





This showed the bottom side (port A) of the solenoid rack.



Here is another angle that showed how the solenoid rack system would be located.



Remove the five 12mm acorn nut/bolts.



Disconnect this ground connector.



Remove this 10mm bolt.



Remove the clamps for elbow. (Not everyone has the Greddy elbow, if you have stock elbow, remove or disconnect at the clamp connection)

There are two 10mm bolts/nuts under the Greddy elbow that bolted the vacuum chamber to the throttle body, remove those to gain access later for removal of UIM (upper intake manifold).

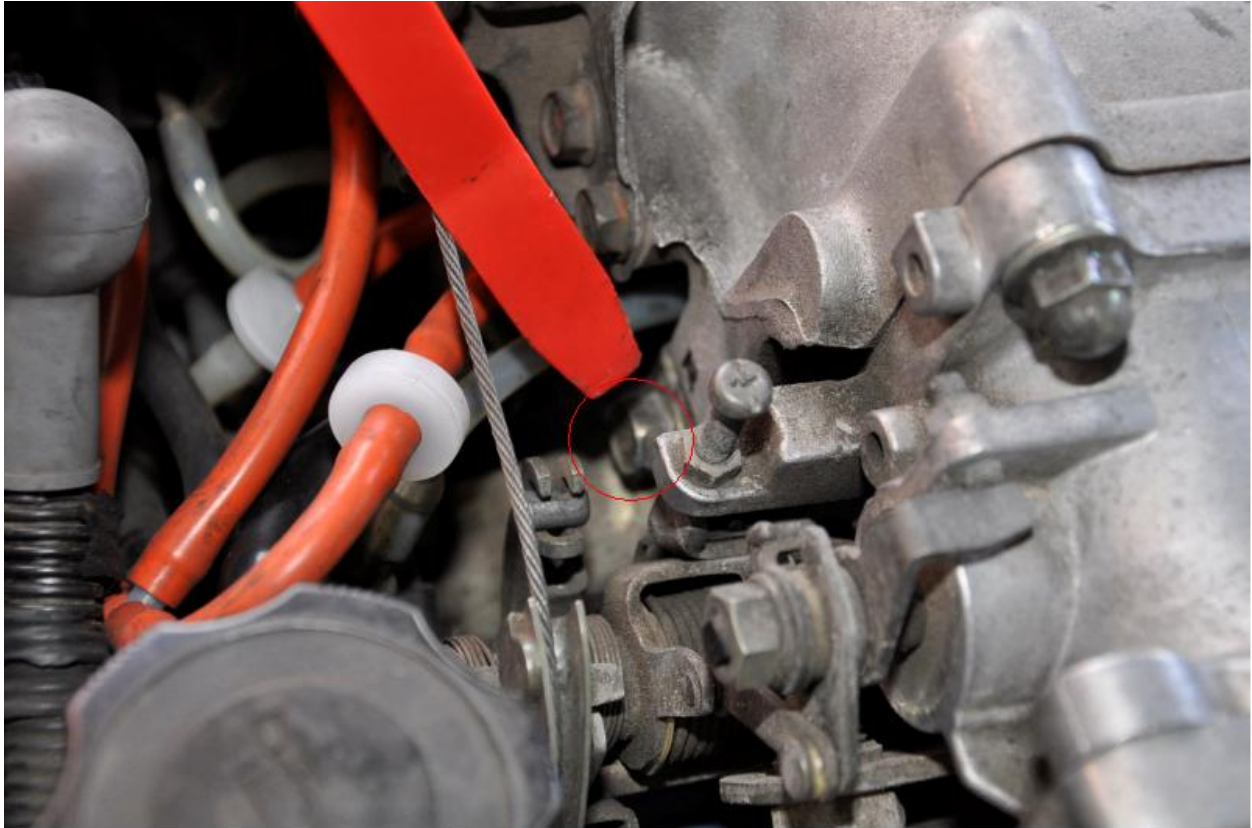


Remove the throttle position sensor connector.





Remove coolant hose to throttle body. Only a few drops of coolant will spill out. If you are worried, place a rag underneath the hose prior to removal if necessary.



LOOSEN this 12mm bolt, DO NOT REMOVE IT for ease of installation later.



The intake pipes were removed and all hoses exposed.



\*\* For those that are lazy like me, I don't necessary have to remove the complete UIM to install this solenoid rack system, you are welcome to copy my method OR remove the UIM completely. The choice is yours. I would recommend completely removing the UIM if you plan to remove and replace all vacuum hoses under the UIM \*\*

Gently lift the UIM, use a bungee cord and wrap it around the hood-end pivot point. Place a rag and block the LIM preventing any debris or nut/bolts from dropping into the engine. Be-aware not to pull the UIM too much because there are few connections in the back (AWS, Air Temp sensor and some hoses).



This picture showed the connection from various vacuum lines and two one-way check valves. Replace the old vacuum hoses with new ones and replace the two one-way check valves that's included in the package. The one-way check valve should be facing towards the UIM in direction. (The valve is shaped in a form of an umbrella, therefore the pointy side is the direction of air/vacuum flow.)



This picture showed another view of the previous picture and how it should be connected. Noticed the Tee and the right hand side vacuum line? Replaced that as well and next to that vacuum hose there will be an opened metal vacuum line, use the plastic cap provided in the package and cap it.



This picture showed the vacuum lines from previous picture in close-up, cap this open metal vacuum line on the right.



This picture showed two vacuum hoses and their connecting/routing point. These connecting points will be used for routing new hoses later.





Behind the alternator, remove the two vacuum hoses and use the plastic cap and cap these two metal vacuum tubing.

Next picture and forward showed where and how the solenoid rack will be connected.

\*\*\*\* Please prepare your solenoid rack correctly connecting the y-splits as per the vacuum diagram provided before continuing the next installation steps \*\*\*\*



Refer to **RED** routing on vacuum diagram, connect from Y split and...



Tee into this connection where the Vacuum Chamber is.



Refer to **PURPLE** routing on vacuum diagram, connect from **port B** of solenoid **X**



...to this metal tube on the left which leads to **Turbo Control Actuator** (compare to OE vacuum diagram if you are confused. This connection is right below the coolant temp sensor.)



Refer to **GREEN** routing on vacuum diagram, connect from **port B** of solenoid **F**



... this Wastegate Control Actuator under the intake air tube.



This image showed the third connection on the solenoid rack from the firewall towards the front of the vehicle being routed to the valve to the Charge Relief Valve. (Circled in red)

Refer to **YELLOW** routing on vacuum diagram, connect from **port B** of solenoid **H** to **Charge Relief Valve.**

