SEAM035000

Operation & Maintenance Manual

KOMATSU®

D61EX-12
D61PX-12

BULLDOZER

SERIAL NUMBERS D61EX-12 -1001 and up
D61PX-12 -1001

November 1999

Copyright 1999 Komatsu
DataKom Publishing Corporation

MidWestTech | Komatsu D61EX-12, D61PX-12 Bulldozer Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

MACHINE OPERATION ---- 3- 64
SHIFTING GAER ---- 3- 68
SHIFTING BETWEEN FORWARD AND REVERSE ---- 3- 69
STEERING MACHINE ---- 3- 71
PRECAUTIONS FOR OPERATION ---- 3- 75
WORK POSSIBLE USING BULLDOZER ---- 3- 77
ADJUSTING POSTURE OF WORK EQUIPMENT ---- 3- 79
PARKING MACHINE ---- 3- 81
CHECK AFTER FINISHING WORK ---- 3- 83
LOCKING ---- 3- 83
TIPS FOR LONGER UNDERCARRIAGE LIFE ---- 3- 84
TRANSPORTATION ---- 3- 87
TRANSPORTATION PROCEDURE ---- 3- 87
PRECAUTIONS WHEN REMOVING WORK EQUIPMENT ---- 3- 87
REMOVING CAB ---- 3- 88
LOADING, UNLOADING WORK ---- 3- 89
LIFTING MACHINE ---- 3- 93
COLD WEATHER OPERATION ---- 3- 96
PRECAUTIONS FOR LOW TEMPERATURE ---- 3- 96
AFTER COMPLETION OF WORK ---- 3- 98
AFTER COLD WEATHER ---- 3- 98
LONG-TERM STORAGE ---- 3- 99
BEFORE STPRAGE ---- 3- 99
DURING STPRAGE ---- 3- 99
AFTER STORAGE ---- 3- 99
STARTING MACHINE AFTER LONG-TERM STORAGE ---- 3- 99
TROUBLESHOOTING ---- 3-100
AFTER RUNNING OUT OF FUEL ---- 3-100
TOWING THE MACHINE ---- 3-100
IF BATTERY IS DISCHARGED ---- 3-101
OTHER TROUBLE ---- 3-104
MAINTENANCE ---- 4- 1
GUIDE TO MAINTENANCE ---- 4- 2
OUTLINE OF SERVICE ---- 4- 4
OUTLINE OF OIL, FUEL, COOLANT ---- 4- 4
RELATING TO ELECTRIC SYSTEM ---- 4- 5
WEAR PARTS ---- 4- 6
WEAR PARTS LIST ---- 4- 6
USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE ---- 4- 7
PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS ---- 4- 7
STANDARD TIGHTENING TORQUES FOR BOLTS AND NUTS ---- 4- 11
TORQUE LIST ---- 4- 11
PERIODIC REPLACEMENT OF SAFETY CRITICAL PARTS ---- 4- 12
SAFETY CRITICAL PARTS ---- 4- 13
MAINTENANCE SCHEDURE CHART ---- 4- 14
MAINTENANCE SCHEDURE CHART ---- 4- 14
SERVICE PROCEDURE ---- 4- 16
WHEN REQUIRED ---- 4- 16
CHECK BEFORE STARTING ---- 4- 36
EVERY 50 HOURS SERVICE ---- 4- 37

MidWestTech | Komatsu D61EX-12, D61PX-12 Bulldozer Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

