

## **Service Manual**

## K21, K25 Gasoline Engine

**K21** 000001-up

**K25** 004868X-up

## **FOREWORD**

This service manual covers K21 and K25 Gasoline Engine of Mitsubishi Forklift Trucks and gives detailed maintenance and repair information. The instructions are grouped by systems to serve the convenience of your ready reference.

Long productive life of your forklift trucks depends to a great extent on correct servicing—the servicing consistent with what you will learn from this service manual. We hope you read the respective sections of this manual carefully and know all the components you will work on before attempting any work.

All descriptions, illustration, specifications, and serial numbers in this manual are effective as of the date printing of this manual. Mitsubishi Caterpillar Forklift Europe B.V. reserves the right to change specifications or design without notice and without incurring obligation.

## **GROUP INDEX**

GROUP INDEX	Items
GI GENERAL INFORMATION	HOW TO USE THIS MANUAL, PRECAUTIONS FOR SAFETY AND QUALITY, PRECAUTIONS, TIGHTENING TORUQE, SPECIAL SERVICE TOOLS, ENGINE OUTSIDE DRAWINGS, MAIN SPECIFICATIONS, STANDARD ANDREPAIR LIMIT, STAMPED LOCATION OF ENGINE NO., TROUBLE DIAGNOSIS
MA MAINTENANCE	ENGINE MAINTENANCE
ET ENGINE TUNE-UP	SPECIFICATIONS, TIGHTENING TORQUE, TROUBLE DIAGNO- SIS, ENGINE INSPECTION AND ADJUSTMENT
EM ENGINE MECHANICAL	PRECAUTIONS, ENGINE OUTSIDE DRAWINGS, MAIN SPECIFICATIONS, ADJUSTMENT VALUE, TIGHTENING TORQUE, TROUBLE DIAGNOSIS, SPECIAL SERVICE TOOLS, REMOVAL AND INSTALLATION OF ENGINE, ENGINE SERVICE
EC ENGINE CONTROL	PRECAUTIONS, PREPARATION, DESCRIPTION, BASIC INSPECTION, TROUBLE DIAGNOSIS, POWER SUPPLY AND GROUND SYSTEM, CRANKSHAFT POSITION SENSOR (POS) SYSTEM, CAMSHAFT POSITION SENSOR (PHASE) SYSTEM, MASS AIR FLOW SENSOR SYSTEM, ENGINE COOLANT TEMPERATURE SENSOR SYSTEM, HEATED OXYGEN SENSOR SYSTEM, THROTTLE POSITION SENSOR SYSTEM, ACCELERATOR PEDAL POSITION SENSOR SYSTEM, INTAKE AIR TEMPERATURE SENSOR, PNP SWITCH SYSTEM, STOP LAMP SWITH SYSTEM, ELECTRIC LOAD SWITCH SYSTEM, CAN COMMUNICATION SYSTEM, IGNITION SYSTEM, FUEL INJECTOR SYSTEM, FUEL PUMP SYSTEM, THROTTLE CONTROL MOTOR SYSTEM, HEATED OXYGEN SENSOR HEATER SYSTEM, PCV GAS PECIRCULATION DEVICE, FUEL CUT FUNCTION, REMOVAL AND INSTALLATION OF ECM COMPONENTS, SERVICE DATA AND SPECIFICATIONS (SDS)
LC ENGINE LUBRICATION & COOLING SYSTEM	LUBRICATION SYSTEM, ENGINE COOLANT SYSTEM
EF ENGINE FUEL	EMISSION CONTROL SYSTEM (ONLY FOR ELECTRONIC CONTROLLED TYPE), UNIT LAYOUT, SERVICE DATA AND SPECIFICATIONS (SDS), LPG FUEL SYSTEM TROUBLE DIAGNOSIS, DISASSEMBLY AND ASSEMBLY OF FUEL SYSTEM, VAPORIZER MECHANISM AND OPERATION
EE ENGINE ELECTRICAL	ADJUSTMENT VALUE, TROUBLE DIAGNOSIS, STARTER MOTOR, ALTERNATOR

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