

PM-Hydraulic Requirements

Section 02-01-05



Manual Number

Table of Contents

Preface	5
Copyright	5
Hydraulic Requirement References.....	7
Index	11

This Page Intentionally Left Blank

Preface

This Manual is provided as a guide to personnel involved with the operation, maintenance and repair of Komatsu Mining Corp. equipment. We recommend that such personnel review and become familiar with the general procedures and information contained within this manual. In addition, we recommend that this manual be kept readily available for reference when repairs or maintenance are necessary.

Read and become familiar with this Manual and any other general safety practices before attempting any procedures.

Due to the complexities of mining equipment and the environment in which it operates, situations may arise which are not directly discussed in detail in this Manual. When such a situation arises, past experience, availability of equipment and common sense play a large part in what steps are to be taken. In addition, a Komatsu Mining Corp. service center representative is available to answer your questions and assist you upon request.

Komatsu Mining Corp. reserves the right to continually improve its products and associated documentation. Therefore, physical alterations to Komatsu equipment may not be identified in this Manual. Revisions may be frequently made to this Manual in an effort to ensure that information contained within is current as alterations occur to the equipment. If you find an error or have other feedback regarding this Manual, please contact Product Training and Publications at *Pro.Train.Pub@mining.komatsu*.

Copyright

© 2018 Komatsu Mining Corp. All rights reserved. This Manual is protected by United States copyright law and international treaties, and may not be reproduced, distributed, transmitted, displayed, published or broadcast without the prior written permission of Komatsu Mining Corp. or one of its affiliates. You may not alter or remove any trademark, copyright or other notice from copies of this Manual. All rights in translations of this Manual remain exclusively with Komatsu Mining Corp. or one of its affiliates.

This Page Intentionally Left Blank

Hydraulic Requirement References

Hydraulic Reservoir Oils – Table 2	Section 02-01-04
Analysis of Hydraulic Pump Drive (HPD) Gearbox Pump Oil	Section 02-01-04
Cleanliness Target	Section 02-01-04
Component Description	Section 03-04-01
Circuit Description for HPD Gearbox Oil	Section 03-04-01
Removal/Installation Procedures	Section 03-04-01
HPD Gearbox Remova	Section 03-04-01
Shimming for Proper Bearing Endplay	Section 03-04-01
Installation and Alignment of HPD Gearbox to Generator	Section 03-04-01
Completing the Installation (Early Production Models)	Section 03-04-01
Installation and Alignment of Gearbox to Generator - Gen2	Section 03-04-01
General Description of the Loader Hydraulic Systems	Section 04-01-02
Hydraulic System Fundamentals	Section 04-01-02
Delta Temperatures	Section 04-01-02
Cleanliness Targets	Section 04-01-02
Hydraulic Reservoir	Section 04-01-03
Service Facilities of the Hydraulic Reservoir	Section 04-01-03
Fluid Level Sight Gauge	Section 04-01-03
Reservoir Return Filters	Section 04-01-03
Reservoir Drain Valve	Section 04-01-03
Reservoir Filling Facilities	Section 04-01-03
Reservoir Access Panels	Section 04-01-03
Reservoir Heaters (Optional)	Section 04-01-03
Service Requirements and Recommendations	Section 04-01-03
Daily Inspection	Section 04-01-03
Oil Analysis	Section 04-01-03
Reservoir Drain and Refill	Section 04-01-03
Pumps	Section 04-01-03

DRG (Hoist/Bucket)	Section 04-01-03
DRG Control (Fan and Blower)	Section 04-01-03
DRS Control (Steering)	Section 04-01-03
Hydraulic Pump Priming	Section 04-01-03
Piston Pumps	Section 04-01-03
Vane Pumps	Section 04-01-03
Filter Leak Check	Section 04-01-03
Gearbox	Section 04-01-03
Hydraulic Pump Drive (Gearbox) Service	Section 04-01-03
Use Specified Lubricating Fluid	Section 04-01-03
Hydraulic Pump Drive (Gearbox) Service Intervals	Section 04-01-03
Hydraulic Pump Drive (Gearbox) Lubricant Pump Circuit	Section 04-01-03
Main Hoist and Bucket Control Valves (HUSCO)	Section 04-01-03
Multipoint Distribution Manifolds	Section 04-01-03
Manual Bleed Valve Assembly	Section 04-01-03
Float Valves	Section 04-01-03
Pilot Circuits	Section 04-01-03
Front Frame Hydraulic Panel	Section 04-01-03
Front Frame Hydraulic Panel Functions	Section 04-01-03
Steering Main Valves	Section 04-01-03
Steering Flow Amplifier Valve (Danfoss Flow Amplifier)	Section 04-01-03
Auxiliary Steering System	Section 04-01-03
Hydraulic System Thermal Control	Section 04-01-03
Hydraulic Oil Cooling Function	Section 04-01-04
Electrical and VCU Logic Controls	Section 04-01-04
Hydraulic Flow	Section 04-01-04
Auxiliary Oil Cooler Control Function	Section 04-01-04
Electrical and VCU Logic Controls	Section 04-01-04
Hydraulic Oil Temperatures	Section 04-01-04
Exceptions	Section 04-01-04

Hydraulic Flow	Section 04-01-04
Hoist and Bucket Pumps Installation	Section 04-01-07
Hoist and Bucket Pump Removal and Installation Procedures	Section 04-01-07
Removal of Hoist and Bucket Pumps	Section 04-01-07
Removal of Hydraulic Gearbox	Section 04-01-07
Installation of Pump	Section 04-01-07
Installation of Gearbox	Section 04-01-07
Installation and Alignment of Gearbox to Generator	Section 04-01-07
Completing the Installation	Section 04-01-07
Steering Valve Removal	Section 04-01-07
Installation	Section 04-01-07
Hydraulic Cylinders (Hoist)	Section 04-01-07
Removal	Section 04-01-07
Installation	Section 04-01-07
Hydraulic Cylinders (Bucket)	Section 04-01-07
Removal	Section 04-01-07
Installation	Section 04-01-07
Hydraulic Cylinder (Steering)	Section 04-01-07
Removal	Section 04-01-07
Installation	Section 04-01-07
Steering Pin Installation	Section 04-01-07
Fluid Power Diagram	Section 04-01-08

This Page Intentionally Left Blank

Index

C

Copyright.....5

P

Preface.....5

This Page Intentionally Left Blank

Komatsu Mining Corp.

<https://mining.komatsu>



Product designs, specifications and/or data in this document are provided for informational purposes only and are not warranties of any kind. Product designs and/or specifications may be changed at any time without notice. The only warranties that apply to sales of products and services are standard written warranties, which will be furnished upon request.

Trademarks and service marks used herein are the property of Komatsu Ltd., Komatsu Mining Corp., or their respective owners or licensees.

© 2019 Komatsu Mining Corp. All rights reserved.