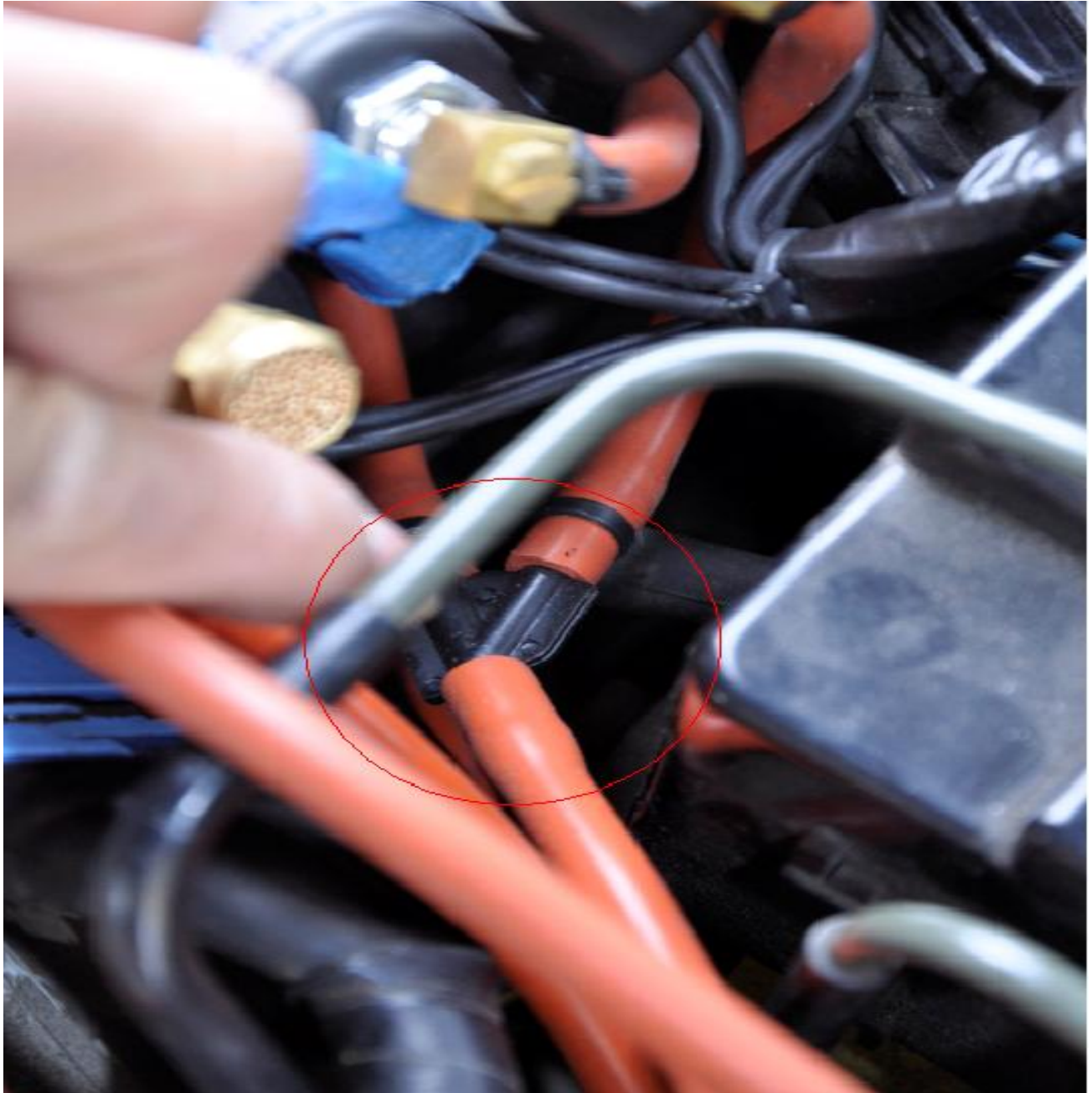




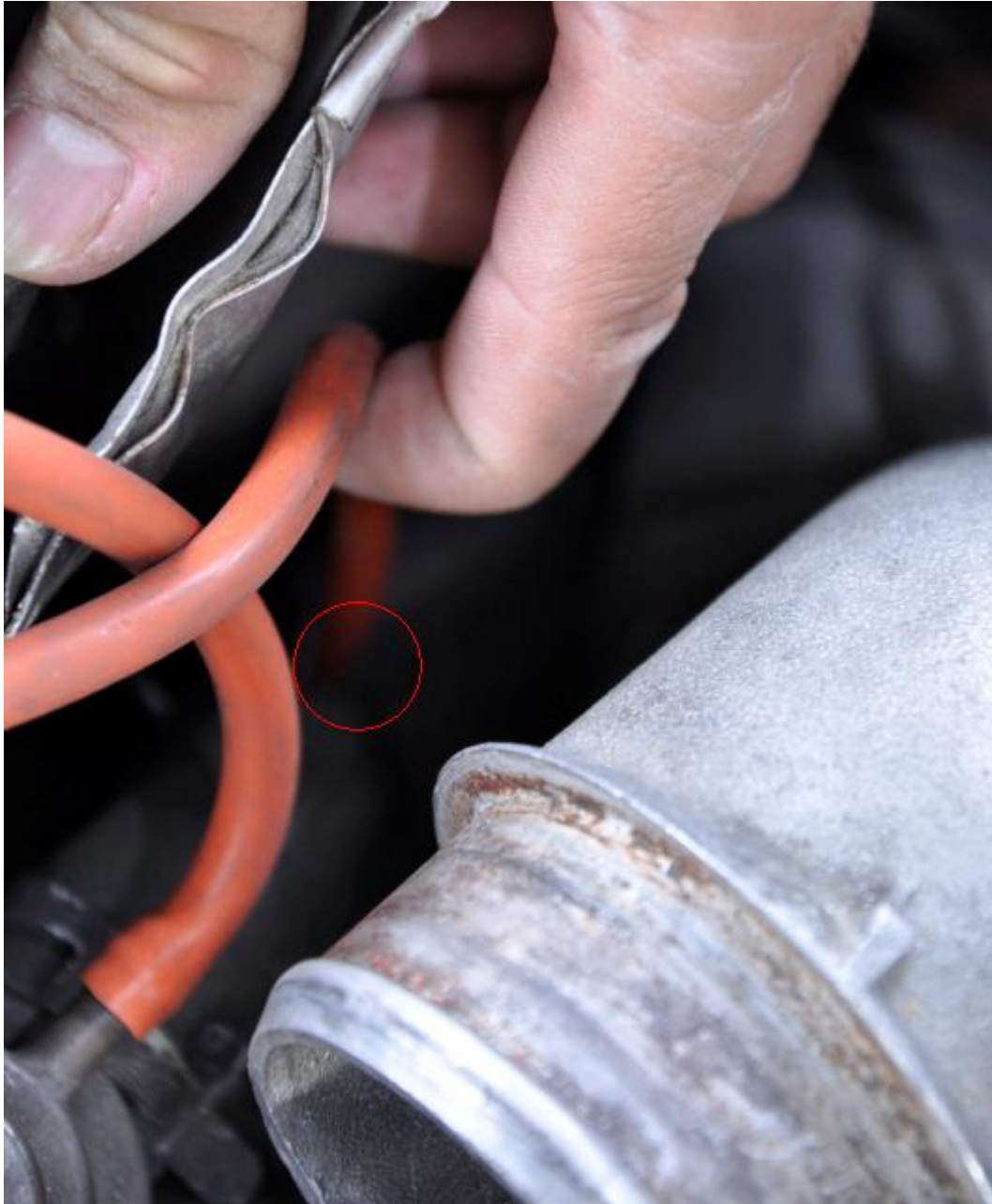
Refer to **DARK BLUE** routing on vacuum diagram, connect from **port B** of solenoid **E**



... to the metal tube below coolant temp sensor which leads to **Turbo Control Actuator Side Port**. (the right tube)



Refer to **BROWN** routing on vacuum diagram, connect from **port A** of solenoid **H** and top port of solenoid **F** to...



the back connection of the Y-Pipe behind Charge Relief Valve.



