

The *Lincoln* / MERCURY Old Parts Store

Vapor locking and related problems

The term vapor locking is some oak times misused as a problem associated with hard starting when hot and failure of gas to reach the fuel pump and then the carburetor. There are many possible answers and solutions that can create this problem, and there are some solutions that may help true vapor locking. Take a few minutes and read this informational to make sure that all systems related to the starting and running of the engine are investigated. Some of these are simple some of these are not as simple, but hopefully there is a solution in here that will help you minimize or eliminate these particular problems.

1. Check your fuel pump to make sure that it is pressurizing properly and fuel is getting to the carburetor. If your fuel pump has not been redone in six years or is an aftermarket sold it at a parts store the chances are very good that it is using the old rubber that is not compatible with the new ethanol gasoline. If this is the case then the fuel pump should be rebuilt, the fuel pump pushrod checked, the fuel filter replaced, and that the fuel system is clean.
2. Check the carburetor to make sure that it is working properly and fuel is being properly fed. Once again if a carburetor has not been rebuilt or replaced in the last six years it undoubtedly needs to be. The same is true as the fuel pump that the rubber is not compatible with the ethanol fuel and cannot work properly.
3. Next, look at your battery and starter cables. If they are cracked, oxidized, or in poor condition, they should be replaced. When replacing these cables I use a heavier cable than what was originally used. The originals, I believe, were number 7gauge wire. The cables that I use are generally a number two wire. It is much heavier and creates less resistance than either used wire or a smaller wire. My experience has been that this helps the starter turn faster and more consistently than the older wires. Less resistance helps terrifically especially when the engine is hot.
4. Check your fuel pump rod. If it is not within factory specs that it **Must** be replaced. This is often mistaken for vapor lock when in fact the fuel pump is not pumping adequate fuel to the carburetor. The specifications for 1958 to 1962 430 engines, also 383, 410, 462 are as follows;
5. These are other ways that can be tried to minimize true vapor lock. They may not all work perfectly, but they generally help with the problem.

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Take some fiberglass insulation preferably covered with metallized foil and wrap it around your fuel line from the fuel pump to the carburetor. Some people even use the old trick of putting a wood close hanger clip. I don't know if it really works but why not if everything else is failing.

The next idea is doing what Ford did on the later engines. This involves cleaning between your Valley pan and the bottom of your intake manifold. Once clean put a piece of fiberglass insulation with the metallized foil on one side, facing up between your Valley pan and your intake manifold. This will prevent some of the radiant heat from migrating up into the intake manifold and boiling the gas out of the carburetor.

6. We also recommend going to cooler thermostats, 160°, to help the engine run cooler and also to retard the timing slightly to compensate for the lower octane fuels.

7. We also recommend going to a five or six blade fan, if not so equipped, to increase the level of airflow to help cool the engine.

With any luck, the simple changes should help alleviate or at least minimize persistent vapor locking problems. You should get improvement by doing some or all of these steps hopefully things will improve.