



## Technical Bulletin (TB-008B)

### OS.A 53 - 74 Screw Compressors

Version 1, January 2016

## OS.A Screw Compressor Modules, Oil Injection Kits and Economizer Fittings

- The scope of this technical bulletin is to provide documentation to the components required for the OS.A open drive screw compressors.
- For standard OS compressors using HFC refrigerants, please see technical bulletin TB-008A for information concerning the application, oil injection kits.
- This document pertains to the ammonia open drive OS.A 53 and 74 series compressors.
- Each section shown below will provide detailed information to each component.
- This document does not include the OS.A 85 series compressors which do not require these components as they are incorporated, internal into the compressor itself.

1. Modules for Discharge Gas Temperature Protection, Oil Monitoring and Motor Phasing
2. Solenoid Coils for capacity control and oil solenoid
3. Oil Injection Kits
4. Economizer Adapter Fittings

### 1. Modules:

All Ammonia OS Application – Oil Injection Kits are delivered with the SE-B\* control module. This module acts as a relay in conjunction with the Oil Flow Switch and the Discharge Gas Temperature Sensor. An optional SE-E1 module can also be used to monitor the phase of the external motor. An optional SE-E2 module can be used to monitor the phase of the external motor when a VFD is used.

The SE-B\* is shown below for reference:



The Optional SE-E\* are shown below:



Module Part Numbers		
SE-E1	347017-10	110/220 volt
SE-E2	347038-01	24-230 volt
SE-B3*	347035-01	110/220 volt
* Included in Application Kit		

## 2. Solenoid Coils:

The coils are not included as Standard Extent of Delivery and must be ordered separately.

Please note that a coil is needed for each unloader and also the oil solenoid valve. The OS74 has two unloaders while the OS53 has one unloader.

Oil and Solenoid Coils		
Compressor Model	Part Number	Voltage
OS.A 53 and 74	884-0202-01	115V
	884-0203-01	230V
	884-0201-01	24 VDC
	884-0202-00	24 VAC

Main Phone:  
BITZER U.S.: 770-503-9226  
BITZER Canada: 514-697-3363  
BITZER Mexico: +52 (81)1522 4500

Web:  
www.bitzerus.com  
www.bitzer.ca  
www.bitzermexico.com

Email:  
sales@bitzerus.com  
sales@bitzer.ca  
ventas@bitzermexico.com

Additional BITZER U.S. Contact Info:  
techsupport@bitzerus.com  
customerservice@bitzerus.com  
24 Hour Quickship Hotline: (888) 462-4893

### 3. NH3 Application – Oil Injection Kits for OS(A) 53 and 74 Series:

Application / Oil Injection Kits		
Compressor Model	Part Number	Extent of Delivery
OS(A) 53 and 74	360602-01	Oil filter housing (with inlet/outlet fittings), oil filter element, oil flow switch, oil solenoid, SE-B* oil control module, oil switch capacitor, misc. aluminum joint rings.

### 4. Economizer / Liquid Injection Adapter Fittings:

These adapters must be ordered separate and are supplied as a kit. The kit includes the adapter, nut, weld connection, aluminum washers and white o-rings. The part numbers are 361331-01 for the OS.A 53 compressor and 361331-02 for the OS.A 74 compressor. Please see the flowing part descriptions that follow for a breakdown of the kit parts.

#### 361331-01

#### OS53 and HS53.1 Eco Kit, M22 Without Valve



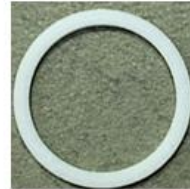
365210-05  
Adapter M22 1-1/4"



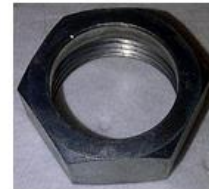
365214-09  
Bushing



382403-05  
Joint Ring A22



372200-03  
Joint Ring 1-1/4"-12



366304-01  
Nut 1-1/4"-12UNF

#### 361331-02

#### OS53-74 and HS53.3-64-74 Eco Kit, M26 Without Valve



365210-02D  
Adapter M26 1-1/4"



