CEAM000401

Operation & Maintenance Manual

KOMATSU®

WA800-2

WHEEL LOADER

SERIAL NUMBERS **WA800-2L - A20001** and up

November 1997

Copyright 1997 Komatsu America International Company

MidWestTech | Komatsu WA800-2L Wheel Loader Operation & Maintenance Manual | Publ... Order the manual at mid-west-tech.com >

5. CONTENTS

1. **Foreword** 0- 1

2. **Safety information** 0- 2

3. **Introduction** 0- 3

4. **Location of plates, table to enter serial No. and distributor** 0- 4

SAFETY

6. **General precautions** 1- 2

7. **Precautions during operation** 1- 7
   - 7.1 Before starting engine 1- 7
   - 7.2 Operating machine 1- 9
   - 7.3 Transportation 1-13
   - 7.4 Battery 1-14
   - 7.5 Towing 1-15

8. **Precautions for maintenance** 1-16
   - 8.1 Before carrying out maintenance 1-16
   - 8.2 During maintenance 1-18
   - 8.3 Tires 1-22

9. **Position for attaching safety labels** 1-24

OPERATION

10. **General view** 2- 2
    - 10.1 General view of machine 2- 2
    - 10.2 General view of controls and gauges 2- 3

11. **Explanation of components** 2- 4
    - 11.1 Machine monitor 2- 4
    - 11.2 Switches 2-14
    - 11.3 Control levers, pedals 2-20
    - 11.3.1 Engine mechanical stop lever handles 2-25
    - 11.4 Dust indicator 2-25B
    - 11.5 Circuit breaker (Main) 2-25B
    - 11.6 Safety bar 2-25B
    - 11.7 Steering column tilt lever 2-26
    - 11.8 Door-open lock 2-26
    - 11.9 Cap with lock 2-26
    - 11.10 Fuel stop lever 2-27
    - 11.11 Air pick-up port 2-27
    - 11.12 Fuse 2-28
    - 11.13 Car radio 2-30
    - 11.14 Cab heater and air conditioner 2-33
    - 11.15 Using accumulator 2-35
    - 11.16 Operation of joystick steering system 2-36

MidWestTech | Komatsu WA800-2L Wheel Loader Operation & Maintenance Manual | Publi... Order the manual at mid-west-tech.com >

12. Operation 2-40
12.1 Check before starting engine 2-40
12.2 Starting engine 2-53
12.3 Operations and checks after starting engine 2-56
12.4 Moving machine off 2-57
12.5 Changing gear speed 2-58
12.6 Changing direction 2-59
12.7 Turning 2-59
12.8 Stopping machine 2-60
12.9 Operation of work equipment 2-61
12.10 Work possible using wheel loader 2-62
12.11 Precautions for operation 2-67
12.12 Adjusting work equipment posture 2-69
12.13 Parking machine 2-71
12.14 Checks after completion of operation 2-72
12.15 Stopping engine 2-72
12.16 Check after stopping engine 2-73
12.17 Locking 2-73
12.18 Handling the tires 2-74
12.19 Removal and installation of the bucket 2-76

13. Transportation 2-80

14. Cold weather operation 2-81
14.1 Precautions for low temperature 2-81
14.2 Precautions after completion of work 2-83
14.3 After cold weather 2-83

15. Long-term storage 2-84
15.1 Before storage 2-84
15.2 During storage 2-84
15.3 After storage 2-84

16. Troubleshooting 2-85
16.1 When machine runs out of fuel 2-85
16.2 Towing the machine 2-86
16.3 If battery is discharged 2-90
16.4 Other trouble 2-94

MidWestTech | Komatsu WA800-2L Wheel Loader Operation & Maintenance Manual | Public... Order the manual at mid-west-tech.com >

MAINTENANCE

17. Guides to maintenance 3- 2

18. Outlines of service 3- 5
18.1 Outline of oil, fuel, coolant 3- 5
18.2 Outline of electric system 3- 8

19. Wear parts list 3- 9

20. Use of fuel, coolant and lubricants according to ambient temperature 3-10

21. Standard tightening torques for bolts and nuts 3-14
21.1 Introduction of necessary tools 3-14
21.2 Torque list 3-15

22. Periodic replacement of safety critical parts 3-16

23. Maintenance schedule chart 3-19
23.1 Maintenance schedule chart 3-19

24. Service Procedure 3 23
24.1 Initial 250 hours service 3-23
24.2 When required 3-24
24.3 Check before starting 3-42
24.4 Every 50 hours service 3-48
24.5 Every 100 hours service 3-49
24.6 Every 250 hours service 3-53
24.7 Every 500 hours service 3-58
24.8 Every 1000 hours service 3-62
24.9 Every 2000 hours service 3-68
24.10 Every 4000 hours service 3-77

