



Revision: 3.4 - 02/02/2010

Install Time: 90 Minutes

This product is not DOT/EPA approved and is not for use on public highways. This product is intended only for off-road/closed-course racing use only. It should be installed trained technicians or individuals with competent mechanical skills.

**INCLUDED IN THE KIT:**

(2) Machined AIS Plugs	(1) Hose Cap
(1) Aluminum Drift	

**TOOLS REQUIRED:**

(1) Mallet / Hammer	Screwdriver (Medium size) Flat and Phillips
(1) Large 12" Screwdriver or equivalent	

**INSTRUCTIONS:**

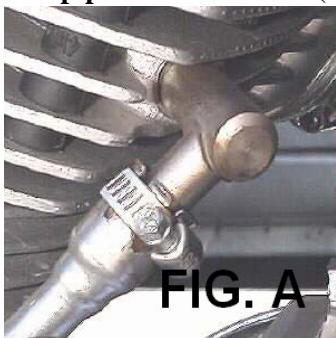
**GENERAL WIRING INSTRUCTIONS:**

**READ ALL INSTRUCTIONS AND VIEW PHOTOS PRIOR TO INSTALLATION!**

For correct installation of this product, please read and follow these guidelines:

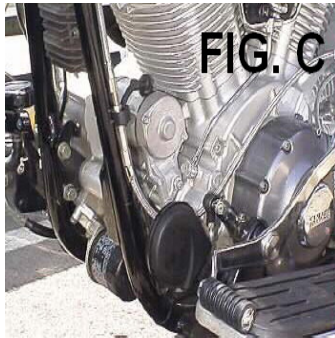
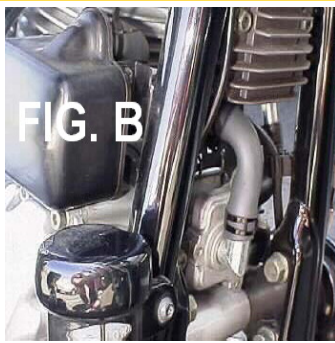
**IMPORTANT NOTE:** Place AIS Plugs in the freezer for 24 hours prior to install and do not remove them until you are ready to insert them into the heads.

1. You will first need to remove the following items from your motorcycle: fuel tank, left side cover and rectifier/regulator.
2. Loosen hose clamp securing air injection head pipe line to each 90-degree elbow fitting in heads then remove AIS pipe lines from bike (Fig. A).



Next, remove air injection pump along with all associated rubber lines and brackets - for Road Star applications refer to (Fig. B & C).

Our install guides provide a basic outline on the proper installation of our products. Further tuning and/or fitment may be required. Barons bears no responsibility on installation costs associated with this product.  
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**NOTE:** On V-Star 1100s, the pump is located under left side chrome cover near battery. Trace vacuum hose up to intake manifold, remove hose and save the clamp. *Install supplied rubber cap onto this vacuum tap using the stock clamp.* Reinstall rectifier/regulator to its stock location.

3. Use a large (minimum 12 inches) heavy-duty flat-blade screwdriver or other suitable driver long enough to reach each 90-degree air fitting from right side of bike (Fig. D).



Insert the tool into elbow area of the air fitting and **FIRMLY** drive the fitting from cylinder head with a hammer (Fig. E).



**NOTE:** The air fittings are very tight in the cylinder head. We have found that when driving out the air fittings, the 90-degree joint may start to tear apart. If this happens, simply insert your removal tool into the hole in the

fitting and continue driving out the fitting. Sometimes fittings can be removed with vice-grip type pliers (Fig. F).



**3a. IMPORTANT:** On V-Star 1100 applications, you must remove right side frame tube by loosening the foot rest and brake master cylinder bolts so they can drop down out of the way. Then remove the two bolts on rear of the right frame piece and the upper two bolts near frame neck under plastic cover. There is no need to disconnect any hoses or wires, as the frame only needs to be moved aside to allow access to the cylinder head so the supplied hole plug may be driven in correctly.

**NOTE:** SKIPPING THIS STEP CAN RESULT IN CRACKING OF THE CYLINDER HEAD WHERE PLUG IS INSTALLED! YOU CANNOT INSTALL THE PLUG IN STRAIGHT IF YOU SKIP THIS STEP.

**INSTALLATION TIP:** At this point we recommend you start the motorcycle and allow the cylinders to get warm/hot so the metal in the heads will expand, this makes installing the AIS plugs easier.

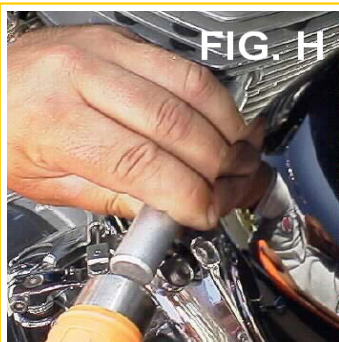
**NOTE:** Doing this will not cause any damage to the engine but will make the install much easier to do. **BE SURE YOUR BIKE IS OUT OF GEAR AND STABLIZED BEFORE STARTING.**

**4.** Once air fittings are removed from cylinder heads (Fig. G) and the engine has been warmed and the frame section is clear on V-Star 1100 models, you should remove the AIS pligs from the freezer one plug at a time.



Insert frozen plugs into the vacated fitting holes pushing them in by hand as far as possible. Then using a mallet along with the supplied Baron aluminum drift, gentle drive these plugs into cylinder head/s (FIG. H) below.

**NOTE:** It is not necessary to drive the plugs in until they are fully seated. You should only drive these plugs in with mild force. The cylinders AIS holes have been found to have varying tolerance, which allows some plugs to drive only partially in while others may drive in fully. There is very little pressure in this area and as long as the plugs are in firmly they will remain in place (Figs. H & I).



**5. Reinstall fuel tank and right side cover. Installation is now complete.**

*This product is intended for installation on Yamaha Road Star (99-03) and V-Star 1100 models only. Baron accepts no responsibility for any damage incurred when installing this product on any other motorcycle.*

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