INSTRUCTIONS

99TA516057E (for RCD use only)

Instruction Sheet Number: **99TA516057E**

Description: 06N Oil Solenoid Valve Kit & 06N Oil Solenoid Seal Kit

Author: Steve Von Borstel Date: May 13, 2014

Part Number: 06NA660001, 06NA660046, 06NA660047, 06NA660048, 06NA660025

⚠ WARNING

HAZARDS: ELECTRIC SHOCK / PRESSURE / EXPLOSION

REFRIGERANT AND OIL UNDER PRESSURE

- **Bodily injury may result from explosion and/or fire if power is supplied to compressor with terminal box cover is removed or unsecured. Terminal pins may blow-out causing injuries, death or fire.**
- **Do not touch terminals, or wiring at terminals, or remove terminal cover or any part of compressor until power is disconnected and pressure is relieved. See safety instructions A, B, and C.**

ELECTRIC SHOCK

- **Bodily injury or death may result from electrocution if terminal cover is removed while power is supplied to compressor.**
- **Do not supply power to compressor unless terminal cover is secured in place and all service valves are open.**

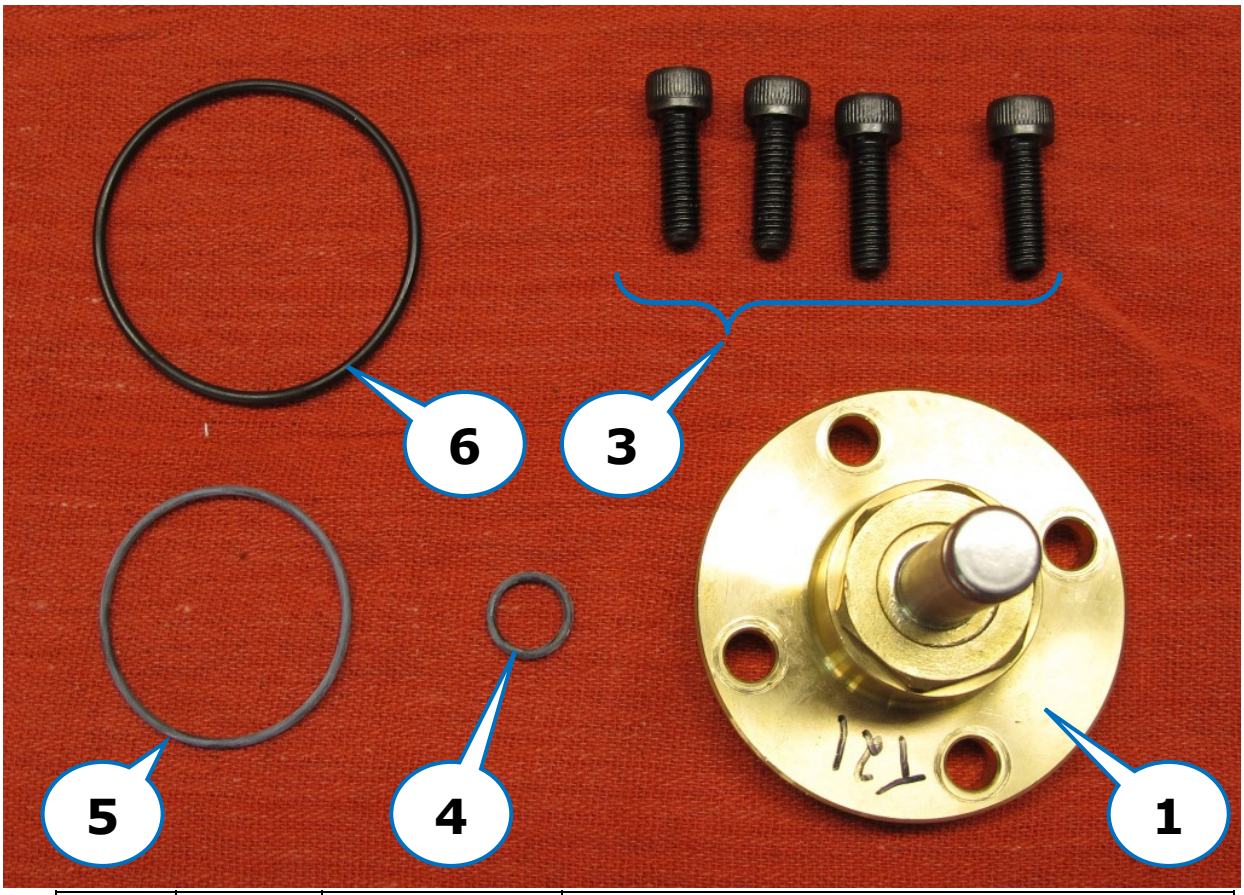
Safety Instructions:
Service or maintenance must be performed only by trained certified technicians and according to service instructions.

A. Follow recognized safety practices and wear protective goggles.
B. Disconnect and lockout all electrical power. Electrical measurements during operation must be taken outside of the compressor terminal box.
C. Isolate the compressor from the system. Reclaim all refrigerant in the compressor. Do not disassemble bolts, plugs, fittings, etc. unless all pressure has been relieved from the compressor. The oil filter cavity must be relieved independently from the rest of the compressor since it can be isolated by the oil check valve.

NOTE: Valves may be sealing off refrigerant from the rest of the system. Do not open isolation valves while servicing the compressor.

1

Oil Control Solenoid Valve Kits include:



Item	Qty.	Part No.	Description
1	1	2BNB000627	Oil Control Solenoid Valve
2	1 Not shown	EF19ZZ001	06NA660001 – 24 A/C Volt Coil
		EF19ZZ002	06NA660046 – 120 A/C Volt Coil
		EF19ZZ003	06NA660047 – 240 A/C Volt Coil
		22-50030-00	06NA660048 – 24 DC Volt Coil
3	4	8TB0670	M8x1.25x25 SHCS
4	1	8TB0274	O-Ring Small
5	1	8TB0276	O-Ring Large
6	1	8TB0847	Oil Filter Plug O-ring
7	1	99TA516057	Instruction Sheet (not shown)

1A

06N Oil Solenoid Seal Kit (06NA660025) includes:

4	1	8TB0274	O-Ring Small
5	1	8TB0276	O-Ring Large
7	1	99TA516057	Instruction Sheet (not shown)

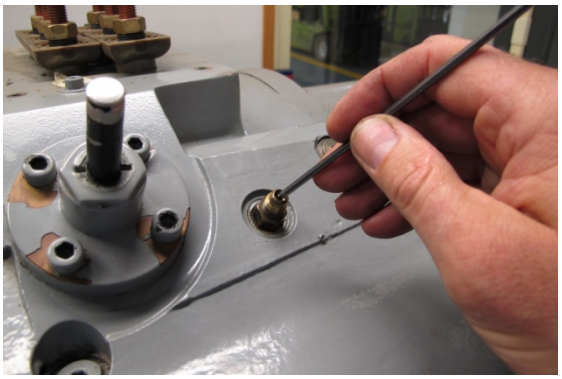
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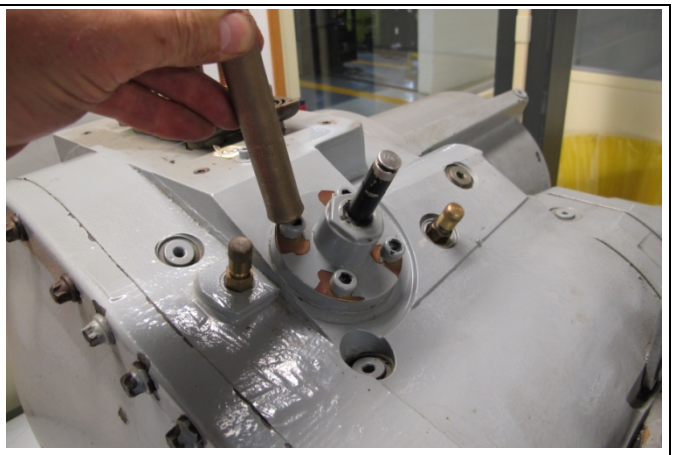
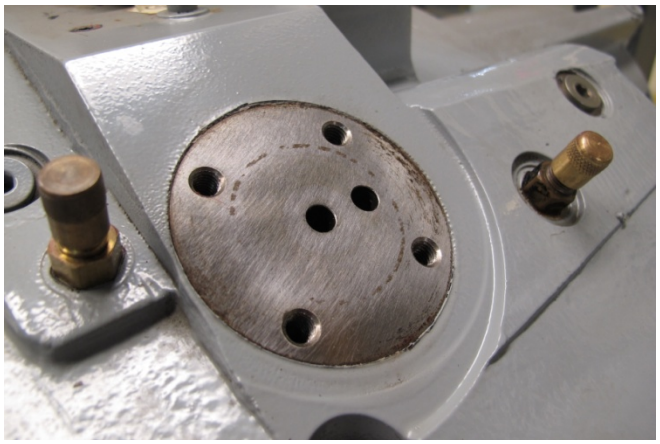
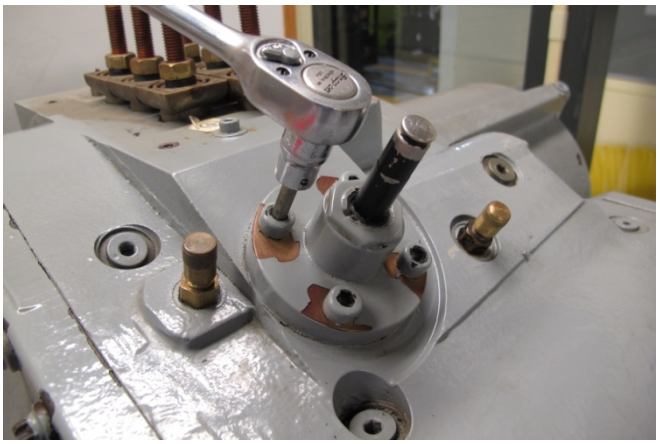
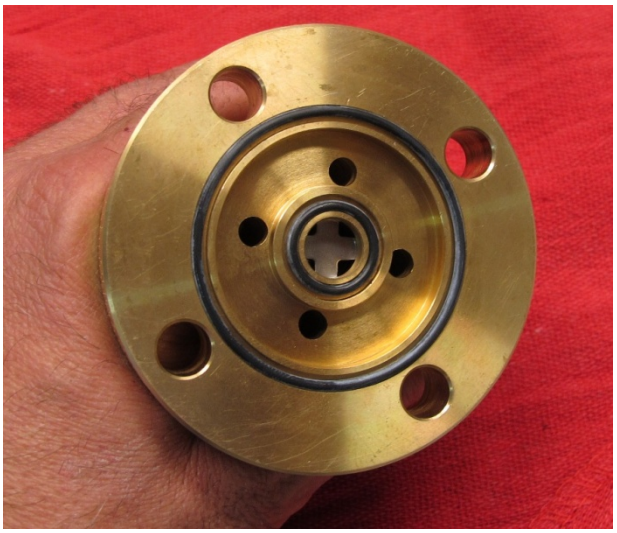
Several different valve manufacturers have been used for the 06N screw compressor oil control valves. The valve supplied in this kit will work with all previous applications.

