CEAMW26030

OPERATION & MAINTENANCE MANUAL

KOMATSU®

WA600-1LC

WHEEL LOADER

SERIAL NUMBERS
WA600-1LC A50001 and up

MAY 93

COPYRIGHT 1993 KOMATSU DRESSER COMPANY

MidWestTech | Komatsu WA600-1LC Wheel Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

CONTENTS

DESCRIPTION **PAGE**

FORWARD ... 0-1
SAFETY INFORMATION ... 0-2
INTRODUCTION ... 0-3
BREAKING IN THE NEW MACHINE ... 0-3
MACHINE AND ENGINE SERIAL NUMBERS ... 0-4
QUICK REFERENCE INFORMATION ... 0-5

SAFETY PRECAUTIONS -- SECTION 1

GENERAL PRECAUTIONS ... 1-2
PERSONNEL PRECAUTIONS ... 1-2
MACHINE PRECAUTIONS ... 1-2

OPERATION ... 1-3
BEFORE STARTING ... 1-3
START-UP ... 1-4
GENERAL OPERATING PRECAUTIONS ... 1-4
DRIVING THE MACHINE ... 1-5
OPERATING THE ATTACHMENTS ... 1-6
PULLING/TOWING ... 1-6
SHUTDOWN ... 1-7

MAINTENANCE ... 1-7
GENERAL MACHINE PRECAUTIONS ... 1-7
GENERAL WORK PRECAUTIONS ... 1-8
ACCUMULATORS ... 1-9
ATTACHMENTS ... 1-10
BRAKES ... 1-10
CAB/ROPS ... 1-10
COOLING ... 1-10
ELECTRICAL ... 1-10
ENGINE ... 1-11
FUEL SYSTEM ... 1-12
HYDRAULICS ... 1-12
TIRES AND RIMS ... 1-12
TURBOCHARGER ... 1-12

SAFETY PRODUCT GRAPHICS AND LOCATIONS ... 1-14

OPERATION -- SECTION 2

GENERAL VIEW ... 2-2

INSTRUMENTS AND CONTROLS ... 2-3
MONITOR PANEL ... 2-3
SYSTEM CHECK ... 2-4
CHECK MONITOR LAMP GROUP ... 2-5
Brake Oil Level Monitor ... 2-5
Engine Oil Level Monitor ... 2-6
Engine Coolant Level Monitor ... 2-6
CAUTION MONITOR LAMP GROUP ... 2-6
Charge Monitor ... 2-6
Fuel Level Monitor ... 2-7
Transmission Oil Filter Monitor ... 2-7
CAUTION MONITOR LAMP GROUP ... 2-7

MidWestTech | Komatsu WA600-1LC Wheel Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

Brake Line Failure Monitor ... 2-7
Engine Oil Pressure Monitor ... 2-8
Engine Coolant Level Monitor ... 2-8
Air Pressure Monitor ... 2-8
Engine Coolant Temperature Monitor ... 2-8
Torque Converter Oil Temperature Monitor ... 2-9
Ground Driven Steering Operation Monitor - If Equipped ... 2-9
METER AND PILOT LAMP GROUP ... 2-10
Parking Brake Pilot Lamp ... 2-10
Working Lamp Pilot Lamp ... 2-11
Transmission Cut-Off Selector Pilot Lamp ... 2-11
Air Pressure Gauge ... 2-11
Engine Coolant Temperature Gauge ... 2-11
Torque Converter Oil Temperature Gauge ... 2-12
Fuel Level Gauge ... 2-12
Turn Signal Pilot Lamp ... 2-12
High Beam Pilot Lamp ... 2-12
Speedometer ... 2-13
Service Meter ... 2-13
ENGINE COOLANT TEMPERATURE MONITOR LAMP ... 2-13
SWITCHES ... 2-14
TRANSMISSION CUT-OFF SELECTOR SWITCH ... 2-14
ENGINE LOW IDLE SELECTOR SWITCH ... 2-14
ETHER START SWITCH ... 2-15
HORN BUTTON ... 2-15
HAZARD LAMP SWITCH ... 2-15
PARKING BRAKE SWITCH ... 2-16
WORKING LAMP SWITCH ... 2-17
STARTING SWITCH ... 2-17
LAMP SWITCHES ... 2-17
Lamp switch ... 2-17
Turn signal lever ... 2-18
Dimmer switch ... 2-18
CIGARETTE LIGHTER ... 2-19
TRANSMISSION KICKDOWN SWITCH ... 2-19
FRONT WIPER SWITCH - IF EQUIPPED ... 2-20
REAR WIPER SWITCH - IF EQUIPPED ... 2-20
CAB DOME LAMP SWITCH - IF EQUIPPED ... 2-21
LEVERS AND PEDALS ... 2-22
DIRECTIONAL LEVER ... 2-22
SPEED CONTROL LEVER ... 2-23
SPEED CONTROL LEVER STOPPER ... 2-23
STEERING COLUMN TILT LEVER ... 2-23
ACCELERATOR PEDAL ... 2-24
BRAKE PEDALS ... 2-24
Right brake pedal ... 2-24
Left brake pedal ... 2-24
LIFT ARM CONTROL LEVER ... 2-25
BUCKET CONTROL LEVER ... 2-25
FRONT ATTACHMENT CONTROL LEVER - IF EQUIPPED ... 2-26
WORK EQUIPMENT CONTROL LEVER LOCK ... 2-26
CAB DOOR HOLD OPEN LOCK - IF EQUIPPED ... 2-26
AIR CLEANER SERVICE INDICATOR ... 2-26
FRAME LOCKING BAR ... 2-27
MAIN CIRCUIT BREAKER ... 2-27
FUSE BOXES ... 2-27
OPERATOR'S SEAT ... 2-30
FORWARD-BACKWARD ADJUSTMENT ... 2-30
SEAT ANGLE ADJUSTMENT ... 2-30
WEIGHT ADJUSTMENT ... 2-30
BACKREST TILT ADJUSTMENT ... 2-30

