

FASS TSC10165G

FASS TSC10165G Titanium Signature Series Diesel Fuel Lift Pump Instruction Manual

Model: TSC10165G | Brand: FASS

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your FASS TSC10165G Titanium Signature Series Diesel Fuel Lift Pump. This system is designed to enhance the fuel delivery and filtration for GM Duramax 6.6L diesel engines manufactured between 2001 and 2010. Please read these instructions thoroughly before proceeding with installation or operation.

2. PRODUCT OVERVIEW AND FEATURES

The FASS Titanium Signature Series diesel fuel lift pump is engineered for high performance and reliability. It addresses common fuel system deficiencies in Duramax engines by providing consistent fuel pressure and advanced filtration.

Key Features:

- Protects and extends the life of your injection system.
- Optimizes fuel efficiency (results may vary).
- Improves cold weather performance.
- Removes water, air, and debris from diesel fuel.
- Supports engines up to 900 horsepower.



Figure 1: FASS Titanium Signature Series Diesel Fuel Lift Pump, showing the motor unit mounted above two filtration canisters. One canister is labeled "PF-3001" and the other "XWS-3002 Separator Water".

3. SAFETY INFORMATION

WARNING:

- Always disconnect the vehicle's battery before beginning any installation or maintenance procedures to prevent electrical shock or damage.
- Diesel fuel is flammable. Work in a well-ventilated area away from open flames or ignition sources.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the vehicle is securely supported on jack stands if working underneath.
- Refer to your vehicle's service manual for specific procedures related to fuel system components.

- Improper installation can lead to fuel leaks, engine damage, or fire. If you are not confident in your ability to install this product, seek professional assistance.

4. SETUP AND INSTALLATION

The FASS TSC10165G is designed for vehicle-specific fitment on GM Duramax 6.6L diesel engines (2001-2010 models). Due to the complexity of fuel system modifications, professional installation is highly recommended.

General Installation Considerations:

- **Mounting:** The unit typically mounts using a bracket system. Ensure the mounting location is secure and provides adequate clearance from moving parts and heat sources. The auto part position is generally rear left inner.
- **Fuel Lines:** Connect the inlet and outlet fuel lines securely. The inlet connection type is hose barb, and the outlet connection type is barb. Use appropriate fuel-rated hoses and clamps.
- **Electrical Connections:** Connect the pump to the vehicle's electrical system according to the wiring diagram provided in the full installation guide (not included in this general manual). Ensure proper grounding.
- **Priming:** After installation, the fuel system must be properly primed to remove air before starting the engine. Consult the full installation guide for detailed priming procedures.



Figure 2: Rear view of the FASS Titanium Signature Series Diesel Fuel Lift Pump, highlighting the serial number label and the two filtration canisters. The label indicates "FASS Titanium Signature Series" and a serial number.

5. OPERATING INSTRUCTIONS

Once properly installed, the FASS Titanium Signature Series Diesel Fuel Lift Pump operates automatically with the vehicle's ignition. It maintains consistent fuel pressure to the injection pump and continuously filters the diesel fuel.

- **Engine Start-up:** Allow the pump to cycle for a few seconds before starting the engine, especially after initial installation or filter changes.
- **Normal Operation:** The pump will run whenever the engine is operating, ensuring a steady supply of clean, air-free fuel.

- **Monitoring:** Pay attention to any unusual noises or changes in engine performance, which could indicate a fuel system issue.

6. MAINTENANCE

Regular maintenance of your FASS fuel system is crucial for optimal performance and longevity of your engine's injection components.

Filter Replacement:

- The system includes a 2-micron filtration element and a water separation filter.
- Filters should be replaced at recommended intervals, typically every 15,000 to 30,000 miles, or annually, depending on fuel quality and operating conditions. Refer to the specific FASS filter replacement guidelines for your model.
- To replace filters:
 1. Ensure the engine is off and the fuel system is depressurized.
 2. Place a drain pan beneath the filters to catch any spilled fuel.
 3. Unscrew the old filter canisters.
 4. Clean the filter housing and lubricate new filter gaskets with clean diesel fuel.
 5. Screw on new filters until hand-tight, then tighten an additional 1/2 to 3/4 turn.
 6. Prime the system before starting the engine.

General Inspection:

- Periodically inspect all fuel lines, connections, and electrical wiring for signs of wear, leaks, or damage.
- Ensure mounting hardware remains secure.

7. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For complex problems, consult a qualified diesel mechanic or FASS technical support.

Symptom	Possible Cause	Solution
Pump does not turn on	No power, blown fuse, faulty wiring, pump motor failure	Check electrical connections, fuses, and relays. Verify power supply to the pump.
Low fuel pressure	Clogged filters, air in fuel system, restricted fuel line, faulty pump	Replace fuel filters. Bleed air from the system. Inspect fuel lines for kinks or blockages.
Excessive noise from pump	Air in fuel system, loose mounting, internal pump issue	Bleed air from the system. Check mounting hardware for tightness.
Fuel leaks	Loose connections, damaged fuel lines, improper filter installation	Inspect all connections and fuel lines. Ensure filters are correctly installed and tightened.

8. SPECIFICATIONS

- **Model:** FASS Titanium Signature Series (TSC10165G)
- **Flow Rate:** 165 Gallons Per Hour (GPH)

- **Application:** GM Duramax 6.6L diesel engines (2001-2010)
- **Material:** Aluminum body, Titanium components
- **Filtration:** 2 Micron (fuel), Water Separation
- **Inlet Connection Type:** Hose Barb
- **Outlet Connection Type:** Barb
- **Mounting Type:** Bracket mount
- **Dimensions (L x W x H):** Approximately 18 x 13.9 x 11.7 inches
- **Item Weight:** Approximately 27.4 pounds
- **OEM Part Number:** TSC10165G
- **UPC:** 850044106240

9. WARRANTY AND SUPPORT

The FASS TSC10165G Titanium Signature Series Diesel Fuel Lift Pump is backed by a **Limited Lifetime Warranty**. For detailed warranty terms, conditions, and to register your product, please refer to the official FASS Fuel Systems website or contact their customer support.

For technical assistance, troubleshooting beyond this manual, or to purchase replacement parts, please visit the official FASS website or contact their authorized dealers.

FASS Store Link: [Visit the FASS Store on Amazon](#)

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