KEAM038100T

Operation & Maintenance Manual

GALEO

GD555-3C

MOTOR GRADER

SERIAL NUMBERS GD555-3C B10001 and up

July 2005

KOMATSU®

MidWestTech | Komatsu GD555-3C 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 ---- 3-104

MidWestTech | Komatsu GD555-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

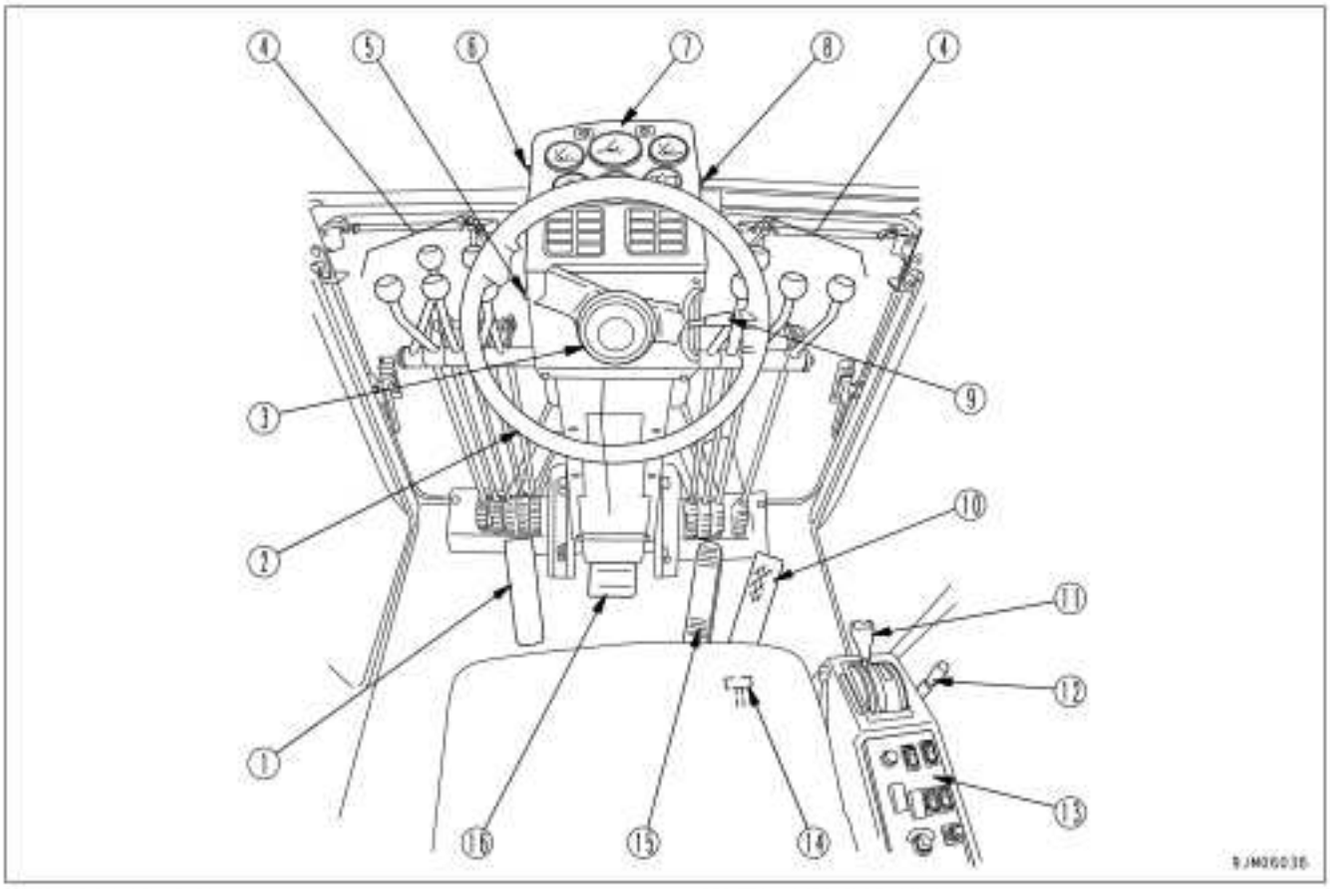
CHECKS AFTER COMPLETION OF OPERATION ---- 3-105
LOCKING ---- 3-106
HANDLING THE TIRES ---- 3-106
TRANSPORTATION ---- 3-107
LOADING, UNLOADING WORK ---- 3-107
PRECAUTIONS FOR LOADING ---- 3-108
COLD WEATHER OPERATION ---- 3-109
PRECAUTIONS FOR LOW TEMPERATURE ---- 3-109
CAUTIONS AFTER COMPLETION OF WORK ---- 3-110
AFTER COLD WEATHER ---- 3-110
LONG-TERM STORAGE ---- 3-111
BEFORE STORAGE ---- 3-111
DURING STORAGE ---- 3-111
AFTER STORAGE ---- 3-111
TROUBLESHOOTING ---- 3-112
AFTER RUNNING OUT OF FUEL ---- 3-112
WHEN LEANING PIPING IS DAMAGED ---- 3-113
TOWING THE MACHINE ---- 3-114
IF BATTERY IS DISCHARGED ---- 3-116
OTHER TROUBLE ---- 3-119
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- 30
EVERY 50 HOURS SERVICE ---- 4- 31
EVERY 250 HOURS SERVICE ---- 4- 32
EVERY 500 HOURS SERVICE ---- 4- 47
EVERY 1000 HOURS SERVICE ---- 4- 53
EVERY 2000 HOURS SERVICE ---- 4- 59
EVERY 4000 HOURS SERVICE ---- 4- 64
SPECIFICATIONS ---- 5- 1
SPECIFICATIONS ---- 5- 2
ATTACHMENTS, OPTIONS ---- 6- 1
HANDLING BLADE ACCUMULATOR ---- 6- 2
FEATURES OF BLADE ACCUMULATOR ---- 6- 2
METHOD OF OPERATING BLADE ACCUMULATOR ---- 6- 3