MidWestTech | Komatsu WA600-1LC Wheel Loader Operation & Maintenance Manual | Pub... Order the manual at mid-west-tech.com >

CONTENTS

HEIGHT ADJUSTMENT 2-30
RIGHT SIDE ARMREST 2-30
HEIGHT ADJUSTMENT 2-30
ANGLE ADJUSTMENT 2-30
SEAT BELT 2-31

CAB HEATER AND DEFROSTER - IF EQUIPPED 2-32
CONTROL PANEL 2-32
FAN SPEED SWITCH 2-32
TEMPERATURE CONTROL LEVER 2-32
AIR INTAKE SELECTOR LEVER 2-32
METHOD OF OPERATION 2-33

CAB HEATER, DEFROSTER AND AIR CONDITIONER - IF EQUIPPED 2-34
CONTROL PANEL 2-34
FAN SPEED SWITCH 2-34
AIR CONDITIONER SWITCH 2-34
TEMPERATURE CONTROL LEVER 2-34
AIR INTAKE SELECTOR LEVER 2-34
METHOD OF OPERATION 2-35
PRECAUTIONS FOR USING AIR CONDITIONER 2-36
HANDLING AIR CONDITIONER IN SEASON 2-36
HANDLING AIR CONDITIONER IN OFF-SEASONS 2-36

