HARTFORD® COMPRESSORS

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SERVICE BULLETIN

Replacement of a 1216 "J" version MSC with a 1215 "J" or 1215/1218 "K" version MSC

There are many changes between the "J" version and the "K" version 1215 & 1216/1218 MSC's. The following service bulletin details the changes affecting the replacement of a 1216 "J" version compressor with a 1215 "J" or a 1215/1218 "K" version model.

DIFFERENCE	"J" COMPRESSOR	"K" COMPRESSOR
HEIGHT	43.4"	47.25"
DIAMETER	19.75"	21.83"
SUCTION SERVICE VALVE	180° from terminal box	90° to right of terminal box
SUCTION CONNECTION	3 5/8"	4 1/8"
DISCHARGE CONNECTION	3 1/8"	3 5/8"
OIL LEVEL SENSOR	Internal oil float switch on Models before Sept. 1995 (Compressors built in Sept. 1995 or later have current sensor)	External optical sensor located left of terminal box
V.I. PORT LOCATION	90° to right of terminal box	90° to left of terminal box
V.I. PORT SIZE	1 5/16" – 12	1 7/8" –12
L.I. PORT LOCATION	90° to right of terminal box (Was part of V.I. connection)	135° to the left of the terminal box next to the V.I. port
L.I. PORT SIZE	1 3/16" – 12	7/8" – 14
OIL SIGHT GLASS	135° to left of terminal box	135° to right of terminal box
UNLOADER	Pad mounted with separate solenoid valves	Solenoid valves integral part of unloader

Model Comparison

	1216NHF6W3J	1215NHF6W4J	1215NHF6W4K	1218NHF6W4K
HORSEPOWER	120 horsepower	Same horsepower 120HP	Same horsepower 120HP	Increase to 150HP
AMPERAGE	398 LRA 995 Across the line	Same amp draw	375 LRA 1030 Across the line	465 LRA 1248 Across the line
DISPLACEMENT	306.8 CFM displacement @ 3500 rpm	278.9 CFM displacement @ 3500 rpm	278.9 CFM displacement @3500 rpm	334.7 CFM displacement @ 3500 rpm
CAPACITY	111 Tons @ 30°F SST **/** 105°F SDT on R22	102 Tons @ 30°F SST / 105°F SDT on R22	101 Tons @ 30°F SST / 105°F SDT on R22	123 Tons @ 30°F SST / 105°F SDT on R22
SUCTION SERVICE VALVE	053572A2 3-5/8 Line size	Reuse Same Kit 053572A2 3-5/8 Line size	053572A6 4-1/8 Line size	053572A6 4-1/8 Line size
DISCHARGE SERVICE VALVE	053572A1 3-1/8 Line size	Reuse Same Kit 053572A1 3-1/8 Line size	053572A2 3-5/8 Line size	053572A2 3-5/8 Line size
DISCHARGE CHECK VALVE	055989A1 3-1/8 Line size	Reuse Same Kit 055989A1 3-1/8 Line size	055989A2 3-5/8 Line size	055989A2 3-5/8 Line size
LIQUID INJECTION KIT	055594A3 – 120 V 055594A4 - 240 V	Reuse Same Kit 055594A3 – 120 V 055594A4 - 240 V	055846A7	055846A8
VAPOR INJECTION	1-5/16 –12 Straight Thread O-ring Boss	1-5/16 –12 Straight Thread O-ring Boss	1-7/8 –12 Straight Thread O-ring Boss Use 051164B1 Threaded adaptor or 055161A2 4-bolt flange kit	1-7/8 –12 Straight Thread O-ring Boss Use 051164B1 Threaded adaptor or 055161A2 4-bolt flange kit
RELIEF VALVE	054047A1	Reuse Same Kit 054047A1	Reuse Same Kit 054047A1	Reuse Same Kit 054047A1

NOTE: Additional Pipe Fittings are required to connect the new compressor's connections to the existing piping. These fittings must be field supplied.

Electrical Components:

- We now use Kriwan motor protectors on the MSC-127 compressors. A new module may need to be purchased depending on the type of sensors installed on the replacement compressor.
- The NHF6W3 model is no longer produced in a “K” version compressor. This model will need to be upgraded to a NHF6W4K. When going from a 1216NHF6W3J to a 1218NHF6W4K the motor size increases by 30 HP.

  Electrical controls and control wiring as well as contactor and overload selections must be reviewed to accommodate the differences in horsepower.
- ***Electronic Oil Level Sensor:*** The old style oil float used on compressors manufactured before September of 1995 has been replaced by an electronic oil level indicator. This electronic liquid sensor must be wired correctly to ensure proper operation. By use of a light beam it determines whether oil is present in the compressor or not. If it determines that no oil is present it opens up the control circuit and shuts off the compressor.
- ***Oil Thermostat:*** The oil thermostat has been upgraded from a 203°F trip point on NLF and NUF “J” version compressors to a trip point of 239°F on all “K” version models.
- ***Liquid Injection:*** The liquid injection arrangement for R134a applications on the MSC-127 consists of a fixed orifice, a solenoid valve and a temperature control. The temperature control will need to be wired to the system control panel and the solenoid coil will need to be supplied with power.
- ***Motor Terminal Sizes:*** The electrical terminal post stud size has been changed from 3/8" to 1/2".
- ***New Pad Mounted Unloader:*** The compressor unloading control has changed from a pad mounted unloader stem with attached solenoid valves to a pad-mounted unloader with built-in integral load/unload solenoid valves. Because the solenoid valves are now relocated in the pad the adjustable needle valves have been replaced by a fixed factory set orifice. The internal relief valve in the unloader body was removed and an additional schraeder access valve was installed.

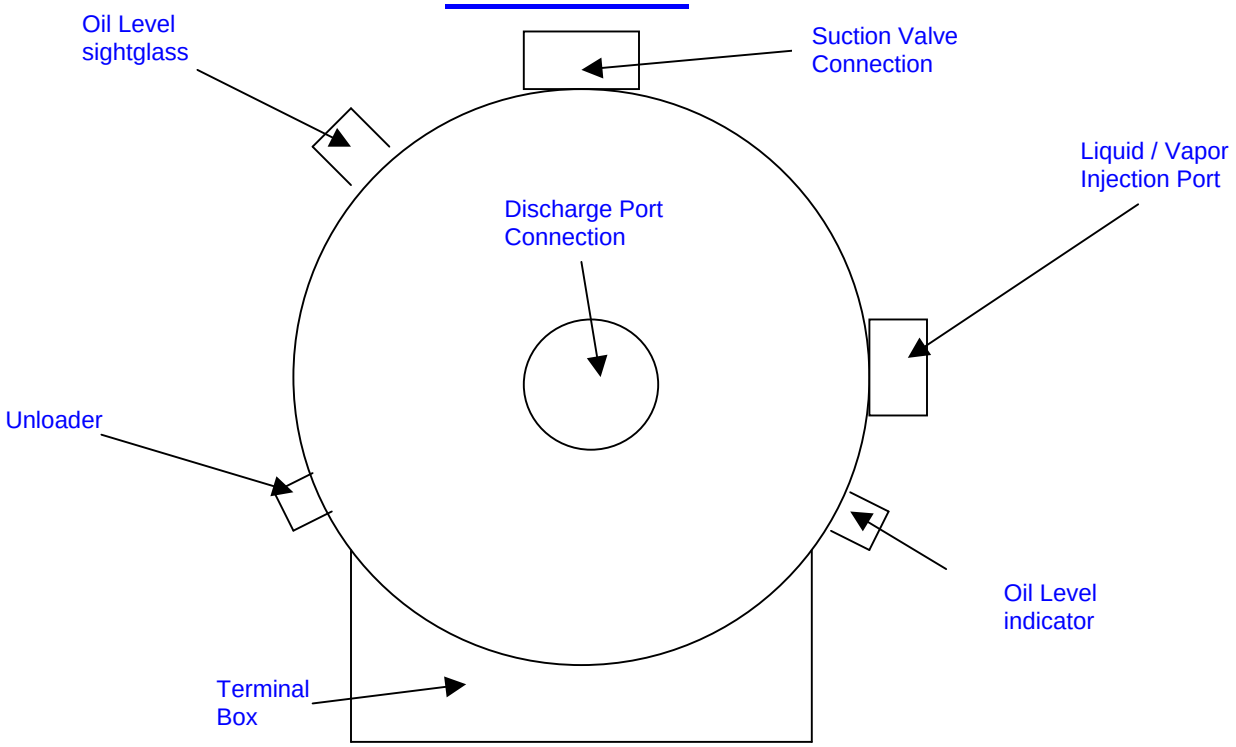
Physical Changes:

- In relation to the terminal box the oil sight glass, oil level indicator, suction connection, liquid injection port and vapor injection port have been moved when going from a “J” version to the “K” version. (Please see the diagram on page 4 for differences in external features and connections.)
- The suction and discharge connections have increased in size.

  (Please see the table on page 1 for details on the increase of connection and line sizes.)
- The compressor unloading control has changed from a pad mounted unloader stem with attached solenoid valves to a pad-mounted unloader with built-in integral load/unload solenoid valves.
- The internal oil float switch sensor on models manufactured before September 1995 has been replaced by an external electronic oil level sensor.
- ***Vapor Injection:*** The vapor injection connection on the compressor has increased to 1 7/8”. The vapor connection on the compressor is no longer coupled with the liquid injection port. The liquid injection port has been relocated to a separate connection port on the compressor.
- The internal oil separator now uses a high efficiency coalescent filter cartridge design.

Top View of Compressor

"J" Version



"K" Version