

# MODEL-T8000

## Heavy-Duty Standard Truck

### OFFICIAL SERVICE GUIDE

Engine:	15L Inline-6 Diesel Standard
Power Output:	450 HP @ 1,800 RPM
Torque:	1,750 lb-ft @ 1,000 RPM
Emissions:	Tier 4 Final + DEF
GVWR:	26,000 - 33,000 lbs
Service Class:	Heavy-Duty (Standard Power)

■■ IMPORTANT NOTICE: This service guide contains MODEL-SPECIFIC diagnostic procedures required for warranty claim approval. Generic procedures from other models are NOT acceptable. Failure to follow T8000-specific steps may result in claim denial.

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## TABLE OF CONTENTS

Section	Title	Page
1.	P0300: Random Misfire Detected	3
2.	P0087: Fuel Rail Pressure Too Low	4
3.	Warranty Requirements Summary	5

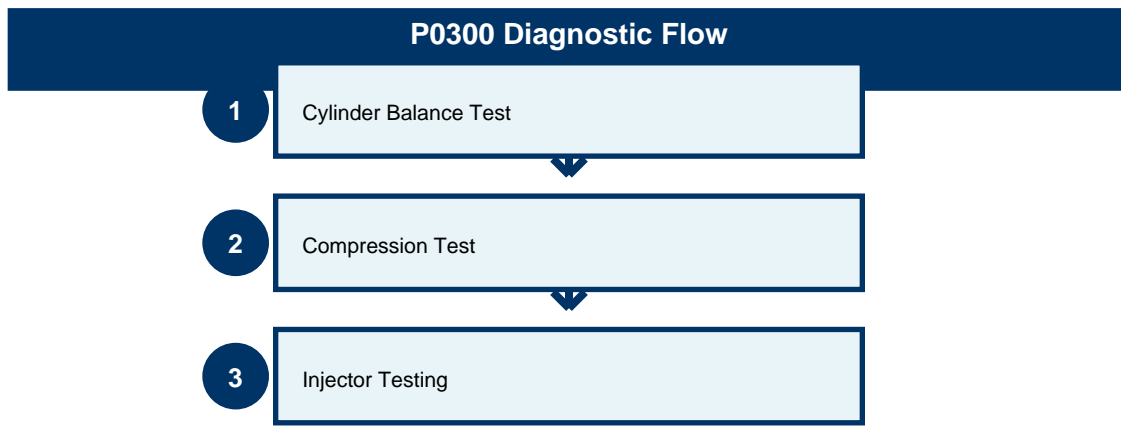
## SECTION 1: DIAGNOSTIC PROCEDURE

### P0300: Random Misfire Detected

■ **CRITICAL FOR T8000:** T8000 uses same engine family as T7000 but LOWER power rating. Diagnostic procedures are similar but with RELAXED tolerances.

#### OVERVIEW

T8000 is de-tuned T7000 engine. Procedures similar but specifications differ.



#### DETAILED DIAGNOSTIC PROCEDURE

## STEP 1 Cylinder Balance Test

Use T7000 or T8000 diagnostic tool. Tools are cross-compatible for T7000/T8000.

### ■ SPECIFICATION (T8000):

T8000: Cylinders within  $\pm 12\%$  (RELAXED vs T7000s  $\pm 10\%$ ). Lower power output allows wider tolerance. Test at 1800 RPM.

■ REQUIRED TOOLS: DIAG-T7000-01 or DIAG-T8000-01 (cross-compatible)

✓ EXPECTED RESULT: All cylinders within  $\pm 12\%$

## STEP 2 Compression Test

Test all cylinders.

### ■ SPECIFICATION (T8000):

T8000: 440-470 PSI (slightly lower than T7000s 450-475 PSI due to lower compression ratio). All within 10%.

✓ EXPECTED RESULT: Compression documented

## STEP 3 Injector Testing

Monitor injector pulse width.

### ■ SPECIFICATION (T8000):

T8000: Within 0.35ms of each other (more tolerance than T7000s 0.3ms). Typical: 2.9-3.3ms.

✓ EXPECTED RESULT: All injectors documented

## COMPLETE T8000 SPECIFICATIONS

Parameter	Specification
Power Contribution	Within $\pm 12\%$ (vs T7000 $\pm 10\%$ )
Compression	440-470 PSI (vs T7000 450-475)
Injector Pulse Tolerance	$\pm 0.35\text{ms}$ (vs T7000 $\pm 0.3\text{ms}$ )
Compatible Tools	DIAG-T7000-01 or DIAG-T8000-01

### ■ WARRANTY CLAIM DOCUMENTATION REQUIREMENTS

- T8000 has RELAXED tolerances vs T7000 ( $\pm 12\%$  vs  $\pm 10\%$ )
- Do not fail T8000 using T7000 specifications (too strict)
- T7000 and T8000 tools are cross-compatible
- Document which model procedure was used

#### ■ COMMON MISTAKES TO AVOID (T8000):

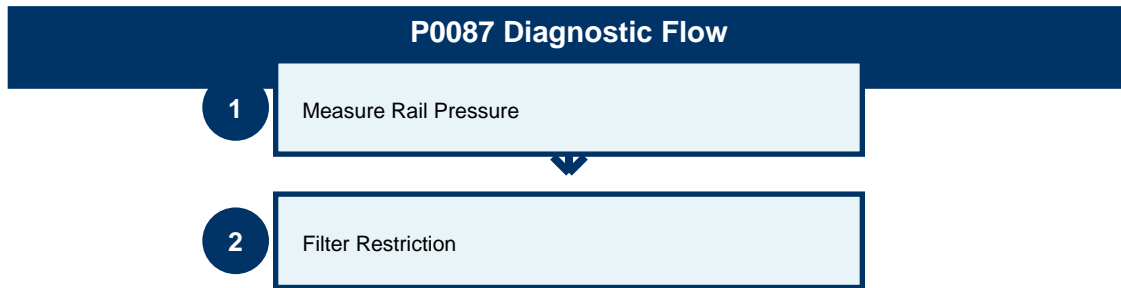
- Using T7000 spec and failing T8000 incorrectly (T8000 has wider tolerance)
- Assuming T8000 and T7000 are identical (power output and tolerances differ)
- Not recognizing T8000 as standard power variant

## SECTION 2: DIAGNOSTIC PROCEDURE

### P0087: Fuel Rail Pressure Too Low

#### OVERVIEW

T8000 uses lower fuel pressure than T7000 (lower power requires less pressure).



#### DETAILED DIAGNOSTIC PROCEDURE

##### STEP 1 Measure Rail Pressure

Monitor fuel rail pressure.

##### ■ SPECIFICATION (T8000):

T8000: CRANKING 26,000 PSI min (vs T7000 28,000 PSI). RUNNING 26,000-29,000 PSI.

✓ EXPECTED RESULT: Pressure documented

**STEP 2****Filter Restriction**

Test fuel filter restriction.

**■ SPECIFICATION (T8000):**

T8000: IDLE <2.0 PSI. 2000 RPM <5.5 PSI. Same as T7000.

✓ **EXPECTED RESULT:** Restriction documented

**COMPLETE T8000 SPECIFICATIONS**

Parameter	Specification
Rail Pressure (Cranking)	26,000 PSI (vs T7000 28,000)
Rail Pressure (Running)	26,000-29,000 PSI
Filter Restriction	Same as T7000

**■■ WARRANTY CLAIM DOCUMENTATION REQUIREMENTS**

- T8000 fuel pressure is LOWER than T7000
- Using T7000 pressure spec may incorrectly pass a failing T8000 pump
- Document actual pressure and compare to T8000 spec

**■ COMMON MISTAKES TO AVOID (T8000):**

- Using T7000 pressure spec (too high for T8000)
- Not recognizing T8000 as lower-pressure variant

## WARRANTY REQUIREMENTS SUMMARY

### For Model T8000 Warranty Claims:

- ✓ All diagnostic procedures in this guide are SPECIFIC to the T8000 model
- ✓ Technician notes must include actual measured values with units (PSI, volts, ohms, etc.)
- ✓ Using diagnostic procedures from other models on T8000 vehicles is NOT acceptable
- ✓ Generic statements like 'Replaced part. Cleared code.' will result in claim denial
- ✓ Post-repair verification testing must be documented
- ✓ Model-specific tools (where required) must be used and documented
- ✓ All specifications must be compared against T8000 specifications (not other models)