

2-CYCLE, SMALL ENGINE, MOTORCYCLE & MARINE VEHICLES



Evolutionary Performance**



Small engines have evolved dramatically, requiring highly specialized fluids for unique applications. Only the most advanced oil meets the difficult challenges of effectively balancing performance, strength and durability. MAG 1[®] 2-Cycle Oils have been designed specifically to meet the demands of today's air cooled 2-cycle engines such as lawn mowers, string trimmers and chain saws.

- Reduces carbon deposits and protects pistons and cylinders
 Promotes engine cleanliness and prolongs spark plug life. from scuffing and weak.

 - Meets JASO FB and API TC requirements.
- FMX[®] technology creates a strong, durable and highperforming level of protection when the engine is on or off.
- Low Ash Formula.

K SIZES	Universal 2-Cycle*	-	Pack Size 12/2.6 Ounces 12/8 Ounces	Product # 60179 60138	
РАСК	Synthetic Universal 2-Cycle*		12/2.6 Ounces	63119	
	Synthetic Blend 2-Cycle with Fu	ıel Stabilizer	15.6 Ounces	63120	
NS		Universal 2-Cyclea	Synthetic Universal 2-Cycle	Synthetic Blend 2-Cycle w/ Fuel Stabilizer	
CLAIMS	JASO FB, API TC	Universal 2-Cyclea			
CLAIMS	JASO FB, API TC Jaso FD, ISO-L-EGC, API TC	Universal 2-Cyclea			

TYPICAL PHYSICAL PROPERTIES								
Properties	Test Method	Universal 2-Cycle	Synthetic Universal 2-Cycle	Synthetic Blend 2-Cycl w/ Fuel Stabilizer				
Color	ASTM D1500	Blue	Blue	Blue				
Flash Point °C	ASTM D92	105	105	99				
Flash Point °F	ASTM D92	221	221	210				
Gravity, °API	ASTM D287	31.22	31.22	-				
Pour Point °C (°F)	ASTM D5950	-18°C (0°F)	-18°C (0°F)	-32°C (-25°F)				
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8696	0.8696	-				
Sulfated Ash	ASTM D874	0.04	0.04	-				
Viscosity @ 100°C cSt	ASTM D445	7.686	7.85	7.5				
Viscosity @ 40°C cSt	ASTM D445	51.58	46.71	45				
Viscosity Index	ASTM D2270	114	138	130				

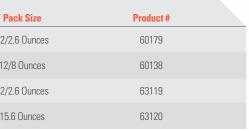
MAG 1 UNIVERSAL 2-CYCLE

MAG 1 Universal 2-Cycle Oil is formulated as a basic, conventional engine oil.

• Delivers superior friction stability to maintain smooth operation.

> • Provides a strong oil film to prevent metal-to-metal contact between rotating parts to prevent wear.





MAG 1 SYNTHETIC UNIVERSAL 2-CYCLE

MAG 1 Full Synthetic Universal 2-Cycle Oil is formulated for superior engine protection and low smoke with 100% pure full synthetic base oil and high performance additives.

MAG 1 SYNTHETIC BLEND 2-CYCLE WITH FUEL STABILIZER

MAG 1 Synthetic Blend Universal 2-Cycle Oil with Fuel Stabilizer is formulated to provide extra protection, compared to conventional oil.

- Low Smoke formula promotes engine cleanliness and prolongs spark plug life.
- Formulated with Fuel Stabilizers to help keep 2-cycle mixture fresh during long period of storage.



Evolutionary Performance**



MAG 1[®] small engine and transmission products are all premium fluids formulated to provide unsurpassed protection and prolong equipment life.

MAG 1 SYNTHETIC 2T 2 CYCLE MOTOR OIL

MAG 1 Synthetic 2T 2 Cycle Motor oil is specially engineered with synthetic base stocks for small two stroke engines.

Low Ash Formula.

MAG 1 2T 2 CYCLE MOTOR OIL

MAG 1 2T 2-Cycle Engine Oil is specially formulated for use in high-performanse air-cooled 2-cycle engines. Promotes engine cleanliness, reduces carbon deposits and prevents exhaust system blocking. Suitable for oil injection of premix systems and • Formulated with conventional base stocks. has low exhaust emissions.

MAG 1 4T 10W-40 MOTOR OIL

MAG 1 10W-40 4T Motor Oil is full synthetic oil specially engineered with for small four stroke engines used in recreational powersports.

• Special friction modifiers for wet-clutch performance.

MAG 1 4T 20W-50 MOTOR OIL

MAG 1 20W-50 4T Motor Oil is specially engineered for small four stroke engines used in recreational powersports. Benefits include:

- Special friction modifiers for wet clutch performance.

MAG 1 MARINE TC-W3 2-CYCLE

MAG 1 TC-W3 2-Cycle Oil is a premium, high-quality motor oil formulated for use MAG 1 80W-90 Marine Gear Oil is specially for the high-performance needs of in outboard motors, motorcycles, snowmobiles, chain saws, garden equipment, stern drives and outboard motors and lower units. Smooth and quiets operation. and other fuel-lubricated or oil-injected 2-cycle engines. Formulated to prevent ring • Superior protection against wear, especially under extreme pressure and sticking, reduce spark plug fouling, keep engine clean, prevent scuffing and work high torque operation. with injector and fuel-lubricated engines. Licensed by NMMA.

ES		Pack Size	Product #	CLAIMS		2T 2-Cycle	4T 10W-40	TC-W3 2-Cycle	Marine 80W-90	Synthetic 2T 2-Cycle
3	2T 2-Cycle*	6/1 Quart	64171	AI	API GL-5				•	
PACK SIZES	4T 10W-40*	6/1 Quart	62971	CL	API SL		•			
7A (55 Gallon	67159		JASO FB, API TC	•		•		
	TC-W3 2-Cycle*	12/16 Ounces	60140		JASO FD, ISO-L-EGC, API TC					٠
		6/1 Quart	00609		JASO MA, MA-2, ISO-L-EMA2		*			
		3/1 Gallon	60136		NMMA TC-W3			*		
		55 Gallon	00614		Mercury, Johnson, Yamaha, Evinrude,			•**		
	Marine 80W-90	6/1 Quart	62845		Force, Mariner, Suzuki, Nissan			-		
	Synthetic 2T	55 Q II	00515		SAE J2360					
	2-Cycle	55 Gallon	66515		★ = Approved ● = Mee	ts Requiremen	ts			

TYPICAL PHYSICAL PROPERTIES							
Properties	Test Method	2T 2-Cycle	4T 10W-40	TC-W3 2-Cycle	Marine 80W-90	Synthetic 2T 2-Cycle	
Calcium, wt. %	ASTM D5185	-	0.207	-	-	-	
Cold Cranking Simulator at (°C), cP	ASTM D5185	-	6010 (-25)	-	-	-	
Color	ASTM D1500	Blue	2.5	Blue	7	Blue	
Flash Point °C	ASTM D92	105	220	165	224	125	
Flash Point °F	ASTM D92	221	428	329	435	257	
Gravity, °API	ASTM D287	31.22	31.22	32.20	28.08	34.76	
High Temperature / High Shear Vis at 150°C, cP	ASTM D5481	-	3.91	-	-	-	
Molybdenum, wt. %	ASTM D5185	-	0.0044	-	-	-	
Nitrogen, wt. %	ASTM D4629	0.01	0.0079	0.47	-	0.019	
Phosphorus, wt. %	ASTM D5185	-	0.121	-	-	-	
Pour Point °C (°F)	ASTM D5950	-18°C (0°F)	-42°C (-44°F)	-47°C (-53°F)	-33°C (-27°C)	-	
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8696	0.8696	0.8644	.8867	0.8511	
Sulfated Ash, wt. %	ASTM D874	0.04	0.87	< 0.001	-	0.10	
Viscosity @ 100°C cSt	ASTM D445	7.686	13.95	6.15	28.08	6.93	
Viscosity @ 40°C cSt	ASTM D445	51.58	93.95	30.07	144.8	33.95	
Viscosity Index	ASTM D2270	114	152	159	103	169	
Zinc, wt. %	ASTM D5185	-	0.132	-	-	-	



MAG 1 MARINE 80W-90 GEAR OIL

- High resistance to thermal breakdown.
- Helps prevent foaming, rust and corrosion.



Evolutionary Performance**



OEMs continue to evolve small engine designs and operating conditions are becoming more severe. Only the most advanced lubricants meet the difficult challenges of effectively balancing performance, strength and durability. MAG 1[®] Small Engine Lubricants provide unsurpassed protection even in the harshest conditions.

MAG 1 AIR COMPRESSOR OIL

MAG 1 Air Compressor Oil is a unique blend of highly refined petroleum base stocks enriched with anti-foam agents. This formula creates a long lasting lubricant that allows smooth operating conditions and helps extend the life of your compressor.

MAG 1 PRESSURE WASHER PUMP OIL

MAG 1 Pressure Washer Pump Oil is a multi-purpose pump lubricant that resists foaming and aeration. Protects against rust and oxidation.

ES		Pack Size
SIZ	Pressure Washer Oil	6/1 Quart
СK	Air Commences Oil	12/16 Ounces
ΡA	Air Compressor Oil	3/1 Gallon

TYPICAL PHYSICAL PROPERTIES						
Properties	Test Method	Pressure Washer Oil	Air Compressor Oil			
Color	ASTM D1500	1.5	0.5			
Flash Point °C	ASTM D92	221	263			
Flash Point °F	ASTM D92	430	505			
Gravity, °API	ASTM D287	21.94	30.27			
Pour Point °C (°F)	ASTM D5950	-30°C (-22°F)	-13°C (9°F)			
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.9222	0.8747			
Viscosity @ 100°C cSt	ASTM D445	10.98	12.49			
Viscosity @ 40°C cSt	ASTM D445	143.8	112.38			
Viscosity Index	ASTM D2270	38	103			





Product #	
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Evolutionary Performance[™]

MAG 1[®] 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[®] 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. • **| --- |** • STRENGTH 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.



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