TEN00012-00
(Replaces SEAM021406T)

Operation & Maintenance Manual

GD825A-2

MOTOR GRADER

SERIAL NUMBERS GD825A-2 12116 and up

October 2004

KOMATSU

MidWestTech | Komatsu GD825A-2 Motor Grader Operation & Maintenance Manual | Publi... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD ---- 1- 1
FOREWORD ---- 1- 2
SAFETY INFORMATION ---- 1- 5
INTENDED USE ---- 1- 7
DIRECTIONS OF MACHINE ---- 1- 7
LOCATION OF PLATES, TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR ---- 1- 8
PRODUCT IDENTIFICATION NUMBER (PIN)/MACHINE SERIAL NO. PLATE ---- 1- 8
ENGINE SERIAL NO. PLATE POSITION ---- 1- 8
SERVICE METER POSITION ---- 1- 9
TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR ---- 1- 9
SAFETY ---- 2- 1
SAFETY INFORMATION ---- 2- 2
SAFETY LABELS ---- 2- 4
POSITION FOR ATTACHING SAFETY LABELS ---- 2- 5
SAFETY LABELS ---- 2- 6
GENERAL PRECAUTIONS ---- 2- 12
PRECAUTIONS DURING OPERATION ---- 2- 20
STARTING ENGINE ---- 2- 20
OPERATION ---- 2- 22
TRANSPORTATION ---- 2- 26
BATTERY ---- 2- 27
TOWING ---- 2- 29
PRECAUTIONS FOR MAINTENANCE ---- 2- 30
PRECAUTIONS WITH TIRES ---- 2- 36
OPERATION ---- 3- 1
GENERAL VIEW ---- 3- 2
GENERAL VIEW OF MACHINE ---- 3- 2
GENERAL VIEW OF CONTROLS AND GAUGES ---- 3- 3
EXPLANATION OF COMPONENTS ---- 3- 6
MONITOR PANEL ---- 3- 6
METERS AND LAMPS ---- 3- 19
SWITCHES ---- 3- 20
CONTROL LEVERS, PEDALS ---- 3- 29
DUST INDICATOR ---- 3- 38
ARTICULATE LOCK PIN ---- 3- 38
FUSE BOX ---- 3- 39
OPERATOR'S CAB LIFT MECHANISM ---- 3- 40
BACKUP ALARM ---- 3- 40
FRONT GLASS ---- 3- 41
TOOL BAG ---- 3- 42
STORAGE BOX ---- 3- 42
QUICK-FILL FUEL FILLER ---- 3- 42
OPERATION ---- 3- 43
CHECK BEFORE STARTING ENGINE ---- 3- 43
STARTING ENGINE ---- 3- 58
OPERATIONS, CHECKS AFTER STARTING ENGINE ---- 3- 61
STOPPING ENGINE ---- 3- 63
CHECK AFTER STOPPING ENGINE ---- 3- 63
TRAVELING POSTURE FOR MACHINE ---- 3- 64

MidWestTech | Komatsu GD825A-2 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

