TEN00051-00

# Operation & Maintenance Manual

GALEO

# PC1800-6

## HYDRAULIC EXCAVATOR

SERIAL NUMBERS PC1800-6 11035 and up

February 2005

KOMATSU

MidWestTech | Komatsu Galeo PC1800-6 Hydraulic Excavator Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

# CONTENTS

## FOREWORD

**FOREWORD** ..... 1-2

**SAFETY INFORMATION** ..... 1-5

**INTRODUCTION** ..... 1-7
DIRECTIONS OF MACHINE ..... 1-7

**PRODUCT INFORMATION** ..... 1-8
MACHINE SERIAL NUMBER PLATE AND ITS LOCATION ..... 1-8
ENGINE SERIAL NUMBER PLATE AND ITS LOCATION ..... 1-8
EMISSION CONTROL INFORMATION LABEL AND ITS LOCATION ..... 1-9
SERVICE METER LOCATION ..... 1-9
YOUR MACHINE SERIAL NUMBERS AND DISTRIBUTOR ..... 1-10

## SAFETY

**SAFETY INFORMATION** ..... 2-2

**POSITION FOR ATTACHING SAFETY LABELS** ..... 2-4
POSITION FOR ATTACHING SAFETY LABELS ..... 2-5
SAFETY LABELS ..... 2-6

**SAFETY INFORMATION** ..... 2-10

**SAFETY MACHINE OPERATION** ..... 2-19
STARTING ENGINE ..... 2-19
OPERATION ..... 2-21
TRANSPORTATION ..... 2-27
BATTERY ..... 2-28
TOWING ..... 2-30
LIFTING OBJECTS WITH BUCKET ..... 2-31

**SAFETY MAINTENANCE INFORMATION** ..... 2-32

## OPERATION

**GENERAL VIEW** ..... 3-2
GENERAL VIEW OF MACHINE ..... 3-2
GENERAL VIEW OF CONTROLS AND GAUGES ..... 3-3

**EXPLANATION OF COMPONENTS** ..... 3-5
MACHINE MONITOR ..... 3-5
CGC MONITOR ..... 3-19
SWITCHES ..... 3-57
LAMP ..... 3-68



MidWestTech | Komatsu Galeo PC1800-6 Hydraulic Excavator Operation & Maintenanc... Order the manual at mid-west-tech.com >

CONTROL LEVERS, PEDALS ..... 3-72
DOOR LOCK ..... 3-76
POCKET ..... 3-76
EMERGENCY ESCAPE HAMMER ..... 3-76
EMERGENCY ESCAPE LADDER ..... 3-77
FIRE EXTINGUISHER ..... 3-77
CAP, COVER WITH LOCK ..... 3-78
ASHTRAY ..... 3-78
HANDLING AIR CONDITIONER ..... 3-79
RADIO ..... 3-87
FUSE ..... 3-91
CIRCUIT BREAKER ..... 3-92
CONTROLLER (COMPUTER) ..... 3-95
TOOLBOX ..... 3-96
HANDLING GREASE PUMP AND GREASE GUN ..... 3-96
HANDLING ACCUMULATOR ..... 3-100
ORBCOMM CONTROLLER ..... 3-101

**MACHINE OPERATIONS AND CONTROLS** ..... 3-102
BEFORE STARTING ENGINE ..... 3-102
STARTING ENGINE ..... 3-123
AFTER STARTING ENGINE ..... 3-128
IN COLD AREAS ..... 3-132
STOPPING THE ENGINE ..... 3-135
CHECK AFTER SHUT OFF ENGINE ..... 3-138
MACHINE OPERATION ..... 3-139
STEERING THE MACHINE ..... 3-143
SWINGING ..... 3-145
WORK EQUIPMENT CONTROLS AND OPERATIONS ..... 3-146
HANDLING WORKING MODE ..... 3-147
PROHIBITED OPERATIONS ..... 3-148
GENERAL OPERATION INFORMATION ..... 3-150
TRAVELING ON SLOPES ..... 3-151
ESCAPE FROM MUD ..... 3-153
RECOMMENDED APPLICATIONS ..... 3-154
REPLACEMENT AND INVERSION OF BUCKET ..... 3-155
PARKING MACHINE ..... 3-157
CHECK AFTER FINISHING WORK ..... 3-158
LOCKING ..... 3-159

