Operation & Maintenance Manual

SEAM036701

GD705A-4

MOTOR GRADER

SERIAL NUMBERS GD705A-23001 and up

WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept near the machine for reference and periodically reviewed by all personnel who will come into contact with it.

NOTICE

Komatsu has Operation & Maintenance Manuals written in some other languages. If a foreign language manual is necessary, contact your local distributor for availability.

KOMATSU®

MidWestTech | Komatsu GD705A-4 Motor Grader Operation & Maintenance Manual | Publi... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD

FOREWORD 1-2

SAFETY INFORMATION 1-5

INTRODUCTION 1-7
- INTENDED USE 1-7
- DIRECTIONS OF MACHINE 1-7

LOCATION OF PLATES, TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR 1-8
- MACHINE SERIAL NO. PLATE POSITION 1-8
- ENGINE SERIAL NO. PLATE POSITION 1-8
- SERVICE METER POSITION 1-9
- TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR 1-9

SAFETY

SAFETY LABELS 2-2
- POSITION FOR ATTACHING SAFETY LABELS 2-2
- SAFETY LABELS 2-3

GENERAL PRECAUTIONS 2-7

PRECAUTIONS DURING OPERATION 2-16
- BEFORE STARTING ENGINE 2-16
- AFTER STARTING ENGINE 2-18
- TRANSPORTATION 2-23
- BATTERY 2-24
- TOWING 2-26

PRECAUTIONS FOR MAINTENANCE 2-27
- BEFORE CARRYING OUT MAINTENANCE 2-27
- DURING MAINTENANCE 2-29

PRECAUTIONS WITH TIRES 2-34

OPERATION

GENERAL VIEW 3-2
- GENERAL VIEW OF MACHINE 3-2
- GENERAL VIEW OF CONTROLS AND GAUGES 3-3

EXPLANATION OF COMPONENTS 3-5
- METERS AND LAMPS 3-5
- SWITCHES 3-9
- CONTROL LEVERS, PEDALS 3-14

MidWestTech | Komatsu GD705A-4 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

DUST INDICATOR 3-22
ARTICULATE LOCK PIN 3-22
FUSE BOX 3-22

OPERATION 3-24
CHECK BEFORE STARTING ENGINE 3-24
STARTING ENGINE 3-38
OPERATIONS, CHECKS AFTER STARTING ENGINE 3-42
STOPPING ENGINE 3-44
CHECK AFTER STOPPING ENGINE 3-45
TRAVELING POSTURE FOR MACHINE 3-45
MOVING MACHINE OFF (FORWARD, REVERSE, SHIFTING GEAR), STOPPING 3-46
TURNING MACHINE 3-52
OPERATING WORK EQUIPMENT 3-55
WORK WHICH CAN BE CARRIED OUT USING A MOTOR GRADER 3-59
PRECAUTIONS WHEN OPERATION 3-79
ADJUSTING WORK EQUIPMENT POSTURE 3-82
PARKING MACHINE 3-89
CHECKS AFTER COMPLETION OF OPERATION 3-91
LOCKING (if equipped with cab) 3-91
HANDLING THE TIRES 3-91

TRANSPORTATION 3-92
LOADING, UNLOADING WORK 3-92
PRECAUTIONS FOR LOADING 3-92

COLD WEATHER OPERATION 3-93
PRECAUTIONS FOR LOW TEMPERATURE 3-93
CAUTIONS AFTER COMPLETION OF WORK 3-95
AFTER COLD WEATHER 3-95

LONG-TERM STORAGE 3-96
BEFORE STORAGE 3-96
DURING STORAGE 3-96
AFTER STORAGE 3-96

TROUBLESHOOTING 3-97
AFTER RUNNING OUT OF FUEL 3-97
WHEN LEANING PIPING IS DAMAGED 3-98
TOWING THE MACHINE 3-99
IF BATTERY IS DISCHARGED 3-101
OTHER TROUBLE 3-105

