

Engine Removal / Installation

Kawasaki 4 Stroke Engines

SBT RECOMMENDS THE USE OF A FACTORY SERVICE MANUAL

Step 1

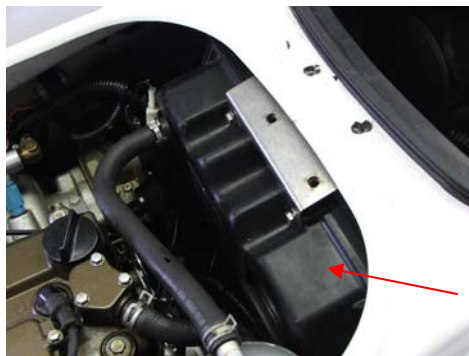
Removal From Hull

1.1 Disconnect the vent tube and wires of the battery, negative terminal first, and remove it from the ski. Now is a good time to check the water levels and fully charge the battery.

1.2 (Below) Shut off the fuel supply valve using the key.



1.3 (Below) Remove the airbox assembly.



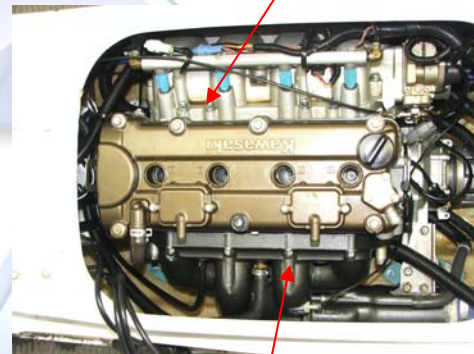
1.4 (Below) Disconnect and remove the oil catch can using a 10mm socket.



1.5 (Below) Disconnect the rear wire harness connections.



1.6 (Below) Remove the bolts from the fuel rail assembly and pull it out, using a 8mm socket.

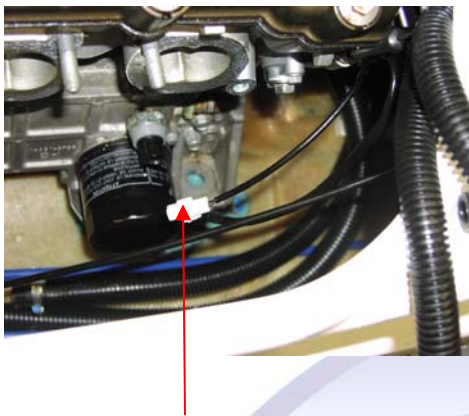


1.7 Remove all the bolts from the intake manifold using a 12mm socket and pull the manifold off.

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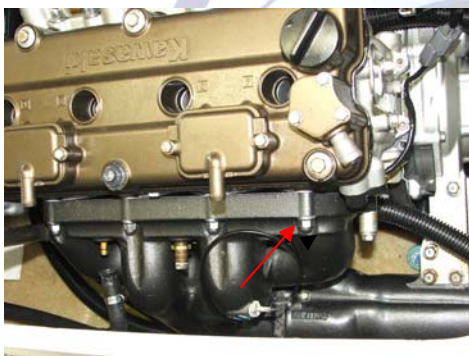
1.8 (below) Remove oil sensor, and stater wires



1.12 (below) remove motor mount bolts, not the ones that hold the mount to the hull, the ones that hold the motor to the mount.



1.9 (below) Remove water lines and exhaust manifold



1.13 slide motor forward till it clears coupling and lift out of hull, until you can reach the lines on the bottom of the motor. Disconnect these lines



1.10 Remove exhaust bracket.

1.11(below) Remove coupler cover



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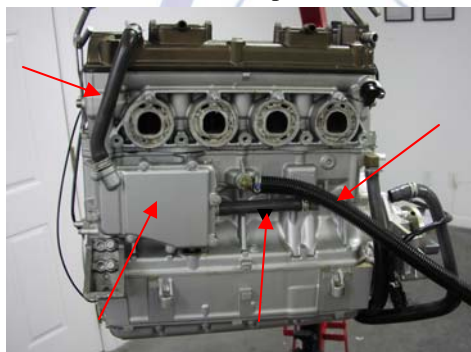
2.1 Removal of external parts

2.2 Remove and document location of sensors and their wire colors

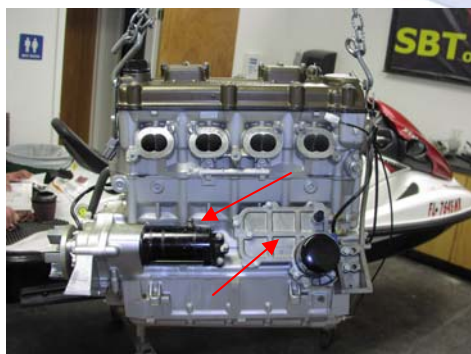
2.3 Remove cam sensor and PTO coupler and rear housing.



2.4 Remove oil separator and hoses



Remove starter, knock sensor and oil cooler.



At this point your core should look like the following pictures. Remove oil pan and

oil pumps, notice the oil pump chain, this stays with the engine for shipping.



Notice the bottom of the engine has the oil pumps removed These DO NOT get sent to SBT with the engine. The oil pan does NOT get sent to SBT as well.



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Follow the removal steps in reverse order to install your new SBT short block assembly:

- 19mm wrench
- Torque wrench

Sockets

- 10mm socket
- 12mm socket
- 14mm socket
- 8mm stud remover

Sealers / Lubricants

- Loctite® Medium Thread locker (Blue) 242
- Loctite® High-Tach
- Copper high-temp RTV

Parts

- External Gasket Kit

Misc.

- Ratchet
- Universal joint
- Long socket extension
- Short socket extension
- Screwdrivers
- Universal flywheel puller (Available at most major auto parts stores for rent/lend/purchase)
- Teflon pipe tape

Tools Needed:

Wrenches

- 10mm wrench