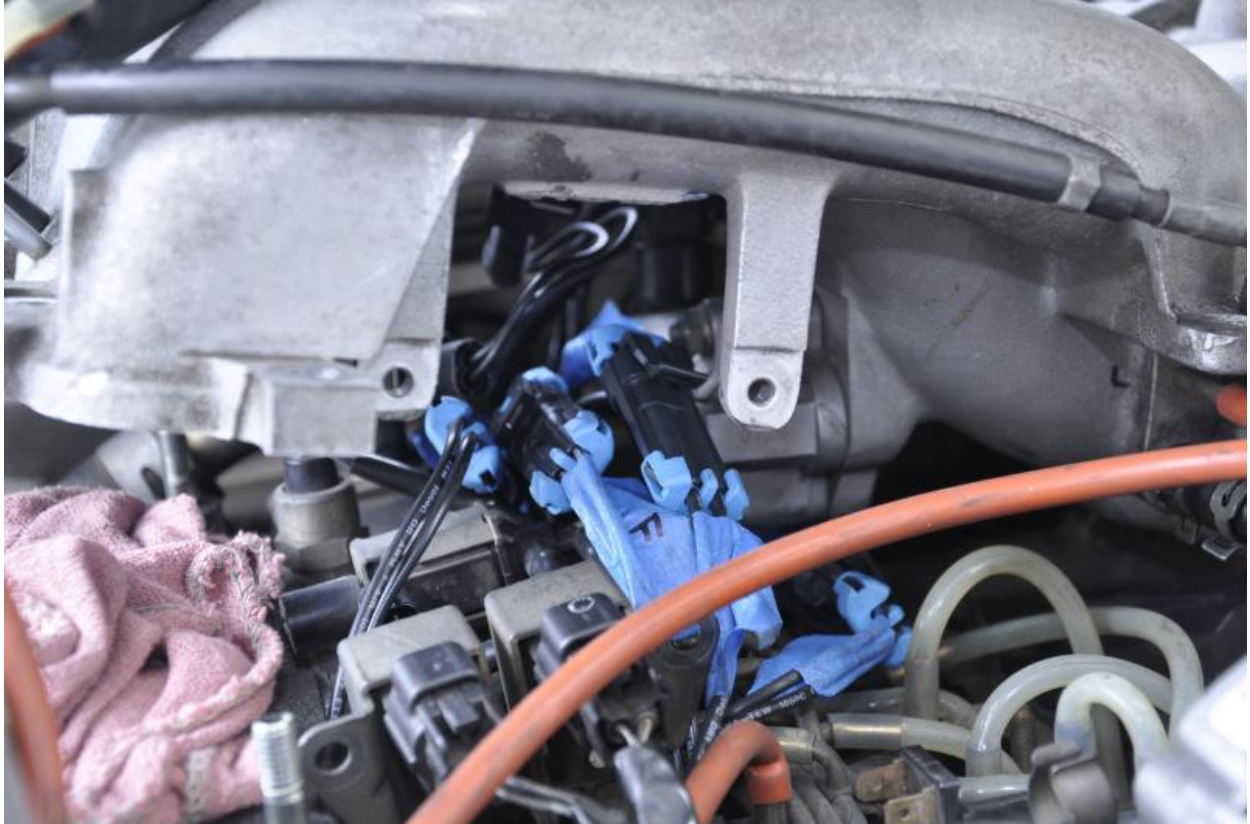
Refer to **ORANGE** routing on vacuum diagram, connect from **port A** of solenoid **E** to...



... the **RIGHT SIDE** on the **pressure chamber**. This current picture showed the pressure chamber flipped upside down therefore the hose is connected to the left. Here you can replace the plastic one-way check valve shown right next to the vacuum hose here. Refer to **RED** routing on vacuum diagram.