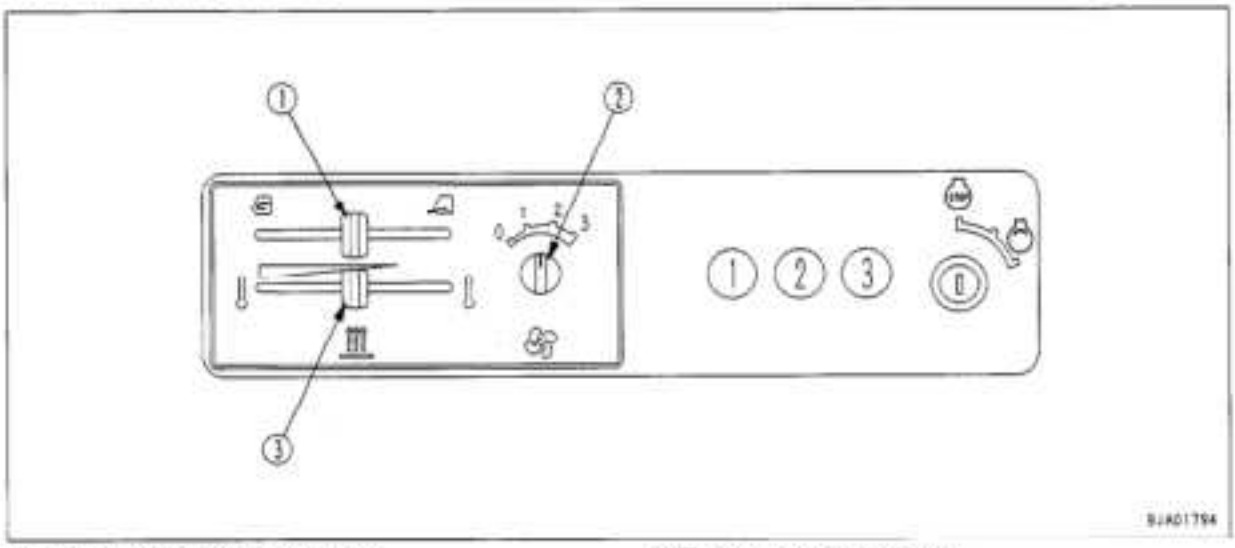
EVERY 250 HOURS SERVICE ---- 4- 38
EVERY 500 HOURS SERVICE ---- 4- 45
EVERY 1000 HOURS SERVICE ---- 4- 48
EVERY 2000 HOURS SERVICE ---- 4- 53
EVERY 4000 HOURS SERVICE ---- 4- 55
SPECIFICATIONS ---- 5- 1
SPECIFICATIONS ---- 5- 2
ATTACHMENTS, OPTIONS ---- 6- 1
GENERAL PRECAUTIONS ---- 6- 2
PRECAUTIONS RELATED TO SAFETY ---- 6- 2
SUSPENSION SEAT ---- 6- 3
HEADREST ---- 6- 4
EQUIPPING THE FIRE EXTINGUISHER AND THE FIRST-AID KIT ---- 6- 5
INDEX ---- 7- 1

MidWestTech | Komatsu D61EX-12, D61PX-12 Bulldozer Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

HEATER

(Machine equipped with cab, heater)

EXPLANATION OF PARTS

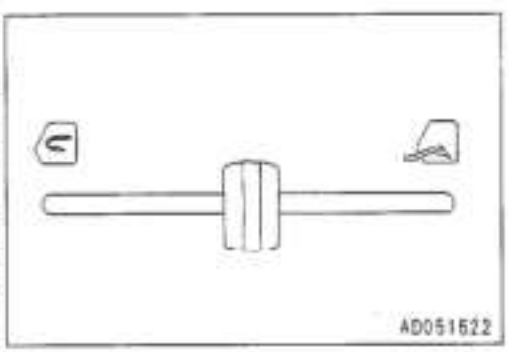


(1)FRESH/RECIRC selector lever
(2)Blower switch
(3)Temperature control lever

FRESH/RECIRC SELECTOR LEVER

This lever(1) changes the air intake port used when cooling or heating.

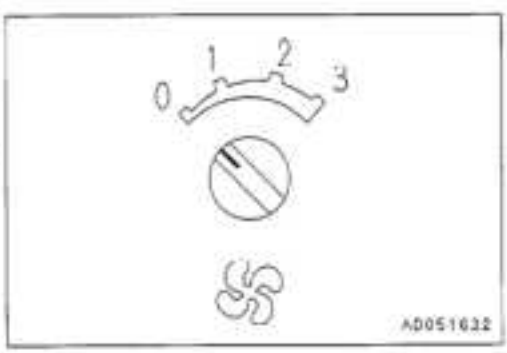
- RECIRC: If lever(1) is shifted to the left, the air conditioner sucks inside air. Set the lever to this position to cool or heat strongly. Ventilation or pressurizing function is not applied at this position.
- FRESH: If lever(1) is shifted to the right, the air conditioner sucks outside air. Set the lever to this position for normal cooling or heating. In this position, the cab is ventilated. It is also pressurized to prevent entry of dust.



BLOWER SWITCH

This switch(2) acts as the wind flow control switch and main switch when cooling or heating.

- The air flow can be set to three stages:
  1(LOW) → 2(MEDIUM) → 3(HIGH).
- If the switch is set to 0, the power is switched off and the heater stops.



MidWestTech | Komatsu D61EX-12, D61PX-12 Bulldozer Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

EVERY 500 HOURS SERVICE

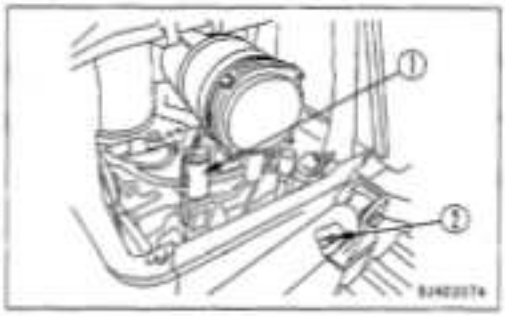
Maintenance for every 50 and 250 hours service should be carried out at the same time.