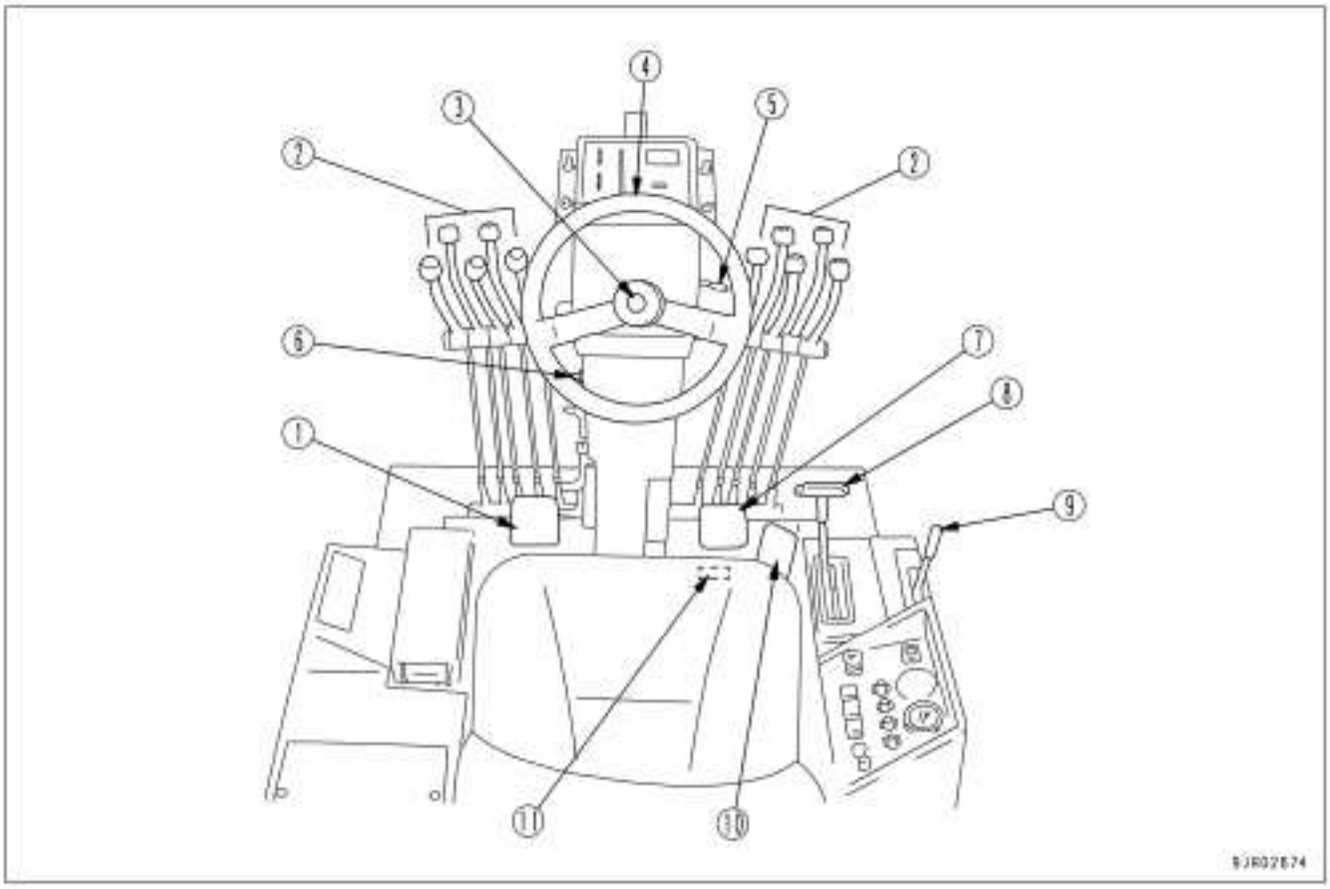
MOVING MACHINE OFF (FORWARD, REVERSE, SHIFTING GEAR), STOPPING ---- 3- 65
TURNING MACHINE ---- 3- 71
OPERATING WORK EQUIPMENT ---- 3- 73
WORK WHICH CAN BE CARRIED OUT USING A MOTOR GRADER ---- 3- 78
PRECAUTIONS WHEN OPERATION ---- 3-106
ADJUSTING WORK EQUIPMENT POSTURE ---- 3-110
PARKING MACHINE ---- 3-111
CHECKS AFTER COMPLETION OF OPERATION ---- 3-113
LOCKING ---- 3-113
HANDLING THE TIRES ---- 3-114
HANDLING BLADE ACCUMULATOR ---- 3-115
HANDLING BLADE FLOAT ---- 3-117
TRANSPORTATION ---- 3-119
LOADING, UNLOADING WORK ---- 3-119
PRECAUTIONS FOR LOADING ---- 3-120
COLD WEATHER OPERATION ---- 3-121
PRECAUTIONS FOR LOW TEMPERATURE ---- 3-121
CAUTIONS AFTER COMPLETION OF WORK ---- 3-122
AFTER COLD WEATHER ---- 3-122
LONG-TERM STORAGE ---- 3-123
BEFORE STORAGE ---- 3-123
DURING STORAGE ---- 3-123
AFTER STORAGE ---- 3-123
TROUBLESHOOTING ---- 3-124
AFTER RUNNING OUT OF FUEL ---- 3-124
WHEN LEANING PIPING IS DAMAGED ---- 3-124
TOWING THE MACHINE ---- 3-125
IF BATTERY IS DISCHARGED ---- 3-128
OTHER TROUBLE ---- 3-131
TRANSMISSION CONTROLLER ---- 3-136
MAINTENANCE ---- 4- 1
GUIDES TO MAINTENANCE ---- 4- 2
OUTLINES OF SERVICE ---- 4- 4
HANDLING OIL, FUEL, COOLANT, AND PERFORMING OIL CLINIC ---- 4- 4
RELATING TO ELECTRIC SYSTEM ---- 4- 6
WEAR PARTS ---- 4- 7
WEAR PARTS LIST ---- 4- 7
USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE ---- 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- 16
INITIAL 250 HOURS SERVICE (only after the first 250 hours) ---- 4- 16
WHEN REQUIRED ---- 4- 17
CHECK BEFORE STARTING ---- 4- 26
EVERY 50 HOURS SERVICE ---- 4- 27
EVERY 250 HOURS SERVICE ---- 4- 28

