Service Manual

Dumpster TD7, TD10

PUBLISHED BY THE
TECHNICAL PUBLICATIONS DEPARTMENT
OF JCB SERVICE; ©
WATERLOO PARK, UTTOXETER,
STAFFORDSHIRE, ST14 5PA, ENGLAND
Tel. ROCESTER (01889) 590312
PRINTED IN ENGLAND

Publication No. 9803/9320 issue 2

Copyright © 2004 JCB SERVICE
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means, electronic, mechanical, photocopying or otherwise, without prior permission from JCB SERVICE.

General Information 1
Care & Safety 2
Routine Maintenance 3
Attachments A
Body & Framework B
Electrics C
Controls D
Hydraulics E
Gearboxes F
Track & Running Gear J
Engine L

MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

Contents **Page No.**

Introduction 1 - 1

Walk Round Inspection 1 - 1

Identifying the Machine 1 - 2

Engine and Track Controls 2 - 1
- Track Controls 2 - 2
- Before starting the engine 2 - 3
- Starting the engine 2 - 4
- Stopping the engine 2 - 5

Refuelling the machine 3 - 1

Using Attachments and Site Safety 4 - 1
- Working on slopes 4 - 2

Getting the machine moving 5 - 1

TD7/TD10
- Operating the hydraulic dumper skip 6 - 1
- Uninstalling the dumper skip 6 - 2
- Installing the dumper skip 6 - 3

Shovel Loader 7 - 1
- Installing the shovel loader 7 - 2
- Connecting to the hydraulic system 7 - 3
- Using the shovel loader 7 - 3

* High Lift Shovel Loader 8 - 1
- Using the high lift 8 - 1
- Using the high lift warning device 8 - 1
- Extending the undercarriage 8 - 2

Transporting the machine 9 - 1

Storage/Preparation 10 - 1

Troubleshooting 11 - 1

MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

Contents **Page No.**

Safety Notices 1 - 1

General Safety 2 - 1

Operating Safety 3 - 1

Maintenance Safety 4 - 1

MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

Contents	**Page No.**
Lubricants & Capacities	1 - 1
Service Schedule	2 - 1
Greasing	3 - 1
Torque Settings	4 - 1
Engine Air Filter	5 - 1
Engine Oil	
Checking the oil level	6 - 1
Changing the oil	6 - 2
Spark Plug	7 - 1
Fuel System	
Idle speed adjustment	8 - 1
Cleaning the sedimenter	8 - 2
Draining the fuel system	8 - 2
Hydraulic System	
Checking the fluid level	9 - 1
Changing the hydraulic oil	9 - 1
Replacing the hydraulic oil filter	9 - 1
Track and Running Gear	
Checking the track gearbox oil level	10 - 1
Changing the track gearbox oil	10 - 1
Checking the track tension	10 - 2
Adjusting the track tension	10 - 2
Removing the rubber track	10 - 3
Installing the rubber track	10 - 3
High Lift Mast	
Wear Pad Bearings - Check (HTD10 only)	11 - 1
High lift Chains - Check (HTD10 only)	11 - 1
* Engine Covers	12 - 1

