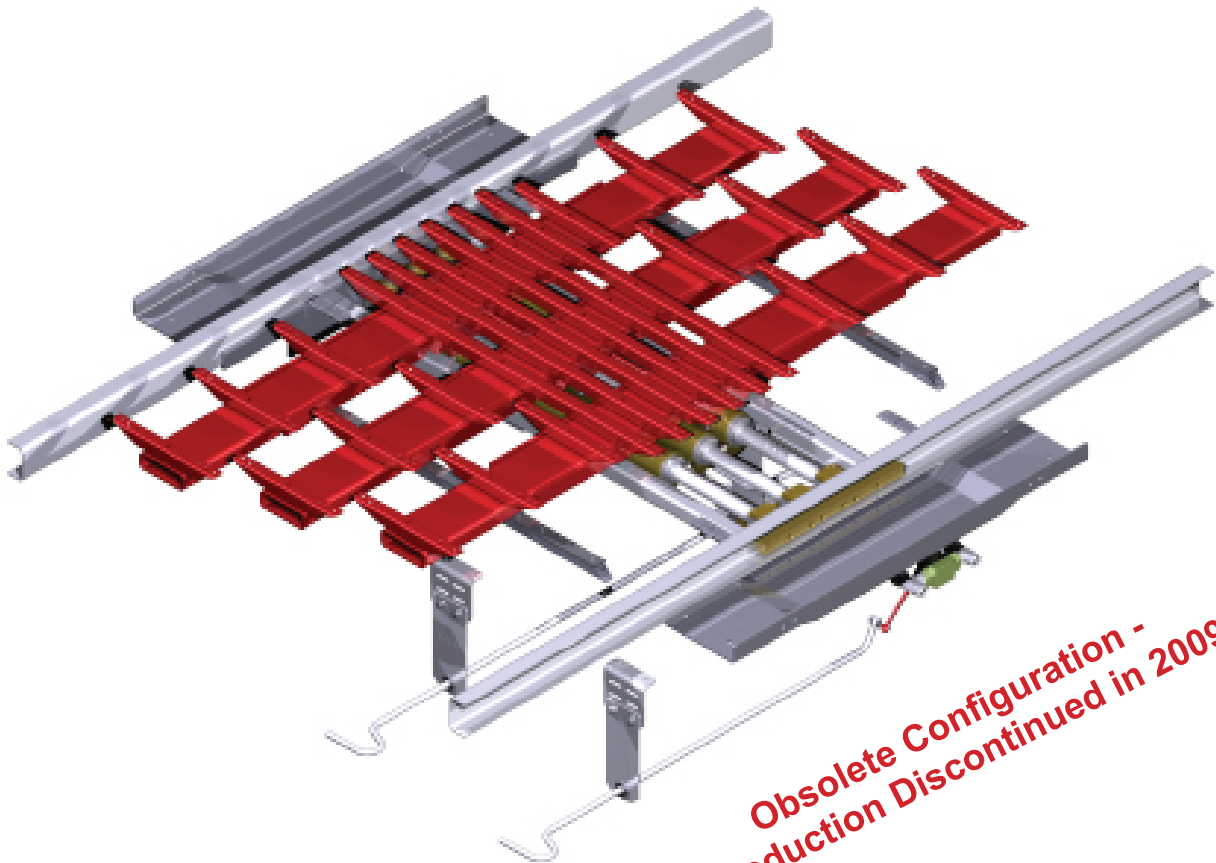


RUNNING FLOOR II®

KEITH Manufacturing Co.
www.KeithWalkingFloor.com
World Headquarters
Toll-Free: 800-547-6161
Phone: +1-541-475-3802



**Obsolete Configuration -
Production Discontinued in 2009**



PARTS CATALOG

Original Instructions

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Table of Contents

Contact Information - KEITH Manufacturing Co.	ii
Service Information	1
Drive Frame Styles	2
Drive Frame & Related Components	3
Drive Leveling / Installation Reference	5
Cross-Drive Support Assemblies	6
Cross-Drive Shoe Variations	8
Cross-Drive Assembly	9
Cross- Drive Assembly (V-Floor)	11
Hydraulic Tubes & Fittings	13
Hydraulic Fittings Chart	14
Left Side Controls - Manual Control Valve	15
Cylinder Assembly - ORFS Tubes (Jan 2020 - Present)	17
Cylinder Assembly - 3.0" & 3.5" (2009 - Jan 2020)	19
Cylinder Assembly - 4" (May 2008 - Jan 2020)	21
Cylinder Assembly - 45 mm Rod & Welded Tubes (1993 - Sept 2001)	23
Cylinder Assembly - SAE Rod 1.727" (1985 - Dec 1993)	25
Check Valve Assembly (Jan 1998 - Present)	27
Check Valve Assembly (Dec 1993 - Jan 1998)	29
One-Way Restrictor Valve Assembly	31
Adjustable Restrictor Valve Assembly	33
Switching Valve Assembly (November 2014 - Present)	35
Threaded Rod Assembly	37
Switching Valve Assembly (April 2013 - November 2014)	39
Switching Valve Assembly (August 2008 - April 2013)	41
Switching Valve Assembly (June 2002 - August 2008)	43
Switching Valve Assembly (December 1998 - June 2002)	45
Control Valve (Load/Unload) Assembly & Handle Assembly - Manual	47
Control Valve (Load/Unload) Assembly - Electric/Manual (Jan 2022 - Present)	49
Control Valve (Load/Unload) Assembly - Electric/Manual (Mar 2000 - Jan 2022)	51
Control Valve (Load/Unload) Assembly - Electric/Manual (May 1995 - Mar 2000)	53
Ball Valve (On/Off) Assembly JIC - Manual	55
Ball Valve (On/Off) Assembly JIC - Electric	57
Tube Clamps	59
Handle Assemblies & Support Guide Assemblies	61
Front Shield Assembly	63

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Not all parts or services available in all regions. Some components may only be sold assembled or in kits. Contact your regional office for information on available parts and services.

Service Information

- Use hydraulic oil or Vaseline to lubricate seals. Do NOT use grease.
- Do NOT use Teflon tape on any hydraulic components.
- When welding, ground specifically to what you are welding on, otherwise it can short across component assemblies damaging seals and gaskets.
- KEITH sells flow meters, pressure testers for troubleshooting and several tools to aid in rebuilding components and drives.

KEITH Mfg. fabricates many standard drive systems, included in this parts catalog, and also fabricates custom drive systems, too numerous to include, therefore KEITH requires the following information from your drive system to ensure we provide you with most accurate information. Please have the following information readily available before contacting KEITH for support:

- Model Number (Located on the Serial Plate of the drive unit)
- Serial Number (Located on the Serial Plate on the drive unit)
- Quantity & length of floor slats
- Vehicle make and unit installer

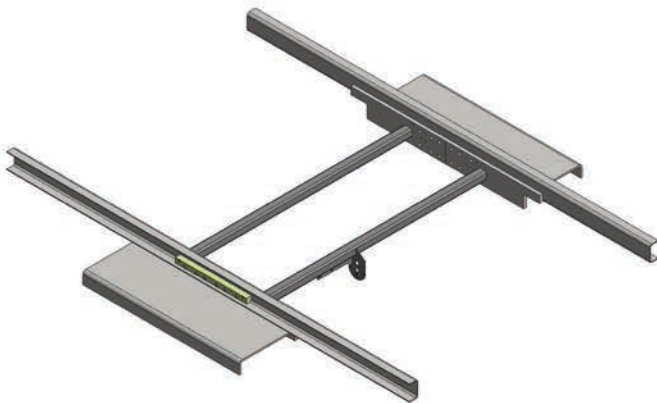
Drive Frame Styles



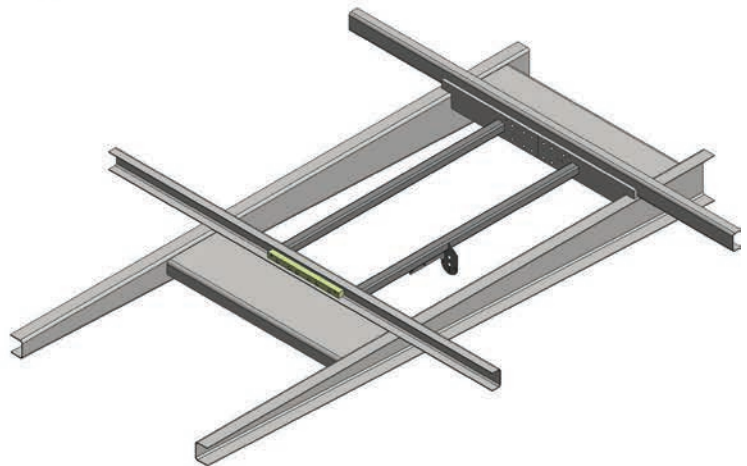
STEEL UNIVERSAL MOUNT



ALUMINUM UNIVERSAL MOUNT



STEEL CENTER MOUNT



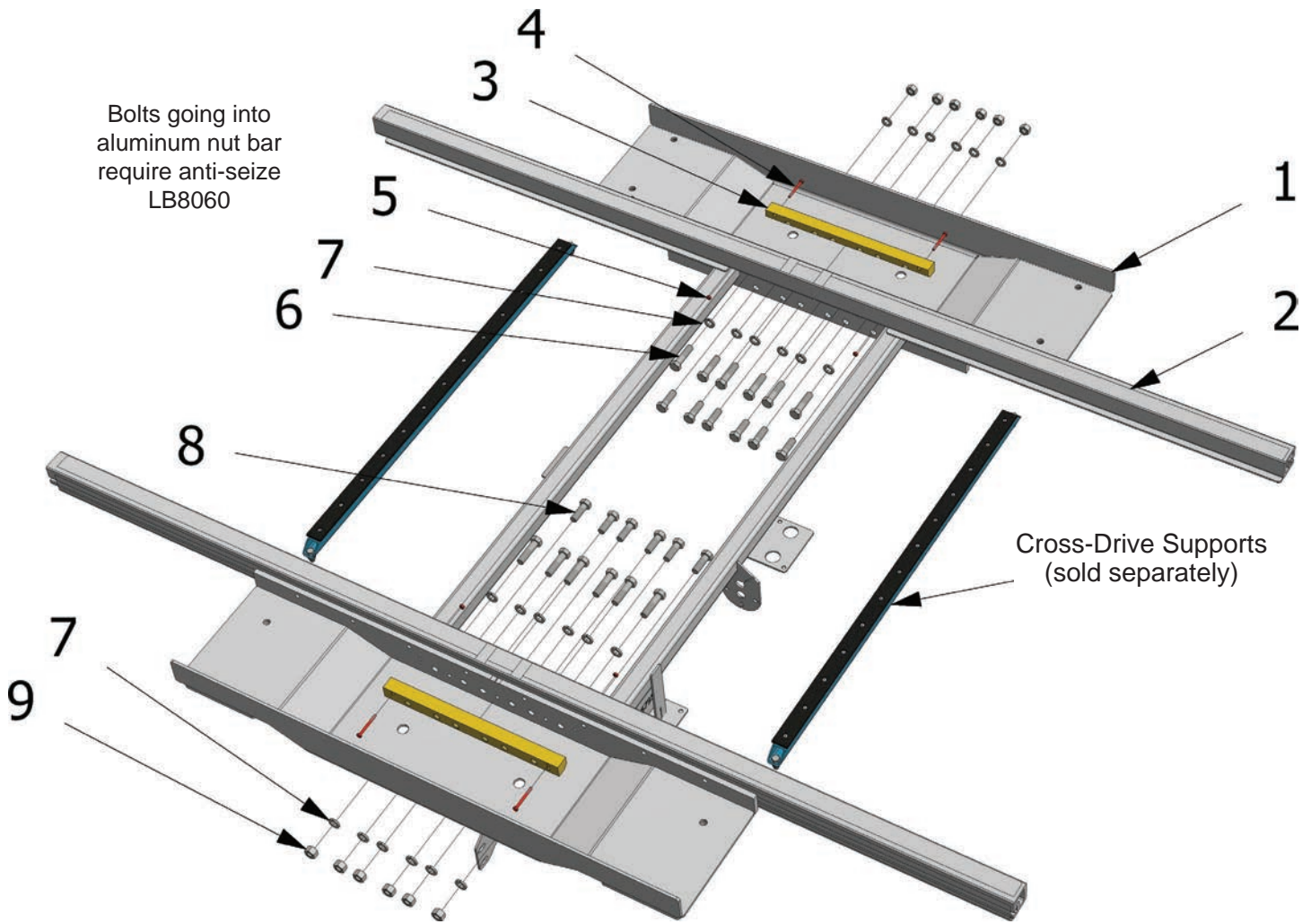
STEEL CENTER MOUNT IN RAILS



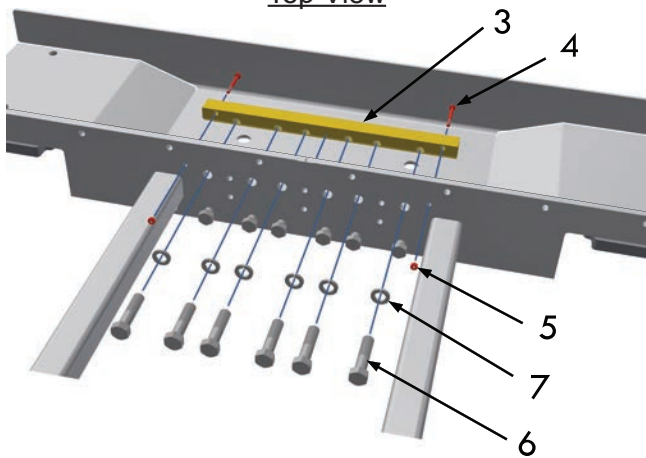
STEEL OUTSIDE PERIMETER MOUNT

09121501

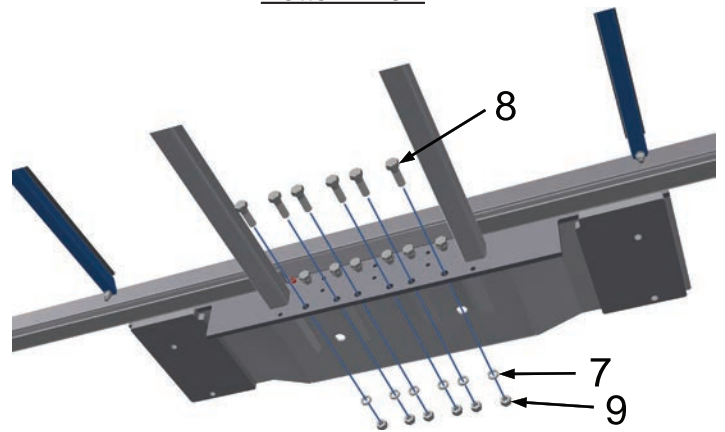
Drive Frame & Related Components



Top View



Bottom View



Drive Frame & Related Components

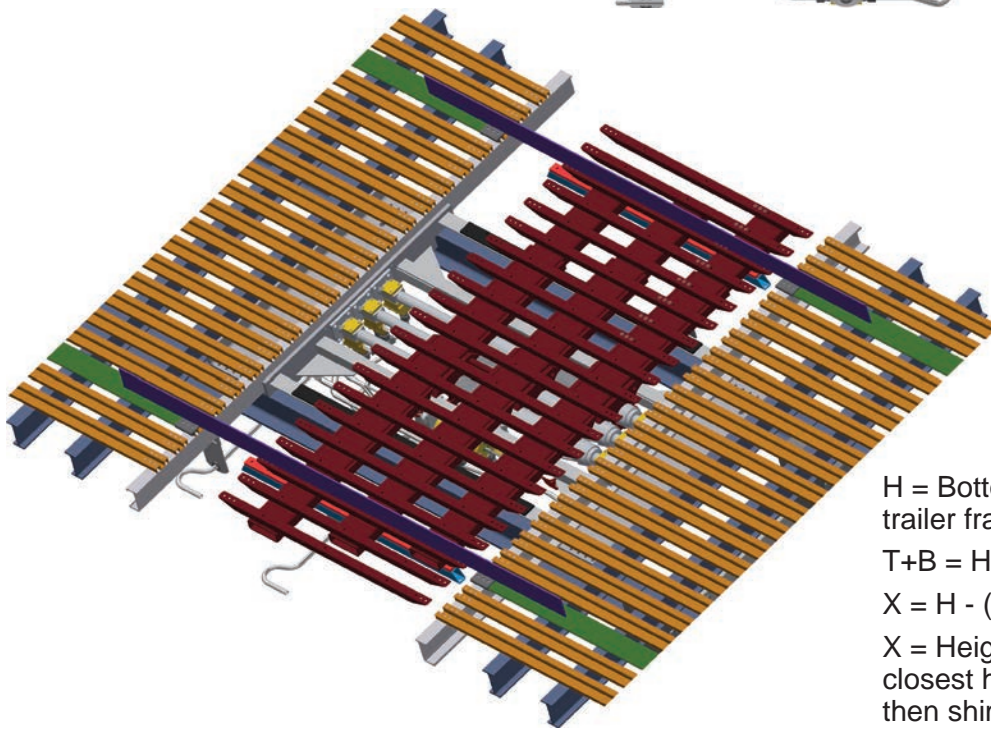
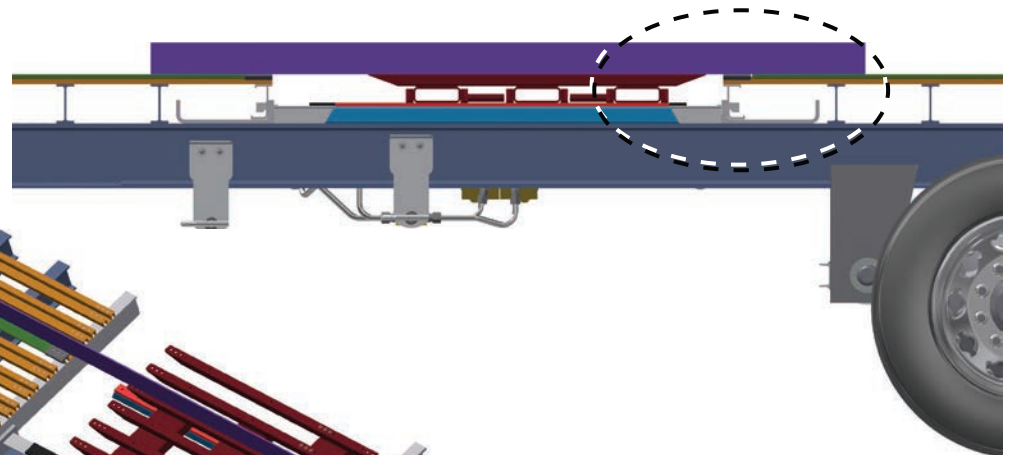
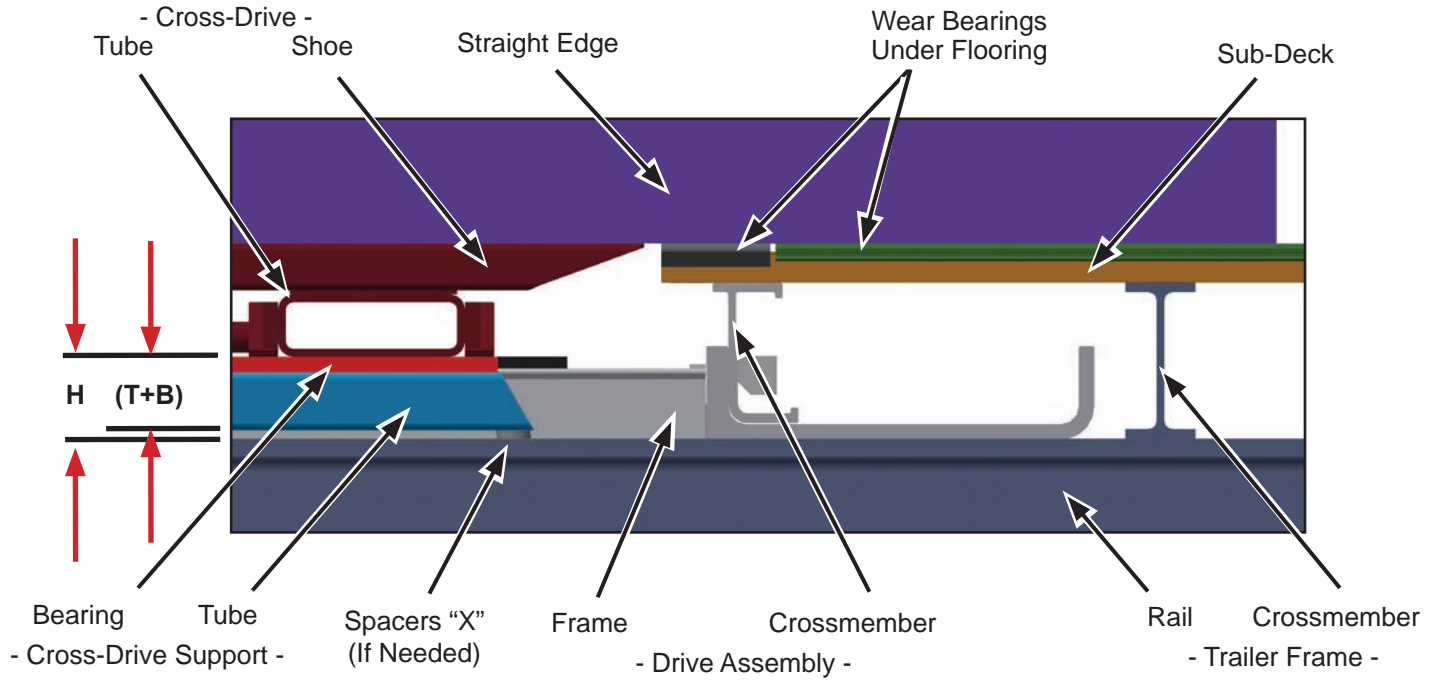
ID#	Qty	SAE Part #	Metric Part #	Description
-	1	-(¹)	-(¹)	Drive Frame Assembly (Includes items 1-18)
1(¹)	1	-	-	Drive Frame Steel
2(¹)(²)	2	w/frame	w/frame	Channel Formed 4"x2 1/4"x3/16"
3(¹)	2	01253701	01253702	Nut Bar Threaded 4.5" Cylinder Centers
	2	01173101	01173102	Nut Bar Threaded 5.0" Cylinder Centers
	2	01253801	01253802	Nut Bar Threaded 6.0" Cylinder Centers
	2	05181401	05181402	Nut Bar Threaded 10.0" Cylinder Centers
	2	05047001	05047002	Nut Bar Threaded 10.5" Cylinder Centers
4	4	86419500	87004530	Bolt Hex (GR5 1/4"x2 1/4", GR8.8 M6 x 1 x 60) (3.0" Cyl)
	4	86420500	87004570	Bolt Hex (GR5 1/4"x2 3/4", GR8.8 M6 x 1 x 70) (3.5" Cyl)
	4	86420500	87004570	Bolt Hex (GR5 1/4"x2 3/4", GR8.8 M6 x 1 x 70) (4.0" Cyl)
5	4	86626000	87100500	Hex Nut Nylock (1/4", M6 x 1) Zinc
6	12	86466500	87016650	Bolt Hex (GR8 5/8"x2 3/4", 10.9 M16 x 2 x 65) (3.0" Cyl)
	12	86467000	87016700	Bolt Hex (GR8 5/8"x3", 10.9 M16 x 2 x 70) (3.5" Cyl)
	12	86466000	87016700	Bolt Hex (GR8 5/8"x2-1/2", 10.9 M16 x 2 x 70) (4.0" Cyl)
7	24	86559000	87078000	Washer Lock (5/8", M16)
8	12	86464500	87016500	Bolt Hex (GR8 5/8"x2", 10.9 M16 x 2 x 50) (3.0" Cyl)
	12	86465500	87016520	Bolt Hex (GR8 5/8"x2 1/4", 10.9 M16 x 2 x 55) (3.5" Cyl)
	12	86464500	87016520	Bolt Hex (GR8 5/8"x2", 10.9 M16 x 2 x 55) (4.0" Cyl)
9	12	86632000	87103000	Nut Hex (5/8", M16 x 2)

(¹) Part numbers and descriptions vary based on the drive configuration and application. Drive serial number must be provided to determine actual part numbers.

(²) Formed Channels are included with frame. In many applications they are non-removable.

**Longer bolts (#6 & #8) may
be required for thicker
Aluminum frames!**

Drive Leveling / Installation Reference



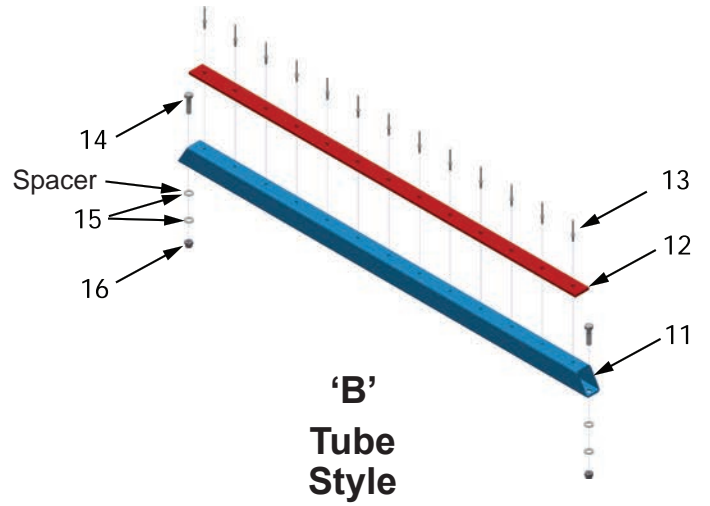
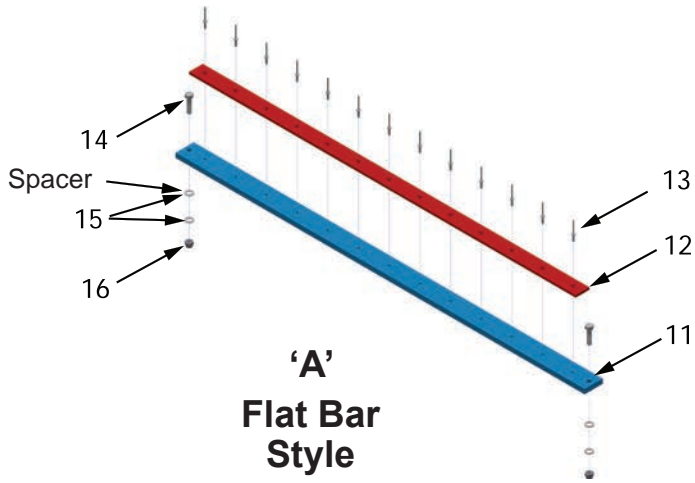
H = Bottom of cross-drive tube to top of trailer frame rail

T+B = Height of Bearing + Tube

X = H - (T+B)

X = Height of spacers required. Select closest height Cross-Drive Supports (T+B) then shim up with washers if needed to match dimension H +0" / -1/16"

Cross-Drive Support Assemblies

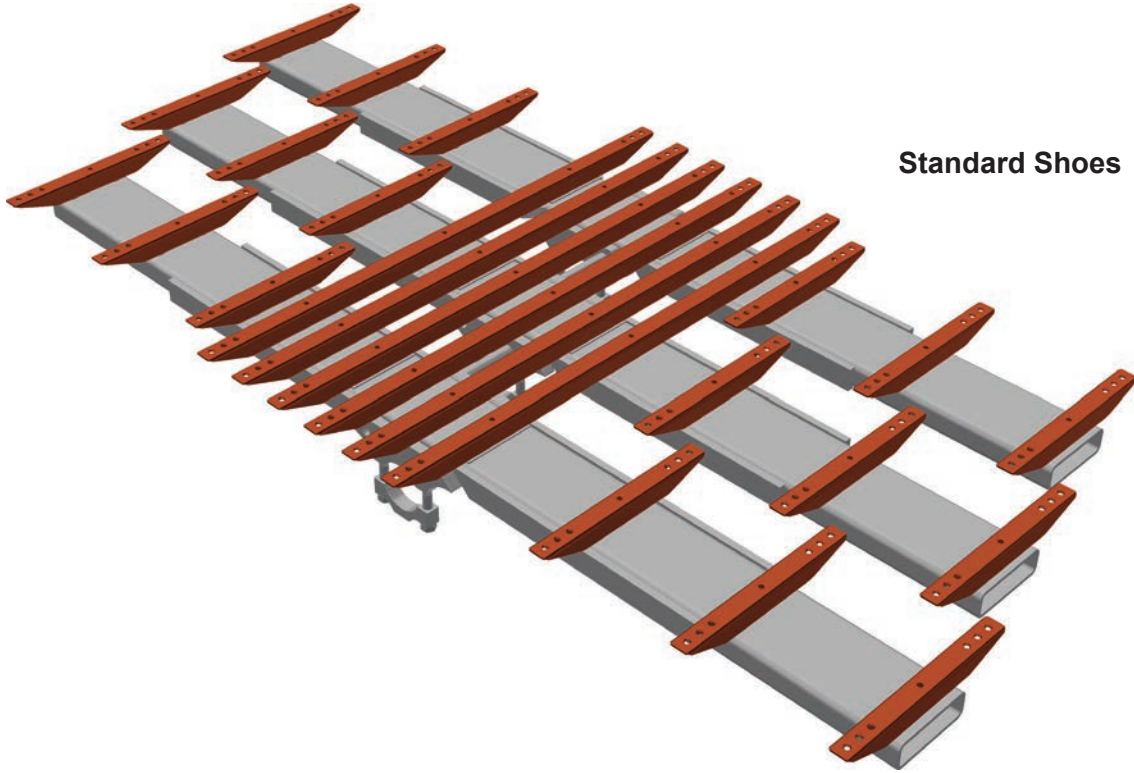


Cross-Drive Support Assemblies

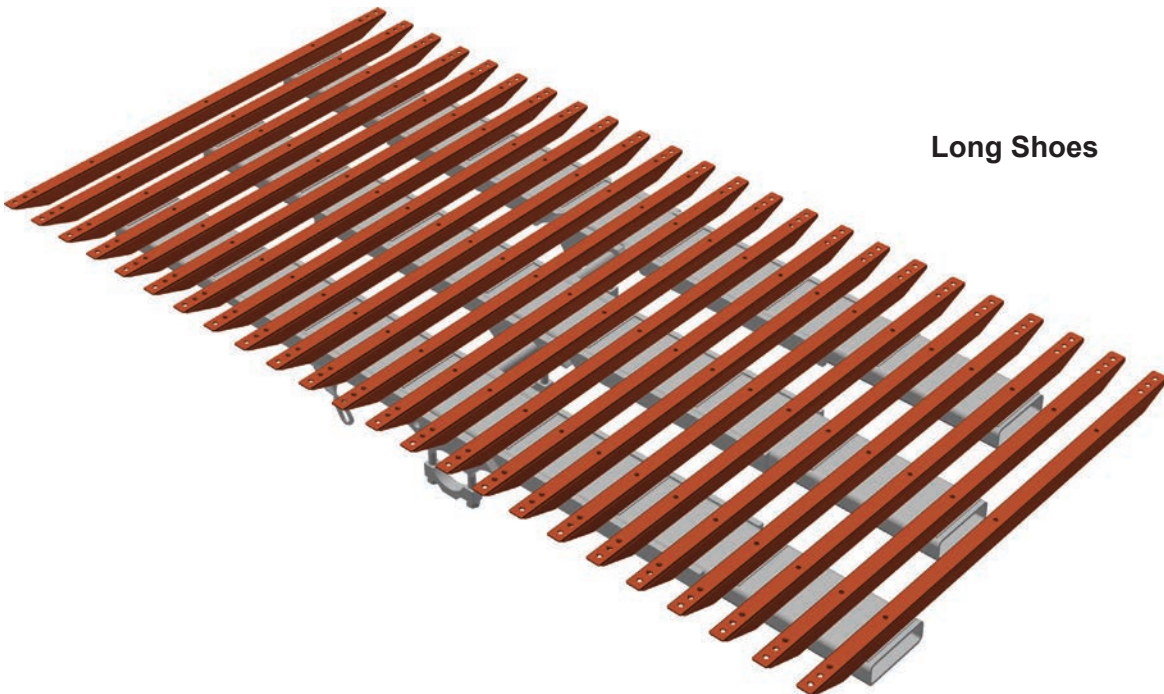
ID #	Qty	'A' Part #	'A' Part #	'A' Part #	'A' Part #	'A' Part #	'B' Part #	'B' Part #	'B' Part #	'B' Part #	Description
- ⁽¹⁾	2	06000801	05068501	04368501	06040301	03467804	03467802	03467805	Cross-Drive Support Assembly (Includes items 11-17)		
T+B	-	3/4" [19 mm]	3/4" [19 mm]	3/4" [19 mm]	3/4" [19 mm]	1-1/2" [38 mm]	1-5/8" [41 mm]	1-7/8" [48 mm]	Combined Height Bar/Tube + Bearing (#11+#12)		
11 ⁽¹⁾		06000701	-	-	-	-	-	-	Bar AL 1/2"x2"x34"		
		-	05068801	-	-	-	-	-	Bar ST 1/2"x2"x45"		
		-	-	04081501	-	-	-	-	Bar ST 1/2"x1-1/2"x45"		
		-	-	-	06040201	-	-	-	Bar AL 1/2"x2"x45"		
12 ⁽¹⁾						03467702			Tube ST 1-1/4"x1-1/4"x45"		
		06001101	-	-	-	-	-	-	Bearing Strip UHMW 1/4"x1-1/2"x32"		
		-	04985601	-	-	-	-	-	Bearing Strip UHMW 1/4"x2"x42-1/2"		
		-	-	-	03453901	-	-	-	Bearing Strip UHMW 1/4"x1-1/2"x42-1/2"		
		-	-	-	-	03453902	-	-	Bearing Strip UHMW 3/8"x1-1/2"x42-1/2"		
		-	-	-	-	-	03453904	-	Bearing Strip UHMW 5/8"x1-1/2"x42-1/2"		
13	13		86528000						Rivet 3/16"x3/8" AB6-6		
14			-				86528150		Rivet 3/16"x1/2" AB6-8		
	2		86438000						Bolt Hex GR8 ZN 3/8"-16 X 1-1/4" HCS		
15	2		-				87008520		Bolt Hex M10 x 1.5 x 40		
	2		86554000						Washer Flat 3/8" Hard USS		
16	2		86553500						Washer Fender 3/8"x1-1/2"x(1/8" Spacer "X")		
	4		-				87076000		Washer Flat M10 (1/16" Spacer "X")		
16	2		86628500						Nut Hex 3/8"-16 GR8 ZINC		
			-				87102000		Nut Hex Nylock M10 x 1.5		

⁽¹⁾ Part numbers and descriptions vary based on the drive configuration and application. Drive serial number or measurements from drive installed in trailer must be provided to determine actual part numbers.

Cross-Drive Shoe Variations

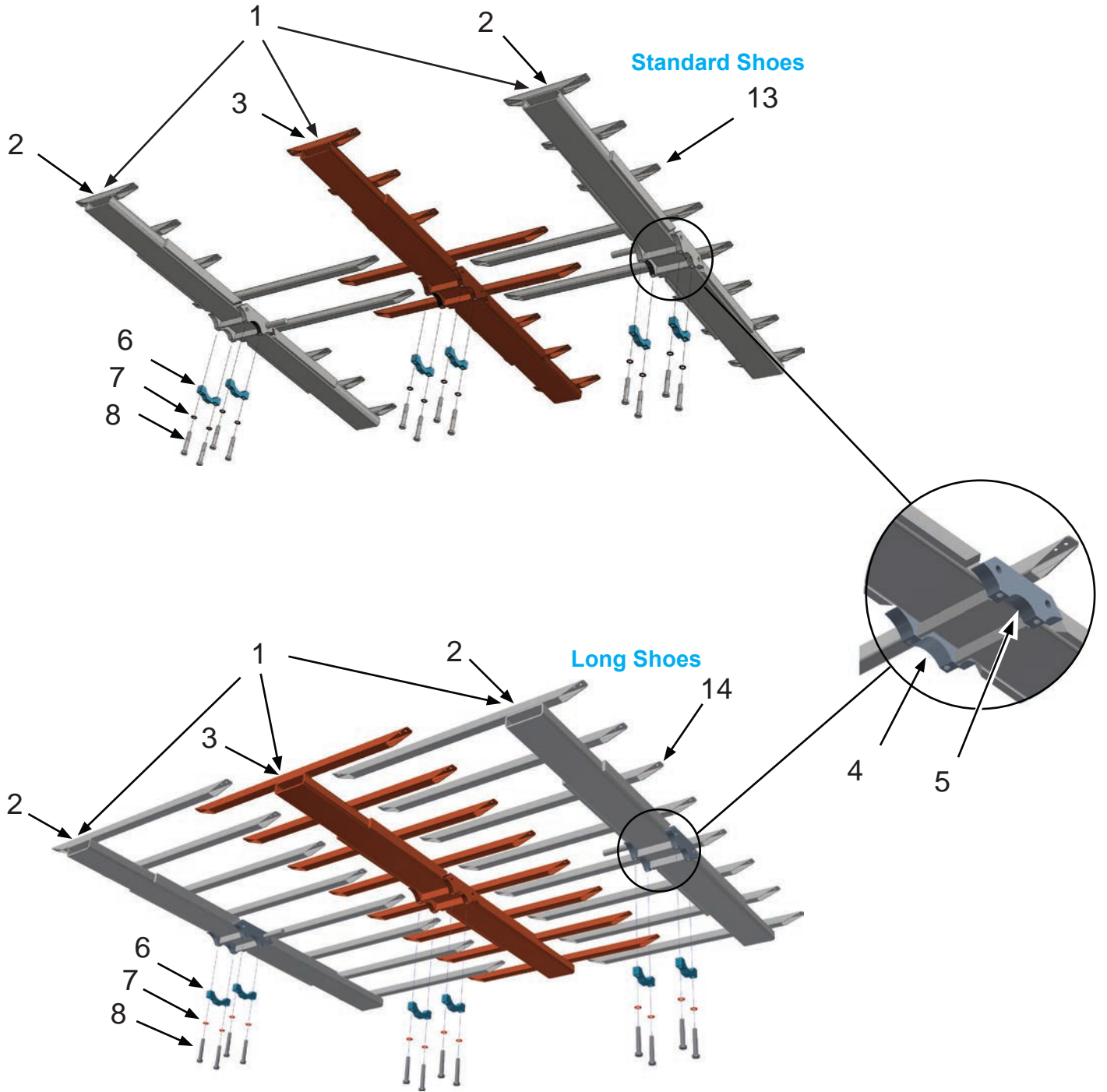


Standard Shoes



Long Shoes

Cross-Drive Assembly



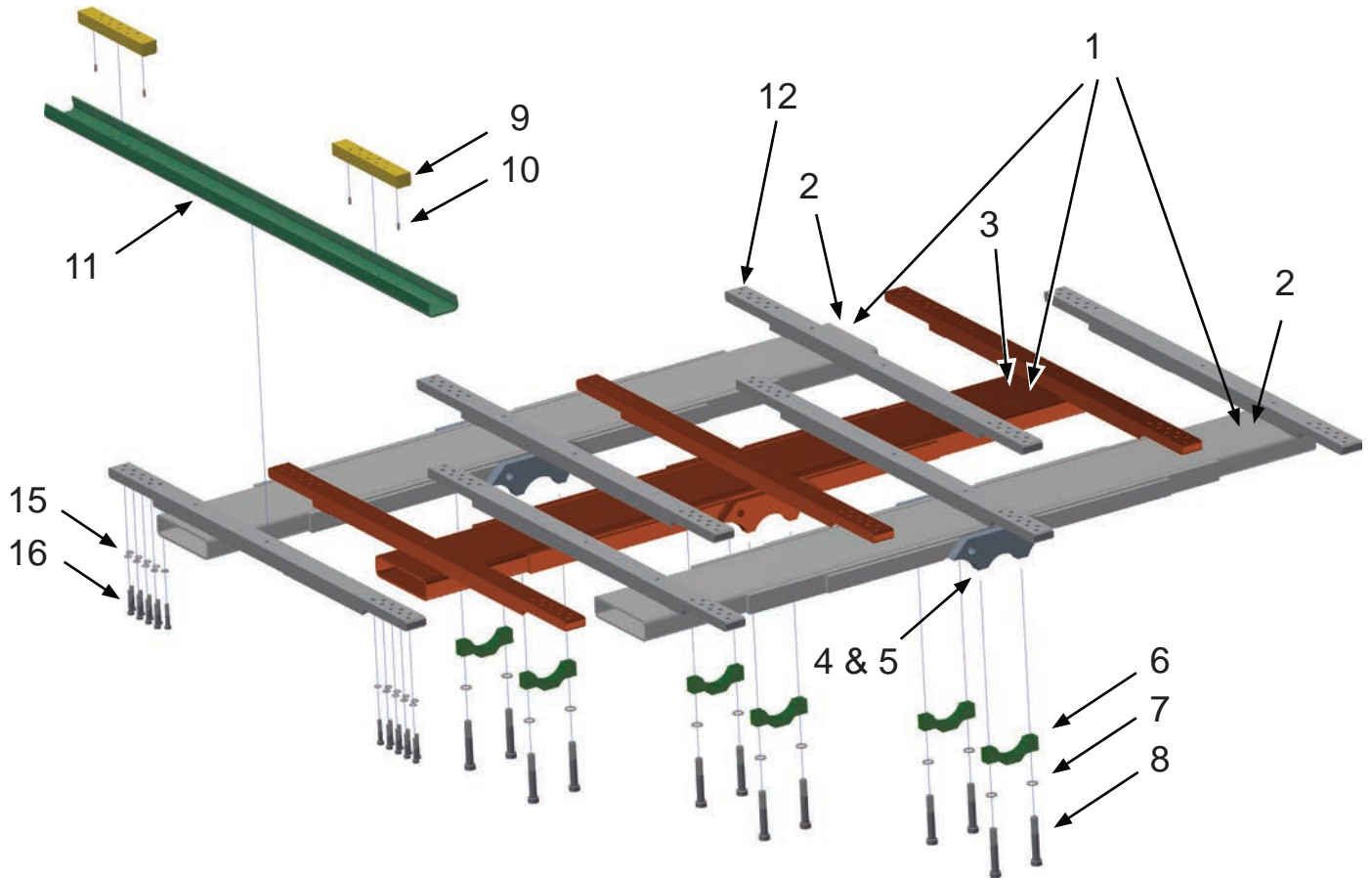
Cross-Drive Assembly

ID#	Qty	3.0" Cyl SAE Part #	3.0" Cyl Metric Part #	3.5" Cyl SAE Part #	3.5" Cyl Metric Part #	4.0" Cyl SAE Part #	4.0" Cyl Metric Part #	Description
1 ⁽¹⁾	-	-	-	-	-	-	-	Cross-Drive Set (Includes items 2-5)
2 ⁽¹⁾	2	-	-	-	-	-	-	Cross-Drive #1 & #3
3 ⁽¹⁾	1	-	-	-	-	-	-	Cross-Drive #2
4	1/XDR	03024501	03024502	03024601	03024602	06837801	06837802	Upper Threaded Weld On Clamp
5	1/XDR	03024401	03024402	08053201	08053202	06837901	06837902	Upper Smooth Weld On Clamp
6	3	-	-	-	-	09611701		Lower Threaded Cross-Drive Clamp
	6	03910501		03910601		06839301		Lower Smooth Cross-Drive Clamp
7	12	86559090				87078401		Washer Nord-Lock 5/8", 3/4" (2 PCS=1)
8	12	86470010	-	-	-	-	-	Bolt Hex Patchloc GR8 5/8"x4"
	12	-	87017880	-	-	-	-	Bolt Hex Patchloc M16x100mm CL10.9
	12	-	-	86470510	-	-	-	Bolt Hex Patchloc GR8 5/8"x4 1/2"
	12	-	-	-	87018510	-	-	Bolt Hex Patchloc M16x120mm CL10.9
	6	-	-	-	-	86474050	-	Bolt Hex 3/4"x5" GR8 ZN
	6	-	-	-	-	86474060	-	Bolt Hex 3/4"x5-1/2" GR8 ZN
	6	-	-	-	-	-	87019600	Bolt Hex M20x120 CL10.9
	6	-	-	-	-	-	87020100	Bolt Hex M20x140 CL10.9
13	1/slat	03005501				-	-	Short Drive Shoe 14" 3 Hole (Standard)
	1/slat	04213901				-	-	Short Drive Shoe 15" 4 Hole (Standard)
14	1/slat	03719001				-	-	Long Drive Shoe 43" 3 Hole
	1/slat	07690601		03005701		07975810		Long Drive Shoe 43" 4 Hole 3/8" 5/16" holes, No Holes

⁽¹⁾ Part numbers and descriptions vary based on drive configuration and application. Drive serial number must be provided to determine actual part numbers.

Cross- Drive Assembly (V-Floor)

Integrated V-Floor Slat



Cross-Drive Assembly (V-Floor)

ID#	Qty	3.0" Cyl		3.5" Cyl		4.0" Cyl		Description
		SAE Part #	Metric Part #	SAE Part #	Metric Part #	SAE Part #	Metric Part #	
1 ⁽¹⁾	-	-	-	-	-	-	-	Cross-Drive Set (Includes items 2-5)
2 ⁽¹⁾	2	-	-	-	-	-	-	Cross-Drive #1 & #3
3 ⁽¹⁾	1	-	-	-	-	-	-	Cross-Drive #2
4	1/CD	03024501	03024502	03024601	03024602	06837801	06837802	Upper Threaded Weld On Clamp
5	1/CD	03024401	03024402	03024701	03024702	06837901	06837902	Upper Smooth Weld On Clamp
6	3	-	-	-	-	09611701		Lower Threaded Cross-Drive Clamp
	6	03910501		03910601		06839301		Lower Smooth Cross-Drive Clamp
7	12	86559090				87078401		Washer Nord-Lock 5/8", 3/4" (2 PCS=1)
8	12	86470010	-	-	-	-	-	Bolt Hex Patchloc GR8 5/8"x4"
	12	-	87017880	-	-	-	-	Bolt Hex Patchloc M16x100mm CL10.9
	12	-	-	86470510	-	-	-	Bolt Hex Patchloc GR8 5/8"x4-1/2"
	12	-	-	-	87018510	-	-	Bolt Hex Patchloc M16x120mm CL10.9
	12	-	-	-	-	86474050	-	Bolt Hex 3/4"x5" GR8 ZN
	12	-	-	-	-	86474060	-	Bolt Hex 3/4"x5-1/2" GR8 ZN
	12	-	-	-	-	-	87019600	Bolt Hex M20x120 CL10.9
	12	-	-	-	-	-	87020100	Bolt Hex M20x140 CL10.9
9	2/slat	05979701					Nut Bar	
10	1/bar	86651405					Roll Pin 1/4" x 5/8"	
11	1/slat	06341401					Drive Channel Aluminum 10.0" SC	
	1/slat	06191601					Drive Channel Aluminum 10.5" SC	
	1/slat	10029801					Drive Channel Aluminum 11.5" SC	
	1/slat	06006201					Drive Channel Steel 10.0" SC	
	1/slat	05977701					Drive Channel Steel 10.5" SC	
	1/slat	09884001					Drive Channel Steel 11.5" SC	
12 ⁽¹⁾	1/slat	05977601					V-Floor Long Drive Shoe 9 hole	
15	18/slat	86555000					Washer Lock 3/8"	
16	18/slat	86439521					Bolt Hex Patchloc 3/8"x2" ZN	

⁽¹⁾ Part numbers and descriptions vary based on the drive configuration and application. Drive serial number must be provided to determine actual part numbers. Some shoes #12 will require (2) shim washers (86552520 Flat Washer 5/16"X1"X1/8") under them for proper installation.

Hydraulic Tubes & Fittings

KEITH Mfg. fabricates many standard drive systems, included in this parts catalog, and also fabricates custom drive systems, too numerous to include, therefore KEITH requires the following information from your drive system to ensure we provide you with most accurate information. Please have the following information readily available before contacting KEITH for support:

- Model Number (Located on the Serial Plate of the drive unit)
- Serial Number (Located on the Serial Plate on the drive unit)
- Number & length of floor slats
- Vehicle make and unit installer

Service Information

- Use hydraulic oil or Vaseline to lubricate seals. Do NOT use grease.
- Do NOT use Teflon tape on any hydraulic components.
- Use the following chart for tightening tubes and fittings.

