



## Upgrade Intercooler Kit

'99-'03 Ford 7.3L – P/N 2-478

'04-'06 Ford 6.0L – P/N 2-483





**READ THIS FIRST:** Study these instructions completely before proceeding. Engine and / or turbocharger damage may occur if any component within these instructions is improperly installed. Turbonetics, Inc or any of its distributors cannot be held responsible for damages as a result of negligent or improper installation. This complete turbocharger system can be installed using common tools and automotive procedures, but installer must have a thorough knowledge of automotive engine operation and feel comfortable working on the vehicle. If in doubt, contact Turbonetics' technical support staff at 805-581-0333, between the hours of 8:00AM and 5:00PM PST, Monday through Friday.

Remove the heat exchanger from its carton and inspect for any obvious physical damage. All kit components are thoroughly inspected and carefully packaged prior to shipment from the factory. If any shipping damage is evident, contact your supplier and request that they process a claim with the shipper involved. Be sure to review the parts list on page 2 to verify that you have all necessary system components to proceed. If any components in the parts list are missing, contact Turbonetics' customer service staff.

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**SAFETY REQUIREMENTS:** It is recommended to follow these precautions.

- Always wear safety glasses & gloves.
- Turn the ignition switch to the OFF position & disconnect the batteries.
- Always use properly rated jack stands when working under the vehicle.
- Prevent unexpected vehicle movement by using wheel chocks and/or parking brake.
- Operate the vehicle only in well ventilated areas.
- Do not smoke or use flammable items near or around the vehicle's fuel system.
- Keep hands, clothing and other objects away from moving parts when engine is running.

**SUPPLIES:** It is recommended to have the following items before beginning installation.

- Ford factory service manual, for your model year
- A large table or bench, and plenty of adjacent available workspace
- Standard selection of automotive tools, primarily metric sizes

**EST. INSTALL TIME:** 1 Hr.

**PARTS LIST**

<i>Part Number</i>	<i>Description</i>	<i>Quantity</i>
5-384	Heat Exchanger Assembly (7.3L)	1
5-380	Heat Exchanger Assembly (6.0L)	1
21472	Boost Tube (6.0L)	1
30275-300	Clamp, T-Bolt, 3.0" (6.0L)	4
30435-4	Silicone Hump Connector, 3.0" (6.0L)	1
21525	Silicone Hose Adapter (6.0L)	1

**TOOLS REQUIRED**

- 1.) 8, 11 & 12mm Deep socket
- 2.) Socket Extension
- 3.) Ratchet
- 4.) 10mm, 12mm Wrench
- 5.) Pry bar
- 6.) Pliers



## INSTALLATION

- 1.) Disconnect negative terminals from both batteries by loosening the 8mm bolts on the battery terminals. SEE FIGURES 1 & 2

FIGURE 1

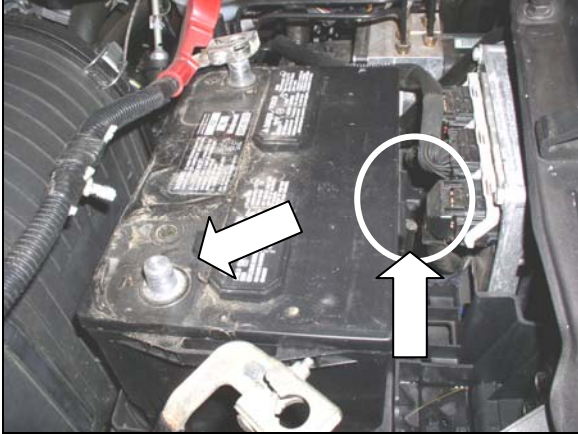


FIGURE 2



- 2.) For 6.0L, remove both battery terminals on the driver's side battery and remove the battery cover by pulling upwards and remove the battery out of the vehicle by unbolting the 8mm bolt. SEE FIGURE 1

- 3.) For 6.0L, Remove upper radiator mounts by unbolting the two 8mm bolts on each mount. SEE FIGURES 3 & 4

