



## SERVICE PARTS

## 06D COMPRESSORS

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### NOTES

Enclosed information sheets read printed material for variations, exceptions and capacity reduction data.

#### Special Note:

Read Pages 2 and 4 for variations and changes on the 06DR013, 06DM313, 06DR316 and 06DM316 compressors. Page 6 for crankcase changes.

Pages 2, 3, 4, 5 and 6 for valve plate data and hot gas capacity reduction information. Complete information regarding new suction cut-off unloading information is included with kit.

Many of Carlyle part numbers are used as KeepRite part numbers, but the dash (-) is dropped, except the second dash which denotes number of pieces in package, eg. Carlyle part number 6F25-1013-050 becomes KeepRite part number 6F251013-050 (dash as in this part number -050 refers to number of pieces in package).

#### I. Model Numbers

- A. All new H.E. compressors . . . both production and service replacement models (Ex: 06DR3370DA\*3\*200) . . . have a "3" in the 11th digit of the compressor model number. The 11th digit is also the 4th character in from the right end of the model number. If it's a "3" . . . it's a H.E. model.
- B. The one exception to the above statement is the new H.E. 06D( )537 compressors. The model numbers for these H.E. compressors did not change because of a valving change only without changing the motor. The "3" in the 11th digit of the H.E. model number is primarily used to identify a motor change. Consequently, the 06D( )537 H.E. models are "not" identified by the typical "3" in the 11th digit of the model number. To make the H.E. determination, one would need to look for the "V" notch in the edge of the valve plate. As noted under valve plates . . . all H.E. valve plates do have the "V" notch identification. (See Figure III)

#### MODEL NUMBER SIGNIFICANCE

0 6 D R 3 3 7 0 D A 3 2 0 0

0 = Model, 7 = Pkg.

Future Design

Electrical Characteristics: (H.E. Models)

31 = 575-3-60

32 = 208/230-3-60 (See Note Below)

36 = 460-3-60

Variables: External Overload, Internal Thermostats

A: (Yes)

(Yes)

C: (No)

(Yes)

Variables: Suction Valve Location, Direction, 2 or 4 Bolt

Various: 0 = New (Refrig.), 2 = New (A/C), 6 = Service, 8 = Special

CFM Displacement

Key to Various HP Motors used on 2-, 4- and 6-cylinder Compressors

Product Series: 06DR - Refrigeration Duty

06DM - Medium Temperature Refrigeration Duty

06DA - A/C Duty

#### Note:

Electrical characteristics shown for 06D represent high efficiency models. For older standard efficient models, the following electrical characteristics apply:

01 = 575-3-60, 04 = 200-3-60, 05 = 230-3-60 and 12 = 208/230-3-60



## II. Service Valve Plate Packages

The change to new H.E. compressors involved a redesigned valve system. As a result, only 2 replacement service valve plate packages are now required for all 06DR/DM/DA H.E. compressors. Chart "F" lists the compressor model size with the applicable new H.E. service valve package along with the old standard package(s) it replaces. (See Figures I and II)

Before viewing Chart "F" for valve plate replacement selections, there are a few important points to note!

1. All new H.E. service valve plate packages can be used on all old standard compressors with the following exceptions:
  - a. The cylinder bore diameter on new H.E. 06DR013 and 06DM313 models has been increased ( $1\frac{3}{16}$ " to 2" dia.). The new H.E. valve plates "can not" be used on old standard 06DR013, 06DM313 and 06DA313 models with the smaller ( $1\frac{3}{16}$ " dia.) cylinder bore.
  - b. The new H.E. valve plates "can not" be used as replacements on any compressor cylinder bank(s) that would continue to use the hot gas by-pass unloading. The compressor cylinder bank(s) with the old style method of unloading require the valve plate with the check valve. The H.E. valve plates do not incorporate a check valve. See also section on hot gas by-pass unloading found in this bulletin.
  - c. When adding new H.E. replacement valve plates to old standard 6-cylinder compressors, it will be necessary to remove the "5th" dowel pin from the centre cylinder deck in the crankcase. The H.E. valve plates presently have provisions for only the 4-dowel pins which hold the suction reed valves. There is no mating valve plate hole for the additional 5th dowel pin and consequently, it must be removed.
2. All old standard service valve plate packages can still be used on old standard compressors as well as replacements on new H.E. compressors with the following exceptions:
  - a. Old standard service valve plate packages designed for the  $1\frac{3}{16}$ " diameter cylinder bore "can not" be used on new 06DR013 and 06DM313 H.E. compressor models with the 2" diameter cylinder bore.
  - b. Old standard service valve plate packages "can not" be used on any new H.E. "DR" compressor models because of the incompatibility with the new low clearance contoured piston and mating suction reed valve. The new low clearance piston with the valve shaped cavity recessed in the head is used only on the new H.E. "DR" models. DM and DA new H.E. models used the conventional flat top pistons.
  - c. If the valve plates must be changed on "DR" H.E. models and only standard service valve plate packages are available, the old standard service valve plate package may be used, but continue to use the existing H.E. suction reed valves. The suction valves included in the old standard service valve plate packages are not compatible with H.E. "DR" compressor models (per note 2b. above) and must not be used.



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Chart F – Service Valve Plate Packages

COMPRESSOR MODEL	VALVE PLATE LOCATION	HIGH EFFICIENCY SERVICE VALVE PLATE PACKAGE (See Note 1)	OLD STANDARD SERVICE VALVE PLATE PACKAGE (See Note 2)
06DM808**	Top	06DA660093	6D75-253
06DR109	Top	06DA660094	6D75-253
06DR013	Side	06DA660094	*06DR660008 & 9
06DM313**	Side	06DA660093	*06DA660037 & 38
06DR316	Side	06DA660094	06DR660010 & 11
06DM316**	Side	06DA660093	*06DA660039 & 40
06DR718	Side	06DA660094	06DA660006
06DA818	Side	06DA660093	6D75-253
06DR820	Side	06DA660094	06DR660006
06DR724	Side	06DA660094	6D75-253
06DR724	Top	06DA660094	6D75-163
06DA824	Side	06DA660093	6D75-253
06DA824	Top	06DA660093	6D75-163
06DR228	Side	06DA660094	06DR660006
06DR228	Top	06DA660094	06DR660013
06DA328	Side	06DA660093	6D75-253
06DA328	Top	06DA660093	6D75-163
06DR337	Side	06DA660094	6D75-253
06DR337	Top	06DA660094	6D75-163
06DM337**	Side	06DA660093	6D75-253
06DM337**	Top	06DA660093	6D75-163
06DA537	Side	06DA660093	6D75-253
06DA537	Top	06DA660093	6D75-163

\*\* = Older "DA" 808, 313, 316 and 337 models may still exist. Valve plate requirements would be the same as comparable "DM" 808, 313, 316 and 337 models.