SPECIFICATIONS

25. Specifications 4- 2

OPTIONS, ATTACHMENTS

26. Optional part and attachments 5- 2

27. Selecting buckets and tires 5- 3

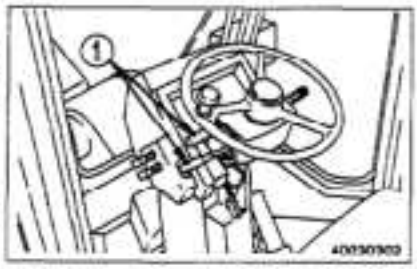
28. Explanation of operation of joy stick steering system 5- 4
28.1 Functions and structure of joy stick steering 5- 4
28.2 Operation method of joy stick steering system 5- 7
28.3 Precautions for steering with joy stick 5- 9
28.4 Adjustment of joy stick console 5-12
28.5 Adjustment of seat 5-13

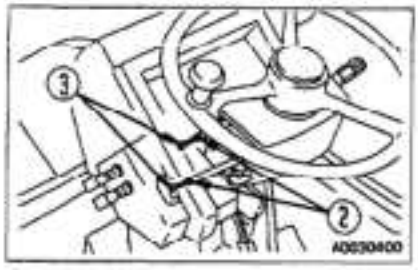
MidWestTech | Komatsu WA800-2L Wheel Loader Operation & Maintenance Manual | Publi... Order the manual at mid-west-tech.com >

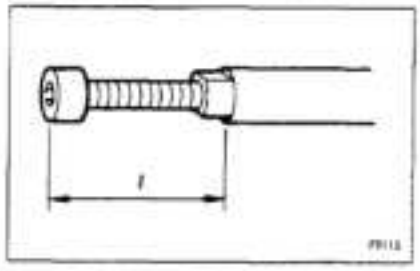
REMARK

The length of the lever can be adjusted freely within a range of 43 mm (1.69 in) for dimension ℓ. To adjust, pull out knob ①, loosen locknut ②, then turn bolt ③ to adjust. After adjusting, tighten locknut ②, then push knob ① in fully.

Set dimension ℓ to within 43 mm (1.69 in). If it is longer than this, the remaining thread is too short, and there is danger that it may come out.



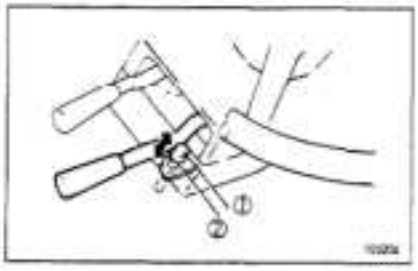




3. SPEED CONTROL LEVER STOPPER

This stopper prevents the speed control lever from entering the 3rd position when working.

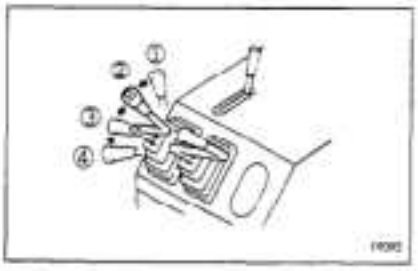
Position ①: Stopper actuated.
Position ②: Stopper released.

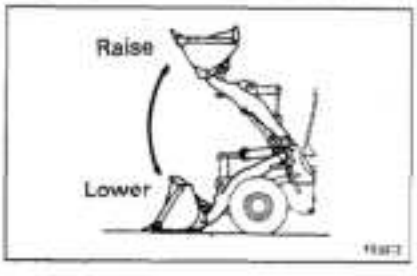


4. LIFT ARM CONTROL LEVER

This lever is used to operate the boom.

① RAISE ( ): When the lift arm control lever is pulled further from the RAISE position, the lever is stopped in this position until the lift arm reaches the preset position of the kick-out, and the lever is returned to the HOLD position.
② HOLD ( ): The lift arm is kept in the same position.
③ LOWER ( )
④ FLOAT ( ): The lift arm moves freely under external force.