FIGURE 3

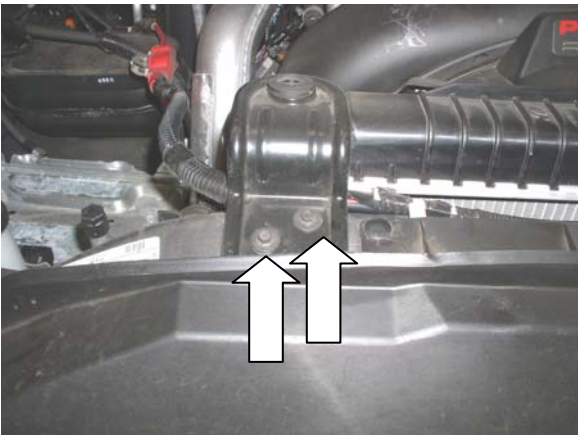
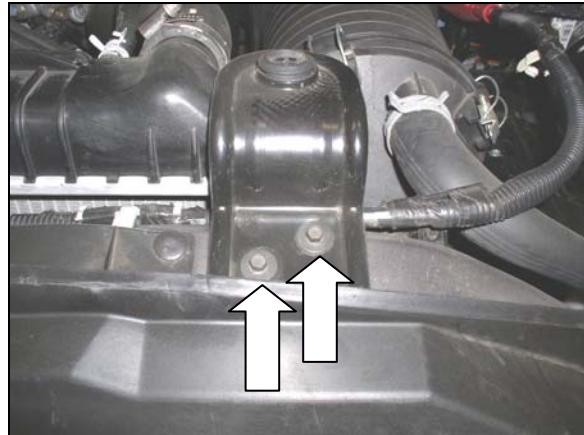


FIGURE 4

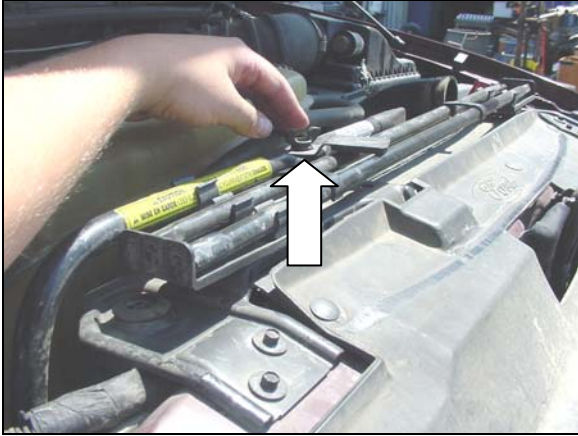


- 4.) For 7.3L, Remove the wing nut that secures the emergency jack and tools in the engine bay. SEE FIGURE 5





FIGURE 5



5.) For 7.3L, Remove the five 8mm bolts that secure the upper radiator mount to the core support. SEE FIGURES 6 to 8

FIGURE 6

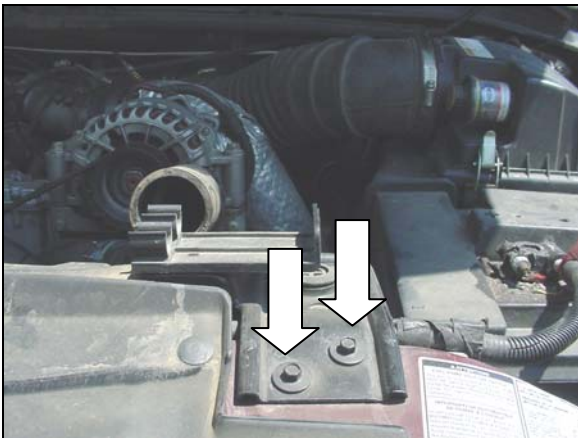
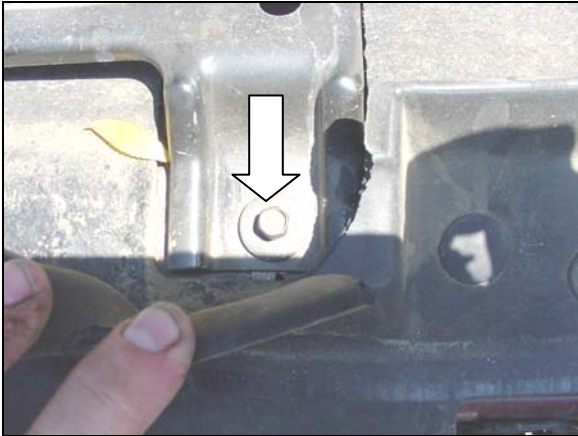


FIGURE 7



FIGURE 8





6.) For 7.3L, Remove three 8mm bolts securing radiator overflow tank to the truck. SEE FIGURES 9 & 10  
**NOTE:** Do not remove the coolant tank completely out of the vehicle.

