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J.I. Case 2090, 2290

Case 2090, 2290 Tractor Service Manual

Comprehensive Service and Repair Guide

INTRODUCTION

This service manual provides detailed instructions and specifications for the maintenance, repair, and overhaul of Case 2090 and 2290 tractors. It is intended for qualified service technicians and individuals with a thorough understanding of tractor mechanics. Adherence to these procedures is crucial for ensuring the safe and efficient operation of the machinery.



Image: Front cover of the Case 2090, 2290 Tractor Service Manual, indicating the comprehensive nature of the guide.

GENERAL INFORMATION AND SPECIFICATIONS

This section outlines the fundamental specifications and general operational parameters for the Case 2090 and 2290 tractor models. It includes details on engine, fuel, steering, power train, brake, and hydraulic systems. Refer to this section for initial diagnostic information and component identification.

General Specifications

- General Specifications - 2090 Tractors
- General Specifications - 2290 Tractors

Lubrication

- Lubrication - 2090 Tractors
- Lubrication - 2290 Tractors

System Specifications

- Engine Specifications 504BDT Engine
- Engine Specifications 504BD Engine
- Fuel System Specifications
- Steering Specifications
- Power Train Specifications
- Brake System Specifications
- Hydraulic System Specifications

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Image: A page from the manual showing the Table of Contents, detailing sections like General, Engines, Fuel System, and Electrical.

ENGINE SYSTEMS

Detailed procedures for engine troubleshooting, tune-up, and component repair are covered in this section. It includes guidance on cylinder head, block, crankshaft, and related systems, ensuring proper engine function and longevity.

Troubleshooting and Tune-Up

- Trouble Shooting - Engine
- Engine Tune-Up

Engine Component Service

- Tractor Split (Between Engine and Torque Tube)
- Cylinder Head, Valve Train and Camshaft
- Cylinder Block, Sleeves, Pistons and Rods
- Crankshaft, Main Bearing, Flywheel and Oil Seals
- Lubrication System - Oil Pump, Oil Pan and Heat Exchanger
- Cooling System
- Turbocharger - T04B
- Turbocharger Failure Analysis
- Air Induction System - 2290 Tractors
- Air Cleaner System - 2090 Tractors
- Reconditioning Engine Cylinder Block

FUEL SYSTEM

This section provides information on the fuel system components, including filters and injection pumps, essential for proper engine operation and fuel efficiency.

- Fuel System and Filters
- Robert Bosch Fuel Injection Pumps
- American Bosch Fuel Injectors

HYDRAULIC SYSTEM

Comprehensive diagrams and instructions for the tractor's hydraulic system, including components, flow, and troubleshooting. Understanding these diagrams is crucial for diagnosing and repairing hydraulic issues.

Image: Multiple diagrams illustrating the operation of hydraulic control valves, including lift check and pressure/flow spool mechanisms.

MAINTENANCE AND ADJUSTMENT PROCEDURES

Regular maintenance and precise adjustments are critical for the longevity and optimal performance of your Case tractor. This section details various maintenance tasks and specific adjustment procedures.

Checking and Adjusting Backlash

Proper adjustment of backlash is essential for the smooth operation and durability of mechanical components. Follow these steps carefully to ensure correct settings.

