TEN00704-01

Operation & Maintenance Manual

BULLDOZER

D85EX -18
D85PX -18

SERIAL NUMBERS 22061 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 D85EX-18, D85PX-18 Bulldozer Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

FOREWORD 1-1
BEFORE READING THIS MANUAL 1-2
SAFETY INFORMATION 1-3
INTRODUCTION 1-4
MAIN USE OF MACHINE 1-4
DIRECTIONS OF MACHINE 1-4
VISIBILITY FROM OPERATOR'S SEAT 1-5
ENGINE TECHNOLOGY TO CONFORM EXHAUST GAS EMISSION 1-6
PRODUCT INFORMATION 1-7
LOCATION OF PRODUCT IDENTIFICATION NUMBER (PIN)/MACHINE SERIAL NO. PLATE 1-7
LOCATION OF ENGINE NUMBER PLATE 1-7
SERVICE METER LOCATION 1-8
YOUR MACHINE SERIAL NUMBERS AND DISTRIBUTOR 1-8
SAFETY 2-1
SAFETY 2-2
SAFETY LABELS 2-4
LOCATION OF SAFETY LABELS 2-5
CONTENTS OF SAFETY LABELS 2-6
GENERAL PRECAUTIONS COMMON TO OPERATION AND MAINTENANCE 2-11
PRECAUTIONS BEFORE STARTING OPERATION 2-11
PREPARATIONS FOR SAFE OPERATION 2-11
PRECAUTIONS TO PREVENT FIRE 2-13
PRECAUTIONS WHEN GETTING ON OR OFF MACHINE 2-15
DO NOT GET CAUGHT IN WORK EQUIPMENT 2-17
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
START ENGINE 2-22
PRECAUTIONS FOR OPERATION 2-25
PRECAUTIONS FOR TRANSPORTATION 2-29
TOWING AND BEING TOWED 2-30
PRECAUTIONS FOR MAINTENANCE 2-31
PRECAUTIONS BEFORE STARTING INSPECTION AND MAINTENANCE 2-31
PRECAUTIONS FOR CHECK AND MAINTENANCE 2-35
PRECAUTIONS FOR DEF 2-41
GENERAL CHARACTER AND PRECAUTIONS FOR HANDLING 2-41
PRECAUTIONS FOR ADDING 2-41
PRECAUTIONS FOR STORING 2-41
PRECAUTIONS FOR FIRE HAZARD AND LEAKAGE 2-41
OTHER PRECAUTIONS 2-41
OPERATION 3-1
GENERAL VIEW 3-2
MACHINE EQUIPMENT NAME 3-2
CONTROLS AND GAUGES NAMES 3-4
EXPLANATION OF COMPONENTS 3-6
EXPLANATION OF MACHINE MONITOR EQUIPMENT 3-6
SWITCHES 3-96
CONTROL LEVERS AND PEDALS 3-102
OTHER EQUIPMENT 3-111
MACHINE OPERATIONS AND CONTROLS 3-157
CHECKS AND ADJUSTMENT BEFORE STARTING ENGINE 3-157
METHOD FOR STARTING ENGINE 3-194
METHOD FOR OPERATIONS AND CHECKS AFTER STARTING ENGINE 3-199

MidWestTech | Komatsu D85EX-18, D85PX-18 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

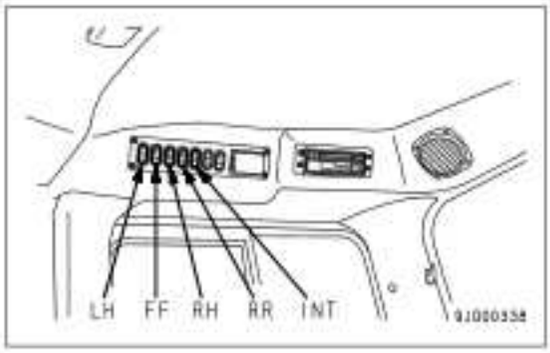
METHOD FOR STOPPING ENGINE 3-203
METHOD FOR STARTING MACHINE (TRAVEL FORWARD AND REVERSE) AND STOPPING MACHINE 3-205
SHIFT GEARS 3-208
METHOD FOR SWITCHING BETWEEN FORWARD AND REVERSE 3-214
METHOD FOR STEERING MACHINE 3-215
RECOMMENDED WORKING MODES FOR WORKS 3-218
PRECAUTIONS FOR OPERATION 3-220
PRECAUTIONS WHEN OPERATING ON SLOPE 3-221
PRECAUTIONS FOR USING BRAKE 3-221
DO NOT OPEN DOOR WHILE OPERATING MACHINE 3-221
DO NOT MODIFY CAB GLASS IN ANY WAY THAT WILL OBSTRUCT THE VIEW 3-222
PRECAUTIONS FOR FLOATING OPERATION 3-222
PRECAUTIONS FOR BLIND SPOTS CAUSED BY CAB AND ROPS STRUCTURES 3-222
RECOMMENDED APPLICATIONS 3-223
METHOD FOR ADJUSTING WORK EQUIPMENT 3-225
TIPS FOR LONGER UNDERCARRIAGE LIFE 3-229
METHOD FOR PARKING MACHINE 3-232
METHOD FOR CHECKING AFTER FINISHING WORK 3-234
LOCK 3-235
HANDLE AIR CONDITIONER 3-241
EXPLANATION OF AIR CONDITIONER EQUIPMENT 3-242
METHOD FOR OPERATING AIR CONDITIONER 3-248
HANDLING RADIO 3-256
EXPLANATION OF RADIO EQUIPMENT 3-256
METHOD FOR CONTROLLING RADIO 3-259
ANTENNA 3-261
TRANSPORTATION 3-262
TRAVEL ON ROAD 3-262
PRECAUTIONS FOR TRANSPORTING MACHINE 3-262
TRANSPORTATION PROCEDURE 3-262
LOADING AND UNLOADING WITH TRAILER 3-263
METHOD FOR LIFTING MACHINE 3-266
COLD WEATHER OPERATION 3-268
COLD WEATHER OPERATION INFORMATION 3-268
PRECAUTIONS AFTER DAILY WORK COMPLETION 3-270
AFTER COLD WEATHER SEASON 3-270
PRECAUTIONS FOR LONG-TERM STORAGE 3-271
PREPARATION FOR LONG-TERM STORAGE 3-271
MAINTENANCE DURING LONG-TERM STORAGE 3-271
STARTING MACHINE AFTER LONG-TERM STORAGE 3-272
TROUBLES AND ACTIONS 3-273
ACTIONS WHEN RUNNING OUT OF FUEL 3-273
PRECAUTIONS FOR TOWING MACHINE 3-273
PRECAUTIONS FOR DISCHARGED BATTERY 3-275
OTHER TROUBLE 3-280
MAINTENANCE 4-1
PRECAUTIONS FOR MAINTENANCE 4-2
CHECK SERVICE METER READING 4-2
KOMATSU GENUINE REPLACEMENT PARTS 4-2
KOMATSU GENUINE LUBRICANTS 4-2
ALWAYS USE CLEAN WASHER FLUID 4-2
FRESH AND CLEAN LUBRICANTS 4-2
CHECK DRAINED OIL AND USED FILTER 4-2
PRECAUTIONS FOR REFILLING OIL OR FUEL 4-2
PRECAUTIONS FOR ADDING DEF 4-2
PRECAUTIONS FOR WELDING 4-2
DO NOT DROP THINGS INSIDE MACHINE 4-2

MidWestTech | Komatsu D85EX-18, D85PX-18 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

PRECAUTIONS FOR KDPF 4-2
PRECAUTIONS FOR SCR ASSEMBLY 4-3
DUSTY JOBSITES 4-3
AVOID MIXING OIL 4-3
LOCK INSPECTION COVERS 4-3
PRECAUTIONS FOR OPENING AND CLOSING ENGINE SIDE COVER 4-3
BLEED AIR FROM HYDRAULIC CIRCUIT 4-3
PRECAUTIONS WHEN INSTALLING HYDRAULIC HOSES 4-3
CHECKS AFTER INSPECTION AND MAINTENANCE 4-4
FUEL AND LUBRICANTS TO MATCH THE AMBIENT TEMPERATURE 4-4
OUTLINE OF MAINTENANCE 4-5
HANDLE OIL, FUEL, COOLANT, AND PERFORMING OIL CLINIC 4-5
HANDLE ELECTRICAL COMPONENTS 4-10
HANDLE HYDRAULIC COMPONENTS 4-11
STANDARD TIGHTENING TORQUE FOR BOLTS AND NUTS 4-12
MAINTENANCE SCHEDULE 4-14
MAINTENANCE SCHEDULE TABLE 4-14
MAINTENANCE PROCEDURE 4-16
INITIAL 250 HOURS MAINTENANCE (ONLY AFTER THE FIRST 250 HOURS) 4-16
WHEN REQUIRED 4-17
CHECKS BEFORE STARTING 4-49
EVERY 250 HOURS MAINTENANCE 4-50
EVERY 500 HOURS MAINTENANCE 4-59
EVERY 1000 HOURS MAINTENANCE 4-66
EVERY 2000 HOURS MAINTENANCE 4-76
EVERY 4000 HOURS MAINTENANCE 4-91
EVERY 4500 HOURS MAINTENANCE 4-96
EVERY 8000 HOURS MAINTENANCE 4-97
EVERY 9000 HOURS MAINTENANCE 4-98
SPECIFICATIONS 5-1
SPECIFICATIONS 5-2
D85EX-18 SPECIFICATIONS 5-2
D85PX-18 SPECIFICATIONS 5-3
ATTACHMENTS AND OPTIONS 6-1
GENERAL PRECAUTIONS 6-2
PRECAUTIONS FOR SAFETY 6-2
TRACK SHOES SELECTION 6-3
SELECTION PROCEDURE OF RIPPER POINT 6-4
REPLACEMENT PARTS 7-1
PERIODIC REPLACEMENT OF DEFINED LIFE PARTS 7-2
DEFINED LIFE PARTS LIST 7-2
CONSUMABLE PARTS 7-3
CONSUMABLE PARTS 7-3
RECOMMENDED FUEL, COOLANT, AND LUBRICANT 7-6
LUBRICATION CHART 7-7
METHOD FOR USING FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE 7-9
RECOMMENDED BRANDS AND QUALITIES OTHER THAN KOMATSU GENUINE OILS 7-10
INDEX 8-1

MidWestTech | Komatsu D85EX-18, D85PX-18 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

WIPER SWITCH



The wiper switch operates the windshield wiper.

The wiper switches are as follows.

(LH) Left door

(FF) Front window

(RH) Right door

(RR) Rear window

(INT) Wiper intermittent operation switch

REMARK

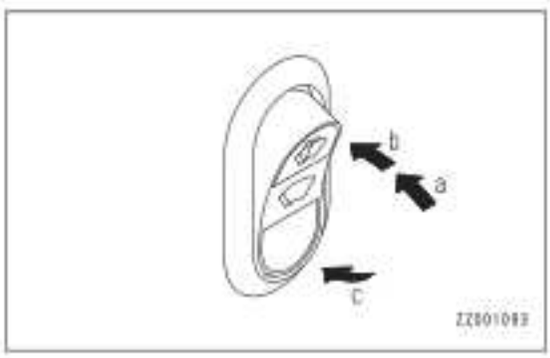
If the wiper blade is locked for some reason, the wiper stops automatically.
The wiper starts again automatically after a certain period. Be sure to remove the cause of stop, however.
Examples of causes of stop

- Long operation while glass is half dry
- Foreign material caught in arm or blade
- Snow or ice sticking to arm or blade

This switch is also used as the window washer switch.

The switch is operated as follows.

Switches (LH), (FF), (RH), and (RR)



(a) ON position

The wiper operates.

(b) Washer operating position

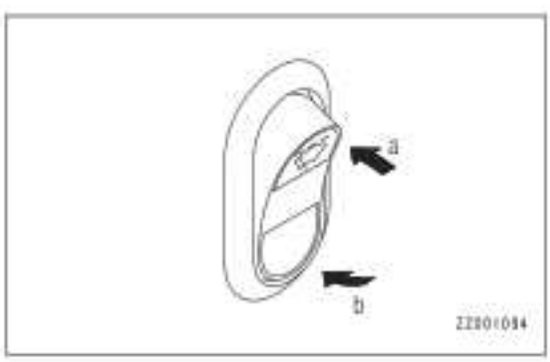
While the switch is depressed, the washing water is sprayed and wiper operates at the same time.

When the switch is released, it returns to (a) position, washing water stops, and only wiper operates.

(c) OFF position

The wiper stops.

Switch (INT)



(a) ON position

The wiper operates intermittently when the switch is turned ON.

(b) OFF position

The wiper operates continuously when the switch is turned OFF.

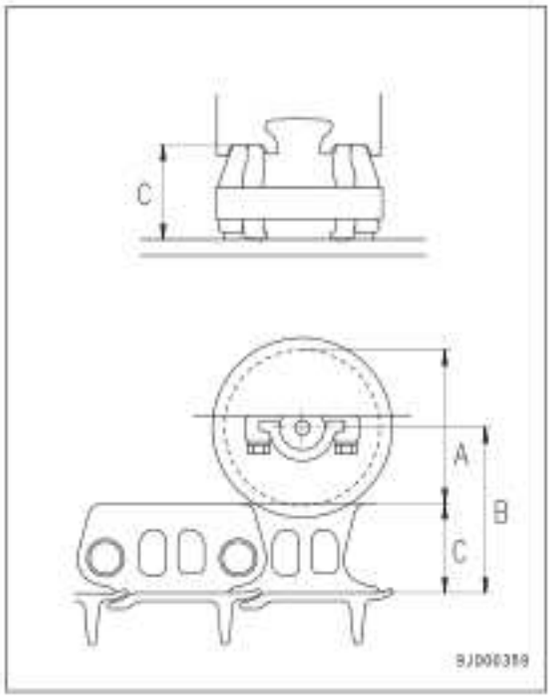
MidWestTech | Komatsu D85EX-18, D85PX-18 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

METHOD FOR MEASURING TRACK ROLLER DIAMETER

1. Measure the link tread (dimension C) as shown in the figure.
2. Stop the machine at a position where the link tread, at which dimension C was measured, is perfectly in contact with the roller tread.
3. Measure dimension B.
4. Calculate outside diameter of the tread (dimension A).

   A = (B - C) x 2

   - Standard dimension (h): 222 mm {8.7 in}
   - Repairable limit: 182 mm {7.2 in}



MidWestTech | Komatsu D85EX-18, D85PX-18 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >

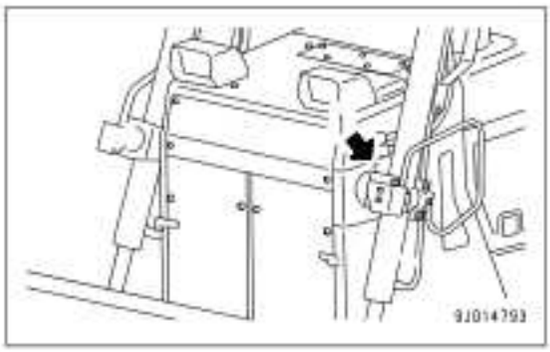
EVERY 250 HOURS MAINTENANCE

METHOD FOR LUBRICATING

METHOD FOR LUBRICATING LIFT CYLINDER SUPPORT SHAFT

1. Lower the blade until the idler is raised 1 to 2 cm {0.4 to 0.8 in} above the ground, and stop the engine.
2. By using a grease pump, pump in grease through the grease fittings.
3. Start the engine again, raise the blade 1 to 2 cm {0.4 to 0.8 in} above the ground, and stop the engine.
4. By using a grease pump, pump in grease through the grease fittings again.
5. After greasing, wipe off any old grease that is pushed out.

(1) Lift cylinder support shaft (2 places)



METHOD FOR LUBRICATING PARTS OTHER THAN LIFT CYLINDER SUPPORT SHAFT

1. Lower the blade to the ground and stop the engine.
2. By using a grease pump, pump in grease through the grease fittings.
3. After greasing, wipe off any old grease that is pushed out.

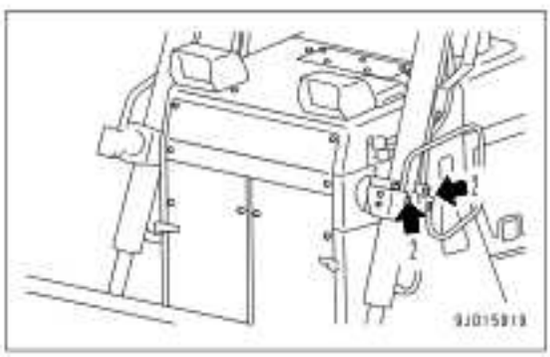
(2) Lift cylinder support yoke (4 places)

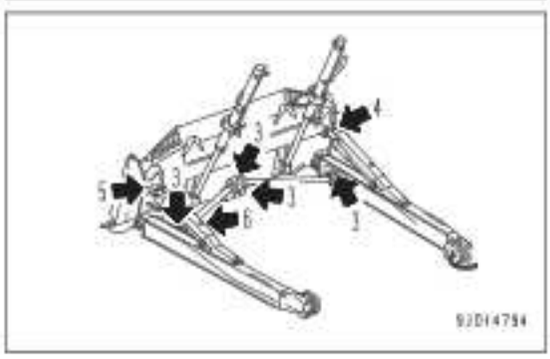
(3) Brace ball joint (4 places)

(4) Tilt cylinder ball joint (1 place) (right and left 2 places for machine with power tilt power pitch dozer specification)

(5) Tilt brace ball joint (1 place) (only for machine with straight tilt dozer specification)

(6) Tilt brace thread portion (1 place) (screw-adjustable)





MidWestTech | Komatsu D85EX-18, D85PX-18 Bulldozer Operation & Maintenance Ma... Order the manual at mid-west-tech.com >