- 1.a. All service valve plate packages include: a valve plate assembly, (2) suction reed valves, (2) cylinder head gaskets (1 standard, 1 suction cut-off unloading), a valve plate gasket, plus (2) shut-off valve positioning springs. (See Figure I)
- b. New H.E. and old standard valve packages are interchangeable as complete assemblies only . . . as noted below. Do not intermix component parts from one type to another . . . such as suction or discharge valves, except as noted in 2.c., page 2.
- c. New H.E. valve plates can be identified by the "V" notch in the edge of each valve plate (discharge edge). Old standard valve plates do not have an identifying notch. (See Figure III)
- 2.a. The 06DA660093 and 094 service valve plate packages are identical except the 06DA660094 package has the canted valve plate with the reduced discharge port volume for low temperature applications.
- b. For proper performance levels, the 06DA660094 must be used for all low temperature compressor applications.
- c. The 06DA660094 package can also be used as an acceptable substitute when any 06DA660093 service valve plate package is unavailable.
- d. The 06DA660093 package is used for medium and high temperature compressor applications and can not be used as a substitute for the 06DA660094 service valve plate package without expecting some loss in performance.



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- 3.a. Where 2 valve plate packages are shown and marked (\*), the 1st number is for the R.H. cylinder deck and the 2nd number is for the L.H. cylinder deck as viewed from the oil pump end of the compressor.
- b. Only those old standard service valve plate packages required for the old standard 06DR013 and 06DM313 (1 $\frac{3}{16}$ " dia. cylinder bore) compressors will continue to be produced. New H.E. service valve plate packages (06DA660093 and 094) can begin to replace old standard service valve plate packages as existing stock is depleted.
- c. Old standard service valve plate packages 06DR660008 and 9 along with 06DA660037 and 38 are to be used only with old standard 06DR013 and 06DM313 models with the 1 $\frac{3}{16}$ " diameter cylinder bore. If it becomes necessary to change valve plates on these old style 13 CFM models, the old standard service valve plate packages must be used as new H.E. packages 06DA660093 and 094 are designed for all models with the 2" diameter cylinder bore.
- d. When using the new H.E. service valve plate packages on old standard DR316 and DM316 models with the suction service valve located at the compressor pump end, a special valve plate gasket must be used. This special gasket, part number 06DA502923, will be included in the 06DA660093 and 094 package and is required only for the old standard 16 CFM models. (See Figure IV, Gasket #7, Page 5) The gasket is to be placed on each of the two cylinder decks with the "blanked-off" section always toward the oil pump end of the compressor. In this position, the gasket allows the suction gas to pass over and cool the motor first before being drawn into the cylinders.

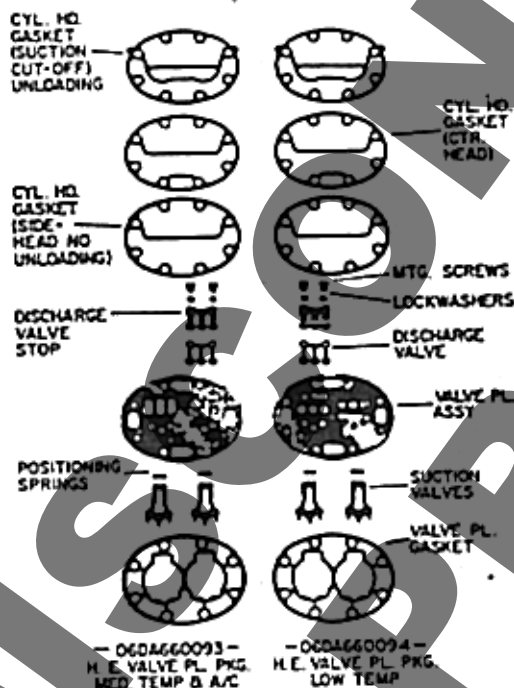


Figure I  
HIGH EFFICIENCY  
SERVICE VALVE PLATE PACKAGE

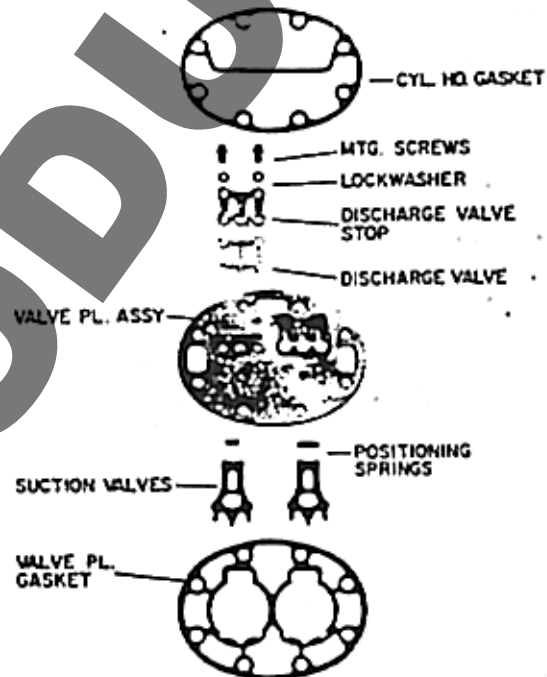


Figure II  
TYPICAL OLD STANDARD  
SERVICE VALVE PLATE PACKAGE

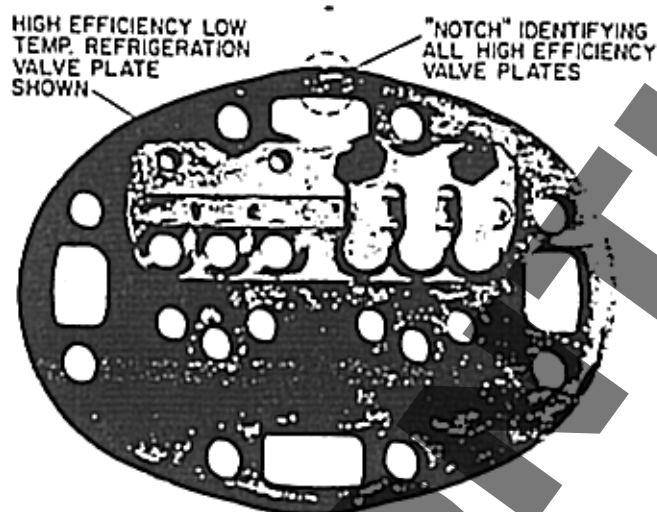


Figure III  
HIGH EFFICIENCY VALVE PLATE

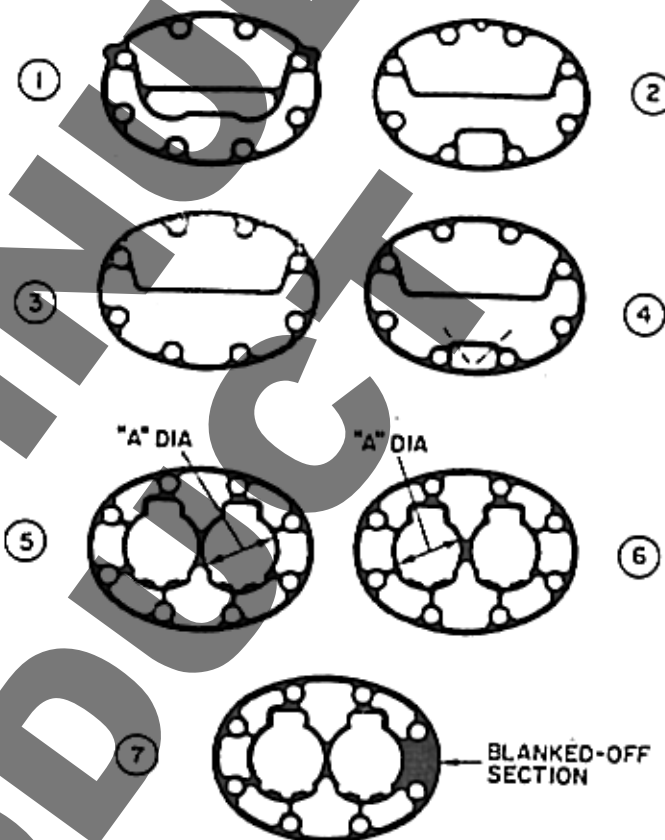


Figure IV  
CYLINDER HEAD AND VALVE PLATE GASKETS

## LEGEND

1. Cylinder Head Gasket - 06DA504594 - Unloading - Suction Cut-Off
  2. Cylinder Head Gasket - 6D75-2672 - Unloading - Hot Gas Bypass
  3. Cylinder Head Gasket - 6D40-1053 - No Unloading - Side-Bank  
Cylinder Head Gasket 6D40-1053 can be made from Gasket #4 (6D68-1053) by removing web as shown by cut lines.
  4. Cylinder Head Gasket - 6D68-1053 - No Unloading - Centre Deck
  5. Valve Plate Gasket - 6D43-1043 - Ref. "A" dia. = 2" dia.
  6. Valve Plate Gasket - 6D40-1043 - Ref. "A" dia. = 1 7/16" dia.
  7. Valve Plate Gasket - 06DA502923 - Blanked-Off Section
- For 16-CFM Models with S.V. located at P.E. of compressor and using H.E. Valve Plates . . . See note 3d, page 4.



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### III. Crankcase Changes (4-cylinder, 13 and 16 CFM Models)

#### 1. Suction Service Valve Relocation

The new H.E. 06DR013, 316 and 06DM313, 316 compressors have changed crankcases which resulted in a relocation of the suction service valve. These new H.E. 13 and 16 CFM compressors have the suction service valve located at the compressor motor end. The old standard version of these models have the suction service valve location on the oil pump end face of the compressor crankcase.

Replacement 06DR013, 316 and 06DM313, 316 compressors are now being remanufactured with the capability of mounting the suction service valve at either the old pump end or new motor end cover location.

However, if only the old standard compressor with the suction valve connection at the pump end is available as the immediate replacement and the defective compressor has the suction valve connected at the motor end . . . remove the motor end cover from the defective compressor and re-install on the replacement body. Use a new motor end cover gasket #6F25-1013.

#### 2. Cylinder Bore Change (1 $\frac{1}{2}$ " dia. to 2" dia.)

New H.E. 06DR013 and 06DM313 compressors incorporate a change in crankcases allowing standardization to a 2" diameter cylinder bore. The old standard 06DR013 and 06DM313 models had a 1 $\frac{1}{2}$ " diameter cylinder bore. To maintain the same 13.1 CFM displacement using a 2" diameter bore, a new crankshaft and piston were required.

Therefore, when considering changes to the running gear on 13 CFM models . . . old standard compressor models would require 1 $\frac{1}{2}$ " diameter pistons and a different crankshaft than the 2" diameter pistons and crankshaft required with the new H.E. 13 CFM Models.

### IV. Hot Gas By-Pass Unloading (Old Capacity Control Design)

The suction cut-off method of capacity control has replaced the old hot gas by-pass unloading design. However, many 06D 6-cylinder compressors now in operation use this old hot gas by-pass means of unloading. The hot gas by-pass capacity control design has a unique valve plate with a built-in check valve. If it becomes desirable to change the unloader cylinder head assembly or the valve plate, note the following recommendations:

1. The hot gas by-pass unloader head can be replaced with the new suction cut-off capacity control design. Use capacity control package 06DA660089 (elec.) or 06DA660090 (press.). Existing solenoid coils will not fit the new suction cut-off unloader valve stem. It is not necessary to change the valve plate when converting to the new suction cut-off unloading design. However, it is recommended to remove the check valve from the existing valve plate before adding the new suction cut-off cylinder head. This can be accomplished by taking the valve plate off the compressor. Then remove the screws holding the check valve body. Discard this body and the piston and spring which it houses. Reassemble the old valve plate using a new valve plate gasket included in the new suction cut-off unloader package.
2. If it is desirable to change the valve plates and maintain the old style hot gas by-pass method of unloading, the valve plate with the check valve (P/N 06DA401843) must be used with the old style unloader cylinder head. The new H.E. valve plate packages (06DA660093 or 094) can not be used with the old style hot gas by-pass cylinder head unloader.
3. If the replacement valve plate assembly with the check valve (06DA401843) is unavailable for use with the old style hot gas by-pass method of unloading, the following option exists: Change the unloader cylinder head assembly from the old hot gas by-pass to the new suction cut-off head as per note #1 above. With the new suction cut-off unloader head, H.E. valve plate packages (06DA660093 or 094) can now be used.