**TRANSPORTATION** ..... 3-160
PRECAUTIONS FOR TRANSPORTATION ..... 3-160
LIFTING MACHINE ..... 3-161
PARTS FOR TRANSPORT ..... 3-161

**COLD WEATHER OPERATION** ..... 3-162
COLD WEATHER OPERATION INFORMATION ..... 3-162
AFTER DAILY WORK COMPLETION ..... 3-164
AFTER COLD WEATHER SEASON ..... 3-164



MidWestTech | Komatsu Galeo PC1800-6 Hydraulic Excavator Operation & Maintenanc... Order the manual at mid-west-tech.com >

**LONG TERM STORAGE** ..... 3-165
BEFORE STORAGE ..... 3-165
DURING STORAGE ..... 3-165
AFTER STORAGE ..... 3-166

**TROUBLESHOOTING** ..... 3-167
RUNNING OUT OF FUEL ..... 3-167
PHENOMENA THAT ARE NOT FAILURES ..... 3-168
TOWING THE MACHINE ..... 3-169
PRECAUTIONS ON PARTICULAR JOBSITES ..... 3-169
DISCHARGED BATTERY ..... 3-170
OTHER TROUBLE ..... 3-174

## MAINTENANCE

**MAINTENANCE INFORMATION** ..... 4-2

**LUBRICANTS, COOLANT AND FILTERS** ..... 4-5
HANDLING OIL, FUEL, COOLANT, AND PERFORMING OIL CLINIC ..... 4-5
ELECTRIC SYSTEM MAINTENANCE ..... 4-8

**WEAR PARTS LIST** ..... 4-9

**USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE** ..... 4-10
PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS ..... 4-10

**TIGHTENING TORQUE SPECIFICATIONS** ..... 4-14
TIGHTENING TORQUE LIST ..... 4-14

**PERIODIC REPLACEMENT OF SAFETY CRITICAL PARTS** ..... 4-15
SAFETY CRITICAL PARTS ..... 4-16

**MAINTENANCE SCHEDULE** ..... 4-18
MAINTENANCE SCHEDULE CHART ..... 4-18

**MAINTENANCE PROCEDURE** ..... 4-21
INITIAL 100 HOURS MAINTENANCE (ONLY AFTER THE FIRST 100 HOURS) ..... 4-21
INITIAL 250 HOURS MAINTENANCE (ONLY AFTER THE FIRST 250 HOURS) ..... 4-21
WHEN REQUIRED ..... 4-22
CHECK BEFORE STARTING ..... 4-55
EVERY 10 HOURS MAINTENANCE ..... 4-56
EVERY 100 HOURS MAINTENANCE ..... 4-60
EVERY 250 HOURS MAINTENANCE ..... 4-61
EVERY 500 HOURS MAINTENANCE ..... 4-71
EVERY 1000 HOURS MAINTENANCE ..... 4-89
EVERY 2000 HOURS MAINTENANCE ..... 4-95
EVERY 4000 HOURS MAINTENENCE ..... 4-101
EVERY 5000 HOURS MAINTENANCE ..... 4-107
EVERY 8000 HOURS MAINTENANCE ..... 4-110



MidWestTech | Komatsu Galeo PC1800-6 Hydraulic Excavator Operation & Maintenanc... Order the manual at mid-west-tech.com >

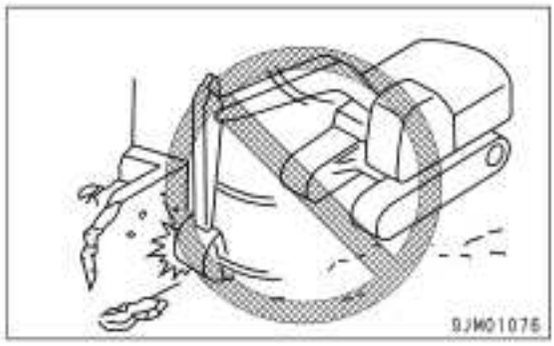
# PROHIBITED OPERATIONS

**⚠ WARNING**

- **If it is necessary to operate the work equipment control lever when the machine is traveling, be extremely careful when operating.**
- **If any lever is operated when the auto-deceleration is being actuated, the engine speed will suddenly increase, so be careful when operating.**

