

***YANMAR***  
***SERVICE MANUAL***

***EXCAVATOR***

**MODEL B25V**



# FOREWORD

This service manual outlines procedures for servicing YANMAR construction machinery. It contains specifications, servicing instructions and handling cautions. To obtain the maximum life and performance from YANMAR construction machinery, read this manual carefully and follow its instructions.

Please note that all dimensions and numerical values in this manual are for service reference, and are not inspection standards. Descriptions and specifications in this manual are subject to change without notice due to design improvements, etc.



# CONTENTS

## CHAPTER 1

### GENERAL CAUTIONS FOR MAINTENANCE WORK

1-1 Correct Work .....	1-1
1-2 Safety Precautions .....	1-1
1-3 Preparations .....	1-1
1-4 Cautions for Disassembly and Reassembly .....	1-1
1-5 Cautions for Removal and Installation of Hydraulic Equipment .....	1-2
1-6 Cautions for Removal and Installation of Hydraulic Piping .....	1-2
1-7 Cautions for Handling Seals .....	1-2
1-8 Correct Installation of Hydraulic Hose .....	1-3
1-9 Specifications of Hydraulic Hose .....	1-5
1-10 Air Release of Hydraulic Equipment .....	1-9

## CHAPTER 2

### TECHNICAL DATA

2-1 Specifications .....	2-1-1
2-2 Machine Dimensions and Working Ranges .....	2-2-1
2-2-1 Canopy Type .....	2-2-1
2-2-2 Cabin Type .....	2-2-2
2-3 Component Weights .....	2-3-1
2-4 Lifting Capacities .....	2-4-1

## CHAPTER 3

### SERVICING STANDARDS

3-1 Machine Performance .....	3-1-1
3-2 Engine .....	3-2-1
3-3 Undercarriage .....	3-3-1
3-3-1 Rubber Crawler Specifications .....	3-3-1
3-3-2 Steel Crawler Specifications .....	3-3-2
3-3-3 Common Specifications of Steel & Rubber Crawlers .....	3-3-3
3-4 Control Devices .....	3-4-1
3-5 Hydraulic Equipment .....	3-5-1
3-5-1 Hydraulic Cylinder .....	3-5-1
3-6 Work Implements .....	3-6-1
3-6-1 Front Attachments .....	3-6-1
3-6-2 Blade Moving Device .....	3-6-2
3-6-3 Bucket Teeth .....	3-6-2

3-7 List of Tightening Torque .....	3-7-1
3-7-1 Machine .....	3-7-1
3-7-2 Engine .....	3-7-3
3-7-3 Tightening Torque for General Bolts and Nuts .....	3-7-3

## CHAPTER 4

### ENGINE

4-1 Measurement, Inspection and Adjustment .....	4-1-1
4-1-1 Measuring the Compression Pressure .....	4-1-1
4-1-2 Adjusting the Valve Head Clearance .....	4-1-3
4-1-3 Checking the V-belt Tension .....	4-1-4
4-1-4 Checking the Fuel Injection Valve .....	4-1-4
4-1-5 Checking and Adjusting the Fuel Injection Timing .....	4-1-8
4-1-6 Adjusting the No-load Maximum (or Minimum) Revolutions .....	4-1-9
4-1-7 Checking the Cooling Water System and Radiator for Water Leakage .....	4-1-9
4-1-8 Checking the Sensors .....	4-1-10
4-2 Measuring Procedure, Service Data and Corrective Action .....	4-2-1
4-2-1 Cylinder Head .....	4-2-1
4-2-2 Cylinder Block .....	4-2-7
4-2-3 Valve Rocker Arm .....	4-2-10
4-2-4 Pistons and Piston Ring .....	4-2-12
4-2-5 Connecting Rod .....	4-2-17
4-2-6 Camshaft .....	4-2-20
4-2-7 Crankshaft .....	4-2-22
4-2-8 Gears .....	4-2-25
4-2-9 Trochoid Pump .....	4-2-27
4-3 Precautions Reassembly .....	4-3-1
4-4 Fuel Supply System .....	4-4-1
4-4-1 Fuel Injection Pump .....	4-4-1
4-4-2 Fuel Feed Pump .....	4-4-3
4-4-3 Fuel System .....	4-4-4
4-4-4 Fuel Injection Valve .....	4-4-4
4-4-5 Governor Mechanism .....	4-4-5
4-4-6 Specification of Fuel Injection Pump .....	4-4-8
4-4-7 Service Date for Fuel Injection Equipment .....	4-4-9

4-5 Electrical Equipment .....	4-5-1
4-5-1 Starter Motor .....	4-5-1
4-5-2 Alternator .....	4-5-3
4-5-3 Air Heater .....	4-5-4

## CHAPTER 5 HYDRAULIC SYSTEM

5-1 Outline .....	5-1-1
5-1-1 Control Valve Operation .....	5-1-4
5-1-2 Additional Operation of Control Valve .....	5-1-6
5-2 Hydraulic Circuit Schematic .....	5-2-1
5-2-1 Standard Specifications .....	5-2-1
5-3 Circuit Operation .....	5-3-1
5-3-1 Boom .....	5-3-1
5-3-2 Arm .....	5-3-3
5-3-3 Bucket .....	5-3-5
5-3-4 Swing .....	5-3-7
5-3-5 Boom Swing .....	5-3-9
5-3-6 Blade .....	5-3-11
5-3-7 Travel .....	5-3-13
5-3-8 Simultaneous Operation of Travel and Boom/Bucket .....	5-3-15
5-3-9 Simultaneous Operation of Travel and Arm/Boom Swing .....	5-3-17
5-3-10 Simultaneous Operation of Boom and Bucket .....	5-3-19
5-3-11 Simultaneous Operation of Arm and Bucket .....	5-3-21
5-3-12 Hydraulic P.T.O. ....	5-3-23
5-4 Pressure Adjustment .....	5-4-1
5-4-1 Relief Valves .....	5-4-1
5-4-2 Swing Brake Valve .....	5-4-3
5-4-3 Cut-off Valve .....	5-4-4

## CHAPTER 6 HYDRAULIC EQUIPMENT

6-1 Hydraulic Pump .....	6-1-1
6-2 Control Valve .....	6-2-1
6-3 Pilot Valve .....	6-3-1
6-4 Swing Motor .....	6-4-1
6-5 Travel Motor .....	6-5-1

## CHAPTER 7 ADJUSTMENT AND REPAIR

7-1 Electric Equipment of the Machine .....	7-1-1
7-1-1 Arrangement of Electrical Equipment and Names of Parts .....	7-1-1
7-1-2 Monitor and Alarm Systems .....	7-1-3
7-1-3 Wiring Diagram .....	7-1-7
7-2 Undercarriage .....	7-2-1
7-2-1 Outline .....	7-2-1
7-2-2 Major Parts .....	7-2-1
7-2-3 Points of Reassembly (Rubber Crawler Models) .....	7-2-2
7-2-4 Points of Reassembly (Steel Crawler Models) .....	7-2-3
7-2-5 Disassembly and Reassembly of Idler .....	7-2-5
7-2-6 Installation of Idler Assembly .....	7-2-6
7-2-7 Disassembly and Reassembly of Track Roller .....	7-2-7
7-2-8 Disassembly and Reassembly of Carrier Roller .....	7-2-8
7-2-9 Drawing of Jig .....	7-2-9
7-3 Control .....	7-3-1
7-3-1 Control Train .....	7-3-1
7-3-2 Disassembly and Reassembly of Mechanical Control Linkage .....	7-3-2
7-3-3 Adjustment of Lock Lever .....	7-3-4
7-3-4 Adjustment of Implements and Swing Control Levers (for Semi-long Lever Type Only) .....	7-3-6
7-3-5 Adjustment of Travel Levers .....	7-3-7
7-3-6 Adjustment of 2-Speed Pedal .....	7-3-8
7-3-7 Adjustment of Boom Swing Pedal .....	7-3-9
7-3-8 Adjustment of Blade Lever .....	7-3-10
7-3-9 Adjustment of Engine Speed Control .....	7-3-11
7-4 Swing Bearing .....	7-4-1
7-5 Hydraulic Equipment .....	7-5-1
7-5-1 Precautions for Removal and Installation, and Assembly of Hydraulic Pump .....	7-5-1
7-5-2 Disassembly and Reassembly of Hydraulic Cylinder .....	7-5-6
7-5-3 Swivel Joint .....	7-5-7
7-5-4 Hydraulic Oil Tank .....	7-5-11
7-5-5 Piping Layout .....	7-5-13

**CHAPTER 8**  
**PERIODIC INSPECTION**  
**AND SERVICING**

8. List of Periodic Inspection and Servicing.....8-1-1

**CHAPTER 9**  
**FUEL, LUBE OIL AND GREASE**  
**RECOMMENDED**

9. Fuel, Lube Oil and Grease  
    Recommended by Yanmar .....9-1-1

**CHAPTER 10**  
**TROUBLESHOOTING**

10-1 Non-breakdowns .....10-1-1  
    10-1-1 Natural Release of Bucket .....10-1-1  
    10-1-2 Discontinuous Arm Movement .....10-1-1  
    10-1-3 Drifting of Upperstructure on  
        Quick Travel Operation .....10-1-2  
    10-1-4 Thermal Shock of Travel Motor.....10-1-3  
    10-1-5 Elongation of Boom Swing Cylinder  
        on 80 degrees Swing .....10-1-4  
    10-1-6 Time Lag on Travel Speed Switching ...10-1-5  
    10-1-7 Fluctuation in Oil Level  
        of Hydraulic Oil Tank  
        Due to Temperture Change .....10-1-6  
10-2 Troubleshooting .....10-2-1  
    10-2-1 Machine and Engine .....10-2-1  
    10-2-2 Electrical Equipment on Panel.....10-2-22

**CHAPTER 11**  
**REFERENCE DATA**

11-1 Specifications for Attachment.....11-1-1





CHAPTER 1

# GENERAL CAUTIONS FOR MAINTENANCE WORK

1-1 Correct Work .....	1-1
1-2 Safety Precautions .....	1-1
1-3 Preparations .....	1-1
1-4 Cautions for Disassembly and Reassembly .....	1-1
1-5 Cautions for Removal and Installation of Hydraulic Equipment .....	1-2
1-6 Cautions for Removal and Installation of Hydraulic Piping .....	1-2
1-7 Cautions for Handling Seals .....	1-2
1-8 Correct Installation of Hydraulic Hose .....	1-3
1-9 Specifications of Hydraulic Hose .....	1-5
1-10 Air Release of Hydraulic Equipment .....	1-9

**Please Click Here To Download The Complete Manual**  
**Download Other Manuals**  
**If Having Any Questions Feel Free To Contact us**

**[admin@servicemanualbit.com](mailto:admin@servicemanualbit.com)**