FUEL TANK FILLER CAP LOCKING COVER 2-37

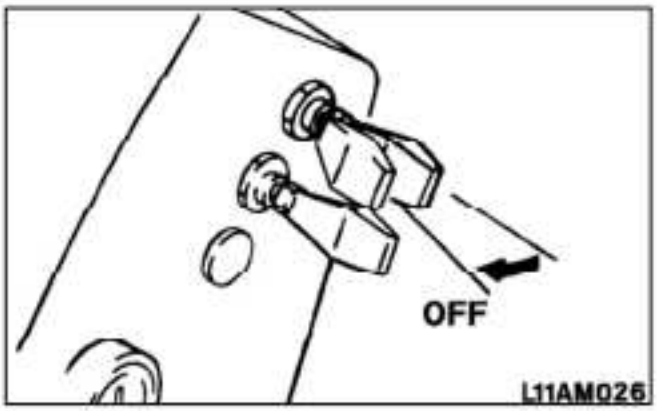
LOCKING FILLER CAPS - IF EQUIPPED 2-38

CHECKS BEFORE STARTING ENGINE 2-39
WALK AROUND CHECK 2-39
CHECKS BEFORE STARTING 2-39

OPERATING MACHINE 2-40
OPERATIONS BEFORE STARTING ENGINE 2-40
STARTING ENGINE 2-42
NORMAL STARTING 2-42
SPECIAL STARTING 2-42
COLD WEATHER STARTING 2-43
OPERATIONS AFTER STARTING ENGINE 2-44
COLD WEATHER WARM-UP PROCEDURE 2-44
MOVING MACHINE OFF 2-45
SHIFTING GEAR 2-47
SHIFTING BETWEEN FORWARD AND REVERSE 2-48
STEERING MACHINE 2-48
STOPPING MACHINE 2-49
OPERATIONAL PRECAUTIONS 2-50
PERMISSIBLE WATER DEPTH 2-50
IF WHEEL BRAKES DO NOT WORK 2-50
WHEN TRAVELING UP OR DOWN SLOPES 2-50
Lower Center of Gravity When Turning 2-50
Braking on Downhill Slopes 2-50
If Engine Stops 2-50
POSSIBLE WORK USING LOADER 2-51
EXCAVATION 2-51
LEVELING 2-53
LOAD AND CARRY OPERATIONS 2-54
LOADING 2-54
Cross Drive Loading 2-54
V-Shape Loading 2-54
PARKING MACHINE 2-55
STOPPING ENGINE 2-56

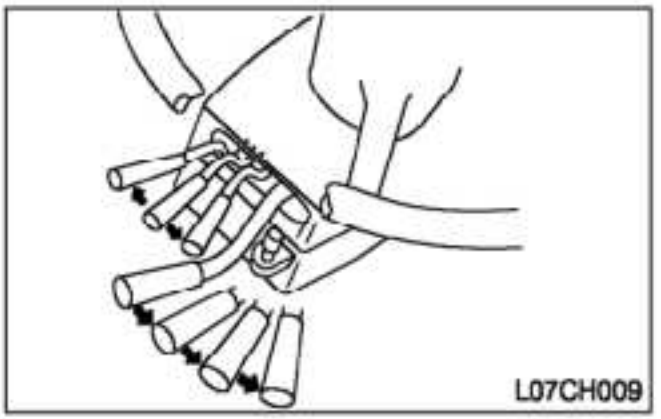
MidWestTech | Komatsu WA600-1LC Wheel Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

★ When the parking brake is applied with parking brake switch (2) put in OFF, put switch (2) to ON and return it to OFF again.



4. Set speed control lever (3) and directional lever (4) to the desired position.
5. Release right brake pedal (1), then depress accelerator pedal (5) to move the machine off.

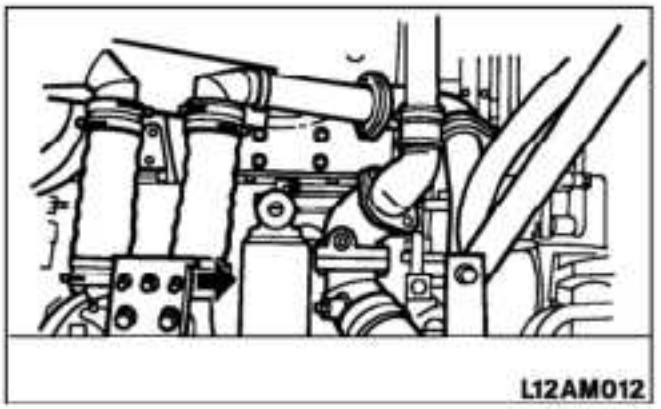
WARNING! If the machine has to be started on a slope, always turn the transmission cut-off selector switch to OFF and depress the left brake pedal. Then depress the accelerator pedal while releasing the left brake pedal to start the machine off slowly.



MidWestTech | Komatsu WA600-1LC Wheel Loader Operation & Maintenance Manual | Pub... Order the manual at mid-west-tech.com >

COOLANT FILTER

GENERAL


L12AM012

The coolant filter is a spin-on type filter. This filter cannot be cleaned and should not be disturbed except when it becomes necessary to replace it.

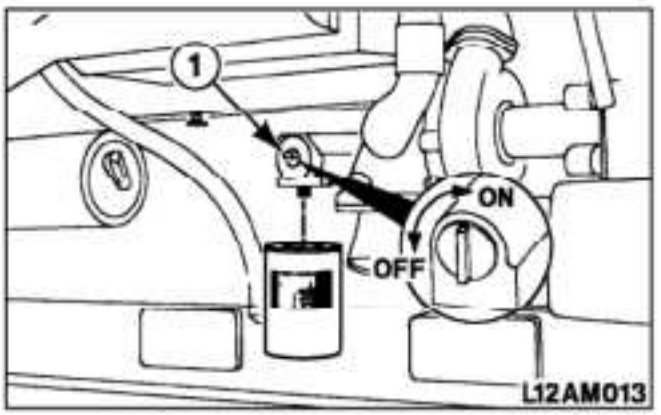
Replace the coolant filter at every engine oil change.