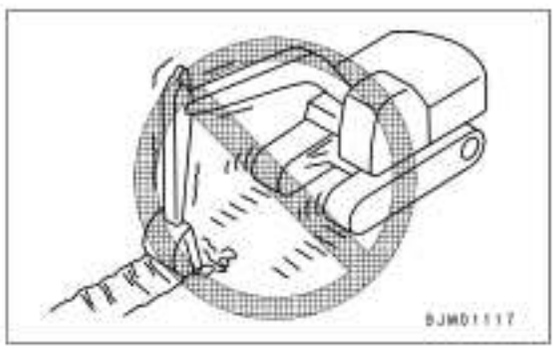
## OPERATIONS USING SWING FORCE

Do not use the swing force to compact soil or break objects. This is not only dangerous, but will also markedly reduce the life of the machine.



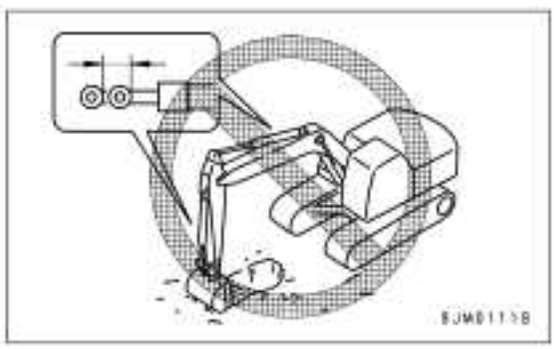

## OPERATIONS USING TRAVEL FORCE

Do not dig the bucket into the ground and use the travel force to carry out excavation. This will damage the machine or work equipment.




## OPERATIONS USING HYDRAULIC CYLINDER STROKE ENDS

If the cylinder is used when the cylinder rod has been operated to the end of its stroke during operations, external force will cause impact to the work equipment, and this will damage the hydraulic cylinders. Avoid carrying out operations with the hydraulic cylinder fully retracted or fully extended.



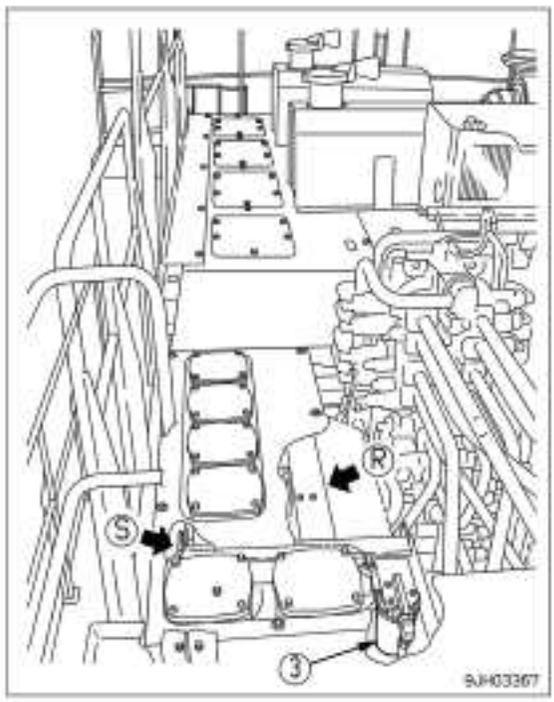



MidWestTech | Komatsu Galeo PC1800-6 Hydraulic Excavator Operation & Maintenanc... Order the manual at mid-west-tech.com >

# CHECK, REPLACE HYDRAULIC PUMP DRAIN FILTER CARTRIDGE

(6 places)

1. Using the filter wrench, turn filter cartridge (1) to the left and remove it.
2. Fill a new filter cartridge with hydraulic oil, coat the packing face with oil, then install it.
3. When installing, bring the packing surface into contact with the seal surface of the filter holder, then tighten it a further 1/2 – 3/4 turns.




