

SPECIAL PROCEDURES

SERVICE TOOLS

Description	Part Number	Page
LARGE HOSE PINCHER.....	529 032 500	2

GENERAL

Refer to the following special procedures according to the specific event. Procedures described may not be applicable to every watercraft model.

PROCEDURES

TOWING THE WATERCRAFT IN WATER

Special precautions should be taken when towing a Sea-Doo watercraft in water.

The maximum recommended towing speed is 24 km/h (15 MPH).

This will prevent the exhaust system from filling with water, which may lead to water being injected into and filling the engine. Without the engine running, there isn't any exhaust pressure to push the water out the exhaust outlet.

NOTICE Failure to follow these instructions may result in damage to the engine. If you must tow a stranded watercraft in water, be sure not to exceed the maximum towing speed of 24 km/h (15 MPH).

SUBMERGED WATERCRAFT

NOTICE Never try to crank or start engine. Water trapped in the intake manifold would flow towards the engine and possible cause severe engine damage.

1. Drain bilge.
2. If the watercraft was submerged in salt water, rinse the bilge and all components thoroughly with fresh water using a garden hose to stop the salt corroding effect.
3. Check for water in the intake system. If water found in the intake system, refer to *WATER-FLOODED ENGINE* in this subsection.

Lubricating the Engine

Refer to *WATER-FLOODED ENGINE* in this subsection.

Inspecting the Fuel System

Check fuel tank for water contamination. If necessary, siphon and refill with fresh fuel.

WATER-FLOODED ENGINE

If the engine is flooded with water, it must be serviced within a few hours after the event. Otherwise, the engine will have to be overhauled.

NOTICE

- Never try to crank or start the engine. Water trapped in the intake manifold would enter the combustion chamber through the intake valves and may cause damage to the engine.
- An engine flooded with water must be properly drained, lubricant replaced (oil change), operated (boil out procedure), then lubricant replaced again, otherwise parts will be seriously damaged.

Draining the Exhaust System

If water is suspected to be in the exhaust system, remove the exhaust pipe and the muffler. Drain them or siphon the water out of them. Refer to *EXHAUST SYSTEM* subsection.

Draining the Intake System

1. If water is present in the air intake silencer, empty it. Refer to *AIR INTAKE SYSTEM* subsection.
2. Remove the air intake silencer and check for water in the supercharger inlet hose. Remove hose to empty it.
3. Remove the water from blow-by valve hose.
4. If water is suspected in the intake manifold, remove the intake manifold and drain it. Then siphon the water out from the intake valve ports. Refer to *INTAKE MANIFOLD* subsection.

Servicing the Supercharger

230Engines

The supercharger is maintenance free.

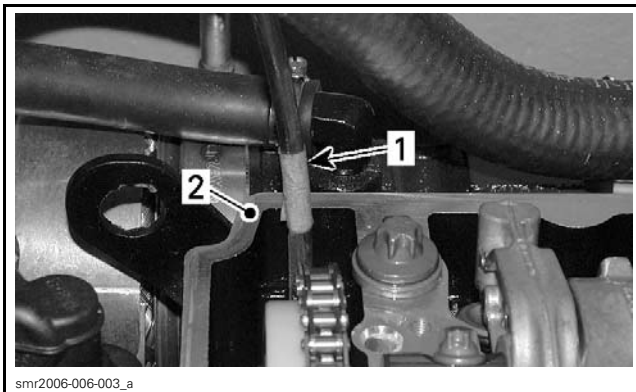
Subsection XX (SPECIAL PROCEDURES)

If there is water in the oil or in the supercharger inlet hose, let all components dry thoroughly

Replacing Engine Oil and Filter

If the engine oil is contaminated with water (oil will be milky), change the engine oil and filter as per following procedure.