06EA401303 - 208V Coil - Hot Gas By-Pass - Fastened with nut on threaded valve shaft

06EA660135 - Valve - Suction Cut-Off

504696 (06DA401794) - 208V Coil - Suction Cut-Off - Fastened with spring clip on valve

Valve not available for 06EA401303 coil; use 504696 (06DA401794) and 06EA660135.



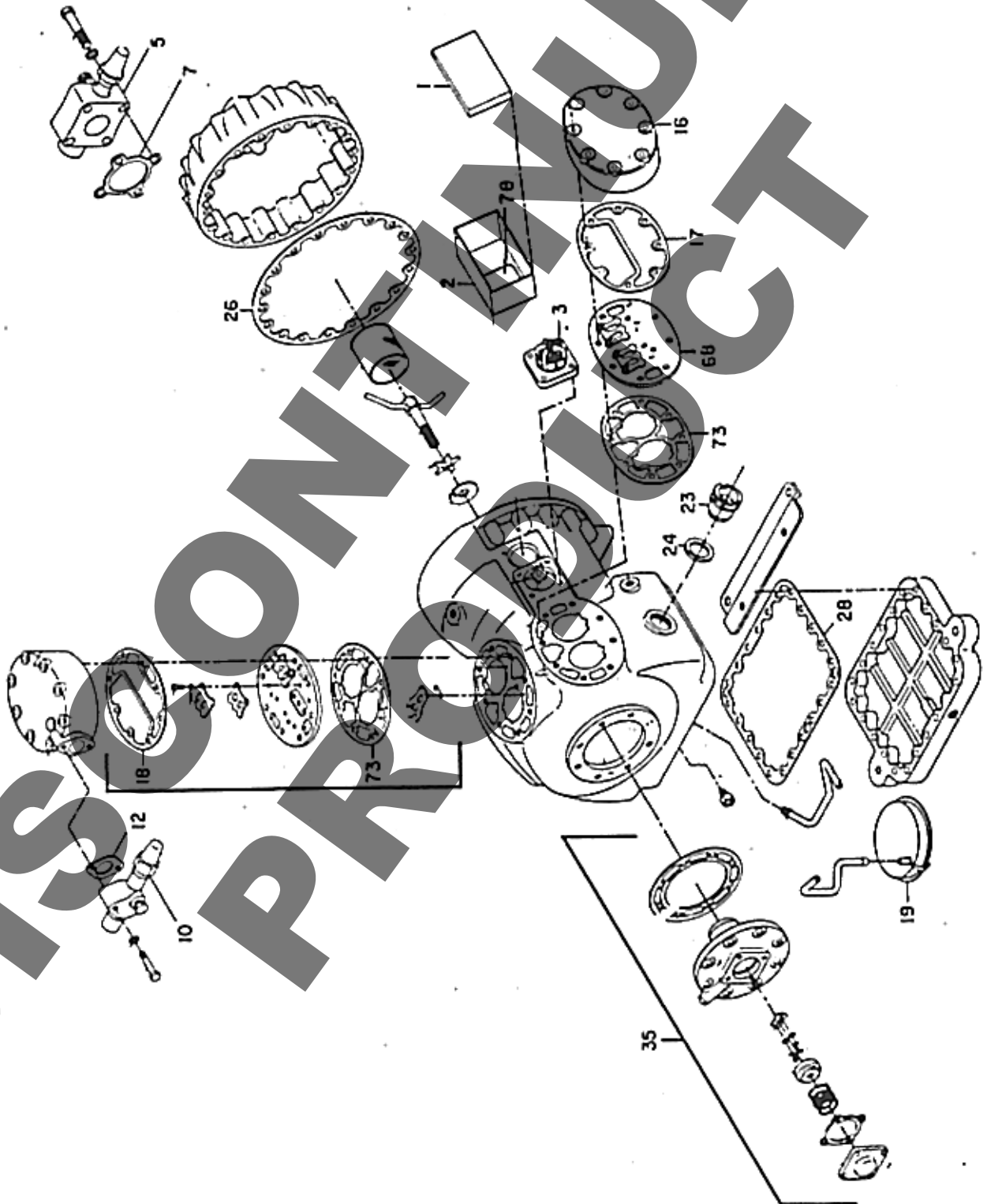
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I T E M	PART NUMBER	DESCRIPTION	QUANTITY USED ON COMPRESSOR MODEL													
			06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089	06D68MR80089
N.S.	1042092	Oil Safety Switch	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	6D68952	P.E. Bearing Head	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N.S.	504695*	Capacity Control Pkg (Electric) 06DA660089*	As Required													
68	06DA660093	Valve Plate Package (DM & DA)	1		2		2		2		3		3		3	3
68	06DA660094	Valve Plate Package (DR)		1	2		2		2	3		3		3		
1 & 2	06DA660075	Terminal Box and Cover Package (6 x 5)	1	1	1	1	1	1	1	1						
1 & 2	06DA660088	Terminal Box and Cover Package (6 x 8)								1	1	1	1	1	1	1
N.S.	120528	Cylinder Head Cooling Fan Pkg - Parts Only	As Required													
19	6D40103	Oil Screen	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23 & 24	5F20781	Sight Glass Assembly	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N.S.	504696	Unloader Valve Coil - 06DA401794	As Required													
N.S.	120365	Head Cooling Motor														
N.S.	120239	Motor Mount - Head Cooling														
N.S.	120369	Fan - N1032														

## NOTES:

Above last 3 items included in 120528 fan package; 120528 used on low temperature water cooled and low temperature remote only.

\*Less unloader valve coil; purchase coil separately.

N.S. - Not Shown





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I T E M	PART NUMBER	DESCRIPTION	QUANTITY USED ON COMPRESSOR MODEL													
			0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8	0 6 D M R 8 0 8
12	6D231421-012	Gasket Svce Valve, 12/pk, 2-hole, 1 1/8" spcng	As Required													
12	6D401131-012	Gasket Svce Valve, 12/pk, 2-hole, 1 1/4" spcng														
7	6D681131-012	Gasket Svce Valve, 12/pk, 4-hole, 2 1/2" sq spcng														
17	6D401053-030	Gasket, Cylinder Head Side	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	6D681053-030	Gasket, Cylinder Head Centre								1	1	1	1	1	1	1
N.S.	06DA504594	Gasket, Cyl Head Suction Cut-Off Unloading	As Required													
73	6D431073-030	Gasket, Valve Plate, 2" dia. bore	1	1	1	1	1	1	1	1	1	1	1	1	1	1
73	6D401073-030**	Gasket, Valve Plate, 1 3/16" dia. bore														
28	6D401043	Gasket Bottom Cover, 2 and 4 cylinder	1	1	1	1	1	1	1	1						
28	6D681043	Gasket Bottom Cover, 6 cylinder								1	1	1	1	1	1	1
26	6D231063	Gasket M.E. Cover, 2 cylinder	1	1												
26	6F251013-050	Gasket M.E. Cover, 4 and 6 cylinder			1	1	1	1	1	1	1	1	1	1	1	1
N.S.	6D43172	Complete Gasket Package	As Required													
N.S.	06EA660135	Capacity Control Valve (Electric)														
	06EA501253	Gasket, Capacity Control Valve														

\*\*Use with old standard 13 CFM models (1 3/16" dia. cylinder bore)

Reference OEM Bulletin #101, Chart "F"

N.S. - Not Shown



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			0 6 D M R 8 0 8	0 6 D M R 1 0 0	0 6 D M R 0 3 1	0 6 D M R 3 3 1	0 6 D M R 3 3 1	0 6 D M R 7 8 1	0 6 D M R 8 8 1	0 6 D M R 7 8 2	0 6 D M R 8 2 2	0 6 D M R 3 3 2	0 6 D M R 3 3 2	0 6 D M R 3 3 3	0 6 D M R 3 3 3	0 6 D M R 5 3 3
78	HN69GZ004	Overload - 208/230/3/60 - 8347A23-19	2	2												
78	HN69GZ012	Overload - 460/3/60 - 8347A23-56	2	2												
78	HN69GZ012	Overload - 575/3/60 - 8347A23-56	2	2												
78	HN69GZ007	Overload - 208/230/3/60 - 8347A23-54		2												
78	HN69GZ011	Overload - 460/3/60 - 8347A23-86		2												
78	HN69GZ060	Overload - 575/3/60 - 8347A23-106		2												
78	HN69GZ024	Overload - 208/230/3/60 - 8347A23-63				2	2	2								
78	HN69GZ014	Overload - 460/3/60 - 8347A23-53				2	2	2								
78	HN69GZ032	Overload - 575/3/60 - 8347A23-42				2	2	2								
78	HN69GZ214	Overload - 208/230/3/60 - 8348A17-9						2	2	2						
78	HN69GZ038	Overload - 460/3/60 - 8347A23-18						2	2	2						
78	HN69GZ037	Overload - 575/3/60 - 8347A23-40						2	2	2						
78	HN69GZ306	Overload - 208/230/3/60 - 8348B19-13								2	2					
78	HN69GZ010	Overload - 460/3/60 - 8347A23-29								2	2					
78	HN69GZ004	Overload - 575/3/60 - 8347A23-19								2	2					
78	HN69GZ309	Overload - 208/230/3/60 - 8348B19-11										2	3	3		
78	HN69GZ024	Overload - 460/3/60 - 8347A23-63										2	2	2		
78	HN69GZ025	Overload - 575/3/60 - 8347A23-31										2	2	2		
78	HN69GZ214	Overload - 208/230/3/60 - 8348A17-9														2
78	HN69GZ215	Overload - 208/230/3/60 - 8348A18-9														2
78	HN69GZ307	Overload - 460/3/60 - 8348A19-4														2
78	HN69GZ301	Overload - 575/3/60 - 8347A30-69														2

## NOTE:

These overloads are suitable for pre-high efficiency compressors and will be supplied in future for both pre-high efficiency and the new high efficiency compressors.



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			0 6 D M 8 0 0 8	0 6 D M 1 0 0 9	0 6 D M 3 1 1 3	0 6 D M 3 1 1 6	0 6 D M 3 1 1 6	0 6 D M 7 1 1 8	0 6 D M 8 1 1 8	0 6 D M 7 1 1 8	0 6 D M 2 2 2 4	0 6 D M 3 3 3 8	0 6 D M 3 3 3 8	0 6 D M 3 3 3 7	0 6 D M 5 3 3 7			
			8	9	3	3	6	6	8	8	0	4	4	6	8	7	7	
10	1042050-002	Suction Shut-Off Valve (7/8-1 1/8 c.c.) 06DA660061	1															
10	1042050-003	Suction Shut-Off Valve (7/8-1 1/4 c.c.) 06DA660062		1		1												
10	1042050-005	Suction Shut-Off Valve (1 1/8-1 3/4 c.c.) 06DA660064			1		1	1		1								
5	1042050-006	Suction Shut-Off Valve (1 3/8-2 1/2 s.p.) 06DA660065							1		1	1			1			
5	1042050-007	Suction Shut-Off Valve (1 1/8-2 1/2 s.p.) 06EA660090											1		1			
5	1042050-004	Suction Shut-Off Valve (1 1/8-2 1/2 s.p.) 06DA660063										1						
10	1042050-001	Discharge Shut-Off Valve (7/8-1 1/8 c.c.) 06DA660060	1	1	1	1	1	1	1									
10	1042050-002	Discharge Shut-Off Valve (7/8-1 1/8 c.c.) 06DA660061							1	1	1							
10	1042050-003	Discharge Shut-Off Valve (7/8-1 1/4 c.c.) 06DA660062										1	1	1	1			
10	1042050-005	Discharge Shut-Off Valve (1 1/8-1 3/4 c.c.) 06DA660064													1			
12	6D231421-012	Suction Shut-Off Valve Gasket	1															
12	6D401131-012	Suction Shut-Off Valve Gasket		1	1	1	1	1	1		1							
7	6D681131-012	Suction Shut-Off Valve Gasket							1		1	1	1	1	1			
12	6D231421-012	Discharge Shut-Off Valve Gasket	1	1	1	1	1	1	1	1	1							
12	6D401131-012	Discharge Shut-Off Valve Gasket										1	1	1	1			
3	06DA660045	Terminal Block Kit	1	1	1	1	1	1	1	1	1	1	1	1	1			

## NOTES:

Part numbers shown for shut-off valves, eg. 1042050-002, includes shut-off valve, gasket and mounting bolts.

Specify tubing size and bolt centres when ordering shut-off valves.

Must have specifications, as outlined, as size may vary from shut-off valves as given above.



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## NOTES

- (1) The 78179-06EX250 compressor is no longer stocked as a service compressor. It is replaced by the 78177-06EZ150 compressor. When making this change, the circuit breaker must be changed. For 575 volt, use circuit breaker P/N HH83XB446; for 208 volt, use circuit breaker P/N HH83XE613. If replacing the 06EZ150 with a 78179-06EX250, no change in motor protection is necessary.

An 06EM compressor becomes an 06EZ as a service compressor.

An 06ER compressor becomes an 06EY as a service compressor.

- (2) When ordering shut-off service valves, advise O.D. pipe size and bolt hole configuration.

- (3) Cylinder Head Sensor (Thermal Sensor). If assistance is required when changing compressors involving this type of protection, please read the accompanying instructions.

All 06EX service compressor models are supplied with cylinder head sensor installed to provide improved motor protection; 06EX models are a direct replacement for original compressors using calibrated overcurrent protection devices and cylinder head sensor protection. Wire per Figure 2.

When replacing original compressors which used the Robertshaw protection system, rewire per Figure 2, using conduit package P/N 06EA601052 (should be ordered along with the service compressor). Wire the cylinder head sensor leads through the compressor terminal box using the black wire and one of the three orange wires that were previously connected to the Robertshaw sensor terminals. Connect orange and black leads to the original control circuit wires removed from the M1 and M2 terminals on the module. Remove and discard the old Robertshaw module and the (2) extra orange sensor leads. Disconnect the module power leads T1 and T2 and insulate or tape off. Complete the terminal box connections per Figure 2.

Original compressors using obsolete thermotector protection must be converted by addition of P/N 06EA601052 conduit kit. Connect the cylinder head sensor leads to original thermotector leads and wire per Figure 2.

All 06EY and 06EZ refrigeration duty service models are supplied with Robertshaw sensors embedded in the motor windings and either the centre head on six cylinder or side head on four cylinder models are tapped and plugged to accept a 1/2 MPT discharge temperature sensor. If original compressor has the sensor, transfer it to service compressor and install the plug in the return compressor. Use a good grade of pipe thread sealant such as John Crane plastic lead seal, insoluble #2 (Crane Packing Company) or equal. Wire the head sensor leads into the control circuit and complete the terminal box connections per Figure 3.

**WARNING:** Application to sensor terminals of any voltage or current in excess of those specified in Figure 3 results in immediate damage to sensors. Failure to use approved over current protection in conjunction with either the Robertshaw protection or the discharge temperature sensor constitutes abuse and warranty-credit may be denied.

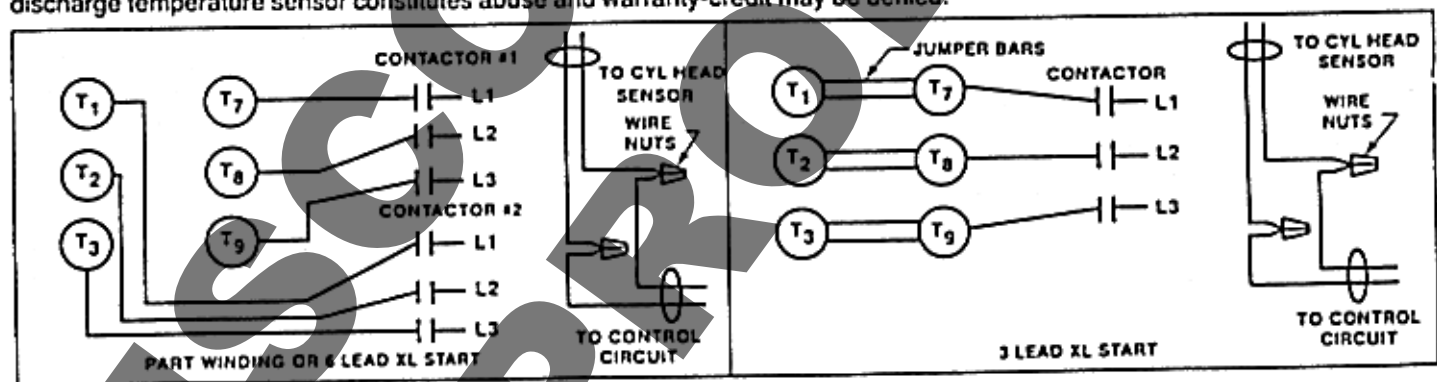


Figure 2 - 06EX CYLINDER HEAD SENSOR AND OVERCURRENT PROTECTED COMPRESSORS

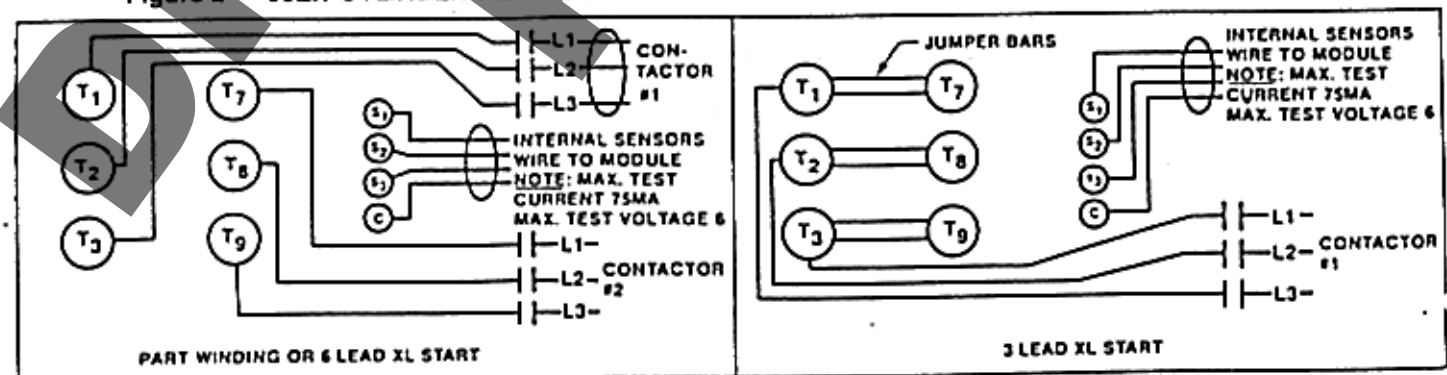


Figure 3 - 06EY-EZ ROBERTSHAW PROTECTED COMPRESSORS



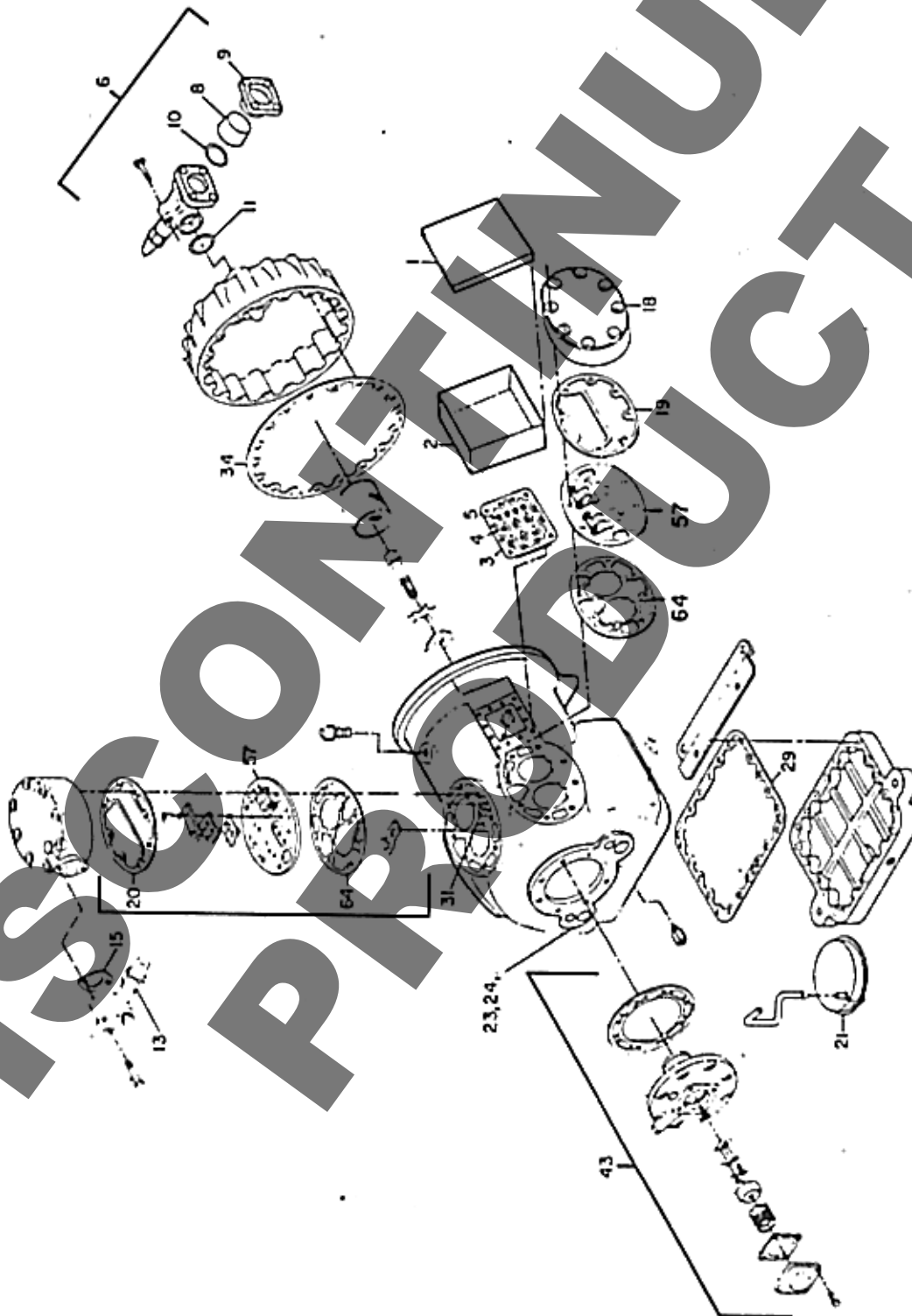
# SERVICE PARTS

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# SERVICE PARTS

# 06E COMPRESSORS

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I T E M	PART NUMBER	DESCRIPTION	QUANTITY USED ON COMPRESSOR MODEL											
			0 6 E R 1 5 0	0 6 E M 1 5 0	0 6 E A 1 2 5 0	0 6 E R 1 2 5 5	0 6 E A 1 2 5 5	0 6 E R 1 2 5 5	0 6 E A 1 2 5 5	0 6 E R 1 2 5 5	0 6 E A 1 2 5 5	0 6 E R 1 2 5 5	0 6 E A 1 2 5 5	0 6 E A 1 2 5 5
N.S.	1042092	Oil Safety Switch	1	1	1	1	1	1	1	1	1	1	1	1
43	06EA660001	P.E. Bearing Head	1	1	1	1	1	1	1	1	1	1	1	1
N.S.	505379*	Capacity Control Package (Electric) 06EA660138*	As Required											
		Capacity Control Package (Pressure)												
57	06EA660143	Valve Plate Package (ER)	2			3		3				3		
57	06EA660137	Valve Plate Package (EM & EA)		2	2		3		3	3		3	3	
1 & 2	06EA660095	Terminal Box and Cover	1	1	1	1	1	1	1	1	1	1	1	1
	120565	Cylinder Head Cooling Fan - Parts Only	As Required											
21	6D40103	Oil Screen	1	1	1	1	1	1	1	1	1	1	1	1
23	KM39BN010	Sight Glass Assembly	1	1	1	1	1	1	1	1	1	1	1	1
24	KK71GW015	*O* Ring Sight Glass	1	1	1	1	1	1	1	1	1	1	1	1
31	EB51FN272	Internal Relief Valve	1	1	1	1	1	1	1	1	1	1	1	1
N.S.	06EA501523	Thermal Sensor (06ER/EM)	1	1		1		1	1		1	1		
N.S.	HN68GA240	Thermal Sensor (06EA)			1		1			1				1
N.S.	06EA601052	Conduit Package for Sensor	1	1	1	1	1	1	1	1	1	1	1	1
N.S.	06EA500672	Insulator Block, Terminal Plate	3	3	3	3	3	3	3	3	3	3	3	3
N.S.	120365	Motor - Head Cooling	As Required											
N.S.	120072	Mount - Head Cooling												
N.S.	120156	Fan - 12"												
N.S.	504696	Unloader Valve Coil - 06DA401794												

## NOTES:

Cylinder head cooling kits on low temperature remote and water cooled units only.

Last 3 items part of 120565 kit.

\*Less unloader valve coil; purchase separately.

N.S. - Not Shown



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I T E M	PART NUMBER	DESCRIPTION	QUANTITY USED ON COMPRESSOR MODEL											
			0 6 E R 1 5 0	0 6 E M 1 5 0	0 6 E A 1 2 5	0 6 E R 1 2 6	0 6 E A 1 2 7	0 6 E R 1 2 8	0 6 E A 1 2 9	0 6 E R 1 3 0	0 6 E A 1 3 1	0 6 E R 1 3 2	0 6 E A 1 3 3	0 6 E A 1 3 4
15	6D401131-012	Gasket Service Valve - 12/pkg.												
N.S.	6D681131-012	Gasket Service Valve - 12/pkg.												
11	6G651061-012	Gasket Service Valve - 12/pkg.												
19	06EA503304010	Gasket Cylinder Head Side - 10/pkg.	1	1	1	1	1	1	1	1	1	1	1	1
20	06EA503314010	Gasket Cylinder Head Centre - 10/pkg.			1	1	1	1	1	1	1	1	1	1
N.S.	06EA503334010	Gasket Cylinder Head/SCO Unl. - 10/pkg.	As Required											
64	06EA501153	Gasket, Valve Plate (06ER)	1		1	1			1					
64	06EA504884	Gasket, Valve Plate (06EM/EA)		1	1		1		1	1		1	1	
29	6D681043	Gasket, Bottom Cover	1	1	1	1	1	1	1	1	1	1	1	1
34	6F251013-050	Gasket, M.E. Cover - 50/pkg.	1	1	1	1	1	1	1	1	1	1	1	1
N.S.	06ER660009	Complete Gasket Package - 06ER	1		1	1			1					
	06EA660104	Complete Gasket Package - 06EA/EM	1	1		1		1	1		1	1		
	06EA660135	Capacity Control Valve (Electric)	As Required											
	06EA501253	Gasket, Capacity Control Valve												

N.S. - Not Shown





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I T E M	PART NUMBER	DESCRIPTION	QUANTITY USED ON COMPRESSOR MODEL											
			06E RMA 155 00	06E RMA 115 00	06E RMA 125 05	06E RMA 121 55	06E RMA 121 55	06E RMA 121 55	06E RMA 121 55	06E RMA 121 55	06E RMA 121 55	06E RMA 121 55	06E RMA 121 55	06E RMA 121 55
6	1042050-008	Suction Shut-Off Valve (2 $\frac{1}{8}$ -3 $\frac{1}{16}$ s.p.) 06EA660091	1	1		1		1	1	1	1	1		
N.S.	1042050-007	Suction Shut-Off Valve (1 $\frac{5}{8}$ -2 $\frac{1}{2}$ s.p.) 06EA660090			1	1								
N.S.	1042050-006	Discharge Shut-Off Valve (1 $\frac{3}{8}$ -2 $\frac{1}{2}$ s.p.) 06DA660065				1	1	1	1	1	1			
N.S.	1042050-007	Discharge Shut-Off Valve (1 $\frac{5}{8}$ -2 $\frac{1}{2}$ s.p.) 06EA660090											1	
N.S.	1042050-005	Discharge Shut-Off Valve (1 $\frac{1}{8}$ -1 $\frac{3}{4}$ c.c.) 06DA660064	1	1	1									
15	6D401131-012	Discharge Shut-Off Valve Gasket	1	1	1									
N.S.	6D681131-012	Discharge Shut-Off Valve Gasket				1	1	1	1	1	1	1		
11	6G651061-012	Suction Shut-Off Valve Gasket	1	1	1	1		1	1	1	1	1		
N.S.	6D681131-012	Suction Shut-Off Valve Gasket			1	1								
N.S.	EN99ZA117	Seal Cap Gasket	1	1	1	1		1	1	1	1	1		
8	EM99AA516	Adapter (Tail Piece)	1	1	1	1		1	1	1	1	1		
9	EM99FA516	Companion Flange	1	1	1	1		1	1	1	1	1		
10	EM99GA516	Adapter Gasket	1	1	1	1		1	1	1	1	1		
3	06EA660051	Terminal Block - 575V, 208/230V - 10 Pin	1	1	1	1	1	1	1	1	1	1		
3	6G45103	Terminal Block - 208/230/460V - 9 Pin	1	1	1	1	1	1	1	1	1	1	1	

## NOTES:

Part numbers shown for shut-off valves, eg. 1042050-007, includes shut-off valve, gasket and mounting bolts.

Specify tubing size and bolt centres when ordering shut-off valves.

Must have specifications, as outlined, as size may vary from shut-off valves as given above.

N.S. - Not Shown

When ordering terminal block, take careful note of above information as to voltage and pins.