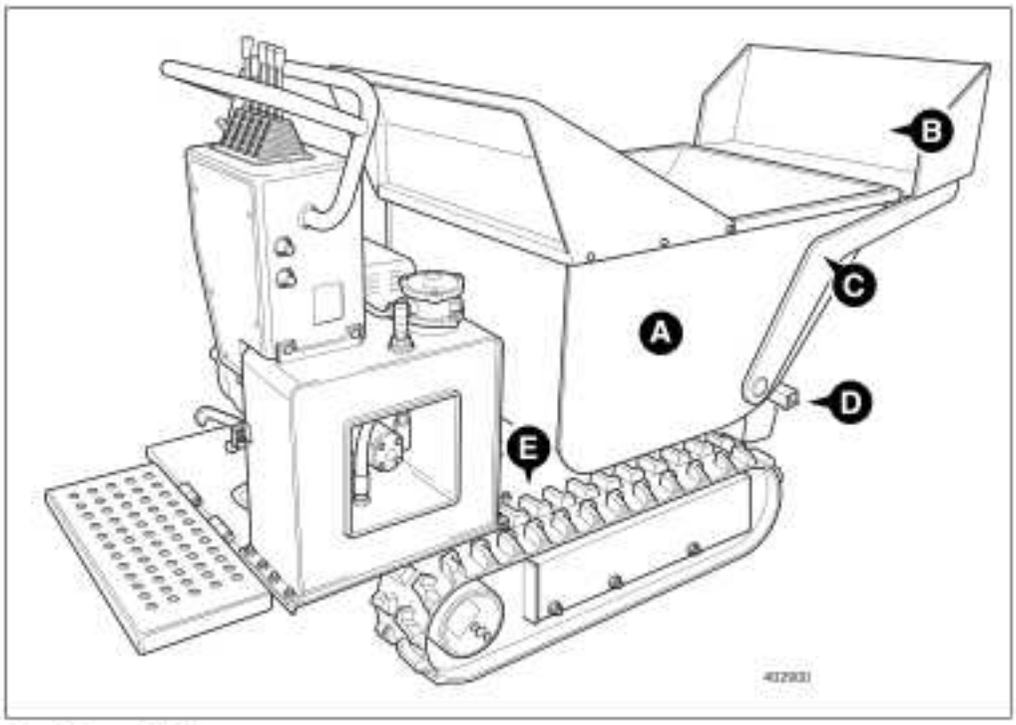
MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

Engine does not start	Is there fuel in the tank? Is there sufficient oil in the engine? Check the spark plug.
Machine does not run properly	
Hydraulic movements are too slow:	
Cold oil	Run engine to normal working temperature.
Wrong grade of oil	Change oil.
Slow running engine	Investigate cause and rectify.
Broken pump	Investigate cause and rectify.
Oil temperature too high	
Incorrect oil	Change oil.
Filter clogged	Replace filter.
Broken pump	Investigate cause and rectify.
Defective discharge valve	Investigate cause and rectify.
Contaminated oil	Change oil.
Oil generates foam	
Air is aspirated from the tank to the pump	Investigate cause and rectify.
Wrong oil	Change oil.
Water in the oil	Change oil.
Oil level too high/low	Drain/top up oil to correct level.
Oil pressure low/no pressure	
Wrong oil	Change to the correct oil.
No hydraulic oil	Fill with the correct oil.
Defective discharge valve	Investigate cause and rectify.
Oil pump not working	
Broken hydraulic pump	Investigate cause and rectify.
No oil	Add correct oil.
Damaged aspiration line	Repair.
Movement are underpowered	
Defective pump	Investigate cause and rectify.
Discharge pressure low	Investigate cause and rectify.
Hydraulic oil level low	Top up with oil.
Control levers not working	
Defective discharge valve	Investigate cause and rectify.
Damaged hoses or connections	Repair or replace.
Loose connections	Tighten.
Defective hydraulic pump	Investigate cause and rectify.
One control lever does not work	
Damaged hoses or connections	Repair or replace.
Loose connections	Tighten.
Reduction gear does not work	
Damaged reduction gear	Investigate cause and rectify.
Damaged hydraulic circuit	Repair or replace.
Drive movements are uneven	
Track tension too tight/loose	Adjust tension.
Decreased pump performance	Investigate cause and rectify.
Decreased engine performance	Investigate cause and rectify.
Undercarriage damaged	Repair.
Stones/debris in tracks	Remove.
Control valve does not function properly	Investigate cause and rectify.

MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

Technical Data

Weight	190 kg
Skip capacity	0.25m³
Shovel capacity	0.06m³



A Dumper Skip
B Shovel
C Shovel arm
D Storage support
E Shovel rams

MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

Example of Schematic Circuit

Some of the symbols described on the preceding pages have been arranged into a simple schematic circuit shown below.