FIGURE 9

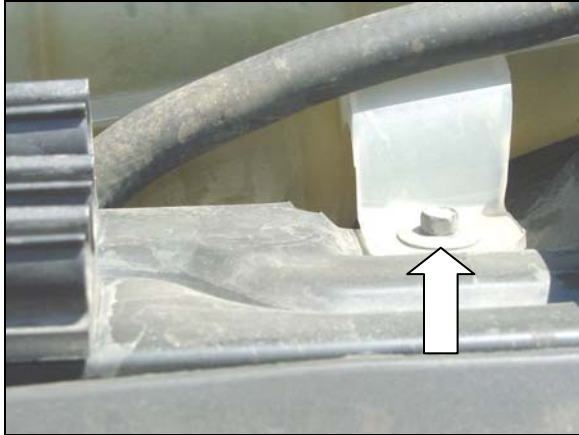
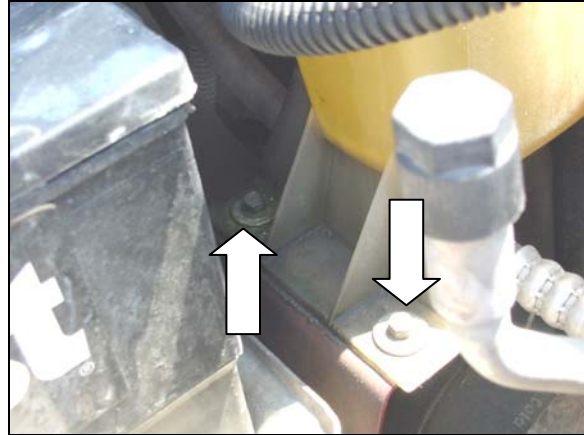


FIGURE 10



7.) For 7.3L and 6.0L, remove the four plastic snap in fasteners that secures the plastic trim to the core support. SEE FIGURES 11, 12, 13 & 14 (6.0L)

FIGURE 11

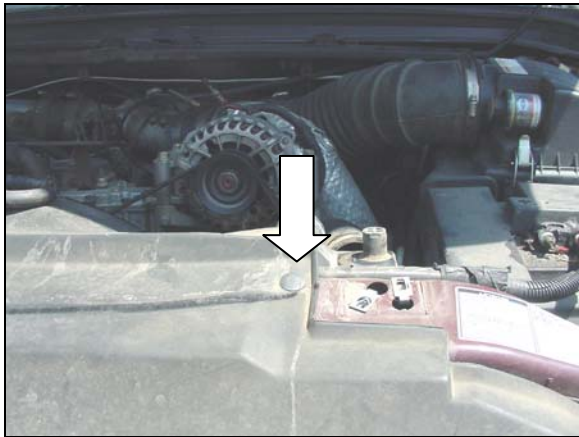


FIGURE 12

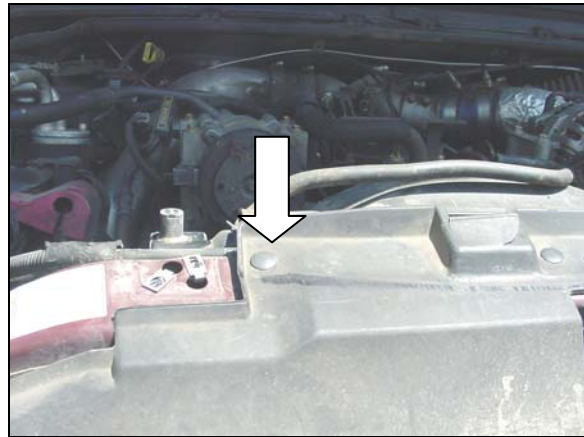


FIGURE 13

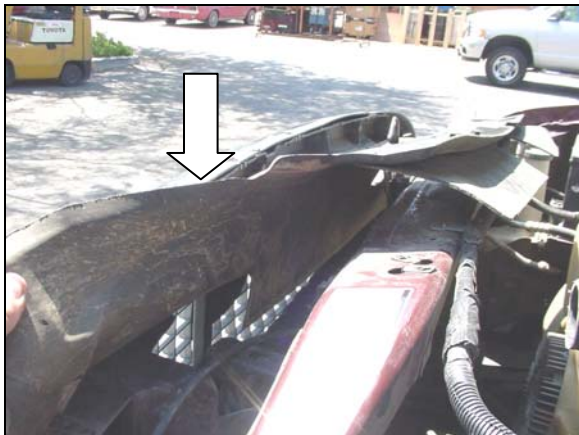
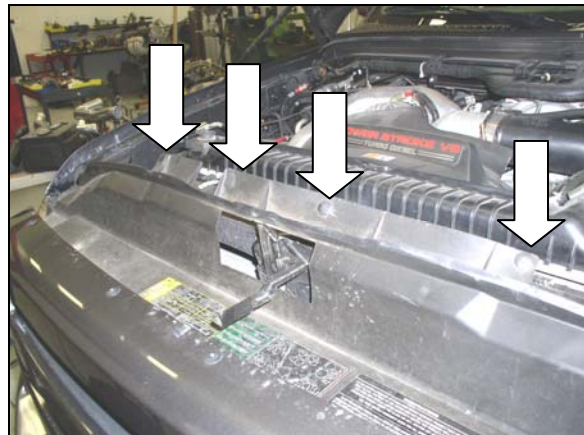


FIGURE 14





- 8.) For 7.3L and 6.0L, use a marker and mark the location of the hood latch in relative to the core support, this will help latch alignment during re-assembly. SEE FIGURES 15 & 16

FIGURE 15

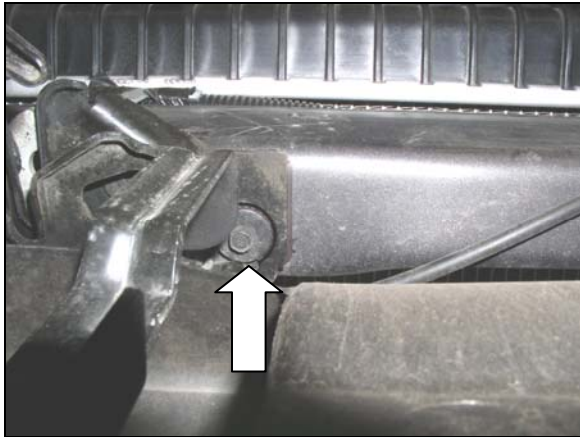
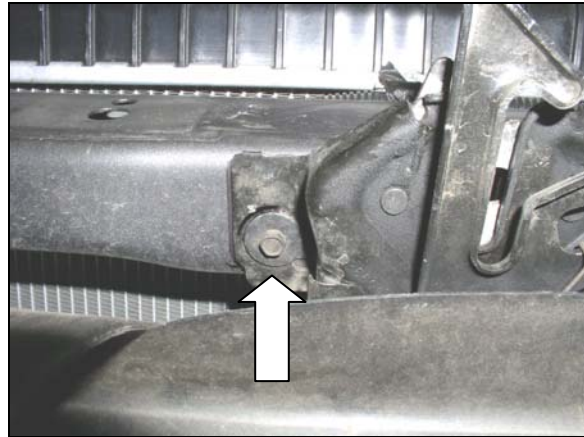


FIGURE 16



- 9.) For 7.3L and 6.0L, carefully unclip the plastic fastener that secures the hood latch cable to the core support. SEE FIGURE 17

FIGURE 17



- 10.) For 7.3L and 6.0L, unbolt the two 8mm bolts for the upper A/C condenser brackets. SEE FIGURES 18, 19 (6.0L) and 20, 21 (7.3L)





FIGURE 18

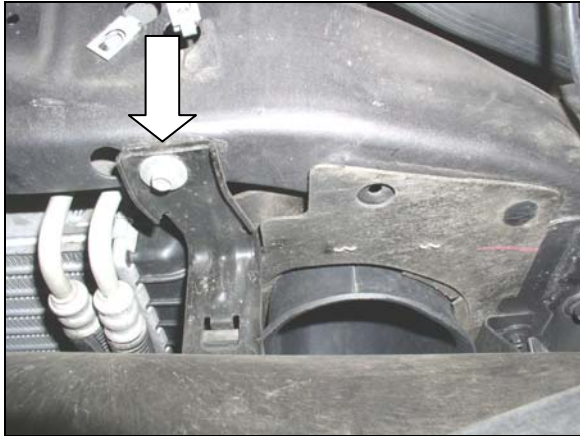


FIGURE 19



FIGURE 20

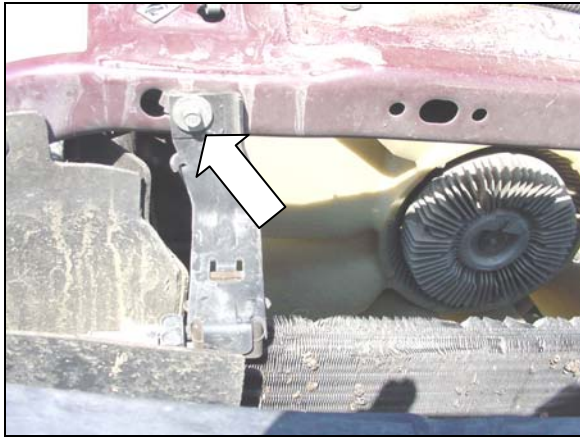


FIGURE 21



11.) For 6.0L, remove the air filter and then the plastic intake tube that goes from the front of the truck to the filter. SEE FIGURE 22

FIGURE 22





12.) For 7.3L and 6.0L, remove two 10mm bolt that secures the factory intercooler to the core support. SEE FIGURE 23, 24 (6.0L) & 25, 26 (7.3L)

FIGURE 23

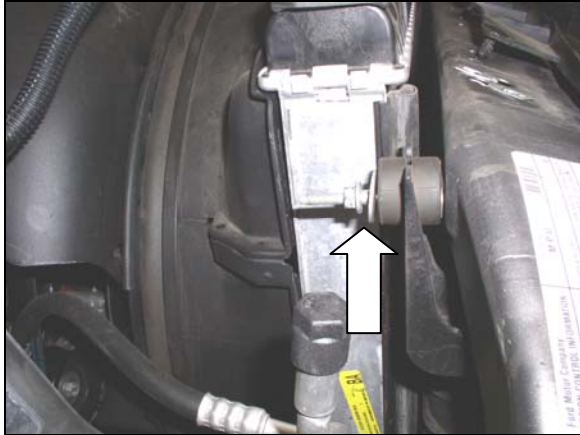


FIGURE 24



FIGURE 25

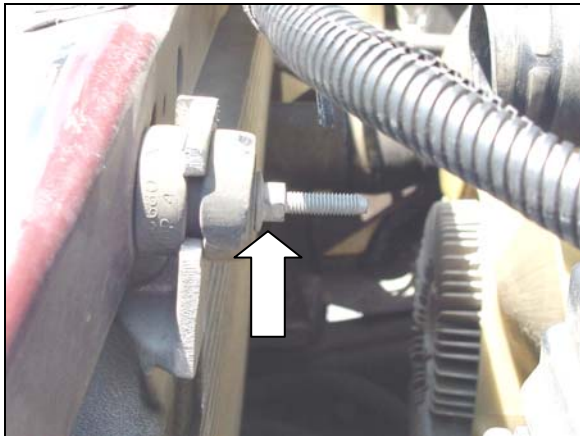
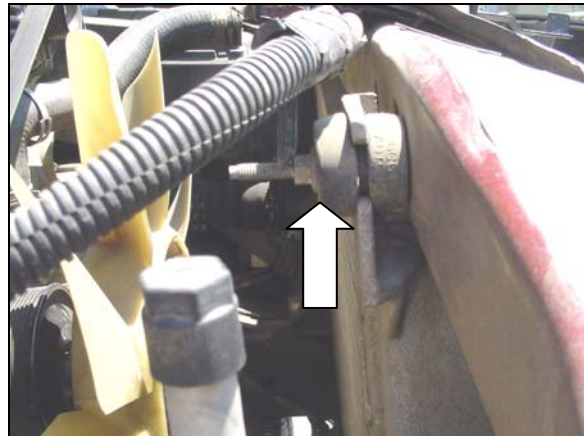


FIGURE 26



13.) For 7.3L and 6.0L, using a 12mm open wrench or socket, remove the eight bolts that secures the core support the chassis. SEE FIGURES 27 to 30

FIGURE 27



FIGURE 28

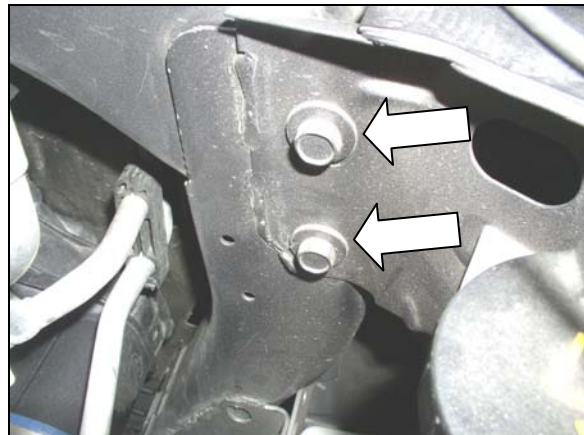






FIGURE 29

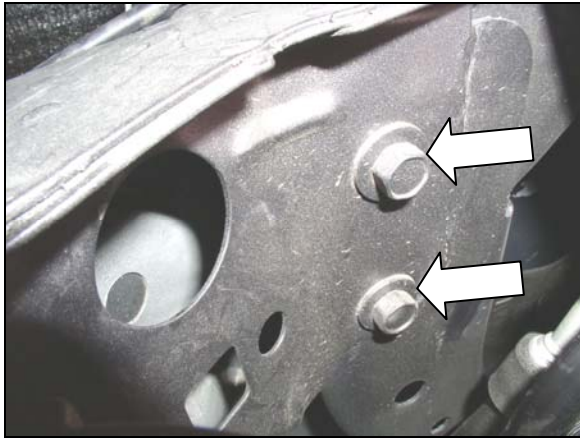
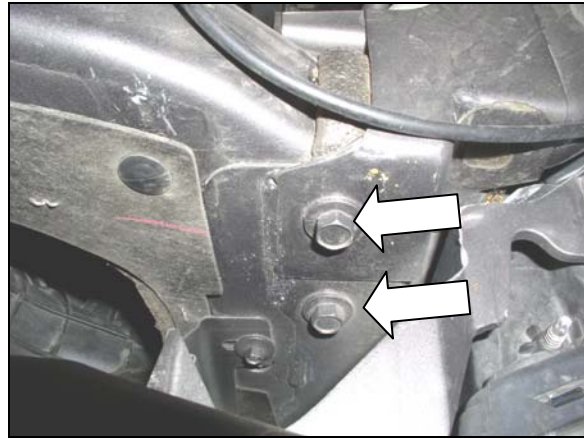


FIGURE 30



14.) Ford 7.3L and 6.0L, carefully pry the top core support out with a pry bar without scratching it. SEE FIGURES 31 & 32

FIGURE 31



FIGURE 32



15.) For 6.0L, remove the driver's side boost tube (some years may come with a plastic boost tube while others may come with a steel tube). SEE FIGURE 33 & 34

FIGURE 33



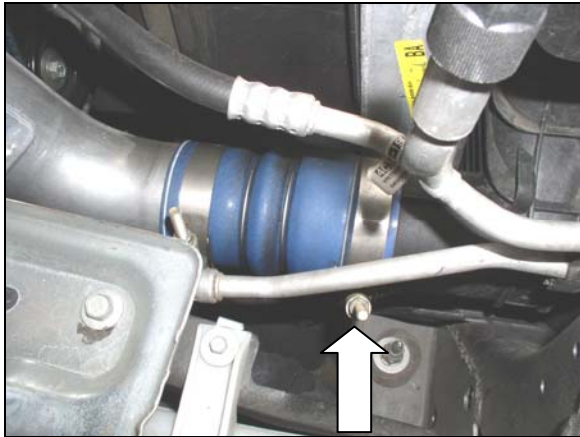
FIGURE 34





16.) For 6.0L, loosen the hose clamp that secures the boost tube from the turbo to the intercooler on the passenger's side. SEE FIGURE 35