Sizes	Tubes	Swivel Nuts or Hoses
-6 JIC	2 FFWR	1-1/2 FFWR
-8 JIC	2 FFWR	1-1/2 FFWR
-12 JIC	1-1/2 FFWR	1-1/4 FFWR
-16 JIC	1-1/2 FFWR	1 FFWR
-12 ORFS	1/2 FFWR	1/2 FFWR
-16 ORFS	1/2 FFWR	1/2 FFWR

- FFWR (Flats From Wrench Resistance)
- JIC (Joint Industry Council, 37° flare seating surface)
- ORFS (O-Ring Face Seal)

Hydraulic Fittings Chart

84691800
84691700
84691500



Elbow

16 Male JIC - 16 Male ORB
16 Male JIC - 12 Male ORB
12 Male JIC - 12 Male ORB

Long Elbow
12 Male JIC - 12 Male ORB



84690950



84688600

Elbow

12 Male JIC - 12 Female JIC

Sweep Elbow
12 Male JIC - 12 Female JIC
16 Male JIC - 16 Female JIC



84683100
84683200

Long Straight
12 Male JIC - 12 Male ORB



84685000

Straight

12 Male JIC - 12 Male ORB



84685010



84686100

Straight

12 Female JIC - 12 Male ORB

Straight
12 Male JIC - 12 Male JIC



84672700



84692260

Run Tee

12 Male JIC - 12 Male ORB - 12 Male JIC

Run Tee
12 Male JIC - 12 Female JIC - 12 Male JIC



84690300



84687900
84687700

Plug

16 Male JIC
12 Male JIC



84692060

Branch Tee

12 Male JIC - 12 Male JIC - 12 Male ORB

Branch Tee
12 Male JIC - 12 Male JIC - 12 Female JIC



84690800



84672000
84671900

Hollow Hex Plug

16 Male ORB
12 Male ORB

84691960
84691970
84691950



45° Elbow

16 Male JIC - 16 Male ORB
16 Male JIC - 12 Male ORB
12 Male JIC - 12 Male ORB

45° Elbow
16 Male JIC - 16 Female JIC
12 Male JIC - 12 Female JIC

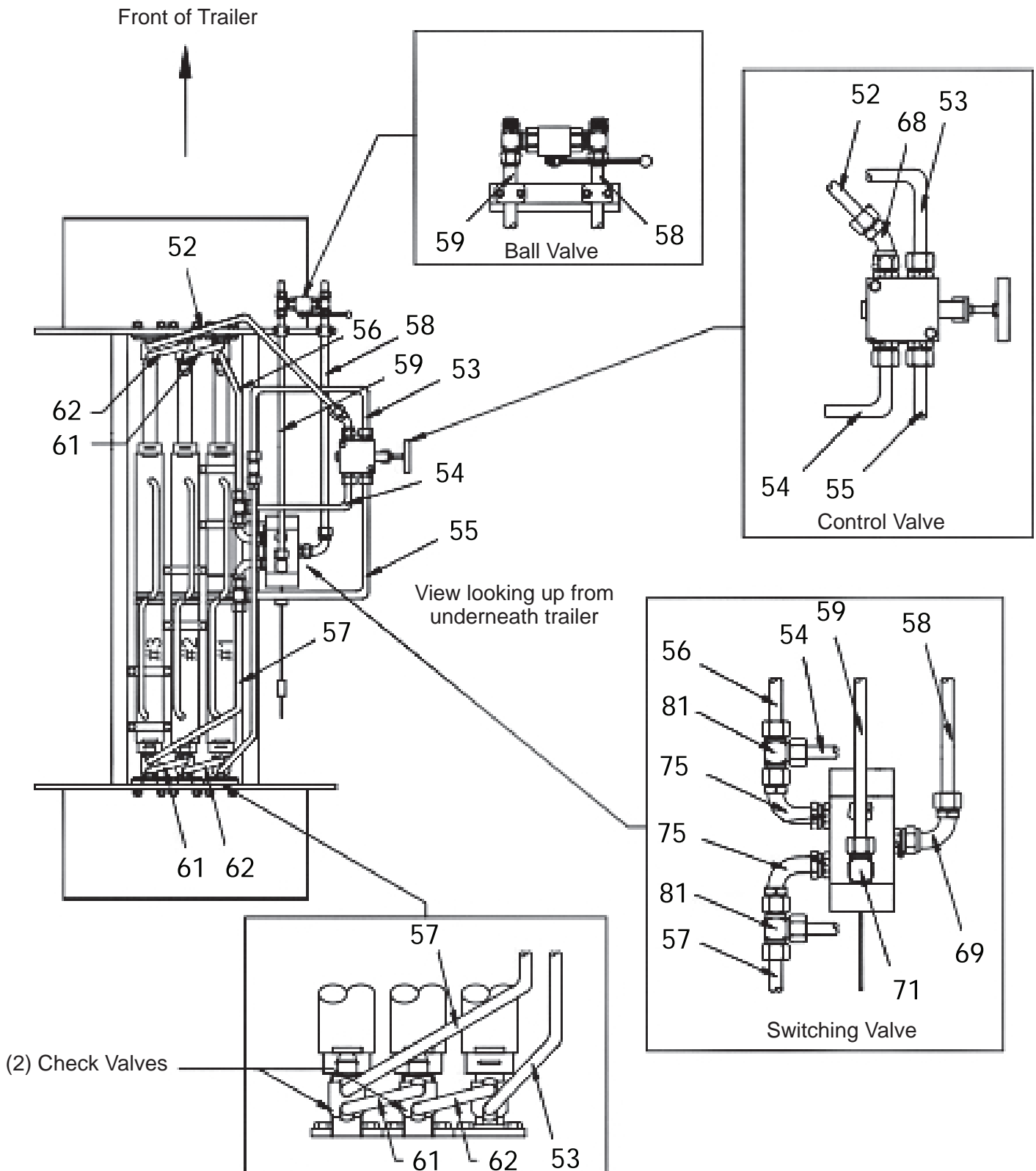
84688460
84688450



84683600
84683700

Long Sweep Elbow
12 Male JIC - 12 Female JIC
16 Male JIC - 16 Female JIC

Left Side Controls - Manual Control Valve

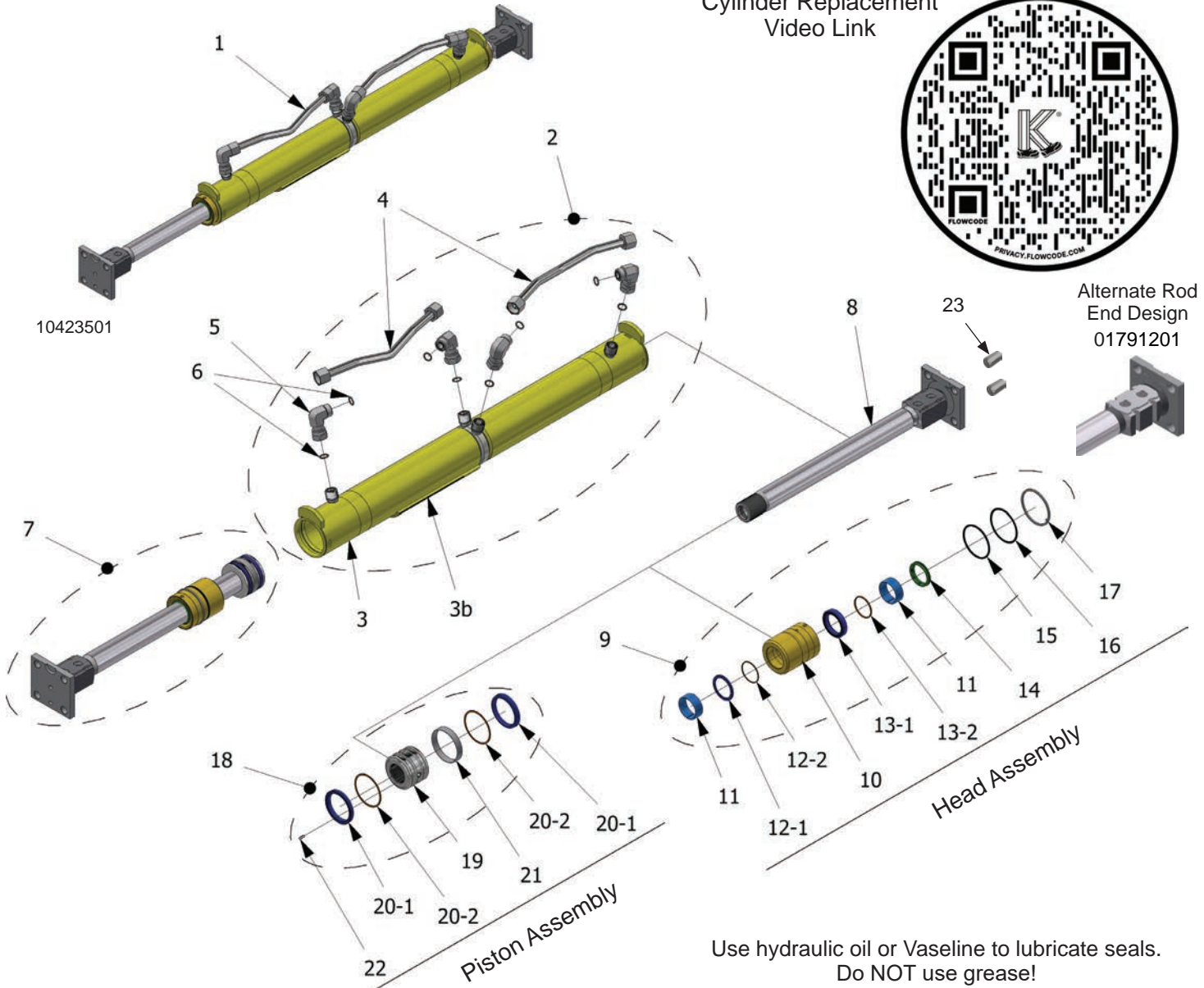


	ID #	Manual CV	Description
HYDRAULIC TUBES	E52	1	#E52 Tube - Control Valve to Front Cylinder 3
	53	1	#53 Tube - Control Valve to Rear Cylinder 1
	54	1	#54 Tube - Control Valve to Switching Valve Front CYL
	55	1	#55 Tube - Control Valve to Switching Valve Rear CYL
	56	1	#56 Tube - Front Check Valve 1 to Switching Valve Front CYL
	57	1	#57 Tube - Rear Check Valve 3 to Switching Valve Rear CYL
	58	1	#58 Tube - Switching Valve PUMP to Ball Valve
	59	1	#59 Tube - Switching Valve RES to Ball Valve
	61	2	#61 Tube - Check Valve to Check Valve
	62	2	#62 Tube - Check Valve 2 to Cylinder
FITTINGS	68	1	Sweep Elbow: 12 Male JIC - 12 Female JIC 45°
	69	1	Sweep Elbow: 16 Male JIC - 16 Female JIC 90°
	71	1	Elbow: 12 Male JIC - 16 Male ORB
	75	2	Sweep Elbow: 12 Male JIC - 12 Female JIC
	81	2	Run Tee: 12 Male JIC - 12 Female JIC- 12 Male JIC

Cylinder Assembly - ORFS Tubes (Jan 2020 - Present)

Drive serial number must be provided to determine actual part numbers.

Cylinder Replacement Video Link



Alternate Rod End Design 01791201

Rod Assembly changed back ORFS Cross-Over Tubes

Use hydraulic oil or Vaseline to lubricate seals.
Do NOT use grease!
Do NOT use teflon tape!

TOOLS



Barrel Pass Ring for removing piston from barrel



Piston Wrench



Rod Nose Cone for head installation



Head Spanner Wrench Round Hole Style

Cylinder Assembly - ORFS Tubes (Jan 2020 - Present)

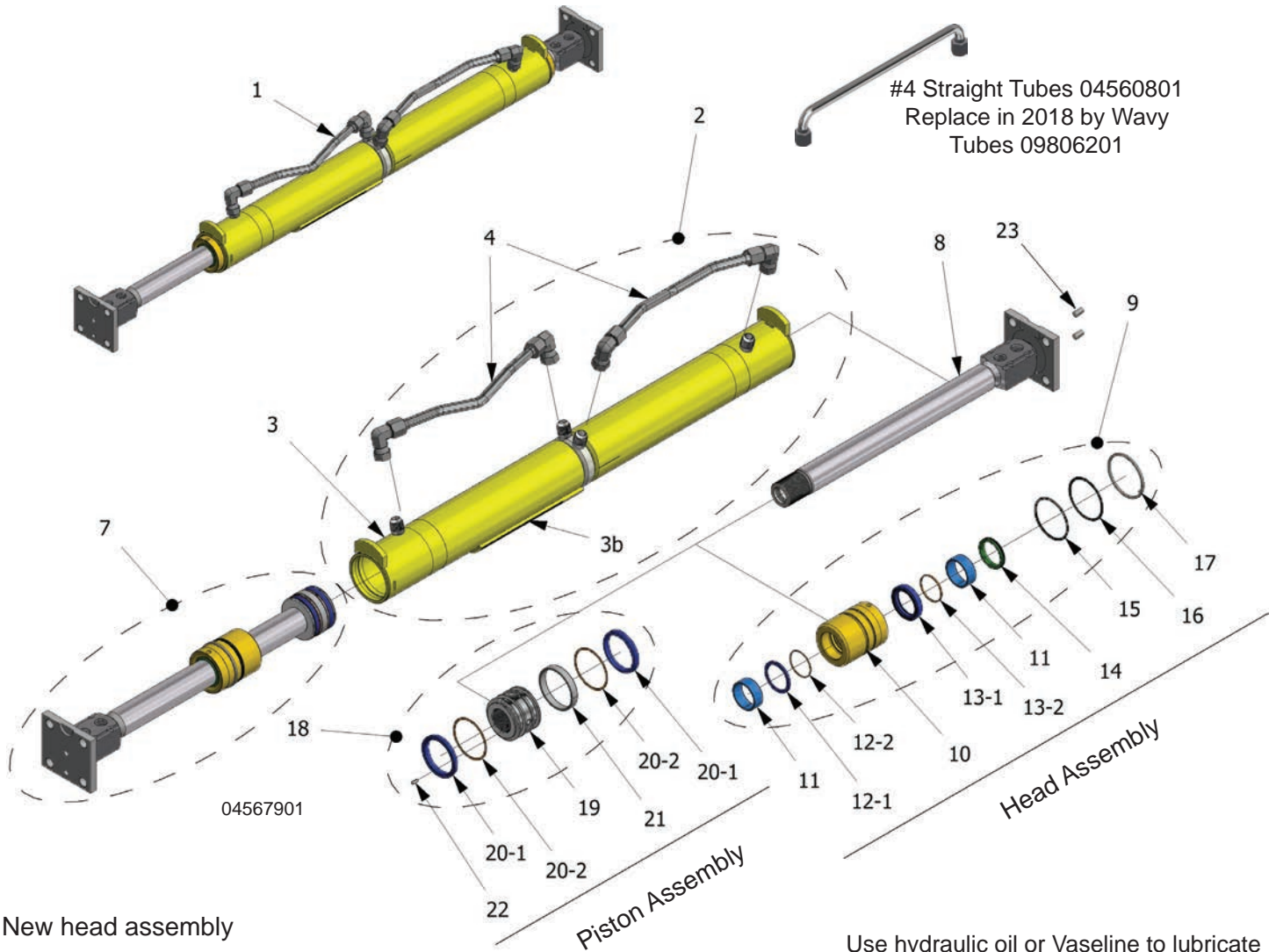
ID#	Qty	3.0" Part #	3.5" Part #	4.0" Part #	Description
1	-	10423501	10423601	10628601	Cylinder Assembly (Includes items 2-23)
2	(1)	10423301	10423401	10628501	Barrel Assembly - ORFS (Includes items 3-6)
3	1	10423101	10423201	10628401	Barrel Weld Assembly Cylinder (Includes item 3b)
3b	1	02552301	03027101	-	Threaded Pad Weld On
4	2	10604901		10634301	Cylinder Cross-Over Tube Assembly - ORFS
5	4	84694048			10 C6LO-S 10-10 MORFS X FORFS Swivel 90 EL - ORFS
6	8	85766640			#10 Trap Seal, Parker 10367
7	(2)	02553201	02553301	10053201	Rod w/Piston & Head Assemblies (Includes items 8-22)
8	1	01791201		09612001	Rod 45 mm w/Block & Plate
9	(1)	03808501	03811001	06321201	Head Assembly (Includes items 10-17)
10	1	06372501	06375501	06811301	Head Cylinder
11	2	84401205			PTFE Wear Ring Rod Cylinder 45 mm (Blue)
12-1	1	84400201			Buffer Seal Rod Cylinder 45 mm
12-2	1	w/Seal			Buffer Seal Back-up Rod Cylinder 45 mm
13-1	1	84354200			Seal Rod Cylinder 45 mm
13-2	1	w/Seal			Seal Backup Rod Cylinder 45 mm
14	1	84426605			Wiper Rod 45 mm
15	1	84384200	84384600	84385000	O-Ring (232, 236, 240) BUNA 90
16	1	84392400	84392800	84393200	O-Ring Backup (232, 236, 240) BUNA 90
17	1	03812102	03812104	03812106	Lock Wire Square
18	(1)	03808101	03810901	06321101	Piston Assembly (Includes items 19-22)
19	1	02564801	02553601	01334402	Piston Cylinder
20-1	2	84353600	84353800	84352500	Seal Piston Cylinder
20-2	2	w/Seal	w/Seal	w/Seal	Seal Backup Piston Cylinder
21	1	84404600	84404800	84405400	Wear Ring Piston
22	1	86650400			Pin Drive Lock 3/16" x 1/2"
23	4	86654310			Alignment Locating Dowel Pin 10 mm x 20 mm
-(2)	-	06528901	06529001	10172801	Seal Kit Cylinder Metric * (Includes items 6, 11-17 & 20-22)
TOOLS					
-	-	03572201	03572202	03572203	Barrel Pass Ring
-	-	06504301			Head Spanner Wrench - for Round Hole Style Head
-	-	04190201			Rod Nose Cone (45 mm = 1.772")
-	-	06354201	05808301	-	Piston Wrench

⁽²⁾ Seal kit includes all necessary items required to rebuild the entire cylinder. It does not include items such as the Barrel, Tubes & Fittings, Rod, Head or Piston.

Cylinder Assembly - 3.0" & 3.5" (2009 - Jan 2020)

Drive serial number must be provided to determine actual part numbers.

Obsolete Design



New head assembly
 (2) blue wear rings
 Changed from straight to wavy
 cross over tubes

Use hydraulic oil or Vaseline to lubricate
 seals. Do NOT use grease!
 Do NOT use Teflon tape!

TOOLS



Barrel Pass Ring
 for removing piston
 from barrel



Nose cone for
 head installation



Piston Wrench



Spanner Wrench -
 Round Hole Style

Cylinder Assembly - 3.0" & 3.5" (2009 - Jan 2020)

ID#	Qty	3.0" Part #	3.0" Diesel Part #	3.5" Part #	Description
1	-	04567901	04567903	04568001	Cylinder Assembly (Includes items 2-23)
2	(1)	04560901	04560901	04561001	Barrel Assembly (Includes items 3-4)
3	1	04560601		04560701	Barrel Weld Assembly (Includes item 3b)
3b	1	02552301		03027101	Threaded Pad Weld On
4	2	09806201			Cross-Over Tube Assembly - Wavy (Aug 2018-Present)
		04560801			Cross-Over Tube Assembly - Straight (Sept 2001-Aug 2018)
7	(2)	02553201	02553203	02553301	Rod W/Piston & Head Assembly (Includes items 8-22)
8	1	01791201			Rod 45 mm W/Block & Plate
9	(1)	03808501	03808503	03811001	Head Assembly (Includes items 10-17)
10	1	06372501	06372501	06375501	Head - Round Hole Style
11 ⁽¹⁾	2	84401205			PTFE Wear Ring Rod 45 mm (Blue)
12-1	1	84400201			Buffer Seal Rod 45 mm
12-2	1	w/seal			Buffer Seal Back-up Rod 45 mm
13-1	1	84354200			Seal Rod 45 mm
13-2	1	w/seal			Seal Backup Rod 45 mm
14	1	84426605			Wiper Rod 45 mm
15	1	84384200	84384210	84384600	O-Ring Buna 90 (232, 232 Viton, 236)
16	1	84392400	84392410	84392800	O-Ring Backup Buna 90 (8-232, 232 Viton, 8-236)
17	1	03812102		03812104	Lock Wire Square
18	(1)	03808101		03810901	Piston Assembly (Includes items 19-22)
19	1	02564801		02553601	Piston
20-1	2	84353600		84353800	Seal Piston
20-2	2	w/seal		w/seal	Seal Backup Piston
21	1	84404600		84404800	Wear Ring Piston
22	1	86650400			Pin Drive Lock 3/16" x 1/2"
23	4	86654310			Alignment Locating Dowel Pin 10 mm x 20 mm
-	-	-			Cylinder Seal Kits (Include items 11-17 & 20-22)
-(2)	-	06528901	-	-	Seal Kit 3.0" Rod 45 mm Metric (1993 - *Serial #0901022 1/05/2009)
-(2)	-	-	-	06529001	Seal Kit 3.5" Rod 45 mm Metric (1993 - *Serial #0901032 1/14/2009)

TOOLS

-	-	03572201		03572202	Barrel Pass Ring
-	-	06504301			Head Spanner Wrench - for Round Hole Style Head (post 2009)
-	-	04190201			Rod Nose Cone (45 mm = 1.772")
-	-	06354201		05808301	Piston Wrench

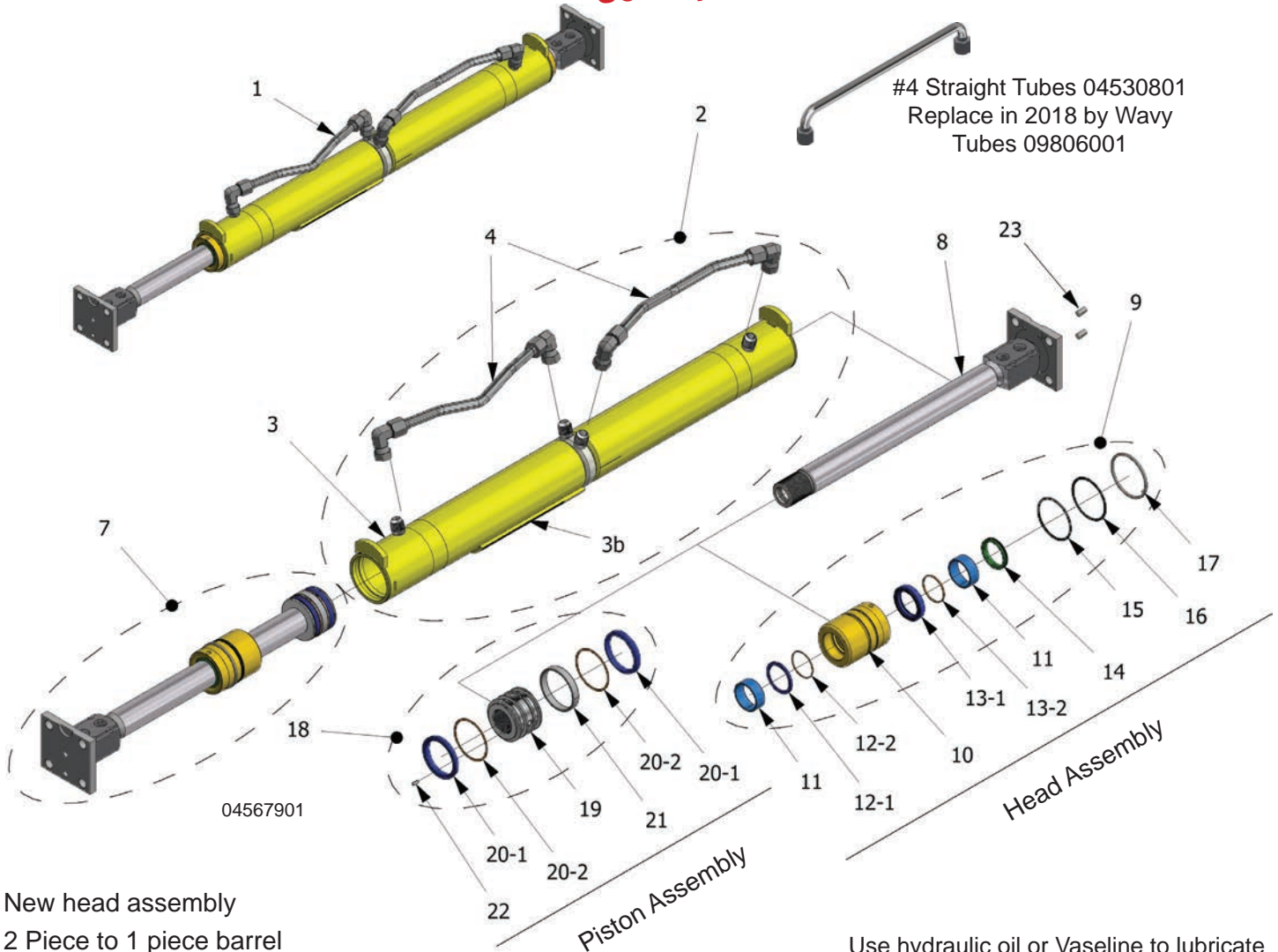
⁽¹⁾ Previous versions of the piston used (1) blue wear ring 84401205 and (1) gray wear ring 84401105 which has now been replaced with a second blue wear ring.

⁽²⁾ Seal kit includes all necessary items required to rebuild the entire cylinder. It does not include items such as the Barrel, Tubes & Fittings, Rod, Head or Piston.

Cylinder Assembly - 4" (May 2008 - Jan 2020)

Drive serial number must be provided to determine actual part numbers.

Obsolete Design
Some parts no longer available



New head assembly
2 Piece to 1 piece barrel
(2) blue wear rings
Changed from straight to wavy
cross over tubes

Use hydraulic oil or Vaseline to lubricate
seals. Do NOT use grease!
Do NOT use Teflon tape!

TOOLS



Barrel Pass Ring
for removing piston
from barrel



Nose cone for
head installation



Piston Wrench



Spanner Wrench -
Round Hole Style

Cylinder Assembly - 4" (May 2008 - Jan 2020)

ID#	Qty	5/08 - Part #	1/16 - Part #	11/17 - Part #	Description
-	-	06122901	06122902	09611801	Cylinder Assembly (Includes items 2-23) 02 w/Tab Jan '16
2	(1)	06123001	-	09612201	Barrel Assembly (Includes items 3-4)
3	1	06123101	-	-	Barrel Weld Assembly - No Actuator Tab
		-	06123102	-	Barrel Weld Assembly w/Tab Jan '16
		-	-	09612501	Barrel Weld Assembly - One Piece Barrel Nov '17
4	2	-	-	09806001	Cross-Over Tube Assembly - Wavy (Aug 2018-Present)
		04530801	-	-	Cross-Over Tube Assembly - Straight (Sept 2001-Aug 2018)
7	(2)	06321301	10053201		Rod W/Piston & Head Assembly (Includes items 8-22) July 2018
8	1	01791201	09612001		Rod 45 mm W/Block & Plate
9	(1)		06321201		Head Assembly (Includes items 10-17)
10	1		06811301		Head - Slotted Hole Style
11	2		84401205		Wear Ring Rod 45 mm
12-1	1		84400201		Buffer Seal Rod 45 mm
12-2	1		w/seal		Buffer Seal Back-up Rod 45 mm
13-1	1		84354200		Seal Rod 45 mm
13-2	1		w/seal		Seal Backup Rod 45 mm
14	1		84426605		Wiper Rod 45 mm
15	1		84385000		O-Ring Buna 90 (232, 236, 240)
16	1		84393200		O-Ring Backup Buna 90 (8-232, 8-236, 240)
17	1		03812106		Lock Wire Square
18	(1)		06321101		Piston Assembly (Includes items 19-22)
19	1		01334402		Piston
20-1	2		84352500		Seal Piston
20-2	2		w/seal		Seal Backup Piston
21	1		84405400		Wear Ring Piston
22	1		86650400		Pin Drive Lock 3/16" x 1/2"
23	4		86654310		Alignment Locating Dowel Pin 10 mm x 20 mm
-	-		-		Cylinder Seal Kits (Include items 11-17 & 20-22)
-(2)	-	04737101		10172801	Seal Kit 4.0" Rod 45 mm Metric (1993 - Present)

TOOLS

-	-		03572203		Barrel Pass Ring
-	-		04592701		Head Spanner Wrench - for Slotted Style Head (pre 2009)
-	-		04190201		Rod Nose Cone (45 mm = 1.772")
-	-		-		Piston Wrench

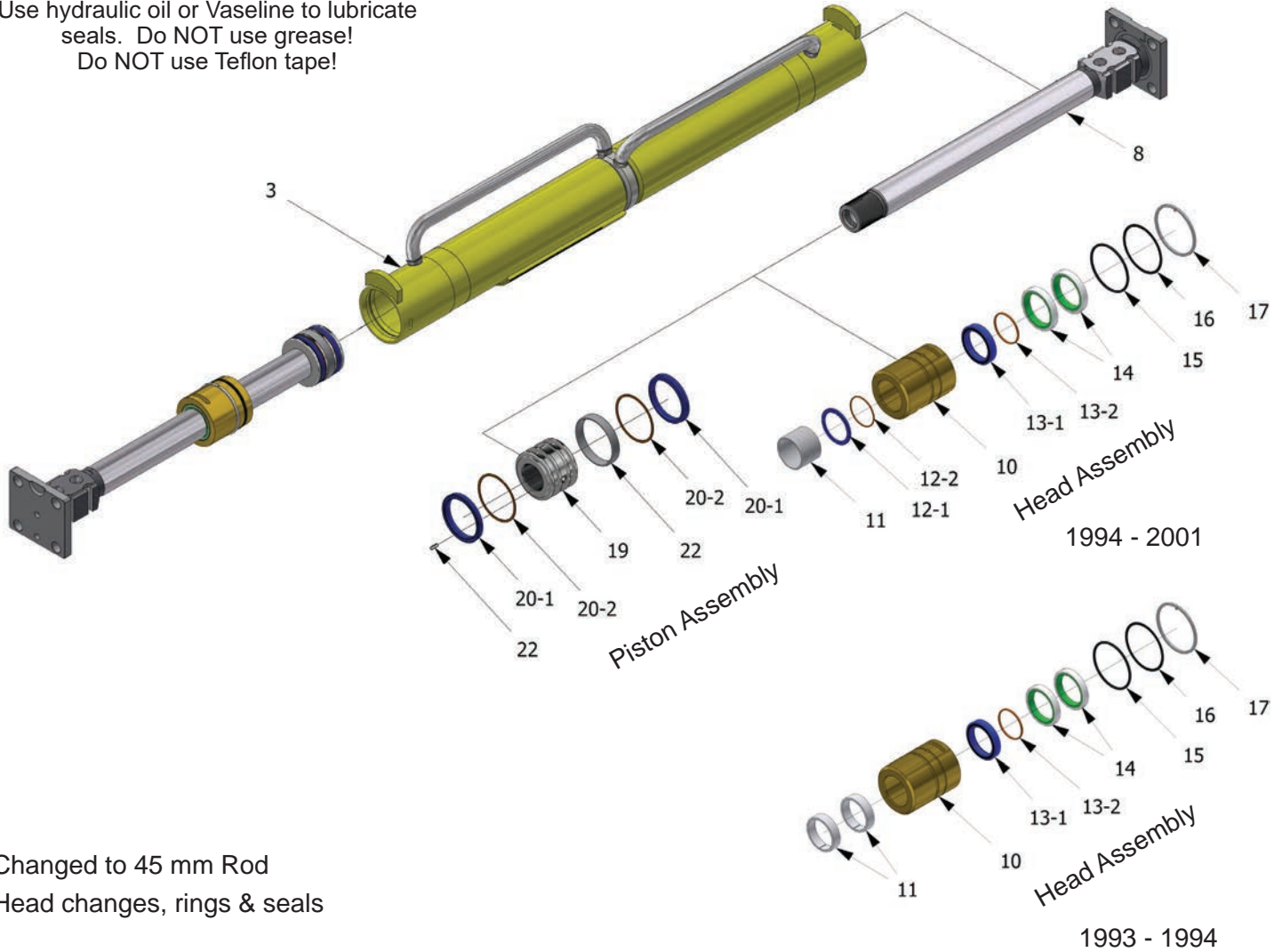
(2) Seal kit includes all necessary items required to rebuild the entire cylinder. It does not include items such as the Barrel, Tubes & Fittings, Rod, Head or Piston.

Cylinder Assembly - 45 mm Rod & Welded Tubes (1993 - Sept 2001)

Drive serial number must be provided to determine actual part numbers.

Obsolete Design
Some parts no longer available

Use hydraulic oil or Vaseline to lubricate seals. Do NOT use grease!
 Do NOT use Teflon tape!



Changed to 45 mm Rod
 Head changes, rings & seals

TOOLS



Barrel Pass Ring
 for removing piston
 from barrel



Nose cone for
 head installation



Piston Wrench



Spanner Wrench -
 Slotted Hole Style

Cylinder Assembly - 45 mm Rod & Welded Tubes (1993 - Sept 2001)

ID#	Qty	3.0" Part #	3.5" Part #	4.0" Part #	Description
-	-	02553901	02553902	03808301	Cylinder Assembly Welded Tubes (Includes items 2-22)
3	(1)	02552901	02553001	03808201	Barrel Assembly (Includes items 3-4)
	1	02552301	03027101	03416901	Threaded Pad Weld On
	2	03423901		03812501	Cross-Over Tube Assembly - (straight, welded)
-	(2)	02553201	02553301	-	Rod W/Piston & Head Assembly (Includes items 8-22)
8	1	01791201			Rod 45 mm W/Block & Plate
10 ⁽¹⁾	1	01786201	02553501	03969301	Head - Slotted Hole Style
11 ⁽¹⁾	1	84401200			Wear Ring Rod 45 mm (1994-2009)
	2	84403400			Wear Ring Rod 45 mm (1993-1994)
12-1 ⁽¹⁾	1	84400201			Buffer Seal Rod 45 mm (1994-2009)
12-2 ⁽¹⁾	1	w/seal			Buffer Seal Back-up Rod 45 mm (1994-2009)
13-1	1	84354200			Seal Rod 45 mm
13-2	1	w/seal			Seal Backup Rod 45 mm
14	1	84426600			Wiper Rod 45 mm canned
15	1	84384200	84384600	84385000	O-Ring Buna 90 (232, 236, 240)
16	1	84392400	84392800	84393200	O-Ring Backup Buna 90 (8-232, 8-236, 240)
17	1	03812102	03812104	03812106	Lock Wire Square
19	1	02564801	02553601	01334402	Piston
20-1	2	84353600	84353800	84352500	Seal Piston
20-2	2	w/seal	w/seal	w/seal	Seal Backup Piston
21	1	84404600	84404800	84405400	Wear Ring Piston
22	1	86650400			Pin Drive Lock 3/16" x 1/2"
-	-	-	-	-	Cylinder Seal Kits (Include items 11-17 & 20-22)
-(2)	-	03877501	-	-	Seal Kit 3.0" Rod 45 mm Metric (1993 - *Serial #0901022 1/05/2009)
-(2)	-	-	03877601	-	Seal Kit 3.5" Rod 45 mm Metric (1993 - *Serial #0901032 1/14/2009)
-(2)	-	-	-	04737101	Seal Kit 4.0" Rod 45 mm Metric (1993 - 2009)

Obsolete Design
Some parts no longer available

TOOLS

-	-	03572201	03572202	03572203	Barrel Pass Ring
-	-	04592701			Head Spanner Wrench - for Slotted Style Head (pre 2009)
-	-	04190201			Rod Nose Cone (45 mm = 1.772")
-	-	06354201	05808301	-	Piston Wrench

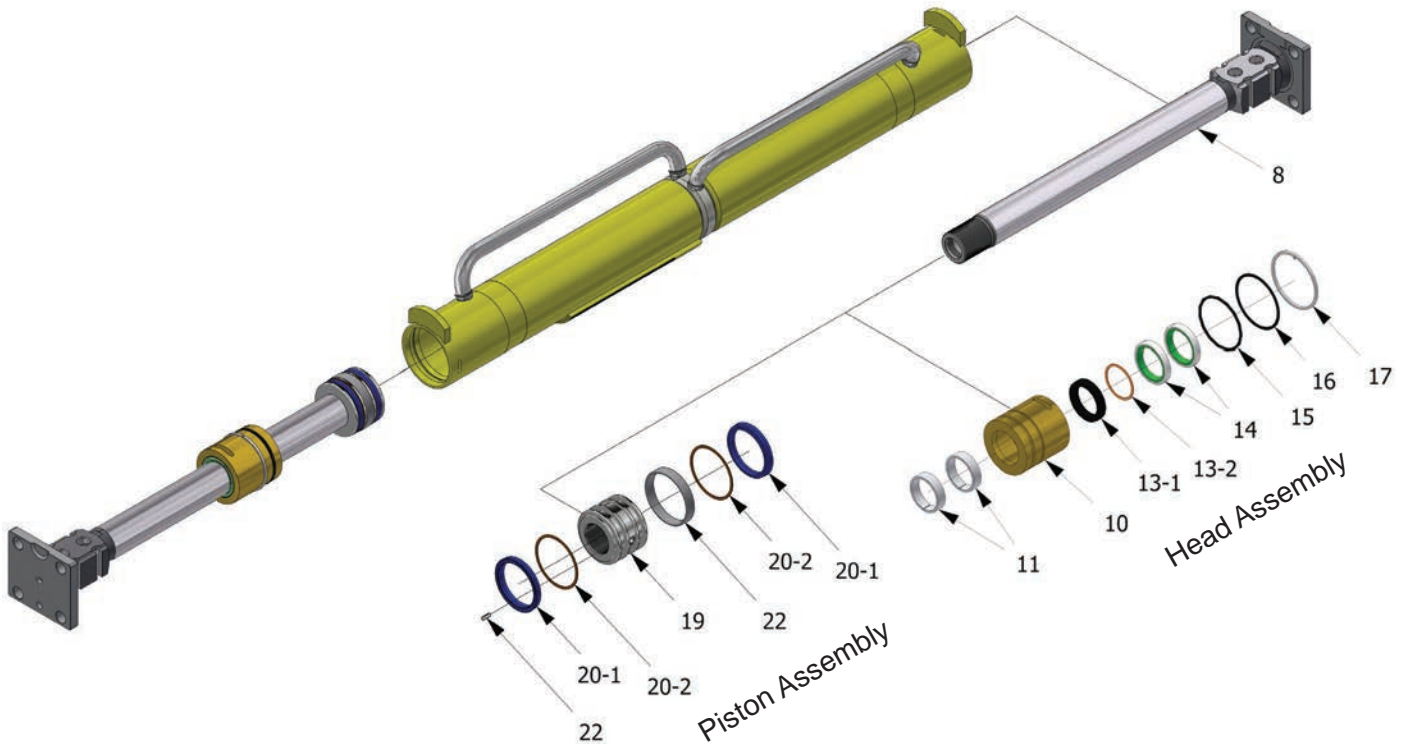
⁽¹⁾ Internal rings and seals differ due to design change.

⁽²⁾ Seal kit includes all necessary items required to rebuild the entire cylinder. It does not include items such as the Barrel, Tubes & Fittings, Rod, Head or Piston.

Cylinder Assembly - SAE Rod 1.727" (1985 - Dec 1993)

Drive serial number must be provided to determine actual part numbers.

Obsolete Design
Some parts no longer available



Use hydraulic oil or Vaseline to lubricate seals. Do NOT use grease!
 Do NOT use Teflon tape!

TOOLS



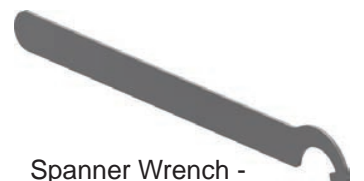
Barrel Pass Ring
for removing piston
from barrel



Nose cone for
head installation



Piston Wrench



Spanner Wrench -
Slotted Hole Style

Cylinder Assembly - SAE Rod 1.727" (1985 - Dec 1993)

ID#	Qty	3.0" Part #	3.5" Part #	Description
8	1	01789801		Rod 1.727" Dia w/Block & Plate Obsolete
10	1	01270401	01270501	Head - Slotted Hole Style Obsolete
11	2	84403400		Wear Ring W125-2000-500 for 1.727" Rod Dia
13-1	1	84353400		Seal Rod P-25001750-375 1-3/4X2-1/4X3/8
13-2	1	w/seal		Seal Backup Rod
14	1	84426400		Wiper Rod J1725 SAE Canned
15	1	84384200	84384600	O-Ring Buna 90 (232, 236)
16	1	84392400	84392800	O-Ring Backup Buna 90 (8-232, 8-236)
17	1	03812102	03812104	Lock Wire Square
19	1	01325701	01337401	Piston
20-1	2	84353600	84353800	Seal Piston
20-2	2	w/seal	w/seal	Seal Backup Piston
21	1	84404600	84404800	Wear Ring Piston
22	1	86650400		Pin Drive Lock 3/16" x 1/2"
-	-	-	-	Cylinder Seal Kits (Include items 11-17 & 20-22)
-(2)	-	03877502	-	Seal Kit 3.0" 1.727" Rod SAE (1985 - 1993)
-(2)	-	-	03877602	Seal Kit 3.5" 1.727" Rod SAE (1985 - 1993)

Obsolete Design
 Some parts no longer available

TOOLS

-	-	03572201	03572202	Barrel Pass Ring
-	-	04592701		Head Spanner Wrench - for Slotted Style Head (pre 2009)
-	-	03528001		Rod Nose Cone SAE 1.727"
-	-	06354201	05808301	Piston Wrench

⁽²⁾ Seal kit includes all necessary items required to rebuild the entire cylinder. It does not include items such as the Barrel, Tubes & Fittings, Rod, Head or Piston.

Check Valve Assembly (Jan 1998 - Present)

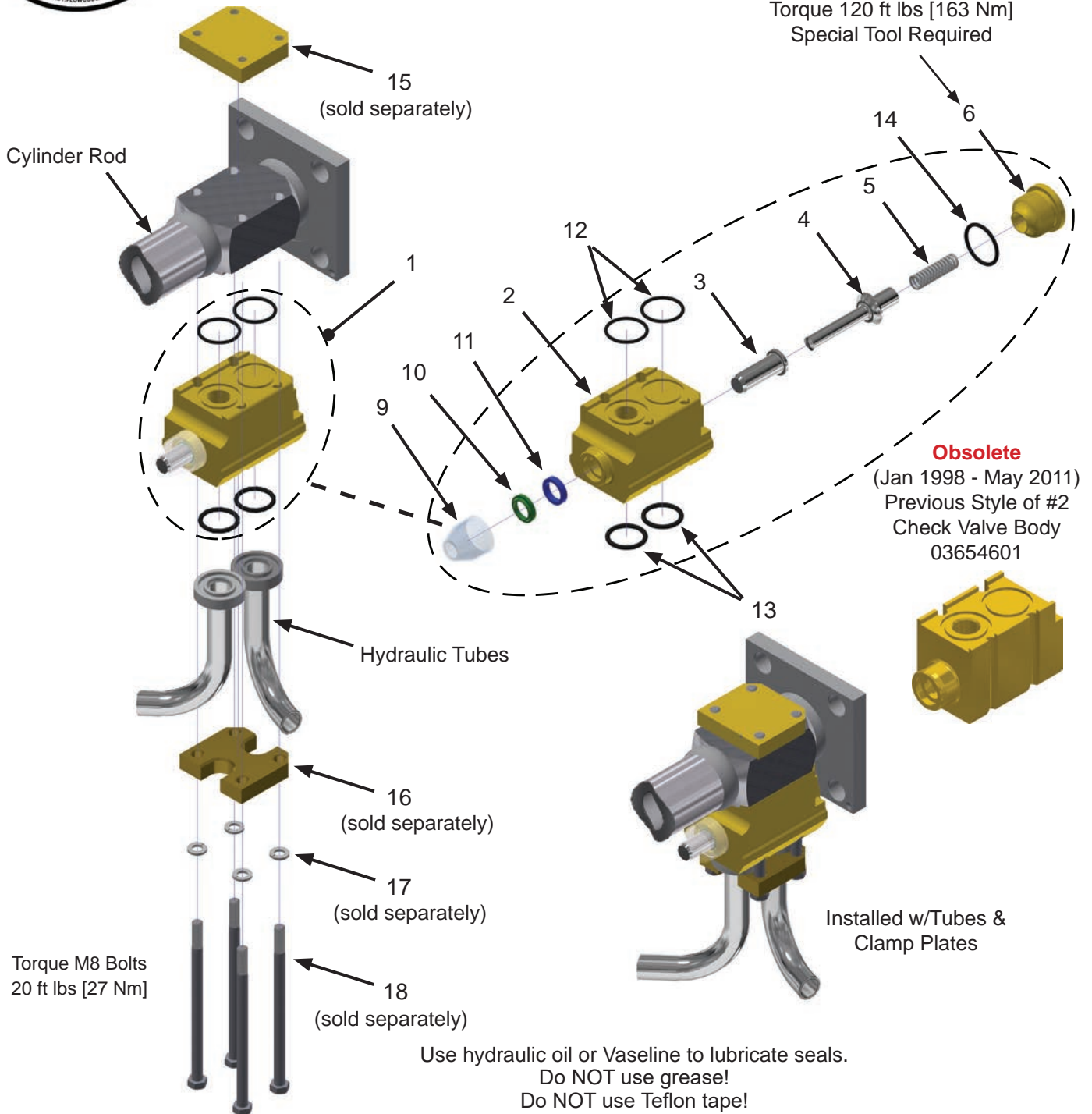


Check Valve Replacement Video Link

Stob Adapters
 03054101 -12 JIC
 03673201 -16 JIC x -12 O-ring



Torque 120 ft lbs [163 Nm]
 Special Tool Required



Check Valve Assembly (Jan 1998 - Present)

ID#	Qty	Part #	Description
1	-	03709401	External Check Valve Assembly (Includes items 2-6, 9-14)
2	1	07283201	Body Check Valve AL External
3	1	01771101	Plunger Check Valve External
4	1	01766901	Rod Check Valve External
5	1	84453400	Spring Check Valve External Large #B-18273
6	1	03654501	End Cap Check Valve External Threaded
-	-	03878101	External Check Valve Seal Kit (Includes items 9-14)
9	1	06613801	Dust Boot Check Valve External
10	1	84426800	Plunger Wiper Check Valve External
11	1	84352200	Seal Rod 5/8" Check Valve External
12	2	84377800	122 O-Ring Buna 90
13	2	84381600	214 O-Ring Buna 90
14	1	84387800	916 O-Ring Buna 90

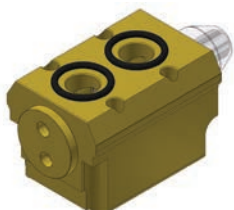
Check Valve Related Components

ID#	Qty	Standard Part #	Metric Part #	Description
15	1	02513001	02513002	Top Clamp Check Valve External
16	1	02513101		Lower Clamp Check Valve External
17	4	86553000		Washer Lock 5/16" Zinc
18	4	86434500	87007550	Bolt Socket 5/16" x 5-1/2" or M8 x 140mm (with Check Valve)
	4	86431000	87006451	Bolt Hex ZN (5/16"-18 X 3-1/4", 8mmX90mm) (Without Check Valve)

Tools

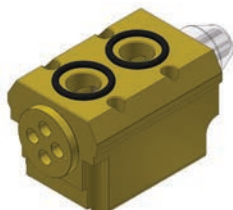
ID#	Qty	Part #	Description
-	-	08248301	Check Valve 4 Prong Raised End Cap Tool (Nov '13 - Present)
-	-	08248201	Check Valve 2 Prong Raised End Cap Tool (Jan '98 - Nov '13)
-	-	09031801	Check Valve 2 Prong Flush End Cap Tool (Dec '93 - Jan '98)

03709401
(Jan '98 - Nov '13)



2 Hole
Raised Cap

03709401
(Nov '13 - Present)



4 Hole
Raised Cap

28



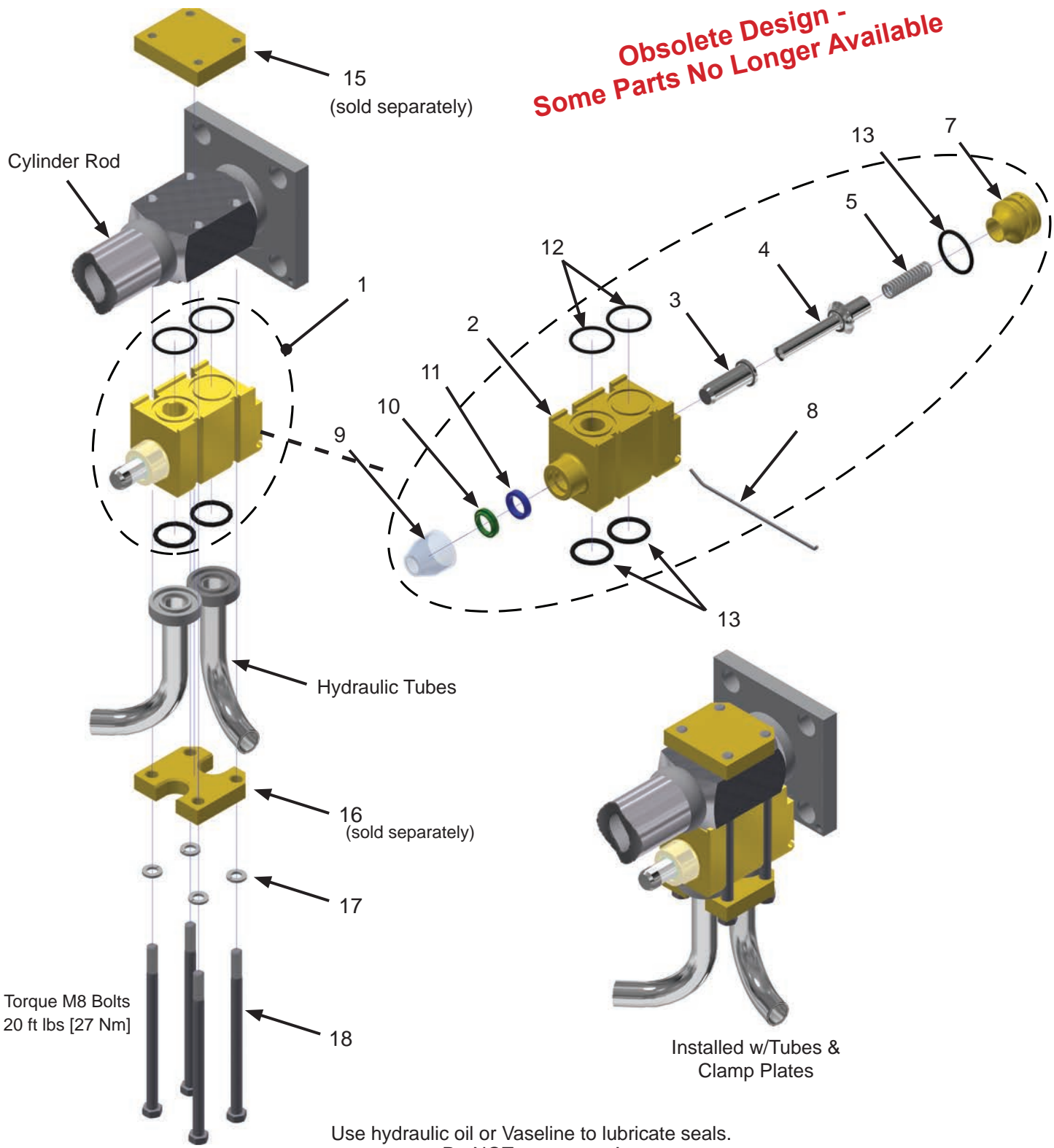
2 Prong
Raised Cap



4 Prong
Raised Cap

Check Valve Assembly (Dec 1993 - Jan 1998)

**Obsolete Design -
Some Parts No Longer Available**



Use hydraulic oil or Vaseline to lubricate seals.
Do NOT use grease!
Do NOT use Teflon tape!

Check Valve Assembly (Dec 1993 - Jan 1998)

ID#	Qty	Part #	Description
1	-	02551601	External Check Valve Assembly (Includes items 2-5 & 7-13)
2	1	01248601	Body Check Valve AL External
3	1	01771101	Plunger Check Valve External
4	1	01766901	Rod Check Valve External
5	1	84453400	Spring Check Valve External Large #B-18273
7	1	01268501	End Cap Check Valve External
8	1	03889301	Lock Wire .093 DIA x 4-5/8" LG 303 SS
-	-	03878101	External Check Valve Seal Kit (Includes items 9-13)
9	1	06613801	Dust Boot Check Valve External
10	1	84426800	Plunger Wiper Check Valve External
11	1	84352200	Seal Rod 5/8" Check Valve External
12	2	84377800	122 O-Ring Buna 90
13	3	84381600	214 O-Ring Buna 90

Obsolete Design -
 Some Parts No Longer Available

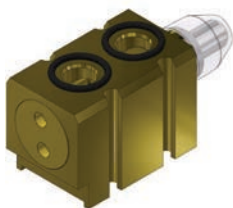
Check Valve Related Components

ID#	Qty	SAE Part #	Metric Part #	Description
15	1	02513001	02513002	Top Clamp Check Valve External
16	1	02513101		Lower Clamp Check Valve External
17	4	86553000		Washer Lock 5/16" Zinc
18	4	86434500	87007550	Bolt Socket 5/16" x 5-1/2" or M8 x 140mm (with Check Valve)
	4	86431000	87006451	Bolt Hex ZN (5/16"-18 X 3-1/4", 8mmX90mm) (Without Check Valve)

Tools

ID#	Qty	Part #	Description
-	-	08248301	Check Valve 4 Prong Raised End Cap Tool (Nov '13 - Present)
-	-	08248201	Check Valve 2 Prong Raised End Cap Tool (Jan '98 - Nov '13)
-	-	09031801	Check Valve 2 Prong Flush End Cap Tool (Dec '93 - Jan '98)

02551601 **Obsolete**
(Dec '93 - Jan '98)

