TEN00496-01

Operation & Maintenance Manual

BULLDOZER

D21A-8E0
D21P-8E0

SERIAL NUMBERS 90219 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 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
SERVICE METER POSITION ---- 1- 7
TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR ---- 1- 7
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- 13
DO NOT GET CAUGHT IN WORK EQUIPMENT ---- 2- 15
PRECAUTIONS RELATED TO PROTECTIVE STRUCTURES ---- 2- 16
UNAUTHORIZED MODIFICATION ---- 2- 16
PRECAUTIONS RELATED TO ATTACHMENTS AND OPTIONS ---- 2- 16
PRECAUTIONS WHEN RUNNING ENGINE INSIDE BUILDING ---- 2- 17
PRECAUTIONS FOR OPERATION ---- 2- 18
PRECAUTIONS FOR JOBSITE ---- 2- 18
STARTING ENGINE ---- 2- 20
OPERATION ---- 2- 23
TRANSPORTATION ---- 2- 27
TOWING ---- 2- 28
PRECAUTIONS FOR MAINTENANCE ---- 2- 29
PRECAUTIONS BEFORE STARTING INSPECTION AND MAINTENANCE ---- 2- 29
PRECAUTIONS FOR INSPECTION AND MAINTENANCE ---- 2- 33
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
CHECK BEFORE STARTING ENGINE, ADJUST ---- 3- 21

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

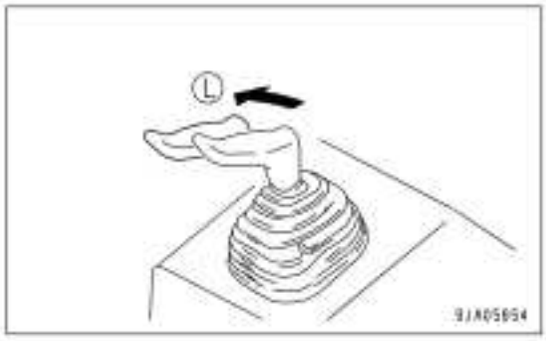
STARTING ENGINE ---- 3- 33
OPERATIONS AND CHECKS AFTER STARTING ENGINE ---- 3- 36
STOPPING ENGINE ---- 3- 38
MACHINE OPERATION ---- 3- 39
SHIFTING GEARS ---- 3- 43
SHIFTING BETWEEN FORWARD AND REVERSE ---- 3- 44
STEERING MACHINE ---- 3- 45
PRECAUTIONS FOR OPERATION ---- 3- 49
WORK POSSIBLE USING BULLDOZER ---- 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
INITIAL 250 HOURS SERVICE(ONLY AFTER THE FIRST 250 HOURS) ---- 4- 16

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

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 >

4. Operate balde control lever (4) to the LOWER position, and lower the blade to the ground.



5. Set work equipment lock lever (5) to the LOCK position (L).



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

SERVICE PROCEDURE

INITIAL 250 HOURS SERVICE(ONLY AFTER THE FIRST 250 HOURS)

Carry out the following maintenance only after the first 250 hours of operation on new machines.

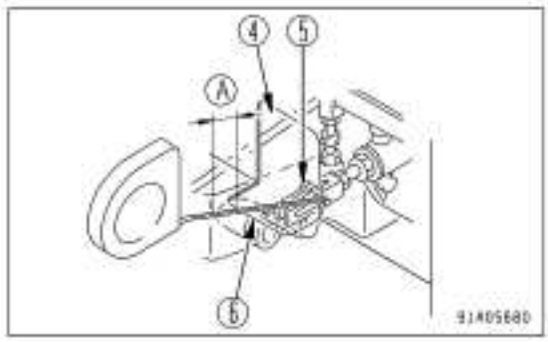
- Replace fuel filter cartridge
- Change oil in engine oil pan, replace engine oil filter cartridge
- Change oil in bevel gear case, transfer case
- Change oil in transmission case, clean strainer
- Change oil in final drive case
- Change oil in hydraulic tank, replace hydraulic oil filter cartridge

For details of the method of replacing or maintaining, see the section on EVERY 500 HOURS AND 1000 HOURS SERVICE.

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

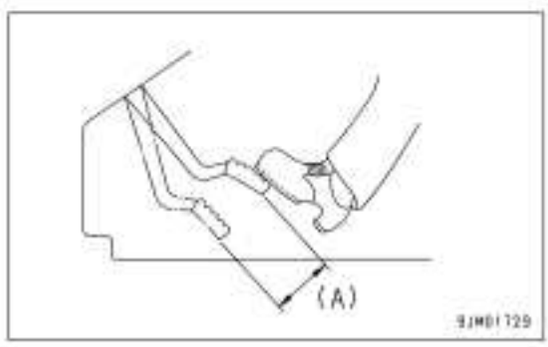
TEST, ADJUST RIGHT STEERING BRAKE

1. Look through inspection window (4) under the operator's seat. Pin (5) is installed to an oblong yoke beyond the oil level gauge tube. Hook the end of a steel tape measure to the projecting part at the tip of pin (5).
2. Depress the brake pedal fully and measure the amount of movement of the tape measure (pin (5)).
3. When reading the movement of the tape measure, use edge (6) of the inspection window as a benchmark.
   If movement (A) is 14.5 mm (0.6 in), the brake is correctly adjusted.
   If it is not 14.5 mm (0.6 in), carry out fine adjustment of movement (A) with right adjustment nut (3) as follows.
   If it is LESS than 14.5 mm (0.6 in), LOOSEN nut (3).
   If it is MORE than 14.5 mm (0.6 in), TIGHTEN nut (3).

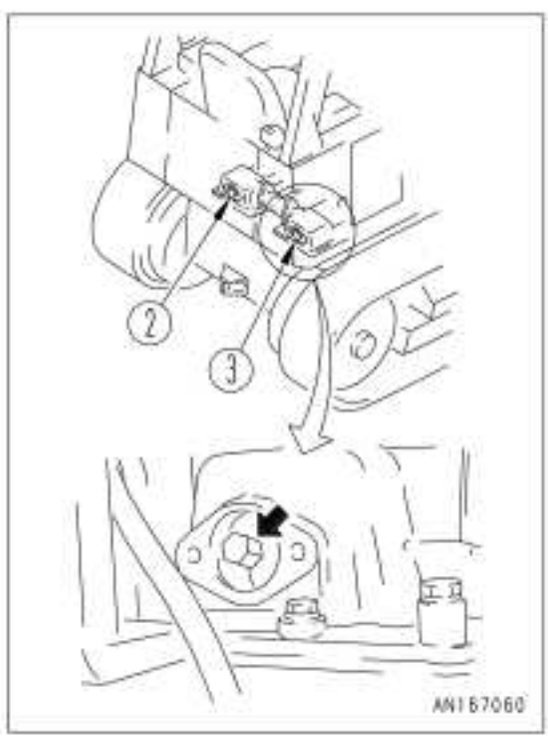


TEST, ADJUST LEFT STEERING BRAKE

1. Travel (A) at the tip of the pedal should be 98 mm (3.9 in) when the brake pedal is fully depressed.
   If it is not 98 mm (3.9 in), adjust again with left adjustment nut (2).



The movement of pin (5) and the travel of the brake pedal change as follows when left and right adjustment nuts (2) and (3) are turned 1/2 turn.
Change in movement of pin (5): 1.6 mm (0.063 in)
Change in travel of brake pedal: 11 mm (0.4 in)
If the braking effect is still poor even after adjustment, please ask your Komatsu distributor to carry out repairs.



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