TEN00269-03

Operation & Maintenance Manual

BULLDOZER

D21A-8E0
D21P-8E0

SERIAL NUMBERS D21A-90001 and up
D21P-90001

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 D21A-8E0, D21P-8E0 Bulldozer Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD 1- 1
BEFORE READING THIS MANUAL 1- 2
IMPORTANT SAFETY INFORMATION 1- 4
INTENDED USE 1- 5
USE OF MACHINE 1- 5
GENERAL VIEW AND DIRECTIONS OF MACHINE 1- 5
VISIBILITY FROM OPERATOR'S SEAT 1- 5
LOCATION OF PLATES, TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR 1- 6
PRODUCT IDENTIFICATION NUMBER (PIN)/MACHINE SERIAL NO. PLATE 1- 6
ENGINE SERIAL NO. PLATE POSITION 1- 6
ADDITIONAL EPA NAMEPLATE 1- 7
SERVICE METER POSITION 1- 7
TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR 1- 8
SAFETY 2- 1
SAFETY 2- 2
SAFETY LABELS 2- 5
POSITIONS OF SAFETY PICTOGRAMS 2- 5
SAFETY LABELS 2- 6
GENERAL PRECAUTIONS COMMON TO OPERATION AND MAINTENANCE 2- 10
PRECAUTIONS BEFORE STARTING OPERATION 2- 10
PREPARATIONS FOR SAFE OPERATION 2- 10
FIRE PREVENTION 2- 12
PRECAUTIONS WHEN GETTING ON OR OFF MACHINE 2- 14
DO NOT GET CAUGHT IN WORK EQUIPMENT 2- 16
PRECAUTIONS RELATED TO PROTECTIVE STRUCTURES 2- 17
UNAUTHORIZED MODIFICATION 2- 17
PRECAUTIONS RELATED TO ATTACHMENTS AND OPTIONS 2- 17
PRECAUTIONS WHEN RUNNING ENGINE INSIDE BUILDING 2- 18
PRECAUTIONS FOR OPERATION 2- 19
PRECAUTIONS FOR JOBSITE 2- 19
STARTING ENGINE 2- 21
OPERATION 2- 24
TRANSPORTATION 2- 28
TOWING 2- 29
PRECAUTIONS FOR MAINTENANCE 2- 30
PRECAUTIONS BEFORE STARTING INSPECTION AND MAINTENANCE 2- 30
PRECAUTIONS FOR INSPECTION AND MAINTENANCE 2- 34
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- 4
FRONT PANEL 3- 4
SWITCHES 3- 10
CONTROL LEVERS AND PEDALS 3- 12
FUSE 3- 19
FUSIBLE LINK 3- 19
DOOR POCKET 3- 20
OPERATION 3- 21

MidWestTech | Komatsu D21A-8E0, D21P-8E0 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

