

Two-Cycle and Four-Cycle Engine Oils

**Pro Two-Cycle TC-W3 RL - Synplus Synthetic Blend 2T - 2T Motorcycle
X-treme 4T SG Motorcycle - 4-T X-treme Max MC**

(1/20/2012 edition)

Amalie Two-Cycle Engine Oils are designed for every 2-cycle engine application and for every budget. They may be used in either pre-mix or mix-on-demand VRO oil delivery systems. Amalie Two-Cycle engine oils deliver excellent service up to a 100:1 fuel-to-oil ratio for individual engines. These oils may also be used where SAE 30 or 40 oils are recommended. Always consult the owner's manual for the recommended engine oil type and for the specific fuel-to-oil mix ratios.

Amalie Pro Two-Cycle TC-W3[®] RL engine oil provides the highest level of protection for high performance, high horsepower, two cycle marine engines. This oil is certified NMMA (BIA) and it is formulated to combat wear, scuffing and deposits. It is truly a high-temperature oxidation resistant oil which protects against corrosion, ensures cleanliness, and provides lubricity for long engine life. This is an ash-less formulation that prevents carbon deposit build-up on engine parts, and protects against ring sticking. It is certified RL which means it has high film strength for improved lubricity that results in increased engine efficiency, reduced bearing wear and cleaner emissions with less smoke. Amalie Pro Two-Cycle TC-W 3[®] RL oil is recommended for all water cooled two cycle engines, including the performance demands of Mercury, OMC Johnson/Evinrude, Yamaha, Honda, Kawasaki and many other engines requiring NMMA TC-W 3, TC-W 2, or TC-W type oils. These oils may be used in other air-cooled and water-cooled applications, such as snowmobiles, personal water craft (PWC), jet skis, lawn mowers, snow blowers, all-terrain vehicles and many others requiring API service category TC.

Amalie Synplus Synthetic Blend 2T Motorcycle Oil is a synthetic blend lubricant formulated for high performance air-cooled 2-cycle motorcycles and smaller four-cycle engines. It is truly a high-temperature oxidation resistant oil which protects against corrosion, ensures cleanliness, and provides lubricity for long engine life. This is a low ash formulation that prevents carbon deposit build-up on engine parts, and protects against ring sticking. This oil is formulated with high-temperature performance chemistry and special smoke reducing components to give you the ultimate in engine protection and environmental performance. These oils may be used in other air-cooled applications, such as snowmobiles, lawn mowers, string trimmers, air-blowers, snow blowers, all-terrain vehicles and many others requiring API service category TC, ISO-L-EGC, EGD and JASO FC, FD.

Amalie 2T Motorcycle Oil is a general-purpose lubricant designed for air-cooled, two-cycle engines where Amalie Synplus Synthetic Blend performance is not required. It is formulated with premium base stocks for motorcycles and higher-temperature applications such as chain saws, weed-cutters, string trimmers, air-blowers, lawn mowers, snow blowers, and small generators. Amalie 2T Motorcycle Oil mixes easily with gasoline and should be used in a fuel to oil ratio specified by the equipment manufacturer.

Amalie X-treme 4T SG and Amalie 4-T X-treme Max MC Motorcycle Oils * are designed to provide wear protection, sludge and varnish protection, and thermal stability for superior performance in four-cycle motorcycle applications. Blended with high-quality base stocks and performance chemistry, the Amalie 4T oils are formulated for superior operation in high-revving, high-temperature motorcycle engines and is blended to give superior performance in those engines and transmissions that have a common sump and require specialized frictional characteristics for clutches and wet brakes. Amalie X-treme 4T is available in SAE 10W40 which meets or exceeds API SG and JASO MA, and the Amalie 4-T X-treme Max MC 15W40 & 20W50 meets or exceeds API SN and Jaso MA.

* Amalie recommends Amalie PRO High Performance Synthetic Blend 20W50 for Harley-Davidson Motorcycles.

Some performance levels are limited by viscosity grades. Please consult the Amalie Performance Application Chart, the Amalie Inspection Data Table for the appropriate Amalie product or contact your Amalie District Manager for more complete information and recommendations.

TYPICAL INSPECTION DATA

| | API Gravity | Flash Point °C. | Viscosity cSt @100C | Viscosity cSt @40C | VI | Pour Point, °C. | % Weight ASH | VISUAL COLOR |
|--------------------------|-------------|-----------------|---------------------|--------------------|-----|-----------------|--------------|--------------|
| Pro Two-Cycle TC-W3 RL | 29.2 | 190 | 7.20 | 42.8 | 135 | -39 | 0 | BLUE-GREEN |
| Synplus Synthetic 2T | 30.9 | 190 | 7.00 | 42.0 | 132 | -39 | 0.08 | RED |
| 2T Motorcycle | 25.0 | 190 | 10.00 | 103.0 | 91 | -9 | 0 | BLUE-GREEN |
| X-treme 4T SG MC 10W-40 | 28.0 | 200 | 13.50 | 92.0 | 147 | -36 | 0.6 | N/A |
| 4-T X-treme Max MC 15W40 | 29.0 | 215 | 14.50 | 100 | 149 | -30 | 0.8 | N/A |
| 4-T X-treme Max MC 20W50 | 28.0 | 220 | 18.0 | 160 | 125 | -27 | 0.8 | N/A |

PERFORMANCE APPLICATION CHART

| SPECIFICATIONS | Pro Two-Cycle TC-W 3 [®] RL | Synplus Synthetic 2T | 2T Motorcycle | X-treme 4T SG Motorcycle**** | 4-T X-treme Max MC **** |
|-------------------------------|--------------------------------------|----------------------|---------------|------------------------------|-------------------------|
| TC-W 3 [®] RL (NMMA) | √ | - | - | - | - |
| API: | | | | | |
| TA* | √ | √ | √ | - | - |
| TB* | √ | √ | - | - | - |
| TC | √ | √ | - | - | - |
| SG | - | - | - | √ | - |
| SN | - | - | - | - | √ |
| JASO: | | - | | | |
| FA* | √ | √ | - | - | - |
| FB | √ | √ | - | - | - |
| FC | ** | √ | - | - | - |
| FD | *** | *** | - | - | - |
| JASO 4T: | | | | | |
| MA | - | - | - | √ | √ |
| ISO-L: | | | | | |
| EGB | √ | √ | - | - | - |
| EGC | ** | √ | - | - | - |
| EGD | *** | *** | - | - | - |

* API TA, TB, and Jaso FA are obsolete specs, however where checked the oils meet the requirements.

** meets all specifications for FC and EGC except port blocking.

*** Suitable for use for FD and EGD requirements.

**** Amalie recommends Amalie PRO High Performance Synthetic Blend 20W50 for Harley-Davidson