MidWestTech | Komatsu GD825A-2 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

EVERY 500 HOURS SERVICE ---- 4- 41
EVERY 1000 HOURS SERVICE ---- 4- 49
EVERY 2000 HOURS SERVICE ---- 4- 58
EVERY 4000 HOURS SERVICE ---- 4- 62
SPECIFICATIONS ---- 5- 1
SPECIFICATIONS ---- 5- 2
ATTACHMENTS, OPTIONS ---- 6- 1
HANDLING EMERGENCY STEERING DEVICE ---- 6- 2
CHECKING ---- 6- 2
AIR CONDITIONER ---- 6- 3
LOCATIONS AND FUNCTIONS OF CONTROL PANEL ---- 6- 3
METHOD OF OPERATION ---- 6- 5
PRECAUTIONS WHEN USING ---- 6- 5
HANDLING AIR-SUSPENSION SEAT ---- 6- 6
ADJUST OPERATOR'S SEAT ---- 6- 6
INDEX ---- 7- 1

MidWestTech | Komatsu GD825A-2 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

GENERAL VIEW OF CONTROLS AND GAUGES



(1) Inching pedal
(2) Work equipment control lever
(3) Horn button
(4) Steering wheel
(5) Turn signal lever
(6) Yellow rotating lamp switch (if equipped)
(7) Brake pedal
(8) Gearshift lever
(9) Fuel control lever
(10) Accelerator pedal
(11) Decelerator pedal

MidWestTech | Komatsu GD825A-2 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

EVERY 500 HOURS SERVICE

REPLACE FUEL FILTER CARTRIDGE 4- 41
CLEAN, CHECK RADIATOR FINS 4- 42
CHECK CIRCLE GUIDE CLEARANCE, ADJUST 4- 43
CHECK PARKING BRAKE LEVEL STROKE, ADJUST 4- 46
CHECK, ADJUST SLIP LOAD FOR DRY-TYPE CLUTCH FOR BLADE ROTATION GEAR 4- 47

EVERY 1000 HOURS SERVICE

GREASE DRIVE SHAFT 4- 49
GREASE FAN PULLEY AND TENSION PULLEY 4- 49
REPLACE TRANSMISSION OIL FILTER ELEMENT 4- 50
CHANGE OIL IN TRANSMISSION CASE, CLEAN STRAINER 4- 51
CHANGE OIL IN FINAL DRIVE CASE, CLEAN STRAINER 4- 52
REPLACE RETURN FILTER ELEMENT AND CLEAN SUCTION STRAINER IN HYDRAULIC TANK 4- 53
CHANGE OIL IN HYDRAULIC TANK 4- 54
CHECK LOOSENESS IN DRAWBAR FRONT BALL JOINT AND BALL STUD 4- 55
CHECK TOE-IN, ADJUST 4- 55
CHECK FRONT WHEEL BEARING PLAY, ADJUST 4- 56
REPLACE CORROSION RESISTOR CARTRIDGE 4- 57
CHECK FOR LOOSE ROPS MOUNT BOLTS 4- 57
REPLACING AIR DRYER DESICCANT 4- 57

