SM043
ZC(KFM)-BE2

FD40Z-5
FG40Z-5
FG40Z-6
FD40/45-5
FG40/45-5
FG40/45-6
FG35S/45S-5
FG35S/45S-6

KOMATSU FORKLIFT USA

SHOP MANUAL

FD40Z-5
FG40Z-5
FG40Z-6
FD40/45-5
FG40/45-5
FG40/45-6
FG35S/45S-5
FG35S/45S-6

MACHINE MODEL	SERIAL NO.	ENGINE
FD40Z-5	**10001A and up**	**6D95L**
FG40Z-5	**20001A and up**	**P40**
FG40Z-6	**21001A and up**	**TB42**
FD40/45-5	**30001A and up**	**6D95L**
FG40/45-5	**40001A and up**	**P40**
FG40/45-6	**41001A and up**	**TB42**
FG35S/45S-5	**60001A and up**	**P40**
FG35S/45S-6	**61001A and up**	**TB42**

FOREWORD

Proper operation, maintenance, troubleshooting and repairs are necessary to preserve the performance of vehicles and engines over a long period of time and to ensure that fault and breakdowns do not occur.
The object of this Shop Manual is to provide the information necessary especially in connection with the performance of inspections and repairs mainly in the maintenance areas.
For this purpose, it includes section on "General", "Removal and Installation of Unit", "Disassembly and Assembly of Components", "Troubleshooting", and the "Testing and Adjusting".
Maintenance data necessary for the performance of maintenance on the machines is also included, but reference should be made to the Operation and Maintenance Manual for further details.
Reference should also be made to this manual in connection with correct operation of the machine.

The content of the items mentioned above is as follows.

General
This chapter indicates General Locations, Weight of Main Components and Cautions for Maintenance.

Removal and Installation of Units
This chapter gives the details of removal of each unit and their installation, as well as their adjusting method.

Disassembly and Assembly of Components
This chapter provides explanations on structure of each equipment and its disassembly procedure as well as contents of inspection and assembly procedure.

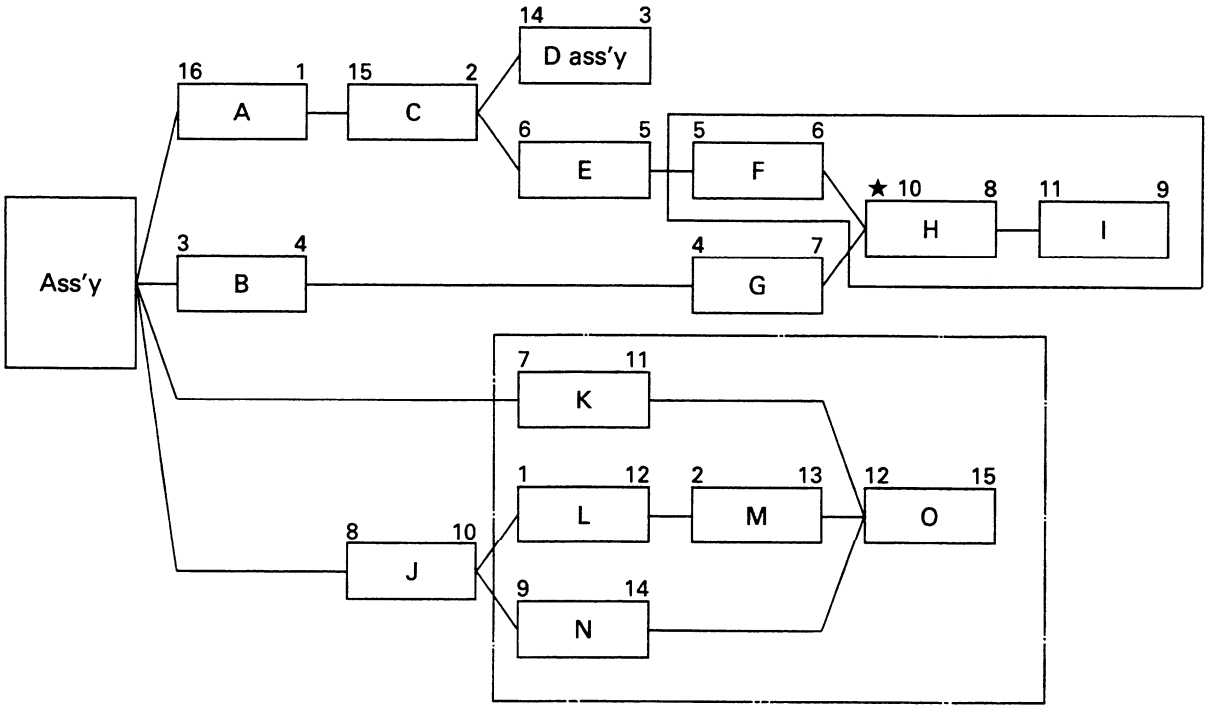
Troubleshooting
Troubles and their probable cause and remedies are explained in this chapter on engine, electrical and other systems.

Testing and Adjusting
Inspection items and adjustment value of each equipment are described in this chapter.

Reference should be made to the "General Shop Manual" for safe operating and working methods which serve as the basis for the performance of repair and inspection works on machines.

