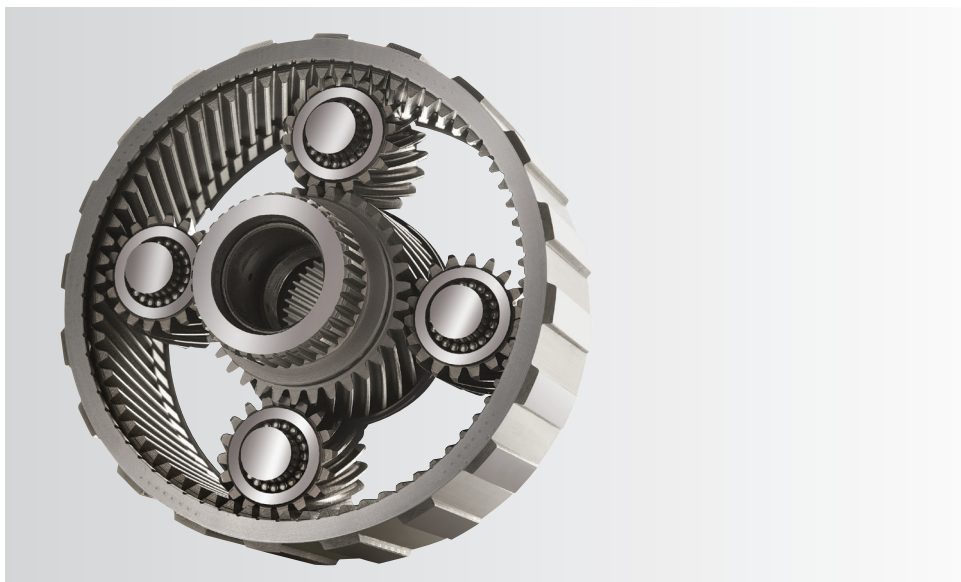


DRIVELINE

HiTEC[®] 419R

ATF Additive Package



Standard tier, with GM Performance and Approvals from ZF, Voith and MAN

HiTEC® 419R ATF Additive Package

Standard Tier, with GM Performance and Approvals from ZF, Voith and MAN

Automatically **First**™



Key Performance Benefits

HiTEC® 419R additive is a versatile package that can be used to formulate high quality Automatic Transmission Fluids in a wide variety of base stocks.

HiTEC® 419R is a version of HiTEC® 419 to which red dye has been added. Red dye is, therefore, not required when HiTEC® 419R is used to blend finished ATF's.

HiTEC® 419R additive package contains a shear stable Viscosity Index Improver, enabling ATF's blended with HiTEC® 419R to provide significant customer benefits, including:

- Good film thickness resulting in better wear protection
- Improved low temperature performance for reliable cold starting
- Consistent transmission performance under a wider range of operating conditions

Recommended Dosage

The recommended treat-rate for HiTEC® 419R is 11.4% wt. in good quality base stocks for conventional Automatic Transmission Fluid applications. It can also be used at a reduced treat-rate of 5.7% wt. for lower performance level applications satisfied by Type A Suffix A (TASA) fluids. Please contact your Afton Chemical representative for specific recommendations.

Approvals

Product	ATF Specifications													
HiTEC® 419R	3	1	3	3	1	1	3	1	3	1	3	1	2	1

Product Status

- Approved
- Meets Requirement
- Suitable for Use

Specification Status

- 1 Formal Approval
- 2 Self Certifying
- 3 Obsolete

Notes

- Ω For GM vehicles of Model Years 1990 and earlier
- λ For GM vehicles of Model Years 1993 and earlier
- α For GM vehicles of Model Years 2003 and earlier
- μ For Ford vehicles of Model Years 2005 and earlier
- † Formerly approved

Afton Product Comparison

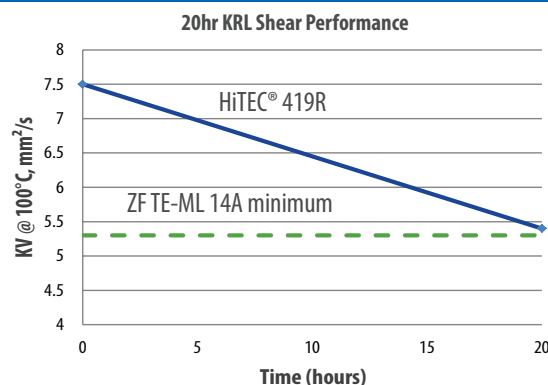
Performance	Benefit	Economic	Standard		Premium				Top
		HiTEC® 410	HiTEC® 419	HiTEC® 429	HiTEC® 2414	HiTEC® 481	HiTEC® 2018	HiTEC® 4014	HiTEC® 3491LV
Oxidative stability	Fluid life, lower parts wear	Good	Good	Better	Better	Better	Better	Best	Best
Friction durability	Fluid life	Good	Good	Better	Better	Better	Best	Best	Best
Shear stability	Lower parts wear	Good	Better	Better	Better	Best	Better	Best	Best
Low temp. performance	More efficient cold-starting	Good	Good	Better	Better	Best	Better	Best	Better
Treat-rate	Fluid cost	Best	Best	Better	Better	Good	Good	Good	Good
Range of OEM specs	Inventory, logistics	Good	Good	Better	Best	Best	Good	Good	Better

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Excellent Shear Performance = Extended Wear Protection



Typical characteristics

Appearance:	Dark red liquid
Density at 15°C, g/ml:	0.92
Flash Point (PMCC), °C:	105 min
Kinematic Viscosity at 100°C, mm²/s:	220

Handling Information

Max Handling Temp: 70°C
Shelf Life: 18 months at ambient temperature