MODEL-T9000

Heavy-Duty Premium Truck

OFFICIAL SERVICE GUIDE

Engine:	15L Inline-6 Turbo Diesel Premium
Power Output:	605 HP @ 1,800 RPM
Torque:	2,050 lb-ft @ 1,000 RPM
Emissions:	Tier 4 Final + Advanced DEF + SCR
GVWR:	33,000 - 40,000 lbs (Heavy Haul)
Service Class:	Heavy-Duty Premium (Flagship)

■■ 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 T9000-specific steps may result in claim denial.

Document Version: 2024.10 | **Effective Date:** October 2024 | **Supersedes:** All previous versions

TABLE OF CONTENTS

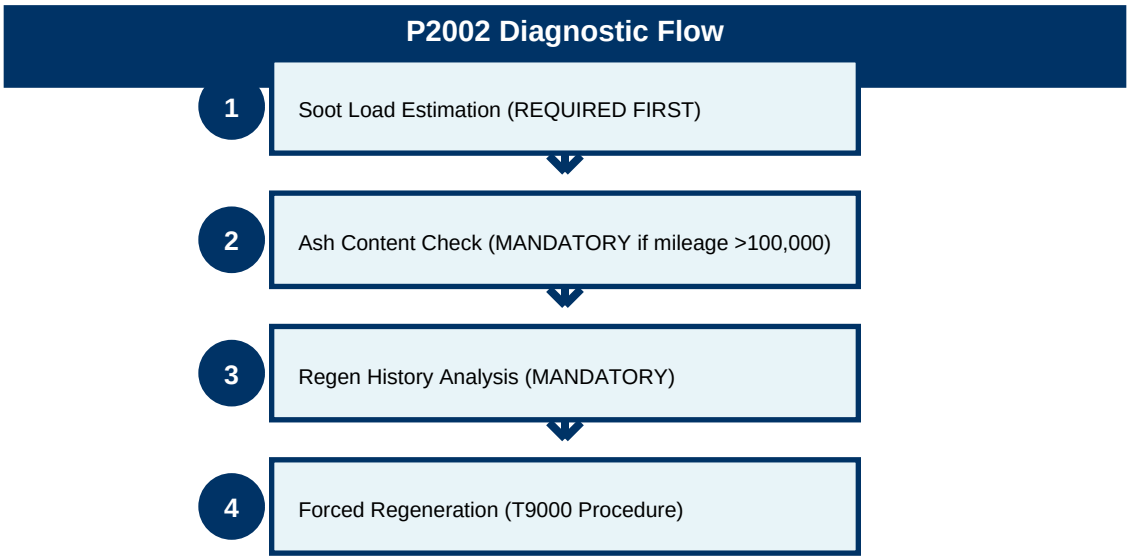
SECTION 1: DIAGNOSTIC PROCEDURE

P2002: DPF Efficiency Below Threshold

■ CRITICAL FOR T9000: T9000 is FLAGSHIP model with STRICTEST documentation requirements. Claims are audited closely. DPF assemblies cost $4,200-4,800 (most expensive).

OVERVIEW

T9000 premium engine produces highest soot due to power output. Advanced DPF system with 4-stage regen (vs 3-stage on other models).



DETAILED DIAGNOSTIC PROCEDURE

STEP 1 Soot Load Estimation (REQUIRED FIRST)

Access ECM advanced diagnostics menu. Retrieve soot load percentage.

■ SPECIFICATION (T9000):
T9000 SPECIFICATION: Normal 0-35% (LOWER threshold than T7000s 40%). Regen recommended 35-45%. Regen required 45-55%. Critical >55%. T9000 has tighter control due to premium status.

✓ **EXPECTED RESULT:** Soot load documented

STEP 2 **Ash Content Check (MANDATORY if mileage >100,000)**

T9000 requires ash check at LOWER mileage than other models (100,000 miles, not 120,000). Remove DPF for physical inspection. Measure ash depth in substrate channels.

■ **SPECIFICATION (T9000):**
Ash should not exceed 60% of substrate depth. >60% ash = replacement required (normal wear, not defect).

✓ **EXPECTED RESULT:** Ash content documented if applicable

STEP 3 **Regen History Analysis (MANDATORY)**

Access regen history for last 20 cycles (not 10 like other models). Calculate average miles between regens. Identify failed regen attempts.

■ **SPECIFICATION (T9000):**
T9000 NORMAL: 1 regen per 250-400 miles (MORE FREQUENT than T7000 due to higher power). If >3 failed regens in last 20 cycles: Investigate root cause before DPF service.

✓ **EXPECTED RESULT:** Last 20 regen cycles documented with success/failure

STEP 4 **Forced Regeneration (T9000 Procedure)**

REQUIRES T9000 diagnostic tool (DIAG-T9000-PREM). T7000 tool will NOT work on T9000. T9000 regen has 4 STAGES (vs 3 on T5000/T7000): Stage 1: Preheat (5-10 min, 600-800°F). Stage 2: Active burn Phase 1 (10-15 min, 1,050-1,150°F). Stage 3: Active burn Phase 2 (10-15 min, 1,150-1,250°F - HIGHER temp than other models). Stage 4: Cooldown (8-12 min, drops to <600°F).

■ **SPECIFICATION (T9000):**
Must reach 1,150°F MINIMUM (T7000 only needs 1,050°F). Can safely reach 1,250°F (T7000 max is 1,200°F). Higher temps required due to premium engines higher soot production.

■ **REQUIRED TOOLS:** DIAG-T9000-PREM (T9000-SPECIFIC, NOT T7000)

✓ **EXPECTED RESULT:** Complete 4-stage regen documented

COMPLETE T9000 SPECIFICATIONS

Parameter	Specification
Soot Load (Normal)	0-35% (LOWER than T7000)
Ash Check Interval	100,000 miles (vs 120,000)

Regen Frequency	250-400 miles (MORE FREQUENT)
Regen Stages	4 STAGES (vs 3 on others)
Regen Temperature	1,150-1,250°F (HIGHER)
Required Tool	DIAG-T9000-PREM (NOT T7000)
Warranty Labor Rate	$175/hr (vs $125 standard)

■■ WARRANTY CLAIM DOCUMENTATION REQUIREMENTS

• T9000 is FLAGSHIP model with HIGHEST warranty labor rates ($175/hr vs $125 standard). Documentation requirements are STRICTEST

• Soot load percentage from ECM (before service) - MANDATORY

• Regen history analysis: Last 20 cycles with success/failure status - MANDATORY

• Ash content measurement (if mileage >100,000) - MANDATORY

• Complete regen log for ALL 4 STAGES: Temperature reached in each stage, Pressure at end of each stage, Total regen duration, Success/failure indication - MANDATORY

• T9000 DPF assemblies cost $4,200-4,800 (most expensive in lineup). Claims are audited closely. Follow T9000-specific procedure EXACTLY

• "DPF clogged, attempted regen, replaced DPF" is COMPLETELY INSUFFICIENT for T9000

■ COMMON MISTAKES TO AVOID (T9000):

• Using T7000 procedure (missing 4th regen stage, wrong tool)

• Using T7000 diagnostic tool (will not access T9000 4-stage regen)

• Expecting T7000 soot load thresholds (T9000 are tighter)

• Missing ash content check (required at 100K, not 120K)

• Not documenting all 20 regen cycles (only documenting 10)

• Insufficient documentation for premium model (T9000 requires most detail)

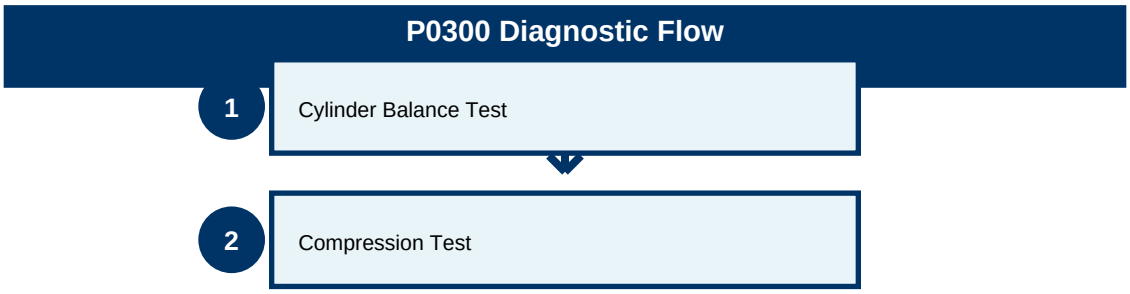
SECTION 2: DIAGNOSTIC PROCEDURE

P0300: Random Misfire Detected

■ CRITICAL FOR T9000: T9000 premium engine has TIGHTEST cylinder balance tolerance in lineup (±8% vs T7000 ±10%).

OVERVIEW

T9000 high-performance diesel requires precise cylinder balance.



DETAILED DIAGNOSTIC PROCEDURE

STEP 1 **Cylinder Balance Test**

REQUIRES T9000-PREM tool. T7000 tool cannot perform T9000 precision testing.

■ **SPECIFICATION (T9000):**
T9000: All cylinders within ±8% (TIGHTEST in lineup. T7000 is ±10%, T8000 is ±12%). Example: All cylinders 16.3-17.0% = OK. One cylinder 14.5% = FAIL (>8% deviation). Premium engine requires tighter balance.

■ **REQUIRED TOOLS:** DIAG-T9000-PREM (MANDATORY)

✓ **EXPECTED RESULT:** All cylinders within ±8%

STEP 2 **Compression Test**

Test all cylinders.

■ **SPECIFICATION (T9000):**
T9000: 460-480 PSI (HIGHEST compression in lineup). All within 8% (not 10%).

✓ **EXPECTED RESULT:** Compression documented for all 6 cylinders

COMPLETE T9000 SPECIFICATIONS

Parameter	Specification
Power Contribution	±8% (TIGHTEST)
Compression	460-480 PSI (HIGHEST)
Tolerance	8% (vs T7000 10%, T8000 12%)
Required Tool	DIAG-T9000-PREM ONLY

■■ **WARRANTY CLAIM DOCUMENTATION REQUIREMENTS**

- T9000 has TIGHTEST balance tolerance (±8%)
- MUST use T9000-PREM tool (T7000 tool lacks precision)
- T9000 is premium model - higher standards apply
- All 6 cylinder power contributions must be documented

■ COMMON MISTAKES TO AVOID (T9000):

- Using T7000 tool (insufficient precision for T9000)

- Applying T7000 ±10% tolerance (too loose for T9000 premium engine)
- Not recognizing T9000 as highest-precision model

WARRANTY REQUIREMENTS SUMMARY

For Model T9000 Warranty Claims:

✓ All diagnostic procedures in this guide are SPECIFIC to the T9000 model

✓ Technician notes must include actual measured values with units (PSI, volts, ohms, etc.)

✓ Using diagnostic procedures from other models on T9000 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 T9000 specifications (not other models)