



## Improvements To Carlyle D/E Compressors

### Special points of interest:

- Expanded unloading limits for low temp R-22 systems.
- Standardized cylinder head sensor for 06E compressors.

Carlyle Compressor Division would like to announce two improvements to our 06D/E family of reciprocating compressors. The first improvement, expanding the unloading limits for low temperature R-22 systems, will allow our compressors to be more flexible while the second will help both the customer and our factory by standardizing on one cylinder head temperature sensor for all applications.

After several years of customer input and laboratory testing, Carlyle feels comfortable allowing the use of capacity control in low temperature R-22 applications. To insure the use of unloaders will not affect the reliability of our 06D/E compressors, certain guidelines must be followed.

Currently, Carlyle uses two different cylinder head temperature sensors for our 06E compressors, one for 06ER/EM and the other for 06EA compressors. The setting for the 06ER/EM sensor is 325° F while the 06EA sensor is set to trip at 295° F. After completing several tests to insure no nuisance trips will occur, we have decided to standardize on the 06EA cylinder temperature

- 1 The use of unloaders is limited to one bank on either the 4 or 6 cylinder 06D/E compressors.
- 2 The saturated suction temperature must not be allowed to drop below -25° F.
- 3 Unloading is only allowed with systems that are charged with mineral oil or Alkyl-Benzene oil. It is NOT allowed with POE oils.
- 4 It is recommended the compressor be operated loaded for 60 seconds every 2 hours to prevent oil from collecting in the compressor or other portions of the system.

sensor. As of the middle of August, all Carlyle 06E compressors will be manufactured with the 295° F sensor (Carlyle part number HN68GA295). In 06ER low temperature applications with R-22, system design must ensure that desuperheating is utilized to maintain the discharge temperature below 250° F, the limit noted in our OEM Bulletin #135.

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### REVISED COMPRESSOR NAMEPLATE

The compressor nameplate used by the Carlyle Compressor Company has been improved in design, construction and content. Carlyle started phasing in the new nameplates in the fall of 1996 and expects to complete the process for all compressor models in early 1997. These plates have a white background with black laser etched lettering to make them easy to read. The new plate material is also easier to clean than previous nameplates, assuring positive identification of units in the field.

The model number has been moved to the top center of the nameplate. During the initial introduction of these new nameplates, the model number was printed in smaller type, designated as "M/N" and located in the upper right hand corner. The model number is now clearly labeled, top centered and printed in a larger, bold faced type. A new designation, "MFG/N", has been added. All other information, such as S/N, UL and CSA designations, operating voltages, LRA, etc. remains the same. Below is an 06E nameplate followed by a more detailed explanation of each item:

	-----Model number
Manufacturing number----- bar code	-----UL and CSA
Manufacturing number----- Electrical Characteristics-----	-----Motor Number
Bar code of serial number-----	Bar code for special -----order number
Serial number-----	-----Special order number (where applicable)

Explanation of the above items, starting clockwise from upper right, Model number:

- **Model Number** is the compressor model number to be used when selecting and ordering a new compressor or given to our distributors to obtain a proper service replacement.

**Note:** The initial production of the new nameplate had the model number stamped using smaller type face, identified by the symbol "M/N" and located in the upper right hand corner.

- UL and CSA is the newly revised single mark that indicates that this compressor meets all the requirements for both UL (Underwriters Laboratory) and CSA (Canadian Standards Association). All 60 HZ semi-hermetic Carlyle Compressors are UL and CSA recognized and comply with UL, CSA and NEC (National Electrical Code) requirements for internal motor protection.
  - Motor number is for internal manufacturing use only.
  - Bar code for special order number is for internal manufacturing and inventory control.
  - Special order number indicates a model that has a distinct engineering file which contains the details on how this unit differs from standard. A model number indicating a special compressor may not include all of the engineering changes. A review of the distinct engineering file is necessary to confirm all changes, especially when a service replacement is required.
  - Serial number is the unique number given to each compressor. This number along with the model number is normally all that is needed to get information on a particular compressor or when a service replacement is needed. In the case of a “special” manufactured compressor, see “Special order number” above.
  - Bar code of serial number is for internal manufacturing and inventory control.
  - Electrical Characteristics are shown for all semi-hermetic compressors. Voltages are shown along with their allowable operating ranges for both 50 and 60 cycle operation. Electrical phase and LRA (Locked Rotor Amps) information is also provided.
    - The RLA (Rated Load Amps) will vary depending on the overcurrent device chosen for the actual operating conditions. Carlyle could only provide the maximum rating data for the compressor. Actual operating RLA may be lower than the compressor maximum, allowing the OEM to use smaller electrical wire and components. Because of all the possible variations in motor protection that can be used by our OEM’s, Carlyle leaves this information on the nameplate blank. The OEM needs to stamp the required information on his package nameplate.
  - Manufacturing Number is our internal bill of materials and will be used by our plant to designate what components go into each compressor. Initially this number will be the same as the model number, but as each model is converted over to our new internal bill of material system this number will differ from the model number. When this process is completed, you must use the “Model Number” to identify the compressor.
  - Manufacturing number bar code is for internal manufacturing and inventory control.
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