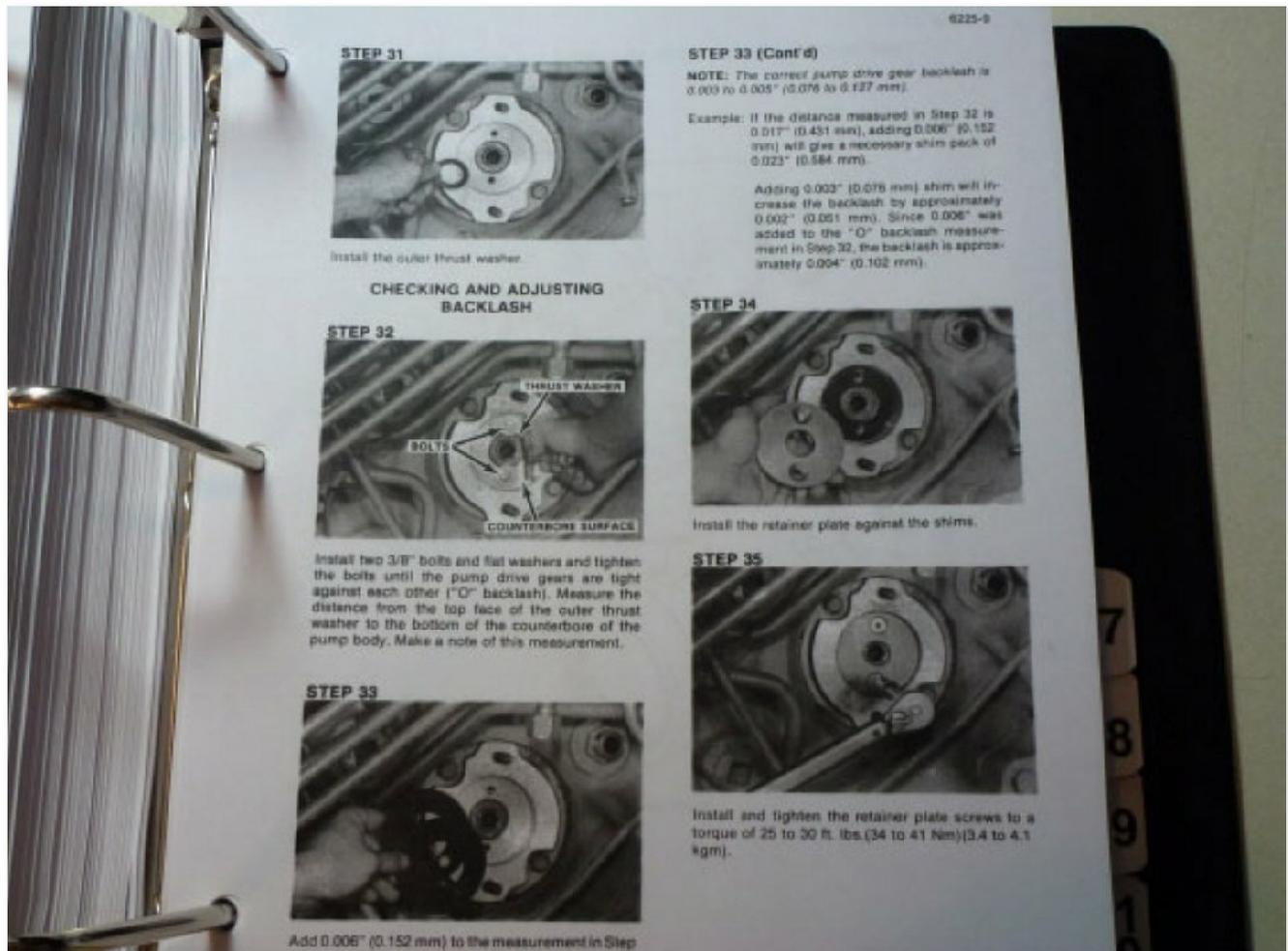


Image: A page from the manual detailing steps for checking and adjusting backlash, with accompanying diagrams of the components involved.

1. **Step 31:** Install the outer thrust washer.
2. **Step 32:** Install two 3/8" bolts and flat washers. Tighten the bolts until the pump drive gears are tight against each other (zero backlash). Measure the distance from the top face of the outer thrust washer to the bottom of the counterbore of the pump body. Record this measurement.
3. **Step 33:** Add 0.006" (0.152 mm) to the measurement obtained in Step 32. This calculated value represents the required shim thickness. The correct pump drive gear backlash should be between 0.003 to 0.005 inches (0.076 to 0.127 mm).
4. **Step 34:** Install the retainer plate against the shims.
5. **Step 35:** Install and tighten the retainer plate screws to a torque of 25 to 30 ft. lbs. (34 to 41 Nm).

This section provides guidance for diagnosing and resolving common issues encountered with Case 2090 and 2290 tractors. Refer to specific system sections for detailed repair procedures.

- **Engine Starting Issues:** Refer to 'Trouble Shooting - Engine' in the Engine Systems section for diagnostic steps and solutions.
- **Hydraulic System Malfunctions:** Consult the 'Hydraulic System' section for diagrams, component checks, and repair procedures related to hydraulic flow and pressure.
- **Brake System Problems:** See 'Brake System Specifications' for diagnostic information and service instructions for brake components.
- **Steering System Irregularities:** Review 'Steering Specifications' for guidance on diagnosing and correcting steering system issues.

TECHNICAL SPECIFICATIONS

Key technical data for the Case 2090 and 2290 tractors, including publication details of this service manual.

- **Publisher:** TechMedia
- **Publication Date:** January 1, 1985
- **Language:** English
- **Print Length:** 1786 pages
- **ASIN:** B005N11ERE