

[Manuals.plus](#) /

› [AgPubs](#) /

› AgPubs Service Manual Set for International Td20B Crawler, 250, 250B Loader, DT-429 Diesel Engine

AgPubs Td20B Crawler 250 250B Loader DT-429

Service Manual Set

INTERNATIONAL Td20B CRAWLER, 250, 250B LOADER, DT-429 DIESEL ENGINE

Published by AgPubs

1. INTRODUCTION

This service manual set provides comprehensive instructions for the repair, overhaul, and troubleshooting of the International Td20B Crawler, 250, 250B Loader, and DT-429 Diesel Engine. It is designed for technicians and individuals performing detailed maintenance and repair tasks.

For basic operation, routine maintenance, fluid specifications, and adjustments, an Operator's Manual is recommended. For exploded views and factory part numbers, a Parts Catalog is required.

2. GENERAL INFORMATION

This section outlines general contents, special service tools, and standard torque specifications applicable across various components of the equipment.



Figure 2.1: General Contents page. This page provides an overview of the manual's structure, including sections on the engine, injection pump, and turbocharger, as well as important reference information like special service tools and a standard torque chart.

2.1. Special Service Tools Required

Specific tools may be necessary for certain repair and overhaul procedures. Refer to the relevant section for a detailed list of required special service tools.

2.2. Standard Torque Chart

A standard torque chart is provided to ensure proper fastener tightening. Always consult this chart or specific section instructions for correct torque values to prevent damage or component failure.

3. ENGINE SYSTEM

This section covers detailed procedures for the DT-429 Diesel Engine, including specifications, checks, overhaul instructions, and component-specific repairs.

GENERAL CONTENTS

	Page
Special Service Tools Required	IV
Standard Torque Chart	VI
SECTION	
1 Engine.	1-1
2 Injection Pump.	2-1
3 Turbocharger.	3-1

Figure 3.1: Engine Section Contents. This page lists the detailed topics covered in the engine section, such as specifications, valve lash adjustment, engine removal, and procedures for cylinder head, valves, connecting rod, pistons, and piston rings.

3.1. Engine Specifications

Refer to the specifications subsection for critical engine data, including dimensions, clearances, and operational parameters.

3.2. Engine Checks and Overhaul

- **Valve Lash Adjustment:** Procedures for correctly setting valve lash.
- **Valve Timing:** Instructions for checking and adjusting engine valve timing.
- **Compression Pressure:** Method for testing engine compression.
- **Engine Removal and Installation:** Step-by-step guide for safely removing and installing the engine.

3.3. Cylinder Head and Valves

This subsection details the description, removal, disassembly, inspection, repair, and installation of the cylinder head and valve components. A valve seat insert chart is also included.

3.4. Connecting Rod, Pistons, and Piston Rings

Procedures for the removal, disassembly, inspection, repair, reassembly, and installation of connecting rods, pistons, and piston rings are provided here.

AIRESEARCH MODEL TO-476 TURBOCHARGER

CONTENTS

Page

Standard Torque Chart	4
Specifications	5
Special Service Tools Required	5
Description	6
General Maintenance and Cleaning Procedure	
General Handling	7
Turbine and Compressor Cleaning Procedures	7
Inspection Before Removal	
Preliminary Inspection	8
Turbocharger Testing	9
Removal	10
Inspection After Removal	11
Disassembly	12
Cleaning, Inspection and Repair	
Compressor Wheel Inspection	15
Compressor Housing Inspection	15
Turbine Wheel Inspection	16
Inspection of Internal Parts	17
Shaft, Turbine Wheel and Bearings	18
Center Housing	19
Reassembly	19
Installation	21

Figure 3.2: Timing Gear Train and Front Cover Removal. This illustration provides a visual guide for the removal process of the timing gear train and front cover, highlighting key components and their interactions.

4. FUEL SYSTEM

This section provides comprehensive information on the fuel system, including the injection pump and injection nozzles.

