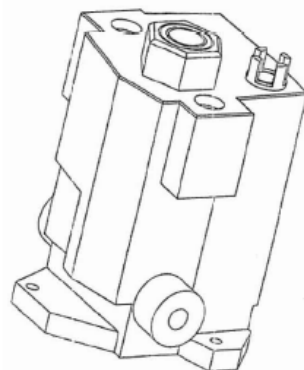
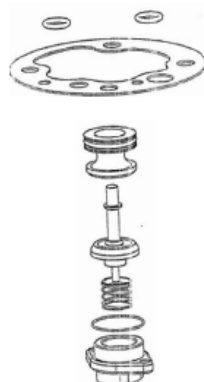




# **AA-10 MECHANISM**

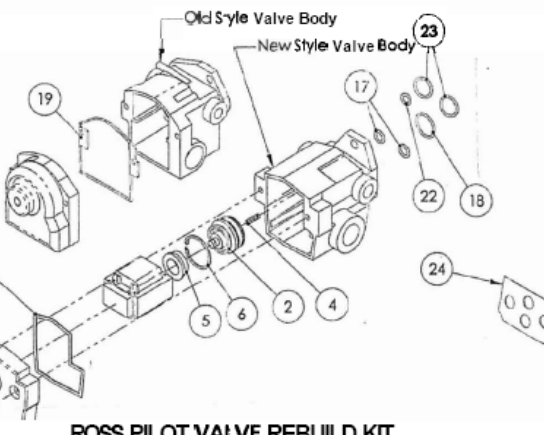


**ROSS PILOT**  
BSI PART 37450AMK

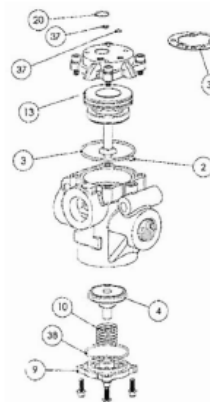


1/4, 3/8 & 1/2  
BSI 37887AMK

**ROSS MAIN CONTROL VALVE REPAIR KIT**  
1/2, 3/4 & 1  
BSI 37169AMK



**ROSS PILOT VALVE REBUILD KIT**  
BSI KIT K12274



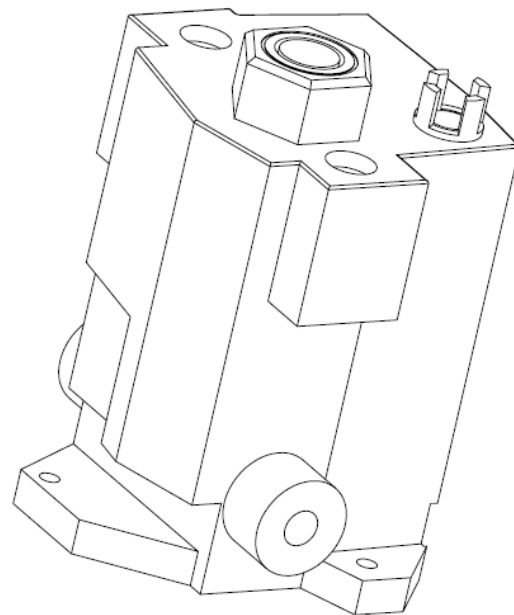
1-1/4 & 1-1/2  
BSI 37882AMK

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**INCLUDES QTY 1 EACH:**  
**37450AMK, K12274, 37887AMK, 37169AMK & 37882AMK**

**BREAKER SERVICE INC**  
800-926-5250 office 838-267-7690 fax  
**ROSS VALVE FIRST AID KIT**  
**REPAIRS ALL ROSS MAIN**  
**& PILOT VALVES**

SIZE <b>A</b>	DWG. NO. <b>38275AMK</b>	REV. <b>0</b>
SCALE: NTS	Date:	SHEET 1 OF 1



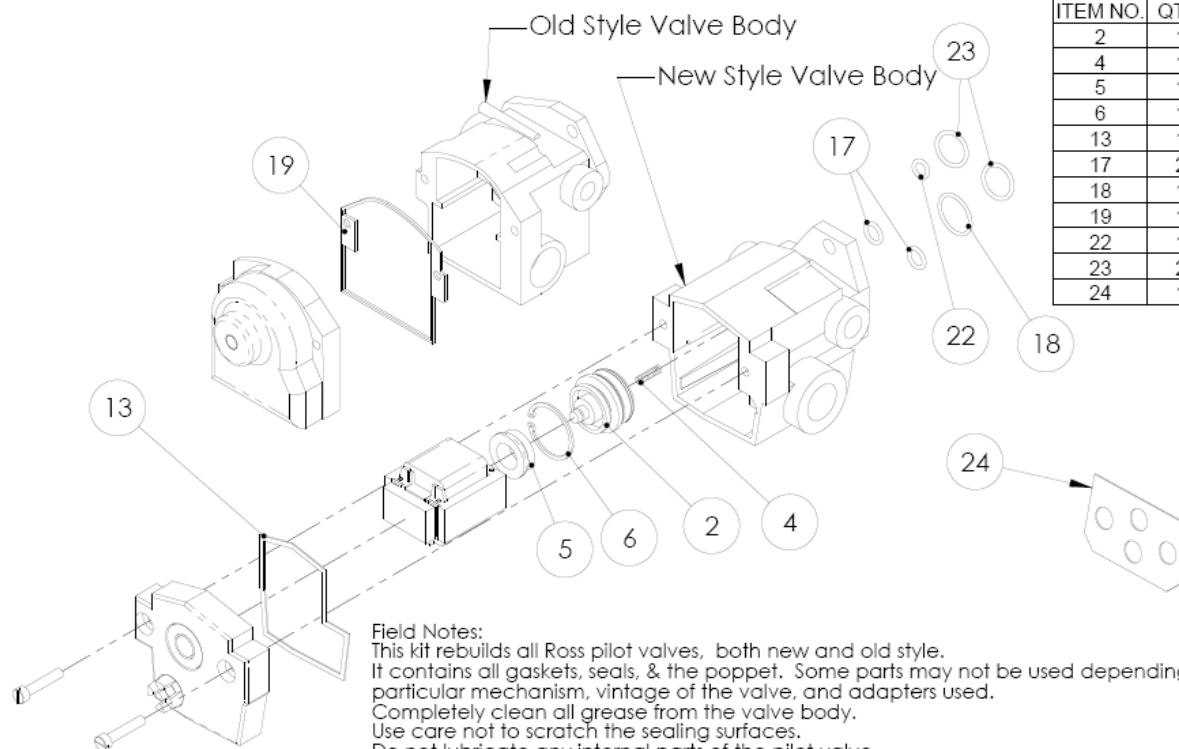
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800-826-5250 office 888-267-7690 fax