EVERY 2000 HOURS SERVICE

CHANGE OIL IN FRONT WHEEL BEARING 4- 58
CHANGE OIL IN CIRCLE REVERSE GEAR CASE 4- 58
CHANGE OIL IN TANDEM DRIVE CASE 4- 59
CLEAN ENGINE BREATHER ELEMENT 4- 59
CLEAN BREATHER 4- 60
CLEAN AND INSPECT INCHING POTENTIOMETER SENSOR 4- 61
CHECK ALTERNATOR, STARTING MOTOR 4- 61
CHECK ENGINE VALVE CLEARANCE, ADJUST 4- 61
CHECK ALL TIGHTENING PARTS OF TURBOCHARGER 4- 61
CHECK PLAY OF TURBOCHARGER ROTOR 4- 61
CLEAN, CHECK TURBOCHARGER 4- 61

EVERY 4000 HOURS SERVICE

CHECK WATER PUMP 4- 62
CHECK VIBRATION DAMPER 4- 62
CHECK FAN PULLEY AND TENSION PULLEY 4- 62

MidWestTech | Komatsu GD825A-2 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

CHECK CIRCLE GUIDE CLEARANCE, ADJUST

⚠ WARNING

When raising the blade, do not raise it higher than necessary.

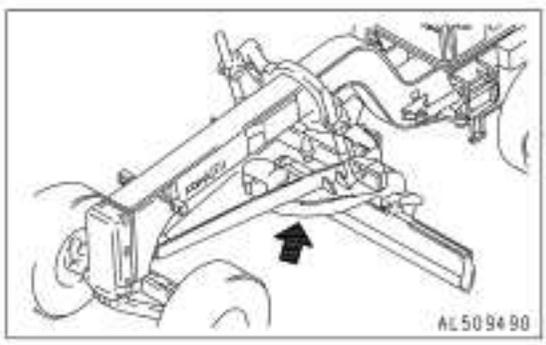
NOTICE

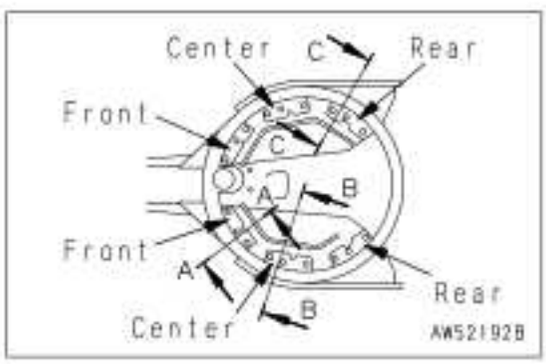
Before stating the adjustment, confirm that there are gaps between the tooth crest of the circle gear and root of the circle pinion and between the tooth crest of the circle pinion and root of the circle gear. If there is no gap, replace the guide before starting the adjustment.

- Prepare the following:
  Feeler gauge
- Shims (thickness: 1 mm (0.039 in), 0.5 mm (0.020 in); 2 types)

CHECKING

1. Raise the blade from the ground.
2. Measure the clearance at portion P with a feeler gauge.
   Standard clearance: 1.5 ± 0.5 mm (0.059 ± 0.020 in) (6 places)
3. Measure the clearances at portions F, C, and R.
   Standard value: F = 0, C = 0.7 mm (0.028 in), R = 1.5 mm (0.059 in)
   or F = C = R = 1 mm (0.039 in)
   F is the clearance for the guide at the front.
   C is the clearance for the guide at the center.
   R is the clearance for the guide at the rear.
4. If the clearance for portions P, F, C, and R are not the above values, adjust as follows.





MidWestTech | Komatsu GD825A-2 Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >