Briggs & Stratton Racing recommends using ONLY Briggs & Stratton 4T full-synthetic oil custom blended by Amsoil. This specially formulated oil was developed in conjunction with Briggs & Stratton Racing to meet the unique needs of our engines, the materials used, engineered clearances each is built to, as well as the air-cooled, hi-revving environment they compete in. The use of ‘karting’ oils is NOT recommended as many offer limited protection and stability as well as are prone to water contamination. The use of ‘Automotive’ or ‘Racing’ oils targeted for automobile engines are also NOT recommended as they are engineered for a pressure, not splash lubed system, and a lower operating temperature.

We recommend visiting our website, www.BriggsRacing.com where you will find:

• An illustrated replacement parts list for your engine
• Specific torque and fastener specifications
• A carburetor tuning and set-up guide
  (recommended initially to setup your carburetor as factory settings tend to change during the shipping process)
• Informative videos on:
  How to properly install your clutch to prevent damage
  How to check valve lash (recommended within the first 30 minutes of run time and periodically thereafter)
  How to set proper torque
  Setting your PZ series carburetor float height
  How to inspect your cylinder head and carburetor against a ‘standard’ racing rule set
• Complete dealer list by state and zip code search
  Find a local dealer for service and parts support
• Forums:
  Ask fellow Briggs & Stratton racers and dealers questions
• Facebook
  Post, share, and stay in touch with what is going on in the world of Briggs & Stratton Racing

Please be aware that specific knowledge of engines, tools, and sanctioning body rules and regulations may be necessary to properly and safely complete installation and/or repairs. If you do not have the knowledge or tools necessary please contact a Briggs & Stratton Racing dealer. A complete list is available at www.BriggsRacing.com.

Briggs & Stratton Racing engines are intended for use only in controlled environments and only for sanctioned, competitive racing. Due to the inherit nature of racing, Briggs & Stratton does not warrant race engines or parts.

Each racer is solely responsible to check and maintain engine legality per the published rule set they compete under.
**BEFORE OPERATING ENGINE**
- Read entire Operating & Maintenance Instructions AND the instructions for the equipment this engine powers.*
- Failure to follow instructions could result in serious injury or death.

**OPERATOR SAFETY**

**SAFETY AND CONTROL SYMBOLS**

- **Fire**
- **Moving Parts**
- **Oil**
- **Toxic Fumes**
- **Slow**
- **Sharpened**
- **Read Manual**
- **Hot Surface**

The safety alert symbol is used to identify safety information about hazards that can result in personal injury. A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

**DANGER** indicates a hazard which, if not avoided, will result in death or serious injury.

**WARNING** indicates a hazard which, if not avoided, could result in death or serious injury.

**CAUTION** indicates a hazard which, if not avoided, could result in minor or moderate injury.

**NOTICE** indicates a situation that could result in damage to the product.

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**WARNING**
The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

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**WARNING**
Briggs & Stratton® Engines are not designed for and are not to be used for: fun-karts; go-karts; children’s, recreational, or sport all-terrain vehicles (ATVs); motorcycles; hovercraft; aircraft products; or vehicles used in competitive events not sanctioned by Briggs & Stratton. For information about competitive racing products, see www.briggsracing.com. For use with utility and side-by-side ATVs, please contact Briggs & Stratton Engine Application Center, 2-866-927-3349. Improper engine application may result in serious injury or death.

**NOTICE:** This engine was shipped from Briggs & Stratton without oil. Before you start the engine, make sure you add oil according to the instructions in this manual. If you start the engine without oil, it will be damaged beyond repair and will not be covered under warranty.

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**WARNING**
Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death.

**When Adding Fuel**
- Turn engine off and let engine cool at least 2 minutes before removing the fuel cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
- If fuel spills, wait until it evaporates before starting engine.

**When Starting Engine**
- Ensure that spark plug, muffler, fuel cap and air cleaner (if equipped) are in place and secured.
- Do not crank engine with spark plug removed.
- If engine floods, cut choke (if equipped) to OPEN/RUN position, move throttle (if equipped) to FAST position and crank until engine starts.

**When Operating Equipment**
- Do not tip engine or equipment at angle which causes fuel to spill.
- Do not choke the carburetor to stop engine.
- Never start or run the engine with the air cleaner assembly (if equipped) or the air filter (if equipped) removed.

**When Changing Oil**
- When you drain the oil from the top oil filler tube, the fuel tank must be empty or fuel can leak out and result in a fire or explosion.

**When Transporting Equipment**
- Transport with fuel tank EMPTY or with fuel shut-off valve OFF.

**When Storing Fuel Or Equipment With Fuel In Tank**
- Replace the fuel cap.
- Ensure that the fuel cap is tight, replaced, and locked.
- When filling fuel tank, to allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
- Wait until it evaporates before starting engine.

**WARNING**
Engineers give off carbon monoxide, an odorless, colorless, poisonous gas. Breathing carbon monoxide can cause nausea, fainting or death.

**WARNING**
Engineers give off carbon monoxide, an odorless, colorless, poisonous gas. Breathing carbon monoxide can cause nausea, fainting or death.

**WARNING**
Starting engine creates sparking. Sparking can ignite nearby flammable gases. Explosion and fire could result.

- If there is natural or LP gas leakage in area, do not start engine.
- Do not use pressurized starting fuels because vapors are flammable.

**WARNING**
Briggs & Stratton does not necessarily know what equipment this engine will power. For that reason, you should carefully read and understand the operating instructions for the equipment on which your engine is placed.

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Due to the conditions inherent in racing, Briggs & Stratton does not warrant race engines or parts.