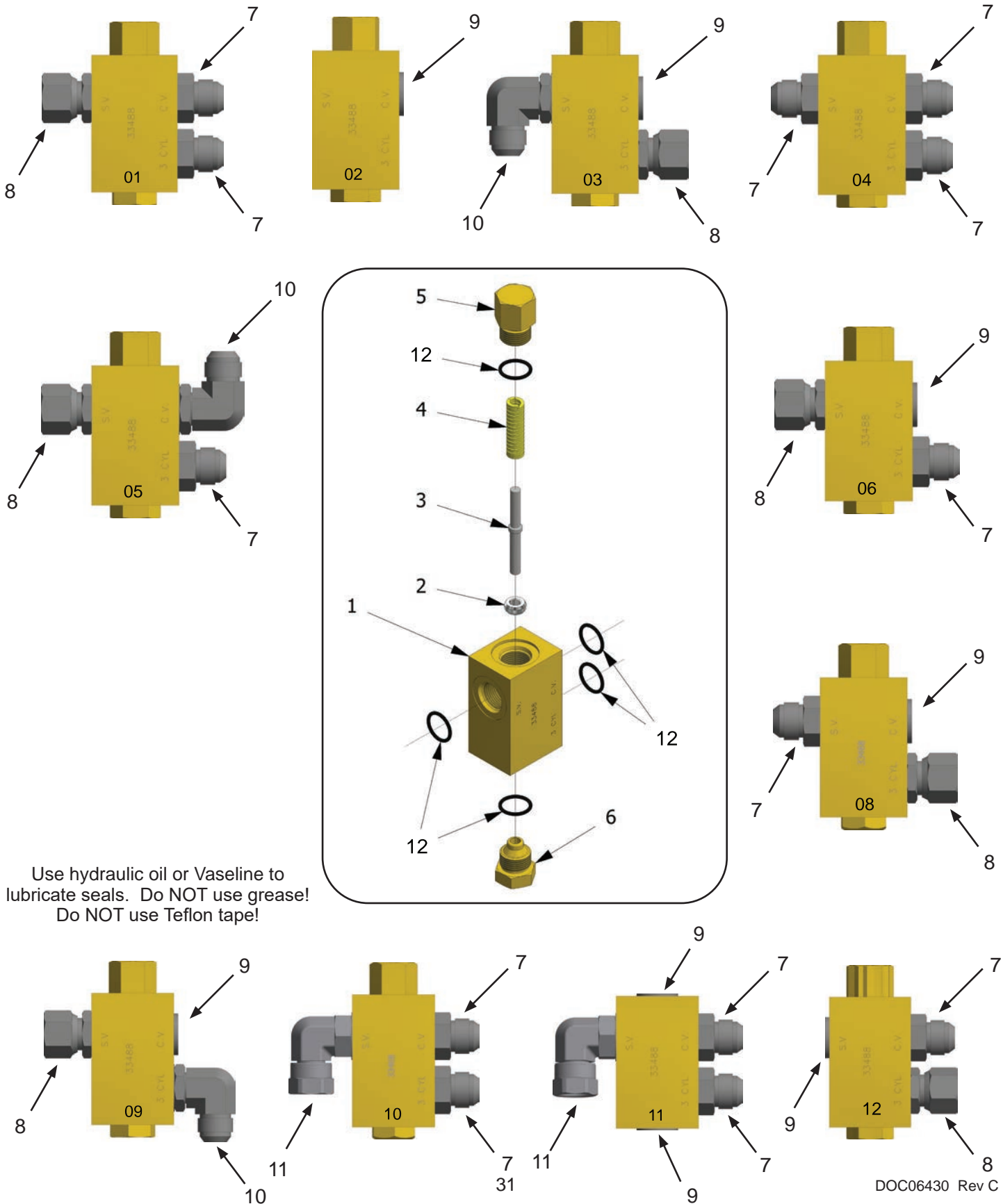


2 Hole
Flush Cap



2 Prong
Flush Cap

One-Way Restrictor Valve Assembly

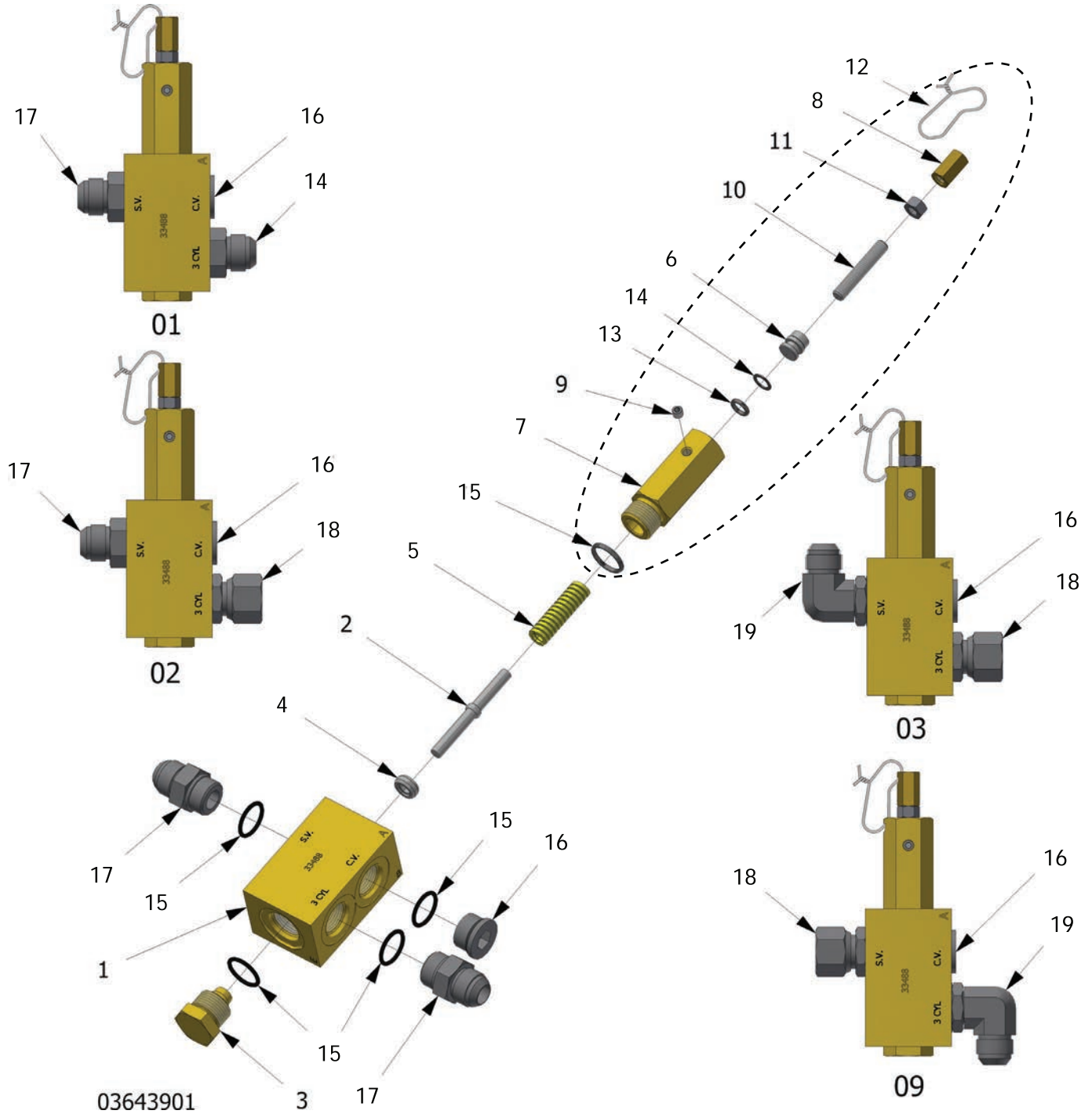


Use hydraulic oil or Vaseline to lubricate seals. Do NOT use grease!
Do NOT use Teflon tape!

Restrictor Valve Assembly													
ID#	Quantities										Part #	Description	
-	01	02	03	04	05	06	08	09	10	11	12	033487xx	One-Way Restrictor Valve Assembly (Includes all items listed below)
1	1	1	1	1	1	1	1	1	1	1	1	03348801	Restrictor Valve Body KRFII
2	1	1	1	1	1	1	1	1	1	-	1	01951901	Collar Restrictor Internal CKV KRFII/WFII 80&90MM Manifold
3	1	1	1	1	1	1	1	1	1	-	1	03348901	Restrictor Rod for One-Way Restrictor KRFII
4	1	1	1	1	1	1	1	1	1	-	1	84455400	Spring 9-1010-36 .625 X 2.5 Yellow Extra Heavy Load
5	1	1	1	1	1	1	1	1	1	-	1	03349001	Spring End Cap LG for One-Way Restrictor Rod KRFII
6	1	1	1	1	1	1	1	1	1	-	1	03349101	End Cap Restrictor Valve KRFII
7	2	-	-	3	1	1	1	1	2	2	1	84685000	12 F5OX-S Straight Thread Connector MJIC X M O-Ring (6400-12-12)
8	1	-	1	-	1	1	1	1	-	-	1	84686100	12 F65OX-S Straight Thread M O-Ring X FJIC (6402-12-12-O)
9	-	1	1	-	-	1	1	1	-	2	1	84687700	12 HP5ON-S Hollow Hex Plug M O-Ring Hex Socket (6408-H12-O)
10	-	-	1	-	-	1	-	-	-	-	-	84691500	12 C5OX-S Straight Thread Elbow MJIC X ADJ O-Ring (6801-12-12)
11	-	-	-	-	-	-	-	-	1	1	-	84692990	12 AOEX6-S Swivel Elbow (6809-12-12-NOW)
12	5	3	5	5	5	5	5	5	5	5	5	84387400	O-Ring 912 Buna 90
-	-	-	-	-	-	-	-	-	-	-	-	06832201	Restrictor Valve Seal Kit for (Includes item 12)

Adjustable Restrictor Valve Assembly

Oil flow from port 3 CYL to port C.V. or port S.V. is restricted.
 Oil flow from port S.V. to port C.V. or port 3 CYL is free flow.
 Oil flow from port C.V. to port S.V. or port 3 CYL is free flow.



Use hydraulic oil or Vaseline to lubricate seals.
 Do NOT use grease!
 Do NOT use Teflon tape!

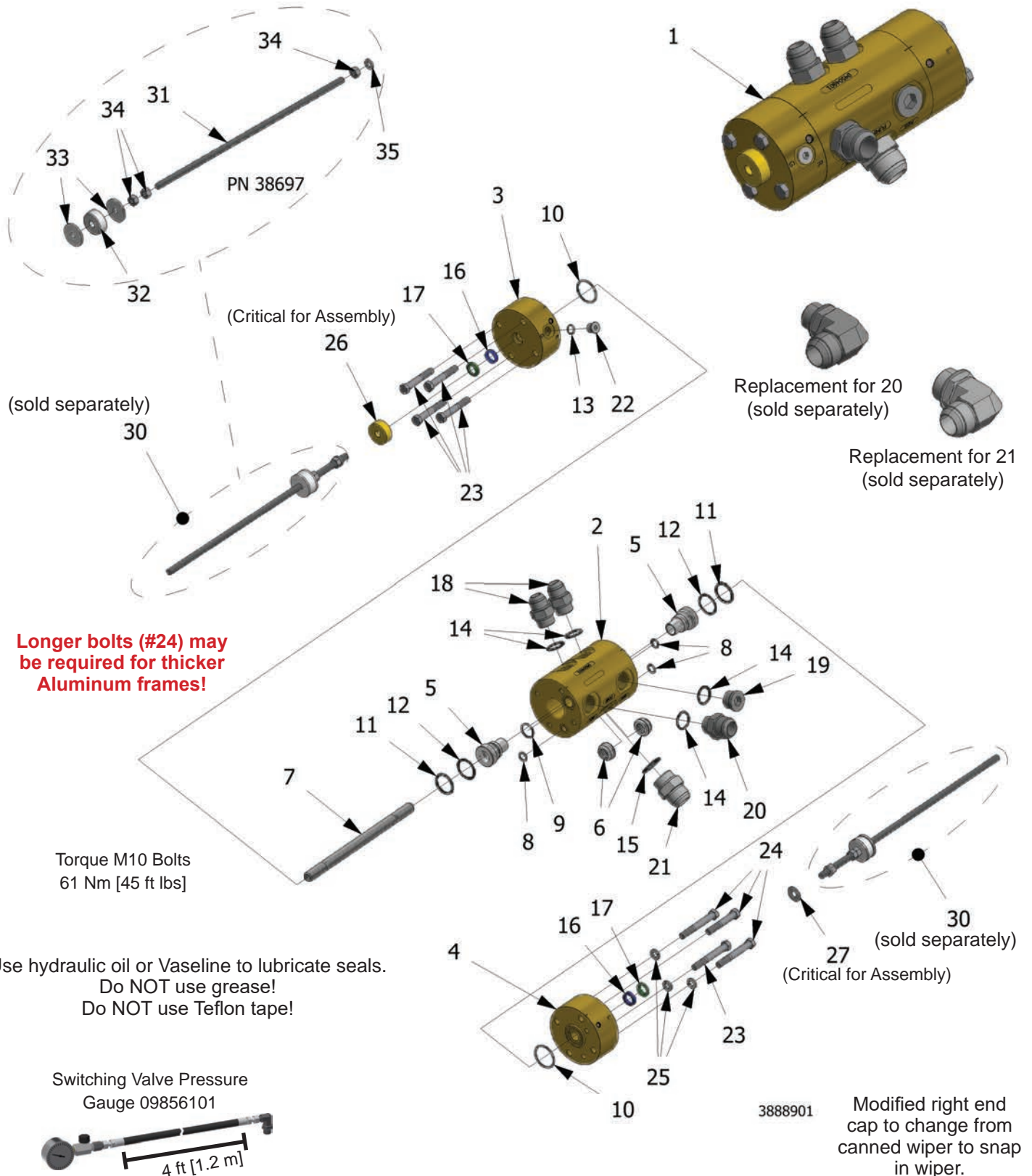
Adjustable Restrictor Valve Assembly

ID#	Qty	Qty	Qty	Qty	Part #	Description
-	01	02	03	09	036439xx	Adjustable Restrictor Valve Assembly (Includes items below)
1	1	1	1	1	03348801	RESTRICTOR VALVE BODY
2	1	1	1	1	03348901	RESTRICTOR GUIDE ROD
3	1	1	1	1	03349101	END CAP, RESTRICTOR ROD GUIDE
4	1	1	1	1	03436901	RESTRICTOR SPOOL
5	1	1	1	1	84455400	DIE SPRING, RECT WIRE, YELLOW, DANLEY 9-1010-36
-	-	-	-	-	06995401	Adjustable Screw Assembly to Fit Restrictor Valve (Includes 6-15)
6	1	1	1	1	03434701	SPRING PLUNGER
7	1	1	1	1	03434801	SPRING CAP FOR ADJUSTMENT SCREW
8	1	1	1	1	03437601	NUT COVER BK KRFII FOR RESTRICTOR VALVE
9	1	1	1	1	84680770	1/16 HHP-S PIPE PLUG SOCKET 1/16", 7/8" TAPER
10	1	1	1	1	86440500	HEX SOCKET SET SCREW, 3/8-16 X 2 1/4
11	1	1	1	1	86628100	JAM NUT HEX GR8 ZN 3/8-16
12	1	1	1	1	80900300	SAFETY WIRE BAR RD SS WIRE .064
13	1	1	1	1	84376200	111 O-RING BUNA 90
14	1	1	1	1	84389000	111 BACK-UP RING BUNA
15	5	5	5	5	84387400	912 O-RING BUNA 90
16	1	1	1	1	84687700	12 HP50N-S HOLLOW HEX PLUG M O-RING
17	2	1	-	-	84685000	12 F50X-S STRAIGHT THREAD CONNECTOR MJIC X M O-Ring
18	-	1	1	1	84686100	12 F65OX-S STRAIGHT THREAD M O-RING X FJIC
19	-	-	1	1	84691500	12 C50X-S STRAIGHT THREAD ELBOW MJIC X ADJ

Restrictor Adjustment Instructions

1. Remove the safety wire #12 that is through the holes in the spring cap #5 and the cover nut #8.
2. Remove the cover nut #8.
3. Loosen the jam nut #11.
4. Remove the pipe plug #9.
5. Install pressure gauges at inlet port 3 CYL and outlet port S.V or port C.V.
6. Adjust the pressure drop when oil is flowing from port 3 CYL to port S.V.
7. Turn the set screw in to increase the pressure drop (flow restriction), turn the set screw out to decrease the pressure drop (flow restriction).
8. After adjusting lock the jam nut #11.
9. Re-install the pipe plug #9.
10. Re-install the cover nut #8.
11. Replace the safety wire #12.

Switching Valve Assembly (November 2014 - Present)



Switching Valve Assembly (November 2014 - Present)

ID#	Qty	Metric Part #	SAE Part #	Diesel SAE Part #	Description
1	-	03888902	03888901	03888911	Switching Valve Assembly (Includes Items 2-27)
2	1	04504602	04504601		Body Switching Valve (not sold separately)
3	1		04504701		End Cap Right Switching Valve (not sold separately)
4	1		04504801		End Cap Left Switching Valve (not sold separately)
5	2		03718901		Poppet Switching Valve
6	2		03718801		Ring Poppet Switching Valve
7	1	01335502	01335501		Control Rod Switching Valve
-(1)	-	03878001		-	Seal Kit Switching Valve (Includes items 8-17)
8	3	84376200	84376201		O-Ring 111 (Buna 90, Viton)
9	1	84377000	84377201		O-Ring 117 (Buna 90, Viton)
10	2	84378200	84378210		O-Ring 126 (Buna 90, Viton)
11	2	84382200	84382210		O-Ring 216 (Buna 90, Viton)
12	2	84391600	84391610		O-Ring Backup 216 (Buna 90, Viton)
13	1	84386800	84386801		O-Ring 906 (Buna 90, Viton)
14	4	84387400	84387410		O-Ring 912 (Buna 90, Viton)
15	1	84387800	84387810		O-Ring 916 (Buna 90, Viton)
16	2		84352200		Seal Rod 5/8"
17	2		84426800		Wiper Snap In 5/8" Rod
18	2		84685000		6400-12-12 Straight
19	1		84687700		6408-12 M O-Ring Socket Plug
20	1		84685300		6400-16-12 Straight Threaded
21	1		84685400		6400-16-16 Straight Threaded
22	1		84687400		6408-6 M O-Ring Socket Plug
23	5	87009000	86441000		Bolt Hex M10 x 65mm [GR5 3/8"x2 1/2"]
24	3	87009511	86442000		Bolt Hex M10 x 75mm [GR5 3/8"x3"]
25	3	87076500	86555000		Washer Lock M10 [3/8"]
26	1		02552101		Cap Limit Switching Valve (Critical for Assembly)
27	1		86553500		Washer Large OD 3/8" (Critical for Assembly)
-	-		84691700		6801-16-12 Straight Threaded Elbow (sold separately)
-	-		84691800		6801-16-16 Straight Threaded Elbow (sold separately)

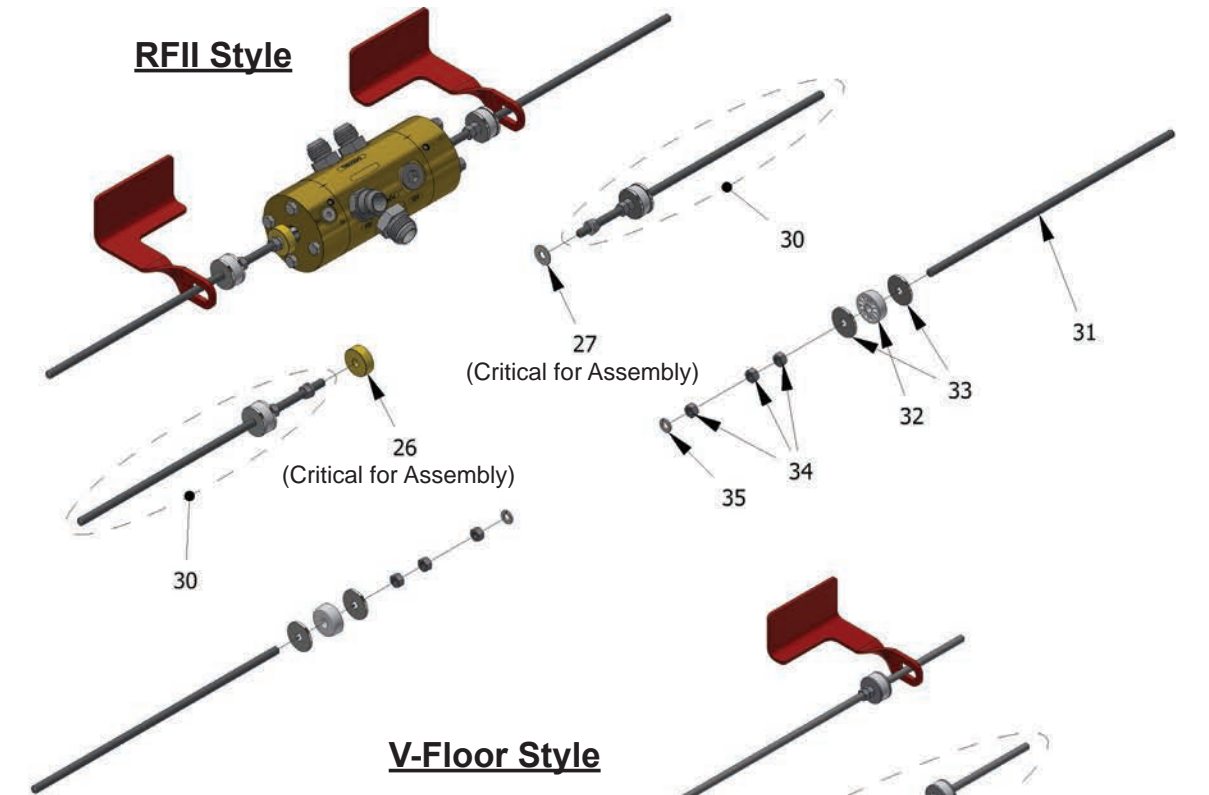


Switching Valve
Replacement &
Adjustment Video Link

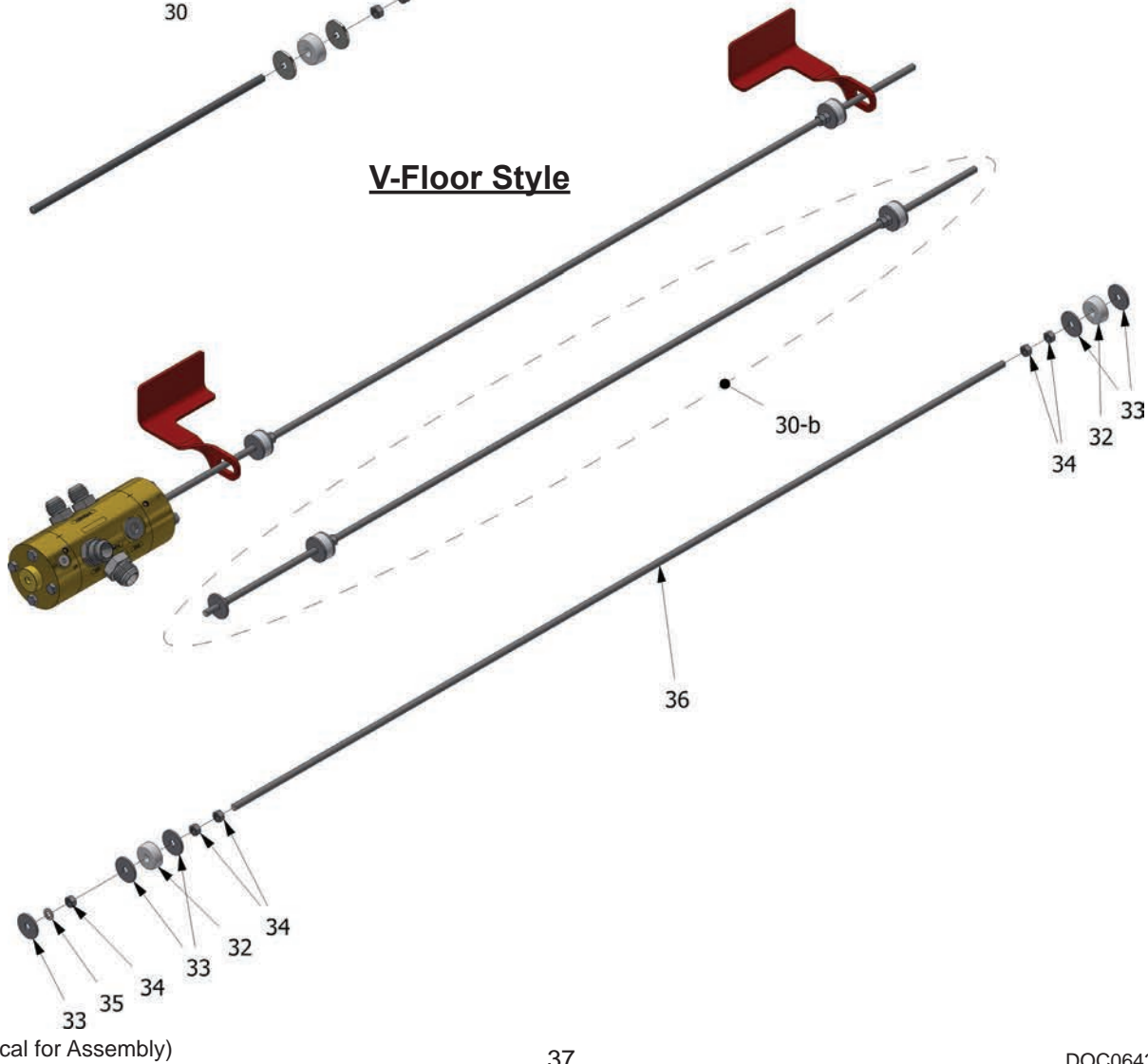
(1) The Switching Valve Seal Kit contains all necessary components to rebuild all Switching Valve models.

Threaded Rod Assembly

RFII Style



V-Floor Style



Threaded Rod Assembly - RFII Style

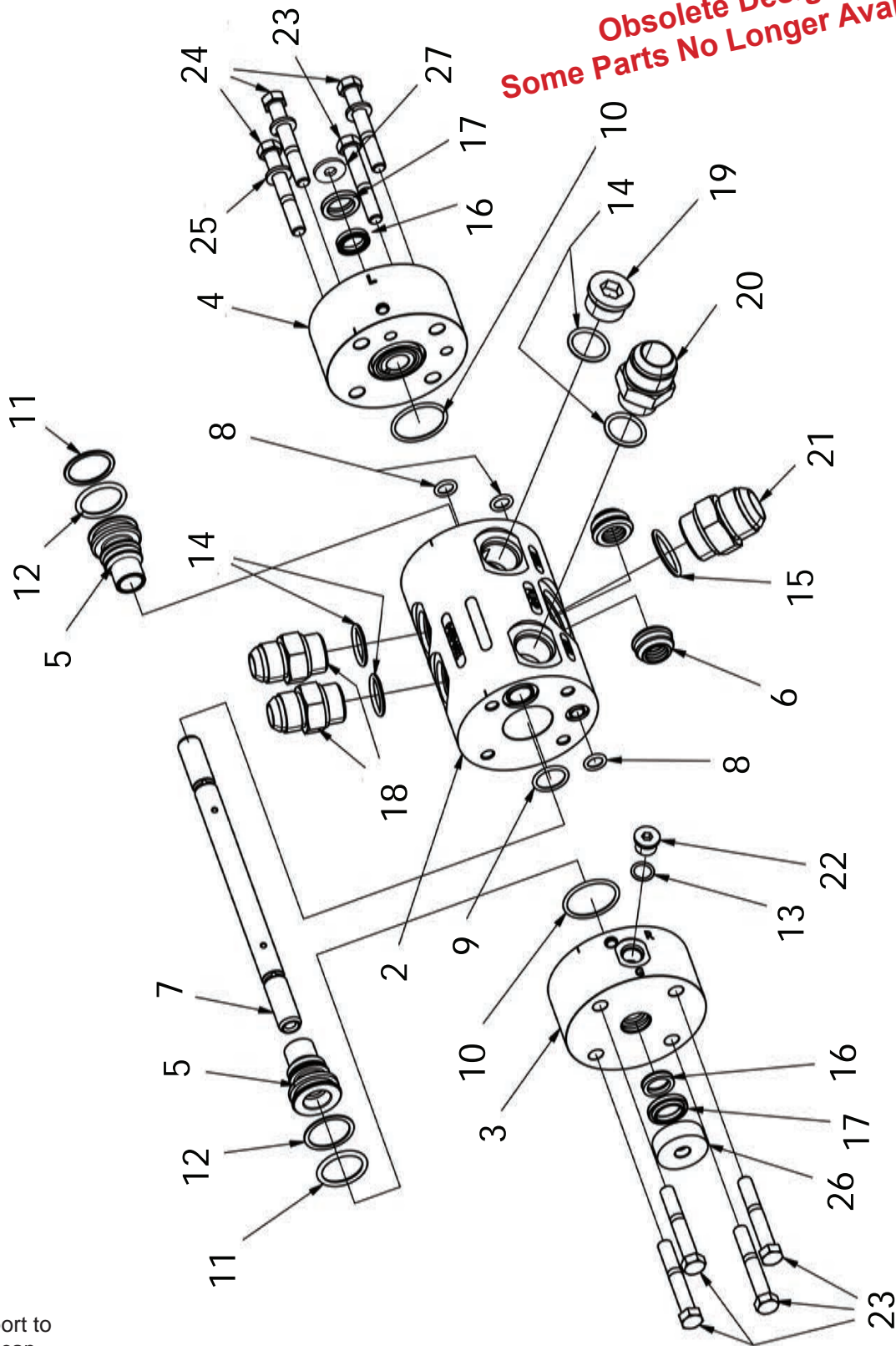
ID#	Qty	Metric	SAE	Description
30	-	03869702	03869701	Rod Threaded Assembly RFII (Includes Items 31-35)
31	1	10488401	10488301	Actuator Rod Threaded (M10-1.5 x 406mm , 3/8"-16x16")
32	1	83217500		Switching Valve Grommet
33	2	86553500		Washer Large OD 3/8"
34	3	87101500	86628500	Nut Hex (M10 x 1.5, 3/8")
35	1	87076500	86555000	Washer Lock (M10, 3/8")

Threaded Rod Assembly - V-Floor Style

ID#	Qty	Metric	SAE	Description
30-b	-	07332602	07332601	Rod Threaded Assembly V-Floor (Includes Items 32-36)
32	2	83217500		Switching Valve Grommet
33	5	86553500		Washer Large OD 3/8"
34	5	87101500	86628500	Nut Hex (M10 x 1.5, 3/8")
35	1	87076500	86555000	Washer Lock (M10, 3/8")
36	1	87151000	86603600	Actuator Rod Threaded (M10-1.5 x 200mm , 3/8"-16x72")

Switching Valve Assembly (April 2013 - November 2014)

**Obsolete Design -
Some Parts No Longer Available**



Added -6 port to
right end cap

Switching Valve Assembly (April 2013 - November 2014)

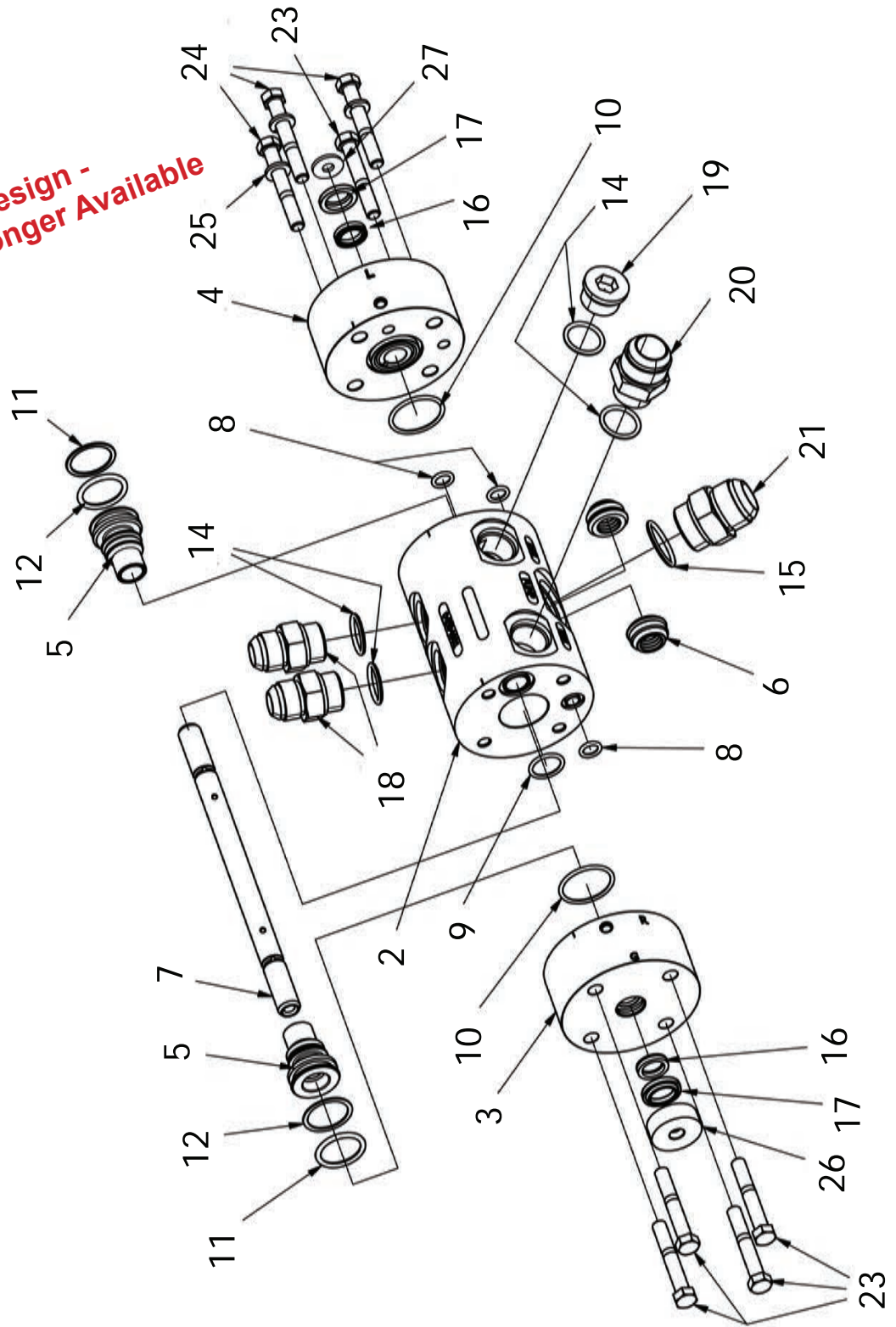
ID#	Qty	Metric Part #	SAE Part #	Diesel SAE Part #	Description
-	-	03888902	03888901	03888911	Switching Valve Assembly (Includes Items 2-27)
2	1	04504702	04504601		Body Switching Valve (not sold separately)
3	1	04504701			End Cap Right Switching Valve (not sold separately)
4	1	04504801			End Cap Left Switching Valve (not sold separately)
5	2	03718901			Poppet Switching Valve
6	2	03718801			Ring Poppet Switching Valve
7	1	01335502	01335501		Control Rod Switching Valve
-(1)	1	03878001		-	Seal Kit Switching Valve (Includes items 8-17)
8	3	84376200	84376201		O-Ring 111 (Buna 90, Viton)
9	1	84377000	84377201		O-Ring 117 (Buna 90, Viton)
10	2	84378200	84378210		O-Ring 126 (Buna 90, Viton)
11	2	84382200	84382210		O-Ring 216 (Buna 90, Viton)
12	2	84391600	84391610		O-Ring Backup 216 (Buna 90, Viton)
13	1	84386800	84386801		O-Ring 906 (Buna 90, Viton)
14	4	84387400	84387410		O-Ring 912 (Buna 90, Viton)
15	1	84387800	84387810		O-Ring 916 (Buna 90, Viton)
16	2	84352200			Seal Rod 5/8"
17	2	84427200			Wiper Canned 5/8" Rod
18	2	84685000			6400-12-12 Straight
19	1	84687700			6408-12 M O-Ring Socket Plug
20	1	84685300			6400-16-12 Straight Threaded
21	1	84685400			6400-16-16 Straight Threaded
22	1	84687400			6408-6 M O-Ring Socket Plug
23	5	87009000	86441000		Bolt Hex M10 x 65mm [GR5 3/8"x2 1/2"]
24	3	87009511	86442000		Bolt Hex M10 x 75mm [GR5 3/8"x3"]
25	3	87076500	86555000		Washer Lock M10 [3/8"]
26	1	02552101			Cap Limit Switching Valve (Critical for Assembly)
27	1	86553500			Washer Large OD 3/8" (Critical for Assembly)

(1) The Switching Valve Seal Kit contains all necessary components to rebuild all Switching Valve models.

Note: All new switching valve assemblies are interchangeable with past assemblies. Internal parts are not necessarily interchangeable.

Switching Valve Assembly (August 2008 - April 2013)

**Obsolete Design -
Some Parts No Longer Available**



Removed filter,
seat & spring.

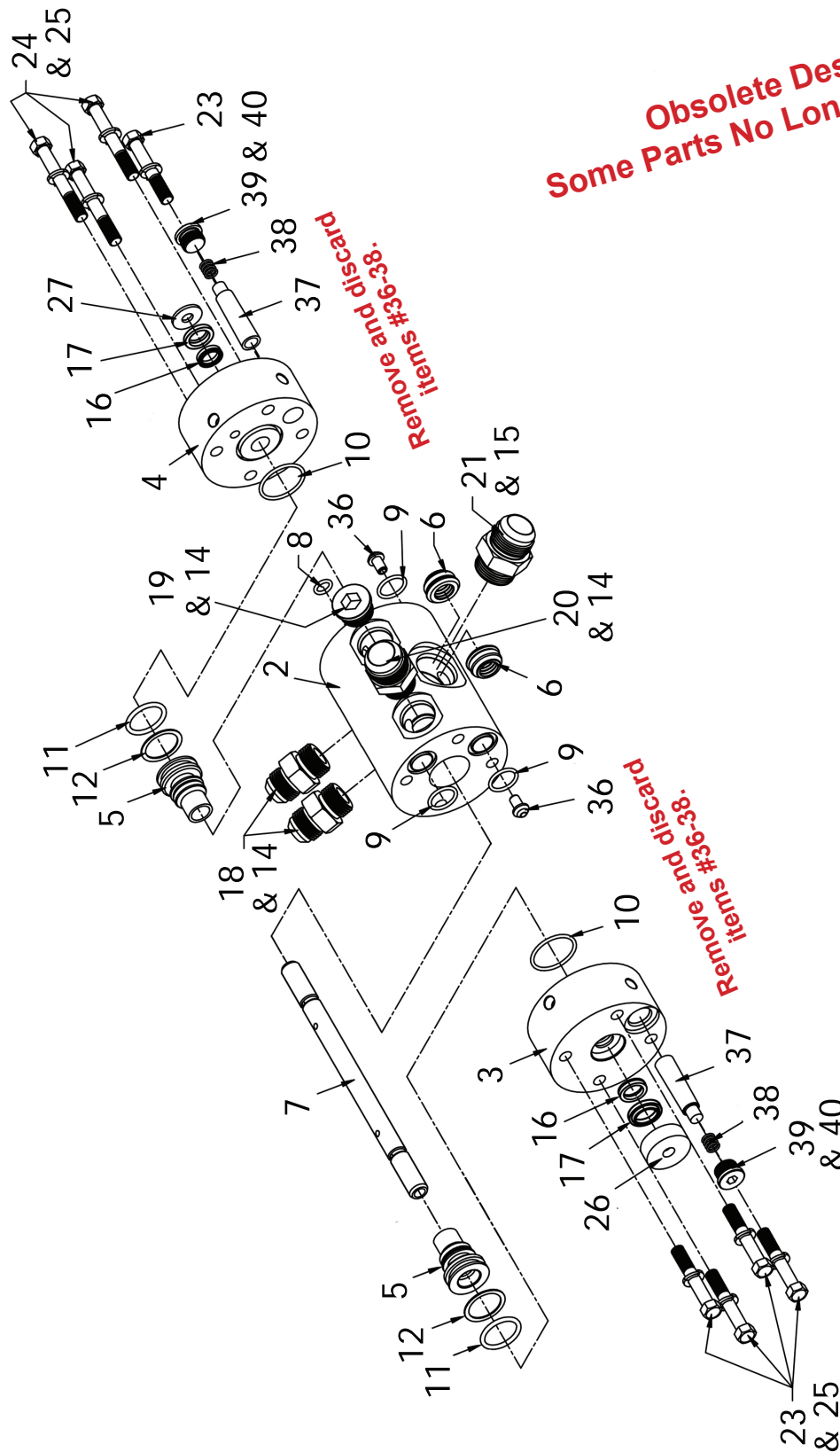
Switching Valve Assembly (August 2008 - April 2013)

ID#	Qty	Metric Part #	SAE Part #	Diesel SAE Part #	Description
-	-	03888902	03888901	03888911	Switching Valve Assembly (Includes Items 2-27)
2	1	04504702	04504601		Body Switching Valve (not sold separately)
3	1		04504701		End Cap Right Switching Valve (not sold separately)
4	1		04504801		End Cap Left Switching Valve (not sold separately)
5	2		03718901		Poppet Switching Valve
6	2		03718801		Ring Poppet Switching Valve
7	1	01335502	01335501		Control Rod Switching Valve
-(¹)	1	03878001		-	Seal Kit Switching Valve (Includes items 8-17)
8	3	84376200	84376201		O-Ring 111 (Buna 90, Viton)
9	1	84377000	84377201		O-Ring 117 (Buna 90, Viton)
10	2	84378200	84378210		O-Ring 126 (Buna 90, Viton)
11	2	84382200	84382210		O-Ring 216 (Buna 90, Viton)
12	2	84391600	84391610		O-Ring Backup 216 (Buna 90, Viton)
14	4	84387400	84387410		O-Ring 912 (Buna 90, Viton)
15	1	84387800	84387810		O-Ring 916 (Buna 90, Viton)
16	2	84352200			Seal Rod 5/8"
17	2	84427200			Wiper Canned 5/8" Rod
18	2	84685000			6400-12-12 Straight
19	1	84687700			6408-12 M O-Ring Socket Plug
20	1	84685300			6400-16-12 Straight Threaded
21	1	84685400			6400-16-16 Straight Threaded
23	5	87009000	86441000		Bolt Hex M10 x 65mm [GR5 3/8"x2 1/2"]
24	3	87009750	86442000		Bolt Hex M10 x 75mm [GR5 3/8"x3"]
25	3	87076500	86555000		Washer Lock M10 [3/8"]
26	1		02552101		Cap Limit Switching Valve (Critical for Assembly)
27	1		86553500		Washer Large OD 3/8" (Critical for Assembly)

(¹) The Switching Valve Seal Kit contains all necessary components to rebuild all Switching Valve models.

Note: All new switching valve assemblies are interchangeable with past assemblies. Internal parts are not necessarily interchangeable.

Switching Valve Assembly (June 2002 - August 2008)



**Obsolete Design -
Some Parts No Longer Available**

Added filter,
seat & spring.

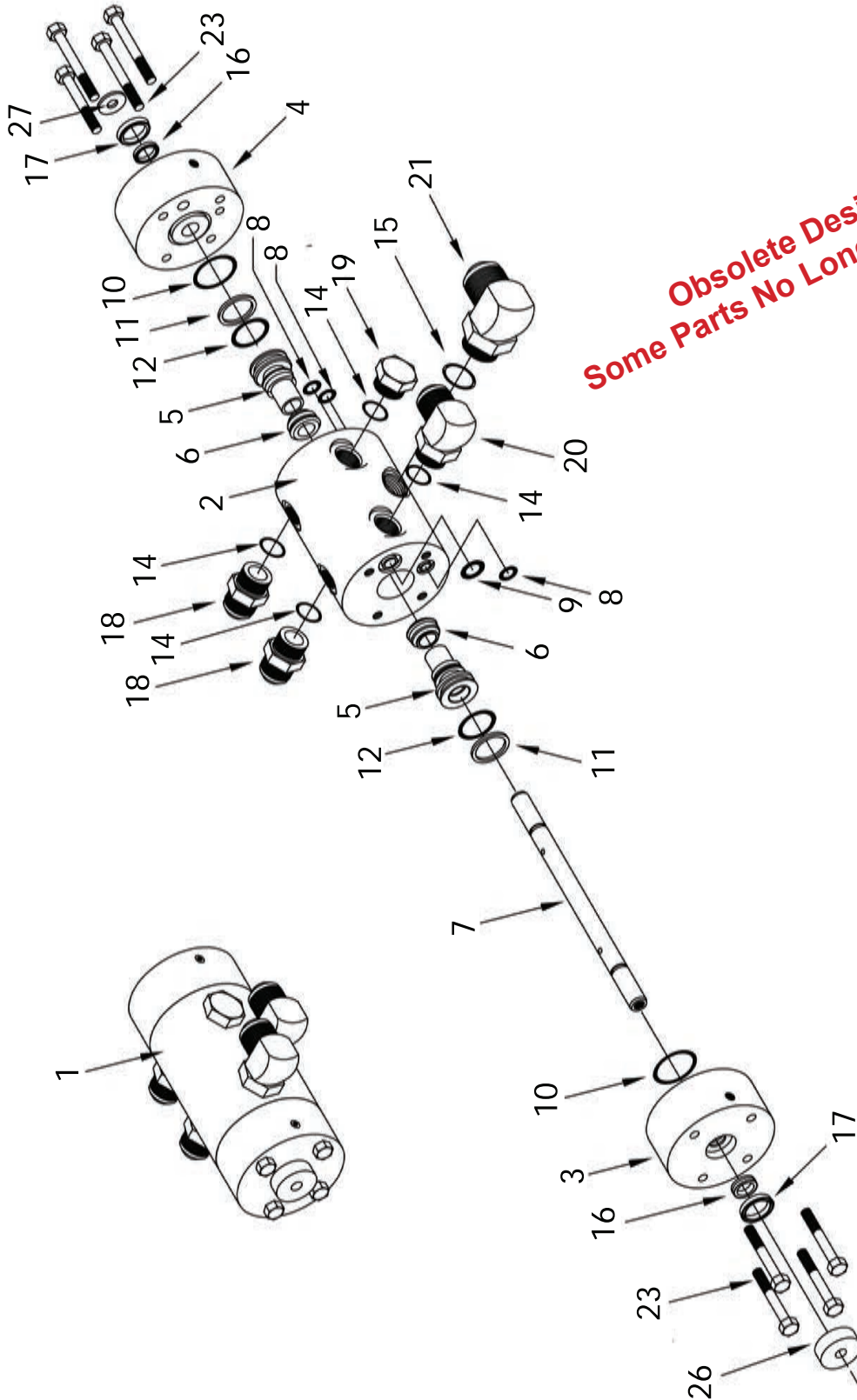
Switching Valve Assembly (June 2002 - August 2008)

ID#	Qty	Metric Part #	SAE Part #	Diesel SAE Part #	Description
-	-	03888902	03888901	03888911	Switching Valve Assembly (Includes Items 2-27, 36-40)
2	1	04504702	04504601		Body Switching Valve (not sold separately)
3	1	04504701			End Cap Right Switching Valve (not sold separately)
4	1	04504801			End Cap Left Switching Valve (not sold separately)
5	2	03718901			Poppet Switching Valve
6	2	03718801			Ring Poppet Switching Valve
7	1	01335502	01335501		Control Rod Switching Valve
-(1)	1	03878001		-	Seal Kit Switching Valve (Includes items 8-17)
8	1	84376200	84376201		O-Ring 111 (Buna 90, Viton)
9	3	84377000	84377201		O-Ring 117 (Buna 90, Viton)
10	2	84378200	84378210		O-Ring 126 (Buna 90, Viton)
11	2	84382200	84382210		O-Ring 216 (Buna 90, Viton)
12	2	84391600	84391610		O-Ring Backup 216 (Buna 90, Viton)
14	4	84387400	84387410		O-Ring 912 (Buna 90, Viton)
15	1	84387800	84387810		O-Ring 916 (Buna 90, Viton)
16	2	84352200			Seal Rod 5/8"
17	2	84427200			Wiper Canned 5/8" Rod
18	2	84685000			6400-12-12 Straight
19	1	84687700			6408-12 M O-Ring Socket Plug
20	1	84685300			6400-16-12 Straight Threaded
21	1	84685400			6400-16-16 Straight Threaded
23	8	87009000	86441000		Bolt Hex M10 x 65mm [GR5 3/8"x2 1/2"]
26	1	02552101			Cap Limit Switching Valve (Critical for Assembly)
27	1	86553500			Washer Large OD 3/8" (Critical for Assembly)
36	2	04502701			FILTER SEAT SWV PILOT100 (REMOVE & DISCARD)
37	2	84012700			FILTER ELEMENT CF0563-46 SWV (REMOVE & DISCARD)
38	2	84451750			SPRING S-157 (REMOVE & DISCARD)
39	2	84687500			08 HP5ON-S Hollow Hex Plug M O-Ring Hex Socket (6408-H08-O)
40	2	84387000	84387010		O-Ring 908 (Buna 90, Viton)

(1) The Switching Valve Seal Kit contains all necessary components to rebuild all Switching Valve models.

Note: All new switching valve assemblies are interchangeable with past assemblies. Internal parts are not necessarily interchangeable.

Switching Valve Assembly (December 1998 - June 2002)



Switching Valve Assembly (December 1998 - June 2002)

ID#	Qty	Metric Part #	SAE Part #	Diesel SAE Part #	Description
.. ⁽²⁾	-	03888902	03888901	03888911	Switching Valve Assembly (Includes Items 2-27)
2 ⁽²⁾	1	03851502	03851501		Body Switching Valve (not sold separately)
3 ⁽²⁾	1		03851701		End Cap Right Switching Valve (not sold separately)
4 ⁽²⁾	1		03851601		End Cap Left Switching Valve (not sold separately)
5	2		03718901		Poppet Switching Valve
6	2		03718801		Ring Poppet Switching Valve
7	1	01335502	01335501		Control Rod Switching Valve
.. ⁽¹⁾	1	03878001		-	Seal Kit Switching Valve (Includes items 8-17)
8	3	84376200	84376201		O-Ring 111 (Buna 90, Viton)
9	1	84377000	84377201		O-Ring 117 (Buna 90, Viton)
10	2	84378200	84378210		O-Ring 126 (Buna 90, Viton)
11	2	84382200	84382210		O-Ring 216 (Buna 90, Viton)
12	2	84391600	84391610		O-Ring Backup 216 (Buna 90, Viton)
14	4	84387400	84387410		O-Ring 912 (Buna 90, Viton)
15	1	84387800	84387810		O-Ring 916 (Buna 90, Viton)
16	2	84352200			Seal Rod 5/8"
17	2	84427200			Wiper Canned 5/8" Rod
18	2	84685000			6400-12-12 Straight
19	1	84686900			12 P5ON-S HEX HEAD PLUG M O-RING HEX CAP (6408-O-12)
20	1	84691700			16-12 C5OX-S Straight Thread Elbow MJIC (6801-16-12)
21	1	84691800			16 C5OX-S Straight Thread Elbow MJIC (6801-16-16)
23	8	87009000	86441000		Bolt Hex M10 x 65mm [GR5 3/8"x2 1/2"]
26	1	02552101			Cap Limit Switching Valve (Critical for Assembly)
27	1	86553500			Washer Large OD 3/8" (Critical for Assembly)

⁽¹⁾ The Switching Valve Seal Kit contains all necessary components to rebuild all Switching Valve models.

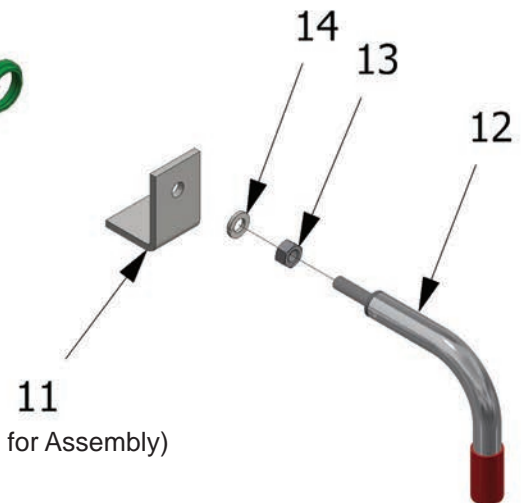
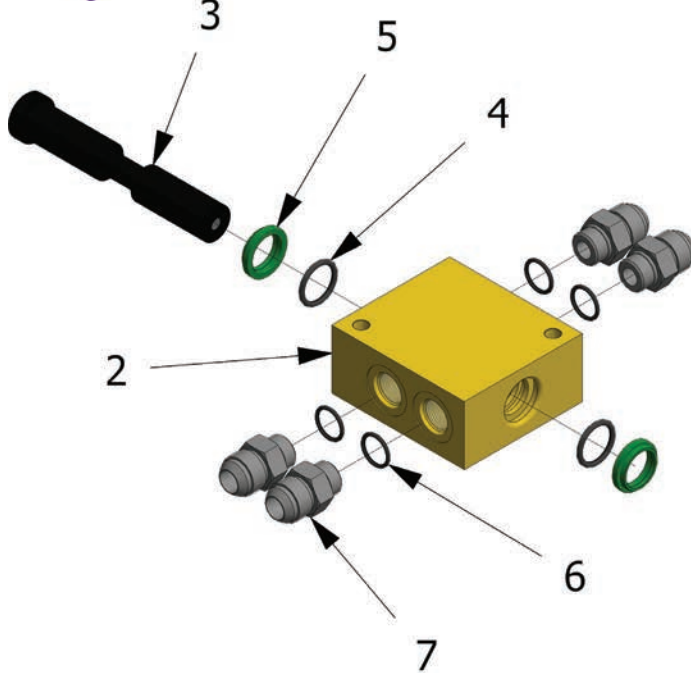
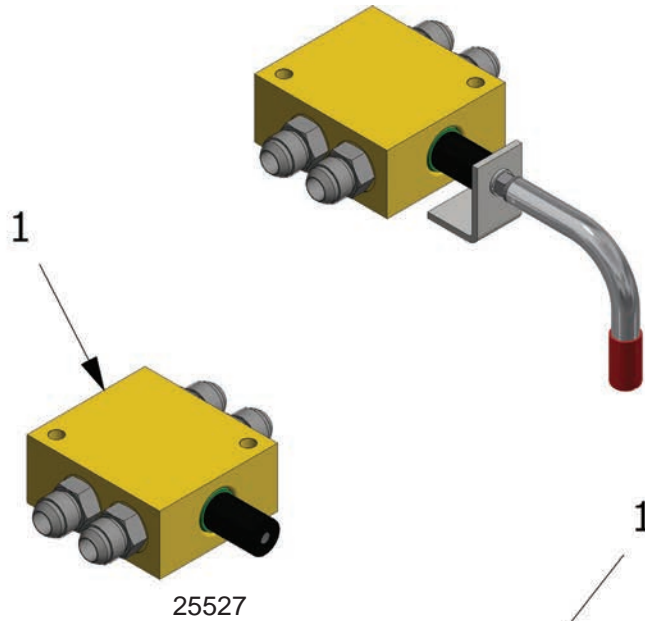
⁽²⁾ Part numbers vary for Switching Valves made before 1998.

Note: All new switching valve assemblies are interchangeable with past assemblies. Internal parts are not necessarily interchangeable.

Control Valve (Load/Unload) Assembly & Handle Assembly - Manual

(Sold Separately)

Control Valve
Replacement
Video Link



Use hydraulic oil or Vaseline to lubricate seals.
Do NOT use grease!
Do NOT use Teflon tape!

(Critical for Assembly)

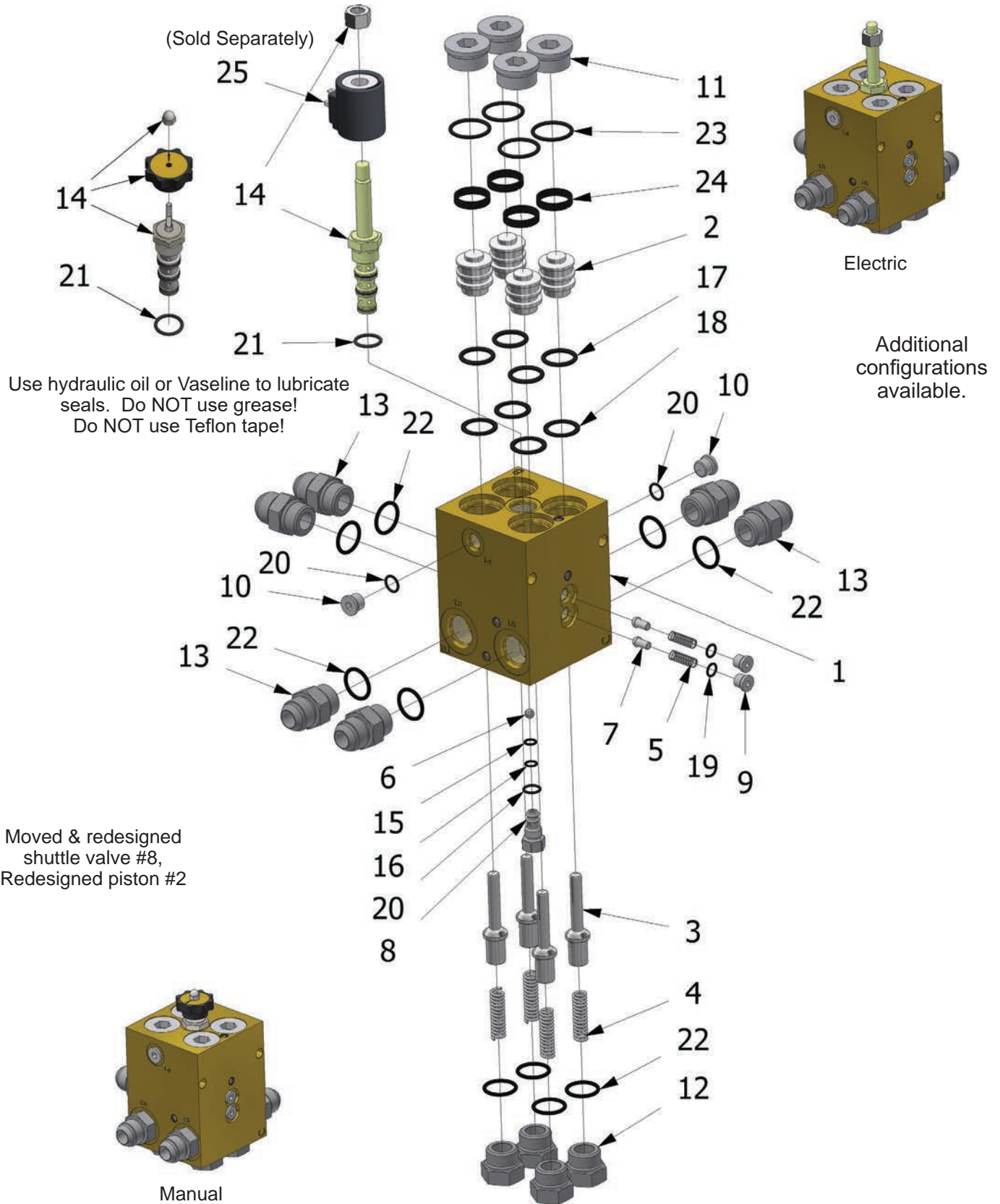
Control Valve Assembly

ID#	Qty	Metric Part #	SAE Part #	Diesel SAE Part #	Description
1	-	02552702	02552701	02552711	Control Valve Load/Unload Assembly (Includes items 2-8)
2	1	01049501			Body Control Valve (not sold separately)
3	1	03423202	03423201		Spool Control Valve (Metric, SAE) (not sold separately)
-	-	03877901		-	Seal Kit Control Valve Load/Unload (Includes items 4-6)
4	2	84381800	84381700		O-Ring 214 (Buna 70, Viton)
5	2	84427000	84427000		Wiper 1" Rod
6	4	84387200	84387300		O-Ring 910 (Buna 90, Viton)
7	4	84684900			6400-12-10 Straight
8	1	84801000			Snap Ring (2 Pcs) OBSOLETE

Handle Assembly

ID#	Qty	Metric Part #	SAE Part #	Description
10	-	11310302	11310301	Handle Assembly Control Valve Load/Unload (Includes Items 11-14)
11	1	06998701		Spool End Stop (Critical for Assembly)
12	1	11229430	11229429	Control Valve Handle Assembly (See Handle Section for options)
13	1	87101500	86628500	Nut Hex 10mm [GR8 ZN 3/8-16]
14	1	87076500	86555000	Washer Lock 10mm [3/8"]

Control Valve (Load/Unload) Assembly - Electric/Manual (Jan 2022 - Present)



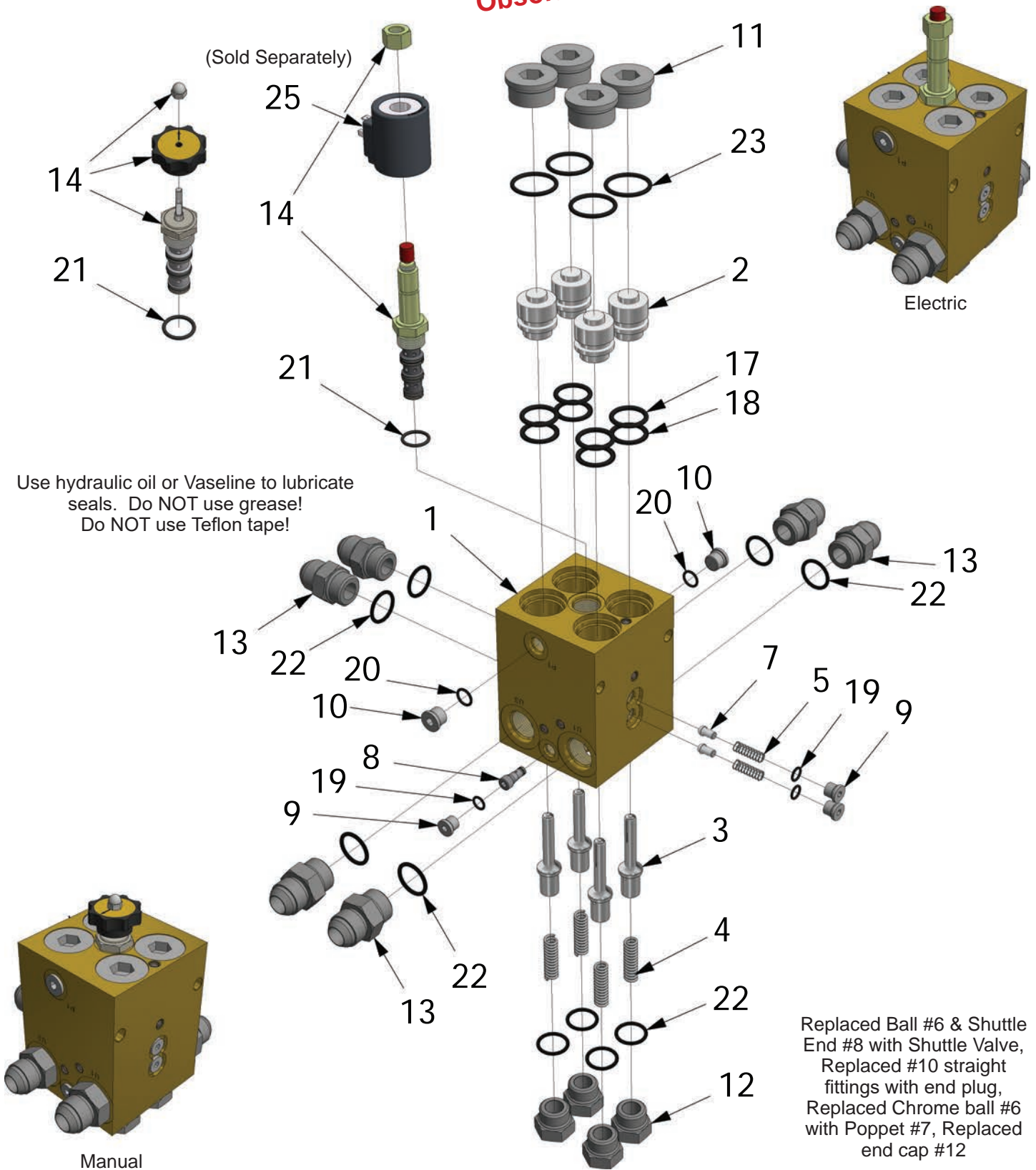
Control Valve (Load/Unload) Assembly - Electric/Manual (Jan 2022 - Present)

ID#	Qty	Electric Part #	Manual Part #	Description
-(1)	-	03244610	03244630	Control Valve (Load/Unload) Assembly (Includes items 1-24)
1	1	03134702		CONTROL VALVE 6 PORT TWO-WAY (Black) (not sold separately)
2	4	03123601		PISTON, CHECK VALVE ACTUATOR
3	4	03138401		PILOT OPERATED CHECK VALVE
4	4	84453400		SPRING CHECK VALVE EXTERNAL LARGE #B-18273
5	2	84450800		SPRING, .328" OD X 1.0" LG, .027 WIRE, 10.5 COILS
6	1	84800500		5/16" CHROME BALL
7	2	11287801		POPPET 6-PORT CTV 032446 TO TANK
8	1	11308201		SHUTTLE VALVE SEAT 6 PORT #32446
9	2	84687300		04 HP5ON-S HOLLOW HEX PLUG M O-RING HEX SOCKET
10	2	84687400		06 HP5ON-S HOLLOW HEX PLUG M O-RING HEX SOCKET
11	4	84687900		16 HP5ON-S HOLLOW HEX PLUG M O-RING HEX SOCKET
12	4	10014101		-12 END CAP MODIFIED was 3860201
13	6	84685000		12 F5OX-S STRAIGHT THREAD CONNECTOR MJIC X M O-RING
14	1	85108800	-	Solenoid Valve SV-10-40M-0-N-0 HF
14	1	-	85105200	Cartridge Valve MRV4-10-K-O VIC
-	-	85108798		Seal Kit for Cartridge Valves
-	-	04661701		Seal Kit Control Valve Electric (Includes items 17-24)
15	1	84375200		011 O-RING BUNA 90
16	1	84388406		011 BACK-UP BUNA 90
17	4	84381200		213 O-RING BUNA 90
18	4	84391200		8-213 BACK-UP BUNA 90
19	2	84386600		904 O-RING BUNA 90
20	3	84386800		906 O-RING BUNA 90
21	1	84387200		910 O-RING BUNA 90
22	10	84387400		912 O-RING BUNA 90
23	4	84387800		916 O-RING BUNA 90
24	4	84405415		WEAR RING BRONZE PTFE 1/4 X 1/16
25	1	varies	-	Coil (Sold Separately) Contact KEITH for Information

(1) Part number and descriptions vary based on drive configuration and application.

Control Valve (Load/Unload) Assembly - Electric/Manual (Mar 2000 - Jan 2022)

Obsolete Design



Control Valve (Load/Unload) Assembly - Electric/Manual (Mar 2000 - Jan 2022)

ID#	Qty	Electric Part #	Manual Part #	Description
.(1)	-	03244610	03244630	Control Valve (Load/Unload) Assembly (Includes items 1-23)
1	1	03134701		Electric Control Valve Body (not sold separately)
2	4	03123601		Plunger Pilot Operated Check Valve
3	4	03138401		Pilot Operated Check Valve
4	4	84453400		Ext Check Valve Spring Large
5	2	84450800		I-9 Spring
7	2	11287801		Poppet 6-Port CTV 032446 To Tank (Replaces 84800500 5/16" Chrome Ball)
8	1	85104800		Shuttle Valve LS04-B-30-0-N
9	3	84687300		6409-04 MSAE O-Ring Socket Plug
10	2	84687400		6409-06 MSAE O-Ring Socket Plug
11	4	84687900		6409-16 MSAE O-Ring Socket Plug
12	4	10014101		-12 Pilot Operated Spring End Cap (Replaces 03860201 Spring Cap)
13	6	84685000		6400-12-12 MSAE-MJIC Straight Connector
14	1	85108800	-	Solenoid Valve SV-10-40M-0-N-0 HF
14	1	-	85105200	Cartridge Valve MRV4-10-K-O VIC
-	-	85108798		Seal Kit for Cartridge Valves
-	-	04661701		Seal Kit Control Valve Electric (Includes items 17-23)
17	4	84381200		O-Ring 213 Buna 90
18	4	84391200		O-Ring Back-Up 8-213 Buna 90
19	3	84386600		O-Ring 904 Buna 90
20	2	84386800		O-Ring 906 Buna 90
21	1	84387200		O-Ring 910 Buna 90
22	10	84387400		O-Ring 912 Buna 90
23	4	84387800		O-Ring 916 Buna 90
25	1	varies	-	Coil (Sold Separately) Contact KEITH for Information

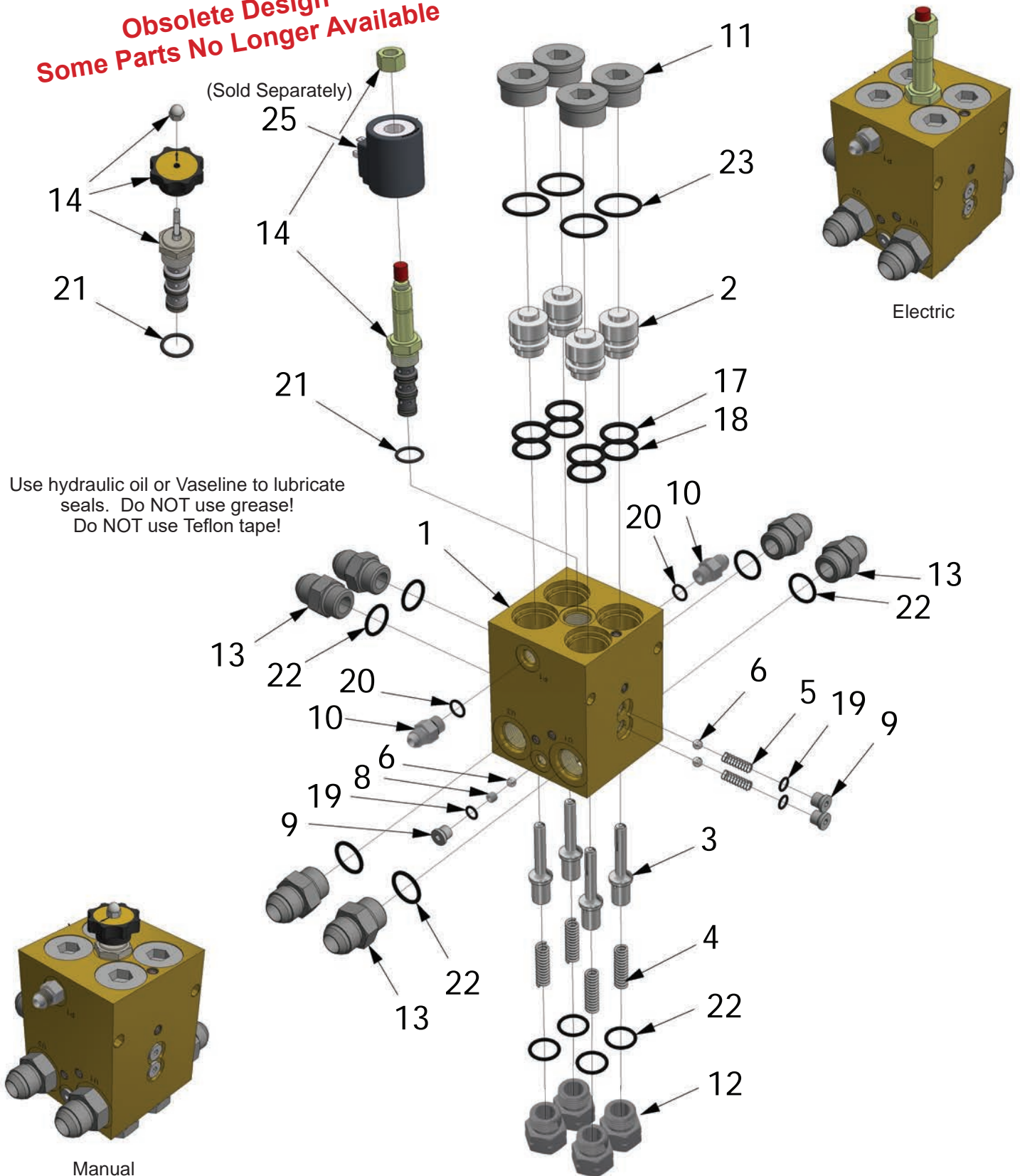
Obsolete Design

(1) Part number and descriptions vary based on drive configuration and application.

Note: All new control valve assemblies are interchangeable with past assemblies. Internal parts are not necessarily interchangeable.

Control Valve (Load/Unload) Assembly - Electric/Manual (May 1995 - Mar 2000)

**Obsolete Design -
Some Parts No Longer Available**



Control Valve (Load/Unload) Assembly - Electric/Manual (May 1995 - Mar 2000)

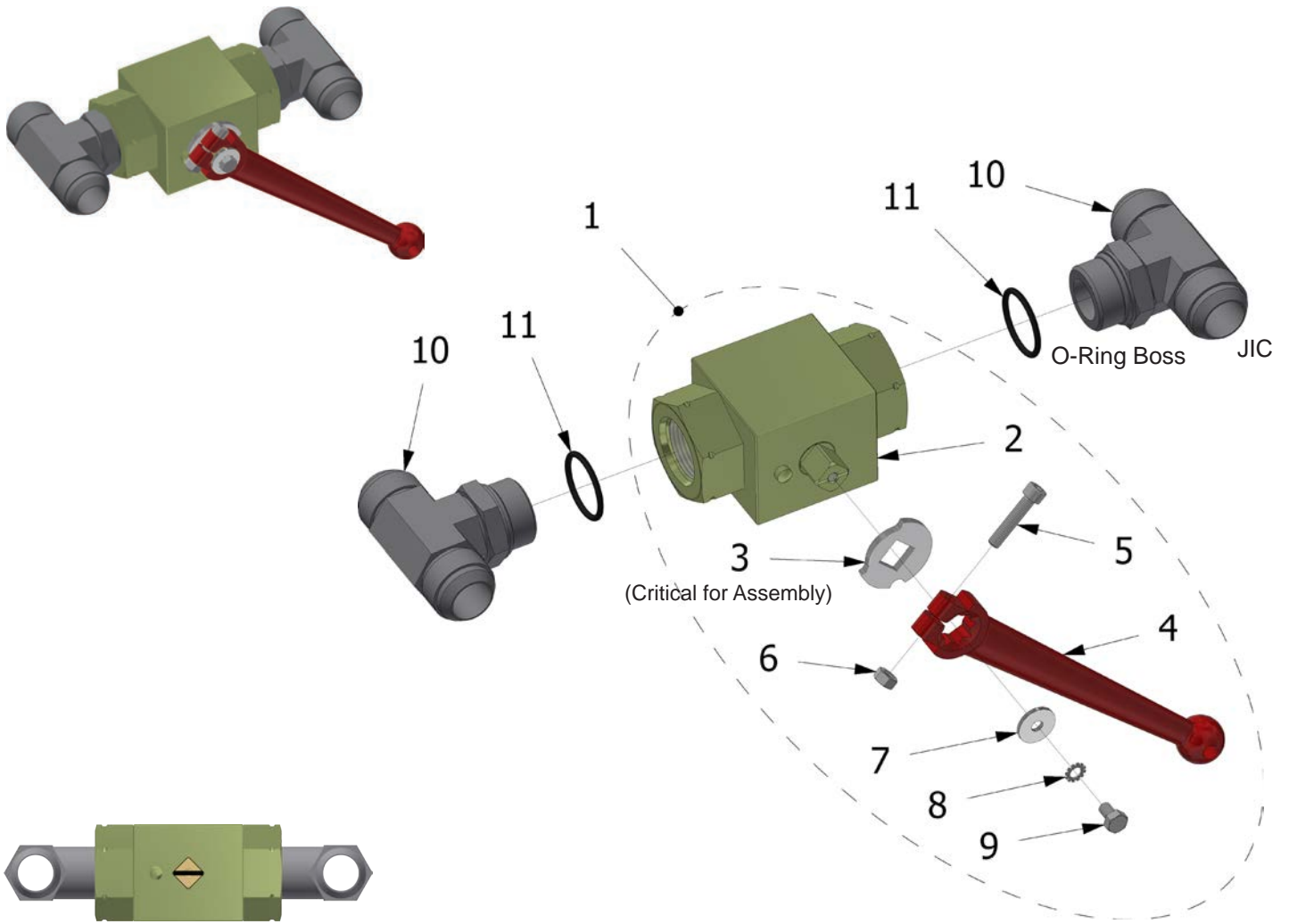
ID#	Qty	Electric Part #	Manual Part #	Description
-(¹)	-	03244610	03244630	Control Valve (Load/Unload) Assembly (Includes items 1-23)
1	1	03134701		Electric Control Valve Body (not sold separately)
2	4	03123601		Plunger Pilot Operated Check Valve
3	4	03138401		Pilot Operated Check Valve
4	4	84453400		Ext Check Valve Spring Large
5	2	84450800		I-9 Spring
6	3	84800500		5/16" Chrome Steel Ball
8	1	03122801		Shuttle Valve End
9	3	84687300		6409-04 MSAE O-Ring Socket Plug
10	2	84684000		6400-06-06 F5OX-S Straight Thread Connector MJIC X M O-RING
11	4	84687900		6409-16 MSAE O-Ring Socket Plug
12	4	03860201		END CAP CKV/6 PORT
13	6	84685000		6400-12-12 MSAE-MJIC Straight Connector
14	1	85108800	-	Solenoid Valve SV-10-40M-0-N-0 HF
14	1	-	85105200	Cartridge Valve MRV4-10-K-O VIC
-	-	85108798		Seal Kit for Cartridge Valves (includes (1) #21 O-Ring)
-	-	04661701		Seal Kit Control Valve Electric (Includes items 17-23)
17	4	84381200		O-Ring 213 Buna 90
18	4	84391200		O-Ring Back-Up 8-213 Buna 90
19	3	84386600		O-Ring 904 Buna 90
20	2	84386800		O-Ring 906 Buna 90
21	1	84387200		O-Ring 910 Buna 90
22	10	84387400		O-Ring 912 Buna 90
23	4	84387800		O-Ring 916 Buna 90
25	1	varies	-	Coil (Sold Separately) Contact KEITH for Information

**Obsolete Design -
Some Parts No Longer Available**

(¹) Part number and descriptions vary based on drive configuration and application.

Note: All new control valve assemblies are interchangeable with past assemblies. Internal parts are not necessarily interchangeable.

Ball Valve (On/Off) Assembly JIC - Manual



84802604



Open - Off Position



Closed - On Position



NPT
Use pipe dope on NPT threads.

JIC



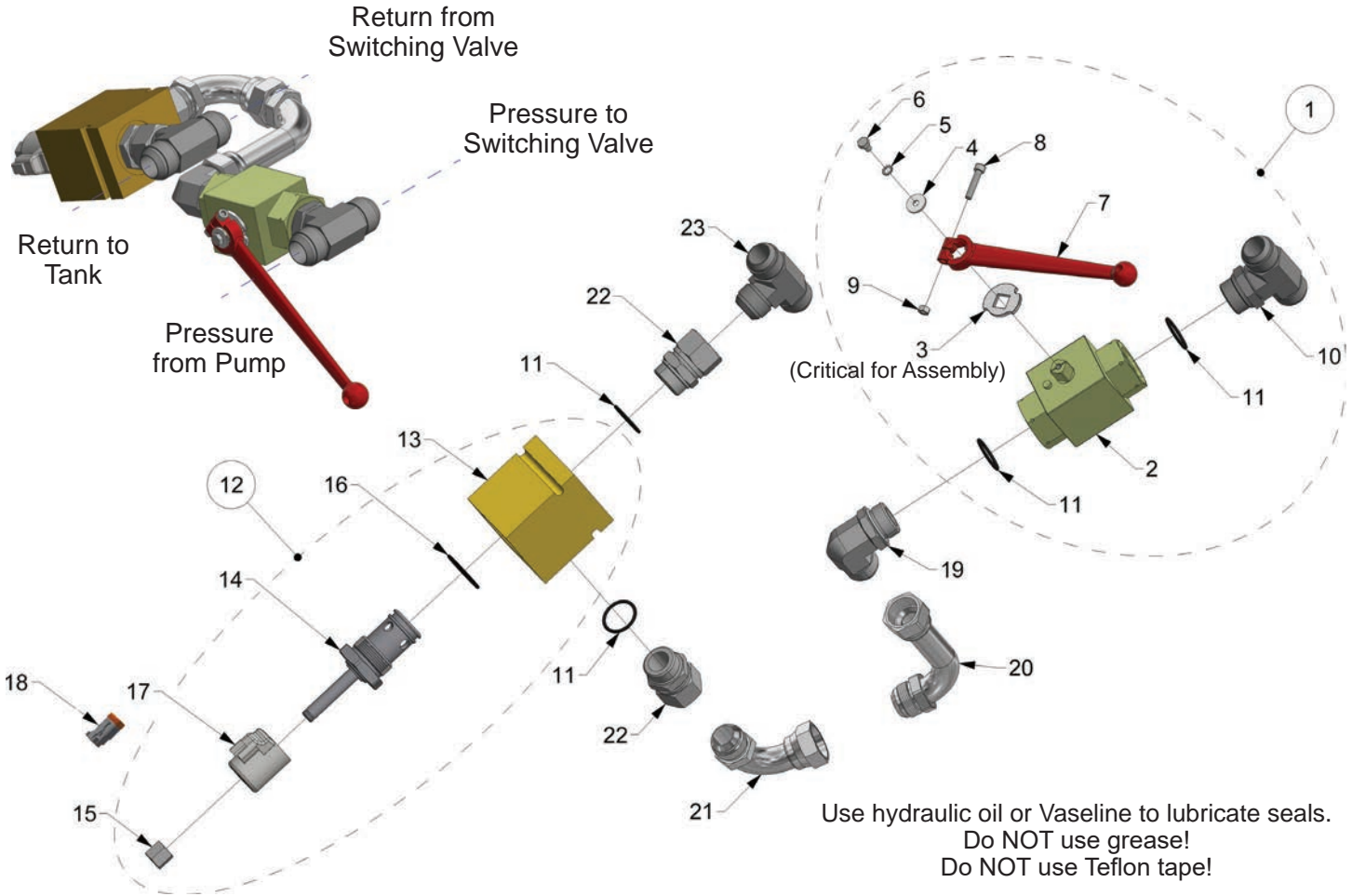
(sold separately)

Use hydraulic oil or Vaseline to lubricate seals.
Do NOT use grease!
Do NOT use Teflon tape!

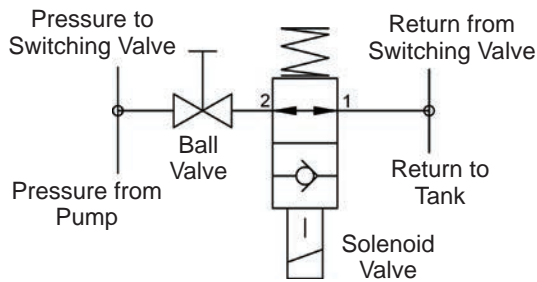
Ball Valve (On/Off) Assembly JIC - Manual

ID#	Qty	O-Ring Boss	NPT	Description
		JIC Part #	JIC Part #	
-	-	84802604	-	Ball Valve Assembly 1" w/ O-Ring Boss Port (Includes items 2-11)
		-	84802600	Ball Valve Assembly 1" w/ NPT Port (Includes items 2-11) Obsolete
1	1	84802620	-	Ball Valve 1" O-Ring Boss Port (Includes items 2-9)
		-	84802800	Ball Valve 1" BKH 1NPT-1123 Port (Includes items 2-9)
2	1	84802605	-	Ball Valve Body 1" O-Ring Boss Port
		-	84802859	Ball Valve Body AE2N1-11DB NPT Port
3	1	84802910		Spud Stop LW56 (Critical for Assembly)
4	1	84802900		Ball Valve Handle Assembly (Includes items 4-6)
5	1	87003100		Bolt Socket Head GR8 6mmx1mmx30mm
6	1	87100510		Nut Hex 6mmx1mm
-	-	87075503		Handle to BV Bolt Kit (Includes items 7-9)
7	1	87075400		Washer Flat 6 mm
8	1	87075501		Star Washer External Tooth M6
9	1	87002460		Bolt Hex GR8 6mmx1mmx12mm
10	2	84692110	-	16 S5OX-S Straight Thread Tee MJIC X MJIC X ADJ O-Ring (6803-16-16-16)
		-	84677880	16 STX-S Male Branch Tee MJIC X MJIC X MPIPE
11	2	84387800	-	916 O-RING BUNA 90
12	1	11467301		PLATE ID RED PRESSURE (sold separately)
13	1	11467302		PLATE ID BLUE TANK (sold separately)

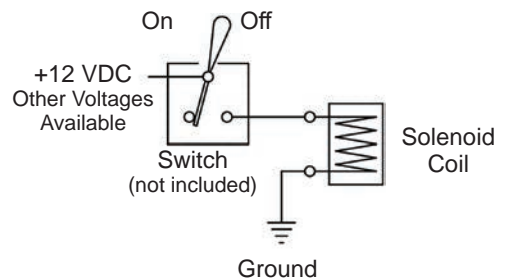
Ball Valve (On/Off) Assembly JIC - Electric



Hydraulic Schematic



Wiring Diagram



INSTALLATION

1. Remove the existing ball valve. It is mounted on the front of the drive frame, on the drivers side, between the pressure and return lines.
2. Install the electrical on/off control assembly.
3. Connect the pressure and return lines as shown.
4. Supply electrical power to the solenoid.
5. Install the switch in the electrical supply coil.
6. Run the wiring in water-tight flex conduit.

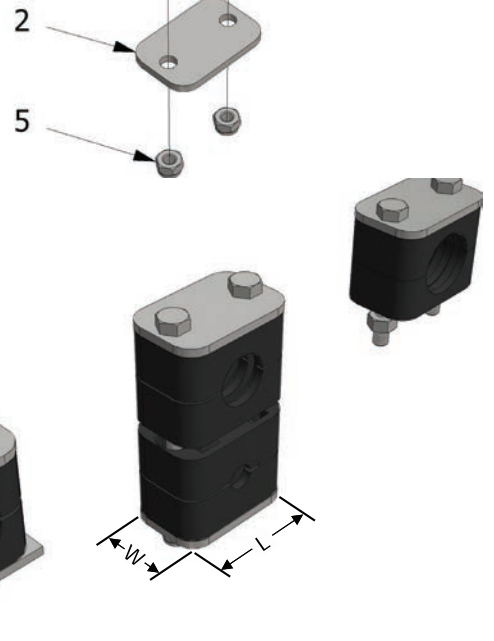
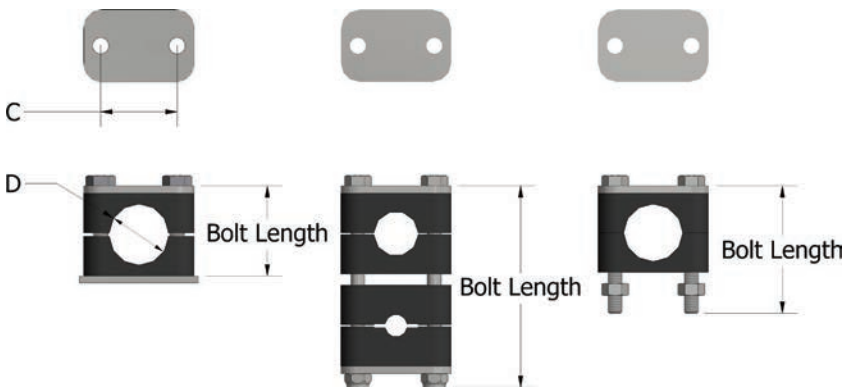
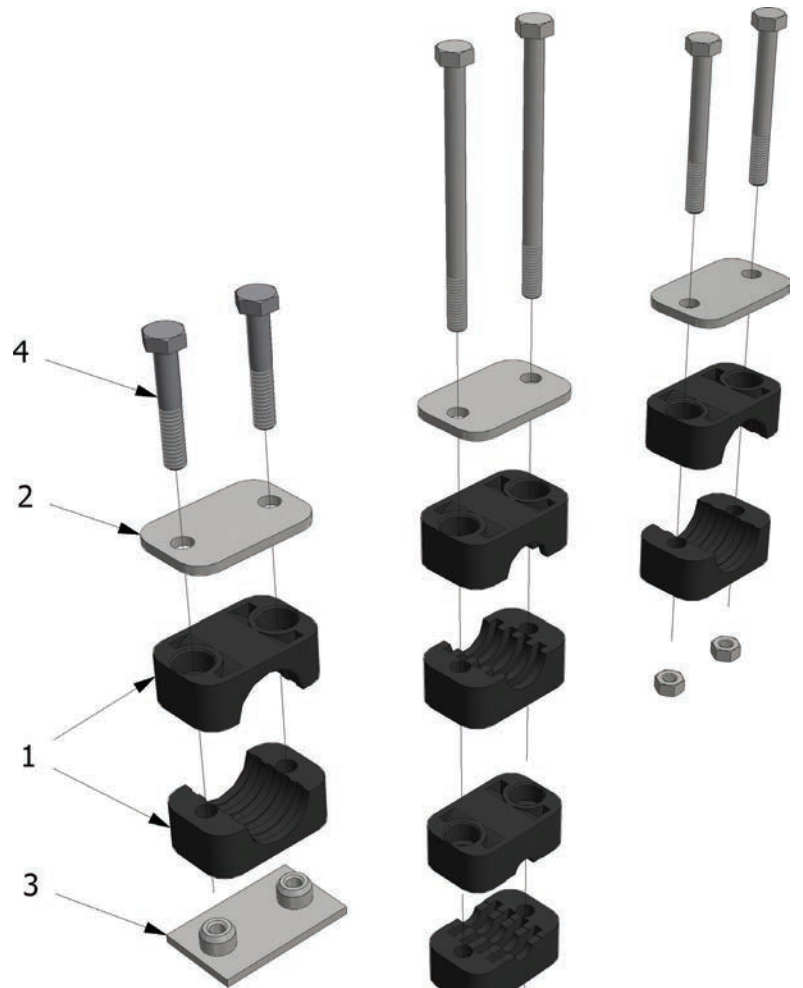
OPERATION

1. Shift the ball valve handle to the open position.
 2. Set the electrical switch to the Off position.
 3. Engage the PTO to start the hydraulic pump.
 4. Turn electrical switch to the On position to start the walking floor. (Solenoid coil must be energized for the walking floor to move.)
- To start or stop the floor using the manual ball valve on the drive.
- Set the electrical switch to the Off position.
 - Close the ball valve to start the walking floor.
 - Open the ball valve to stop the walking floor.

Ball Valve (On/Off) Assembly JIC - Electric

ID#	Qty	O-Ring Boss JIC Part #	NPT JIC Part #	Description
-	-	03426601		Electric On/Off Ball Valve Assy (Includes items 1-23)
1	1	84802604	84802601	Manual On/Off Ball Valve Assy (Includes items 2-11)
2	1	84802620	-	Ball Valve Body Assy 1" O-Ring Boss (Includes items 3-6)
		-	84802800	Ball Valve 1" BKH 1NPT-1123 w/Handle, Bolt & Flat Washer (Includes items 3-6)
3	1	84802910		Spud Stop (critical for assembly)
4	1	87075400		Washer Flat 6mm
5	1	87075501		Star Washer External Tooth M6
6	1	87002460		Bolt Hex GR8 6mm x 1mm x 12mm
7	1	84802900		Ball Valve Handle Assembly (Includes items 8-9)
8	1	87003100		Bolt Socket Head GR8 6mmx1mmx30mm
9	1	87100510		Nut Hex 6mm x 1mm
10	1	84692110	-	16 S5OX-S STRAIGHT THREAD TEE MJIC X MJIC X ADJ O-RING (6803-16-16-16)
		-	84677880	16 STX-S MALE BRANCH TEE MJIC X MJIC X MPIPE (2601-16-16-16)
11	4,2	84387800		916 O-Ring Buna 90
12	1	85108200		Electric Solenoid Valve Assembly (Includes items 11-17)
13	1	85101600		Body Valve 20822 566409 2-Way
14	1	85108120		Valve Cartridge SV3-20-0-16H-12DN
-	-	85108798		Seal Kit for Cartridge Valves
15	1	85108001		NUT SV3 VALVE CART 02-175698
16	1	84388000		920 O-Ring Buna 90
17	1	85602615		Coil, 12 VDC w/Deutsch Conn. Vickers
18	1	06414701		CONNECTOR KIT DEUTSCH DT06-2S
19	1	84691800	-	16 C5OX-S STRAIGHT THREAD ELBOW MJIC X ADJ O-RING (6801-16-16)
		-	84677400	2501-16-16 Male Elbow 84691800
20	1	84683700		63UC-16-16 Long Bent Stem 90 Deg.
21	1	84683200		63UA-16-16 Bent Stem 90 Deg.
22	2	84686200		6402-16-16 Swivel St. Thread Connector
23	1	84678100		2603-16-16-16 Union Tee

Tube Clamps



Group 3

L = 1.875"

W = 1.219"

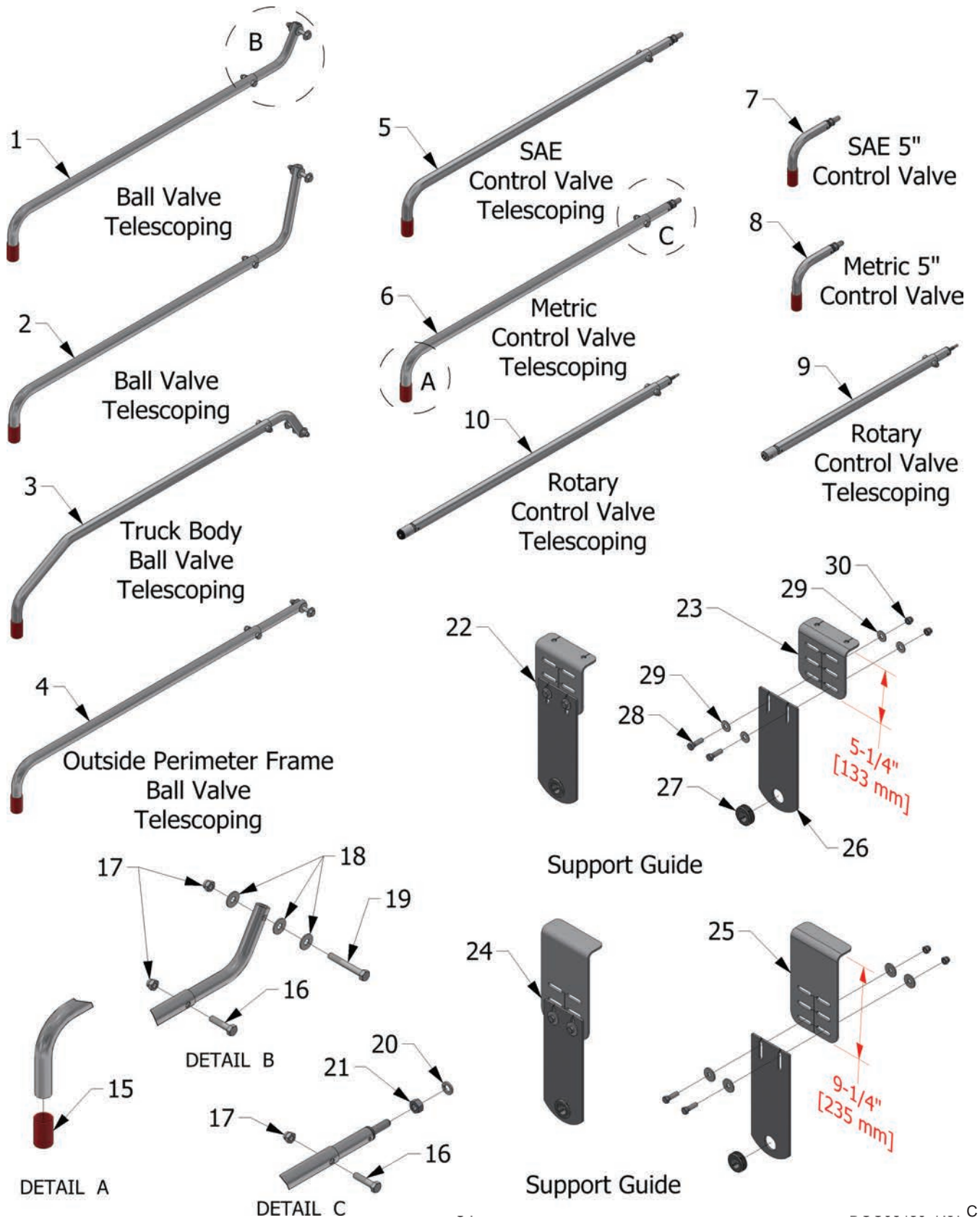
C = 1.300"

D = Tube Diameter

Tube Clamps

ID#	Qty	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Description
-	-	04631101	-	-	-	-	-	-	Tube Clamp Assembly 1" Tube Group 3 3100-PP
-	-	-	04631102	-	-	-	-	-	Tube Clamp Assembly 3/4" Tube Group 3 3075-PP
-	-	-	-	04631103	-	-	-	-	Tube Clamp Assembly 3/8" Tube Group 3 3038-PP
-	-	-	-	-	04631104	-	-	-	Tube Clamp Assembly 1/2" Tube Group 3 30840-PP
-	-	-	-	-	-	04631105	-	-	Tube Clamp Assembly 7/8" Tube Group 3 3087-PP
1	1 pair	84750300	-	-	-	-	-	-	Clamp 1" Tube Group 3 3100-PP
1	1 pair	-	84750200	-	-	-	-	-	Clamp 3/4" Tube Group 3 3075-PP
1	1 pair	-	-	84750100	-	-	-	-	Clamp 3/8" Tube Group 3 3038-PP
1	1 pair	-	-	-	84750060	-	-	-	Clamp 1/2" Tube Group 3 30840-PP
1	1 pair	-	-	-	-	84750230	-	-	Clamp 7/8" Tube Group 3 3087-PP
2	1-2	84751200	84751200	84751200	84751200	84751200	-	-	Cover Plate COP-03
3	1	-	-	84748990	84748990	84748990	-	-	Bolt Plate - Weld On STW-03 1/4"
3	1	-	-	-	-	-	84748991	-	Bolt Plate - Weld On STW-03 1/4" Unplated
3	1	-	-	-	-	-	84748992	-	Bolt Plate - Weld On STW-03 1/4" SS
3	1	-	-	-	-	-	84748995	-	Bolt Plate - Weld On STW-03 M6
4	2	-	86416500	-	-	-	-	-	Hex Bolt 1/4" x 1-1/2
4	2	86419500	-	86419500	86419500	86419500	-	-	Hex Bolt 1/4" x 2-1/4"
4	2	-	-	-	-	-	87004510	-	Hex Bolt 6mm x 1 x 55mm
4	2	-	-	-	-	-	87004600	-	Hex Bolt 6mm x 1 x 85mm
4	2	-	-	-	-	-	87004570	-	Hex Bolt 6mm x 1 x 70mm
5	2	86626000	86626000	86626000	86626000	86626000	-	-	Hex Nut - Nylock 1/4"-20
5	2	-	-	-	-	-	87105000	-	Hex Nut - Nylock M6x1

Handle Assemblies & Support Guide Assemblies



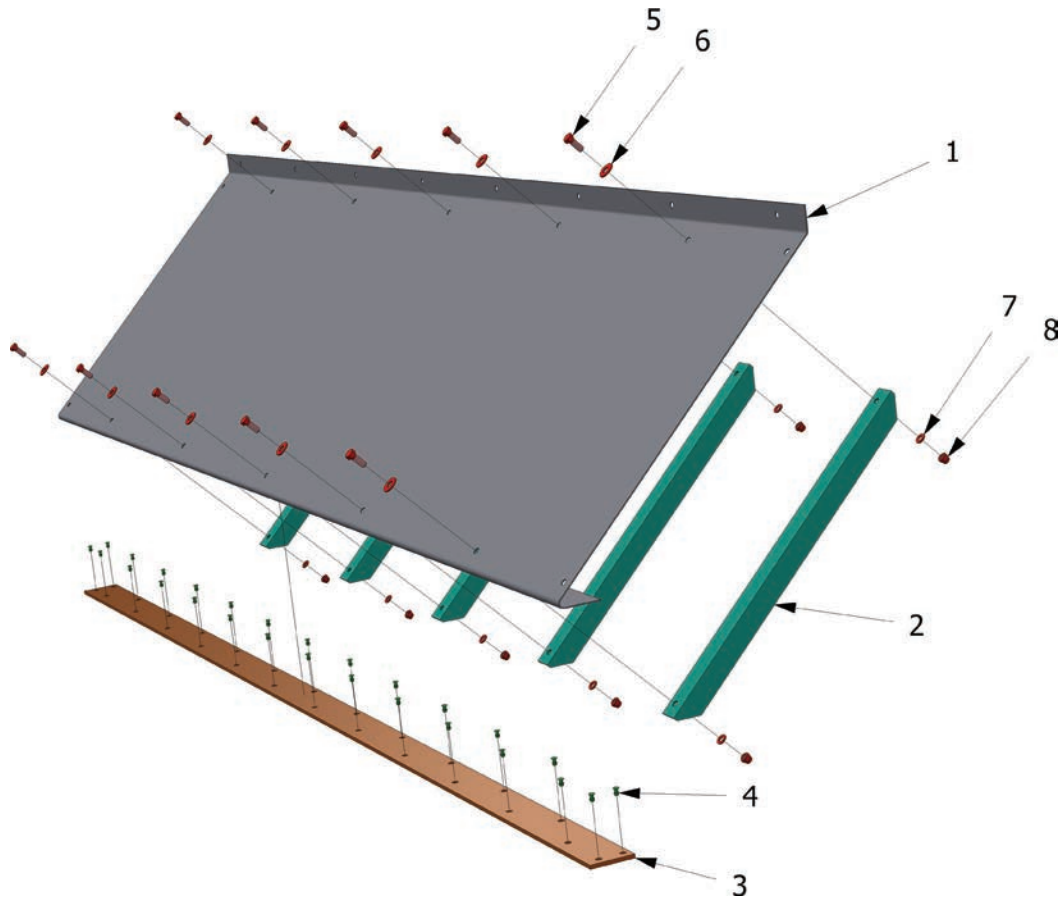
Handle Assemblies

ID#	Qty	Part #	Description
1	-	11262401	Telescoping Ball Valve Handle Assembly (Includes items 15-19)
2	-	11262501	Telescoping Ball Valve Handle Assembly (Includes items 15-19)
3	-	11262601	Telescoping TB Ball Valve Handle Assembly (Includes items 15-19)
4	-	11262701	Telescoping OSP Ball Valve Handle Assembly (Includes items 15-19)
5	-	11262801	Telescoping Control Valve Handle Assy SAE (Includes items 15-17, 20-21)
6	-	11262901	Telescoping Control Valve Handle Assy Metric (Includes items 15-17, 20-21)
7	-	11229429	Control Valve Handle Assembly SAE 5" (Includes items 15, 20-21)
8	-	11229430	Control Valve Handle Assembly MET 5" (Includes items 15, 20-21)
9	-	11263001	Telescoping 23-39" Rotary Control Valve Handle Assembly Metric (Includes items 16-17)
10	-	11263101	Telescoping 33-59" Rotary Control Valve Handle Assembly Metric (Includes items 16-17)
15	1	85711565	ROUND END CAP - RED - .875" ID X 1.5" LONG FOR HANDLES
16	1	87005950	BOLT HEX 8.8 8-1.25MM X 35MM ZN
17	2	87101000	NUT HEX NYLOCK 8MM-1.25
18	3	86552500	WASHER FLAT 5/16" ZINC
19	1	87006200	BOLT HEX 8.8 8-1.25MM X 60MM ZN
20	1	86555000	WASHER LOCK 3/8"
	1	87076500	WASHER LOCK 10MM
21	1	86628500	NUT HEX GR8 ZN 3/8-16
	1	87101500	NUT HEX 10MM

Support Guide Assemblies

ID#	Qty	Part #	Description
22	-	06627102	Handle Mount Support Assembly (Included items 23 & 26-30)
23	1	06625401	Angle Mount Plate 5-1/4"
24	-	06747801	Handle Mount Support Assembly (Included items 25-30)
25	1	06698501	Angle Mount Plate 9-1/4"
26	1	03690401	Handle Mount Plate
27	1	83218400	Grommet 1 X .25 X 1.375 2572
28	2	87008510	BOLT HEX 10.9 10MM X 35MM
29	4	87076000	WASHER FLAT 10MM
30	2	87102000	NUT HEX NYLOCK 10MM

Front Shield Assembly



Front Shield Assembly

ID#	Qty	36" Part #	30" Part #	Description
-	-	035395xx*	035396xx*	Front Shield Assembly x Length (Includes all items below)
1	1	035397xx	-	Formed Sheet, 36" x Length, 16 Gauge Galvanized
		-	35398xx	Formed Sheet, 30" x Length, 14 Gauge Galvanized
2	varies	03539901	03540001	Stiffener Angle 1-1/2" x 1-1/2"x 1/8"
3	1	03540110		UHMW Bearing Strip 102" 1/4 X 2-7/8 No Holes
4	varies	86528000		Pop Rivet .188"x.250"-.375" Grip, AL AB6-6
5	2/stiffener	86437000	-	Bolt Hex GR8 ZN 3/8"-16 X 3/4"
		-	86437500	Bolt Hex GR8 ZN 3/8-16x1
6	2/stiffener	86554000		Washer Flat 3/8
7	2/stiffener	86555000		Washer Lock 3/8
8	2/stiffener	86628500		Nut Hex GR8 ZN 3/8-16

* Part numbers and descriptions vary based on trailer width and application.