Section 1

ENGINE

CONTENTS

	Page
Specifications	1-3
Engine Checks	
Valve Lash Adjustment	1-10
Valve Timing	1-10
Compression Pressure	1-11
Special Overhaul Instructions	1-12
Engine Removal	1-12
Mounting the Engine to the Stand	1-13
Engine Installation	1-14
Cylinder Head and Valves	
Description	1-14
Removal	1-14
Disassembly	1-16
Inspection and Repair	1-16
Valve Seat Insert Chart	1-20
Installation	1-21
Connecting Rod, Pistons and Piston Rings	
Removal	1-22
Disassembly	1-22
Inspection and Repair	1-22
Reassembly	1-24
Installation	1-24

Figure 4.1: Fuel System Section Contents. This page outlines the topics covered in the fuel system section, including specifications for the injection pump and nozzles, general operation, troubleshooting, various checks and adjustments, and detailed service procedures for the injection pump and nozzles.

4.1. Fuel System Specifications

Detailed specifications for the injection pump, injection nozzles, fuel rotor, and special torque values are provided.

4.2. General Description and Operation

An overview of the fuel system's components and their operational principles is included.

4.3. Troubleshooting

This subsection assists in diagnosing common fuel system issues.

4.4. Checks and Adjustments

Procedures for various adjustments, including fuel shut-off, governor linkage, transfer pump pressure, idle speed, throttle linkage, speed advance, fuel rotor, fuel return line, and pump timing/rotor rotation.

4.5. Injection Pump Service

Detailed instructions for injection pump removal, drive shaft removal, disassembly, inspection, repair, reassembly, and installation.