365214-06  
Bushing D22



320506-01  
Washer, Sealing



372200-03  
Joint Ring 1-1/4"-12

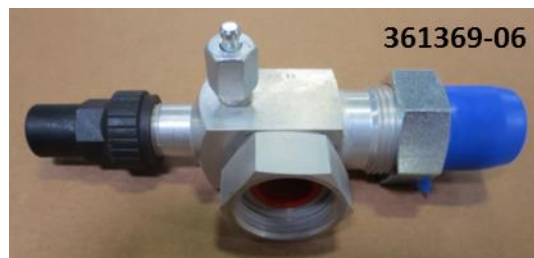


382403-04  
Joint Ring A26



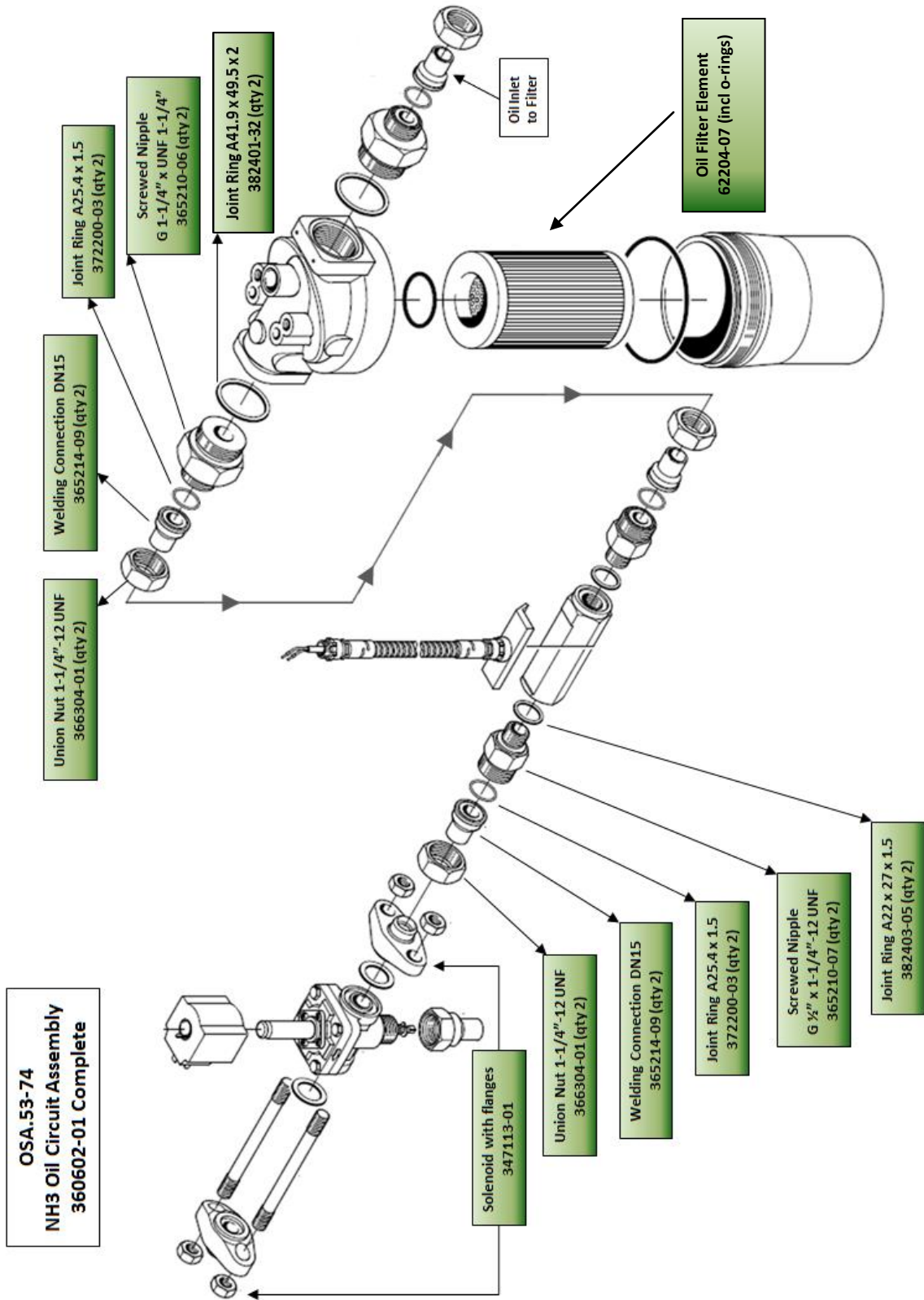
366304-01  
Nut 1-1/4"-12UNF

#### Optional NH3 ECO Valve


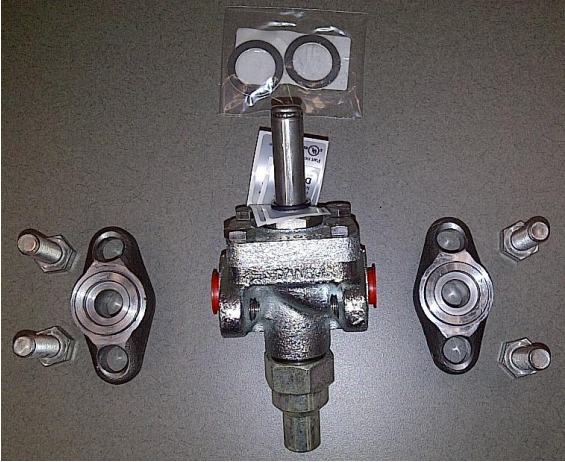
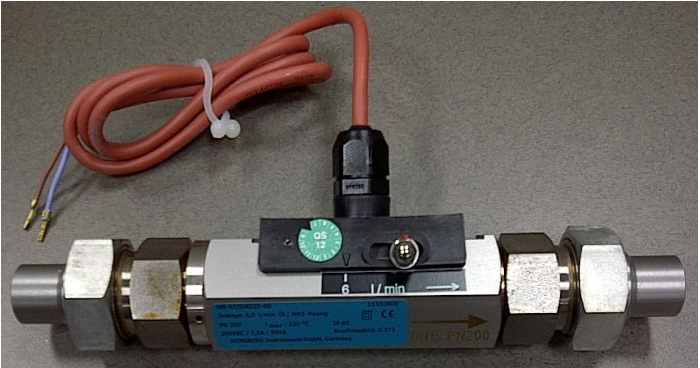


361369-06






**BITZER Screw Compressor  
Oil Circuit Component Assembly Diagram**








**Standard NH3 Application / Oil Injection Kit Parts Included in NH3 Kit 360602-01**






Description	Part #	Product Image
<p><b>Oil Filter Housing (includes oil filter element)</b></p>	<p><b>362215-01</b></p>	 <p>A cylindrical metal oil filter housing with a grey plastic cap. The cap has two side handles and a central top port. A white label on the side of the housing reads 'MAHLE' and contains technical specifications in multiple languages.</p>
<p><b>Oil Solenoid Valve Complete EVRA 15</b></p>	<p><b>347113-01</b></p>	 <p>A central metal solenoid valve with a coil on top. It is surrounded by two sets of metal fittings, each consisting of a circular flange with two ports and a small hex nut.</p>
<p><b>6 Liter Oil Flow Switch (shown with fittings)</b></p>	<p><b>347501-05</b></p>	 <p>A horizontal metal flow switch with two large ports on either side. It has a black control box in the middle with a green 'GS' label and a red indicator light. A red cable is connected to the top of the control box. A blue label on the side provides technical details.</p>

**Standard NH3 Application / Oil Injection Kit Parts Continued**

Description	Part #	Product Image
<b>Oil Filter Element (Included with Housing) O-rings included</b>	<b>362204-07</b>	
<b>Oil Filter Housing Joint Ring (qty 2) 41.9 x 49.5</b>	<b>382401-32</b>	
<b>Oil Filter Housing Fittings (qty 2) 1-1/4"xUNF 1-1/4"</b>	<b>365210-06</b>	
<b>Oil Switch Capacitor</b>	<b>343100-09</b>	
<b>Oil Flow Switch Fittings (qty 2) 1/2"x1-1/4"-12UNF</b>	<b>365210-07</b>	
<b>Oil Filter and Oil Flow Switch Inlet and Outlet Fittings (qty 4) 1/2" NPS Weld Connection</b>	<b>365214-09</b>	

**Standard NH3 Application / Oil Injection Kit Parts Continued**

Description	Part #	Product Image
<p><b>Oil Flow Switch Joint Ring (qty 2) A22</b></p>	<p><b>382403-05</b></p>	
<p><b>Oil Filter Housing and Oil Flow Switch Inlet – Outlet Joint Rings O-rings (qty 4) 25.4 mm</b></p>	<p><b>372200-03</b></p>	
<p><b>Oil Filter Housing Inlet and Outlet Union Nut (qty 2) 28mm 1-1/4"-12 UNF</b></p>	<p><b>366304-01</b></p>	
<p><b>Oil Flow Switch Inlet and Outlet Union Nut (qty 2) 1-1/4"-12 UNF</b></p>	<p><b>366304-01</b></p>	
<p><b>SE-B3 Module</b></p>	<p><b>347035-01</b></p>	

Product Images Below are for Reference and are Included in Either the Oil Injection or Optional Kits		
Description	Part #	Product Image
OSA74 Eco Inlet Weld Connection DN20 3/4" NPS	365214-06	
OSA53 Oil Inlet Weld Connection DN15 1/2" NPS	365214-11	
OSA53 Eco Connection and OSA74 Oil Inlet Weld Connection DN15 1/2" NPS	365214-09	
<b>Optional Items for Reference:</b>		
Description	Part #	Product Image
PTC100 Discharge Temperature Sensor (Included with compressor)	347032-01	
Capacity Unloader and Oil Solenoid Coil (must be ordered separate)	See Section 2 For part numbers	



**NOTES:**