

ENGINE BREAK-IN



2-STROKE SNOWMOBILES ENGINES - SKI-DOO

Rev6 highly recommend following this process and reading the service manual before installing the engine! **The most common failure of 2-stroke snowmobile engines is lack of lubrication from failing to purge the air out of the Oil Injection System thoroughly.** For a long, trouble-free machine life, no single action on your part is as important as a proper break-in of a new or rebuilt engine. You will need to run one full tank of fuel through your motor for the break-in period to be completed.

- If your machine has an Electronic Oil Injection System, like a Polaris Axys or a Ski-doo E-tec, refer to the service manual to initiate the break-in procedure. These systems will prime/purge the oil injection system and add additional oil for the first couple hundred miles to ensure proper break-in. If your machine **does not** have an Electronic Oil Injection System, skip to the next step.
- If your machine has a mechanical oil injection system, you will need to bleed the oil pump to ensure the oil is flowing properly with no air pockets. Rev6 recommends you **premix the first tank of fuel 40:1 ratio.** Use 16oz of 2-stroke injection oil for each 5 gallons of fuel. This, in addition to the lubrication supplied by the injection system, will assure proper engine break-in. If your machine **does not** have a mechanical oil injection system, skip to next step.
- If your machine does not use an oil injection system and is pre-mix only, Rev6 recommends a premix ratio of 20:1 for the first tank of fuel. Mix 32oz of 2-stroke injection oil for each 5 gallons of fuel. An oil rich premix will keep the top end lubricated and ensure a proper engine break in.

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For 800R E-TEC/P-TEC

- Fill the oil tank completely with the correct 2-stroke injection oil.
- Locate the bleed screw on the oil pump – it's a small brass screw on the pump body, usually facing outward or downward near the lower right side of the engine.
- Loosen the bleed screw one or two turns (don't remove it).
- Wait for oil to flow steadily (no bubbles) from the screw. This purges the air in the pump cavity.
- Tighten the bleed screw once you see solid oil.
- Manually actuate the pump arm – either with your hand or by pulling the throttle cable – to open the oil valve fully.
- Prime the feed lines:
 - Use a small syringe or squeeze bottle to push oil into the outlet fittings until oil starts dripping out at the banjos on the intake fittings.
 - Reconnect the lines to the intake check valves.
- Run the engine on premix for the first tank (50:1) just to be safe while the injection system catches up.
- With the sled running, hold the oil pump arm fully open for 30–60 seconds while idling – you should see a little smoke increase, confirming oil is feeding properly.

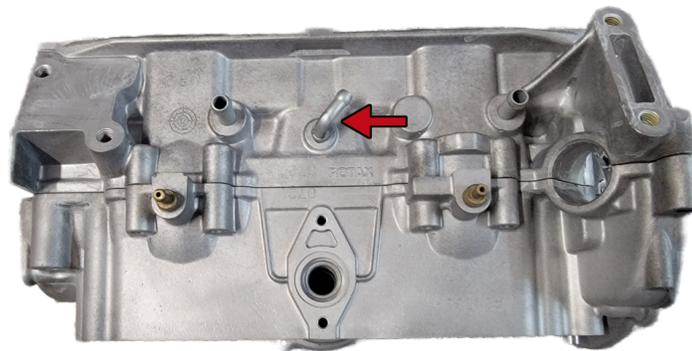
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Do not mix oil brands. Stick with whichever high quality oil brand you select. Rev6 recommends OEM manufacturer oils (Polaris, Yamalube, XPS, Etc.) or reputable oil manufactures, such as Amsoil, Royal Purple, Lucas, etc.

On models with a worm-gear cavity (such as 07-16 Ski-Doo 600/700/800R E-tec, P-tek), you must add 50ml of 2-stroke oil to the worm-gear cavity before installation. Fill the cavity by injecting oil through the breather bung located just above the oil pump or block-off plate. The worm gear for the impeller shaft must be operated in an oil bath. Failure to do so will result in immediate failure.



You will need to bleed the coolant system thoroughly before starting the engine.

- Fill your coolant tank with the recommended coolant in your owners manual. Leave the cap off.
- Start the engine and continue to bleed coolant until a steady stream of coolant is flowing from the bleeder screw and there is no air left in the system.
- Operate the motor until it is fully warmed up and the thermostat has been activated. Double check the bleeder at least one more time for any residual air in the system.
- Top off the coolant and replace the cap.

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Excessive heat build-up during the first three hours of operation will damage close-fitted engine parts. Do not operate at full throttle or high speeds for extended periods during the first three hours of use. Vary the throttle openings and machine speeds to reduce friction on all close-fitting machined parts, allowing them to break in slowly without damage.

Warning!: Do not idle your engine for warm up. Drive the sled slowly until it reaches operating temperature. You will need to heat-cycle your engine several times.

Drive the sled slowly, varying the throttle until the engine reaches operating temperature. Stop the motor and allow to cool to ambient temperature. Repeat several times to allow engine parts to acclimate to each other. Keep RPMs low until the motor reaches operating temperature.

Do not idle engine for longer than 1 minute. Vary throttle position and operation. Do not hold throttle wide open for longer than 7 seconds. This process must be followed for the life of the engine.

Drive with extra caution during the break-in period. Perform regular checks on fluid levels, lines, and all other important areas of the machine.

Serious engine damage can occur without the proper lubrication. Check the oil level often during the first tank of fuel. If the oil level doesn't go down, shut the machine down immediately and check the oil injection system.

If you have any questions or concerns, feel free to call customer service. We are happy to answer or assist in any way possible. A successful engine build doesn't end at assembly—it continues through break-in. Taking the time to properly break in your engine ensures that every component functions as intended, resulting in better performance, greater reliability, and longer service life.