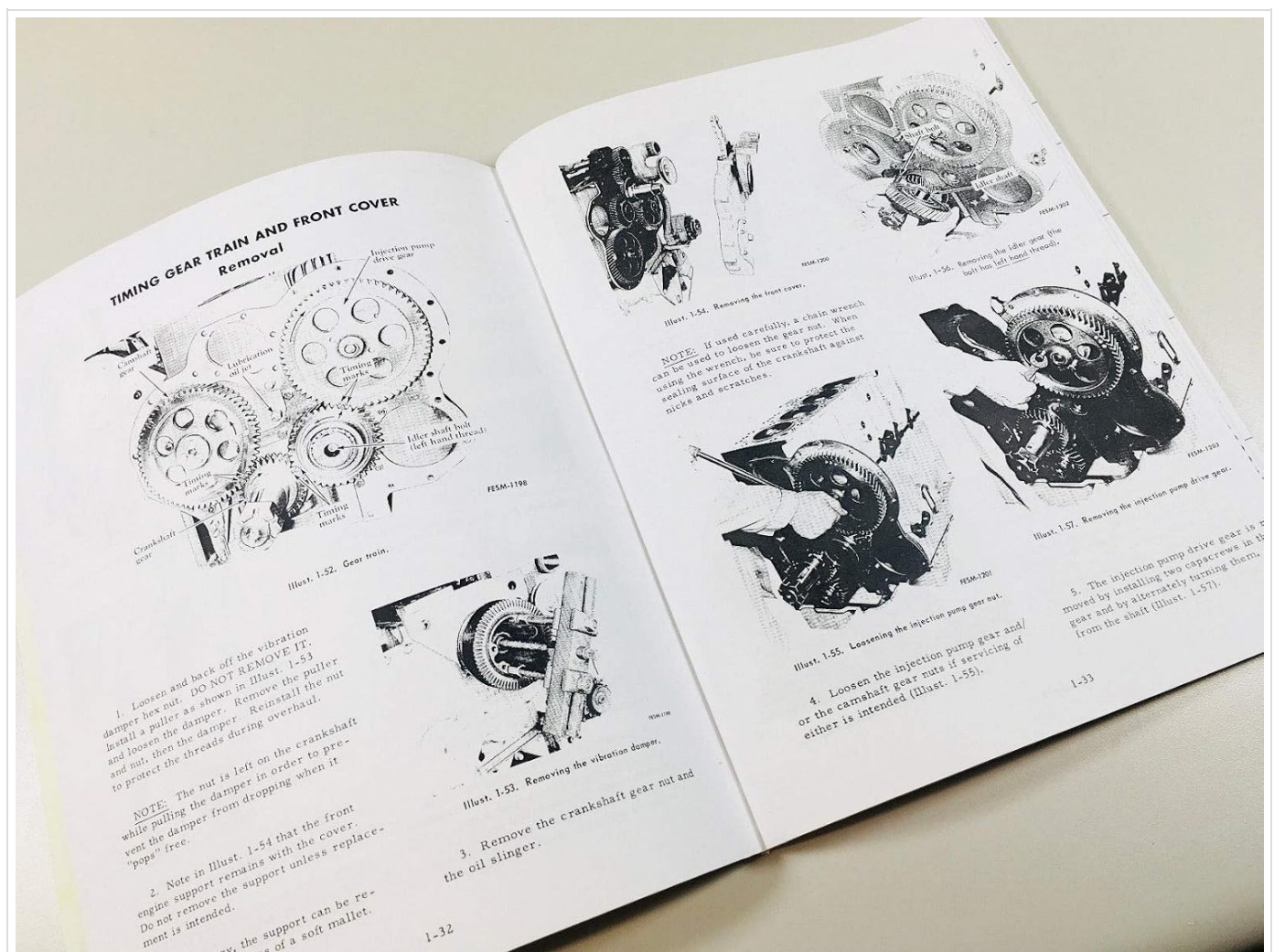


Figure 4.2: Cutaway View of Injection Pump. This diagram illustrates the internal structure of the injection pump, identifying key components such as the governor, plungers, and various valves, aiding in understanding its operation and repair.

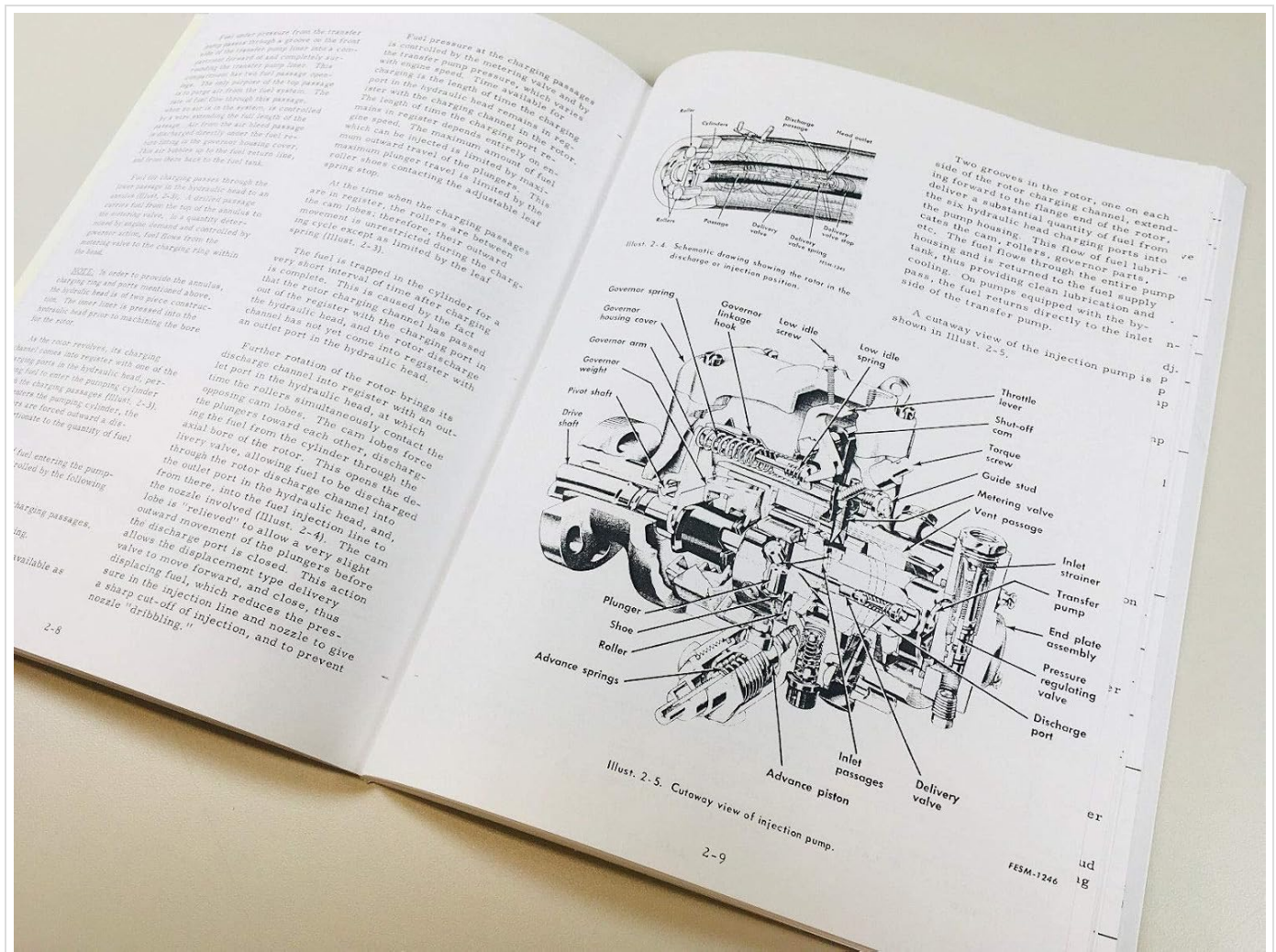


Figure 4.3: Exploded View of Injection Pump. This detailed exploded diagram breaks down the injection pump into its individual components, providing a visual reference for disassembly and reassembly procedures.

4.6. Injection Nozzles

General description, service procedures, inspection, and repair of injection nozzles are covered.

5. TURBOCHARGER SYSTEM

This section provides detailed service information for two turbocharger models: Solar Model TC-4B and Airesearch Model TO-476.

5.1. Solar Model TC-4B Turbocharger

Section 2

FUEL SYSTEM

CONTENTS

	Page
Specifications	
Injection Pump	2-2
Injection Nozzles	2-4
Fuel Rator Specification	2-4
Special Torques (Pump)	2-5
Special Torques (Nozzle)	2-5
General Description and Operation	2-6
Trouble Shooting	2-14
Checks and Adjustments	
General	2-22
Fuel Shut-Off Adjustment	2-22
Governor Linkage Hook Adjustment	2-22
Transfer Pump Pressure	2-24
High and Low Idle Speed Adjustment	2-24
Throttle Linkage Adjustment	2-25
Transfer Pump Checks	2-25
Speed Advance Adjustment	2-26
Fuel Rator Adjustments	2-26
Fuel Return Line Check	2-28
Pump Timing and Rotor Rotation	2-28
Injection Pump Service	
Pump Removal	2-29
Drive Shaft Removal	2-30
Pump Disassembly	2-30
Inspection and Repair	2-40
Reassembly	2-46
Pump Drive Shaft and Injection Pump Installation	2-57
Injection Nozzles	
General Description	2-58
Nozzle Service	2-60
Inspection and Repair	2-61

Figure 5.1: Solar Model TC-4B Turbocharger Section Contents. This page lists the topics for the Solar TC-4B turbocharger, including specifications, general maintenance, inspection before and after removal, disassembly procedures, and inspection of internal parts.

- **Specifications and Description:** Technical data and operational overview.
- **General Maintenance and Cleaning:** Procedures for handling, turbine, and compressor cleaning.
- **Inspection and Removal:** Preliminary inspection, turbocharger testing, and removal steps.

- **Disassembly and Internal Parts Inspection:** Detailed steps for disassembling components like compressor wheel, turbine wheel, bearings, and inspecting internal parts.
- **Reassembly and Installation:** Instructions for reassembling and installing the turbocharger.