REPLACE FUEL FILTER CARTRIDGE

⚠ WARNING

- **Engine is at high temperature immediately after the machine has been operated. Wait for engine to cool down before replacing the filter.**
- **Do not bring fire or sparks near the fuel.**

Prepare a filter wrench and a container to catch the fuel.



1. Set the container to catch the fuel under the filter cartridge.
2. Using a filter wrench, turn filter cartridge (1) counterclockwise to remove it.
3. Clean the filter holder, fill a new filter cartridge with clean fuel, coat the packing surface with engine oil, then install it to the filter holder.
4. When installing, tighten until the packing surface contacts the seal surface of the filter holder, then tighten it up 1/2 to 3/4 of a turn.
   If the filter cartridge is tightened too far, the packing will be damaged and this will lead to leakage of fuel. If the filter cartridge is too loose, fuel will also leak from the packing, so always tighten to the correct amount.
5. Loosen the knob of feed pump(2) and operate it 50 to 60 times up and down. This will bleed the air.
6. Push in the knob of feed pump(2) and tighten it.
7. fter replacing the filter cartridge, start the engine and check that there is no leakage of fuel from the filter seal surface. If there is any leakage of fuel, check the tightening of the filter cartridge. Whenever there is leakage of fuel, follow Steps 1 and 2 to remove the filter cartridge, then check the packing surface for damage or foreign material.
   If any damage or foreign material is found in the packing, replace the packing with a new part, then repeat Steps 3 - 6 to install the filter cartridge.

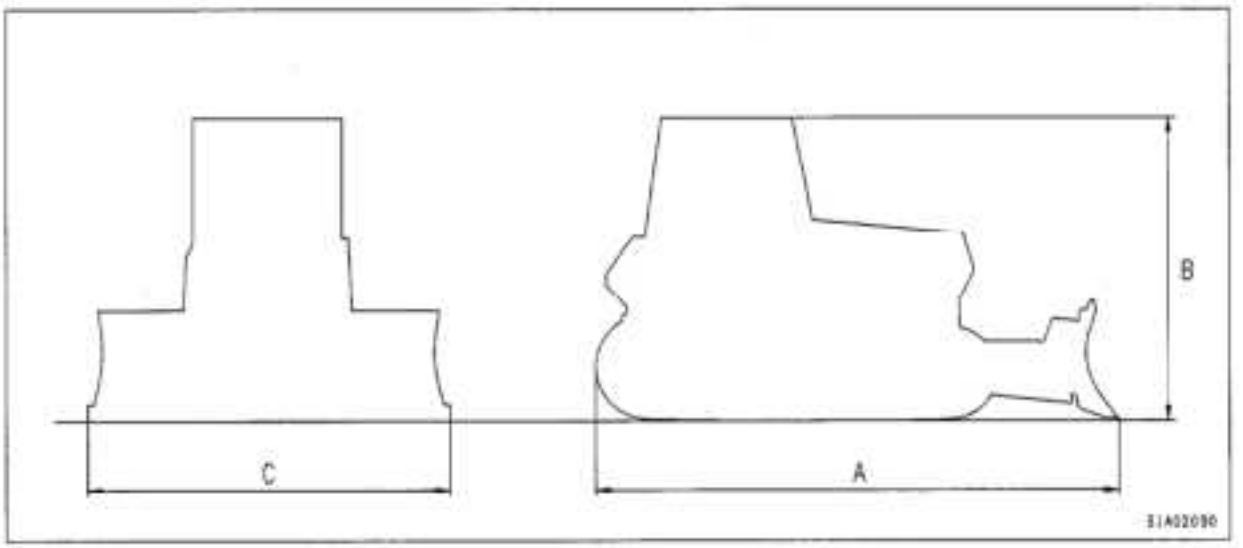
MidWestTech | Komatsu D61EX-12, D61PX-12 Bulldozer Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

SPECIFICATIONS

D61EX-12 Power angle, power tiltdozer with ROPS canopy

D61PX-12 Power angle, power tiltdozer with ROPS canopy (equipped with single shoe)

	Item		Unit	D61EX-12	D61PX-12
	Operating weight (without operator)		kg	15,800	17,500
	Name of engine		-	Komatsu S6D114E-1A deisel engine	
	Engine horsepower		Kw{PS}/rpm	112{150}/1,850	
A	Overall length		mm	5,030	5,465
B	Overall height		mm	3,115	3,140
C	Overall width		mm	3,275	3,860
	Travel speed (1st/2nd/3rd)	Forward	km/h	3.5/6.0/10.3	
		Reverse	km/h	4.6/7.9/12.8	



MidWestTech | Komatsu D61EX-12, D61PX-12 Bulldozer Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >