



## CITGO SYNTHETIC GEAR LUBRICANTS

Date 01/10

**DESCRIPTION:** CITGO Synthetic Gear Lubricants are heavy-duty, synthetic gear and bearing lubricants designed for use in manual transmissions, transfer cases and differential axles of trucks, farm tractors, construction, passenger cars and miscellaneous industrial equipment. Blended from very high viscosity index, low pour point synthetic base stocks, these oils provide maximum protection to gears and bearings operating over a wide range of temperatures, speeds and loads. Their superb resistance to oxidation provides the benefit of extended drain intervals. Available in three viscosity grades: SAE 75W-90, 80W-140 and 50.

- PROPERTIES:**
- Superior oxidation resistance for extended drain intervals.
  - Excellent load carrying properties (SAE 75W-90 and 80W-140) for maximum protection against component wear.
  - High viscosity index and low pour point synthetic base stocks provide reduced fluid friction with resultant fuel savings potential during low temperature start-up or operating conditions
  - Excellent demulsibility – separates water readily.
  - Shear resistant.
  - Provides full protection to system parts against rust and corrosion.
  - Non-foaming.

**APPLICATIONS:** **CITGO Synthetic Gear Lubricants (SAE 75W-90 and 80W-140)** are recommended for differentials, manual transmissions for which hypoid-type lubricants are required and transfer cases for heavy equipment – trucks, tractors, industrial gear drives, automobiles, farm machinery, etc. These products meet or exceed the following performance requirements:

- API Service Classification GL-5 and MT-1
- SAE J2360; former U.S. Military Specification MIL-L-2105D and MIL-PRF-2105E
- Scania STO 1:0
- Eaton Roadranger E500/Shaes 256, Rev. C
- Mack GO-J Plus (75W-90)
- Mack GO-J (80W-140)
- ArvinMeritor O-76N
- International TMS-6816
- General Electric D 50E9C
- Harnishfeger (P&H) 474

**CITGO Synthetic Gear Lubricant SAE 50** is recommended for heavy-duty service in manual transmission for which the manufacturer normally recommends either engine oils or GL-1 to GL-4/MT-1 lubricants. This product contains antiwear, rust, oxidation, foam and corrosion inhibitors to protect bearings and synchronizers and to promote longer transmission life. As in the other products in this series, CITGO Synthetic Gear Lubricant SAE 50 provides improved start-up, easier shifting and less gear wear in low temperature environments. Less friction, less drag and improved oxidation resistance combine to provide fuel economy benefits and longer drain intervals.

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**APPLICATIONS:** CITGO Synthetic Gear Lubricant SAE 50 (Continued)

This product meets or exceeds the following performance requirements:

- API GL-4, MT-1
- MAN 341 SL
- Eaton Roadranger Extended Drain (E500) PS-164 Rev. 7, PS 164/O81 (Approved for 500,000 miles drain intervals)
- Mack TO-A 500,000 Mile Extended Drain
- ArvinMeritor Extended Drain O-81 500,000 Mile Extended Drain
- Rockwell International 0-80 (former)
- Meritor ZF Freedom Line ZF TE-ML-04D
- Volvo STD 97305
- International TMS 6816 500,000 Mile Extended Drain
- ZF AS-Tronic

**TYPICAL PROPERTIES:**

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| SAE Grade                          | 75W-90    | 80W-140   | 50        |
|------------------------------------|-----------|-----------|-----------|
| Material Code                      | 631809001 | 631814001 | 631815001 |
| API Classification                 | GL-5      | GL-5      | GL-4      |
| AGMA Grade                         | 4         | 5-6       | 4         |
| Gravity, ASTM D 4052, °API         | 33.4      | 31.5      | 33.1      |
| Pounds Per Gallon                  | 7.14      | 7.23      | 7.16      |
| Flash Point, ASTM D 92, °F (°C)    | 405 (204) | 410 (210) | 435 (224) |
| Pour Point, ASTM D 97, °F (°C)     | -65 (-54) | -54 (-48) | -49 (-45) |
| Color, ASTM D 1500                 | 1.5       | 1.5       | 2.0       |
| Viscosity, ASTM D 445, cSt at 40°C | 111       | 273       | 128       |
| cSt at 100°C                       | 15.1      | 29.1      | 17.6      |
| Viscosity Index                    | 143       | 142       | 151       |
| Brookfield Viscosity, ASTM D 2270  |           |           |           |
| cP at -18°C                        | 5,715     | 22,700    | 6,835     |
| cP at -26°C                        | —         | 60,950    | —         |
| cP at -40°C                        | 93,050    | —         | <120,000  |
| Foam Test, ASTM D 892              | Pass      | Pass      | Pass      |
| Copper Corrosion, ASTM D 130       | 1A        | 1A        | 1A        |
| Rust Protection, ASTM D A/B        | Pass      | Pass      | Pass      |