SEAM038003T

Operation & Maintenance Manual

GD675-3C

MOTOR GRADER

SERIAL NUMBERS GD675-3C 51001 and up

May 2003

KOMATSU

MidWestTech | Komatsu GD675-3C 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
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 ---- 2- 1
SAFETY INFORMATION ---- 2- 2
SAFETY LABELS ---- 2- 4
POSITION FOR ATTACHING SAFETY LABELS ---- 2- 5
SAFETY LABELS ---- 2- 6
GENERAL PRECAUTIONS ---- 2- 11
PRECAUTIONS DURING OPERATION ---- 2- 19
STARTING ENGINE ---- 2- 19
OPERATION ---- 2- 21
TRANSPORTATION ---- 2- 25
BATTERY ---- 2- 26
TOWING ---- 2- 28
PRECAUTIONS FOR MAINTENANCE ---- 2- 29
PRECAUTIONS WITH TIRES ---- 2- 35
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
METERS AND LAMPS ---- 3- 6
SWITCHES ---- 3- 13
CONTROL LEVERS, PEDALS ---- 3- 24
DUST INDICATOR ---- 3- 33
ARTICULATE LOCK PIN ---- 3- 33
FUSE BOX ---- 3- 33
OPERATION ---- 3- 35
CHECK BEFORE STARTING ENGINE ---- 3- 35
STARTING ENGINE ---- 3- 47
OPERATIONS, CHECKS AFTER STARTING ENGINE ---- 3- 51
STOPPING ENGINE ---- 3- 53
CHECK AFTER STOPPING ENGINE ---- 3- 53
TRAVELING POSTURE FOR MACHINE ---- 3- 54
MOVING MACHINE OFF (FORWARD, REVERSE, SHIFTING GEAR), STOPPING ---- 3- 55
TURNING MACHINE ---- 3- 59
OPERATING WORK EQUIPMENT ---- 3- 62
WORK WHICH CAN BE CARRIED OUT USING A MOTOR GRADER ---- 3- 68
PRECAUTIONS WHEN OPERATION ---- 3- 89
ADJUSTING WORK EQUIPMENT POSTURE ---- 3- 93
PARKING MACHINE ---- 3-102

MidWestTech | Komatsu GD675-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

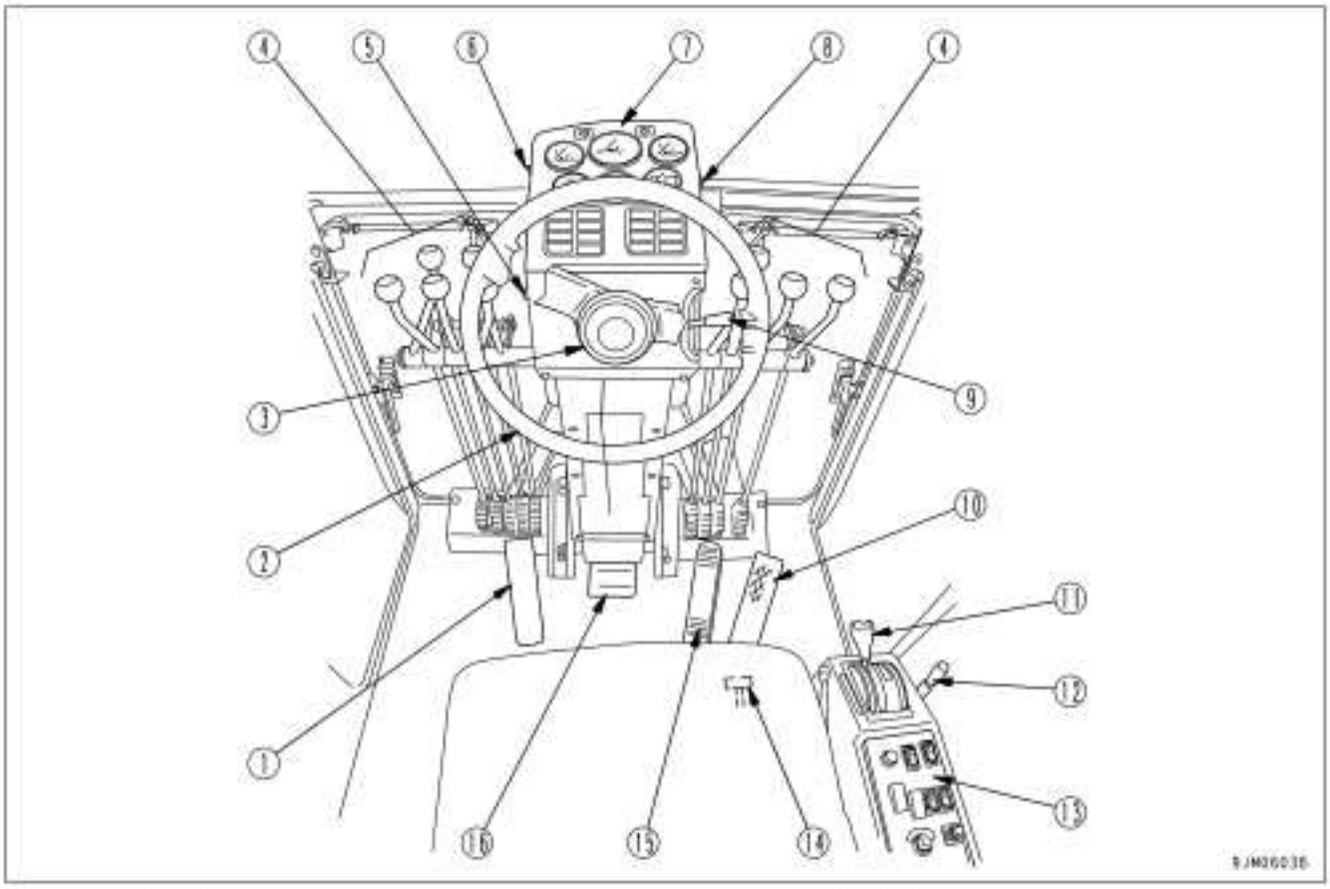
CHECKS AFTER COMPLETION OF OPERATION ---- 3-103
LOCKING ---- 3-104
HANDLING THE TIRES ---- 3-104
TRANSPORTATION ---- 3-105
LOADING, UNLOADING WORK ---- 3-105
PRECAUTIONS FOR LOADING ---- 3-106
COLD WEATHER OPERATION ---- 3-107
PRECAUTIONS FOR LOW TEMPERATURE ---- 3-107
CAUTIONS AFTER COMPLETION OF WORK ---- 3-108
AFTER COLD WEATHER ---- 3-108
LONG-TERM STORAGE ---- 3-109
BEFORE STORAGE ---- 3-109
DURING STORAGE ---- 3-109
AFTER STORAGE ---- 3-109
TROUBLESHOOTING ---- 3-110
AFTER RUNNING OUT OF FUEL ---- 3-110
WHEN LEANING PIPING IS DAMAGED ---- 3-111
TOWING THE MACHINE ---- 3-112
IF BATTERY IS DISCHARGED ---- 3-114
OTHER TROUBLE ---- 3-117
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- 14
CRITICAL PARTS ---- 4- 14
MAINTENANCE SCHEDULE CHART ---- 4- 15
MAINTENANCE SCHEDULE CHART ---- 4- 15
SERVICE PROCEDURE ---- 4- 17
INITIAL 250 HOURS SERVICE (only after the first 250 hours) ---- 4- 17
WHEN REQUIRED ---- 4- 18
CHECK BEFORE STARTING ---- 4- 31
EVERY 50 HOURS SERVICE ---- 4- 32
EVERY 250 HOURS SERVICE ---- 4- 33
EVERY 500 HOURS SERVICE ---- 4- 48
EVERY 1000 HOURS SERVICE ---- 4- 54
EVERY 2000 HOURS SERVICE ---- 4- 61
EVERY 4000 HOURS SERVICE ---- 4- 66
EVERY 8000 HOURS SERVICE ---- 4- 68
SPECIFICATIONS ---- 5- 1
SPECIFICATIONS ---- 5- 2
ATTACHMENTS, OPTIONS ---- 6- 1
HANDLING BLADE ACCUMULATOR ---- 6- 2
FEATURES OF BLADE ACCUMULATOR ---- 6- 2

MidWestTech | Komatsu GD675-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

METHOD OF OPERATING BLADE ACCUMULATOR ---- 6- 3
AM/FM RADIO-CASSETTE STEREO ---- 6- 4
EXPLANATION OF COMPONENTS ---- 6- 4
METHOD OF OPERATION ---- 6- 9
PRECAUTIONS WHEN USING ---- 6- 12
AIR CONDITIONER ---- 6- 13
LOCATIONS AND FUNCTIONS OF CONTROL PANEL ---- 6- 13
METHOD OF OPERATION ---- 6- 15
PRECAUTIONS WHEN USING ---- 6- 15
TESTING AND MAINTENANCE ---- 6- 15
HANDLING AIR-SUSPENSION SEAT ---- 6- 16
ADJUST OPERATOR'S SEAT ---- 6- 16
INDEX ---- 7- 1

MidWestTech | Komatsu GD675-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

GENERAL VIEW OF CONTROLS AND GAUGES



(1) Inching pedal
(2) Steering wheel
(3) Horn button
(4) Work equipment control lever
(5) Starting aid switch
(6) Dimmer switch
(7) Machine monitor
(8) Differential lock switch (if equipped)
(9) Turn signal lever
(10) Accelerator pedal
(11) Gearshift lever
(12) Fuel control lever
(13) Right side panel
(14) Decelerator pedal
(15) Brake pedal
(16) Steering console tilt pedal

MidWestTech | Komatsu GD675-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

MAINTENANCE SCHEDULE CHART

MAINTENANCE SCHEDULE CHART

INITIAL 250 HOURS SERVICE (only after the first 250 hours)
REPLACE FUEL FILTER CARTRIDGE ---- 4- 48
CHANGE OIL IN TRANSMISSION CASE ---- 4- 56
CHANGE OIL IN FINAL DRIVE CASE ---- 4- 57
CHANGE OIL IN CIRCLE REVERSE GEAR CASE ---- 4- 62
CHANGE OIL IN HYDRAULIC TANK ---- 4- 61
REPLACE HYDRAULIC TANK FILTER ELEMENT ---- 4- 57
CHANGE OIL IN TANDEM DRIVE CASE ---- 4- 63
CHECK ENGINE VALVE CLEARANCE, ADJUST ---- 4- 65

WHEN REQUIRED
CLEAN INSIDE OF COOLING SYSTEM ---- 4- 18
CHECK, CLEAN AND REPLACE AIR CLEANER ELEMENT ---- 4- 21
CLEAN, CHECK WATER SEPARATOR ---- 4- 25
CHECK ELECTRICAL INTAKE AIR HEATER ---- 4- 26
REPLACE THE CUTTING EDGES, REVERSE AND REPLACE END BIT ---- 4- 26
CHECK INCHING PEDAL ---- 4- 26
CLEAN AIR CONDITIONER AIR FILTER ---- 4- 27
CHECK REFRIGENT (GAS) LEVEL ---- 4- 28
CHECK TENSION OF AIR CONDITIONER COMPRESSOR BELT ---- 4- 28
SELECTION AND INSPECTION OF TIRES ---- 4- 29

CHECK BEFORE STARTING

EVERY 50 HOURS SERVICE
LUBRICATING ---- 4- 32

EVERY 250 HOURS SERVICE
LUBRICATING ---- 4- 33
CHANGE OIL IN ENGINE OIL PAN, REPLACE ENGINE OIL FILTER CARTRIDGE ---- 4- 39
CHECK OIL LEVEL IN TRANSMISSION CASE, ADD OIL ---- 4- 40
CHECK OIL LEVEL IN FINAL DRIVE CASE, ADD OIL ---- 4- 41
CHECK OIL LEVEL IN TANDEM DRIVE CASE, ADD OIL ---- 4- 42
CHECK OIL LEVEL IN CIRCLE REVERSE GEAR CASE, ADD OIL ---- 4- 42
CHECK OIL LEVEL IN HYDRAULIC TANK, ADD OIL ---- 4- 43
CHECK LEVEL OF BATTERY ELECTROLYTE ---- 4- 44
CHECK BALL JOINT CLEARANCE, ADJUST ---- 4- 46
CHECK AND TIGHTEN WHEEL HUB NUT AND HUB BOLT ---- 4- 46
CHECKING WHEEL RIM, LOCK RING AND SIDE RING FOR CORROSION AND WEAR ---- 4- 46
CHECK FAN BELT TENSION, ADJUST ---- 4- 47

EVERY 500 HOURS SERVICE
REPLACE FUEL FILTER CARTRIDGE ---- 4- 48
CLEAN, CHECK RADIATOR FINS ---- 4- 50
CHECK CIRCLE GUIDE CLEARANCE, ADJUST ---- 4- 51

MidWestTech | Komatsu GD675-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

CHECK CIRCLE GUIDE CLEARANCE, ADJUST

⚠ WARNING

- If there is no clearance between the root of the teeth (or the tip of the teeth) of the pinion gear of the circle rotator and the tip of the teeth (or the root of the teeth) of the circle gear after maintenance has been carried out, replace the guide.
- When raising the blade, do not raise it higher than necessary.

NOTICE

If the condition remains as below even after maintenance is carried out, replace the circle guide.

- When there is no clearance (R) between the circle and circle guide.
- When there is no clearance between the root of the teeth (or the tip of the teeth) of the pinion gear of the circle rotator and the tip of the teeth (or the root of the teeth) of the circle gear.

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

TESTING

1. Raise the blade and use a feeler gauge to measure clearance (P) between the bottom face of the drawbar and the top face of the swing circle as shown in the diagram. The standard clearance is 1.5 ± 0.5 mm (0.059 ± 0.020 in).
2. Keep the blade raised and use a feeler gauge to measure clearance (Q) F (front), (Q) C (center), and (Q) R (rear) between the circle and circle guide as shown in the diagram when force is applied at the rear.
   Standard clearances (Q) F, (Q) C, and (Q) R are as follows.
   (Q) F = 0 mm, (Q) C = 0.7 mm (0.028 in), (Q) R = 1.5 mm (0.059 in), or (Q) F = (Q) R = 1 mm (0.039 in)

MidWestTech | Komatsu GD675-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >