

WHIPPLE SUPERCHARGERS

Installation Instructions For 600/662/700SCI Stage 1, 2, 3 and 4



WHIPPLE SUPERCHARGERS
3292 NORTH WEBER AVE
FRESNO, CA 93722
TEL 559.442.1261
FAX 559.442.4153

www.whipplesuperchargers.com

A color PDF of this manual is available, email
tech@whipplesuperchargers.com for a copy

PREMIUM FUEL ONLY (91 OCTANE OR BETTER ALWAYS) RON+MON/2

Version A1R5

Last Updated May 15th, 2015

WHIPPLE SUPERCHARGERS

This product is intended for use on STOCK, UNMODIFIED, WELL-MAINTAINED ENGINES. Installation on a worn-out or modified engine is not recommended and could result in failure of the engine. If engine is in question, its recommended to perform a compression test of all cylinders, and perform a cylinder pressure leak down procedure. This will indicate the condition of the engine for reference.

****NOTICE:** Installation of Whipple Supercharger products signifies that you have read this document and have agreed to the terms stated within.

It is the purchaser's responsibility to follow all installation instruction guidelines and safety procedures supplied with the product as it is received by the purchaser to determine the compatibility of the product with the vessel or the device the purchaser intends to install the product on.

Whipple Supercharger assumes no responsibility for damages occurring from accident, misuse, abuse, improper installation, improper operation, lack of reasonable care, or all previously stated reasons resulting from incompatibility with other manufacturers' products.

There are no warranties expressed, implied, for merchantability or fitness for engine failure, parts failure, any type of damage to vessel in any way, or reimbursement for labor or inconvenience.

For best performance and continued reliability the following are MANDATORY.

1. USE ONLY PREMIUM GRADE FUEL (91 OCTANE OR BETTER) (RON + MON)/2.
2. ALWAYS LISTEN FOR ANY SIGN OF ENGINE KNOCKING, IF PRESENT DISCONTINUE USE IMMEDIATELY.
3. Your REV LIMITER is not your maximum propping RPM, always keep a 100RPM gap from max propping RPM to REV LIMITER RPM. 600SCI rev limit is 5850rpm and 700SCI is 6000rpm.
4. Your valve train must be in good working condition. All engines should be inspected to verify that the valve train and engine are in good working condition by inspecting each rocker adjustment. Adjust as needed.

RECOMMENDED PREPERATION FOR INSTALL

It's highly recommended that you replace the factory spark plugs (NGK BPR6ES) with a minimum of NGK R5671-A8. Proper spark plug gap is .032".

GENERAL INFORMATION

Always wear appropriate safety goggles and gloves when required.

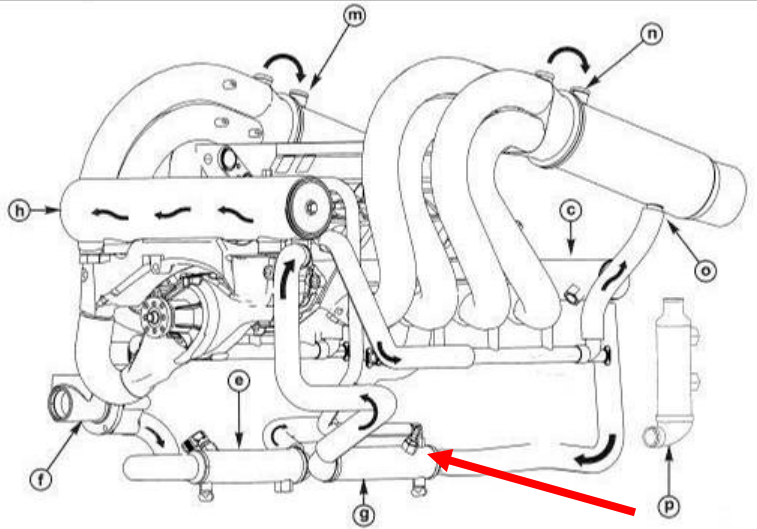
Always use caution around flammable liquids.



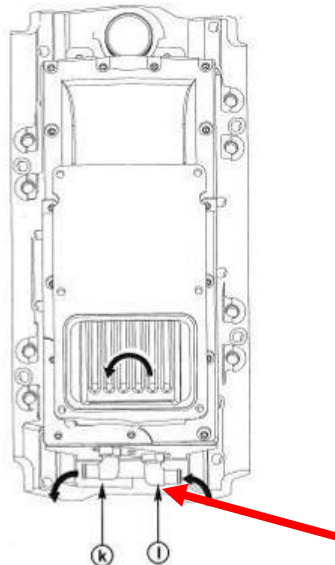
Run the engine before beginning installation of the kit until the fuel level is as close as possible to empty. Make sure that fuel tank does not have old gasoline and contains only fuel that is 91 octane or better before installing upgrades. If the octane of the fuel in the tank is old or unknown, drain the tank until empty and fill with 91-octane premium fuel or higher.

WHIPPLE SUPERCHARGERS

1. Its highly recommended to remove the factory spark plugs and install a set of NGK R5671-A8 and gap to .032".
2. Stage 1 systems, install the recalibrated PCM. No further modifications are required.
3. Stage 4 systems require a camshaft change. Follow Mercury service manual for camshaft removal and installation.
4. Locate the factory power steering cooler on the port side of the engine. At the inlet side, find the barbed fitting with the 5/8" line feeding the intercooler.
 - a. Remove hose from fitting.
 - b. Remove fitting from power steering cooler.
 - c. Install pipe plug in open pipe hole where you removed the barbed fitting. This will no longer be used to feed the intercooler.

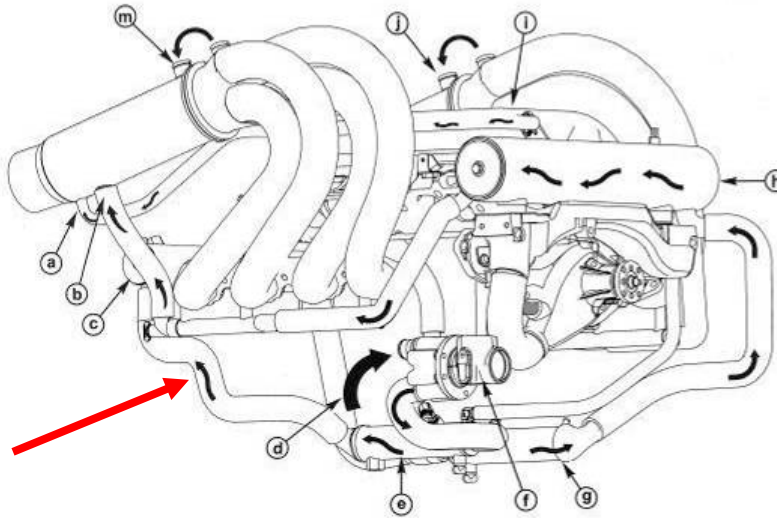


5. Locate the inlet line feeding the intercooler (came from power steering cooler fitting you just removed). The inlet line is on the port side, the lowest fitting of the two. Marked I in the diagram below. Note that all 600SCI engines and some 662/700SCI engines have very restricted inlet and/or outlet fittings. Although they're equipped with a 5/8" ID inlet and outlet line, some fittings only have a .25" hole in the 90deg inlet/outlet fittings. If this is what your unit has, its recommended that you drill this unit out. This is not mandatory, but is beneficial for power and will less the likelihood of setting the discharge air temp high code. Whipple also offers the -10 and -12 IC fitting kits that significantly help increase water flow, and should be installed on all packages that run in hot climates.



WHIPPLE SUPERCHARGERS

6. Locate the line coming from the fuel cooler to the oil cooler.
 - a. Find a straight area to install tee, cut this line and install supplied tee fitting. Secure with hose clamps on both sides.
 - b. Install supplied 5/8" line from tee to factory intercooler feed fitting, secure with clamps.

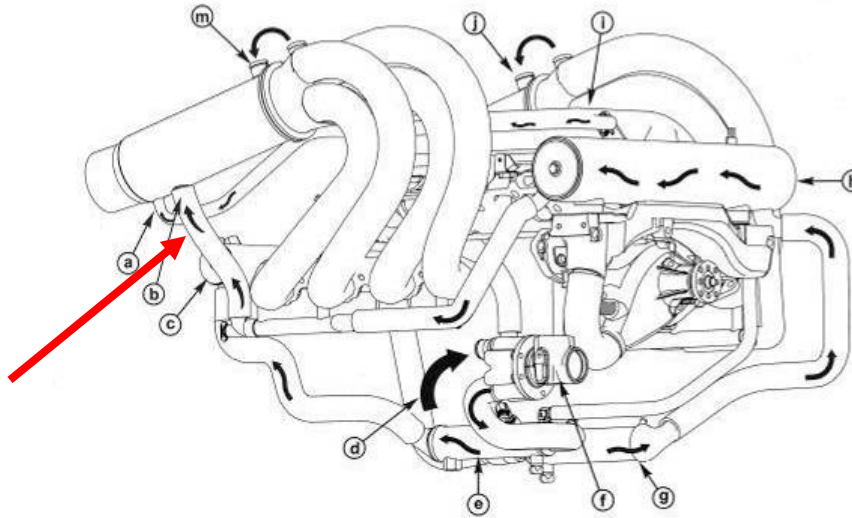


Water system key:

- a - Charge air cooler exit point
- b - Restrictor 4.88 mm (0.192 in.)
- c - Engine oil cooler
- d - Raw water inlet
- e - Fuel cooler
- f - Sea water pump
- g - Power steering fluid cooler
- h - Heat exchanger
- i - Outlet for charge air cooler
- j - Restrictor 10.31 mm (0.406 in.)
- k - Charge air cooler outlet fitting 6.74 mm (0.344 in.)
- l - Charge air inlet fitting
- m - Restrictor 9.8 mm (0.386 in.)
- n - Restrictor 10.31 mm (0.406 in.)
- o - Restrictor 5.11 mm (0.201 in.)
- p - Transmission fluid cooler

WHIPPLE SUPERCHARGERS

7. Locate the factory water line coming from the header water feed log to the exhaust tailpipe (port and starboard).
 - a. Remove rubber hose that feeds water from the header water log to the tailpipe on both sides of the engine.
 - b. Remove plastic drain plug from the end of header water log on both sides of engine.
 - c. Install the supplied rubber 1" cap on header water logs.
 - d. Install the supplied brass pipe plug in the tailpipes.



- a - Charge air cooler exit point
- b - Restrictor 4.88 mm (0.192 in.)
- c - Engine oil cooler
- d - Raw water inlet
- e - Fuel cooler
- f - Sea water pump
- g - Power steering fluid cooler
- h - Heat exchanger
- i - Outlet for charge air cooler
- j - Restrictor 10.31 mm (0.406 in.)
- k - Charge air cooler outlet fitting 8.74 mm (0.344 in.)
- l - Charge air inlet fitting
- m - Restrictor 9.8 mm (0.386 in.)
- n - Restrictor 10.31 mm (0.406 in.)
- o - Restrictor 5.11 mm (0.201 in.)
- p - Transmission fluid cooler

8. Inspect all tank fittings, along with the inlet fuel lines to ensure there are no anti-siphon or check valves. These will restrict the flow and limit the power level.
9. For Stage 3 systems, remove the factory air filter by removing the hose clamp (5/16" nut driver). To install the new air filter:
 - a. Install billet clamp bottom onto bottom of throttle body.
 - b. Install filter body ledge into billet clamp.
 - c. Install the supplied billet clamp top.
 - d. Use the supplied 6mm socket head cap screws to secure unit together.
 - e. If filter feels slightly loose, use some automotive or marine grade silicone in 4 area's (.125") round dots of silicone around the inner ring. When dry, these small little silicone dots will hold the unit from vibrating.

WHIPPLE SUPERCHARGERS

10. For systems that purchased the -10 IC fitting kit upgrade, remove the factory 90deg fittings by removing the locking plate on the front. To remove fittings, pull straight out. Install the supplied orings to the new fittings. Install the fittings into the intercooler, retain new fittings with the new supplied retaining plate. Use the factory bolts to secure retaining ring. Install the supplied push lock fittings to the new intercooler fittings. Press the factory 5/8" ID hose onto push lock fittings.



11. If the PCM's were identified as port/starboard/center when shipped to Whipple, those engine identifications will be maintained. If they are not marked, then in dual and triple applications, Whipple will flash one as starboard and one as port. Therefore, you may need to swap them depending on the gauge configuration.
12. During the flashing process, the gauge configuration is always reset to default, digital only. If your boat has analog type gauges, you will need to toggle the analog gauge option with a scan tool (Mercury CDS, Diacom, Rinda) for your gauges to read properly.