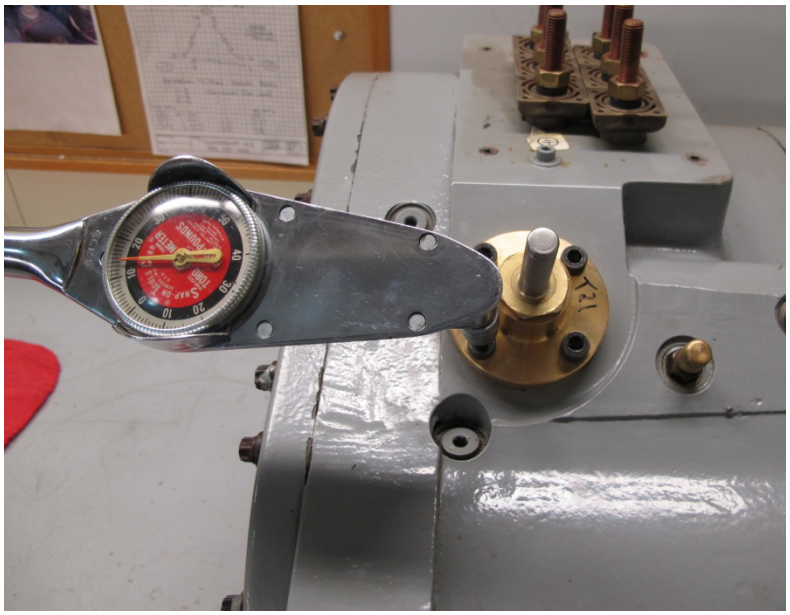
			
ALCO 8TB0226 "Short Body" with No Internal Check Valve, Used from 1994 – December 1998 (4998Jxxxxx) MODIFICATIONS TO OIL FILTER ADAPTER ARE REQUIRED	ALCO 8TB0884 w/internal check valve, used from December 1998 (5098Jxxxxx) – April 2000 (1700Jxxxxx)	Parker 8TB0884 w/internal check valve, used from April 2000 (1800Jxxxxx) – April 2014 (1714Uxxxxx)	STF 2BNB000627 w/internal check valve, used from April 2014 (1714Uxxxxx) - present

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After all pressure has been relieved from the compressor, relieve the pressure in the oil filter cavity and remove the coil from the oil control valve stem.

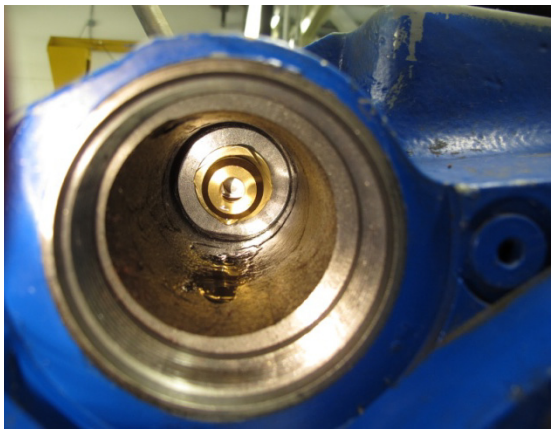


4	You can score the paint between the valve and the casing to provide a “clean break” when removing the valve. Remove the four socket head cap screws using a 6mm hex drive. It is helpful to strike the cap screws using a hammer and drift. This will make it easier to remove the screws. Lift the valve from the casing, being careful not to allow any dirt or paint chips to fall into the holes.	  
5	Install the o-rings into the grooves of the valve. Compressor oil or Parker Super-O-Lube can be used to help hold the o-rings inplace during re-assembly.	

6	Install new valve using the new o-rings and socket head cap screws. Torque screws to: **14-17 lb-ft, (19-23 Nm)** 
7	If the valve being replaced has an internal check valve (8TB0884 or a 2BNB000627, see Step 2), then go to Step 14. If the valve being replaced is an early 8TB0226 valve, the oil filter adapter will need to have the check valve disc removed. This is covered in Steps 8-13. If this is not done, high oil pressure differentials can occur, leading to oil pressure or oil pressure differential (plugged filter) alarms.
8	Remove oil filter plug using a 19mm or ¾" hex drive. Striking the SAE plug using a drift and hammer will make it much easier to remove. 
9	Remove the oil filter by pulling it off the adapter. It's a good idea to replace the filter at this time. Many filters are damaged during removal.

10

At the bottom of the oil filter cavity is the Oil Filter Adapter. This needs to be removed using a 1 1/8", 8 point "double-square" socket and extension. The adapter has standard right hand threads. When the adapter is removed you will see the check valve disc and snap-ring.







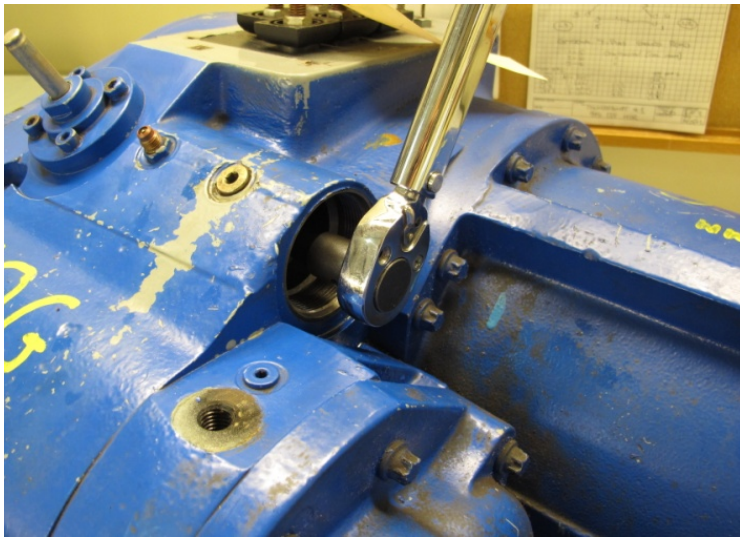
11

Remove the snap-ring and disc.







12	Re-install the Oil Filter Adaptor <u>without</u> the snap-ring and disc. Torque to: **50-70 lb-ft, (68-95 Nm)**	
13	Install the oil filter. Replace the o-ring on the filter access plug by sliding the new o-ring over the back side of the plug. Installing the o-ring over the threads can cut the o-ring causing leaks. Lubricate the o-ring with compressor oil or Parker Super-O-Lube. Torque the access plug to: **65-85 lb-ft, (88-116 Nm)**	
14	Install the coil on the valve stem and activate the coil. There should be a clear "click" sound each time the coil is activated and deactivated.	
15	The replacement valves included in this kit, which require A/C coils, must be used with the higher temperature rating AHCX coils listed in Step 1. The older A/C coils used on units manufactured before 2014 CANNOT be used with these replacement valves.	
16	Evacuate the system and check for leaks.	
17	Refer to the unit installation and startup procedures for restarting the system.	
	End	

APPENDIX I: TOOLS FOR SOLENOID REPLACEMENT

TOOL	TOOL NUMBER	SUPPLIER	OPERATION	STEP (s)	NOTES
UTILITY KNIFE			SCORE PAINT AT BASE OF VALVE	**4**	
BRONZE DRIFT	PPB1002A	SNAP-ON	REMOVING OIL FILTER PLUG & SOLENOID CAP SCREWS	**4** **8**	
HAMMER	HSSD32	SNAP-ON	REMOVING OIL FILTER PLUG & SOLENOID CAP SCREWS	**4** **8**	
3/8" DRIVE RATCHET	F830	SNAP-ON	REMOVAL OF SOLENOID VALVE SOCKET HD CAP SCREWS	**4**	
6mm HEX DRIVE	FAM6E	SNAP-ON	REMOVAL & INSTALLATION OF SOLENOID VALVE SOCKET HD CAP SCREWS	**4** **6**	
SUPER-O-LUBE		PARKER	HOLD O-RINGS IN SOLENOID GROOVES, OIL FILER PLUG O-RING	**5** **13**	
3/8" DRIVE TORQUE WRENCH	TE25FA	SNAP-ON	INSTALLATION OF SOLENOID VALVE SOCKET HD CAP SCREWS	**6**	0-25 LB-FT RANGE
¾" HEX DRIVE	SA24E	SNAP-ON	REMOVE & INSTALL OIL FILTER PLUG	**8** **13**	
½" RATCHET	SL936	SNAP-ON	REMOVE OIL FILTER PLUG & ADAPTER	**8** **10**	
½" EXTENSION	SXK8	SNAP-ON	REMOVE & INSTALL OIL FILTER ADAPTER	**10** **12**	8" LONG
1 1/8" 8-POINT SOCKET	4336	WRIGHT	REMOVE & INSTALL OIL FILTER ADAPTER	**10** **12**	"DOUBLE-SQUARE" SOCKET
INTERNAL SNAP-RING PLIERS	SRPC4790	SNAP-ON	REMOVE OIL FILTER ADAPTER RETAINING RING	**11**	
½" TORQUE WRENCH	QD3R150	SNAP-ON	INSTALL OIL FILTER PLUG & ADAPTER	**12** **13**	3-150 LB-FT RANGE

REVISION RECORD			
DATE	**REV.**	**DESCRIPTION**	**CARLYLE REF. FILE NAME**
7/30/98	---	PREVIOUS RELEASE	99TA516057 Oil Cntrl Sol.doc
6/3/05	D	ADDED 06NA660025 SEAL KIT	99TA516057D.doc
5/13/14	E	VALVE PART NUMBER 2BNB000627 WAS 8TB0884, ADDED KITS 06NA660046, 06NA660047, 06NA660048, ADDED APPROPRIATE COIL TO EACH KIT, REMOVED KLE-LLM6 ALLEN WRENCH FROM THE KIT, ADDED PHOTOS SHOWING CONTENTS OF THE KITS AND DIFFERENT MANUFACTURES VALVES SERVICE BY THESE KITS, RENUMBER STEPS	99TA516057E_OIL_SOLENOID.docx