**NOTICE**

**When replacing the cartridge, check that there are no iron particles or foreign material accumulated at the bottom of the filter case or stuck to the circumference of the cartridge.**

**If there are any iron particles or foreign material, there is probably an abnormality in the hydraulic circuit.**

**Please contact your Komatsu distributor for inspection and repairs.**

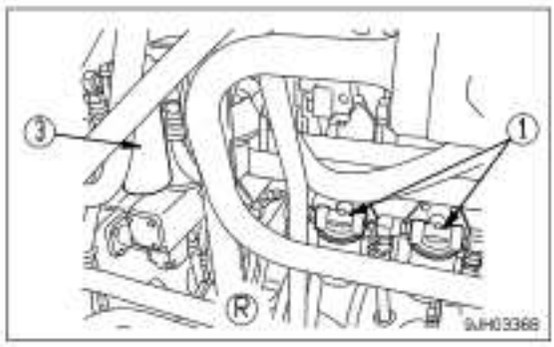
**REMARK**

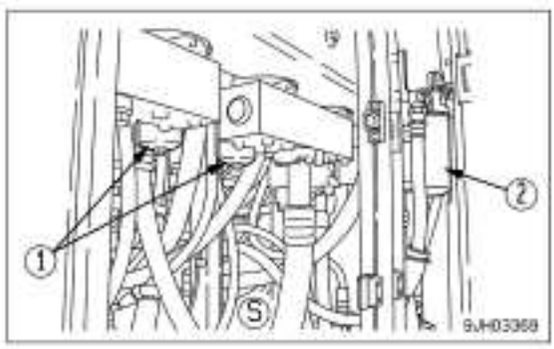
The drain filter cartridges consist of the following three types.

(1): Hydraulic pump drain filter cartridge (6 places)

(2): Swing motor drain filter cartridge (1 place)

(3): Travel motor drain filter cartridge (1 place)






MidWestTech | Komatsu Galeo PC1800-6 Hydraulic Excavator Operation & Maintenanc... Order the manual at mid-west-tech.com >

R: indicates a point on the right side
L: indicates a point on the left side

| Injector installed location | | Injector location subdivision | Lubrication point |
|---|---|---|---|
| (A) | Bucket | 1R | F&R bucket connector pin (R.H) |
| | | 1L | F&R bucket connector pin (L.H) |
| | | 2R | Bottom dump cylinder head pin (R.H) |
| | | 2L | Bottom dump cylinder head pin (L.H) |
| | | 3R | Bottom dump cylinder bottom pin (R.H) |
| | | 3L | Bottom dump cylinder bottom pin (L.H) |
| (B) | Arm | 4R | Arm top pin (1) (R.H) |
| | | 4L | Arm top pin (1) (L.H) |
| | | 5R | Arm top pin (2) (R.H) |
| | | 5L | Arm top pin (2) (L.H) |
| | | 6R | Arm cylinder head pin (R.H) |
| | | 6L | Arm cylinder head pin (L.H) |
| | | 7R | Bucket cylinder bottom pin (R.H) |
| | | 7L | Bucket cylinder bottom pin (L.H) |
| | | 8R | Boom top pin (R.H) |
| | | 8L | Boom top pin (L.H) |
| | | 9R | Bucket cylinder head (R.H) |
| | | 9L | Bucket cylinder head (L.H) |
| (C) | Boom | 10R | Boom foot pin (R.H) |
| | | 10L | Boom foot pin (L.H) |
| | | 11R | Arm cylinder bottom pin (R.H) |
| | | 11L | Arm cylinder bottom pin (L.H) |
| | | 12R | Boom cylinder head pin (R.H) |
| | | 12L | Boom cylinder head pin (L.H) |
| (D) | Chassis | 13R | Boom cylinder bottom pin (R.H) |
| | | 13L | Boom cylinder bottom pin (L.H) |



MidWestTech | Komatsu Galeo PC1800-6 Hydraulic Excavator Operation & Maintenanc... Order the manual at mid-west-tech.com >