SECTION INDEX

DISASSEMBLY AND ASSEMBLY DIAGRAM



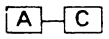
DISASSEMBLY DIAGRAMS

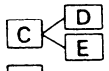
Sequential procedure to be followed when disassembling a machine or its components are illustrated in these manuals in the form of a diagram; no sentential descriptions are provided. Therefore, you are required to be familiar with such diagrams by thoroughly understanding the following descriptions. The disassembling diagrams include the following information:

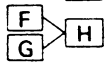
- Sequential procedure to be followed when disassembling a machine or a component thoroughly.
- The shortest procedure which requires the minimum number of parts to be removed from the machine prior to removal of a desired component part.
- The same as above necessary to remove a desired assembly.

HOW TO READ THE DIAGRAMS

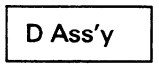
In the diagram shown as an example on the preceding page, the name of machine (or assembly) to be disassembled is shown in the square at far left. All other squares represent parts or sub-assemblies to be removed from the preceding parts or sub-assembly. Mutual relations between the parts (or sub-assembly) can be classified as follows:

- 

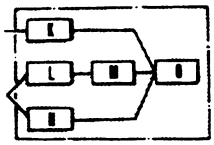
"C" can not be removed unless "A" is removed.
- 

Both "D" and "E" can be removed after "C" is removed.
- 

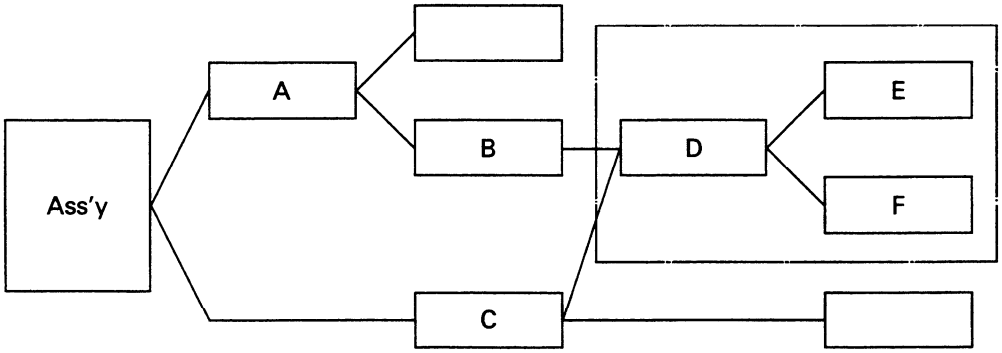
"H" cannot be removed unless both "F" and "G" are removed.
- This indicates an assembly composed of enclosed parts such as "F", "H" and "I". To remove these parts as an assembly, it is necessary to remove previously all parts connected to the lines leading from the left-hand edge of the block.



This is an assembly of which the disassembling procedure is described separately.



This indicates an assembly composed of enclosed parts. All of the enclosed parts may be removed individually according to the procedure shown by this diagram, or may be removed first as an assembly end then divided into individual parts according to the separately illustrated disassembly diagram.



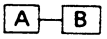
When a part (or an assembly) in the diagram is specified as an object to be removed, trace all paths leading the specified part (or the block of the specified assembly) to the original machine (or assembly) located at the far left of the diagram. The parts arranged in such paths are the minimum parts necessary to be removed. In the diagram above, for example, the part "D" (or an assembly composed of "D", "E" and "F") can be removed after removing only the parts "A", "B" and "C" arranged on the thick lines.

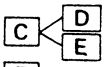
SYMBOL AND NUMERALS ABOVE A SQUARE

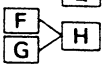
- The mark ★ is a reference to a note describing the precautions to be followed when removing the part.
- The boldface numeral located at the top left of a square corresponds to the index number used in the structural drawing to indicate that part. Only in the disassembly diagram indicating the general disassembly of a machine (or an assembly), however, is another form of numerals such as 12-24 used, **12** corresponds to the item code number used on each page as part of the page numbers, and **24** corresponds to the index number used in the structural drawing.
- The numeral located at the top right of a square indicates the disassembling order recommended by Komatsu.

ASSEMBLY DIAGRAM

The same manner as described above to read the disasembly drawings are also applicable to the assembly drawings. A part (machine chassis, case, etc.) with which the assembling procedure is to be started is indicated in the square located at the far left end in the diagram. All other squares represent parts (or sub-assemblies) to be installed to the preceding parts or sub-assemblies.
In the assembly diagrams, in which all parts are arranged in the sequence of assembly from left to right, the parts have mutual relations with each other as shown in the following.

- 

"B" cannot be installed unless "A" is installed.
- 

Both "D" and "E" can be installed after "C" is installed.
- 

"H" cannot be installed unless both "F" and "G" are installed.

All marks and numerals have the same designations as described for the disassembly diagram.

PRECAUTIONS WHEN PERFORMING THE SERVICE WORK

Always pay attention to "Safety" before starting any work — this is important.
Never attempt any work where danger to yourself or to other persons.
Whenever work requiring safety precautions are described in this manual, a flag mark ⚠ inserted, always make double sure that safety measures are taken.
Other unmarked work, should always be performed after studying and using your common sense to prevent accidents.

DESCRIPTION OF THE SYMBOLS

The symbols described below are used in this manual for convenience and better understanding.

Symbol	Item	Description
⚠	**Safety**	Special safety precautions are needed to perform the work.
★	**Note**	Special technical precautions are needed to perform the work.
kgm	**Tightening Torque**	Fastening parts that require specified tightening force when assembling.
kg	**Weight**	Weight of parts or systems.
	**Coat**	Places to be coated with adhesives, etc. when assembling.