SERVICING THE SIMPLE START® SYSTEM:

Operation:
As the Start Pump receives the crankcase pressure and vacuum pulses, it begins to suck fuel from the metering chamber into the start pump, and spray it out of the injector hole in the throttle bore. As the engine warms up it does not need this extra fuel so it begins running richer and richer and begins to slow down. If Simple Start is left on, the engine will eventually get too rich and die.

Possible Failure Modes:

1) Will Not Start:

First make sure the rest of the carburetor functions properly. Do this by starting the engine either by choking it with your hand or priming it with some fuel through the carburetor throat. The Simple Start system is calibrated to work with the properly adjusted, properly operating carburetor. If the rest of the engine and carburetor operates properly, but the Simple Start pump is not delivering fuel, and easy initial check can be done.

While running the engine engage the start system. If the engine accelerates when the system is engaged and then gradually slows down and dies, the system is working. Occasionally the small passages in the starting circuit become clogged by small drops of oil or trash and running the engine will clear these obstructions. If running the engine does not fix the system then proceed with the diagnosis.

Make sure the crankcase pulse passages are open. Check the carb mount and gaskets to make sure no sealer or a mis-aligned gasket is blocking the pulse hole. Make sure the actuating system is functioning.

Inlet check valve; you should not be able to suck air back through it. The OUTLET check valve can also be tested in this way, however it contains a metering spring so you should not be able to suck or blow air easily through it.

If the check valves are not functioning properly, you can attempt to clean them by directing some spray carburetor cleaner through them. *DO NOT BLOW COMPRESSED AIR THROUGH THEM*. If the check valves cannot be cleaned, replace the start pump body.

The fuel pump gasket and diaphragm are serviceable parts. The gasket goes on next to the start pump body, with the diaphragm on top of it.

2) Starts but dies

The other possible failure mode is leaking. If the Simple Start pump does not shut off or if the outlet check valve becomes damaged the system will leak fuel and affect the carburetor mixture settings.

1) Is the pulse being shut off? It takes a very small amount of pulse to operate the pump. Make certain the levers controlling the simple start pulse are correctly positioned to completely shut off the pulse in the run mode.

2) Is the outlet check valve working? Again test the outlet check valve with a piece of primer hose. Gently blow through the check valve by month or with a carburetor pressure tester. The outlet check valve should offer resistance to airflow.

If the outlet check valve is sticking open, it can be cleaned with a spray carburetor cleaner. If cleaning does not fix it, replace the start pump body.