



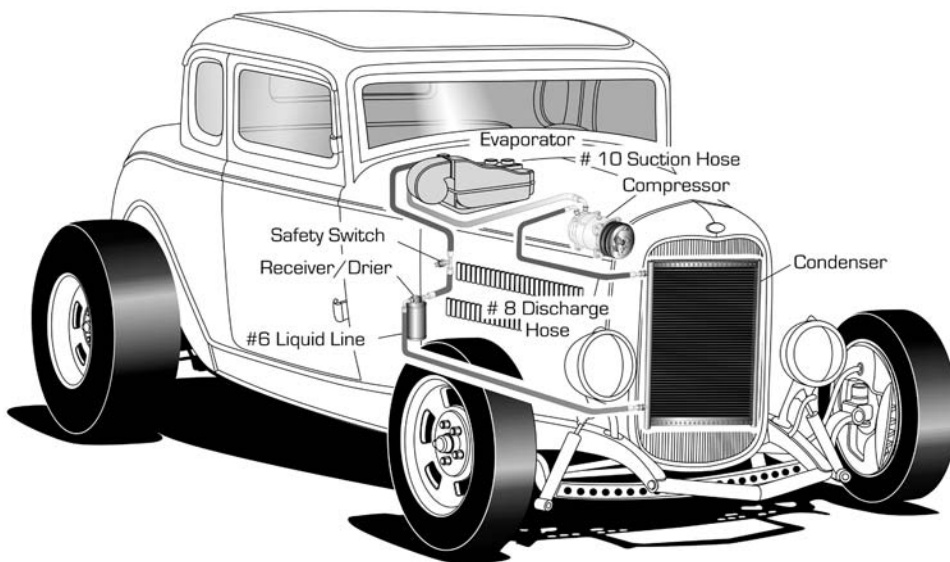
good thing for hot rods! A condenser has to have good air flow and must be mounted properly. It must be matched to a compressor of approximately nine (9) cubic inches or slightly less, using a standard aftermarket evaporator. Using this as a standard basic minimum, you can work with the components for desired results. We recommend the using largest parallel flow condenser possible. The condenser should also cover as much of the radiator core as possible.

Air flow to the condenser is as important as size. The more the better. Ambient air temperature is more important to an air conditioner condenser than it is to a water cooling radiator because when the refrigerant

condensers are used, the last one in the series should be in the coolest location. We feel more time and effort should be spent on selecting a condenser than on any other component of your system. The results will be well worth it.

Basic Compressor Facts

The next, most critical part of the air conditioning system in terms of providing trouble free service is matching the compressor to the system. Why should a compressor be matched to the system? What are the most common types of compressors? How are they different and how can you tell one from another? These are the things we will cover in this part of the outline.



is exposed to temperatures above approximately 100°F, the chemical expands at a very rapid and disproportionate rate. Water expands more proportionately at much greater temperatures than refrigerant because of a high boiling point. So, we put the condenser in front of the radiator or in the coolest air stream possible to keep the ambient air flowing over the condenser below or as near the century mark as possible. If two con-

The basic type of compressor most commonly used now on street rods is the Sanden. We see a few engine swaps that retain the original General Motors/Frigidaire (DAG and R4), or the Ford Nippondenso. And yes, a few York/Tecumseh's are still on some restored classics. The Sanden compressor is round with most of its size being its 8 1/2-inches of length, compared to about 5-inches in diameter. It is easy to spot

with its round shape, aluminum color and over-all size. Its five or seven cylinders run lengthwise and it is an axial compressor. Even though it is commonly known as a rotary, it is not. It is very smooth, with a minimum amount of torque required to operate it because the load is distributed over multiple short stroke cylinders. The compressor has one more characteristic which we like, especially for street rods. That characteristic is its short stroke, low displacement per cylinder configuration which tends to make it less efficient at low RPM ranges (1200 and below), the same speed our engine driven radiator fans are least efficient. This puts less heat load on the condenser and consequently on the radiator at idle speeds. On the average under-condensed street rod, that is a blessing. Above 1200 RPM, efficiency rapidly increases; at operating speeds of 1800 to 2400 RPM it is about the most efficient pump on the market. It can be operated at continuous crank speeds of 6000 RPM. These characteristics make it an almost ideal street rod compressor. Displacement sizes are identified by the numbers on the label on the case. The original number system is interpreted as follows: SD 508= 5 cylinder/8.4 cubic inch, SD 505= 5 cylinder/ 5.6 cubic inch. Sanden changed their numbering system so the new numbers do not give any information about the compressor like the old numbers did, as an example:

Old number	New number	New HFC-134a number
SD 508	V9285	V4509
SD 709	V7402	V7819

The Xexel or Diesel Keiki compressor is a clone of the Sanden 508 and the performance bracketry required is comparable.

Briefly, the York compressor, which is a rarity, can be identified by its square shape. It is about 8" (L) x 5" (W) x 9" (H) in size, with the clutch. Its displacement is given on the front of the compressor in the space marked "P1" or "Part." It will say

RESEARCH AND DEVELOPMENT

Testing and developing better products is what keeps Vintage at the leading edge of climate control technology. Yes, we test our systems on the street in actual driving situations. But sometimes you just can't test the extreme limits with accurately measured results without such high-tech equipment as this extreme environment computerized wind tunnel. Rick Love's '39 Ford a/c performed beyond our expectations in simulations that no real hot rodder will ever see!

