

Triax TRXSAE50

TRIAX Synergy Gear HD 50W Full Synthetic Manual Transmission Oil User Manual

Model: TRXSAE50

1. PRODUCT OVERVIEW

TRIAX Synergy Gear HD 50W is a full synthetic heavy-duty manual transmission oil and gear lubricant. It is engineered to provide exceptional performance and protection for manual transmissions in demanding applications, including those found in Mack, ZF, and Freightliner vehicles. This lubricant is designed for extended drain intervals, offering durability and efficiency over long periods.



Image 1.1: Front view of the TRIAX Synergy Gear HD 50W 1-gallon bottle, highlighting the product name and SAE 50W rating.

2. KEY FEATURES AND BENEFITS

- **Extended Drain Intervals:** Engineered for up to three times the drain interval of many conventional fluids, supporting 750,000 miles or more in high-load conditions. This significantly reduces fluid costs and downtime for long-haul trucks.
- **Extreme Temperature Performance:** Maintains fluidity down to -60°F, ensuring reliable cold flow and fuel economy, while also providing stability and protection at high operating temperatures.
- **Superior Wear Protection:** Formulated with top-tier base oils and additives to prevent shear and viscosity loss, maintaining optimal viscosity throughout its service life.
- **Optimized Frictional Characteristics:** Designed to eliminate slippage, protect synchronizers, seals, and gears, preventing grinding and reducing wear.
- **OEM Compliance:** Developed for durability and adherence to Original Equipment Manufacturer (OEM) specifications.



TRIAX Synergy Gear HD 50W

Full Synthetic Heavy Duty Truck
Manual Transmission Fluid

- ✓ Extreme Temperature Range;
Flows Down to -60°F
- ✓ Made With Top Tier Base
Oils & Additives
- ✓ Designed to Eliminate
Slippage; Protects
Syncros, Seals & Gears



Image 2.1: Visual representation of key features including extreme temperature range, top-tier base oils, and protection for synchronizers, seals, and gears.



Image 2.2: Diagram illustrating superior viscosity stability, advanced friction management, and enhanced heat management properties of TRIAX lubricants.

3. APPLICATIONS

TRIAX Synergy Gear HD 50W is specifically recommended for heavy-duty manual transmissions requiring SAE 50W full synthetic gear lubricant. It is compatible with a wide range of heavy-duty truck and equipment manufacturers, including but not limited to:

- Mack
- ZF
- Freightliner
- Eaton Fuller (e.g., 13-speed transmissions)
- Other heavy-duty manual transmissions requiring a 50W synthetic lubricant.

This product is suitable for both on-highway and off-road heavy-duty applications.

4. USAGE AND OPERATING INSTRUCTIONS

Always consult your vehicle or equipment manufacturer's service manual for specific transmission fluid requirements, capacities, and change procedures. The following are general guidelines:

1. **Preparation:** Ensure the vehicle or equipment is on a level surface and the transmission is cool enough to handle safely. Gather necessary tools, including a drain pan, wrenches, and a suitable pump or funnel for filling.
2. **Draining Old Fluid:** Locate the transmission drain plug. Place a drain pan underneath and carefully remove the plug to allow the old fluid to drain completely.
3. **Replacing Drain Plug:** Once drained, clean the drain plug and reinstall it, ensuring it is tightened to the manufacturer's specifications to prevent leaks.
4. **Filling with New Fluid:** Locate the transmission fill plug. Using a clean funnel or pump, slowly add TRIAX Synergy Gear HD 50W until the fluid level reaches the bottom edge of the fill hole, or as specified

by the manufacturer.

5. **Checking Level:** Reinstall the fill plug. After a short period of operation, recheck the fluid level and top off if necessary.



Image 4.1: The TRIAX bottle features a built-in spout for precise pouring and an airtight reseal, aiding in clean and efficient fluid changes.

5. MAINTENANCE

Regular maintenance of your transmission fluid is crucial for optimal performance and longevity of your heavy-duty manual transmission. TRIAX Synergy Gear HD 50W is formulated for extended drain intervals, which can significantly reduce maintenance frequency.

- **Drain Intervals:** This fluid is rated for drain intervals of up to 750,000 miles or more, depending on operating conditions and manufacturer recommendations. Always adhere to your equipment manufacturer's guidelines for severe service or specific applications.
- **Fluid Inspection:** Periodically check the transmission fluid level and condition. Look for signs of contamination, excessive darkening, or unusual odors, which may indicate a need for earlier fluid replacement.

- **Seal Integrity:** Inspect transmission seals and gaskets for leaks during routine maintenance checks. Address any leaks promptly to prevent fluid loss and potential damage.

6. SPECIFICATIONS

Specification	Detail
Product Name	TRIAX Synergy Gear HD 50W
Item Model Number	TRXSAE50
Brand	Triax
Material	Full Synthetic
Liquid Volume	1 Gallon (3.78 Liters)
Recommended Uses	Heavy Duty Manual Transmissions
Temperature Range	Flows down to -60°F
Drain Interval Rating	Up to 750,000 miles or more
Manufacturer	Triax Lubricants LLC
Product Dimensions	4.6 x 7.9 x 10.5 inches; 7.58 Pounds (for 1 Gallon)



Image 6.1: Rear view of the TRIAX Synergy Gear HD 50W bottle, displaying performance characteristics, applications, and specifications.



Image 6.2: Certification details indicating 100% specification and OEM compliance, along with API licensing and certification.

7. SAFETY INFORMATION

When handling TRIAX Synergy Gear HD 50W, observe standard safety precautions for lubricants:

- **Skin Contact:** Avoid prolonged or repeated skin contact. Wash thoroughly with soap and water after handling.
- **Eye Contact:** In case of contact with eyes, flush immediately with large amounts of water for at least 15 minutes. If irritation persists, seek medical attention.
- **Ingestion:** Do not ingest. If swallowed, do not induce vomiting. Seek medical attention immediately.
- **Inhalation:** Avoid breathing oil mists or vapors. Use in a well-ventilated area.
- **Storage:** Store in a cool, dry, well-ventilated area away from open flames, sparks, and direct sunlight. Keep containers tightly closed when not in use.
- **Disposal:** Dispose of used oil and containers in accordance with all local, state, and federal regulations. Do not pour into drains or dispose of with household waste.

8. TROUBLESHOOTING

If you experience issues related to your transmission fluid, consider the following:

- **Unusual Noises or Grinding:** This could indicate low fluid level, incorrect fluid type, or internal transmission wear. Check fluid level and condition. If the fluid is correct and at the proper level, consult a qualified mechanic.
- **Difficulty Shifting Gears:** May be caused by low fluid level, incorrect fluid viscosity, or worn synchronizers. Verify fluid level and ensure the correct TRIAX Synergy Gear HD 50W is used.
- **Fluid Leaks:** Inspect all seals, gaskets, and drain/fill plugs for signs of leakage. Tighten loose components or replace damaged seals as necessary.
- **Overheating Transmission:** Can be caused by low fluid level, incorrect fluid, or heavy loads. Ensure proper fluid level and consider if the application is exceeding the transmission's design limits.

For persistent issues, professional diagnosis and repair are recommended.

9. WARRANTY AND SUPPORT


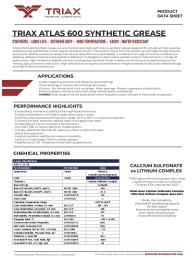
For specific warranty information regarding TRIAX Synergy Gear HD 50W, please refer to the official Triax Lubricants LLC website or contact their customer support directly. General product information and support can be found via the following resources:

- **Manufacturer:** Triax Lubricants LLC
- **Online Store:** [TRIAX Performance Lubricants Store on Amazon](#)

Always retain your purchase receipt for warranty claims.

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Related Documents - TRXSAE50

	<p>TRIAX Fleet Supreme Diesel Engine Oils: Superior Performance and Protection</p> <p>Explore TRIAX Fleet Supreme, a premium full synthetic heavy-duty diesel engine oil engineered for extended service intervals, enhanced fuel economy, and maximum engine protection. Featuring advanced friction modifiers and superior thermal stability, it minimizes wear and optimizes performance across a wide range of heavy-duty applications and manufacturers.</p>
	<p>TRIAX Atlas 600 Synthetic Grease Technical Data Sheet</p> <p>Technical specifications and performance highlights for TRIAX Atlas 600 Synthetic Grease, a high-performance grease designed for multi-purpose and heavy-duty applications, featuring exceptional stability, temperature range, and water resistance.</p>