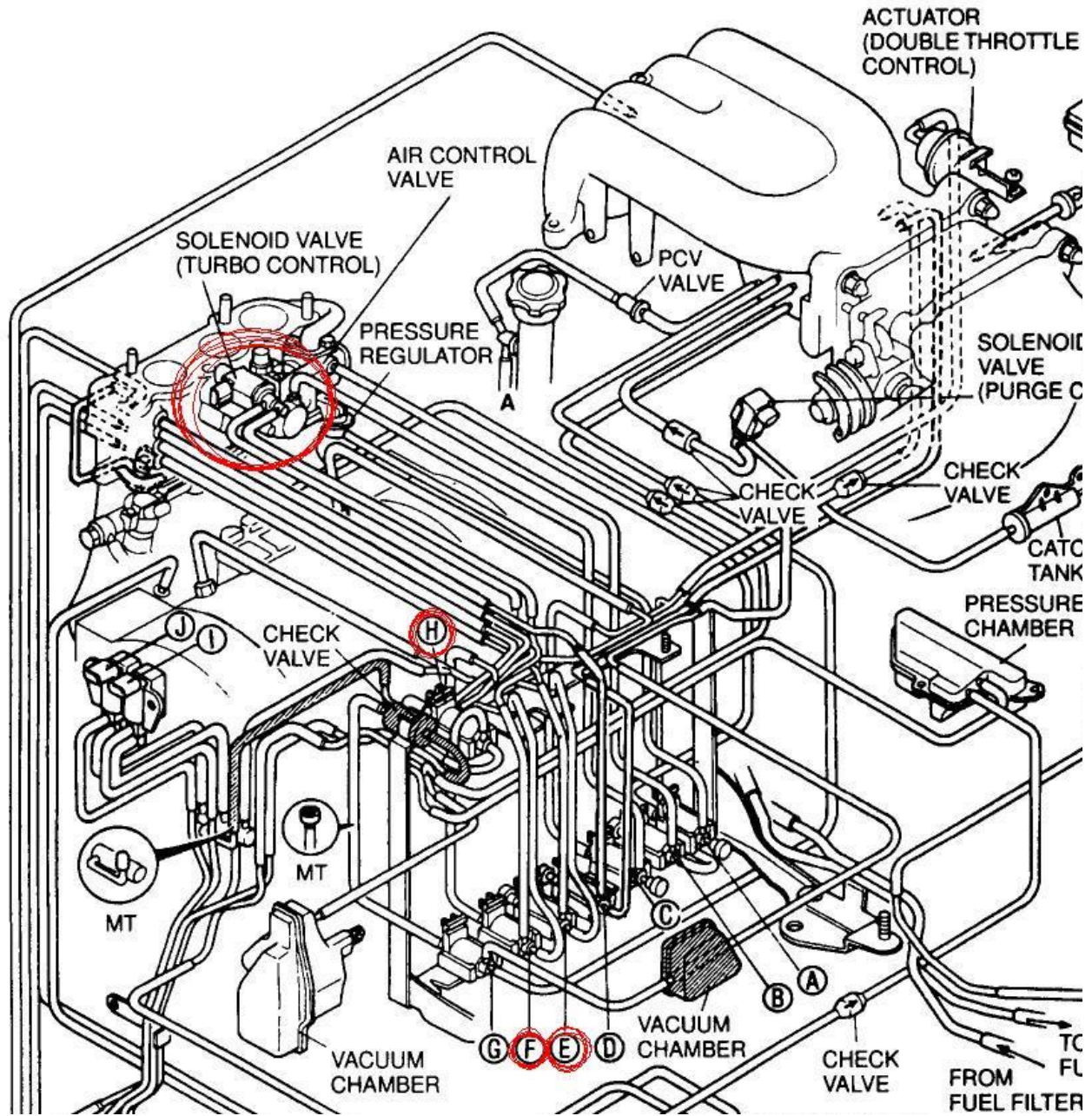


Then route the harness from the solenoid rack along the brake lines, use zip-tie if necessary to secure the harness.



This image just showed when all the connectors are connected under the UIM.





This diagram showed the four solenoids that we will be replacing which are circled in red.

Viewed on passenger front fender, looking at the solenoid rack; the top single solenoid is **H**, directly below it from front of vehicle toward the end of car would be **G, F, E, D, C, B, A**.

Disconnect **H, F, E** and the **Turbo Control Solenoid** (aka **solenoid X**) that sat next to the LIM under the LIM.

Provided with the custom PnP harness, all you need is disconnect solenoid connection **E**, **F**, **H** and **X** and plug them in accordingly. It **DOES NOT** matter which polarity you connect your solenoids because the solenoid will work the same vice-versa therefore do not worry about switching the polarities.