MAINTENANCE

GUIDES TO MAINTENANCE 4-2

OUTLINES OF SERVICE 4-4
OUTLINE OF OIL, FUEL, COOLANT 4-4
RELATING TO ELECTRIC SYSTEM 4-6

MidWestTech | Komatsu GD705A-4 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

WEAR PARTS LIST 4-7

USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE 4-8
PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS 4-8

STANDARD TIGHTENING TORQUES FOR BOLTS AND NUTS 4-12
TORQUE LIST 4-12

PERIODIC REPLACEMENT OF CRITICAL PARTS 4-13
CRITICAL PARTS 4-13

MAINTENANCE SCHEDULE CHART 4-14
MAINTENANCE SCHEDULE CHART 4-14

SERVICE PROCEDURE 4-17
INITIAL 250 HOURS SERVICE 4-17
WHEN REQUIRED 4-18
CHECK BEFORE STARTING 4-28
EVERY 50 HOURS SERVICE 4-29
EVERY 250 HOURS SERVICE 4-30
EVERY 500 HOURS SERVICE 4-43
EVERY 1000 HOURS SERVICE 4-47
EVERY 2000 HOURS SERVICE 4-55
EVERY 4000 HOURS SERVICE 4-57

SPECIFICATIONS

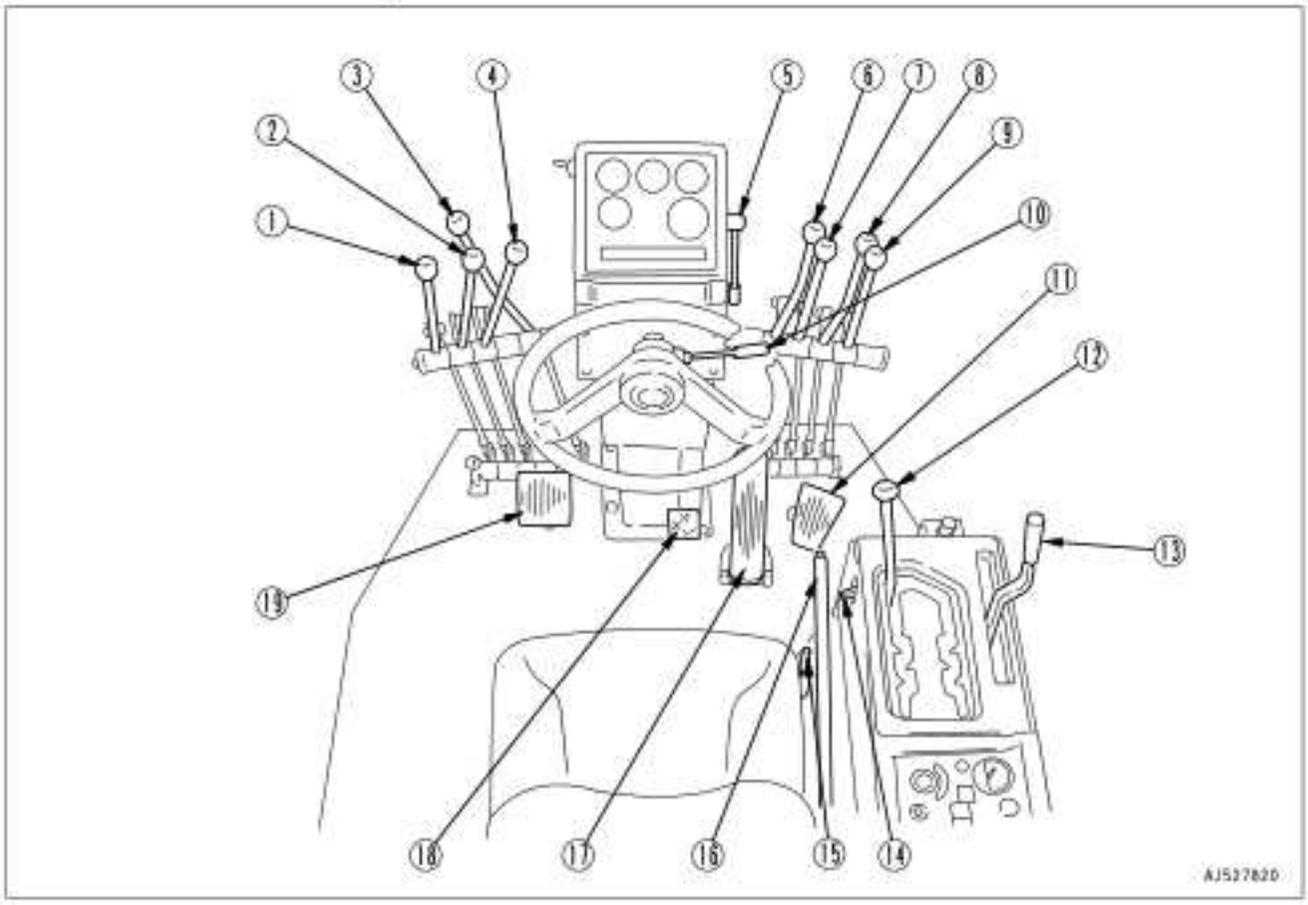
SPECIFICATIONS 5-2

OPTIONS, ATTACHMENTS

HANDLING BLADE ACCUMULATOR 6-2
FEATURES OF BLADE ACCUMULATOR 6-2
METHOD OF OPERATING BLADE ACCUMULATOR 6-3

MidWestTech | Komatsu GD705A-4 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

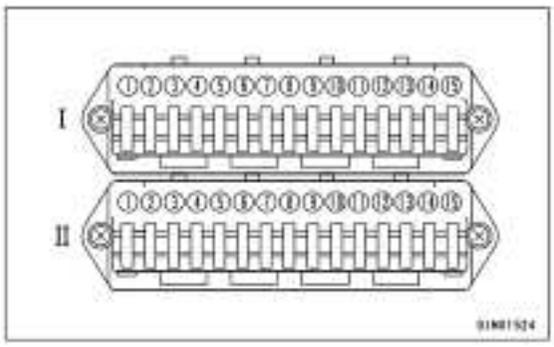
CONTROL LEVERS, PEDALS



(1) Left blade lift cylinder control lever
(2) Drawbar side shift control lever
(3) Blade rotation control lever
(4) Articulate control lever
(5) Steering wheel tilt lever
(6) Power tilt control lever (if equipped)
(7) Blade side shift control lever
(8) Leaning control lever