Ross Pilot Valve with coil for  
125vdc operation

SIZE <b>A</b>	DWG. NO. <b>37450AMK</b>	REV. <b>0</b>
SCALE:1:1	Date: 02-02-2002	SHEET 1 OF 1



ITEM NO.	QTY.	DESCRIPTION
2	1	poppet assembly
4	1	spring
5	1	bumper
6	1	retaining ring
13	1	new style cover gasket
17	2	o-ring
18	1	o-ring
19	1	old style cover gasket
22	1	o-ring
23	2	o-ring
24	1	gasket

#### Field Notes:

This kit rebuilds all Ross pilot valves, both new and old style. It contains all gaskets, seals, & the poppet. Some parts may not be used depending on the particular mechanism, vintage of the valve, and adapters used. Completely clean all grease from the valve body.

Use care not to scratch the sealing surfaces.

Do not lubricate any internal parts of the pilot valve.

There should be only one spring in the pilot valve - it is located under the poppet as shown in the drawing.

If the sealing surfaces are scored, then the valve must be replaced.

Time the breaker before (if possible) and after rebuilding the pilot valve.

Use item 23 & 24 for the Westinghouse style main control valve with adapter block.

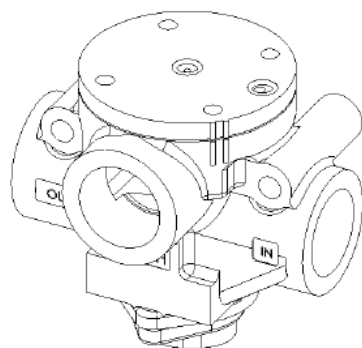
Use items 17 for Ross main valves with ports 1" & smaller

Use items 18 & 22 for Ross main valves with ports larger than 1"

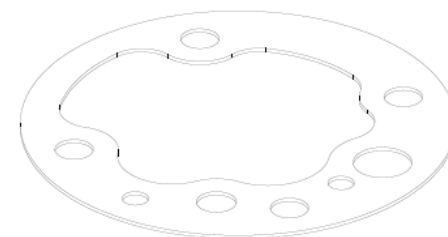
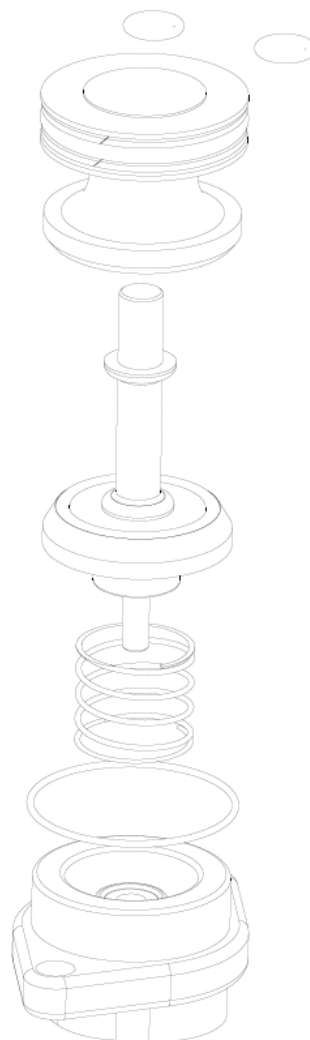
The internal parts (items 2, 4, 5, & 6) are the same for the old & new style pilot valve bodies, but not illustrated above for the old style valve body.

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800-826-5250 office 888-267-7690 fax		
Ross pilot valve rebuild kit		
SIZE <b>A</b>	DWG. NO. <b>12274</b>	REV. <b>6</b>
SCALE: 1:2.5 Date: 09-02-2003		SHEET 1 OF 1



Valve body shown  
for reference only

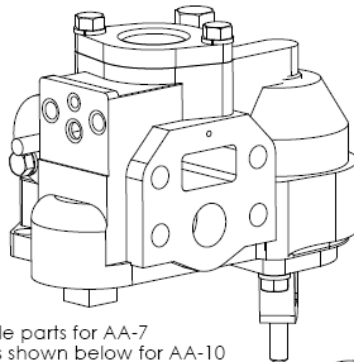


All parts shown are  
included in the rebuild kit

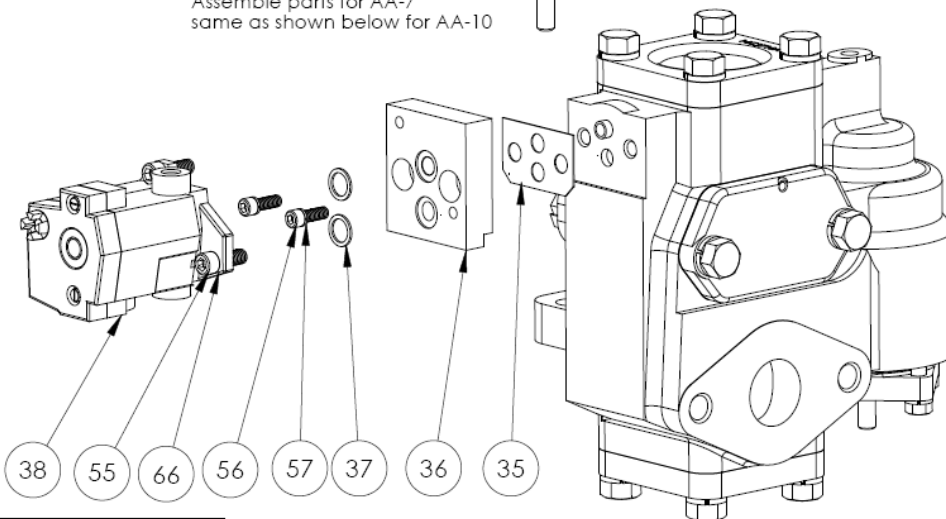
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800-826-5250 office 888-267-7690 fax			
Rebuild kit for Ross main control valve for Westinghouse AA-7 mechanism			
SIZE <b>A</b>	DWG. NO. <b>37169AMK</b>	REV. <b>0</b>	
SCALE 1:1	Date: 09-20-2004	SHEET 1 OF 1	

Westinghouse AA-7 main control valve



Assemble parts for AA-7  
same as shown below for AA-10



Westinghouse AA-10 main control valve

Item No	BSI part #	Description	Qty
35	30525/37131AMK	gasket	1
36	37990AMK	adapter	1
37	2112470/37124AMK	o-ring	2
38	37450AMK	Ross pilot valve	1
55	37134AMK	socket head cap screw, 1/4-20 x 1"	2
56	38596AMK	socket head cap screw, 3/8-16 x 1"	2
57	37144AMK	lock washer, 3/8"	2
66	37145AMK	lock washer, 1/4"	2

**Notes:**

1. Always time the breaker before (if possible) and after replacing the pilot valve to ensure proper closing speed.
2. This kit is for use on the mechanisms listed below that are used on oil circuit breakers and the Westinghouse model 2300SF GCB.
3. If replacing a Norgren pilot valve with an external pilot pressure feed into port "P" on the old Norgren pilot valve, remove and discard the pipe plug from port "X1" on the new Ross pilot valve and connect the external pilot pressure tubing to the port on the Ross pilot valve marked "X1". The port on the Ross pilot valve marked "Y3" is the pilot exhaust and should always remain unplugged.

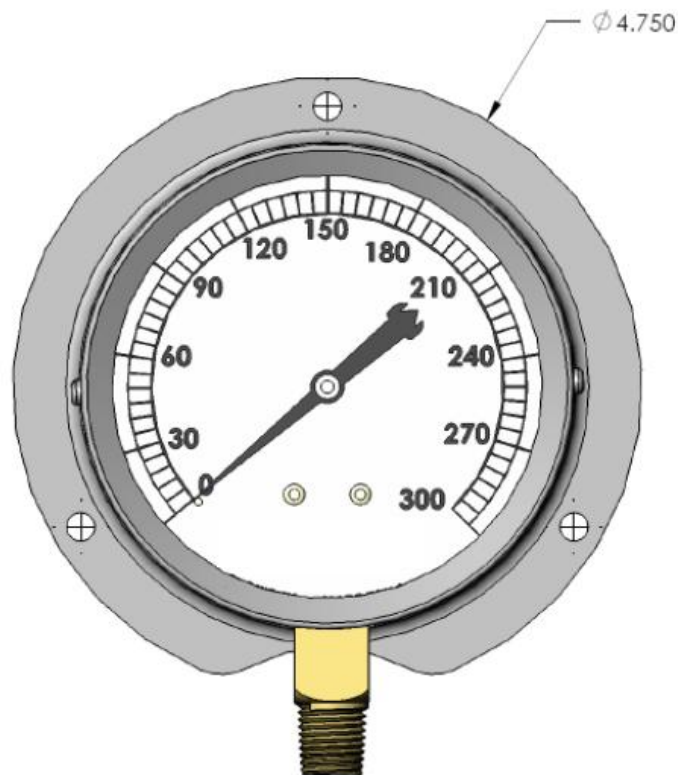
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800-826-5250 office 888-267-7690 fax

Kit to replace the Westinghouse  
"magnet valve" pilot valve or  
Norgren D0035A pilot valve on  
AA-7, AA-10, & AA-14 W.H. main  
control valves with a Ross pilot  
valve - see notes for limitations

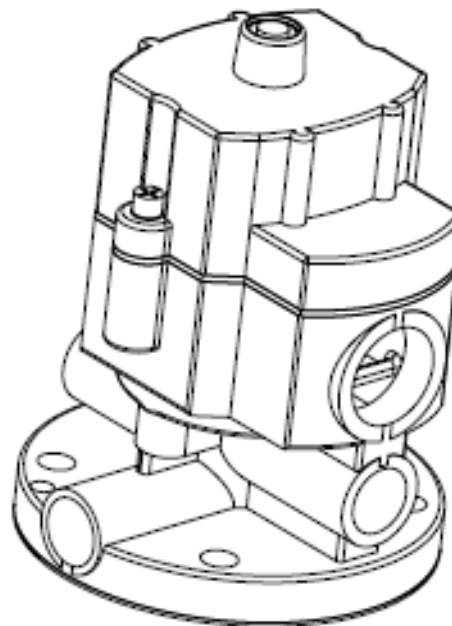
SIZE <b>A</b>	DWG. NO. <b>37993AMK</b>	REV. <b>4</b>
SCALE: 1:3	Date: 02-18-2005	SHEET 1 OF 1



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 800-826-5250 office 888-247-7690 fax  
 Pressure Gauge for some older  
 Westinghouse AA-7 & AA-10  
 mechanisms, 0-300 psig, flange  
 mounting, bottom connection,  
 1/4" NPT

DATE	DWG. NO.	
A	40150AMK	
SCALE: 1:1	Date: 02-03-2005	SHEET 1 OF



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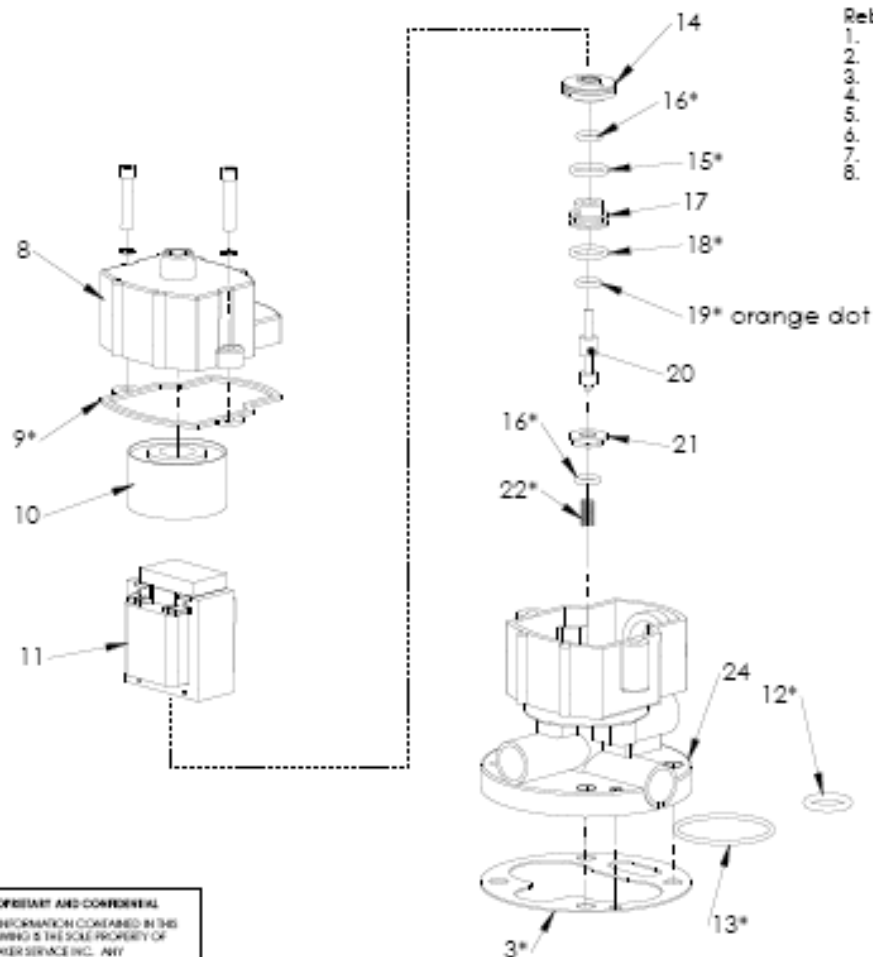
**BREAKER SERVICE INC**