FIGURE 35



17.) For 7.3L, loosen the hose clamps on both driver and passenger side boost tube. SEE FIGURES 36 & 37

FIGURE 36

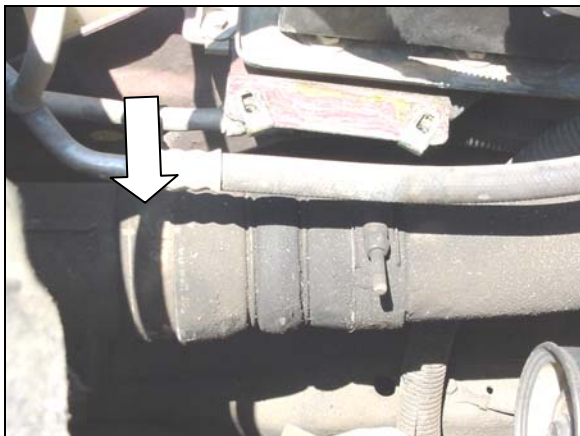
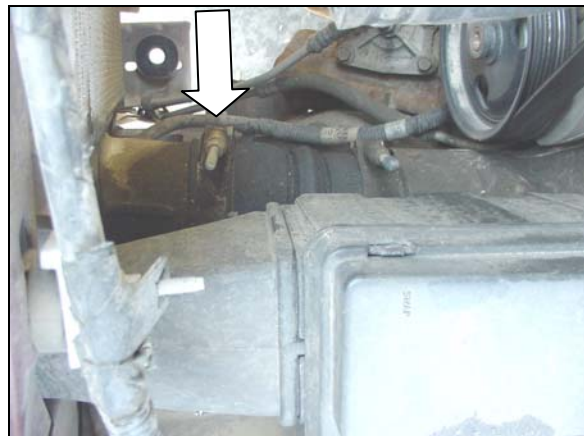


FIGURE 37



18.) For 7.3L & 6.0L, slowly remove the factory intercooler out of the vehicle by lifting upwards. SEE FIGURE 38

**NOTE:** Be careful of when working around the A/C lines, the lines are soft and can be bent slightly out of the way easily.

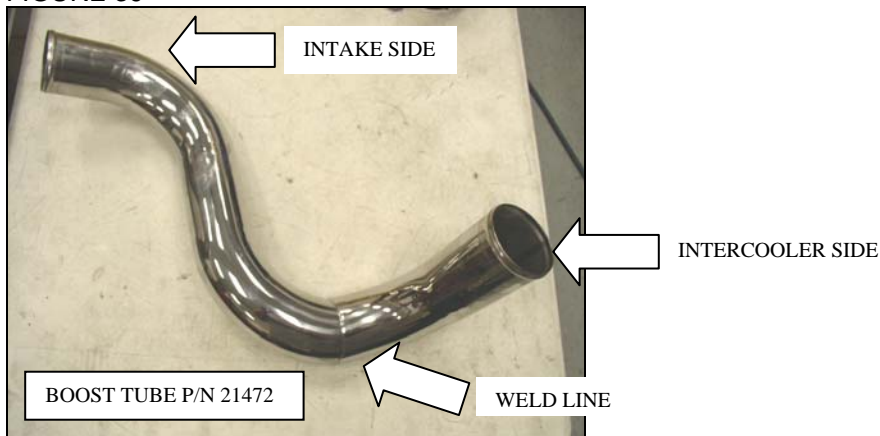


FIGURE 38



- 19.) For 7.3L, remove the two rubber grommet (one of each side) on the top mounting brackets of the factory intercooler and re-install it onto the top of the new Spearco intercooler.
- 20.) For 7.3L & 6.0L, remove the rubber isolator from the lower mounting brackets of the factory intercooler and re-install it onto the new Spearco intercooler. Making sure the rubber isolator is flush to the edge of the new intercooler lower mount.  
**NOTE:** Glue the factory rubber isolator to the Spearco intercooler with silicone to make installation easier.
- 21.) Install your new intercooler into vehicle in reverse order.
- 22.) For 6.0L, install the new supplied stainless boost tube (P/N 21472) that connects the intercooler to the engine using the supplied t-bolts clamps (P/N 30275-300), silicone hump connector (P/N 30435-4), and silicone hose adapter (P/N 21525). SEE FIGURE 39