(9) Right blade lift cylinder control lever
(10) Turn signal lever (if equipped)
(11) Accelerator pedal
(12) Gearshift lever
(13) Fuel control lever
(14) Safety lock lever (for gearshift lever)
(15) D.D.V. lever (if equipped)
(16) Parking brake lever
(17) Brake pedal
(18) Steering post tilt pedal
(19) Inching pedal

MidWestTech | Komatsu GD705A-4 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

FUSE CAPACITY AND NAME OF CIRCUIT



Fuse I

No.	Capacity	Name of circuit
(1)	30A	Spare
(2)	20A	Spare
(3)	30A	Diffused light type rotating lamp or caution lamp
(4)	20A	Spare
(5)	15A	Spare
(6)	15A	Spare
(7)	10A	Car heater
(8)	10A	Spare
(9)	20A	Spare
(10)	30A	Spare
(11)	20A	Spare
(12)	10A	Cigarette lighter
(13)	20A	Air conditioner
(14)	20A	Air conditioner
(15)	5A	Air conditioner

Fuse II

No.	Capacity	Name of circuit
(1)	20A	Head lamp, gauge lighting, clearance lamp
(2)	15A	Rear working lamp, cab work lamp
(3)	10A	Front working lamp
(4)	15A	Spare
(5)	10A	Horn, turn signal, hazard
(6)	10A	Accumulator, differential indicator
(7)	10A	Stop lamp, parking brake
(8)	10A	Spare
(9)	10A	Air dryer, bank
(10)	20A	Spare
(11)	20A	Spare
(12)	20A	Top front wiper, rear wiper, room lamp
(13)	10A	Buzzer, air gauge, fog lamp
(14)	10A	Backup lamp
(15)	20A	Starting switch, engine stop motor, radio

MidWestTech | Komatsu GD705A-4 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

EVERY 500 HOURS SERVICE

Maintenance for every 50 and 250 hours service should be carried out at the same time.