800-826-5250 office 888-267-7690 fax

Norgren Pilot Valve with coil for  
125vac operation

REV <b>A</b>	DWG. NO. <b>37562AMK</b>	REV <b>0</b>
DATE/REV 02-02-2002	DATE 02-02-2002	SHEET 1 OF 1





#### Rebuild instructions:

1. Do not proceed if you are not qualified for this work
2. Make breaker & mechanism safe for work
3. Disassemble and gently clean valve
4. Reassemble using new seals per drawing
5. Items 12 & 13 are used with older main valves
6. Item 3 is used with newer main valves
7. Take special note of the location of item 19
8. Sparingly lubricate orings with Parker Superlube

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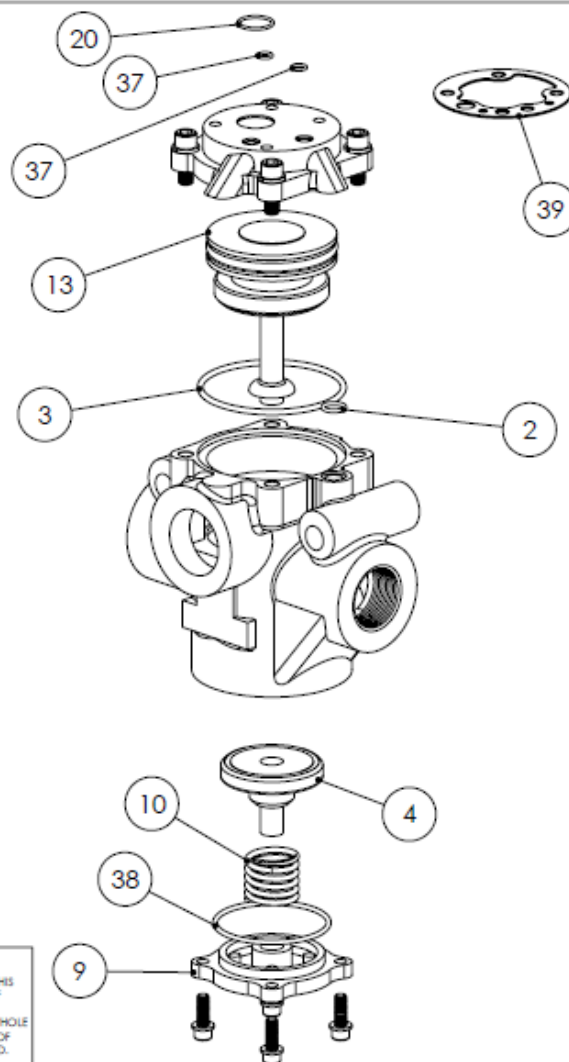
#### BREAKER SERVICE INC

800-826-5250 office 888-267-7690 fax

Rebuild kit for Norgren pilot valve  
model D0035C or D00105.

Items shown with asterisk \* are  
included in this repair kit

REV	DATE	BY	APP
A	15028		O
SCALE: N/A		DATE: 04-10-2005	SHEET 1 OF 1



ITEM NO.	QTY.	DESCRIPTION
2	1	o-ring
3	1	o-ring
4	1	lower poppet
9	1	bottom plate
10	1	spring
13	1	upper poppet assy
20	1	o-ring
37	2	o-ring
38	1	o-ring
39	1	gasket

#### FIELD NOTES:

Time the breaker before & after you rebuild the main closing control valve.

Apply only a very thin film of the supplied grease to the moving piston seal on the upper poppet. All static o-rings (items 20,37,2,3,&38) should be lightly coated with a high quality o-ring grease such as Dow Corning # 111.

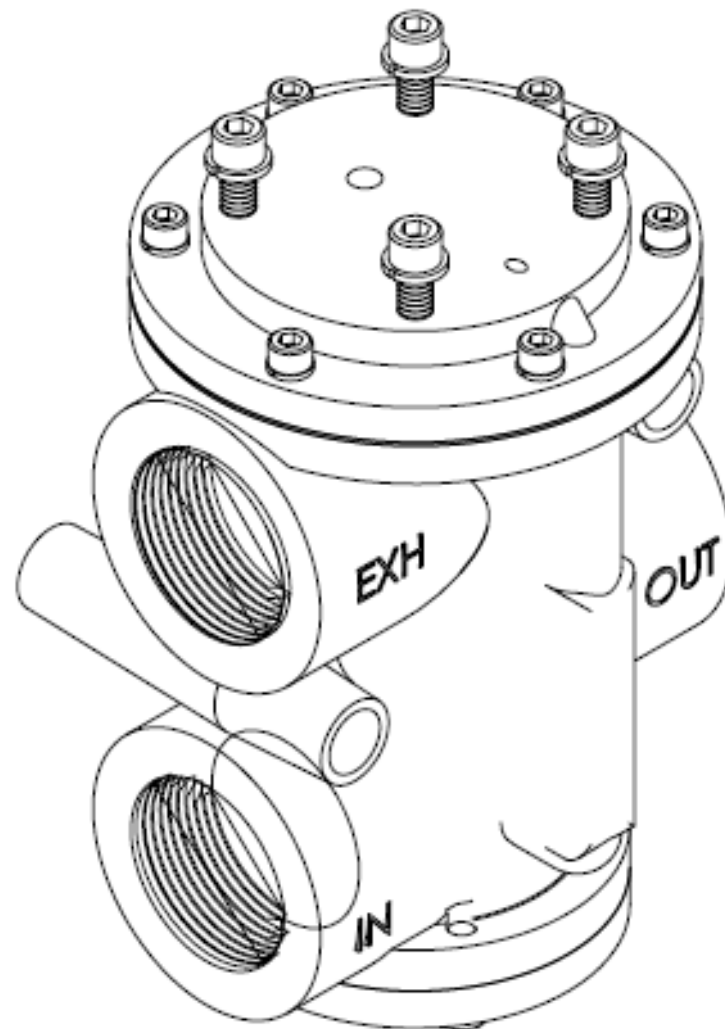
All the gaskets and o-rings may not be necessary depending on the exact configuration of your control valve.

