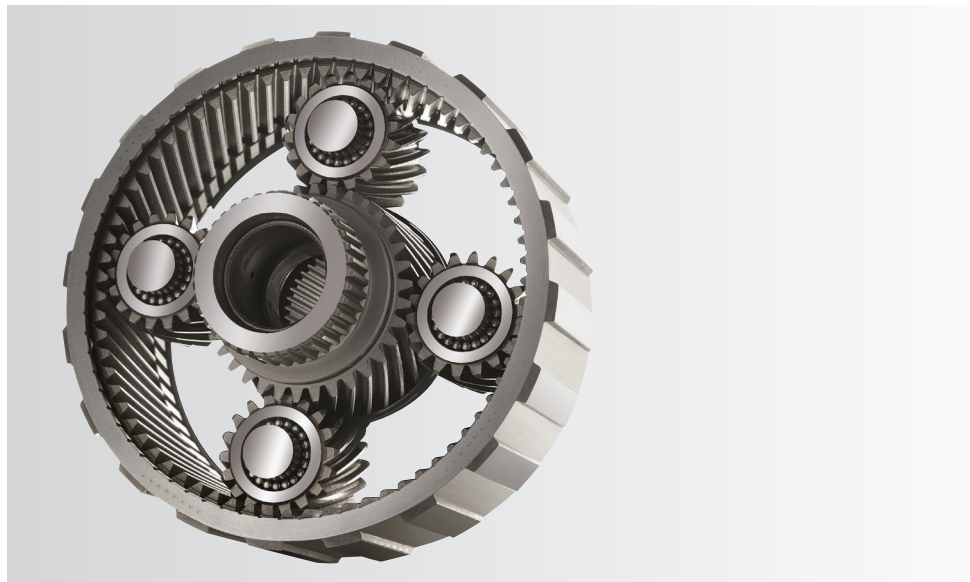


DRIVELINE

HiTEC[®] 2414 ATF Additive Package



From TASA to GM IIIH Using a Single Additive

HiTEC® 2414 ATF Additive Package

From TASA to GM IIIH Using a Single Additive

Automatically **First**™ 

Key Performance Benefits

HiTEC® 2414 additive package is a unique single additive solution used to formulate high quality ATFs from TASA to GM IIIH level performance in a wide variety of base stocks, allowing oil companies to rationalise their inventory and simplify their logistics. HiTEC® 2414 additive package provides additional customer benefits in terms of:

- Compatibility in a wide range of base stocks
- Friction retention, improving clutch durability
- Load carrying and oxidation performance, which extends fluid life and provides transmission protection
- Approvals from all the major commercial vehicle AT manufacturers (ZF, Voith, Allison)
- Core technology approvals by Ford, GM, MB, VW and ZF for passenger car applications

Recommended Dosage

The recommended treat-rate for HiTEC® 2414 is 11.9% wt. in good quality base stocks for most conventional North American and European OEM Automatic Transmission Fluid applications. Please contact your Afton Chemical representative for specific recommendations.

Approvals

ALLISON TES-228(C-4)	ALLISON TES-389	Ford Pre-2005 ^μ	GM IID ^μ IIE ^λ	GM IIIG ^α	GM IIIH ^β	MAN 339 L1, L2	MAN 339 Z1, V1	MB 236.1	MB 236.9	CHRYSLER +3	TASA	VOITH H55.6335	VOLVO CE97340	VOLVO CE97341	ZF TE-ML 02F	ZF TE-ML 03D	ZF TE-ML 05L, 21L	ZF TE-ML 09	ZF TE-ML T1A, T1B	ZF TE-ML 04D, T4A	ZF TE-ML T7C
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Product	ATF Specifications																					
HiTEC®2414	3+	1	3+	3	3	3+	1	1	1	1	3	3	1	3	1	3+	1	2	2	3	1	1

Product Status	Specification Status	Notes
● Approved	1 Formal Approval	Ω For GM vehicles of Model Years 1990 and earlier
● Meets Requirement	2 Self Certifying	λ For GM vehicles of Model Years 1993 and earlier
	3 Obsolete	α For GM vehicles of Model Years 2003 and earlier
		β For GM vehicles of Model Years 2006 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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HiTEC® 2414 Formulation Table	TASA	IID + OEM	IIIG + OEM	IIIH + OEM
HiTEC® 2414, % wt.	5.9	11.9	11.9	11.9
Yubase 4, % wt.			25.0	35.0
HiTEC® 5710, % wt.	2.0			
ExMo 100SN, % wt.	92.1	88.1	63.1	53.1
KV100 mm ² /s	7.0	7.6	7.5	7.2
Brookfield at -40°C mPa.s	35,000	28,000	19,000	17,000
KV100 post KRL shear, mm ² /s	-	5.5	5.6	5.5

Typical Characteristics

Appearance:	Dark brown viscous liquid
Density at 15°C, g/ml:	0.92
Flash Point (PMCC), °C:	105 min
Kinematic Viscosity at 100°C, mm ² /s:	185

Handling Information

Max Handling Temp: 80°C
Shelf Life: 18 months at ambient temperature