5.2. Airesearch Model TO-476 Turbocharger

Section 3

SOLAR MODEL TC-4B TURBOCHARGER

CONTENTS

	Page
Specifications	3-2
Description	3-3
General Maintenance and Cleaning Procedure	
General Handling	3-3
Turbine and Compressor Cleaning Procedures	3-4
Inspection Before Removal	
Preliminary Inspection	3-4
Turbocharger Testing	3-5
Removal	3-7
Inspection After Removal	3-8
Disassembly	
Compressor Wheel Inspection	3-9
Compressor Housing Inspection	3-10
Turbine Wheel Inspection	3-10
Nozzle Ring Inspection	3-11
Checking Turbine Wheel Radial Movement	3-11
Checking End Play	3-12
Checking Compressor Wheel Radial Movement	3-13
Removing Compressor Wheel	3-13
Removing Turbine Wheel, Shaft and Back Plate	3-14
Removing Rotor Brake Assembly	3-14
Disassembling Rotor Brake Assembly	3-15
Removing Thrust Bearing and Thrust Washer	3-16
Removing Bearings	3-16
Inspection of Internal Parts	3-17
Shaft and Turbine Wheel	3-18
Bearings	3-19
Bearing Housing	3-20
Rotor Brake	3-21
Reassembly	3-22
Installation	3-28

Figure 5.2: Airesearch Model TO-476 Turbocharger Section Contents. This page details the contents for the Airesearch TO-476 turbocharger, covering standard torque, specifications, special tools, maintenance, inspection, removal, disassembly, cleaning, and inspection of internal parts.

- **Standard Torque Chart and Specifications:** Specific torque values and technical specifications.
- **Special Service Tools Required:** List of tools necessary for this turbocharger model.
- **General Maintenance and Cleaning:** Handling, turbine, and compressor cleaning procedures.
- **Inspection and Removal:** Preliminary inspection, testing, and removal steps.
- **Disassembly, Cleaning, Inspection, and Repair:** Comprehensive guide for component breakdown, cleaning, inspection, and repair of parts like compressor wheel, housing, and turbine wheel.
- **Inspection of Internal Parts:** Focus on shaft, turbine wheel, bearings, and center housing.
- **Reassembly and Installation:** Instructions for reassembling and installing the turbocharger.

6. SPECIFICATIONS

This section consolidates general specifications for the International Td20B Crawler, 250, 250B Loader, and DT-429 Diesel Engine. Refer to individual component sections for detailed specifications.

- **Engine Type:** DT-429 Diesel Engine
- **Equipment Models:** International Td20B Crawler, 250 Loader, 250B Loader
- **Manual Type:** Service Manual Set (Repair, Overhaul, Troubleshooting)
- **Manufacturer:** AgPubs (Reproduction Manual)

7. TROUBLESHOOTING

This section provides diagnostic information and potential solutions for common operational and mechanical issues encountered with the International Td20B Crawler, 250, 250B Loader, and DT-429 Diesel Engine. For specific component troubleshooting, refer to the relevant system section (e.g., Fuel System Troubleshooting).

7.1. General Troubleshooting Steps

1. Identify the symptom or problem accurately.
2. Consult the relevant section of this manual for specific diagnostic procedures.
3. Perform visual inspections for obvious damage or loose connections.
4. Test components as instructed to isolate the fault.
5. Implement the recommended repair or adjustment.
6. Verify the repair by testing the equipment.

8. MAINTENANCE

While this is primarily a service manual for repair and overhaul, it includes procedures that contribute to long-term maintenance. For routine operational maintenance, consult the equipment's Operator's Manual.

8.1. Overhaul and Repair Maintenance

The detailed instructions for engine, fuel system, and turbocharger overhaul and repair serve as critical maintenance activities to restore components to optimal operating condition and extend equipment lifespan.

8.2. Cleaning Procedures

Specific cleaning procedures for components like the turbocharger turbine and compressor are outlined to maintain

efficiency and prevent premature wear.

9. SUPPORT INFORMATION

For further assistance or inquiries regarding this service manual set, please contact AgPubs directly.

Brand: AgPubs

Product ASIN: B07K2CPYQ2

Manufacturer: AgPubs

© 2026 AgPubs. All rights reserved. This manual is a reproduction for informational and service purposes.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

<https://manuals.plus/asin/B07K2CPYQ2>

More documents and user manuals: <https://manuals.plus/>