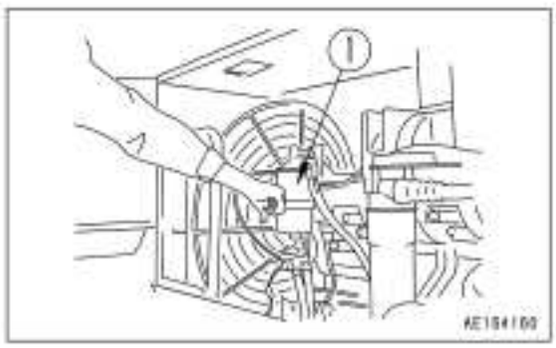
REPLACE FUEL FILTER CARTRIDGE

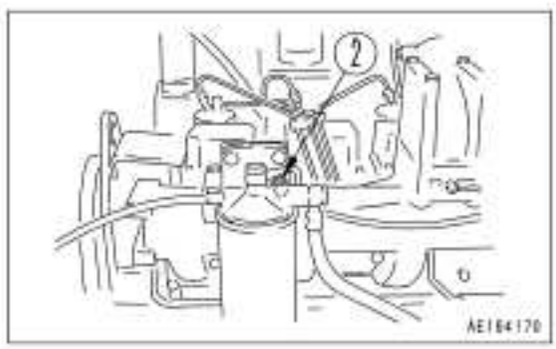
⚠ WARNING

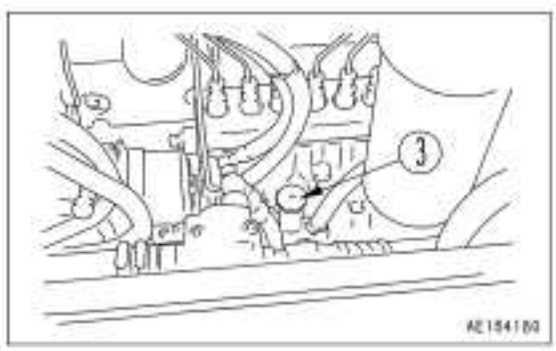
- **Engine is at high temperature immediately after the machine has been operated. Wait for engine to cool down before replacing the filter.**
- **Do not bring fire or sparks near the fuel.**

Prepare a filter wrench and a container to catch the fuel.

1. Set the container under the filter cartridge to catch the fuel.
2. Using a filter wrench, turn filter cartridge (1) counterclockwise to remove it.
3. Clean the filter holder, fill a new filter cartridge with clean fuel, coat the packing surface with engine oil, then install it to the filter holder.
4. When installing, tighten until the packing surface contacts the seal surface of the filter holder, then tighten it 1/2 of a turn.
   If the filter cartridge is tightened too far, the packing will be damaged and this will lead to leakage of fuel. If the filter cartridge is too loose, fuel will also leak from the packing, so always tighten to the correct amount.
5. After replacing filter cartridge (1), loosen air bleed plug (2).
6. Loosen feed pump knob (3) and move the pump knob up and down to draw off fuel until air ceases to come out of air bleed plug (2).
7. Tighten up air bleed plug (2).
8. Push in the knob of feed pump (3) and tighten it.
9. After replacing the filter cartridge, start the engine, and check that there is no leakage of fuel from the filter seal. If there is any leakage of fuel, check the tightening of the filter cartridge. If there is still leakage, repeat Steps 1 and 2 to remove the filter cartridge, then check the packing surface for damage or foreign material.
   If there is any damage or foreign material in the packing, replace with a new cartridge and repeat Steps 3 to 8.







MidWestTech | Komatsu GD705A-4 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >