

FUEL SYSTEMS

There are two components that are guaranteed to cause problems that are still being fitted to Lotus cars: The "Facit" type solid state fuel pump and the CR Inc nee Alondra fuel regulator. The common failure mode starts as an undiagnosed missed, usually under high rev's or high demand. The usual troubleshoot results in misspent \$'s and no solution. Principally because the efforts are directed towards the ignition/electrical area and you normally cannot produce the load to see the run out of gas mode when you test. Based on several years of racing experience, the following components have delivered the expected performance: Holly Red fuel pump, carter SW, "Dupree," FACIT nee Bendix.

The only fuel pressure regulator commonly available to suit our requirments is the Holly Red — you need 2-3 psi for racing conditions — anything over 3 psi with a Weber will force the needle valve off its seat. DO NOT use the Holly Blue or any other hi performance drag strip big American V8 500 cubic inch unit — these typically cannot regulate below 4 psi.

Plumbing

Fuel system plumbing is often set up incorrectly. The fuel pump should be mounted vertically and positioned below the gas tank if possible. The regulator is plumbed between the pump and the carbs.

If you want to run a fuel filter, it should be located on the pressure side of the fuel pump. Fuel filter selection is not as critical — The standard OEM type is ok. For those of you who want the first class set up, FRAM and Holly both offer cannister type filters. With diesel engines more numerous, there are some spin on filters available. However, I do not know of any short comings of using a diesel fuel filter on a gasoline system. Remember diesel normally use a high pressure fuel injection system.

I suggest that competition cars use aeroquip braided type hose — dash 6 can carry fuel for a high output V8. With the current fuel problems, I would prefer to use the Teflon lined hose for this application. If you buy the regular aeroquip, buy from a reputable vendor as some types of rubber are resistant to gas but not to the hot fuel set ups and additions.

Those of you who want to use the OEM rubber lines and do not want either a project to re-plumb or the additional expense of aeroquip, no problem. Remeber to inspect the lines for abrasions, cracks or other defects. When replacing the fuel lines, use the worm screw clamps instead of the OEM spring clamps.

For competition purposes once we have our aeroquip, Holly pump, Holly regulator and FRAM filters, we add a fuel pressure gauge (Partly because fuel cells have no cockpit level indicator). You need a 0-5 psi gauge to set the regulator. A loss in fuel pressure precedes running out of gas due to low fuel, clogged filters, uncovering the fuel pick up under hard cornering or simply a dead fuel pump.

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