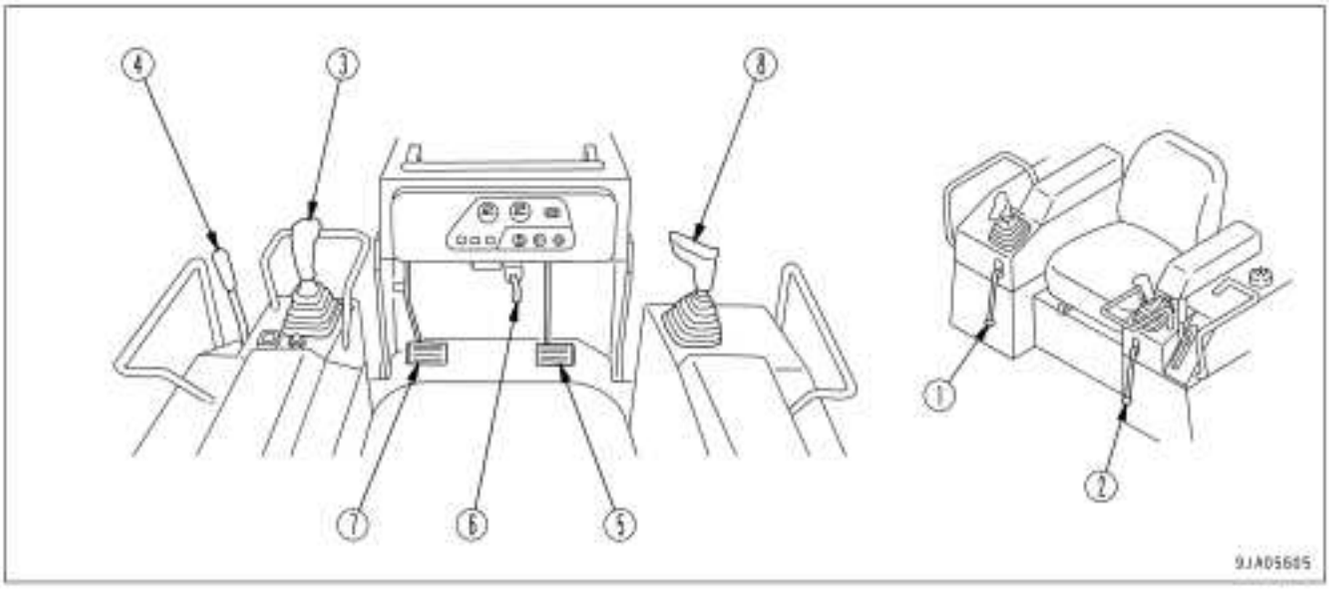
CHECK BEFORE STARTING ENGINE, ADJUST ---- 3- 21
STARTING ENGINE ---- 3- 33
OPERATIONS AND CHECKS AFTER STARTING ENGINE ---- 3- 36
STOPPING ENGINE ---- 3- 38
MACHINE OPERATION ---- 3- 39
SHIFTING GEARS ---- 3- 43
SHIFTING BETWEEN FORWARD AND REVERSE ---- 3- 44
STEERING MACHINE ---- 3- 45
PRECAUTIONS FOR OPERATION ---- 3- 49
WORK POSSIBLE USING BULLDOZER ---- 3- 50
PARKING MACHINE ---- 3- 52
CHECK AFTER FINISHING WORK ---- 3- 54
LOCKING ---- 3- 54
TIPS FOR LONGER UNDERCARRIAGE LIFE ---- 3- 55
HANDLING RUBBER SHOES (RUBBER SHOES ONLY) ---- 3- 58
TRANSPORTATION ---- 3- 63
TRANSPORTATION MEANS ---- 3- 63
LOADING, UNLOADING WORK ---- 3- 63
LIFTING MACHINE ---- 3- 66
COLD WEATHER OPERATION ---- 3- 67
PRECAUTIONS FOR LOW TEMPERATURE ---- 3- 67
AFTER COMPLETION OF WORK ---- 3- 68
AFTER COLD WEATHER ---- 3- 68
LONG-TERM STORAGE ---- 3- 69
BEFORE STORAGE ---- 3- 69
DURING STORAGE ---- 3- 69
AFTER STORAGE ---- 3- 69
TROUBLESHOOTING ---- 3- 70
AFTER RUNNING OUT OF FUEL ---- 3- 70
MACHINE TOWING METHOD ---- 3- 70
IF BATTERY IS DISCHARGED ---- 3- 71
OTHER TROUBLE ---- 3- 74
MAINTENANCE ---- 4- 1
GUIDE TO MAINTENANCE ---- 4- 2
OUTLINE OF SERVICE ---- 4- 4
HANDLING OIL, FUEL, COOLANT, AND PERFORMING OIL CLINIC ---- 4- 4
RELATING TO ELECTRIC SYSTEM ---- 4- 7
WEAR PARTS LIST ---- 4- 8
WEAR PARTS LIST ---- 4- 8
RECOMMENDED FUEL, COOLANT, AND LUBRICANT ---- 4- 9
USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE ---- 4- 10
RECOMMENDED BRANDS, RECOMMENDED QUALITY FOR PRODUCTS OTHER THAN KOMATSU GENUINE OIL ---- 4- 11
STANDARD TIGHTENING TORQUES FOR BOLTS AND NUTS ---- 4- 12
TORQUE LIST ---- 4- 12
PERIODIC REPLACEMENT OF SAFETY CRITICAL PARTS ---- 4- 13
SAFETY CRITICAL PARTS ---- 4- 13
MAINTENANCE SCHEDULE CHART ---- 4- 14
MAINTENANCE SCHEDULE CHART ---- 4- 14
SERVICE PROCEDURE ---- 4- 16