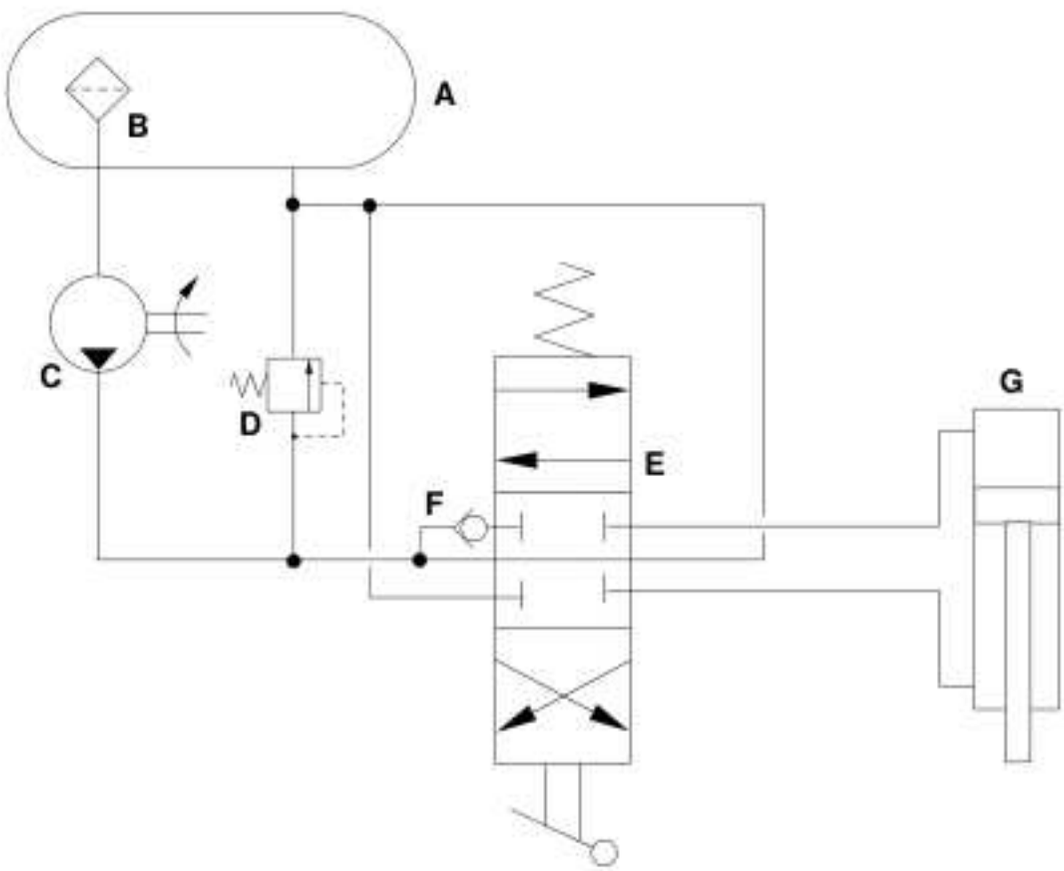
Hydraulic tank **A** is a pressurised tank with an internally mounted strainer **B** on the suction line to the fixed displacement pump **C**. System pressure is limited to the setting of relief valve **D**.

Valve spool **E** is an open-centre spool that is in neutral position; flow from the pump passes through the spool and returns to the hydraulic tank.

If the lever operated spool is moved away from neutral position hydraulic fluid is directed to either head side or rod side of hydraulic ram **G**. Notice that the fluid must first open one way valve **F** before flowing to the ram.

