

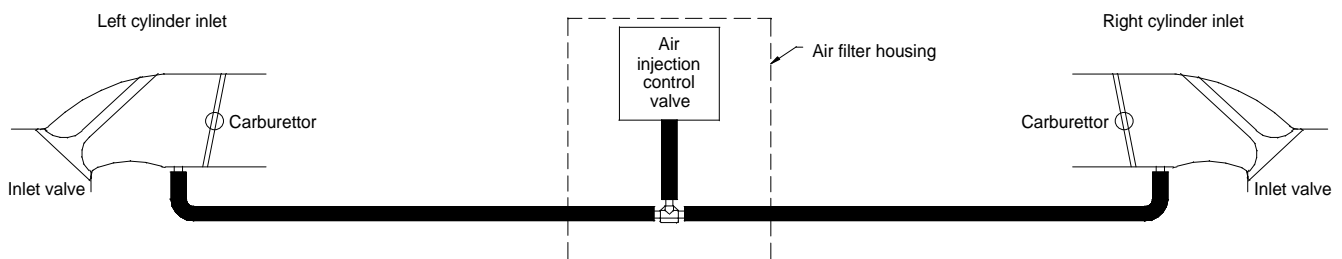
The vacuum hose system.

The following paragraphs explain the purpose of the vacuum hose assembly and show schematics of how it goes together.

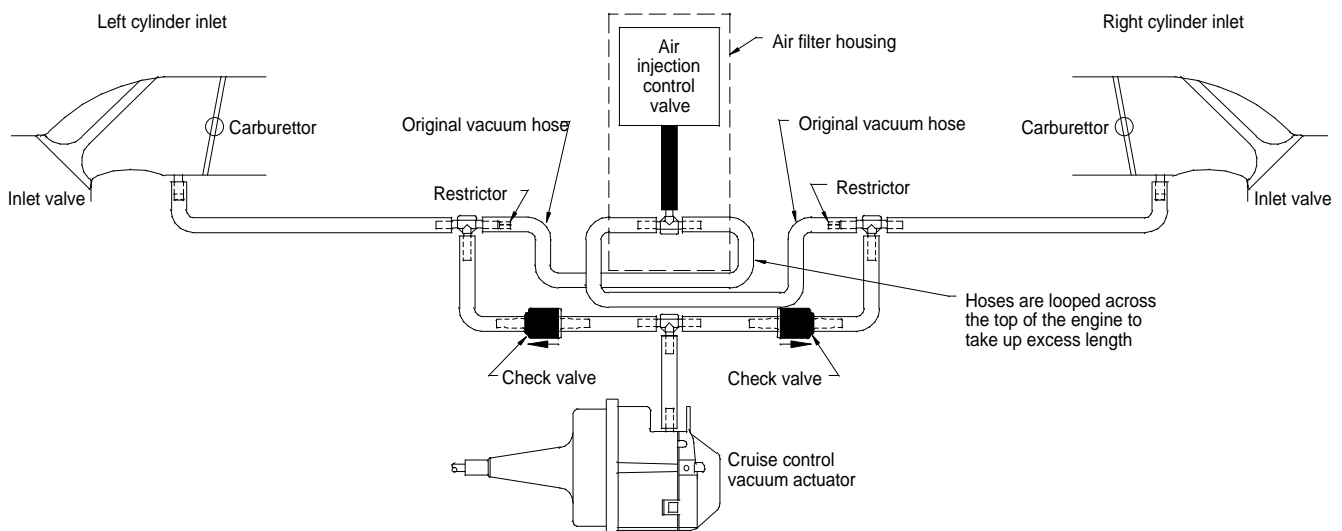
The air injection system is operated by engine vacuum, and injects air into the exhausts during high vacuum conditions (on engine overrun with the throttle closed, such as when slowing down for an intersection). At these times the air fuel mixture tends to be too rich, and injecting air into the exhausts allows any unburnt fuel to be burnt in the exhaust system, thus reducing pollutants in the exhaust gases. The vacuum line system for the cruise control has been designed to allow the air injection to work properly, while still ensuring sufficient vacuum for the cruise control to operate.

The principals to make the air injection system work also apply the same way to Evaporative Emissions Carbon Canister connections. The Air Injection Control Valve would be replaced with the Purge Valve on the carbon canister, but the connections are the same.

The drawing below shows the connection of the vacuum hoses as currently set up on the bike.



The drawing below shows the connection after the cruise control is installed.



On bikes that have the air injection system or carbon canister fitted, the vacuum lines for the air injection/carbon canister must be disconnected from the vacuum port on the carburetors.

The free ends of the vacuum hose assembly supplied with the cruise are attached to the carburettor vacuum port.

The vacuum restrictors are fitted in the ends of the two tee pieces and the free ends of the bikes vacuum hoses are placed over the restrictors and the tee pieces.

The hoses from the air cleaner housing or purge valve (the original hoses on the bike) are shown crossing to the opposite side only to use the extra length of hose so that it is not necessary to cut the hoses. This will make it much easier to restore the bike to its original condition if the cruise control is removed later.

The MOST important point when setting the hoses up is to keep the length of the hose from the vacuum port on the carburettor/throttle body to the 'T' piece as short as possible and also the length of the hose from the 'T' piece to the check valve, less than 50mm or 2" in each case. The restrictors MUST be fitted to the 'T' piece, not somewhere further along the hose to the air injection control/purge valve.

The purpose of this is keep the volume of the system from the vacuum port on the carburettor/throttle body to the restrictor and check valve as small as possible.

The length of hose after the check valves to the cruise control actuator is of no significant consequence, short or long does not make much difference.