

# **Operation & Maintenance Manual**

# **PC78MR-6**

## **HYDRAULIC EXCAVATOR**

**SERIAL NUMBERS PC78MR-6 1001 and up**

This material is proprietary to Komatsu America Corp. and is not to be reproduced, used, or disclosed except in accordance with written authorization from Komatsu America Corp..

It is our policy to improve our products whenever it is possible and practical to do so. We reserve the right to make changes or improvements at any time without incurring any obligation to install such changes on products sold previously.

Due to this continuous program of research and development, revisions may be made to this publication. It is recommended that customers contact their distributor for information on the latest revision.

Copyright 2003 Komatsu  
Printed in U.S.A.  
Komatsu America Corp.

May 2003

**CONTENTS**

FOREWORD ..... 1- 1

    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 ..... 2- 1

    SAFETY INFORMATION ..... 2- 2

    SAFETY LABELS ..... 2- 4

        LOCATION OF SAFETY LABELS ..... 2- 5

        SAFETY LABELS ..... 2- 6

    SAFETY INFORMATION ..... 2- 12

    SAFETY MACHINE OPERATION ..... 2- 20

        STARTING ENGINE ..... 2- 20

        OPERATION ..... 2- 22

        TRANSPORTATION ..... 2- 28

        BATTERY ..... 2- 29

        TOWING ..... 2- 31

        LIFTING OBJECTS WITH BUCKET ..... 2- 32

    SAFETY MAINTENANCE INFORMATION ..... 2- 33

OPERATION ..... 3- 1

    MACHINE VIEW ILLUSTRATIONS ..... 3- 2

        OVERALL MACHINE VIEW ..... 3- 2

        CONTROLS AND GAUGES ..... 3- 3

    DETAILED CONTROLS AND GAUGES ..... 3- 4

        MONITORING SYSTEM ..... 3- 4

        SWITCHES ..... 3- 15

        CONTROL LEVERS AND PEDALS ..... 3- 20

        SUN ROOF ..... 3- 25

        WINDSHIELD ..... 3- 26

        SLIDING DOOR ..... 3- 31

        EMERGENCY ESCAPE HAMMER ..... 3- 31

        CAP WITH LOCK ..... 3- 33

        ENGINE HOOD ..... 3- 34

        MUD COVER ..... 3- 35

        BATTERY INSPECTION COVER ..... 3- 36

        FUSE ..... 3- 37

        FUSIBLELINK ..... 3- 38

        AUXILIARY ELECTRIC POWER ..... 3- 38

        CONTROLLERS ..... 3- 38

        AIR CONDITIONER CONTROLS ..... 3- 39

        HEATER AND **DEFROSTER** CONTROLS ..... 3- 45

        RADIO ..... 3- 50

        OPERATION MANUAL STORAGE ..... 3- 55

|  |       |
|--|-------|
| TOOL BOX .....   | 3- 55 |
| GREASE PUMP HOLDER .....   | 3- 55 |
| ASHTRAY .....  | 3- 55 |
| FIRE EXTINGUISHER .....  | 3- 56 |
| MACHINE OPERATIONS AND CONTROLS .....                                  | 3- 57 |
| BEFORE STARTING ENGINE .....   | 3- 57 |
| STARTING ENGINE .....  | 3- 73 |
| AFTER STARTING ENGINE .....  | 3- 78 |
| STOPPING THE ENGINE .....  | 3- 81 |
| CHECK AFTER SHUT OFF ENGINE .....                                      | 3- 81 |
| MACHINE OPERATION .....  | 3- 82 |
| STEERING THE MACHINE .....   | 3- 86 |
| SWINGING .....   | 3- 88 |
| WORK EQUIPMENT CONTROLS AND OPERATIONS .....                           | 3- 89 |
| WORKING MODE .....   | 3- 91 |
| PROHIBITED OPERATIONS .....  | 3- 92 |
| GENERAL OPERATION INFORMATION .....                                    | 3- 94 |
| TRAVELING ON SLOPES .....  | 3- 96 |
| ESCAPE FROM MUD .....  | 3- 98 |
| RECOMMENDED APPLICATIONS .....   | 3- 99 |
| MACHINE READY FOR ATTACHMENT .....                                     | 3-101 |
| BUCKET REPLACEMENT AND INVERSION .....                                 | 3-107 |
| PARKING MACHINE .....  | 3-109 |
| MACHINE INSPECTION AFTER DAILY WORK .....                              | 3-110 |
| LOCKING .....  | 3-110 |
| ROAD LINERS AND RUBBER SHOES .....                                     | 3-111 |
| TRANSPORTATION .....   | 3-116 |
| TRANSPORTATION PROCEDURE .....   | 3-116 |
| LOADING AND UNLOADING WITH TRAILER .....                               | 3-116 |
| LIFTING MACHINE .....  | 3-122 |
| COLD WEATHER OPERATION .....   | 3-124 |
| COLD WEATHER OPERATION INFORMATION .....                               | 3-124 |
| AFTER DAILY WORK COMPLETION .....                                      | 3-126 |
| AFTER COLD WEATHER SEASON .....  | 3-126 |
| LONG TERM STORAGE .....  | 3-127 |
| BEFORE STORAGE .....   | 3-127 |
| DURING STORAGE .....   | 3-127 |
| AFTER STORAGE .....  | 3-127 |
| TROUBLES AND ACTIONS .....   | 3-128 |
| RUNNING OUT OF FUEL .....  | 3-128 |
| PHENOMENA THAT ARE NOT FAILURES .....                                  | 3-128 |
| TOWING THE MACHINE .....   | 3-129 |
| SEVERE JOB CONDITION .....   | 3-129 |
| DISCHARGED BATTERY .....   | 3-130 |
| HOW TO LOWER WORK EQUIPMENT WHEN ENGINE STOPS DUE TO ABNORMALITY ..... | 3-135 |
| OTHER TROUBLE .....  | 3-136 |
| MAINTENANCE .....  | 4- 1  |
| MAINTENANCE INFORMATION .....  | 4- 2  |
| LUBRICANTS, COOLANT AND FILTERS .....                                  | 4- 4  |
| HANDLING OIL, FUEL, COOLANT, AND PERFORMING OIL CLINIC .....           | 4- 4  |