Example Circuit Key

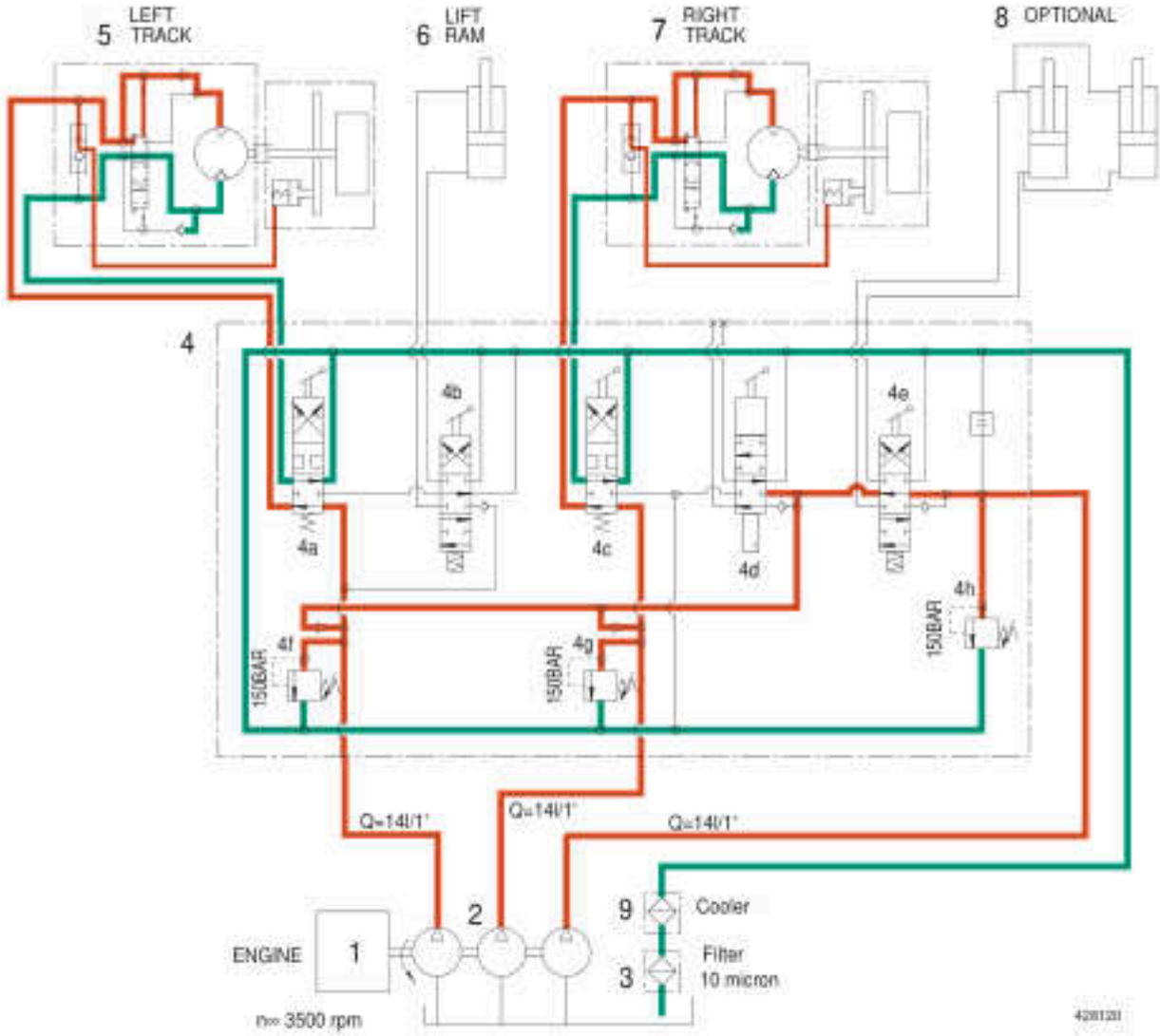
A	Hydraulic Tank
B	Strainer
C	Fixed Displacement Pump
D	Relief Valve
E	Spool
F	One Way Valve
G	Double Acting Hydraulic Ram



A189770

MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

High Speed Travel



This diagram shows the oil flow in high speed travel. Both left (**4a**) and right (**4c**) track spools are selected but when the high speed spool **4d** is also selected the oil flow from the third pump element joins the other two pump element flows to increase the speed of travel.

Main relief valves **4f**, **4g** and **4h** all control the maximum pressure that can be generated in the track circuits.

Legend

1 Engine
2 Hydraulic pump
3 Hydraulic filter
4 Control valve block
5 Left track
6 Skip lift ram
7 Right track
8 Shovel arm rams
9 Hydraulic Cooler

Key to Oil Flow & Pressure
- Pressure
- Neutral
- Exhaust

MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >

Working on Slopes

⚠ WARNING

Failure to observe these precautions may cause the machine to become unstable and in extreme circumstances will overturn with potential serious injury to the operator.

HOP64

⚠ WARNING

Hill sides

Operating on hillsides can be hazardous, especially moving across a slope. If the slope is too steep, your machine could roll over. Remember that loose surface material and mud will change the ground conditions. In any event do not drive across a slope of greater than 15°.

HOP60-1

⚠ WARNING

Do not ride on the footplate when moving on a slope, as it will change the centre of gravity and increase the possibility of the machine tipping over.