MidWestTech | Komatsu GD555-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

AM/FM RADIO-CASSETTE STEREO ---- 6- 4
EXPLANATION OF COMPONENTS ---- 6- 4
METHOD OF OPERATION ---- 6- 9
PRECAUTIONS WHEN USING ---- 6- 11
AIR CONDITIONER ---- 6- 12
LOCATIONS AND FUNCTIONS OF CONTROL PANEL ---- 6- 12
METHOD OF OPERATION ---- 6- 14
PRECAUTIONS WHEN USING ---- 6- 14
TESTING AND MAINTENANCE ---- 6- 14
HANDLING AIR-SUSPENSION SEAT ---- 6- 15
ADJUST OPERATOR'S SEAT ---- 6- 15
INDEX ---- 7- 1

MidWestTech | Komatsu GD555-3C 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 GD555-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

Capacity \ Reservoir		Engine oil pan	Trans-mission case	Tandem drive case (each)	Final drive case		Circle reverce gear case	
					Standard	With differential lock	Shear pin type	Slip clutch type
Specified	Liters	16.0	60.0	80.0	17.0	14.0	5.0	7.0
	US gal	4.23	15.85	21.14	4.49	3.70	1.32	1.85
Refill	Liters	14.2	45.0	80.0	17.0	14.0	5.0	7.0
	US gal	3.75	11.89	21.14	4.49	3.70	1.32	1.85

Capacity \ Reservoir		Hydraulic system	Fuel tank	Cooling system
Specified	Liters	85	340	44
	US gal	22.46	89.76	11.62
Refill	Liters	45	–	44
	US gal	11.89	–	11.62

REMARK

- When fuel sulphur content is less than 0.5%, change oil in the oil pan according to the periodic maintenance hours described in this manual.
  Change oil according to the following table if fuel sulphur content is above 0.5%.

- When starting the engine with an atmospheric temperature of lower than 0°C (32°F), be sure to use engine oil of SAE10W, SAE10W-30 and SAE15W-40, even though the atmospheric temperature goes up to 10°C (50°F) more or less during the day.

- Use API classification CD as engine oil and if API classification CC, reduce the engine oil change interval to half.

- There is no problem if single grade oil is mixed with multigrade oil (SAE10W-30, 15W-40), but be sure to add single grade oil that matches the temperature range in the table.

- We recommend Komatsu genuine oil which has been specifically formulated and approved for use in engine and hydraulic work equipment applications.

Specified capacity: Total amount of oil including oil for components and oil in piping.

Refill capacity: Amount of oil needed to refill system during normal inspection and maintenance.

ASTM: American Society of Testing and Material
SAE: Society of Automotive Engineers
API: American Petroleum Institute

Fuel sulphur content	Charge interval of oil in engine oil pan
0.5 to 1.0%	1/2 of regular interval
Above 1.0%	1/4 of regular interval

MidWestTech | Komatsu GD555-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

EVERY 1000 HOURS SERVICE

Maintenance for every 50, 250 and 500 hours should be carried out at the same time.

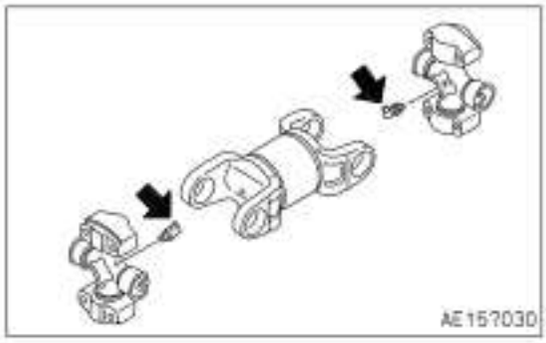
LUBRICATING

⚠ WARNING

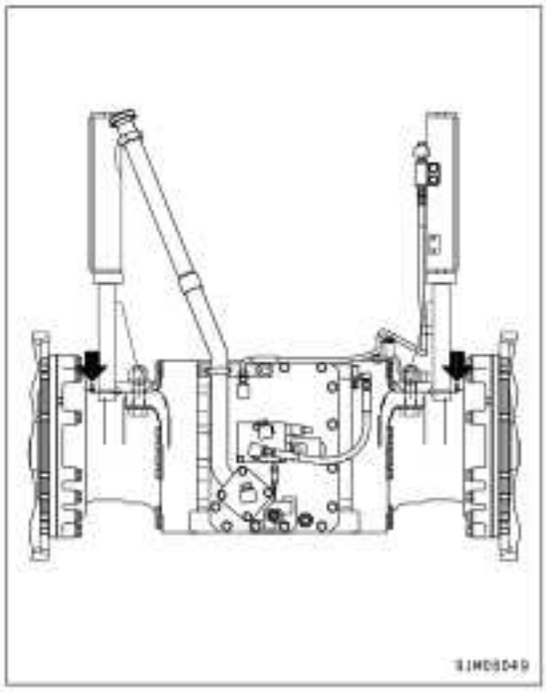
- **Apply the parking brake, and secure the front and rear frame with the articulate lock pin.**
- **Set the work equipment in a stable condition, and stop the engine.**

1. Using a grease pump, pump in grease through the grease fittings shown by arrows.
2. After greasing, wipe off any old grease that was pushed out.

Drive shaft (2 places)



Final drive (2 places)
(Machine equipped with differential lock only)



MidWestTech | Komatsu GD555-3C Motor Grader Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >