



The First in Synthetics®

hp Injector Synthetic 2-Cycle Oil

• **NMMA TC-W3** • **API TC**

hp Injector (HPI) is a precise synthetic formulation that exceeds the lubrication demands of modern two-cycle motors. Today's two-cycle outboard motors operate at higher temperatures and at leaner oil and fuel ratios than older motors. This difficult operating environment requires proper lubrication technology to keep motors running long and strong. hp Injector is a premium lubricant engineered with AMSOIL synthetic base oils and MAX-DOSE advanced additives. It contains up to 30 percent more additives than other TC-W3 two-cycle oils for "super clean" operation. And because AMSOIL synthetic oils are more durable, they are perfect for lean mixture operations. In addition, this AMSOIL-exclusive product produces low smoke and odor and has low aquatic toxicity properties, making it ideal for boats.

hp Injector improves engine life. It helps prevent deposits that cause ring sticking and ring jacking (carbon build-up behind the ring, forcing it outward), a phenomenon that occurs in modern DFI outboard motors. hp Injector reduces wear. It has excellent lubricity properties and provides a good lubricating oil film, protecting pistons and bearings. hp Injector protects against rust, an important feature where motors are subjected to water. hp Injector provides superior performance in direct fuel injected (DFI), semi-direct fuel injected (SDI), electronic fuel injected (EFI) and carbureted outboard motors, as well as other recreational equipment.



- **Superior performance in DFI outboard motors**
- **Reduces piston and combustion chamber deposits**
- **Protects against "ring jacking" common to DFI outboards**
- **Low smoke, low odor product**
- **Contains up to 30 percent more additives for "super clean" operation**
- **Reduces wear for long engine life**
- **Protects against rust**
- **Multi-functional and recommended for use in many two-cycle motors**
- **Low aquatic toxicity**
- **Recommended for use as injection oil or at a 50:1 pre-mix**



TYPICAL TECHNICAL PROPERTIES **hp Injector Synthetic 2-Cycle Oil (HPI)**

Kinematic Viscosity @ 100°C, cSt (ASTM D-445)	8.5	Pour Point, °C (°F) (ASTM D-97)	-46 (-51)
Kinematic Viscosity @ 40°C, cSt (ASTM D-445)	46.8	Flash Point, °C (°F) (ASTM D-92)	86 (187)
Viscosity Index (ASTM D-2270)	160	Fire Point, °C (°F) (ASTM D-92)	86 (187)

APPLICATIONS

hp Injector is recommended for use in all two-cycle outboard motors including, but not limited to, **Mercury® EFI & Optimax®, Johnson® and Evinrude® FICHT® and E-TEC™, Yamaha® HPDI, Nissan® and Tohatsu® TLDI®, Suzuki®, Mariner® and Force®**. Also recommended for use in all two-cycle personal watercraft and jet boats, as well as snowmobiles, motorcycles and ATVs.

Use as injection oil or as 50:1 pre-mix (2.6 oz. per U.S. gallon of gas) where NMMA TC-W3 or API TC oils are specified. *Compatible with mineral and synthetic TC-W3-type two-cycle oils, however, mixing two-cycle oils should be minimized.*

AMSOIL 2-CYCLE OIL RECOMMENDATIONS

AMSOIL 2-Cycle Oil	Outboard	Snowmobile, Motorcycle & ATV	Personal Watercraft & Jet Boat	Chain Saw, Chop Saw & Pump	Weed Eater, Blower & Lawn Mower	Moped, Scooter & Go-Cart
hp Injector (HPI) TC-W3, API TC (Injection or 50:1 Pre-Mix)	Excellent (4) (5)	Very Good	Very Good	Not Recommended	Not Recommended	Not Recommended
INTERCEPTOR (AIT) API TC, JASO FC (Injection or 50:1 Pre-Mix)	Not Recommended	Excellent (4)	Excellent (3) (4)	Good	Good	Good
DOMINATOR (TDR) API TC, JASO FC (Injection or 50:1 Pre-Mix)	Racing (1)	Racing (2)	Racing (2) (3)	Very Good	Very Good	Very Good
Saber Professional 100:1 Pre-Mix (ATP) ISO-L-EGD, JASO FD, API TC	Not Recommended	Very Good Pre-Mix Only	Very Good Pre-Mix Only (3)	Excellent	Excellent	Excellent
Saber Outboard 100:1 Pre-Mix (ATO) TC-W3, API TC	Excellent Pre-Mix Only	Very Good Pre-Mix Only	Very Good Pre-Mix Only	Not Recommended	Not Recommended	Not Recommended

Equipment manufacturers and motor builders have redesigned two-cycle motors to reduce emissions and increase fuel economy. These changes have increased operating temperatures, reduced oil consumption and incorporated direct fuel injection and exhaust power valves. AMSOIL 2-Cycle Oils are designed to maximize performance in all types of engine designs and are optimized for select applications.

Even though AMSOIL 2-Cycle Oils have been optimized for specific applications, they are multi-functional and recommended for use in many areas. The chart rates each oil's performance abilities per application as follows:

Excellent: The primary recommendation for the oil. The oil is specifically designed for the operating conditions of the motors in these markets. There is only one "Excellent" recommendation per category.

Very Good: A main recommendation for the oil. Identifies an oil that is very good for the operating conditions of these motors.

Good: A secondary recommendation for an oil. The oil was not specifically designed for these applications. However, the chemistry in the oil is suited to the operating conditions of these motors.

Not Recommended: Identifies applications where the product was not intended for use.

- Notes:**
- (1) Not recommended for long-term use in outboard motors as a TC-W3-type oil, although excellent as a racing oil for short term use where motors are periodically inspected.
 - (2) Excellent for racing or modified motors. Very good for recreational use.
 - (3) For applications calling for a TC-W3 product use the recommendations listed under Outboards.
 - (4) Recommended for all direct fuel injected (DFI), electronic fuel injected (EFI) and carbureted motors.
 - (5) Includes Mercury® Optimax®, Johnson® & Evinrude® FICHT® & E-TEC™, Yamaha® HPDI, Nissan® & Tohatsu® TLDI®.

DANGER: Harmful or fatal if swallowed. Contains synthetic lubricant and petroleum distillates. If swallowed, do not induce vomiting. Contact a physician immediately. Avoid frequent or prolonged skin contact. Wash skin thoroughly with soap and water after handling. Avoid eye contact. Flush eyes with water for 15 minutes in case of contact. **KEEP OUT OF REACH OF CHILDREN.**

AMSOIL products and Dealership information are available from your local AMSOIL Dealer.



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