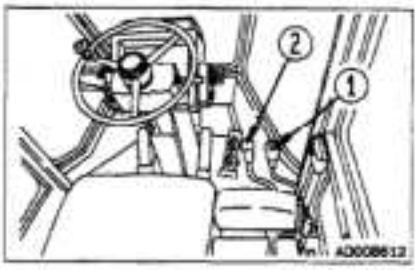




MidWestTech | Komatsu WA800-2L Wheel Loader Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

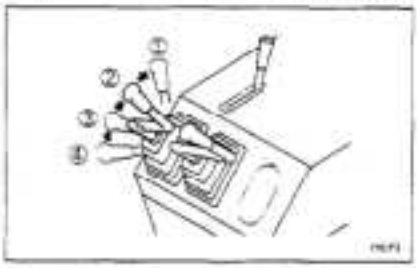
12.9 OPERATION OF WORK EQUIPMENT

Lift arm control lever ① and bucket control lever ② can be used to operate the lift arm and bucket as follows.



LIFT ARM OPERATION (LEVER ①)

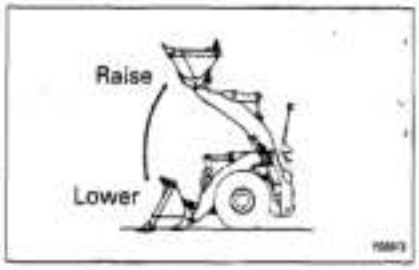
① Raise ( )
② Hold ( ): The lift arm is kept in the same position.
③ Lower ( )
④ Float ( ): The lift arm moves freely under external force.



When the lift arm control lever is pulled further from the raise position, the lever is stopped in this position until the lift arm reaches the preset kick-out position, and the lever is return to the hold position.

NOTICE

Do not use the FLOAT position when lowering the bucket.

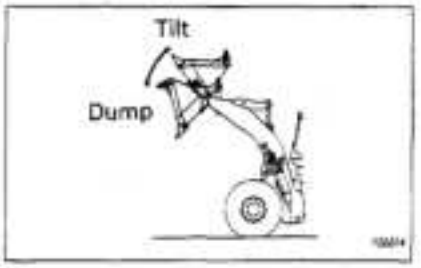


BUCKET OPERATION (LEVER ②)

① Tilt ( )
② Hold ( ): The bucket is kept in the same position.
③ Dump ( )



When the bucket control lever is pulled further from the tilt position, the lever is stopped in this position until the bucket reaches the preset position of the positioner, and the lever is return to the hold position.



MidWestTech | Komatsu WA800-2L Wheel Loader Operation & Maintenance Manual | Publicat... Order the manual at mid-west-tech.com >

23. MAINTENANCE SCHEDULE CHART

23.1 MAINTENANCE SCHEDULE CHART

SERVICE ITEM	PAGE
INITIAL 250 HOURS SERVICE (only after the first 250 hours)	
Replace fuel filter cartridge	3-23
Replace transmission oil filter element	3-23
Check engine valve clearance, adjust	3-23
WHEN REQUIRED	
Check, clean, or replace air cleaner element	3-24
Replace coolant and flush cooling system - Every two years or 2000 hours of service	3-26
Check transmission oil level, add oil	3-30
Check axle oil level, add oil	3-31
Clean axle case breather	3-32
Clean condenser of air conditioner	3-32
Check window washing fluid level, add fluid	3-32
Clean radiator fins	3-33
Check electrical intake air heater	3-33
Replace bucket teeth	3-34
Lubricating	3-35
• Work equipment control valve linkage (2 points)	3-35
• Accelerator pedal linkage (2 points)	3-35
• Steering column (1 point)	3-35
Check air conditioner	3-36
Adjust parking brake	3-37
Bleeding air from brake hydraulic circuit	3-38
Bleeding air from PPC circuit	3-38
Bleeding air from hydraulic tank	3-39
Drain water from water separator	3-40
Replace fan belt, adjust auto-tensioner	3-41
CHECK BEFORE STARTING	
Check monitor panel	3-42
Check coolant level, add water	3-42

MidWestTech | Komatsu WA800-2L Wheel Loader Operation & Maintenance Manual | Publi... Order the manual at mid-west-tech.com >