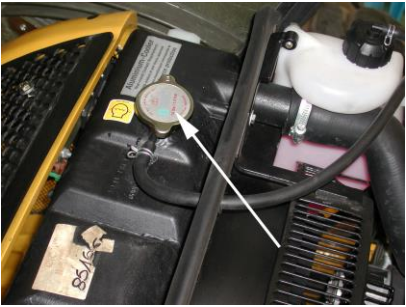
Front Final Drive



Hydraulic Oil



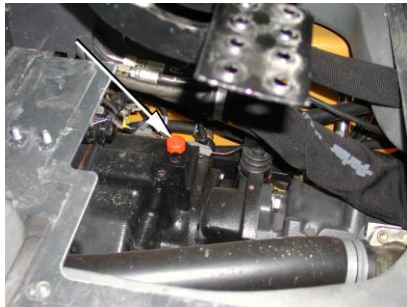
Front & Rear Axle



Cooling

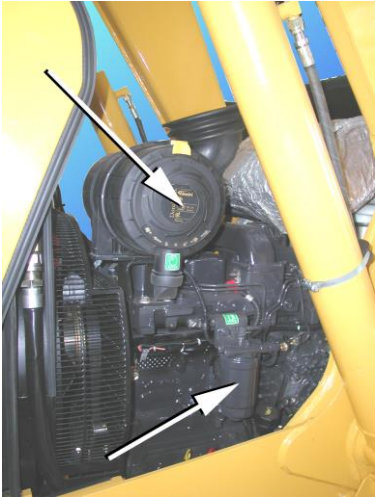


Engine Oil



Transmission Oil

Maintenance : Replace Filters



Air & Fuel



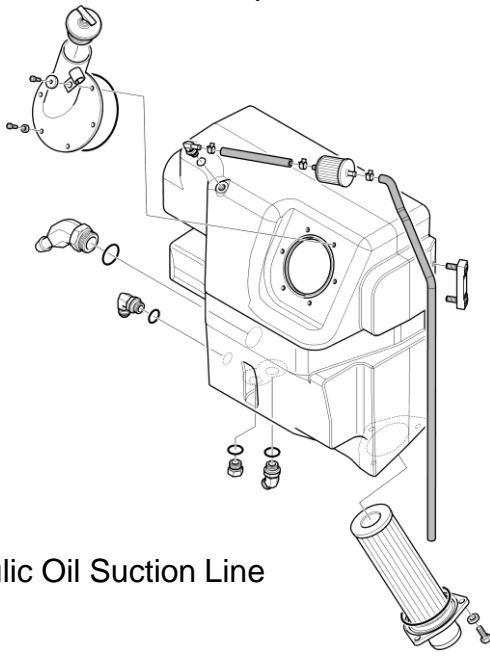
Engine Oil



Hydraulic Oil Return Line



Transmission Oil



Hydraulic Oil Suction Line