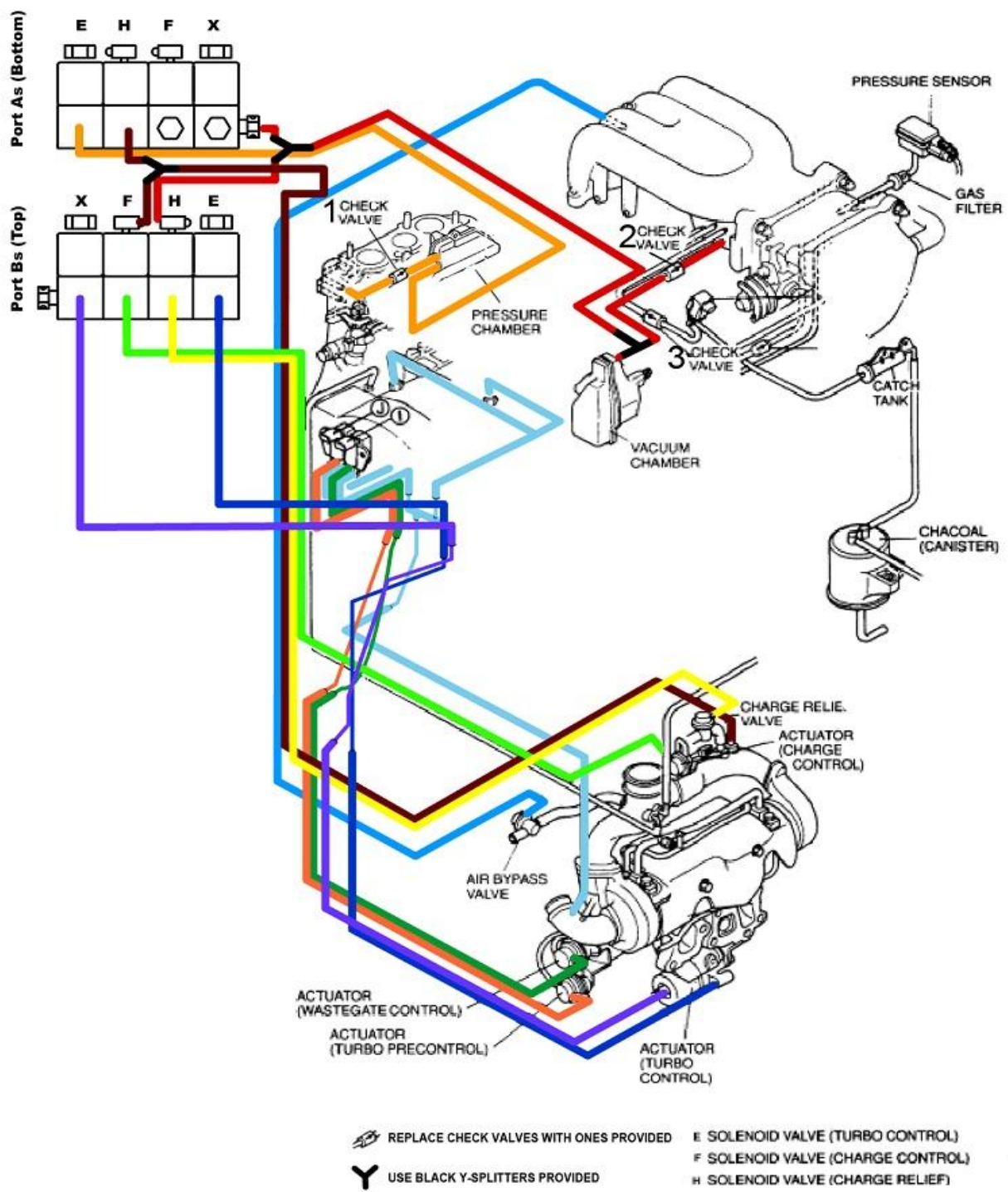
Also know that solenoid **X** has it's own connector on the PnP harness, whereas E, F, H will have spade connectors.

**DOUBLE CHECK ALL** connections, make sure everything were routed and connected correctly.

Now, reinstall everything in **reverse order**.

If all of these are confusing, you are welcome to just use the routing diagram and enjoy your project.

However, do give yourself a weekend or two for this job. It can be tedious at time, but it can be done within two hours, if you know what you are doing ^\_\_^



\*\*\*\*\* THANK YOU FOR PURCHASING AZEKNIIGHT'S CUSTOM SOLENOID RACK \*\*\*\*\*