FIGURE 39



- 23.) Install the boost tube (P/N 21472) in between the intercooler and the intake manifold using the supplied silicone hump hose (P/N 30435-4) and two 3.0" t-bolt clamp (P/N 30275-300) on the intercooler side and





the silicone hose adapter (P/N 21525) and two 3.0" t-bolt clamp (P/N 30275-300) on the intake manifold side. SEE FIGURES 40 & 41

FIGURE 40

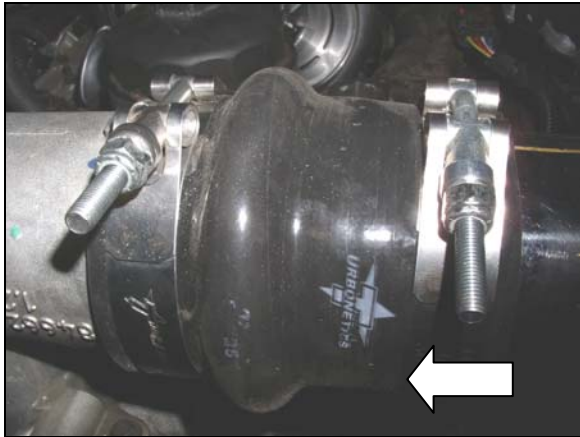


FIGURE 41



24.)When installing the new supplied silicone hose adapter (P/N 21525), the shorter side with the ring on the inside of the hose goes on the engine side.

#### FINAL CHECKLIST:

- Review these instructions to make sure that all fasteners, clamps connections have been installed correctly.
- Check that all hose routings are free of any kinks or near any hot or abrasive surfaces, which may cause wear over time. Adjust or reroute as necessary to provide adequate slack for engine movement.



#### **“NO FAULT / NO HASSLE” WARRANTY PROGRAM:**

TURBONETICS will repair or replace, at our expense, any new TURBONETICS / Spearco products that fail, including products used in racing or competition applications, for a period of one year from the original date of purchase. All turbocharger and cartridge assemblies have a factory installed inline oil filtration device. This filter device must remain in place if any warranty is to be considered under the No-Fault / No-Hassle program. Electrical components that fail due to misuse are not covered under the No-Fault / No-Hassle Warranty Program.

Warranty is limited to TURBONETICS products and does not include progressive or subsequential damage and does not cover removal or installation labor or associated parts. No warranty is made for any other claims for special, indirect or consequential damages including but not limited to component removal or installation equipment downtime, prospective profits or other economic loss.

Warranty will not be granted for recurring damage, malfunction, or failure due to improper installation, misuse, unauthorized repair or alterations, or externally induced physical damage.

Warranty is non-transferable and must be processed via the original purchaser from TURBONETICS.

Remanufactured units, performance upgraded units, and O.E.M. replacement units are covered by a 90-day warranty or the O.E. warranty period.

TURBONETICS highly recommends that the installation of mechanical or electrical parts be performed by trained professionals. Improperly installed products may lead to unsafe and unreliable conditions.

#### **RETURN POLICY:**

Only unused and complete merchandise may be accepted for return subject to inspection and acceptance by TURBONETICS. No goods will be accepted without prior return authorization from TURBONETICS. Call for approval and RGA (Returned Goods Authorization) tracking number. No returns will be accepted without an RGA tracking number. No returns will be accepted after ninety (90) days from the original shipping date from TURBONETICS unless approved. All approved returns are subject to a 15% restocking charge – NO EXCEPTIONS. The original invoice must accompany the return. Accepted warehouse / distributor and open account returns will be issued credit only.

#### **RETURNED GOODS AUTHORIZATION TRACKING NUMBER:**

TURBONETICS will only accept product returns, repair orders / upgrades, and warranty requests that have been approved and are returned with a corresponding RGA (Returned Goods Authorization) tracking number.

Contact TURBONETICS for approval and the RGA number. Write the RGA number clearly on the outside of the package and include it inside the package. This is very important in allowing us to properly identify and process your request. Failure to comply with this requirement will result in the delay of processing or the product being returned to you.