

# Shop Manual

ARTICULATED  
DUMP TRUCK

***HM400-5***

SERIAL NUMBERS 10001 and up

**KOMATSU**



---

# 00 Index and Foreword

---

# Index

|  |       |
|--|-------|
| 00 Index and Foreword .....  | 00-1  |
| Abbreviation List .....  | 00-23 |
| Foreword, Safety, Basic Information .....  | 00-29 |
| How to Read the Shop Manual .....  | 00-29 |
| Safety Notice for Operation .....  | 00-31 |
| Precautions to Prevent Fire .....  | 00-39 |
| Procedures If Fire Occurs .....  | 00-41 |
| Precautions for Disposing of Waste Materials .....                                   | 00-42 |
| Procedures for Exhaust Gas Regulations .....   | 00-43 |
| Precautions for DEF .....  | 00-44 |
| Store DEF .....  | 00-45 |
| Precautions When You Handle Hydraulic Equipment .....                                | 00-46 |
| Precautions When You Disconnect and Connect Pipings .....                            | 00-49 |
| Precautions When You Handle Electrical Equipment .....                               | 00-56 |
| Precautions When You Handle Fuel System Equipment .....                              | 00-58 |
| Precautions When You Handle Intake System Equipment .....                            | 00-59 |
| Practical Use of KOMTRAX .....   | 00-60 |
| Disconnect and Connect Push-Pull Type Coupler .....                                  | 00-61 |
| Precautions for Disconnection and Connection of Connectors .....                     | 00-65 |
| How to Disconnect and Connect Deutsch Connector .....                                | 00-69 |
| How to Disconnect and Connect Slide Lock Type Connector .....                        | 00-70 |
| How to Disconnect and Connect Connector with Lock to Pull .....                      | 00-72 |
| How to Disconnect and Connect Connector with Lock to Push .....                      | 00-73 |
| How to Disconnect and Connect Connector with Housing to Rotate .....                 | 00-75 |
| How to Read the Codes for Electric Cable .....                                       | 00-76 |
| Explanation of Terms for Maintenance Standard .....                                  | 00-80 |
| Standard Tightening Torque Table .....   | 00-83 |
| Conversion Table .....   | 00-90 |
| 01 Specifications .....  | 01-1  |
| Table of Contents .....  | 01-2  |
| Abbreviation List .....  | 01-3  |
| Specifications .....   | 01-9  |
| Specification Drawing .....  | 01-9  |
| Specifications .....   | 01-11 |
| Weight Table .....   | 01-17 |
| Table of Quantity of Oil and Coolant to be Added (North America Specification) ..... | 01-19 |
| Table of Quantity of Fuel, Coolant and Lubricants (Australia Specification) .....    | 01-21 |
| 10 Structure and Function .....  | 10-1  |
| Table of Contents .....  | 10-2  |
| Abbreviation List .....  | 10-6  |
| Urea SCR System .....  | 10-12 |
| Layout Drawing of Urea SCR System .....  | 10-12 |
| Urea SCR System Diagram .....  | 10-14 |
| Function of Urea SCR System .....  | 10-15 |
| Component Parts of Urea SCR System .....   | 10-31 |
| Boot-up System .....   | 10-40 |
| Layout Drawing of Boot-up System (Machine with KOMTRAX Terminal) .....               | 10-40 |
| Layout Drawing of Boot-up System (Machine with Gateway Function Controller) .....    | 10-42 |
| System Operating Lamp System .....   | 10-44 |
| Battery Disconnect Switch .....  | 10-47 |
| Engine System .....  | 10-49 |
| Layout Drawing of Engine System .....  | 10-49 |
| Automatic Idle Stop System .....   | 10-52 |
| Component Parts of Engine System .....   | 10-54 |
| Cooling System .....   | 10-73 |
| Layout Drawing of Cooling System .....   | 10-73 |

|   |        |
|---|--------|
| Radiator Fan Control System .....   | 10-75  |
| Aftercooler Fan Control System .....  | 10-77  |
| Component Parts of Cooling System .....   | 10-79  |
| Control System .....  | 10-107 |
| Layout Drawing of Control System (Machine with KOMTRAX Terminal) .....            | 10-107 |
| Layout Drawing of Control System (Machine with Gateway Function Controller) ..... | 10-108 |
| Retarder and Hoist Control System .....   | 10-109 |
| Machine Monitor System .....  | 10-111 |
| Rearview Monitor System .....   | 10-114 |
| KOMTRAX System .....  | 10-115 |
| Payload Meter System .....  | 10-117 |
| Component Parts of Control System .....   | 10-131 |
| Hydraulic System .....  | 10-202 |
| Layout Drawing of Hydraulic System .....  | 10-202 |
| Component Parts of Hydraulic System .....   | 10-203 |
| Power Train System .....  | 10-223 |
| Layout Drawing of Power Train System .....  | 10-223 |
| Transmission Control System .....   | 10-225 |
| Gear Shift Control System .....   | 10-231 |
| Shift Hold System .....   | 10-234 |
| Direction Control System .....  | 10-235 |
| Komatsu Traction Control System (KTCS) .....                                      | 10-236 |
| Component Parts of Power Train System .....                                       | 10-239 |
| Work Equipment System .....   | 10-294 |
| Work Equipment Control .....  | 10-294 |
| Hoist Control .....   | 10-295 |
| Component Parts of Work Equipment System .....                                    | 10-297 |
| Steering System .....   | 10-304 |
| Layout Drawing of Steering System .....   | 10-304 |
| Function of Steering System .....   | 10-305 |
| Steering Column .....   | 10-306 |
| Component Parts of Steering System .....  | 10-307 |
| Brake System .....  | 10-319 |
| Layout Drawing of Brake System .....  | 10-319 |
| Retarder Control .....  | 10-321 |
| Parking Brake Interlock Function .....  | 10-324 |
| ARAC System .....   | 10-325 |
| Component Parts of Brake System .....   | 10-326 |
| Undercarriage and Frame .....   | 10-353 |
| Front Suspension .....  | 10-353 |
| Center and Rear Suspensions .....   | 10-355 |
| Suspension Cylinder .....   | 10-357 |
| Oscillation Hitch .....   | 10-360 |
| Work Equipment .....  | 10-362 |
| Structure of Work Equipment .....   | 10-362 |
| Function of Work Equipment .....  | 10-363 |
| CAB Related Parts .....   | 10-364 |
| ROPS CAB .....  | 10-364 |
| CAB Tilt .....  | 10-366 |
| 20 Standard Value Table .....   | 20-1   |
| Table of Contents .....   | 20-2   |
| Abbreviation List .....   | 20-3   |
| Standard Value Table for Engine .....   | 20-9   |
| Standard Value Table for Engine: HM400-5 .....                                    | 20-9   |
| Standard Value Table for Machine .....  | 20-13  |
| Standard Value Table for Machine: HM400-5 .....                                   | 20-13  |
| Machine Posture and Procedures to Measure Performance .....                       | 20-27  |
| Standard Value Table for Electricity .....  | 20-28  |

It's a preview. You can download the full file by clicking the link below.

<https://shopservicemanual.com/>

Service Manuals from 2\$