

# **AUTOMATIC TRANSMISSION FLUID**



Evolutionary Performance\*\*



Automotive transmissions have evolved dramatically, requiring highly specialized fluids for unique applications. One brand has evolved right alongside – MAG 1<sup>®</sup>. Only the most advanced transmission fluids meet the difficult challenges of effectively balancing performance, strength and durability.

# MAG 1 AUTOMATIC TRANSMISSION FLUID

MAG 1 Automatic Transmission Fluid is engineered to extend transmission life and smooth operation of Ford and General Motors vehicles where a DEXRON®-III/MERCON® fluid is specified. MAG 1 Full Synthetic Multi-Vehicle ATF is a balanced advanced formula utilizing superior additive technology and 100% synthetic base oils helping to ensure peak performanc

#### MAG 1 LOW VISCOSITY MULTI-VEHICLE TRANSMISSION FLUID

MAG 1 Low-Viscosity Automatic Transmission Fluid is a balanced advanced formula utilizing superior additive technology and 100% synthetic base oils. DEXRON®-VI/ MERCON® LV Approved.

# MAG 1 MULTI-VEHICLE TRANSMISSION FLUID

MAG 1 Multi-Vehicle Automatic Transmission Fluid is engineered to extend transmission life and smooth operation of many automatic transmissions from a variety of OEMs.

### MAG 1 FULL SYNTHETIC MULTI-VEHICLE TRANSMISSION FLUID

MAG 1 Full Synthetic Multi-Vehicle ATF is a balanced advanced formula utilizing superior additive technology and 100% synthetic base oils helping to ensure peak performance of almost any automatic transmission. This premiumquality product meets and exceeds the frictional and wear requirements of many automatic transmissions manufactured after 1983, including many foreign vehicles.

# MAG 1 TYPE F AUTOMATIC TRANSMISSION FLUID

MAG 1 Type F Automatic Transmission Fluid is approved for all Ford automatic transmissions built prior to 1977 and certain models for years 1977 through 1980. Meets Ford specifications for high static friction fluid and requirements for transmissions recommending a Type F fluid.

# MAG 1 MERCON® V TRANSMISSION FLUID

MAG 1 MERCON<sup>®</sup> V ATF is specially formulated with a unique combination of conventional base stocks and an advanced additive technology to meet the performance requirements of Ford automatic transmissions calling for MERCON<sup>®</sup> V fluid. MAG 1 CVT Fluid formulated with a unique combination of full synthetic base stocks and an advanced additive technology designed for the specific demands of CVTs. Recommended for use in most belt- or chain-driven CVTs. Not a replacement for ATF.

#### MAG 1 ATF+4®

MAG 1 ATF+4<sup>®</sup> is licensed by FCA US, LLC for use in all Chrysler, Dodge, and Jeep vehicles calling for ATF+4<sup>®</sup>, ATF+3<sup>®</sup>, or ATF+2<sup>®</sup> transmission fluid. MAG 1 Full Synthetic DCT Fluid is for service fill applications on a wide range of European, Asian, and American vehicles equipped with a wet Dual Clutch Transmission. MAG 1 DCT fluid has demonstrated robust performance in both industry/OEM testing as well as extensive field testing.

S		Pack Size	Product #		Pack Size	Product #
PACK SIZES		12/12 Ounce	00901		6/1 Quart	64092
S		6/1 Quart	00900	Low-Viscosity	6 Gallon**	65449
×		3/1 Gallon	00906	Multi-Vehicle*	55 Gallon	64094
46	ATF*	2/2.5 Gallon	00902			
9		5 Gallon	00905		330 Gallon	65480
		55 Gallon	62856	Mercon <sup>®</sup> V*	6/1 Quart	63453
		330 Gallon	65479		6/1 Quart	00910
	Full Curthatia	6/1 Quart	62555	Туре F*	55 Gallon	63440
	Full Synthetic Multi-Vehicle*	3/1 Gallon	63341	ATF+4 <sup>®</sup> *	6/1 Quart	60627
		55 Gallon	62869		,	
	Multi-Vehicle*	6/1 Quart	00915	CVT*	6/1 Quart	63318
	wuru-vemcie"	55 Gallon	60613	DCT	6/1 Quart	68611

		T	YPICAL P	HYSICAI	L PROPE	RTIES				
Properties	Test Method	ATF	Full Synthetic Multi-Vehicle	Multi-Vehicle	Low-Viscosity Multi-Vehicle DEXRON®-VI/ Mercon® LV	Mercon® V	Туре F	ATF+4 <sup>®</sup>	сут	DCT
Brookfield Viscosity at -40°C, cP	ASTM D2983	18,500	10,300	11,300	10,300	11,300	37,000	9,000	12,300	16,826
Color	ASTM D1500	Red	Red	Red	Red	Red	Red	Red	Amber	Amber
Flash Point °C	ASTM D92	204	216	204	220	204	204	204	199	199
Flash Point °F	ASTM D92	400	420	400	428	400	400	400	390	390
Gravity, °API	ASTM D287	32.98	34.66	33.02	35.60	33.02	32.67	34.81	34.23	34.5
Pour Point °C (°F)	ASTM D5950	-51°C (-60°F)	-51°C (-60°F)	-51°C (-60°F)	-51°C (-60°F)	-51°C (-60°F)	-51°C (-60°F)	-48°C (-54°F)	-51°C (-60°F)	-51°C (-60°F)
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8603	0.8516	0.8601	0.8468	0.8601	0.8619	0.8508	0.8538	0.8524
Viscosity @ 100°C cSt	ASTM D445	7.38	7.41	7.56	5.797	7.56	7.47	7.68	7.21	7.038
Viscosity @ 40°C cSt	ASTM D445	35.67	33.64	35.43	28.56	35.43	38.11	35.22	33.8	33.57
Viscosity Index	ASTM D2270	179	196	189	151	189	167	201	185	178

\*Available in Bulk \*\* Enviro Box®



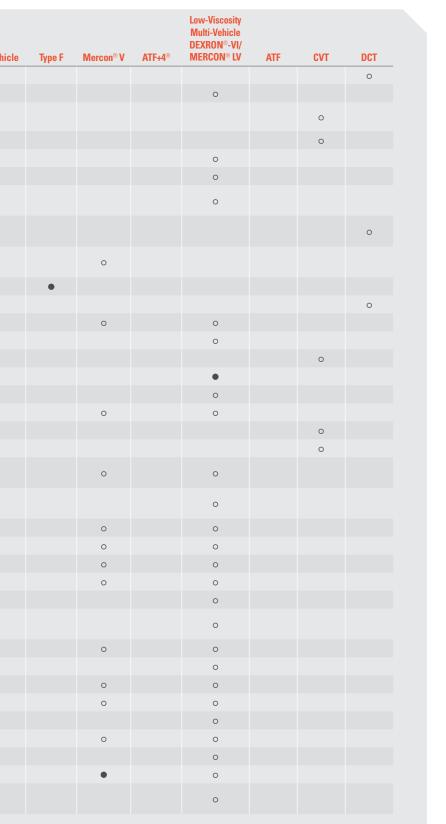


# MAG 1 DUAL CLUTCH TRANSMISSION FLUID



CLAIMS		Full Synthetic	Multi-Vehicle	Turo E	Mercon® V	ATF+4®	Low-Viscosity Multi-Vehicle DEXRON®-VI/ MERCON® LV	ATF	CVT	DCT
	Allison C-3	wulu-venicie	wulu-venicie	Type F		AIT+4"		AIF	GAI	DUI
	Allison C-4	0	0		0		0	•		
	Allison TES 389®*		•		•		•			
	Audi 5 HP LT71141,						0			
	G 052162-A1/A2, G052 025 A2									
	Audi G 052 025, 052 162, 055 025	0	0		0		0			
	Audi/VW (TL 52180; G 052 180; G 052 516)								0	
	BMW 6-speed DCT									0
	BMW 7045E, LA2634, LT71141	0	0		0		0			
	BMW 8322 0 136 376/8322 0 429 154(EZL799/EZL 799A)								0	
	BMW Drivelogic 7-speed (Getrag)/									0
	DCTF-1									
	BMW JWS 3309, LA2634, ZF 5HP18FL, 5HP24, 5HP30, Mini						0			
	BMW MTF LT-5									0
	BMW P/N 83 22 0 024 359, ETL-8072B	0	0		0		•			
	BMW P/N 83 22 0 0246 922, ETL-7045E	0	0		0		0			
	BMW P/N 83 22 0 403 249, ETL-8072B	0	0		0		0			
	BMW P/N 83 22 9 407 765, LA 2634	0	0		0		0			
	BMW P/N 83 22 9 407 807, LT 711 41	0	0		0		0			
	Borg Warner									0
	Bugatti Veyron									0
	Castrol BOT 341									0
	Castrol BOT 450									0
	Castrol Transmax Dual									0
	CAT TO-2						0			
	Chrysler 68044345 EA & GA									0
	Chrysler 8 and 9 Speed Transmission		6				0			
	Chrysler AS68RC, Diamond SP-III Chrysler ATF+4 <sup>®</sup> (MS 9602)		0		0	+	0			
	Chrysler ATF+3 <sup>®</sup> (MS 7176E)					*				
	Chrysler P/N 05127382AA, P/N					0				
	68043742AA (DEXVI)		0		0		0			
	Chrysler Powershift 6-speed (Getrag)									0
	Daewoo LT 71141						0			
	Daihatsu Amix CVTF-DC, Daihatsu AMIX CVTF-DFE								0	
	Daihatsu AMMIX ATF D-II, D-III SP						0			
	DCT-1									0
	DEXRON <sup>®</sup> III G/H, DEXRON <sup>®</sup> II,	0	0		0			•		
	DEXRON <sup>®</sup> , AW1 Dexron <sup>®</sup> VI						*			
	Dexron <sup>©</sup> VI Dodge / Jeep (NS-2 / CVTF+4/Mopar						×			
	CVT 4)								0	
	Esso 71141	0	0		0		0			

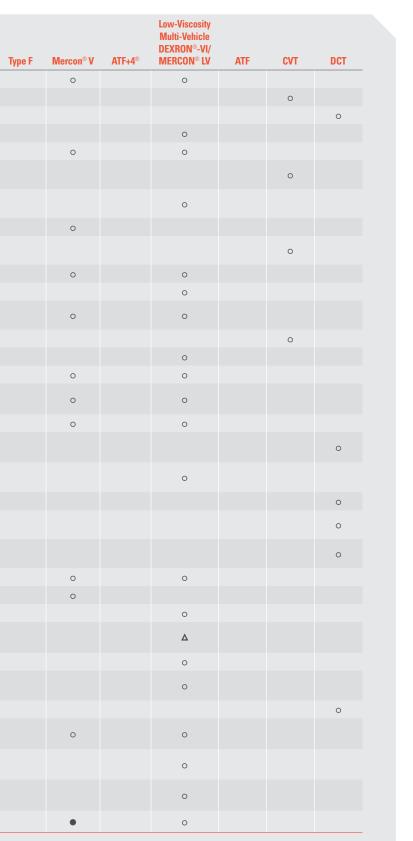






Mazda ATF M-III, MV, Mazda CVTF 3320		Full Synthetic Multi-Vehicle	Multi-Vehicle	Type F	Mercon® V	ATF+4®	Low-Viscosity Multi-Vehicle DEXRON®-VI/ MERCON® LV	ATF	СVТ	DCT
Mazda ATF M-III, MV,	T-IV	0	0		0		0			
Mazda CVTF 3320									0	
MB 223.2, 236.1, 236.2, 2 236.41, 236.5, 236.6, 236							0			
MB236.1, 2, 5, 6, 7, 9		0	0		0					
Mercedes Benz (236.20		0	U		0				0	
Mercedes Benz CVT28,									0	
236.20 Mercon®, Ford ESP-M	I2C166-H	0	0		0		Δ	•	-	
Mercon <sup>®</sup> LV (XT-10-QL							*			
Mercon <sup>®</sup> SP, except 6HP2							Δ			
Mercon® V (XT-5-QM,					*					
Mini Cooper									0	
(EZL 799/ EZL 799A/2	ZF CVT V1)								Ŭ	
Mini Cooper T-IV MINI P/N 83 22 0 40	12 413	0	0		0		0			
Mitsubishi (CVTF-J1)	JZ 41J	0	0		0		0		0	
Mitsubishi DiaQueen (C	5v1F-J1, GV1F-J4)								0	
Mitsubishi DiaQueen SK, Mitsubishi TC-SST 6.s							0			
Mitsubishi TC-SST 6-s MZ320065 DiaQueen										0
Mopar AS 68 RC, JW	VS 3309						0			
NAG-1	400	0					0			
Nissan Matic-D, J, K, Nissan Matic, J, S	402	0	0		0		0			
Nissan (NS-1, NS-2, NS	5-31						0		0	
Opel	5-57						0		0	
PDK transmissieolie v Transmission Oil for Z	voor ZF (DCT (F)									0
Pentosin FFL 2, 3, 4										0
Peugeot/Citroen DCS	6-speed									
(GFT)/9734.S2										0
Peugeot ZF 4HP20							0			
Porsche P/N 999 917	, ,	0	0		0		0			
Porsche ZF 5HP19FL, LT71141, ATF 3403-M							0			
3309							Ŭ			
Punch EZL 799/EZL 79									0	
Renault EDC 6-speed (6	Getrag)									0
Renault ELFMATIC									0	
SAAB P/N 22 717 46 93 165 147 (AW-1)	66,	0	0		0		0			
Saturn P/N 2100596		0	0		0		0			
Saturn T-IV, GM TASA T-IV ATF, GM WS ATF		0	0		0		0			
Shell 3403, LA 2634,		0	0		0		0			
ETL-8072B										











Heavy duty truck transmissions have evolved dramatically, requiring highly specialized fluids for unique applications. One brand has evolved right alongside – MAG 1<sup>®</sup>. Only the most advanced transmission fluids meet the difficult challenges of effectively balancing performance, strength and durability.

- Performance Delivers superior friction stability to maintain smooth, consistent shifting and prevent shudder.
- Strength Provides a strong oil film to prevent metal-to-metal contact between rotating parts to prevent wear.
- Durability Resists thickening due to high operating temperatures.

MAG 1 helps optimize the friction, torque and function of your equipment to optimize performance and longevity.

# MAG 1 FULL SYNTHETIC HD 50 TRANSMISSION FLUID

MAG 1 Full Synthetic Heavy Duty 50 Transmission Fluid is formulated for use in manual transmissions that undergo severe duty and extended drain intervals. It is blended with full synthetic base stocks and advanced additives to provide outstanding cold temperature performance and protect against corrosion, oxidation and deposits.

S		Pack Size	Product #
SIZE		5 Gallon	63598
ACK SIZ	Full Synthetic HD 50 Transmission Fluid*	16 Gallon	67048
9		55 Gallon	67046
		330 Gallon	68246
	Full Synthetic Heavy Duty Automatic	3/1 Gallon	67077
	Transmission Fluid*	55 Gallon	67076

Properties	Test Method	Full Synthetic HD 50 Transmission Fluid	Full Synthetic Heavy Duty Automatic Transmission Fluid
Brookfield Viscosity at -40°C, cP	ASTM D2983	18,500	8,000
Color	ASTM D1500	Red	Red
Flash Point °C	ASTM D92	218	220
Gravity, °API	ASTM D287	32.98	35.42
Pour Point °C (°F)	ASTM D5950	-51°C (-60°F)	-51°C (-60°F)
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8603	0.8477
Viscosity @ 100°C cSt	ASTM D445	7.38	7.349
Viscosity @ 40°C cSt	ASTM D445	35.67	34.81
Viscosity Index	ASTM D2270	179	181





MAG 1 Full Synthetic Heavy Duty Automatic Transmission Fluid is formulated for use in heavy duty truck or bus transmissions that undergo severe duty and extended drain. It is formulated with full synthetic base oil and advanced additives to provide outstanding cold temperature performance and protect against corrosion, oxidation and deposits.

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CLAIMS

CLAIMS		Full Synthetic HD 50 Transmission Fluid	Full Syn Heavy Duty Automatic Transmission Fluid
Z	Allison TES-295**		<b>♦</b>
0	Allison TES-389**		•
	API GL-1 and MT-1	0	
	Mack TO-A Plus	0	
	Meritor 0-81	0	
	Navistar/International TMS 6816	0	
	Volvo I-Shift	0	
	ZF Freedomline	0	
	◆ = MAG 1 Recommended	O = Suitable for Use	

# **TYPICAL PHYSICAL PROPERTIES**







MAG 1<sup>®</sup> Agriculture and Construction Lubricants provide unsurpassed protection even in the harshest conditions. We offer a wide range of lubrication products for most farming and construction operations that meet the difficult challenges of effectively balancing performance, strength and durability. Benefits of MAG 1:

- Outstanding thermal and oxidative stability
- Protection against component wear to extend equipment life
- Excellent pumpability in extreme cold
- Protection rust and corrosion from water contamination
- Optimally balanced frictional characteristics to ensure precise clutch and brake operation and reduce chatter

# MAG 1 UNIVERSAL TRACTOR TRANS HYDRAULIC FLUID

# MAG 1 HYDROSTATIC MV ISO 46

MAG 1 Premium Universal Tractor Trans-Hydraulic Fluid is formulated with high-quality paraffinic base stocks, and is recommended for farm equipment with transmission final drives, wet brakes, clutches, and hydraulics supplied from a common reservoir.

MAG 1 Hydrostatic MV ISO 46 is recommended for use in industrial hydraulic systems, skid-steer hydrostats/hydraulics, lawn and turf hydrostats/hydraulics, hydraulic systems that recommend multi viscosity and logging opperations.

# MAG 1 TO-4 TORQUE FLUIDS

MAG 1 TO-4 Torque Fluids are multipurpose lubricants designed for use in transmissions, wet brakes and hydraulic systems requiring a fluid meeting Caterpillar® TO-4 requirements. This fluid has outstanding hydraulic oil stability and allows protection against high-pressure pump wear. Available viscosities: SAE 10, SAE 30, and SAE 50.

S		Pack Size	Product #
IZE		3/1 Gallon	60681
X S		2/2.5 Gallon	00522
PACK	Universal Tractor Trans-Hydraulic Fluid*	5 Gallon	00525
		55 Gallon	62863
		330 Gallon	65576
	Hydrostatic MV ISO 46*	3/1 Gallon	63952

	TYPICAL PHYSICAL PROPERTIES											
Properties	Test Method	Universal Tractor Trans- Hydraulic Fluid	Hydrostatic MV ISO 46	TO-4 Torque Fluid SAE 10	TO-4 Torque Fluid SAE 30	TO-4 Torque Fluid SAE 50						
Brookfield Viscosity at -40°C, cP	ASTM D2983	42,000	-	-	-	-						
Calcium, wt. %	ASTM D5185	6.334	0.003	0.242	0.242	0.242						
Color	ASTM D1500	1.5	0.5	2.0	5.0	8.0						
Flash Point °C	ASTM D92	224	210	210	216	218						
Flash Point °F	ASTM D92	435	410	410	420	425						
Gravity, °API	ASTM D287	32.54	31.50	30.75	27.74	26.97						
Oxidation Hours	ASTM D943	-	5000	-	-	-						
Phosphorus, wt. %	ASTM D5185	0.13	0.033	0.092	0.092	0.092						
Pour Point °C (°F)	ASTM D5950	-42°C (-44°F)	-48°C (-54°F)	-33°C (-27°F)	-30°C (-22°F	-27°C (-17°F						
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8626	0.8681	0.8721	0.8886	0.8929						
Viscosity @ 100°C cSt	ASTM D445	9.322	7.72	6.929	11.87	19.45						
Viscosity @ 40°C cSt	ASTM D445	55.13	43.93	43.25	106.6	212.6						
Viscosity Index	ASTM D2270	152	146	118	100	104						
Zinc, wt. %	ASTM D5185	0.139	0.041	0.11	0.11	0.11						
*Available in Bulk												

\*Δ



FRICTION

MANAGEMENT FOR





	Universal Tractor Trans- Hydraulic Fluid	Ford Hydraulic Transmission SAE 90	Hydrostatic MV ISO 46	TO-4 Torque Fluid SAE 10	TO-4 Torque Fluid SAE 30	TO-4 Torque Fluid SAE 50		
ABEX/Denison HF-0, HF-1, HF-2	0						John Deere J20D	
AGCO 821XL	0						Kubota UDT	
Allison C-3	0						Massey Ferguson M-1110, M-1127,	
Allison C-4	0			•	•	•	M-1127A, M-1127B	
Allison C-4, C-2	0						Massey Ferguson M-1129, M-1129A, M-1135, M-1141	
API GL-1		0					Massey Ferguson M-1135, M-1141, M-1143, M-1145	
API GL-4	0						MAT 3525, 3505	
Bosch Rexroth			0				IMAT 3525, 3505	
Case JIC 144, 145	0						Oliver/White 0-1826, 01766, 01722,	
Case MS-1209, 1210, 1207, 1204	0						Q1766B, Q1705, Q1802, Type 55	
CAT TDTO				0	0	0	Parker Denison HF-0, HF-1	
CAT TO-2	0			0		0	Parker Denison HF-2	
CAT TO-4				•	•	•	Sauer/Danfoss (Sundstrand) ?	
eutz, Allis-Chalmers ower Fluid 821	0						Hydrostatic Transmission Fluid Sperry Vickers/Eaton I-286-S, M-2950-	
DIN 51524, Part 1,2,3			0				Sperry Vickets/ Laton 1-200-3, IV-2330-	
Ford New Holland M2C41A,B, M2C48B, M2C53A, M2C86A	0						Sperry Vickers M-2950-S Mobil Hydraulics, I-286-S Industrial Hydraulic	
Ford New Holland M2C86B, M2C134A, B, C, D, (NH-410B)	0						Steiger Hyd-Trans SEMS 17001	
General Motors LS-2			0				US Steel 127, 136	
Grove Manufacturing Hydraulic Fluid	0						Valmet, Yanmar, New Idea Power Units Leyland, Belarus & Fiat	
Hesston-Fiat AF-87, Oilofiat Tutela Multi-F	0						Versatile Gear and Hyd-Trans	
International Harvester Hy-Tran B-6	0						Vickers Vickers 35VQ25	
JCMAS HK			0				ZF TE-ML 03C	
ohn Deere J14C, 303	0						◆ = MAG 1 Recommended ● = Meets Re	ui
ohn Deere J20C/J20A/J21A	0							





Ford Hydraulic Transmission SAE 90	Hydrostatic MV ISO 46	TO-4 Torque Fluid SAE 10	TO-4 Torque Fluid SAE 30	TO-4 Torque Fluid SAE 50
	0			
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Automotive transmissions have evolved dramatically, requiring highly specialized fluids for unique applications. One brand has evolved right alongside - MAG 1<sup>®</sup>. Only the most advanced transmission fluids and additives meet the difficult challenges of effectively balancing performance, strength and durability.

MAG 1 transmission additive products help optimize the friction, torque and function of your automatic transmission to maintain or improve the performance of your vehicle.

# MAG 1 AUTOMATIC TRANSMISSION FLUID WITH STOP LEAK

MAG 1 Automatic Transmission Fluid with Stop Leak softens and conditions seals to help prevent leaks. Benefits include:

- · Guards against seal hardening and distortion.
- Excellent high- and low-temperature protection.
- Stable friction properties for smooth and consistent shifting.
- Excellent shear stability.

S	Automatic Transmission Fluid with Stop Leak	Pack Size	
PACK SIZE		12/12 Ounces	
PAC		6/1 Quart	
S		Automa	
CLAIMS	Dexron®-III G/H, Dexron®-II, Dexron®, AW1		
5	Mercon, Ford ESP-M2C166-H		
	Chrysler MS-5931		
	Ford M2C195-A		
	GM 9985010		
	• = Meets Requirements <sup>O</sup> = Suitable for Use		

# TYPICAL PHYSICAL PROPERTIES

Properties	Test Method	
Brookfield Viscosity at -40°C, cP	ASTM D2983	
Color	ASTM D1500	
Flash Point °C	ASTM D92	
Flash Point °F	ASTM D92	
Gravity, °API	ASTM D287	
Pour Point °C (°F)	ASTM D5950	
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	
Viscosity @ 100°C cSt	ASTM D445	
Viscosity @ 40°C cSt	ASTM D445	
Viscosity Index	ASTM D2270	







Automatic Transmission Fluid with Stop Leak	
13,777	
Red	
204	
400	
33.61	
-51°C (-60°F)	
0.8570	
7.146	
35.18	
170	



MAG 1<sup>®</sup> motor oils, lubricants and chemicals are designed to keep pace with today's engine demands, requiring lighter viscosities and increased power densities. It's the only brand with FMX<sup>®</sup> Technology System, which meets the difficult challenges of effectively balancing performance, strength and durability.

# THE MEANING OF EVOLUTIONARY PERFORMANCE™

Today's engines, machinery and equipment are evolving rapidly as OEMs push for more power density, lighter viscosity oil and increased fuel or fluid efficiency. MAG 1 is leading the way in this new evolution, based on the science of advanced additives and powerful molecular structures. It's all part of our exclusive FMX Technology System that boosts performance on many levels under the most severe operating conditions.

It means, despite lower viscosities, MAG 1 still delivers extraordinary performance, strength and durability, in every grade. Even the thinnest MAG 1 oils and fluids perform better than thicker oils of the past.

MAG 1 engine oils and lubricants are chemically formulated to deliver a higher level of performance that rises to the challenge of everincreasing demands and developments by automotive, heavy duty truck and industrial equipment manufacturers.



MAG 1 delivers unsurpassed protection to control friction and wear well beyond standard industry requirements. It can also help extend engine life and improve the performance of all types of vehicles, trucks, machinery, and equipment.



MAG 1 protects as well on the last day as it does on the first. Even under the most extreme operating conditions, it retains viscosity and withstands heat and shearing. •

MAG 1 is bolstered by FMX Technology, which provides a very strong oil film that shields engines, parts and machinery at multiple points of contact and fights friction between rotating parts.



With a powerful, molecular-reinforced formulation, MAG 1 reduces engine and equipment stresses from high heat, cold starts, heavy loads, steep inclines, dusty roads, power density, and more.

# WELL-EARNED REPUTATION

MAG 1 is the brand to trust no matter what kind of vehicle you drive or equipment you operate. Manufactured in the U.S.A. by one of the world's leading suppliers of lubricants and automotive chemicals, its solid reputation and record of performance over many years is a testament to the consistent, dependable quality of every MAG 1 product.



Manufactured by Warren Distribution, Inc. 950 S 10th St, Suite 300 | Omaha, NE 68108 | U.S.A. Toll Free: 800-852-1235 | Main: 402-341-9397 | Spanish/International: 800-949-4645 www.mag1.com | www.warrendistribution.com