★ The correct coolant filter to be used is determined by the total cooling system capacity and operational factors. For further information, refer to "DCA4 UNIT MAINTENANCE GUIDE".

The coolant filter is located on the left side of the engine.

Be careful not to allow dirt, water or other foreign material to get in the new filter. Keep new filters in the original package until ready for installation.

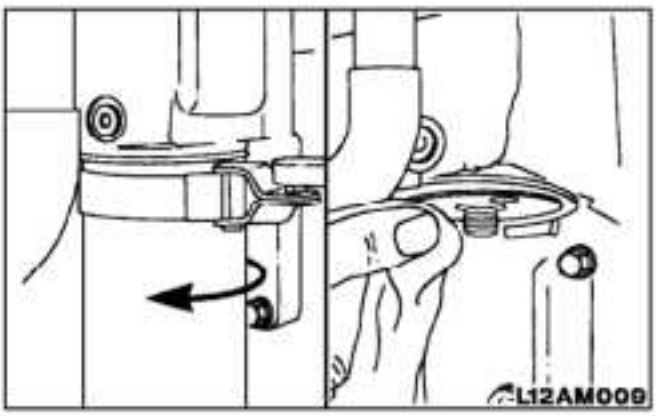
REPLACEMENT



L12AM013

WARNING! Do not remove the radiator cap when the engine coolant is hot. Hot coolant will cause serious personal injury. Remove the radiator cap and close the shutoff valve, before removing the coolant filter. Failure to do so can result in personal injury from heated coolant spray.

1. Open the engine side access door on the left side of the machine.
2. Remove the radiator cap. Turn shutoff valve (1), located on the left side of the engine, to the OFF position.
3. Clean the area around the coolant filter.
4. Using a filter wrench, remove the coolant filter by turning it counterclockwise. Discard the filter in a suitable manner if is **not** needed for any reason.
5. Clean the filter gasket surface of the filter header.


L12AM009

MidWestTech | Komatsu WA600-1LC Wheel Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

GENERAL SPECIFICATIONS - MACHINES WITH HIGH LIFT BOOM

	With Straight Edge Rock Bucket 5.0 m^3 (6.5 yd^3)		With Spade Nose Rock Bucket 5.0 m^3 (6.5 yd^3)	
	3565 x 33 L4 Tires	3565 x 33 L5 Tires	3565 x 33 L4 Tires	3565 x 33 L5 Tires
OPERATING WEIGHT - With special counterweight	Not available at this time	Not available at this time	Not available at this time	Not available at this time
PERFORMANCE				
• Travel speeds - Maximum				
Forward 1st	6.4 km/h (3.9 mph)	6.4 km/h (3.9 mph)	6.4 km/h (3.9 mph)	6.4 km/h (3.9 mph)
Forward 2nd	11.3 km/h (7.0 mph)	11.3 km/h (7.0 mph)	11.3 km/h (7.0 mph)	11.3 km/h (7.0 mph)
Forward 3rd	19.4 km/h (12.1 mph)	19.4 km/h (12.1 mph)	19.4 km/h (12.1 mph)	19.4 km/h (12.1 mph)
Forward 4th	31.8 km/h (19.8 mph)	31.8 km/h (19.8 mph)	31.8 km/h (19.8 mph)	31.8 km/h (19.8 mph)
Reverse 1st	7.1 km/h (4.4 mph)	7.1 km/h (4.4 mph)	7.1 km/h (4.4 mph)	7.1 km/h (4.4 mph)
Reverse 2nd	12.5 km/h (7.8 mph)	12.5 km/h (7.8 mph)	12.5 km/h (7.8 mph)	12.5 km/h (7.8 mph)
Reverse 3rd	21.4 km/h (13.3 mph)	21.4 km/h (13.3 mph)	21.4 km/h (13.3 mph)	21.4 km/h (13.3 mph)
Reverse 4th	35.2 km/h (21.9 mph)	35.2 km/h (21.9 mph)	35.2 km/h (21.9 mph)	35.2 km/h (21.9 mph)
ENGINE				
• Make and Model	Cummins KTA 19C diesel engine			
• Type	4-cycle, water cooled, direct injection, turbocharged			
• Displacement	18.9 liter (1150 in^3)			
• Number of cylinders	Six (6)			
• Bore and stroke	159 mm x 159 mm (6.2 in x 6.2 in)			
• Flywheel horsepower @ 2000 rpm	317 kW (425 HP)			

MidWestTech | Komatsu WA600-1LC Wheel Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >