



# Product Bulletin

## FULL SYNTHETIC MANUAL TRANSMISSION LUBRICANT

**BRAD PENN® Full Synthetic Manual Transmission Lubricant** is a 100% synthetic, amber colored SAE 50 transmission lubricant designed specifically for extended drain and severe service in heavy-duty manual transmissions which require a non-EP gear or transmission lubricant.

**BRAD PENN® Full Synthetic Manual Transmission Lubricant** is formulated from a synthetic base stock with a high viscosity index and low pour point to ensure superior all-season, year-round performance. It also contains an antiwear additive, along with rust, oxidation, and corrosion inhibitors that protect bearings and synchronizers, reduce component wear, and promote longer transmission and lubricant life. Additional benefits include:

- Potential for maximum fuel economy
- Easier cold weather shifting
- Improved component protection
- Extended Drain Interval
- All-climate, year round performance

**BRAD PENN® Full Synthetic Manual Transmission Lubricant** is a specially formulated synthetic transmission lubricant that meets or exceeds the following performance requirements:

- Eaton Transmission Div., PS-164 rev. 7
- Mack Truck TO-A-PLUS
- International Truck TMS 6816
- API MT-1
- ArvinMeritor 0-81
- ZF Freedomline



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**BRAD PENN<sup>®</sup>**  
**Full Synthetic Manual Transmission Lubricant**  
**Typical Properties**

<b>SAE Grade</b>	<b>Test Method</b>	<b>50</b>
Appearance, visual		Amber
Viscosity, cSt @ 40°C	ASTM D-445	132
Viscosity, cSt @ 100°C	ASTM D-445	17.5
Viscosity, SUS @ 100°F	ASTM D-2161	678
Viscosity, SUS @ 210°F	ASTM D-2161	89.9
Viscosity, cP -40°C	ASTM D-2983	104,000
Viscosity Index	ASTM D-2270	146
Pour Point, °C (°F)	ASTM D-97	<-45 (<-49)
Flash Point, °C (°F)	ASTM D-92	221 (430)
Foam	ASTM D-892	
Sequence I		Pass
Sequence II		Pass
Sequence III		Pass
API gravity 15.6/15.6°C	ASTM D-287	33.0
Density, g/l, 15.6°C (lbs./gal., 60°F)	ASTM D-1298	860 (7.17)
Copper strip corrosion	ASTM D-130	
3 hrs. @ 100°C (212°F)		1a pass
3 hrs. @ 121°C (250°F)		1a pass
<b>Product Code</b>		<b>7764</b>