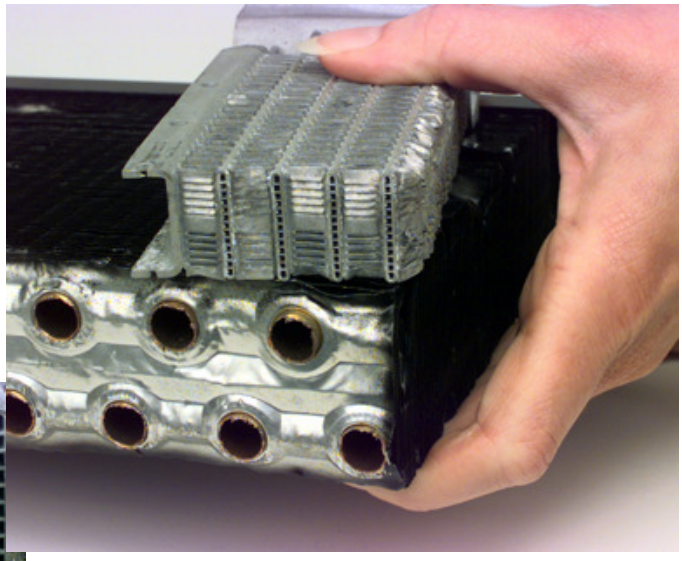
FOUR SEASONS®
DIVISION OF STANDARD MOTOR PRODUCTS, INC

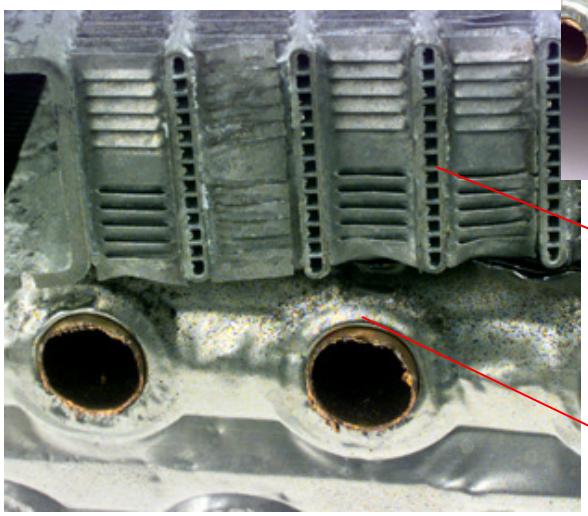
Tech Tip

Condenser Comparison

In the interest of improving efficiency, saving weight, and reducing size, many Original Equipment Manufacturers are now using aluminum serpentine and parallel flow condensers that can cause A/C service problems. The photos below illustrate the difference in the size of the internal passages between an old style tube and fin condenser, and a new, flat tube multipass parallel flow style. In the event of a compressor failure, or any failure that causes debris, sludge or foreign material to circulate through the system, the smaller condenser tube designs are very likely to become stopped up. It is often impossible to completely flush contaminates out of condensers with small passages since the multipass design allows the flushing agent to circulate around the blockage. Replacing the condenser becomes the only option. The larger passages in tube and fin styles can normally pass the foreign material through to the orifice tube screen or filter/drier, and remaining debris can be removed in the flushing process.

Diagnosing problems on small flat tube condensers can be difficult due to partial restrictions. Symptoms include poor cooling, high temperature and pressure at the compressor, rapid compressor failure, clutch failure, and compressor noise.





Flat tube Serpentine.
Each opening measures
.040” by .060”

Tube and fin.
Each opening
measures .36”