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800-826-5250 office 888-267-7690 fax

Rebuild kit for Ross main control valves with 1-1/4" & 1-1/2" NPT ports.

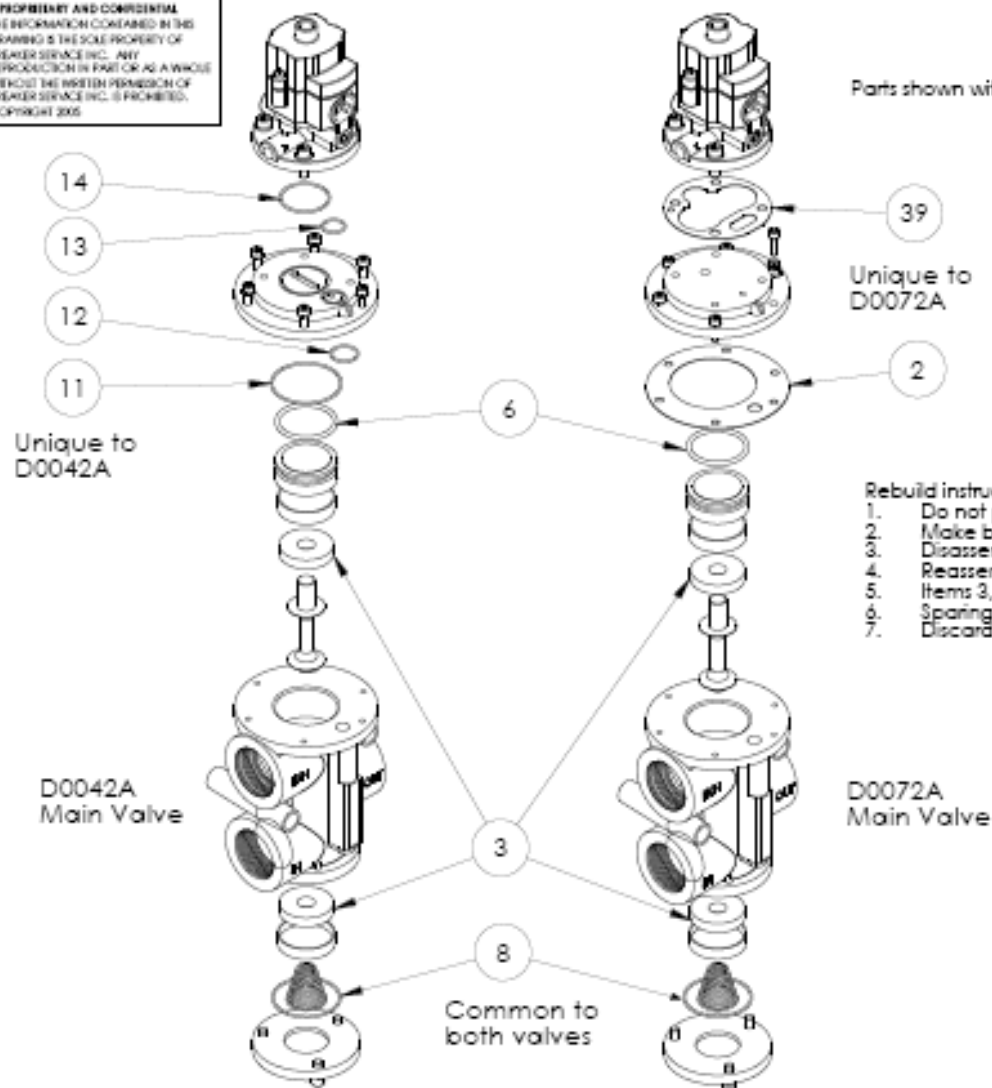
SIZE **A** DWG. NO. **37882AMK** REV. **0**  
SCALE 1:1 Date: 09-16-2003 SHEET 1 OF 1



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<b>BREAKER SERVICE INC</b> 800-826-5250 office 888-267-7690 fax		
Norgren main valve Used in Siemens & Westinghouse type SP breakers		
SIZE <b>A</b>	DWG. NO. <b>37480AMK</b>	REV. <b>0</b>
DRAWN BY [Signature]	DATE 02-02-2002	SHEET 1 OF 1

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Parts shown with item numbers are included in the rebuild kit

#### Rebuild instructions:

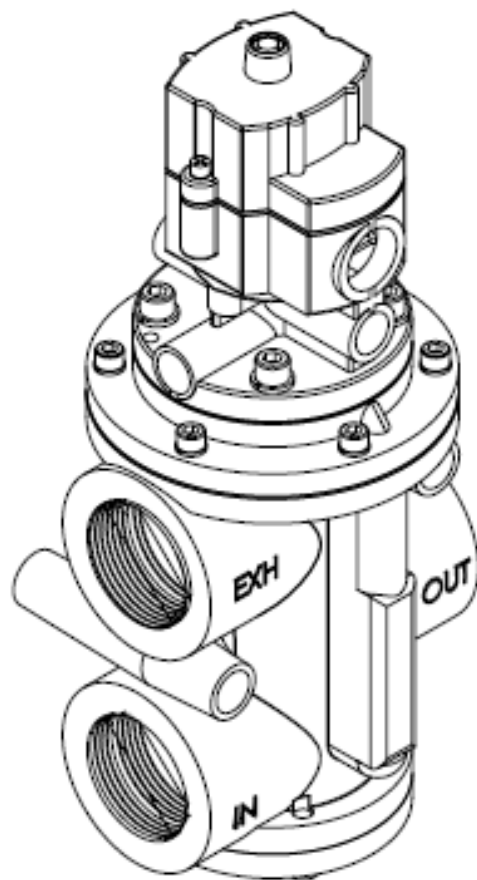
1. Do not proceed if you are not qualified for this work
2. Make breaker & mechanism safe for work
3. Disassemble and gently clean valve
4. Reassemble using new seals per drawing
5. Items 3, 6 & 8 are common to both valves
6. Sparingly lubricate rings with Parker Superlube
7. Discard unused parts

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800-826-5250 office 888-267-7690 fax

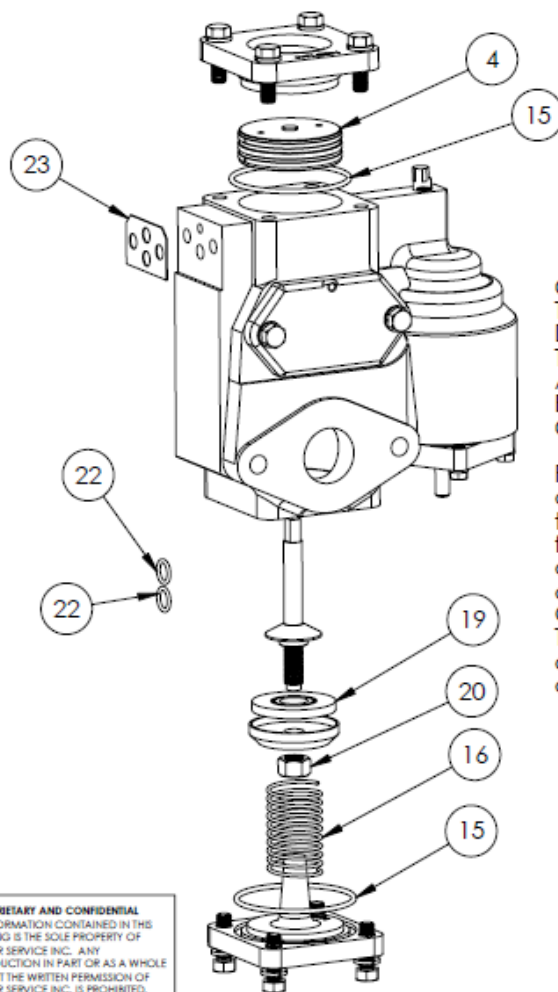
Rebuild kit for Norgren D0042A or  
D0072A main control valve used  
on Siemens & Westinghouse type  
SP gas circuit breakers

REV A	DWG. NO. 15031AMK	REV 0
SCALE 1:1		DATE 01-10-2005
		SHEET 1 OF 1



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<b>BREAKER SERVICE INC</b>		
800-525-5250 office 888-257-7690 fax		
Norgren pilot & main valve assembly with coil for 125vdc operation. Used in Siemens & Westinghouse type SP breakers		
SIZE	DWG. NO.	REV.
A	37479AMK	0
SCALE: 1/1	Date: 02-02-2002	SHEET 1 OF 1



ITEM NO.	QTY.	DESCRIPTION
4	1	Piston Assy - New Style
15	2	O-ring
16	1	Spring
19	1	Valve Disc
20	1	Lock Nut
22	2	Adapter Plate O-ring
23	1	Gasket

### CAUTION !!!

The new piston is shipped with a white ring on it.  
DO NOT discard this ring.

This ring serves 3 functions:

- A) To protect the piston, guide rings, and omniseal.
- B) As a re-sizing tool when the omniseal is installed.
- C) As the installation tool to insert the piston into the valve.

Failure to follow this instruction will cause concealed damage to the piston guide rings and omniseal. To install the piston, make sure that the hollow side of the piston is facing into the valve and at the bottom of the narrow end of the installation ring. Center the piston and installation ring over the bore and hold it flush with the face of the valve. Gently push the piston through the ring directly into the bore. This will prevent the guide rings and omniseal from expanding as they enter the bore, thus avoiding damage from the edge of the bore.

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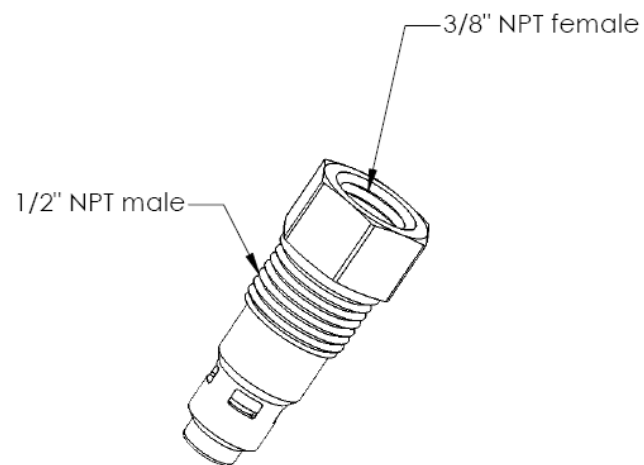
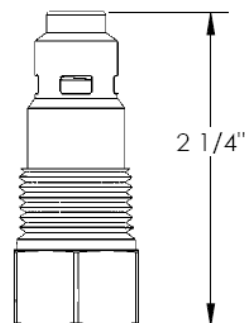
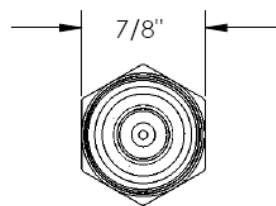
Kit to rebuild Westinghouse  
AA-10 mechanism control  
valve

SIZE DWG. NO. **37652AMK**

REV. **0**

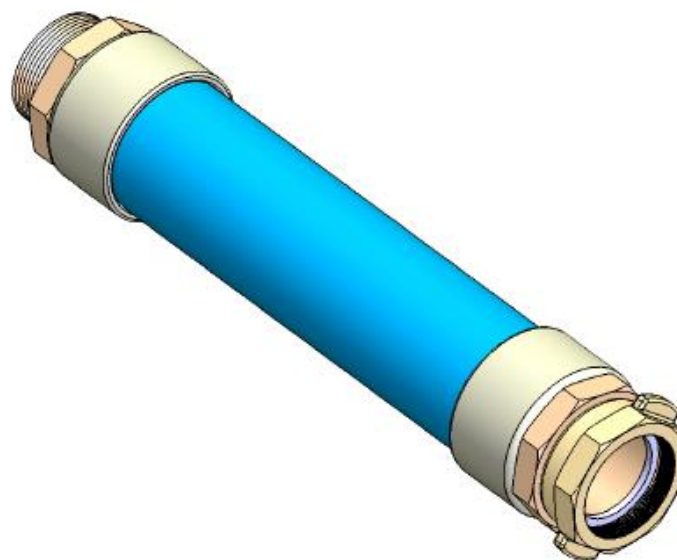
SCALE: NTS Date: 01-15-2003

SHEET 1 OF 1



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800-826-5250 office 888-267-7690 fax			
Check valve, intank Westinghouse # 513A271H01 Siemens # 513A271H01			
SIZE <b>A</b>	DWG. NO. <b>37526AMK</b>	REV. <b>0</b>	
SCALE 1:1	Date: 02-02-2003	SHEET 1 OF 1	



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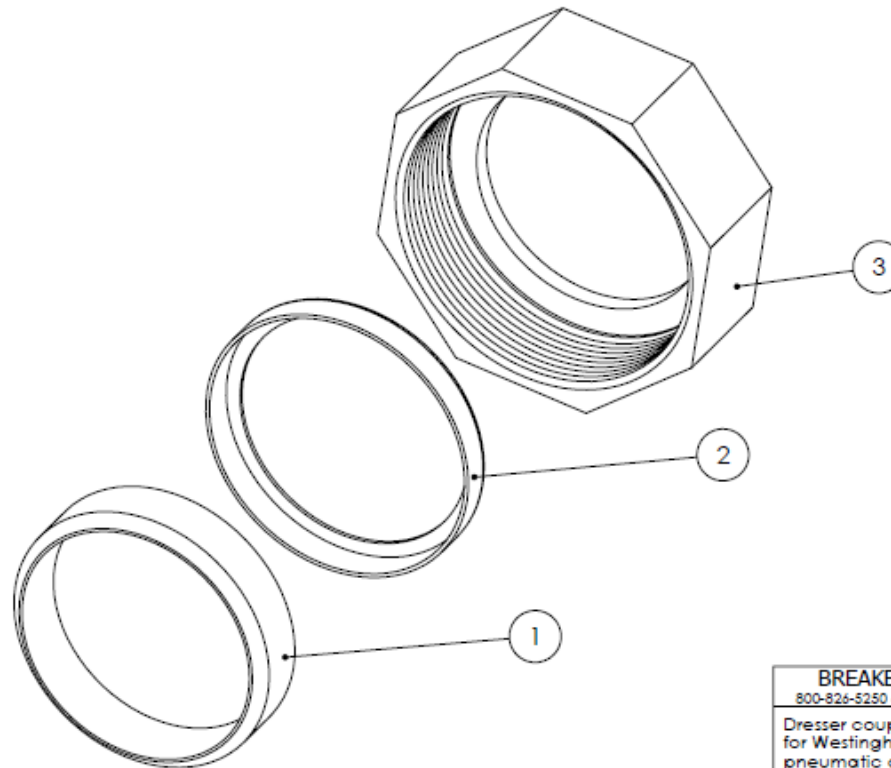
BREAKER SERVICE INC.  
800-826-5250 office 888-267-7690 fax

Hose for air receiver to Mech.  
for WH breaker type 145-GMB-63  
W/AA-10-80 Mech  
1.5" I.D X 13.5" long

SIZE	WORK. NO.	REV.
A	37361AMK	0
SCALE	DATE	SHEET 1 OF 1



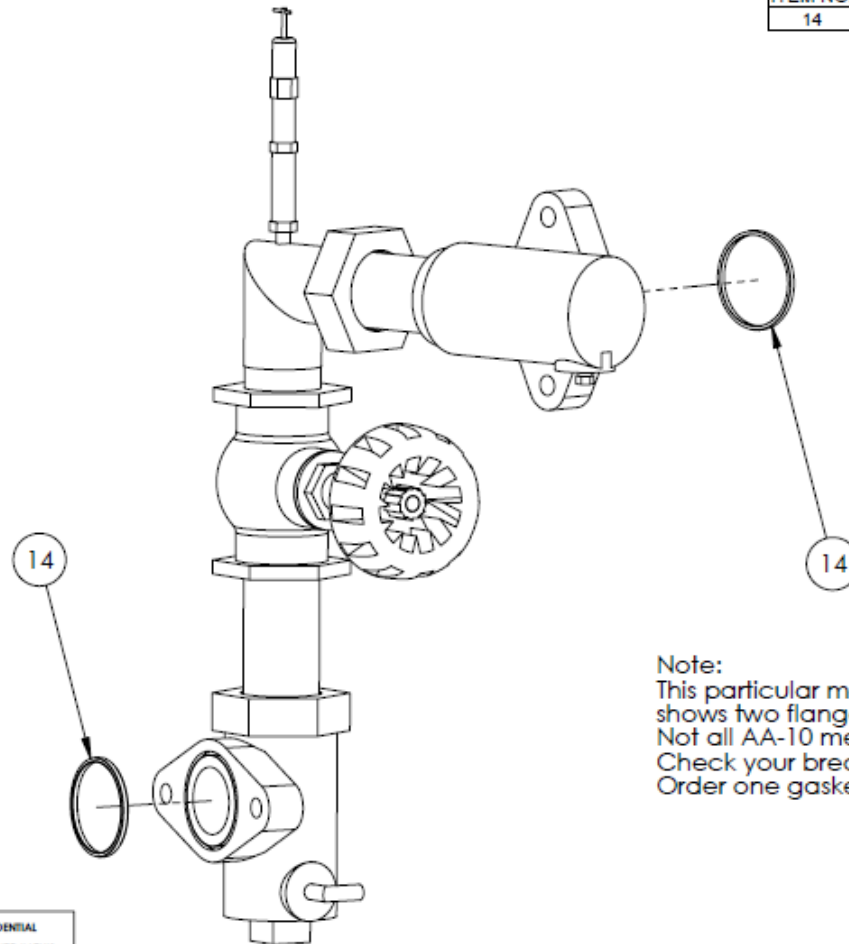
ITEM NO.	QTY.	DESCRIPTION
1	1	Gasket
2	1	Retainer
3	1	Nut



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800-826-5250 office 888-267-7690 fax			
Dresser coupling assembly for Westinghouse AA-10 pneumatic operating mech. For 1.900 inch O.D. pipe			
SIZE <b>A</b>	DWG. NO. <b>30522</b>	REV. <b>0</b>	
SCALE: NTS	Date: 08-09-2003	SHEET 1 OF 1	

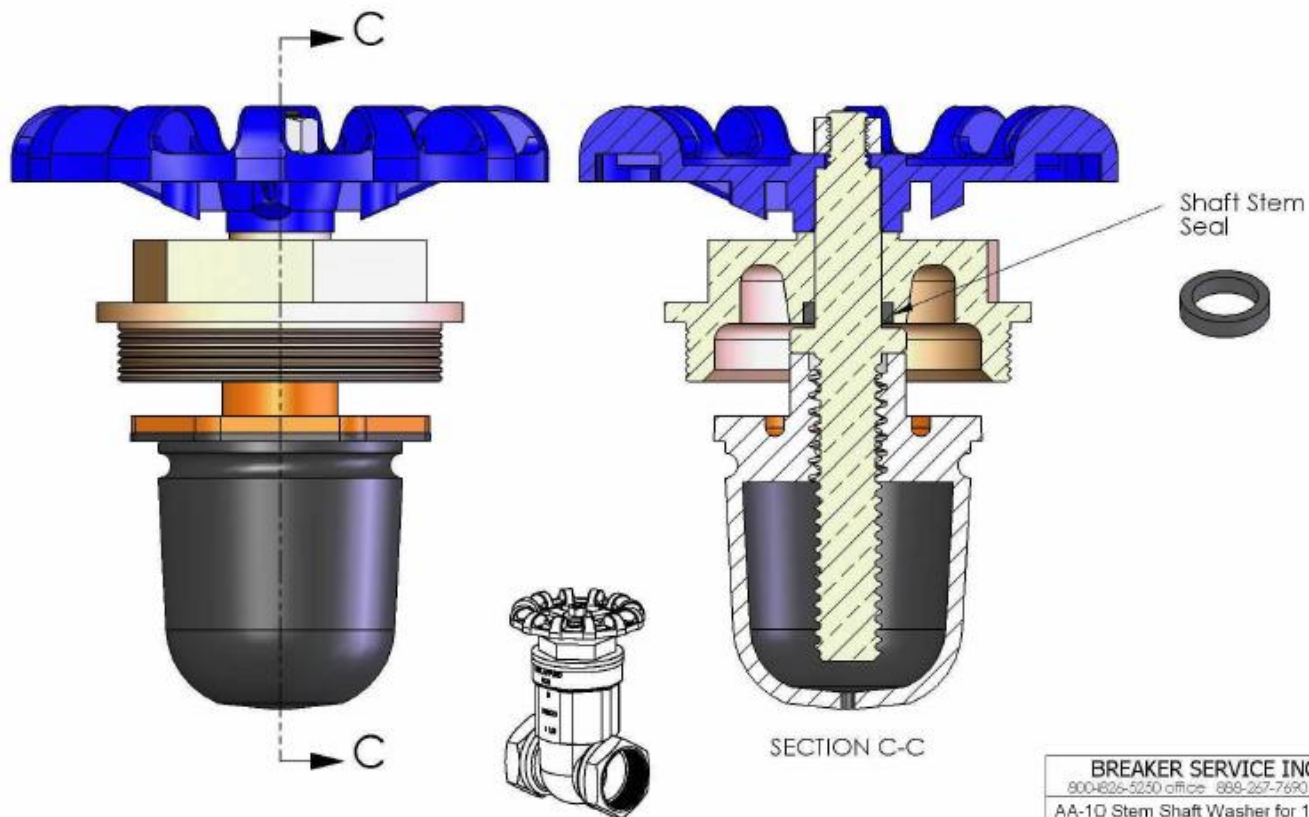
ITEM NO.	QTY.	DESCRIPTION
14	2	Gasket



**Note:**  
 This particular manifold configuration shows two flanges, requiring 2 gaskets.  
 Not all AA-10 mechs have 2 flanges.  
 Check your breaker for your particular needs.  
 Order one gasket (part# 30523) per flange.

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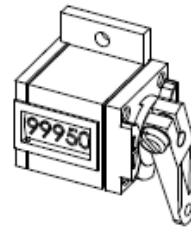
<b>BREAKER SERVICE INC</b>			
800-826-5250 office 888-267-7690 fax			
Gasket for flanges on Westinghouse AA-10 pneumatic operating mech.			
SHEET	DWG. NO.	REV.	
A	30523	0	
SCALE: NTS		Date: 08-09-2003	SHEET 1 OF 1



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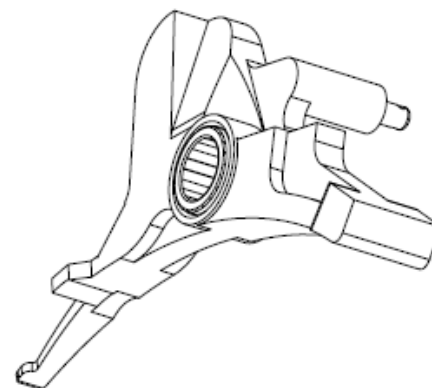
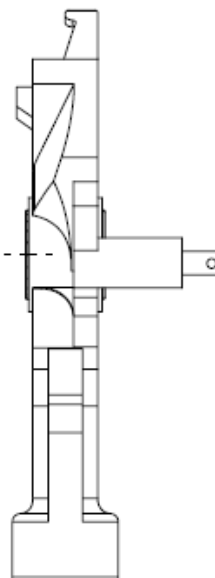
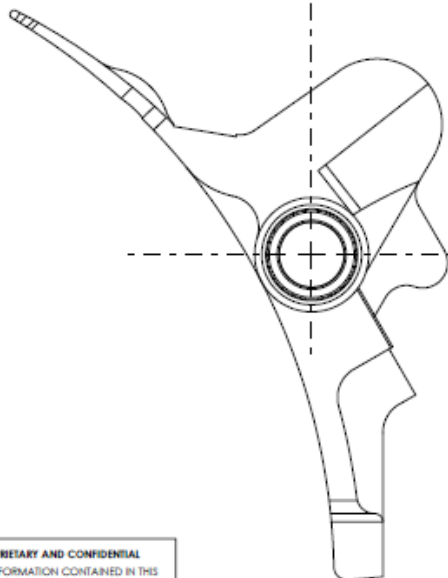
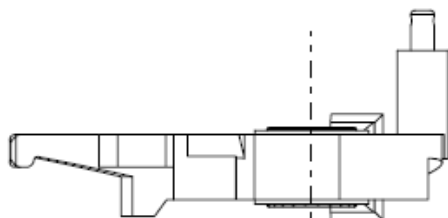
Complete valve shown  
 for reference only.  
 Valve body not included  
 in repair kit.

BREAKER SERVICE INC 800-426-5250 office 688-267-7690 fax		
AA-10 Stem Shaft Washer for 1.5" air shut off valve		
SIZE A	DRAW. NO. 38213AMK	REV. 0
SCALE: 1:1	DATE: 06-09-2004	SHEET: 01



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800-826-8250 office 888-267-7690 fax			
Operations Counter for Westinghouse AA-7 mech Westinghouse part # 491759			
SIZE <b>A</b>	DWG. NO. <b>38303AMK</b>	REV. <b>0</b>	
SCALE 1:1	Date: 05-15-2004	SHEET 1 OF 1	



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800-826-5250 office 888-267-7690 fax			
Trip free trigger			
For Westinghouse AA-10 mech			
A88 part # 23D6021G02			
Westinghouse style # 1647752			
SIZE	DWG. NO.	REV.	
A	37272AMK	0	
SCALE 1:1	Date: 02-02-2003	SHEET 1 OF 1	