1. Drain engine oil. Refer to *LUBRICATION SYSTEM* subsection.
2. Fully depress throttle lever and HOLD it for cranking.
3. Crank the engine for 5 seconds.
4. Remove the oil filter cap and the oil filter. Refer to *LUBRICATION SYSTEM* subsection.
5. Again, siphon the contaminated oil from the oil filter reservoir.
6. Remove valve cover. Refer to *CYLINDER HEAD* subsection.
7. Wrap a piece of tape around the suction pump tube 400 mm (16 in) from the end of the tube.
8. Insert the tube in the PTO area until the tape is even with the cylinder-block edge.
9. Siphon contaminated oil out.



TYPICAL

1. Suction pump tube with tape
2. Edge of cylinder-block

10. Remove the suction pump tube.
11. Reinstall valve cover.
12. Install a **NEW** oil filter and reinstall the oil filter cap.
13. Replenish the engine with appropriate amount of the recommended engine oil. Refer to *LUBRICATION SYSTEM* subsection.
14. Proceed with the *BOIL OUT PROCEDURE* that follows.

NOTE: The boil out procedure is intended to evaporate a small quantity of water contained in the oil system.

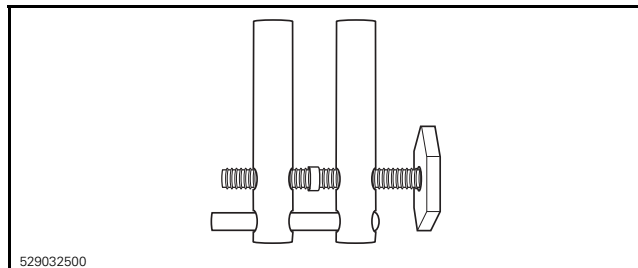
Boil Out Procedure in a Test Tank or Tied to a Trailer with Watercraft in Water

1. Connect the vehicle to latest BUDS2 version to monitor the coolant temperature. Coolant temperature must exceed 100°C (212°F) in order for the water to boil out. Once the boiling point is attained, the water will evaporate quickly.
2. Run the engine for 5 minutes at 3500 RPM.

WARNING

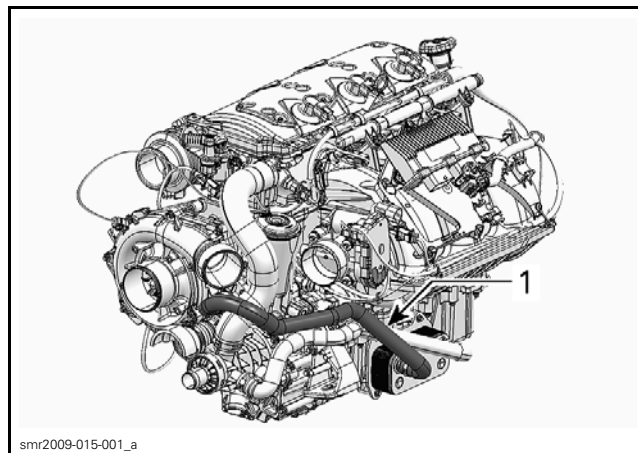
Be sure to safely secure the watercraft.

3. With the engine still running at 3500 RPM, install a LARGE HOSE PINCHER (P/N 529 032 500) on the coolant line going to the oil cooler.



WARNING

Certain components in the engine compartment may be very hot. Direct contact may result in skin burn. Do not touch any electrical parts or jet pump area when the engine is running.



TYPICAL

1. Oil cooler coolant inlet hose

4. Continue to run the engine at 3500 RPM for 15 more minutes (20 minute total run time).
5. Shut the engine off.
6. Remove the hose pincher from coolant line going to the oil cooler.

NOTICE Hose pincher must be removed prior to operating the watercraft. Failure to do this will result in damage to the engine.

7. Change the oil and filter again.

8. Procedure is now complete.

CAPSIZED WATERCRAFT

Capsized for More than 5 Minutes

Refer to *WATER-FLOODED ENGINE* in this subsection.