MidWestTech | Komatsu D21A-8E0, D21P-8E0 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

INITIAL 250 HOURS SERVICE(ONLY AFTER THE FIRST 250 HOURS) ---- 4- 16
WHEN REQUIRED ---- 4- 17
CHECK BEFORE STARTING ---- 4- 39
EVERY 50 HOURS SERVICE ---- 4- 40
EVERY 250 HOURS SERVICE ---- 4- 41
EVERY 500 HOURS SERVICE ---- 4- 46
EVERY 1000 HOURS SERVICE ---- 4- 50
EVERY 1500 HOURS SERVICE ---- 4- 55
EVERY 2000 HOURS SERVICE ---- 4- 56
EVERY 4000 HOURS SERVICE ---- 4- 57
SPECIFICATIONS ---- 5- 1
SPECIFICATIONS ---- 5- 2
ATTACHMENTS, OPTIONS ---- 6- 1
GENERAL PRECAUTIONS ---- 6- 2
PRECAUTIONS RELATED TO SAFETY ---- 6- 2
DECELERATOR PEDAL ---- 6- 3
SUSPENSION SEAT ---- 6- 4
ADJUSTMENT ---- 6- 4
SEAT BELT ---- 6- 4
HANDLING MACHINES EQUIPPED WITH KOMTRAX ---- 6- 6
BASIC PRECAUTIONS ---- 6- 6
INDEX ---- 7- 1

MidWestTech | Komatsu D21A-8E0, D21P-8E0 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

CONTROL LEVERS AND PEDALS



(1) Work equipment lock lever
(2) Travel lock lever
(3) Steering, directional and gear shift lever
(4) Fuel control lever
(5) Brake pedal
(6) Brake pedal lock lever
(7) Inching pedal
(8) Blade control lever

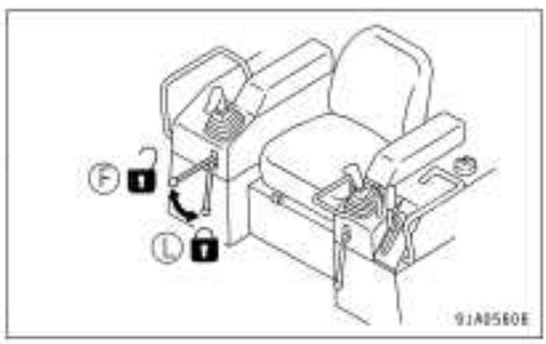
WORK EQUIPMENT LOCK LEVER

WARNING

- **When standing up from the operator's seat, set the work equipment lock lever securely to the LOCK position. If the lever is not at the LOCK position and the blade control lever is touched by mistake, it may lead to serious personal injury.**
- **If the work equipment lock lever is not placed securely at the LOCK position, the blade control lever may move and cause serious personal injury. Check that the work equipment lock lever is at the LOCK position.**
- **When parking the machine or carrying out maintenance, always lower the work equipment completely to the ground and set the lever to the LOCK position.**

This is the locking device of blade control lever (1).
(L): Lock position
(F): Free position

When the lever is set to the LOCK position, the blade operation is locked.



REMARK
When the blade control lever is at the FLOAT position and the work equipment lock lever is operated to the LOCK position, the blade control lever is automatically returned to the HOLD position.