Try to avoid moving across slopes. Even on slopes of less than 10° there is a greater danger of the machine sliding if the ground surface is loose or wet.

⚠ WARNING

A dumper skip full of material will raise the machines centre of gravity and increase the possibility of the machine tipping over on a slope.

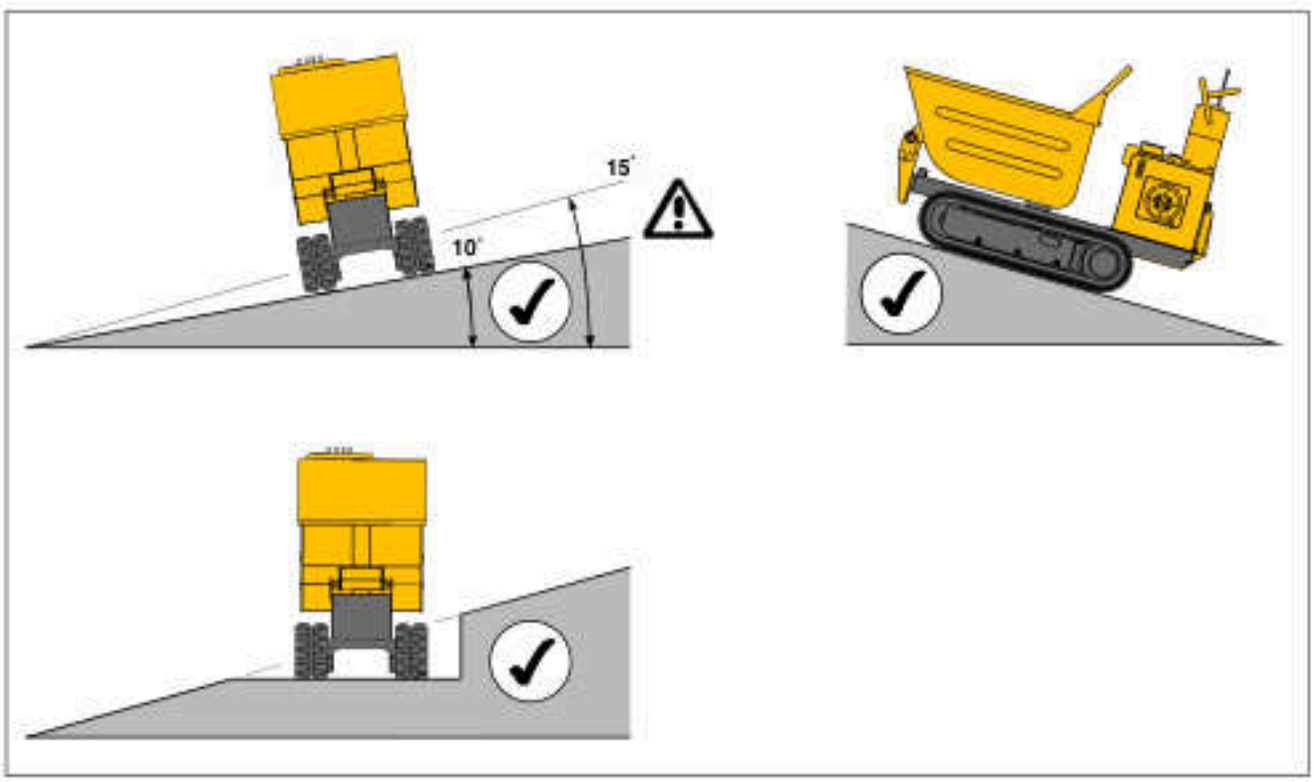
If repeated journeys across a slope are unavoidable, cut a level platform for the machine to travel on to increase stability.

Do not attempt climb up a slope greater than 15°.

Before attempting to travel up a slope make sure that the engine and hydraulic fluid have reached working temperature.

Do not make sudden direction changes when moving up a slope. Always chock the rear of the tracks if you stop on a slope, even for a short while.

When travelling down a slope, engage low speed gear only.



MidWestTech | JCB TD7, TD10 Dumpster Service Manual | Publication 9803-9320 Order the manual at mid-west-tech.com >