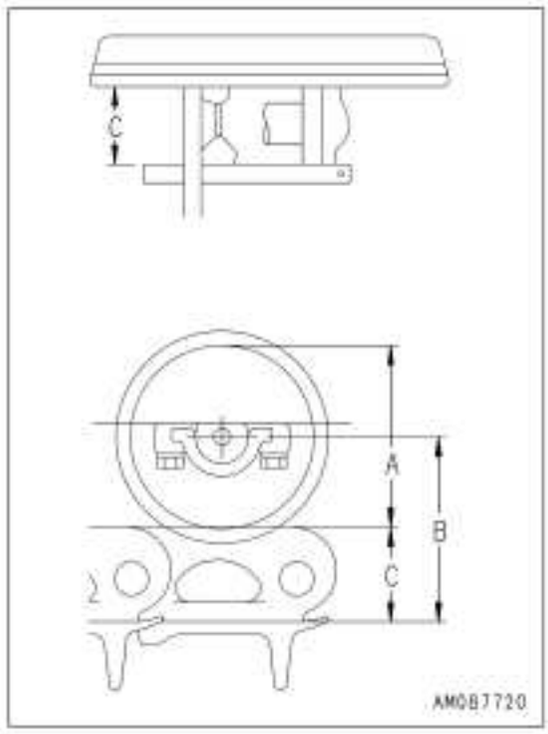
MidWestTech | Komatsu D21A-8E0, D21P-8E0 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

MEASURING OUTSIDE DIAMETER OF TRACK ROLLER

1. Measure the height (dimension C) of the link tread as shown in the diagram.
2. Stop the machine at a point where the link tread (for which dimension C was measured) is completely in contact with the roller tread, then measure dimension B.
3. Calculate the outside dimension of the tread (dimension A).

   A = (B - C) x 2

   - Standard dimension (A): 135 mm (5.3 in)
   - Repair limit: 127 mm (5.0 in)



MidWestTech | Komatsu D21A-8E0, D21P-8E0 Bulldozer Operation & Maintenance Ma... 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- 46
Change oil in engine oil pan, replace engine oil filter cartridge ---- 4- 48
Change oil in bevel gear case, transfer case ---- 4- 51
Change oil in transmission case, clean strainer ---- 4- 52
Change oil in final drive case ---- 4- 53
Change oil in hydraulic tank, replace hydraulic oil filter cartridge ---- 4- 54

WHEN REQUIRED

Check, clean and replace air cleaner element ---- 4- 17
Clean inside of cooling system ---- 4- 20
Clean water separator element ---- 4- 23
Check and adjust steel shoe tension ---- 4- 24
Check and tighten track steel shoe bolts ---- 4- 26
Check and replace rubber shoes ---- 4- 27
Check and adjust rubber shoe tension ---- 4- 29
Replace rubber shoes ---- 4- 31
Reverse and replace end bits and cutting edges ---- 4- 34
Bleed air from head end of angle circuit ---- 4- 35
Adjust brake pedal (test, adjust steering brake) ---- 4- 36
Adjust idler clearance ---- 4- 38

CHECK BEFORE STARTING

EVERY 50 HOURS SERVICE

Drain water, sediment from fuel tank ---- 4- 40

EVERY 250 HOURS SERVICE

Lubricating ---- 4- 41
Check oil level in final drive case, add oil ---- 4- 42
Check oil level in hydraulic tank, add oil ---- 4- 42
Check level of battery electrolyte ---- 4- 43
Check fan belt tension, adjust ---- 4- 45

EVERY 500 HOURS SERVICE

Replace fuel filter cartridge ---- 4- 46
Change oil in engine oil pan, replace engine oil filter cartridge ---- 4- 48
Clean, check radiator fins ---- 4- 49
Clean breather ---- 4- 49

MidWestTech | Komatsu D21A-8E0, D21P-8E0 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >