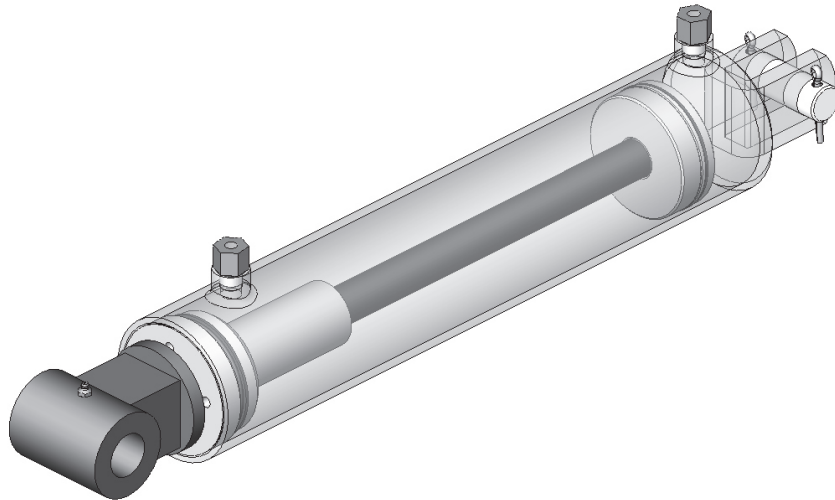




Hydraulic Cylinders Repair Parts Catalog



LANDOLL COMPANY, LLC

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Illustrated Parts List

Instructions for Ordering Parts

**** Repair parts must be ordered through an authorized dealer ****

DEALER INSTRUCTIONS FOR ORDERING PARTS FROM LANDOLL PARTS DISTRIBUTION CENTER

PHONE #: 800-423-4320 OR 785-562-5381

FAX #: 888-527-3909

ORDER ONLINE: Dealer.landoll.com

Cylinders by Bore Size and Stroke

Bore Size x Stroke	Part Number	Rod Diameter
1.75 x 06	129251P	1.0
2 x 03	204810P	1.125
2 x 06	9D282G	1.0
2 x 06	9D282L	1.125
2.5 x 06	9J440G	1.25
2.5 x 06	9J440L	1.125
2.5 x 20	6J812G	1.25
2.5 x 20	6J812L	1.25
2.5 x 20	116344P	1.25
3 x 06	3J567P	1.375
3 x 08	2J674C	1.25
3 x 08	2J674L	1.25
3 x 08	2J674M	1.375
3 x 08	2J674P	1.375
3 x 08	3J603C	1.25
3 x 08	3J603P	1.375
3 x 08	5J280G	1.125
3 x 08	5J280P	1.375
3 x 08	5K440G	1.25
3 x 08	5K440L	1.25
3 x 16	9D137G	1.375
3 x 16	9D137L	1.5
3 x 30	6J216P	1.375
3.5 x 06	167310P	1.5
3.5 x 08	5J128P	1.375
3.5 x 16	4K777G	1.375
3.5 x 16	6K843G	1.5
3.5 x 16	6K843L	1.5
3.5 x 16	7J680C	1.75
3.5 x 16	7J680G	1.75
3.5 x 16	7J680P	1.5
3.5 x 16	9D524G	1.375
3.5 x 16	9D524L	1.5
3.5 x 16	9K733G	1.75
3.5 x 16	9K733L	1.75
3.5 x 16	2P381L	1.25
3.5 x 20	1P156L	1.5
3.5 x 20	6J811G	1.375
3.5 x 20	6J811L	1.5
3.75 x 08	2K087P	1.375
3.75 x 16	8K902M	-

Bore Size x Stroke	Part Number	Rod Diameter
3.75 x 16	8K924M	-
3.75 x 16	2P931L	1.375
4 x 08	2K088P	1.375
4 x 08	193252P	1.375
4 x 08	2K088P	1.375
4 x 08	1-242-010171-3P	1.75
4 x 10	167308P	1.75
4 x 12	1-242-010197-3P	1.75
4 x 16	4K992G	1.75
4 x 16	4K992L	1.75
4 x 16	8K901M	-
4 x 16	8K923M	-
4 x 16	9D731G	1.75
4 x 16	9D731L	1.5
4 x 20	1-242-010180-3P	1.75
4 x 24	3J568G	1.75
4 x 24	3J568L	2.0
4 x 24	9J493G	1.75
4 x 24	9J493L	1.75
4 x 24	1-242-010172-3P	1.75
4 x 30	5J830G	1.75
4 x 30	5J830L	1.75
4 x 30	5J830P	1.75
4 x 30	9K502P	1.75
4 x 36	2P460L	1.75
4 x 48	2P810L	2.0
4.5 x 08	2K094P	2.0
4.5 x 08	193251P	2.0
4.5 x 14	9K389G	1.75
4.5 x 14	9K389L	1.75
4.5 x 14	181342P	2.0
4.5 x 16	3J818G	1.75
4.5 x 16	3J818L	1.75
4.5 x 20	114004P	2.0
4.5 x 36	183553L	1.75
4.75 x 08	2K093P	1.5
5 x 24	1-242-010172-5P	2.0
5 x 42	173376L	2.0
5 x 48	9K501P	2.25
5.5 x 42	181526L	2.0

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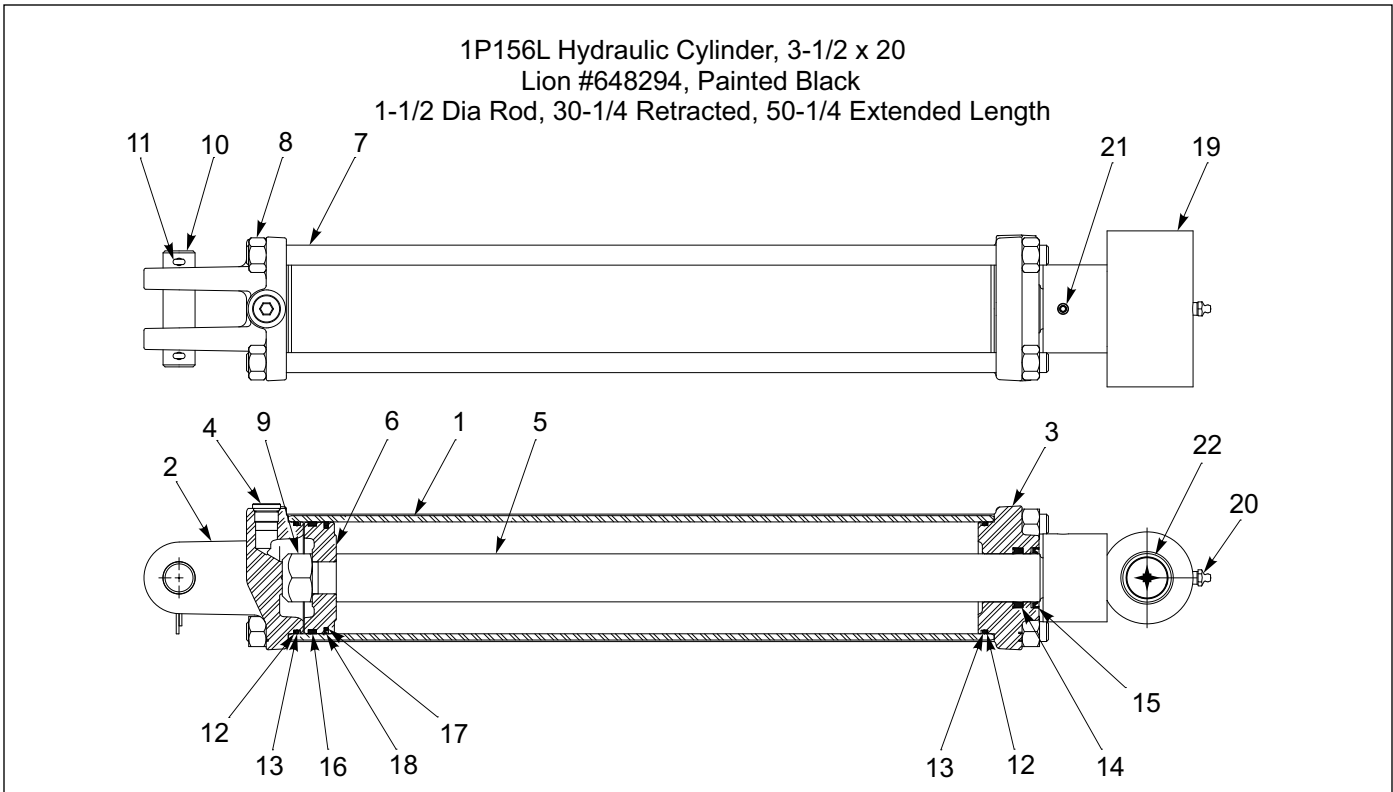


Figure 1-1: 1P156L Hydraulic Cylinder, 3-1/2 x 20 - Lion

1P156L Hydraulic Cylinder, 3-1/2 x 20 - Lion - 648294

ITEM	PART NUMBER	DESCRIPTION	QTY
	1P156	HYD CYL, 3 1/2 X 20	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	ROD	1
6	NSS	PISTON	1
7	NSS	TIE ROD	4
8	NSS	NUT, HEX 5/8-18, ZP	8
9	NSS	NUT, LOCK 1-14, GRB, ZP	1
10	5J650	PIN, 1.0 X 3.625 H2	1
11	110-4224	PIN, COTTER 3/16 X 2IN LG	2
12	NSS	SEAL, BU#236 19PI-236	2
13	NSS	O-RING, 236 (3.25X3.5) D90	2
14	NSS	SEAL, HALLITE 605 ROD 1-1/2 D	1
15	NSS	SEAL, NOK-AR2263-EO 1-1/2" BO	1
16	NSS	WEAR RING, 3.50-3.25-.25-GFN	1
17	NSS	O-RING, 151 (3.0X3.188) DURO90	1
18	NSS	SEAL, PTFE PISTON RING 3-1/2D	1
19	1P339	CROSS TUBE, ROD END (INCLUDES ITEMS 20-22)	1
20	1-298-010001-1	FIT, GREASE 1/8PTF X 0.688	1
21	1P444	SET SCREW, 3/8-16 X 3/4 NYLON TIP	1
22	1P196	SPRING BUSHING, 1.25X1.5X0.75	2
23	648397	SEAL KIT (INCLUDES ITEMS 12-18)	

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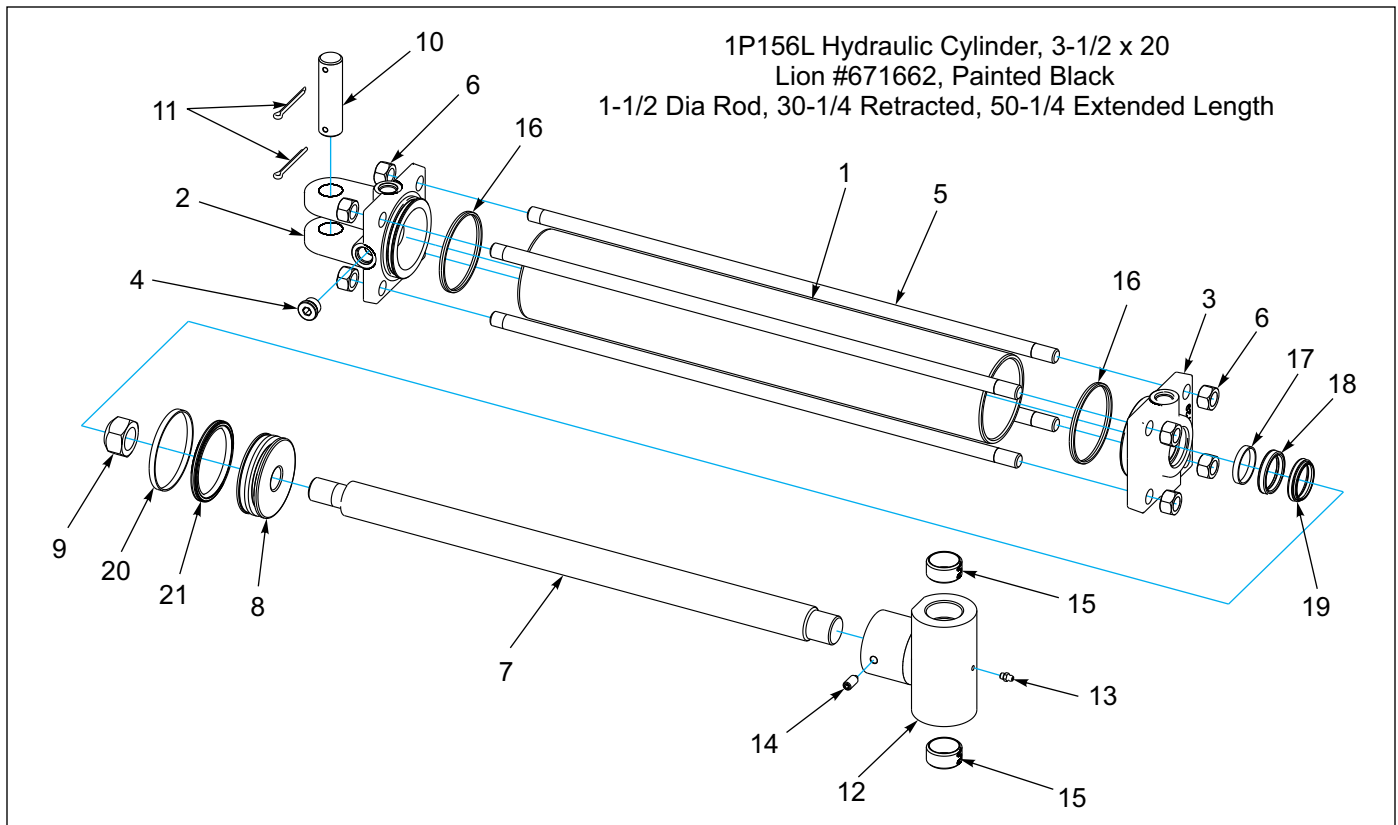


Figure 1-2: 1P156L Hydraulic Cylinder, 3-1/2 x 20 - Lion

1P156L Hydraulic Cylinder, 3-1/2 x 20 - Lion - 671662

ITEM	PART NUMBER	DESCRIPTION	QTY
	1P156	HYD CYL, 3 1/2 X 20	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	NUT, LOCK 1-14, GRB, ZP	1
10	5J650	PIN, 1.0 X 3.625 H2	1
11	110-4224	PIN, COTTER 3/16 X 2IN LG	2
12	1P339	CROSS TUBE, ROD END (INCLUDES ITEMS 13-15)	1
13	1-298-010001-1	FIT, GREASE 1/8PTF X 0.688	1
14	1P444	SET SCREW, 3/8-16 X 3/4 NYLON TIP	1
15	1P196	SPRING BUSHING, 1.25X1.5X0.75	2
16	NSS	SEAL, BU#236 19PI-236	2
17	NSS	O-RING, 236 (3.25X3.5) D90	2
18	NSS	SEAL, HALLITE 605 ROD 1-1/2 D	1
19	NSS	SEAL, NOK-AR2263-EO 1-1/2"BO	1
20	NSS	WEAR RING, 3.50-3.25-.25-GFN	1
21	NSS	O-RING, 151 (3.0X3.188) DURO90	1
22	659139	SEAL KIT (INCLUDES ITEMS 16-21)	1

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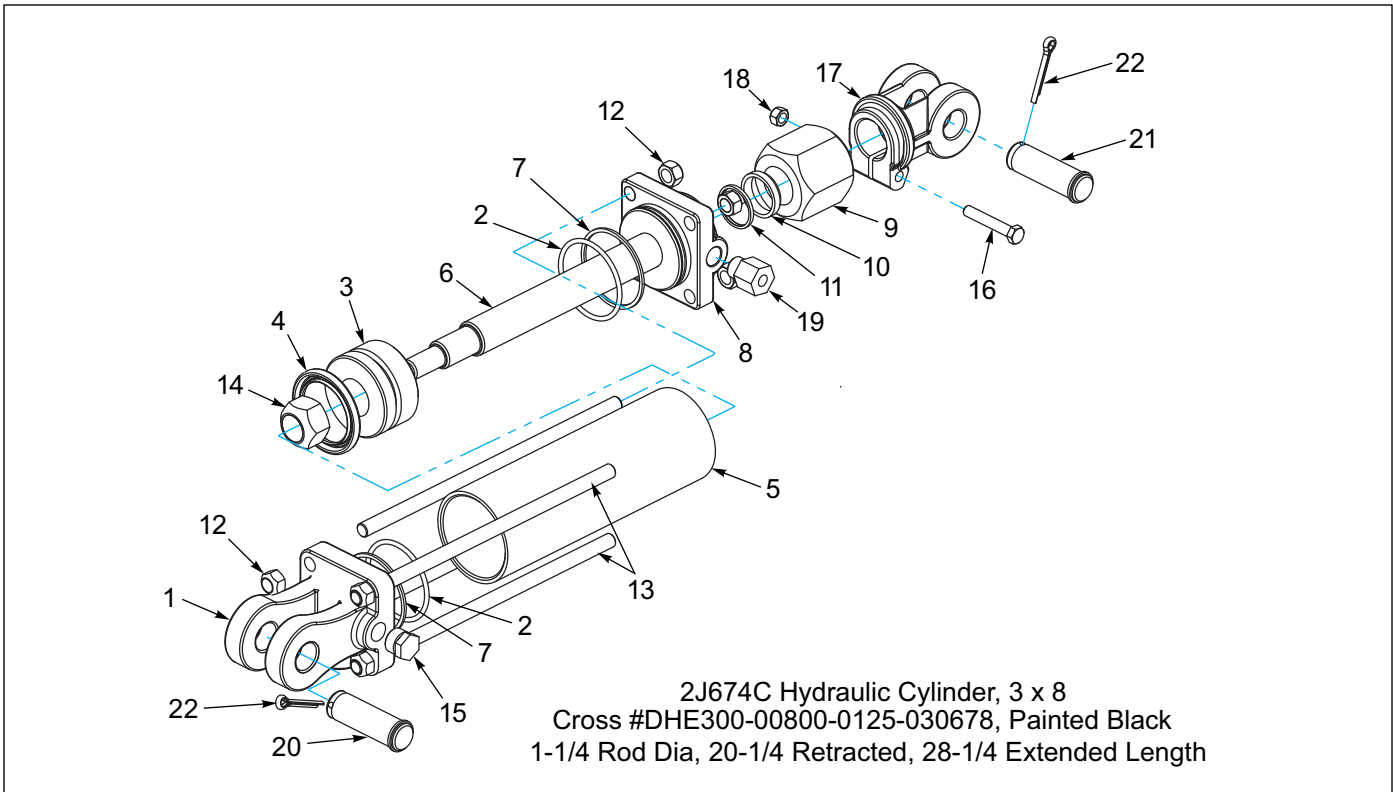


Figure 1-3: 2J674C Hydraulic Cylinder, 3 x 8 - Cross

2J674C Hydraulic Cylinder, 3 x 8 - Cross

ITEM	PART NUMBER	DESCRIPTION	QTY
	2J674	HYD CYL. 3 X 8	
1	9K471	BASE CLEVIS	1
2	NSS	O-RING	2
3	9K472	PISTON	1
4	NSS	CROWN SEAL	1
5	5K687	TUBE	1
6	9K473	ROD	1
7	NSS	BACK UP	2
8	9K474	HEAD	1
9	9K475	STOP COLLAR ASSEMBLY	1
10	NSS	WIPER	1
11	NSS	U-CUP	1
12	9K485	TIE ROD NUT	8
13	9K476	TIE ROD	4
14	9K477	NUT	1
15	NSS	PLUG ASSEMBLY	1
16	5K697	CAPSCREW	1
17	5K696	ROD CLEVIS	1
18	5K698	NUT	1
19	7J025	ADAPTER ASSEMBLY	2
20	2D799	CLEVIS PIN, 1 X 3"	1
21	9K492	CLEVIS PIN	1
22	110-4224	PIN,COTTER 3/16 X 2IN LG	2
23	9K491	SEAL KIT (INCLUDES ITEMS 2,5,7,10 AND 11)	1

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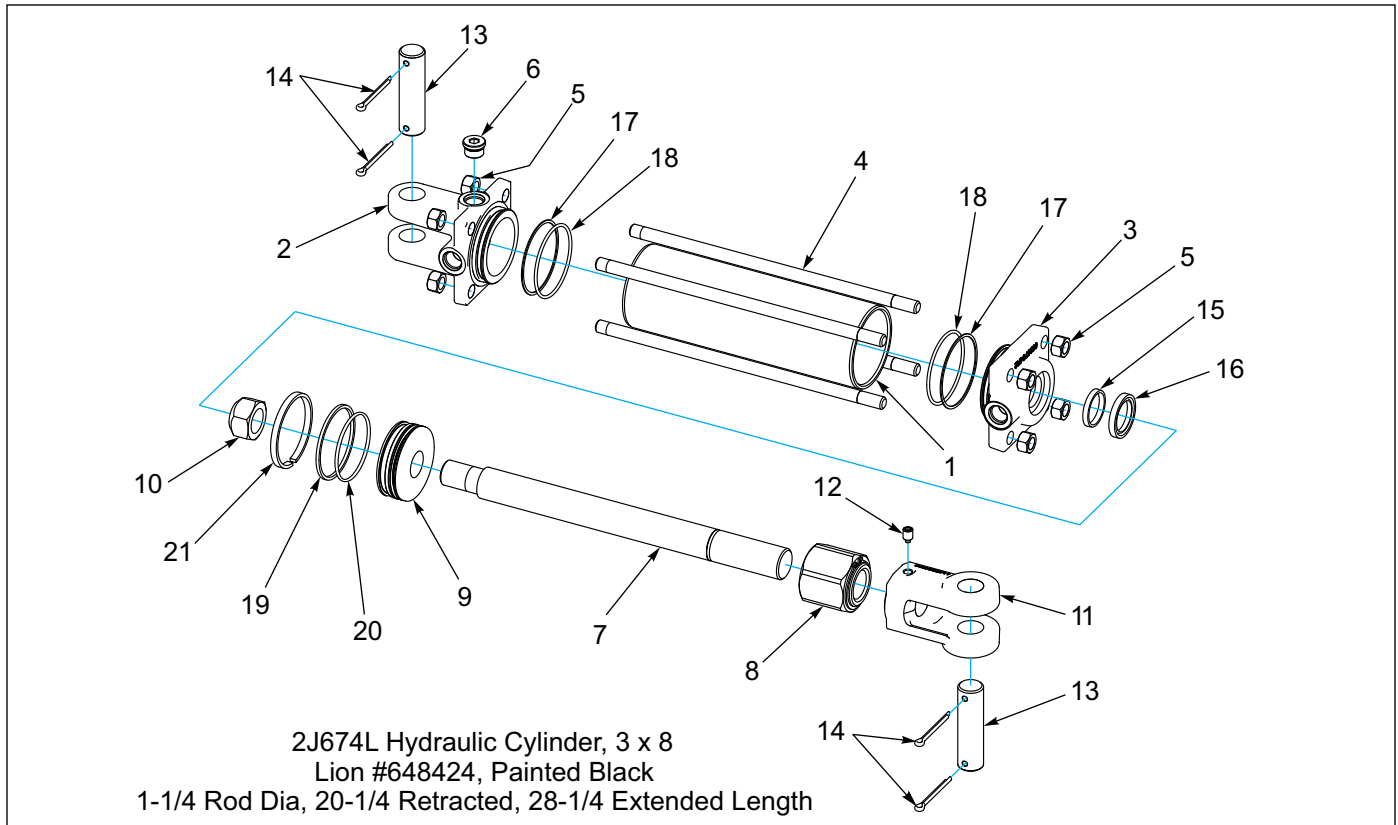


Figure 1-4: 2J674L Hydraulic Cylinder, 3 x 8 - Lion

2J674L Hydraulic Cylinder, 3 x 8 - Lion - 648424

ITEM	PART NUMBER	DESCRIPTION	QTY
	2J674	HYD CYLINDER - 3 X 8	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1-512-010007-09	NUT,HEX 1/2-13,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	STROKE CONTROL ASSEMBLY	1
9	NSS	PISTON	1
10	NSS	NUT, LOCK 1.0-14 GRB	1
11	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEMS 12)	1
12	1P443	SET SCREWS,3/8-16 X 1/2 NYLON TIP	1
13	5J650	PIN, 1.0 X 3.625 H2	2
14	110-4224	PIN,COTTER 3/16 X 2IN LG	4
15	NSS	SEAL,HALLITE 605 ROD 1-1/4 D	1
16	NSS	SEAL WIPER ROD, 1.250 METAL E	1
17	NSS	SEAL,BU#232 19PI-232	2
18	NSS	O-RING,232 (2.75X3) BUNAN D9	2
19	NSS	SEAL,PTFE PISTON RING 3 DIA	1
20	NSS	O-RING, 145 (2.562X2.75) DUR9	1
21	NSS	WEAR RING,3.00-2.75-.25-GFN	1
22	1P743	SEAL KIT (INCLUDES ITEMS 15-21)	

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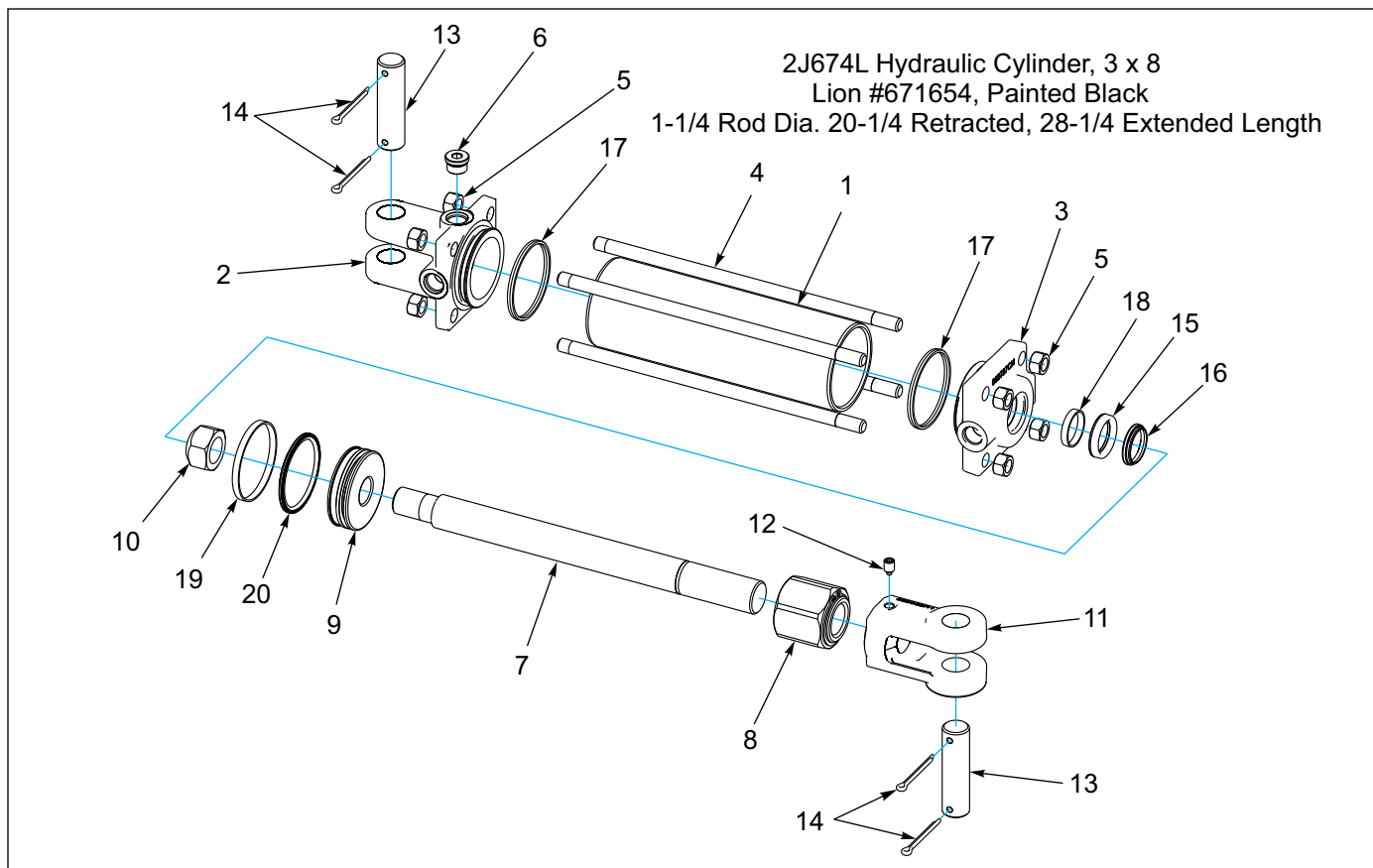


Figure 1-5: 2J674L Hydraulic Cylinder, 3 x 8 - Lion

2J674L Hydraulic Cylinder, 3 x 8 - Lion - 671654

ITEM	PART NUMBER	DESCRIPTION	QTY
	2J674	HYD CYLINDER - 3 X 8	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1-512-010007-09	NUT,HEX 1/2-13,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	STROKE CONTROL ASSEMBLY	1
9	NSS	PISTON	1
10	NSS	NUT, LOCK 1.0-14 GRB	1
11	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEMS 12)	1
12	1P443	SET SCREWS,3/8-16 X 1/2 NYLON TIP	1
13	5J650	PIN, 1.0 X 3.625 H2	2
14	110-4224	PIN,COTTER 3/16 X 2IN LG	4
15	NSS	SEAL,HALLITE 605 ROD 1-1/4 D	1
16	NSS	SEAL WIPER ROD, 1.250 METAL E	1
17	NSS	SEAL,BU#232 19PI-232	2
18	NSS	O-RING,232 (2.75X3) BUNAN D9	2
19	NSS	SEAL,PTFE PISTON RING 3 DIA	1
20	NSS	WEAR RING,3.00-2.75-.25-GFN	1
21	1P743	SEAL KIT (INCLUDES ITEMS 15-20)	

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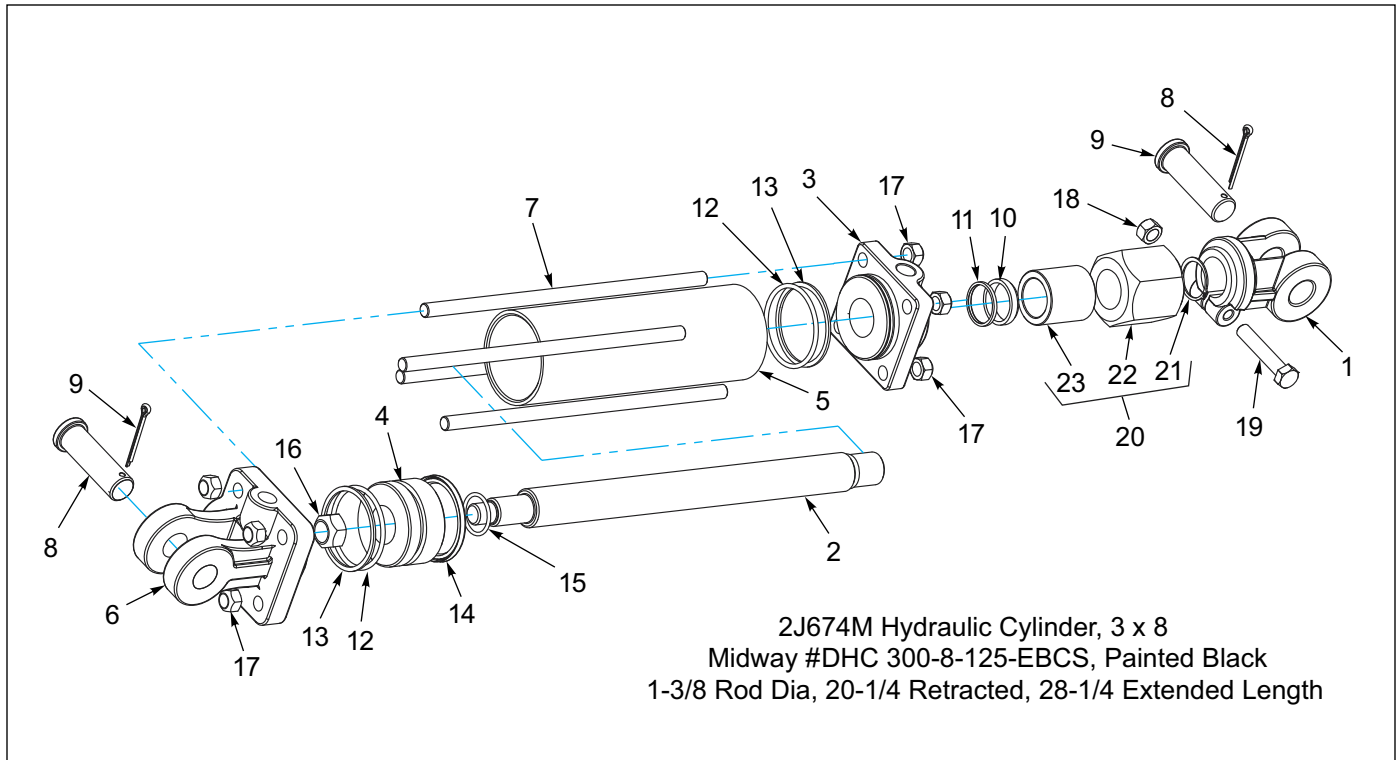


Figure 1-6: 2J674M Hydraulic Cylinder, 3 x 8 - Midway

2J674M Hydraulic Cylinder, 3 x 8 - Midway

ITEM	PART NUMBER	DESCRIPTION	QTY
	2J674	HYD CYLINDER - 3 X 8	
1	9K484	CLEVIS	1
2	9K483	ROD	1
3	9K482	HEAD	1
4	9K481	PISTON	1
5	9K480	TUBE	1
6	9K479	BASE	1
7	9K478	TIE ROD	4
8	9K038	CLEVIS PIN	2
9	110-4224	PIN,COTTER 3/16 X 2IN LG	2
10	NSS	ROD WIPER	1
11	NSS	U-CUP	1
12	NSS	O-RING	2
13	NSS	BACK-UP	2
14	NSS	CROWN SEAL	1
15	NSS	O-RING	1
16	NSS	PISTON NUT,	1
17	9K485	TIE ROD NUT,	8
18	1-512-010005-05	CLEVIS NUT, 3/8-16 NC STOVER GR. B PLATED	1
19	7C937	HHCS, 3/8-16 NC X 1 3/4" SOCKET HD.	1
20	9K486	COLLAR ASSEMBLY (INCLUDES ITEMS 21-23)	1
21	9K489	RETAINER	1
22	9K488	HEX COLLAR	1
23	9K487	ROD COLLAR	1
24	9K490	SEAL KIT (INCLUDES ITEMS 10-15)	1

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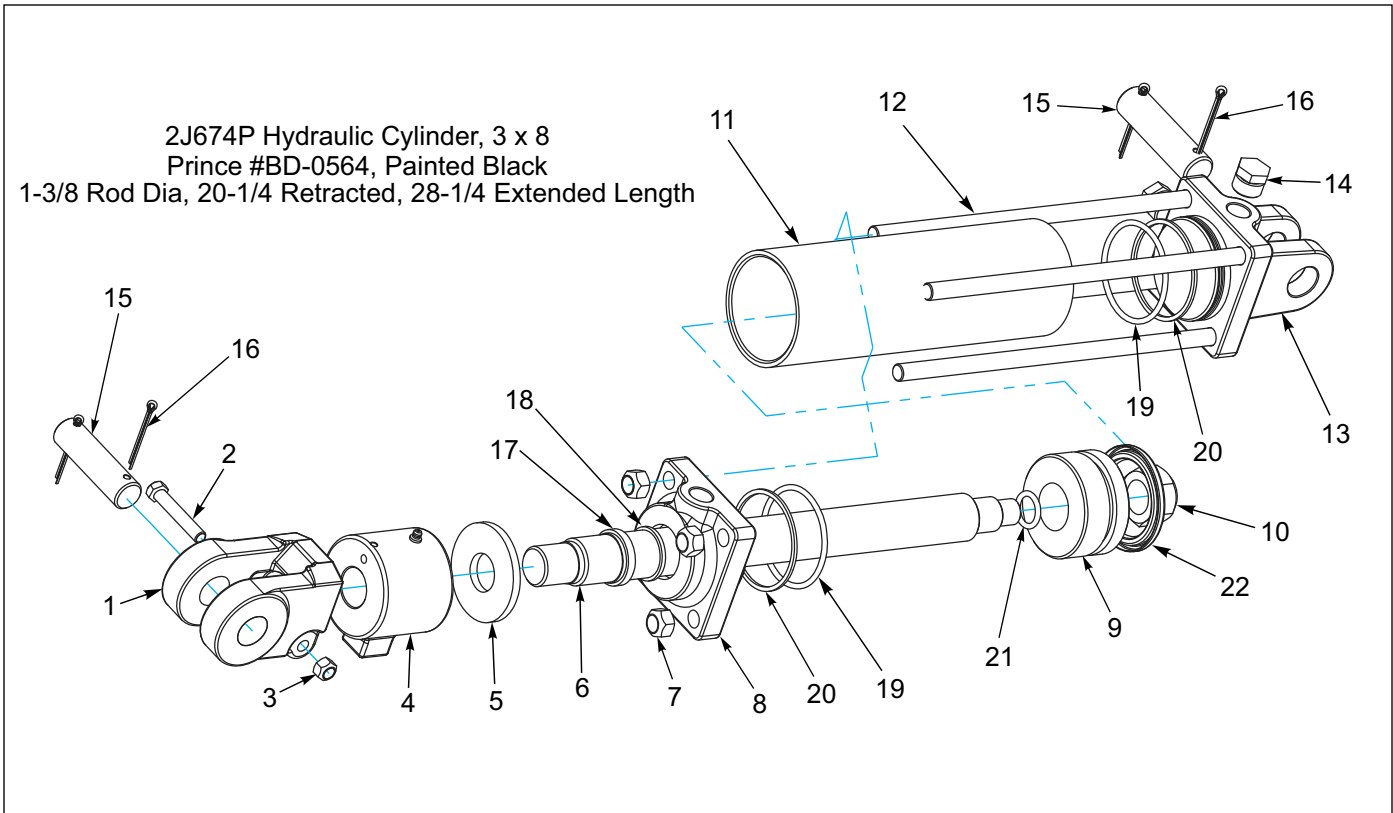


Figure 1-7: 2J674P Hydraulic Cylinder, 3 x 8 - Prince

2J674P Hydraulic Cylinder, 3 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	2J674	HYD CYLINDER - 3 X 8	
1	9D481	ROD END CLEVIS	1
2	1-654-010051-10	HHCS, 3/8-16 NC X 2 1/4" LONG GR. 5	1
3	1-512-010005-05	HEX NUT, SLFLKG GRB 3/8-16	1
4	7K943	STROKE CONTROL ASSEMBLY	1
5	5J170	DUST COVER	1
6	7K942	PISTON ROD	1
7	2C112	HEX NUT, 1/2-13 NC - HEAVY	4
8	7K931	GLAND (WITH PORT REQUIRING O-RING FITTING)	1
9	7K930	PISTON	1
10	NSS	LOCKNUT, 1-14 UNF, SELF LOCKING	1
11	3J114	TUBE	1
12	7K934	TIE ROD	4
13	7J049	BASE (WITH PORTS REQUIRING O-RING FITTINGS)	1
14	1-007-010025	PLUG, 3/4-16 O-RING BOSS	3
15	5J650	CLEVIS PIN	2
16	110-4224	PIN,COTTER 3/16 X 2IN LG	4
17	NSS	ROD WIPER	1
18	NSS	U-CUP	1
19	NSS	O-RING	2
20	NSS	BACK-UP WASHER	2
21	NSS	O-RING	1
22	NSS	CROWN SEAL	1
23	7K926	PMCK-BD-0565 SEAL KIT (INCLUDES ITEMS 17-22)	

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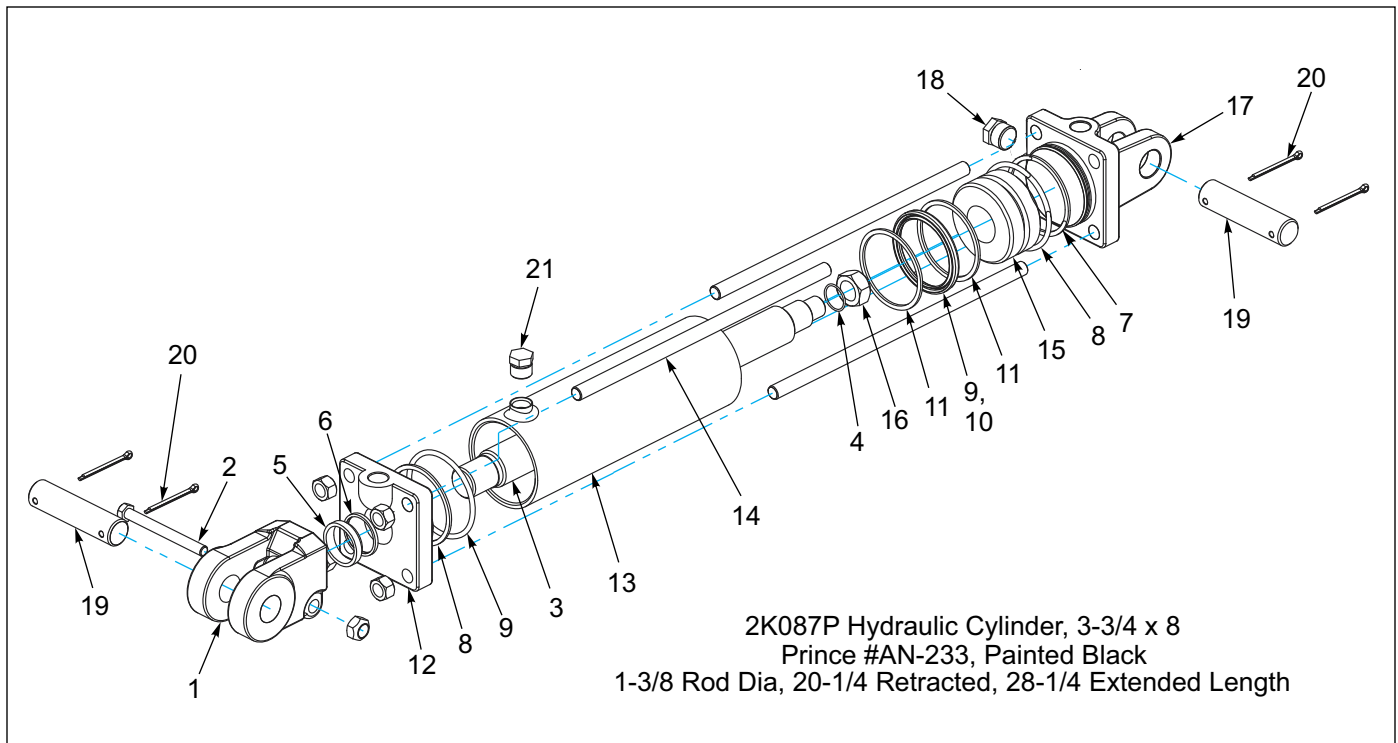


Figure 1-8: 2K087P Hydraulic Cylinder, 3-3/4 x 8 - Prince

2K087P Hydraulic Cylinder, 3-3/4 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	2K087	HYD CYLINDER - 3.75 X 8	
1	3J723	ROD END CLEVIS, W/1.125-12UNF-3 THREAD (PRIOR TO 2/98)	1
1	6K841	ROD END CLEVIS, W/ 1.313-12UNF-3 THREAD (AFTER 2/98)	1
2	1-654-010051-11	SCREW HX CP, 3/8-16 X 2 1/2 G5 ZP	1
2	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
3	2K321	PISTON ROD, 1.125-12UNF-3 CLEVIS END (PRIOR TO 2/98)	1
3	6K840	PISTON ROD, 1.313-12UNF-3 CLEVIS END (AFTER 2/98)	1
4	NSS	O-RING	1
5	NSS	ROD WIPER	1
6	NSS	U-CUP	1
7	NSS	BACK UP WASHER	2
8	NSS	O-RING	2
9	NSS	O-RING	1
10	NSS	TEFLON SEAL	1
11	NSS	BEARING RING	2
12	2K318	GLAND W/ BUSHING	1
13	9J651	TUBE ASSEMBLY	1
14	8J859	TIE ROD WITH NUT	4
15	2K319	PISTON	1
16	NSS	LOCK NUT, 1"-14 NF	1
17	7J064	BASE	1
18	1-007-0100025	PLUG,3/8-16 O-RING BOSS	3
19	7J067	CLEVIS PIN, 1" DIA. X 4" LONG	2
20	110-4224	PIN, COTTER 3/16 X 2IN LG	4
21	9J623	PLUG	1
22	2K320	PMCK-AN-233 SEAL KIT (INCLUDES ITEMS 4-11)	

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2K088P Hydraulic Cylinder, 4 x 8
 Prince #AN-234, Painted Black
 1-3/8 Rod Dia, 20-1/4 Retracted, 28-1/4 Extended Length

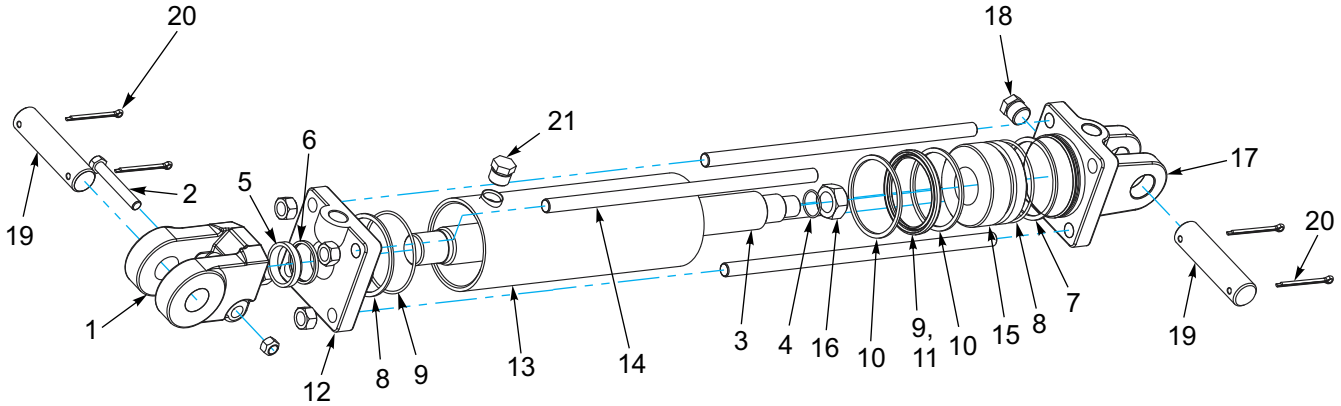


Figure 1-9: 2K088P Hydraulic Cylinder, 4 x 8 - Prince

2K088P Hydraulic Cylinder, 4 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	2K088	HYD CYLINDER - 4 X 8	
1	3J723	ROD END CLEVIS, W/1.125-12UNF-3 THREAD (PRIOR 2/98)	1
1	6K841	ROD END CLEVIS, W/1.313-12UNF-3 THREAD (AFTER 2/98)	1
2	1-654-010051-11	SCREW HX CP, 3/8-16 X 2 1/2 G5 ZP	1
2	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
3	2K321	PISTON ROD, 1.125-12UNF-3 CLEVIS END (PRIOR TO 2/98)	1
3	6K840	PISTON ROD, 1.313-12UNF-3 CLEVIS END (AFTER 2/98)	1
4	NSS	O-RING	1
5	NSS	ROD WIPER	1
6	NSS	U-CUP	1
7	NSS	BACK UP WASHER	2
8	NSS	O-RING	2
9	NSS	O-RING	1
10	NSS	BEARING RING	2
11	NSS	TEFON SEAL	2
12	2K322	GLAND	1
13	9J622	TUBE ASSEMBLY	1
14	8J859	TIE ROD WITH NUT	4
15	2K323	PISTON	1
16	NSS	LOCK NUT, 1"-14 NF	1
17	7J053	BASE	1
18	1-007-010025	PLUG, 3/4-16 O-RING BOSS	3
19	7J067	CLEVIS PIN, 1" DIA. X 4" LONG	2
20	110-4224	PIN,COTTER 3/16 X 2IN LG	4
21	9J623	PLUG	1
22	2K324	SEAL KIT (INCLUDES ITEMS 4 - 11)	

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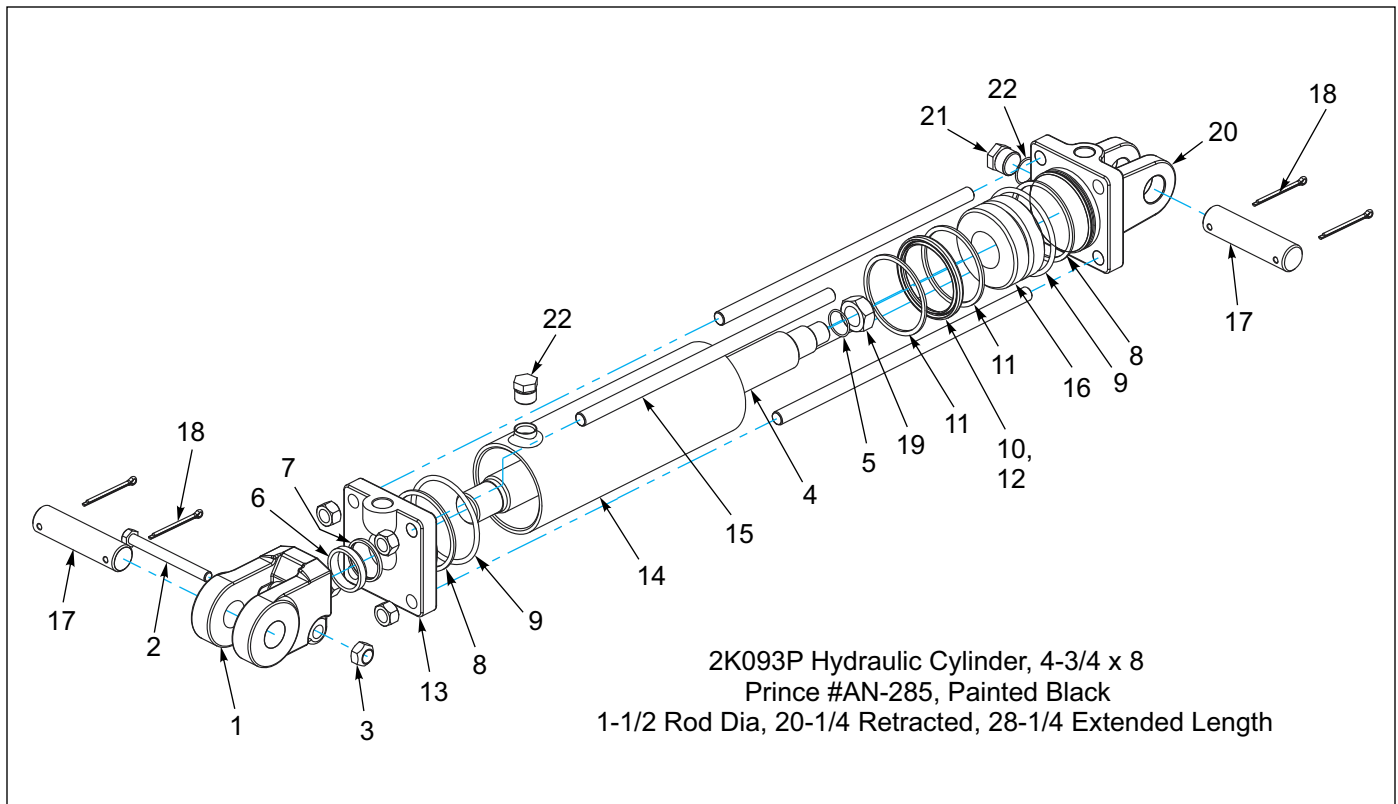


Figure 1-10: 2K093P Hydraulic Cylinder, 4-3/4 x 8 - Prince

2K093P Hydraulic Cylinder, 4-3/4 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	2K093	HYD CYLINDER - 4 3/4 X 8	
1	1J072	ROD END CLEVIS	1
2	1-654-010051-11	SCREW HX CP 3/8-16X2-1/2 G5 ZP	1
3	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
4	2K442	PISTON ROD	1
5	NSS	O-RING	1
6	NSS	ROD WIPER	1
7	NSS	U-CUP	1
8	NSS	BACK UP WASHER	2
9	NSS	O-RING	2
10	NSS	O-RING	1
11	NSS	BEARING RING	2
12	NSS	TEFON SEAL	1
13	2K443	GLAND W/ BUSHING	1
14	9J628	TUBE ASSEMBLY	1
15	5J161	TIE ROD WITH NUT	4
16	2K444	PISTON	1
17	7J067	CLEVIS PIN, (1" DIA. X 4" LONG)	2
18	110-4224	PIN,COTTER-3/16 X 2IN LG	4
19	8J852	LOCK NUT, 1-1/8"-12 GRB,ZP	1
20	7J057	BASE	1
21	1-007-010025	PLUG, 3/4-16 O-RING BOSS	3
22	9J623	O-RING	1
23	2K445	SEAL KIT (INCLUDES ITEMS 5-12)	

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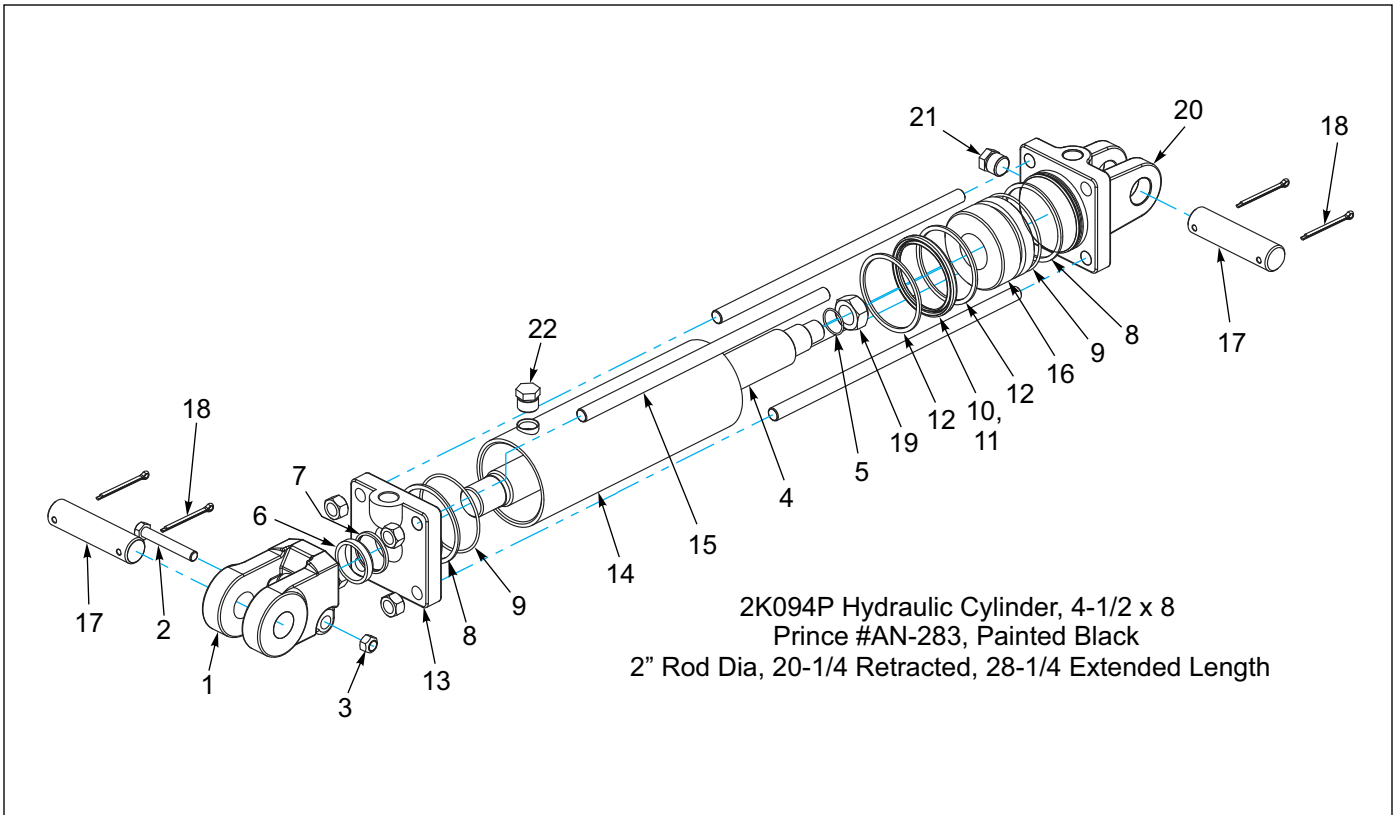


Figure 1-11: 2K094P Hydraulic Cylinder, 4-1/2 x 8 - Prince

2K094P Hydraulic Cylinder, 4-1/2 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	2K094	HYD CYLINDER - 4 1/2 X 8	
1	1J072	ROD END CLEVIS	1
2	1-654-010051-11	SCREW HX CP 3/8-16X2-1/2 G5 ZP	1
3	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
4	2K446	PISTON ROD	1
5	NSS	O-RING	1
6	NSS	ROD WIPER	1
7	NSS	U-CUP	1
8	NSS	BACK UP WASHER	2
9	NSS	O-RING	2
10	NSS	O-RING	1
11	NSS	TEFLON SEAL	1
12	NSS	BEARING RING	2
13	2K447	GLAND W/ BUSHING	1
14	9J626	TUBE ASSEMBLY	1
15	5J161	TIE ROD WITH NUT	4
16	2K448	PISTON	1
17	6D529	CLEVIS PIN, (1" DIA. X 4" LONG)	2
18	110-4224	PIN,COTTER-3/16 X 2IN LG	4
19	8J852	LOCK NUT, 1-1/8"-12 GRB,ZP	1
20	7J059	BASE	1
21	1-007-010025	PLUG, 3/4-16 O RING BOSS	3
22	9J623	PLUG	1
23	2K449	SEAL KIT (INCLUDES ITEMS 5-12)	

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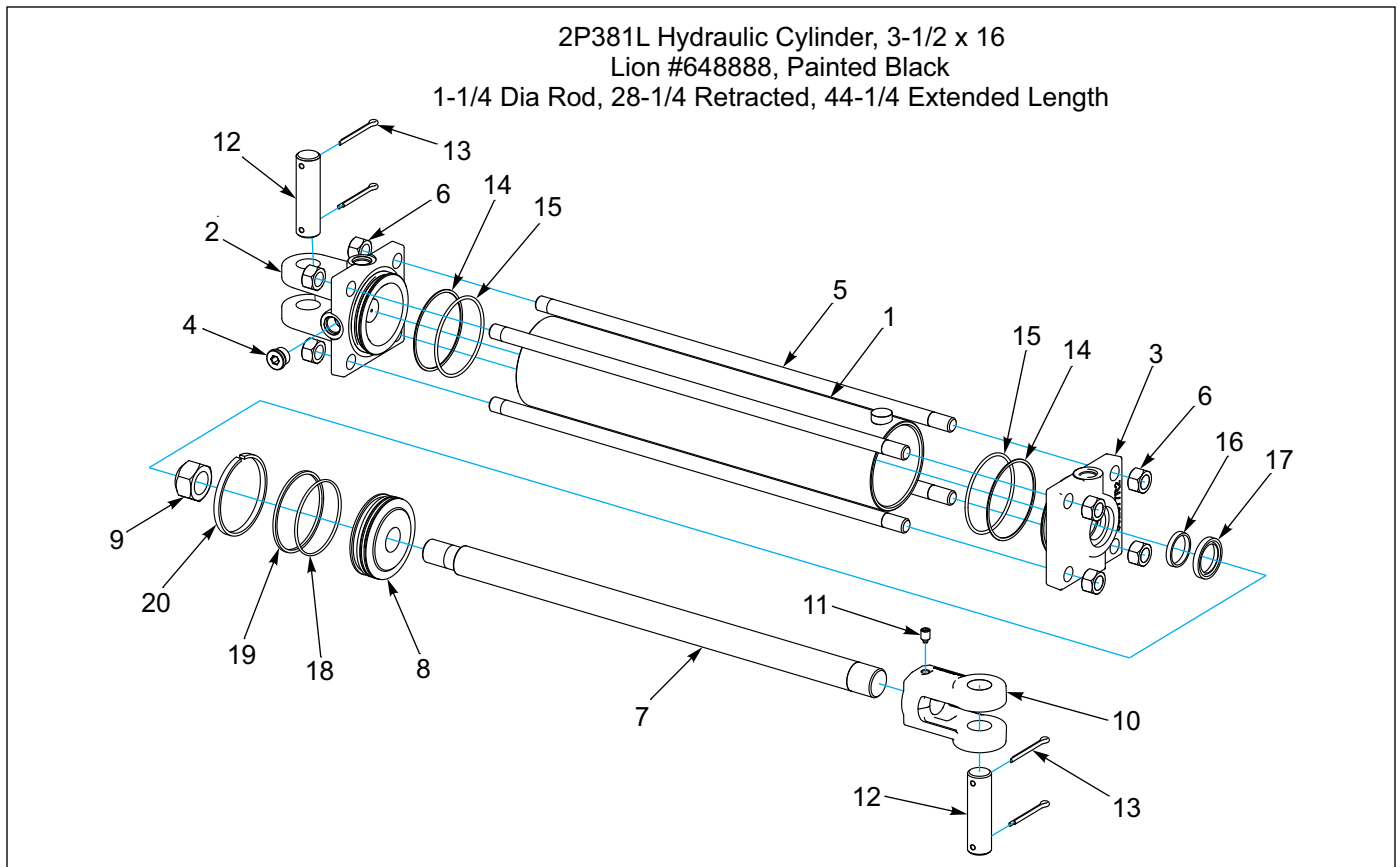


Figure 1-12: 2P381L Hydraulic Cylinder, 3-1/2 x 16 - Lion

2P381L Hydraulic Cylinder, 3-1/2 x 16 - Lion - 648888

ITEM	PART NUMBER	DESCRIPTION	QTY
	2P381	HYD CYLINDER - 3 1/2 X 16	
1	NSS	TUBE WELDMENT	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	1P804	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD, CYL 1.25	1
8	NSS	PISTON	1
9	9C223	NUT, LOCK 1-14, GRB, ZP	1
10	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 11)	1
11	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
12	5J650	PIN, 1.0 X 3.625 H2	2
13	110-4224	PIN, COTTER 3/16 X 2IN LG	4
14	NSS	SEAL, BU#236 19PI-236	2
15	NSS	O-RING, 236 (3.25X3.5) D90	2
16	NSS	SEAL, HALLITE 605 ROD 1-1/4 D	1
17	NSS	SEAL WIPER ROD, 1.250 METAL E	1
18	NSS	O-RING, 151 (3.0X3.188) DUR90	1
19	NSS	SEAL, PTFE PISTON RING 3-1/2D	1
20	NSS	WEAR RING, 3.50-3.25-.25-GFN	1
21	1P744	SEAL KIT (INCLUDES ITEMS 14-20)	

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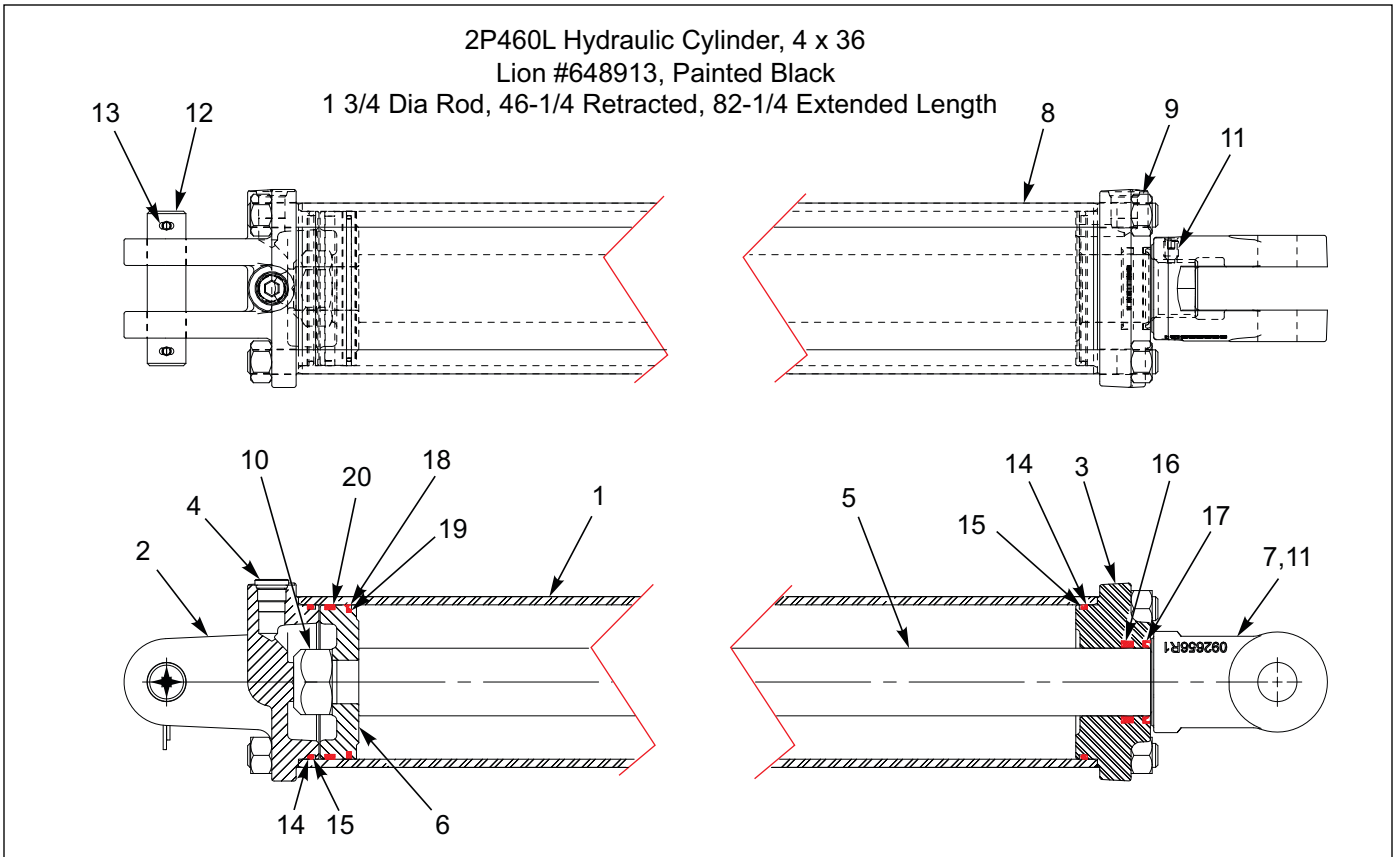


Figure 1-13: 2P460L Hydraulic Cylinder, 4 x 36 - Lion

2P460L Hydraulic Cylinder, 4 x 36 - Lion - 648913

ITEM	PART NUMBER	DESCRIPTION	QTY
	2P460	HYD CYLINDER - 4 X 36	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	ROD	1
6	NSS	PISTON	1
7	NSS	ROD CLEVIS	1
8	NSS	TIE ROD	4
9	NSS	NUT, HEX 5/8-18, ZP	8
10	8J852	NUT, LOCK 1-1/8-12, GRB, ZP	1
11	1P443	SET SCREW, 3/8-16 X 1/2 NYL	1
12	7J067	CLEVIS PIN, 1.0 X 4.0 H2	1
13	110-4224	PIN,COTTER 3/16 X 2IN LG	2
14	NSS	SEAL, BU#240 19PI-240	2
15	NSS	O-RING, 240 (3.75X4.0) DURO 90	2
16	NSS	SEAL, HALLITE 605 ROD 1.75D	1
17	NSS	SEAL, NOK-AR2573-EO 1.75BO	1
18	NSS	SEAL, PTFE PISTON RING 4 DIA.	1
19	NSS	O-RING, 153 (3.5X3.688) DUR	1
20	NSS	WEAR RING, 4.00-3.75-.25-GFN	1
21	1P745	SEAL KIT (INCLUDES ITEMS 14-20)	

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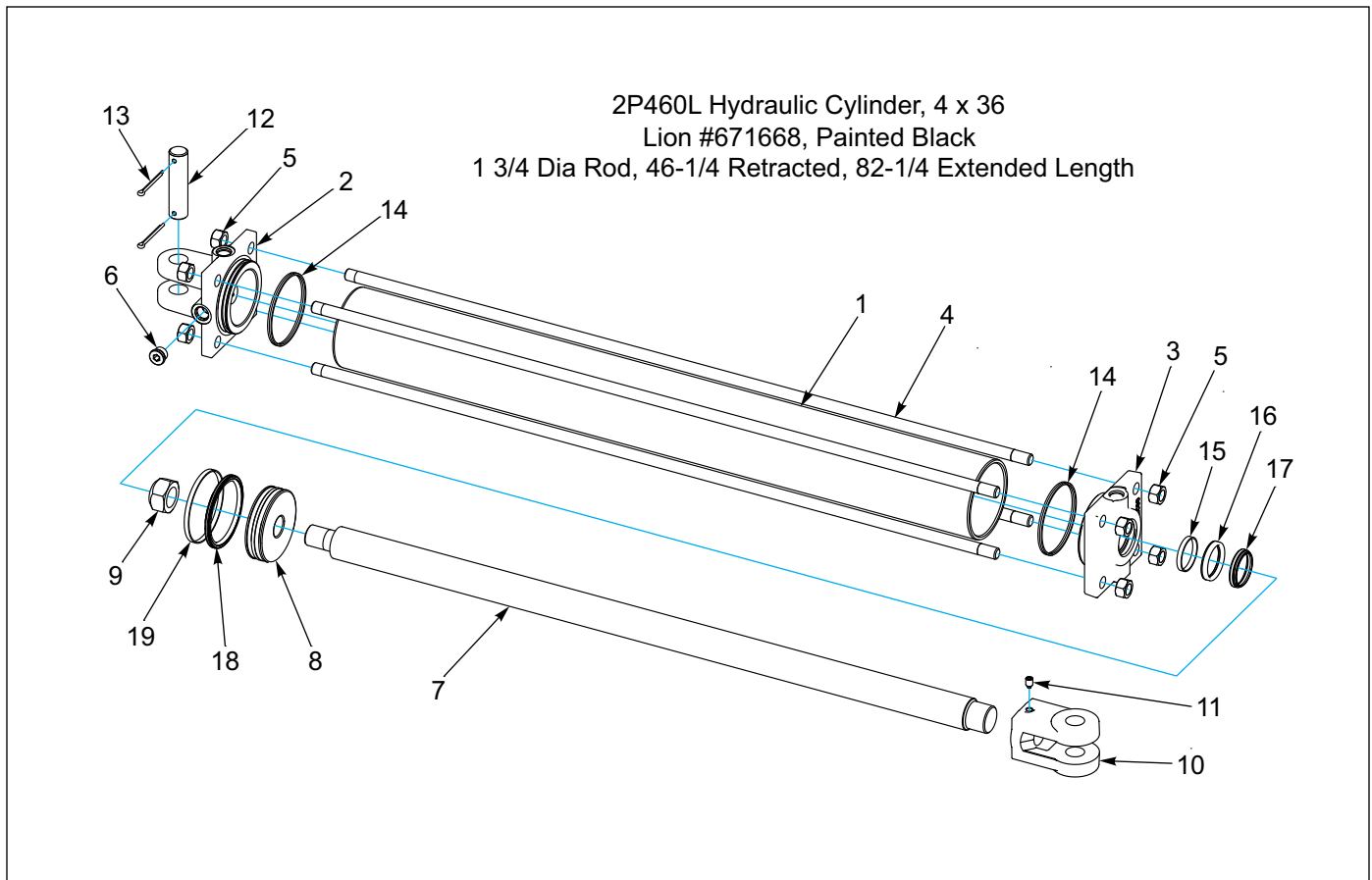


Figure 1-14: 2P460L Hydraulic Cylinder, 4 x 36 - Lion

2P460L Hydraulic Cylinder, 4 x 36 - Lion - 671668

ITEM	PART NUMBER	DESCRIPTION	QTY
	2P460	HYD CYLINDER - 4 X 36	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP 4.00-1.75	1
4	NSS	TIE ROD	4
5	1P804	NUT, HEX 5/8-18, ZP	8
6	NSS	PLUG, SOCKET HEAD 3/4-16	1
7	NSS	ROD, 1-3/4	1
8	NSS	PISTON 4.00-1.125	1
9	8J852	NUT, LOCK 1-1/8-12, GRB, ZP	1
10	2P738	CLEVIS, 1" PIN X 1.5-12 X 2.75 (INCLUDES ITEM 11)	1
11	1P443	SET SCREW, 3/8-16 X 1/2 NYL	1
12	7J067	PIN, 1.0 X 4.0 H2	1
13	110-4224	PIN, COTTER 3/16 X 2IN LG	2
14	NSS	SEAL DUAL 4.00	2
15	NSS	WEAR RING, 1.87-1.75-0.250	1
16	NSS	SEAL, ZURCON U-CUP RU9 1.75	1
17	NSS	SEAL WIPER 1.75	1
18	NSS	SEAL SURCON WYNSEAL 4.00	1
19	NSS	WEAR RING, 4.00-3.88-0.250	1
20	1P745	SEAL KIT (INCLUDES ITEMS 14-19)	1

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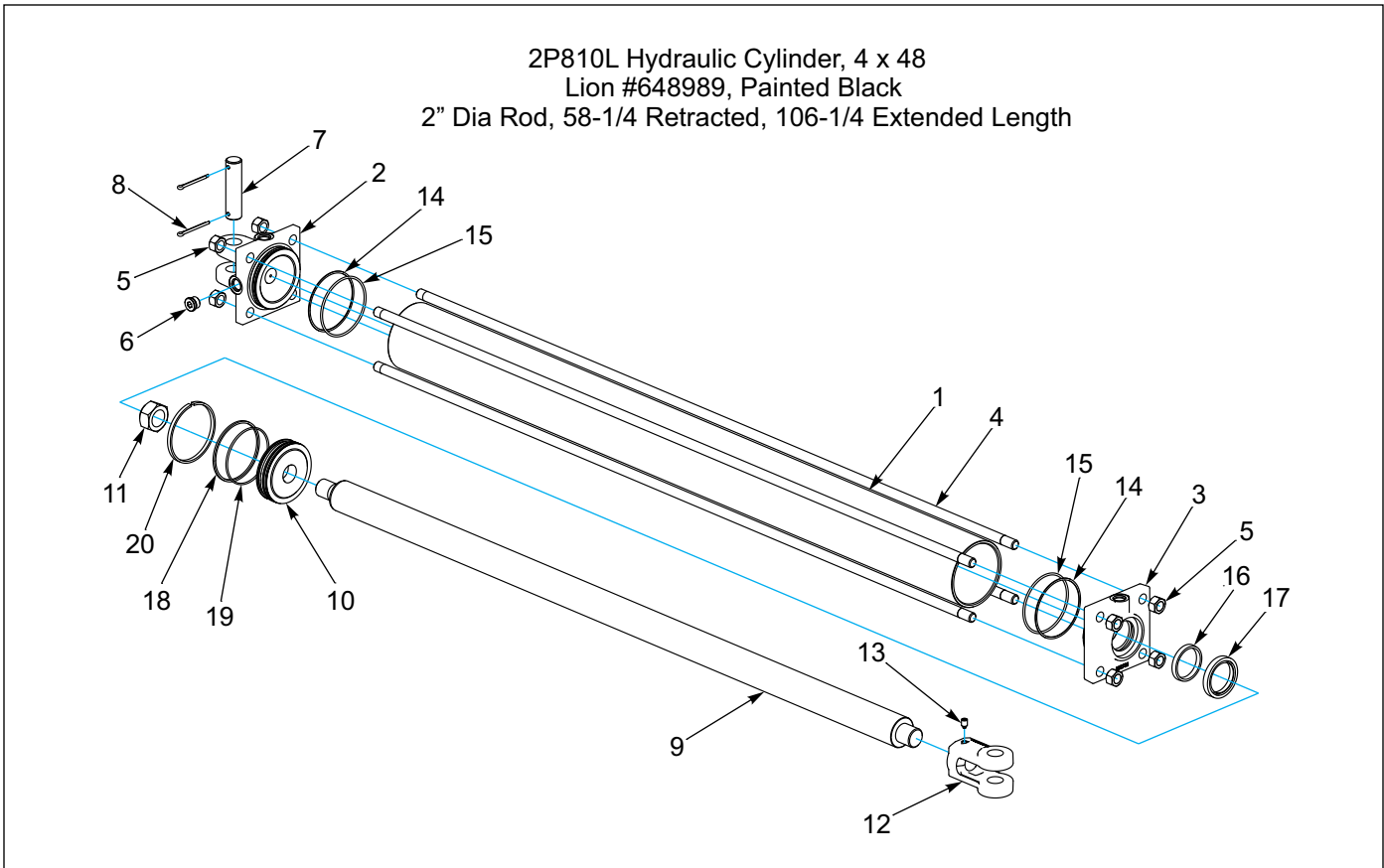


Figure 1-15: 2P810L Hydraulic Cylinder, 4 x 48 - Lion

2P810L Hydraulic Cylinder, 4 x 48 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	2P810	HYD CYLINDER - 4 X 48	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	NSS	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	7J067	PIN,1.0 X 4.0 H2	1
8	110-4224	PIN,COTTER 3/16 X 2IN LG	2
9	NSS	ROD	1
10	NSS	PISTON	1
11	8J852	NUT,LOCK 1-1/8-12,GRB,ZP	1
12	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 13)	1
13	1P443	SET SCREW,3/8-16 X 1/2 NYLON TIP	1
14	NSS	SEAL,BU#240 19PI-240	2
15	NSS	O-RING,240 (3.75X4.0) DURO 90	2
16	NSS	SEAL,HALLITE 605 ROD 2 DIA	1
17	NSS	SEAL,NOK-AR2915-EO 2X2.685	1
18	NSS	SEAL,PTFE PISTON RING 4DIA	1
19	NSS	O-RING,153 (3.5X3.688) DUR	1
20	NSS	WEAR RING,4.00-3.75-.25-GFN	1
21	1P745	SEAL KIT (INCLUDES ITEMS 14-20)	

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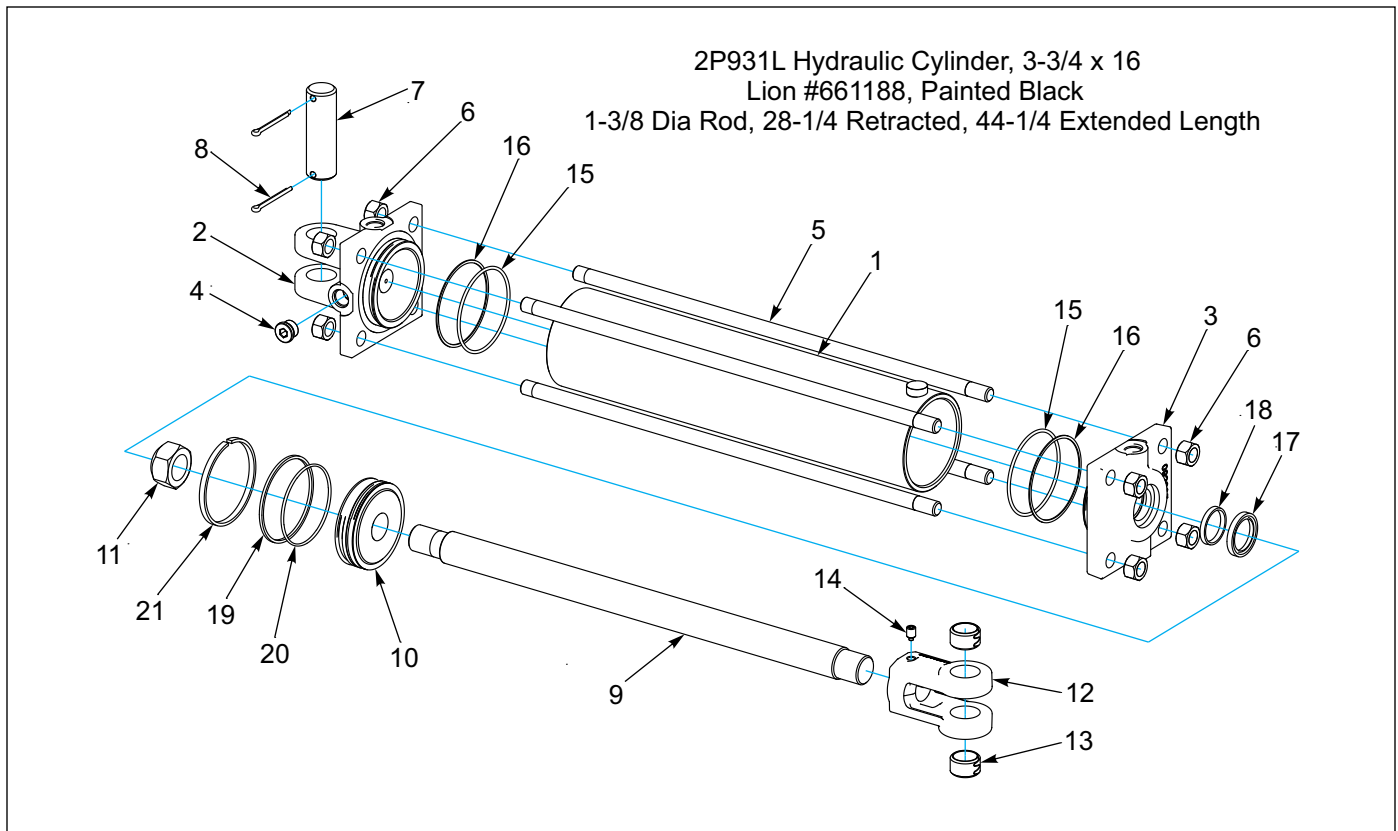


Figure 1-16: 2P931L Hydraulic Cylinder, 3-3/4 x 16 - Lion

2P931L Hydraulic Cylinder, 3-3/4 x 16 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	2P931	HYD CYLINDER - 3-3/4 X 16	
1	NSS	TUBE WELDMENT	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	4J549	PIN, 1.25 X 4.0 H2	1
8	110-4224	PIN, COTTER 3/16 X 2IN LG	2
9	NSS	CYLINDER ROD, 1.38	1
10	NSS	PISTON 3.75-1.12-TP	1
11	8J852	NUT, LOCK 1-1/8-12, GRB, ZP	1
12	2P111	ROD CLEVIS (INCLUDES ITEMS 13,14)	1
13	3P079	SPRING BUSHING, 1.0X1.25X0.75	2
14	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
15	NSS	O-RING, 238 (3-1/2X3-3/4) D9	2
16	NSS	SEAL, BU#238	2
17	NSS	SEAL, NOK-AR1997-EO 1-3/8"BO	1
18	NSS	SEAL, HALLITE 605 ROD 1-3/8 D	1
19	NSS	SEAL, PTFE PISTON RING 3-3/4D	1
20	NSS	O-RING 152 3-1/4X3-7/16UR9	1
21	NSS	WEAR RING, 3.75-3.50-.25-GFN	1
22	2P955	SEAL KIT (INCLUDES ITEMS 15-21)	1

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3J567P Hydraulic Cylinder, 3 x 6
 Prince #8300060BBAAA07B, Painted Black
 1-3/8 Rod Dia, 16-1/4 Retracted, 22-1/4 Extended Length

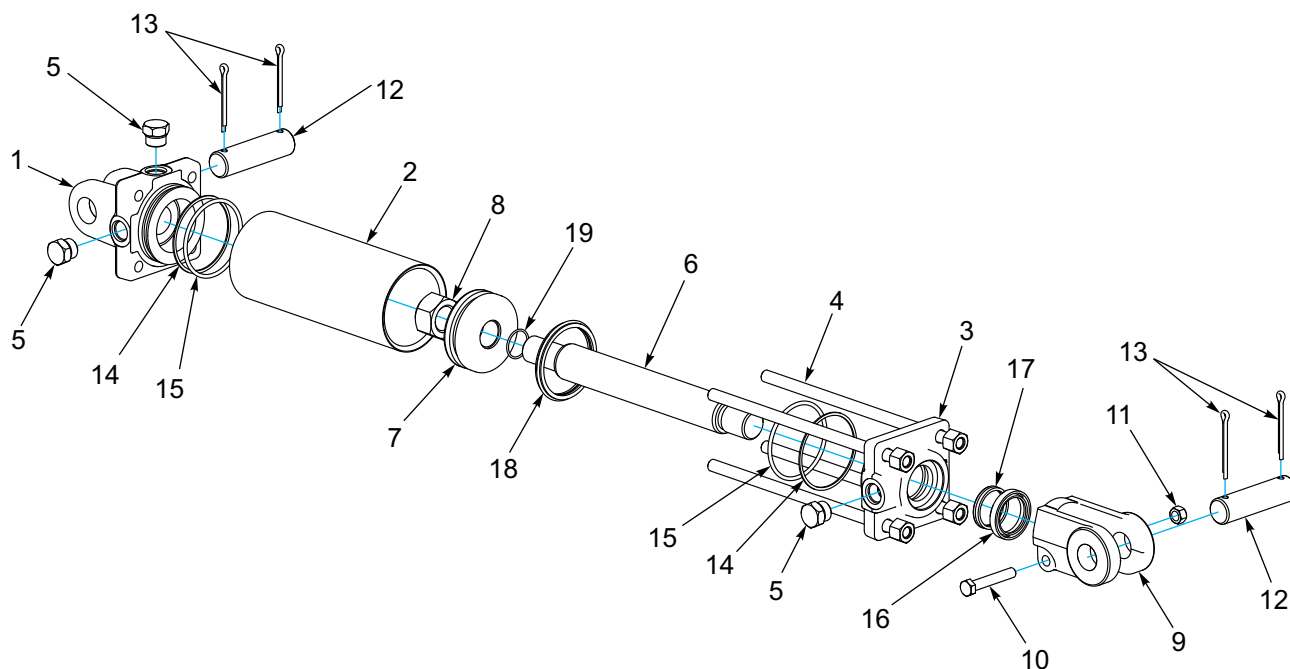


Figure 1-17: 3J567P Hydraulic Cylinder, 3 x 6 - Prince

3J567P Hydraulic Cylinder, 3 x 6 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J567	HYD CYLINDER - 3 X 6	
1	NSS	BASE CLEVIS	1
2	NSS	TUBE, CYL	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD ASSEMBLY	4
5	1-007-010025	PLUG, 3/4-16 O-RING BOSS	3
6	NSS	PISTON ROD	1
7	NSS	PISTON	1
8	NSS	PISTON NUT	1
9	9D481	ROD CLEVIS	1
10	1-654-010051-10	SCREW, HX CP3/8-16X2-1/4 GR5	1
11	1-512-010005-05	NUT, HEX, SLFLKG GRB 3/8-16	1
12	5J650	PIN, 1.0 X 3.625 H2	2
13	110-4224	PIN, COTTER 3/16 X 2IN LG	4
14	NSS	B/U WASHER	2
15	NSS	O-RING	2
16	NSS	ROD WIPER	1
17	NSS	U-CUP	1
18	NSS	PISTON SEAL	1
19	NSS	PISTON O-RING	1
20	3J117	SEAL KIT *(2 KIT PACKAGES)*(INCLUDES ITEMS 14-19)	

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3J568G Hydraulic Cylinder, 4 x 24
 Hydraulic Gear #4024-01 Painted Black
 1-3/4 Rod Dia, 34-1/4 Retracted, 58-1/4 Extended Length

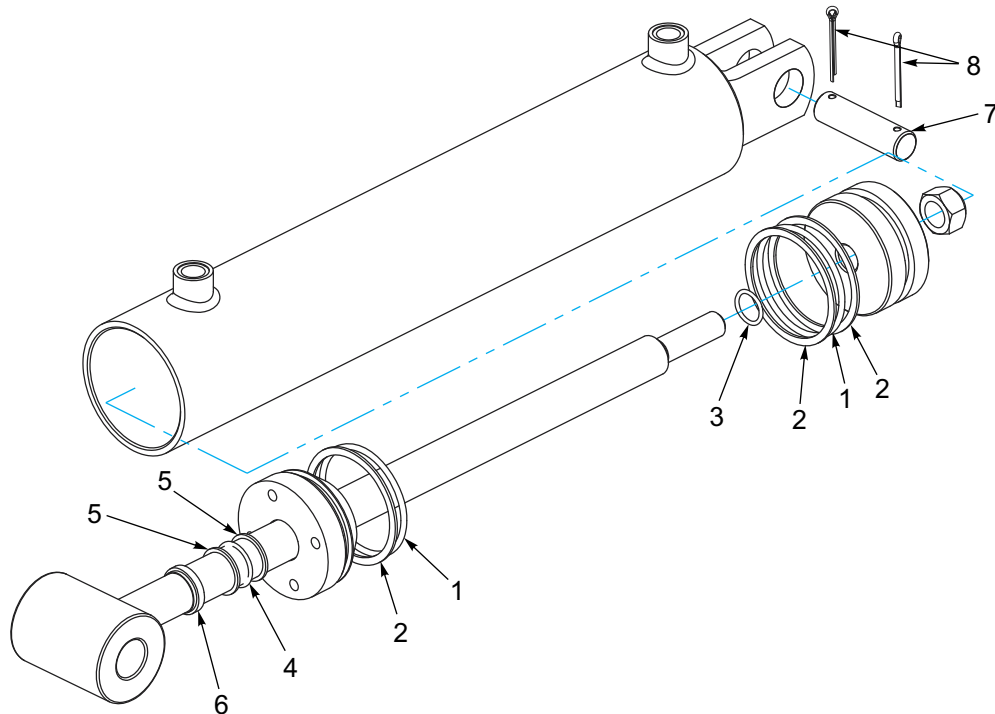


Figure 1-18: 3J568G Hydraulic Cylinder, 4 x 24 - Hydraulic Gear

3J568G Hydraulic Cylinder, 4 x 24 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J568	HYD CYLINDER - 4 X 24	
1	NSS	O RING	2
2	NSS	BACK-UP RING	3
3	NSS	SEAL	1
4	NSS	ROD SEAL	1
5	NSS	BACK UP RING	2
6	NSS	WIPER	1
7	3J771	CYLINDER PIN	1
8	1-557-010362-63	PIN,COTTER 1/4X2, ZP	2
9	1J956	SEAL KIT (INCLUDES ITEMS 1-6)	

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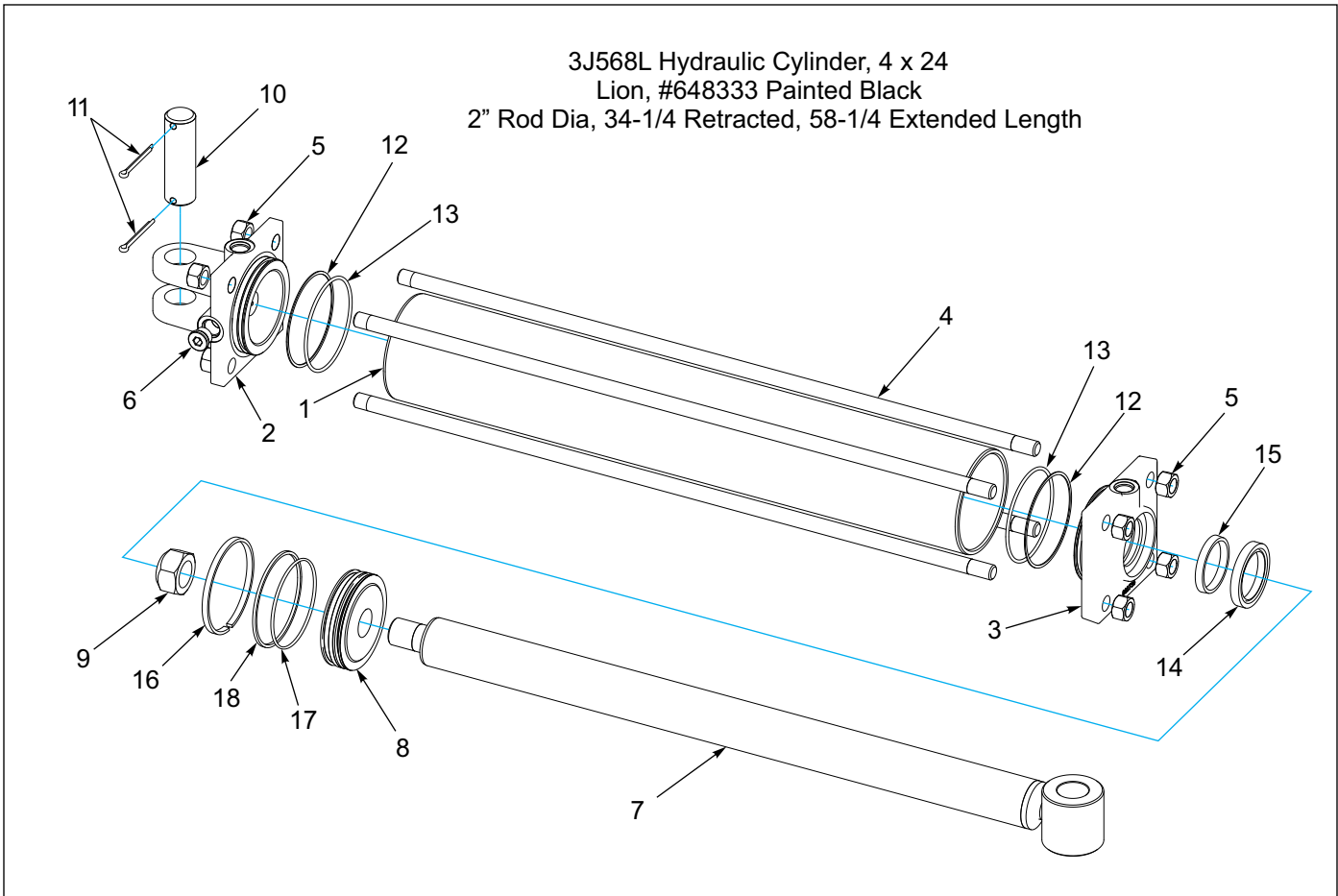


Figure 1-19: 3J568L Hydraulic Cylinder, 4 x 24 - Lion

3J568L Hydraulic Cylinder, 4 x 24 - Lion - 648333

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J568	HYD CYLINDER - 4 X 24	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1P804	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD WELDMENT	1
8	NSS	PISTON	1
9	8J852	NUT,LOCK 1-1/8-12,GrB,ZP	1
10	4J549	PIN,1.25 x 4.0 H2	1
11	110-4224	PIN,COTTER 3/16 X 2IN LG	2
12	NSS	SEAL,BU#240 19PI-240	2
13	NSS	O-RING,240 (3.75x4.0) DURO 90	1
14	NSS	SEAL,NOK-AR2915-EO 2x2.685	1
15	NSS	SEAL,HALLITE 605 ROD 2 DIA	1
16	NSS	WEAR RING,4.00-3.75-.25-GFN	1
17	NSS	O-RING,153 (3.5x3.688) DUR	1
18	NSS	SEAL,PTFE PISTON RING 4DIA	1
19	1P745	SEAL KIT (INCLUDES ITEMS 12-18)	

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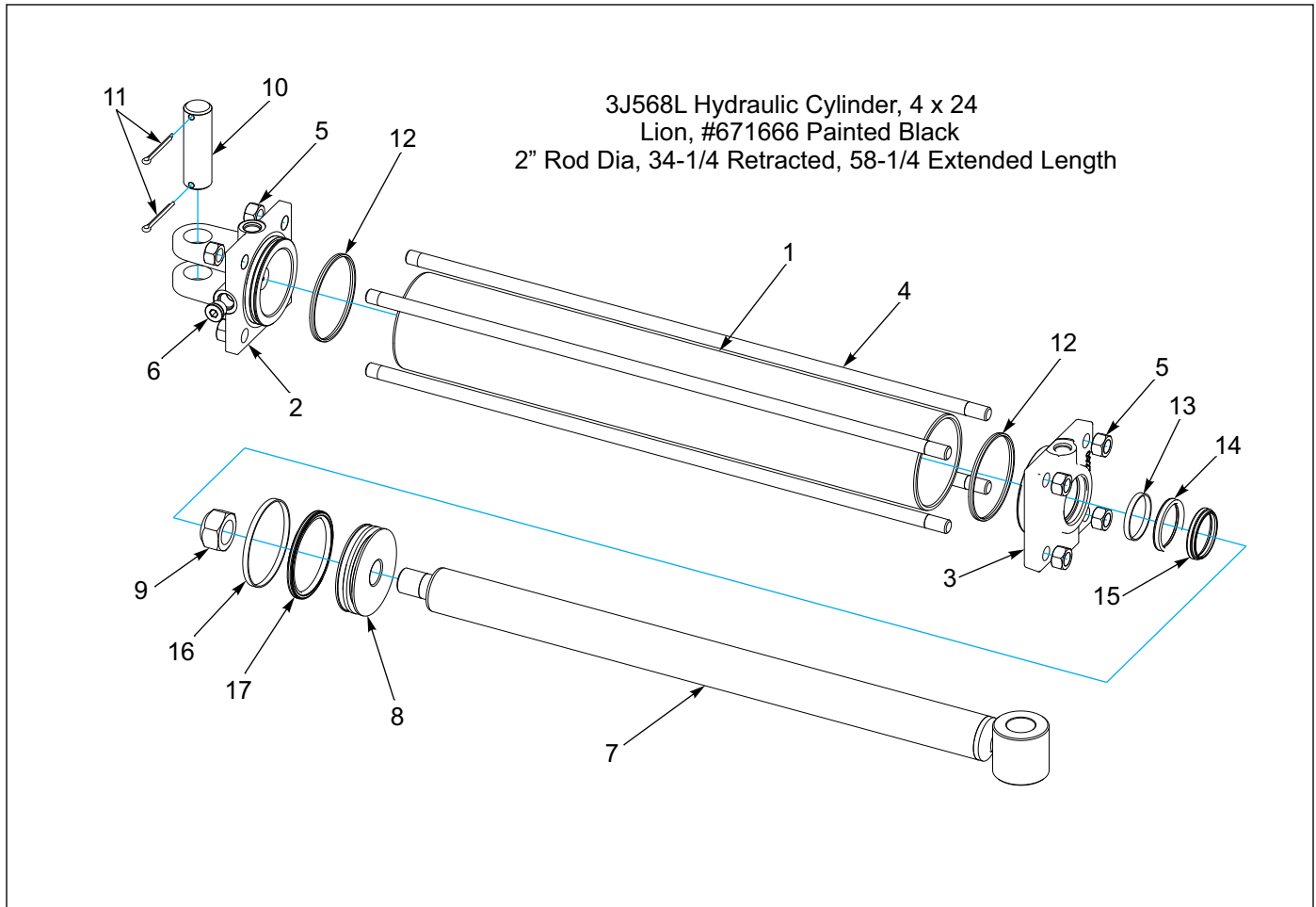


Figure 1-20: 3J568L Hydraulic Cylinder, 4 x 24 - Lion

3J568L Hydraulic Cylinder, 4 x 24 - Lion - 671666

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J568	HYD CYLINDER - 4 X 24	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1P804	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD WELDMENT	1
8	NSS	PISTON	1
9	8J852	NUT,LOCK 1-1/8-12,GrB,ZP	1
10	4J549	PIN,1.25 x 4.0 H2	1
11	110-4224	PIN,COTTER 3/16 X 2IN LG	2
12	NSS	WEAR RING 2.12-2.00-0.250	2
13	NSS	SEAL SURCON U-CUP RU9 2.00	1
14	NSS	SEAL WIPER 2.00 WNUC TSS	1
15	NSS	SEAL DUAL 4.00	2
16	NSS	WEAR RING 4.00-3.88-0.250	1
17	NSS	SEAL SURCON WYNSEAL 4.00	1
18	1P745	SEAL KIT (INCLUDES ITEMS 12-17)	1

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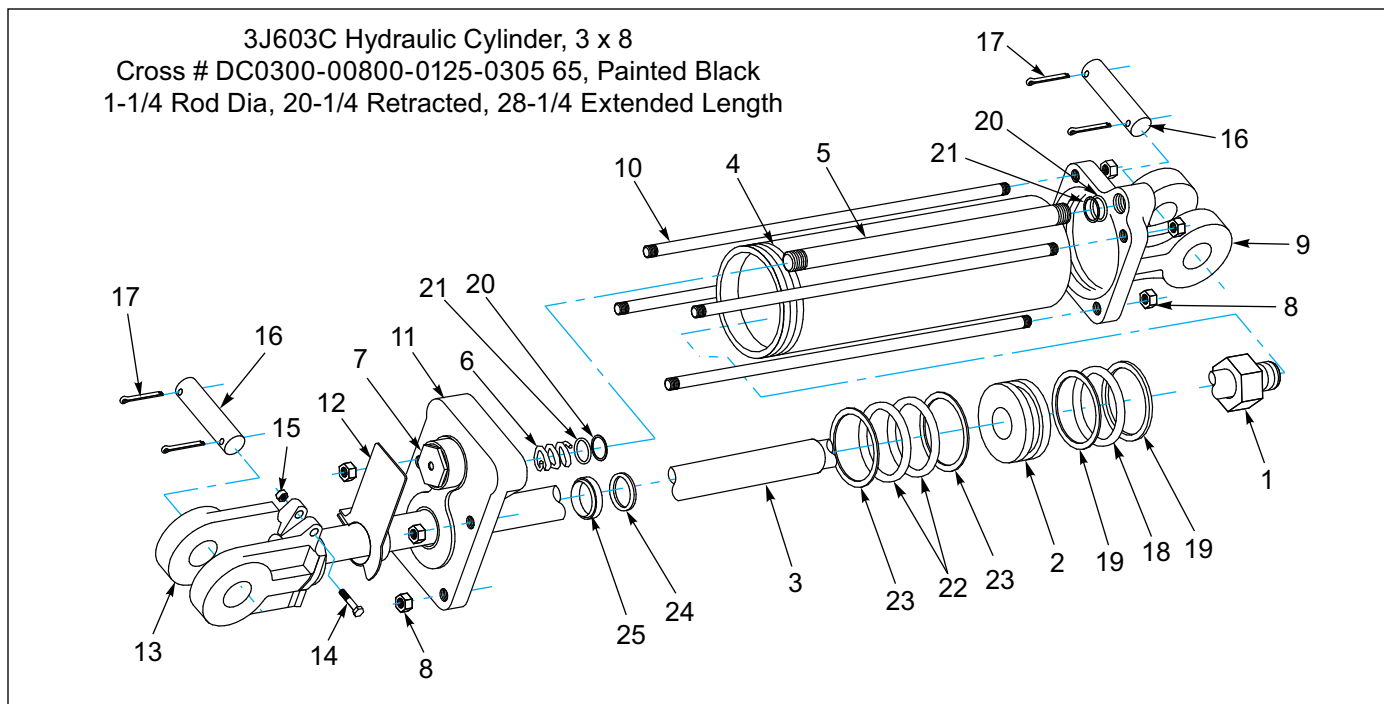


Figure 1-21: 3J603C Hydraulic Cylinder, 3 x 8 - Cross

3J603C Hydraulic Cylinder, 3 x 8 - Cross

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J603	HYD CYLINDER	
1	5K684	NUT	1
2	5K685	PISTON	1
3	5K686	ROD	1
4	5K687	TUBE	1
5	5K688	FEED TUBE	1
6	5K689	SPRING	1
7	5K690	CARTRIDGE ASSEMBLY	1
8	5K691	NUT	8
9	5K692	BASE CLEVIS	1
10	5K693	TIE ROD	4
11	5K694	HEAD	1
12	5K695	ACTUATOR ASSEMBLY	1
13	5K696	ROD CLEVIS	1
14	5K697	CAPSCREW	1
15	5K698	NUT	1
16	7J067	CLEVIS PIN, 1 X 4	2
17	110-4224	PIN,COTTER-3/16 X 2IN LG	4
18	NSS	O-RING	1
19	NSS	BACK-UP RING	2
20	NSS	BACK-UP RING	2
21	NSS	O-RING	2
22	NSS	O-RING	2
23	NSS	BACK-UP RING	2
24	NSS	U-CUP	1
25	NSS	WIPER	1
26	5K699	SEAL KIT (INCLUDES ITEMS 18 - 25)	

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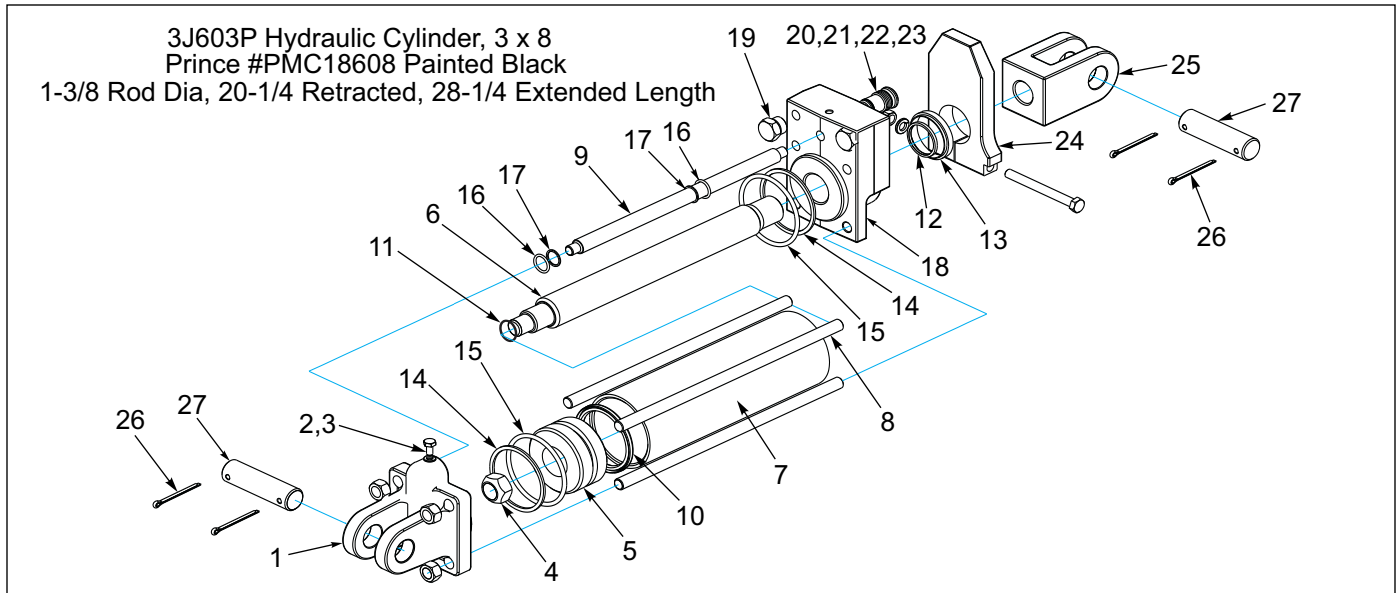


Figure 1-22: 3J603P Hydraulic Cylinder, 3 x 8 - Prince

3J603P Hydraulic Cylinder, 3 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J603	HYDRAULIC CYLINDER 3 X 8	
1	NSS	BUTT (BASE)	1
2	NSS	NYLTITE SEAL	1
3	3J730	CAPSCREW	1
4	6D918	LOCK NUT (3/4-16)	1
5	NSS	PISTON	1
6	NSS	PISTON, ROD	1
7	3J719	TUBE, CYL	1
8	3J721	TIE ROD	4
9	3J720	MANIFOLD TUBE	1
10	NSS	URETHANE SEAL	1
11	NSS	O-RING	1
12	NSS	U-CUP	1
13	NSS	WIPER	1
14	NSS	BACK-UP WASHER	2
15	NSS	O-RING	2
16	NSS	O-RING	2
17	NSS	BACK-UP WASHER	2
18	7J050	GLAND (WITH PORTS REQUIRING O-RINGS)	1
18	3J726	GLAND (WITH PIPE THREADS)	1
19	1-007-010025	PLUG, 3/4-16 O-RING BOSS	1
20	9J638	VALVE ASSEMBLY	1
21	NSS	O-RING	1
22	NSS	O-RING	1
23	NSS	BACK-UP WASHER	1
24	9J804	STRIKER PLATE ASM-5K695 - DEA	1
25	NSS	CLEVIS ASSEMBLY	1
26	110-4224	PIN,COTTER-3/16 X 2IN LG	4
27	5J650	CLEVIS PIN	2
28	3J729	SEAL KIT (INCLUDES ITEMS 10-17)	

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3J818G Hydraulic Cylinder, 4-1/2 x 16
 Hydraulic Gear #4516-01 Painted Red
 1-3/4 Rod Dia, 26-1/4 Retracted, 42-1/4 Extended Length

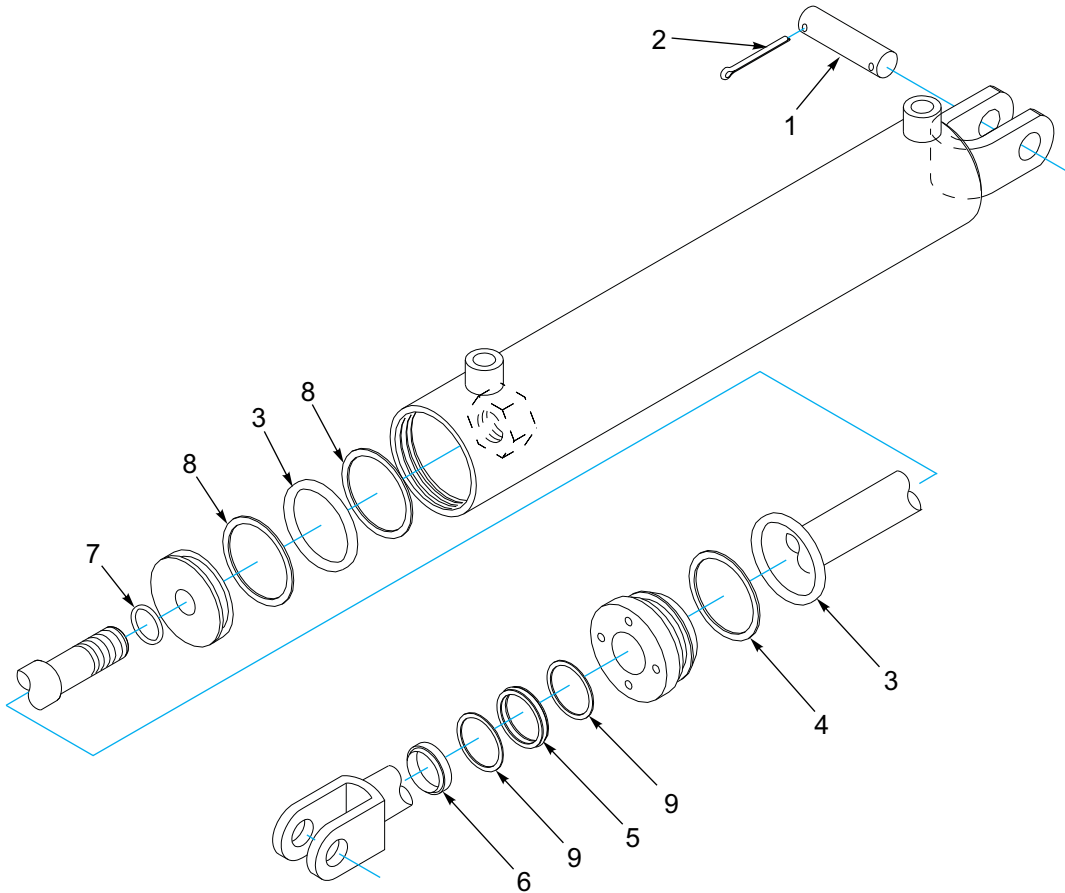


Figure 1-23: 3J818G Hydraulic Cylinder, 4-1/2 x 16 - Hydraulic Gear

3J818G Hydraulic Cylinder, 4-1/2 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J818	HYD CYLINDER - 4-1/2 X16 DA	
1	3J498	CYLINDER PIN	1
2	1-557-010362-63	PIN,COTTER 1/4X2 ZP	2
3	NSS	O RING	2
4	NSS	BACK-UP RING	1
5	NSS	ROD SEAL	1
6	NSS	WIPER	1
7	NSS	O RING	1
8	NSS	BACK-UP RING	2
9	NSS	BACK-UP RING	2
10	5J140	SEAL KIT (INCLUDES ITEMS 3-9)	

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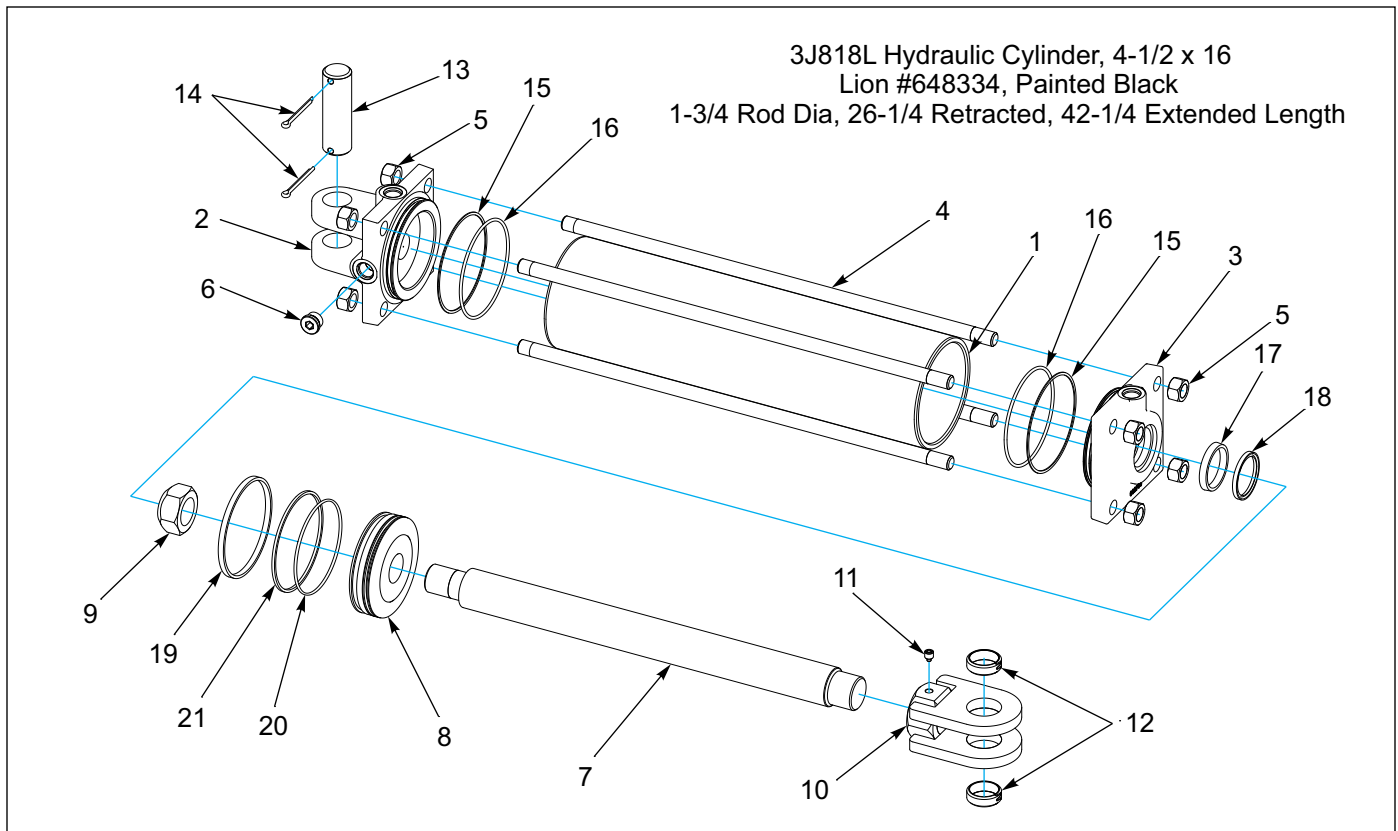


Figure 1-24: 3J818L Hydraulic Cylinder, 4-1/2 x 16 - Lion

3J818L Hydraulic Cylinder, 4-1/2 x 16 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	3J818	HYD CYLINDER - 4-1/2 X 16 DA	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	NSS	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	NUT,LOCK 1-1/4-12,ZP	1
10	1P769	CLEVIS 1.5-12 X 2.25 X 4.375 (INCLUDES ITEMS 11,12)	1
11	1P770	SET SCREW,3/8-16 x 3/8 NYLON TIP	1
12	181176	SPRING BUSHING,1.25x1.5x0.5 (02/14/2014 AND AFTER)	2
13	4J549	PIN,1.25 x 4.0 H2	1
14	110-4224	PIN,COTTER 3/16 X 2IN LG	2
15	NSS	SEAL,BU#244	2
16	NSS	O-RING,244 (4.25x4.5) D90	2
17	NSS	SEAL,HALLITE 605 ROD 1.75D	1
18	NSS	SEAL,NOK-AR2573-EO 1.75BO	1
19	NSS	WEAR RING,4.50-4.25-.25-GFN	1
20	NSS	O-RING,155 (4.0x4.188) DUR90	1
21	NSS	SEAL,PTFE PISTON RING 4.5D	1
22	1P746	SEAL KIT (INCLUDES ITEMS 15-21)	1

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4K777G Hydraulic Cylinder, 3-1/2 x 16
 Hydraulic Gear #3516ASAE, Painted Black
 1-3/8 Rod Dia, 31-1/2 Retracted, 47-1/2 Extended Length

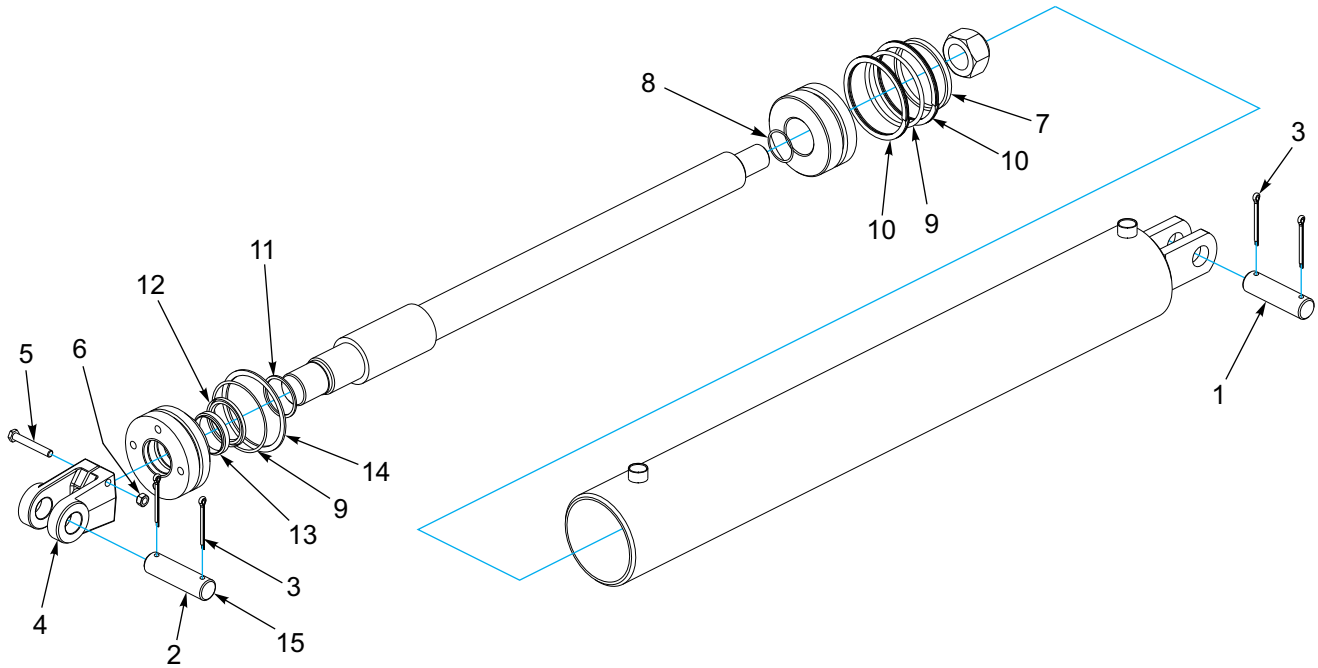


Figure 1-25: 4K777G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

4K777G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	4K777	HYD CYL 3-1/2 X 16 (USE PART NUMBER 6K843)	
1	5J650	PIN	1
2	5K798	PIN	1
3	110-4224	PIN,COTTER-3/16 X 2IN LG	4
4	5J195	CLEVIS	1
5	1-654-010049-11	SCREW,HX CAP,5/16-18UNCX2-1/2	1
6	104032	NUT,HX SLF-LKG W/MYL 5/16-18	1
7	NSS	WEAR RING	1
8	NSS	O-RING	1
9	NSS	O-RING	2
10	NSS	SPRING BACKUP	2
11	NSS	WEAR RING	1
12	NSS	O-RING	1
13	NSS	WIPER	1
14	NSS	BACKUP RING	1
15	5K793	SEAL KIT (INCLUDES ITEMS 7-14)	

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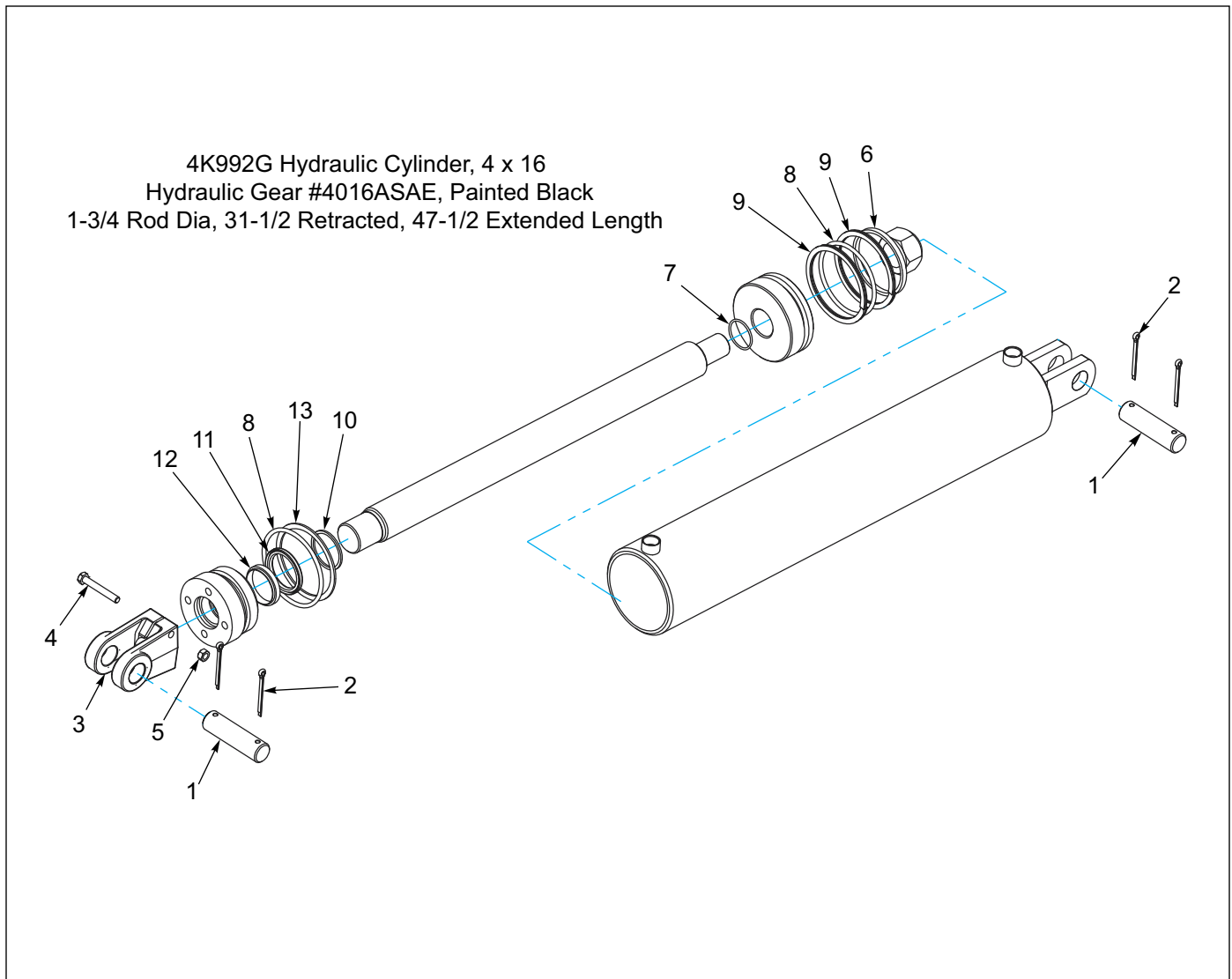


Figure 1-26: 4K992G Hydraulic Cylinder, 4 x 16 - Hydraulic Gear

4K992G Hydraulic Cylinder, 4 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	4K992	HYD CYLINDER - 4 X 16	
1	5J650	PIN	2
2	110-4224	PIN,COTTER-3/16 X 2IN LG	4
3	5J195	CLEVIS	1
4	1-654-010049-11	SCREW,HX CAP, 5/16-18UNCX2-1/2	1
5	104032	NUT, HX SLF-LKG W/MYL 5/16-18	1
6	NSS	WEAR RING	1
7	NSS	O-RING	1
8	NSS	O-RING	2
9	NSS	SPIRAL BACKUP	2
10	NSS	WEAR RING	1
11	NSS	POLYSEAL	1
12	NSS	WIPER	1
13	NSS	BACKUP RING	1
14	5K799	SEAL KIT(INCLUDES ITEMS 6-13)	

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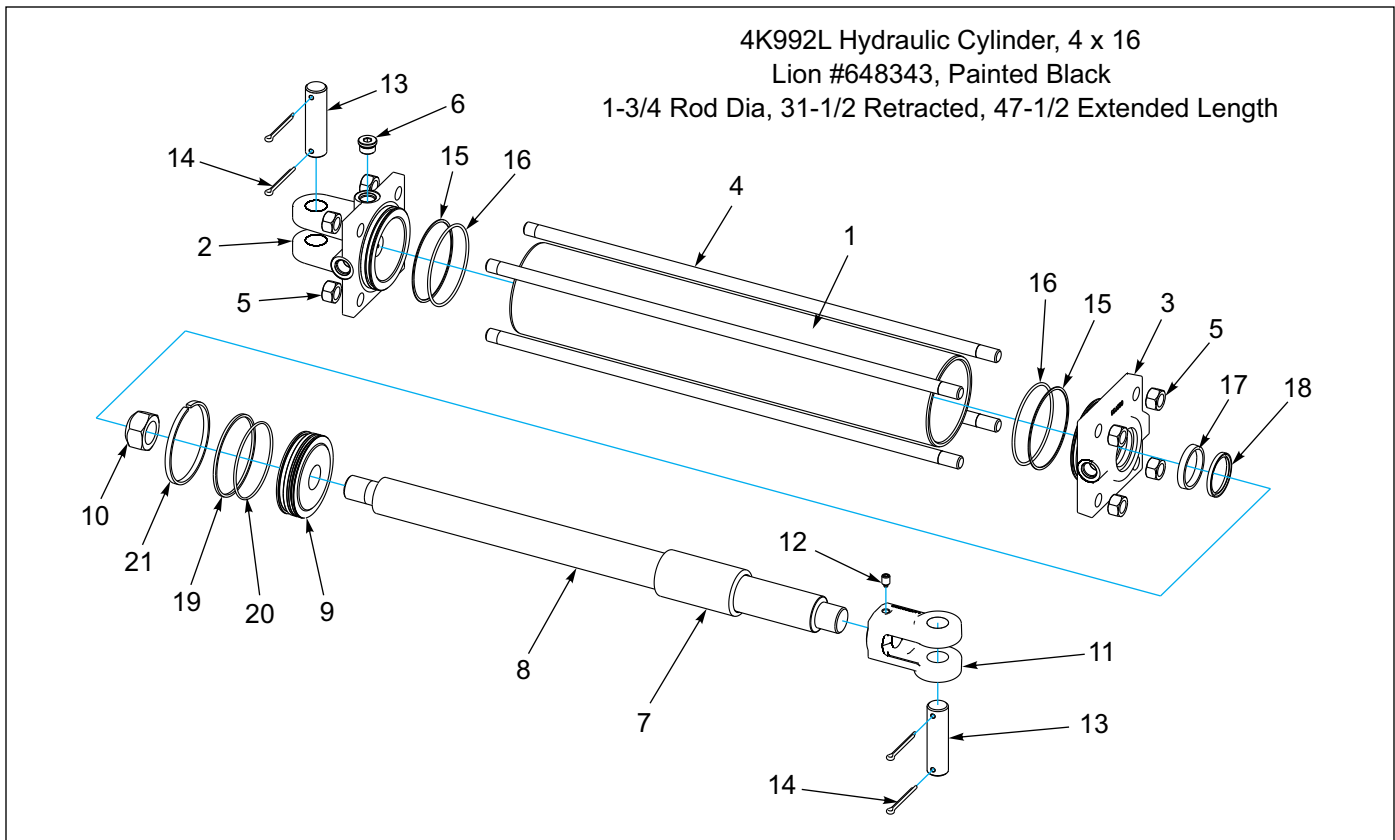


Figure 1-27: 4K992L Hydraulic Cylinder, 4 x 16 - Lion

4K992L Hydraulic Cylinder, 4 x 16 - Lion - 648343

ITEM	PART NUMBER	DESCRIPTION	QTY
	4K992	HYDRAULIC CYLINDER, 4 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1P804	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG, SOCKET HEAD 3/4-16	1
7	NSS	STOP TUBE	1
8	NSS	ROD	1
9	NSS	PISTON	1
10	8J852	NUT,LOCK 1-1/8-12,GRB,ZP	1
11	2P741	CLEVIS, 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 12)	1
12	1P443	SET SCREW,3/8-16 x 1/2 NYLON TIP	1
13	5J650	PIN,1.0 x 3.625 H2	2
14	110-4224	PIN,COTTER-3/16 X 2IN LG	4
15	NSS	SEAL,BU#240 19PI-240	2
16	NSS	O-RING,240 (3.75x4.0) DURO 90	2
17	NSS	SEAL,HALLITE 605 ROD 1.75D	1
18	NSS	SEAL,NOK-AR2573-EO 1.75BO	1
19	NSS	SEAL,PTFE PISTON RING 4DIA	1
20	NSS	O-RING,153 (3.5x3.688) DUR	1
21	NSS	WEAR RING,4.00-3.75-.25-GFN	1
22	1P745	SEAL KIT (INCLUDES ITEMS 15-21)	

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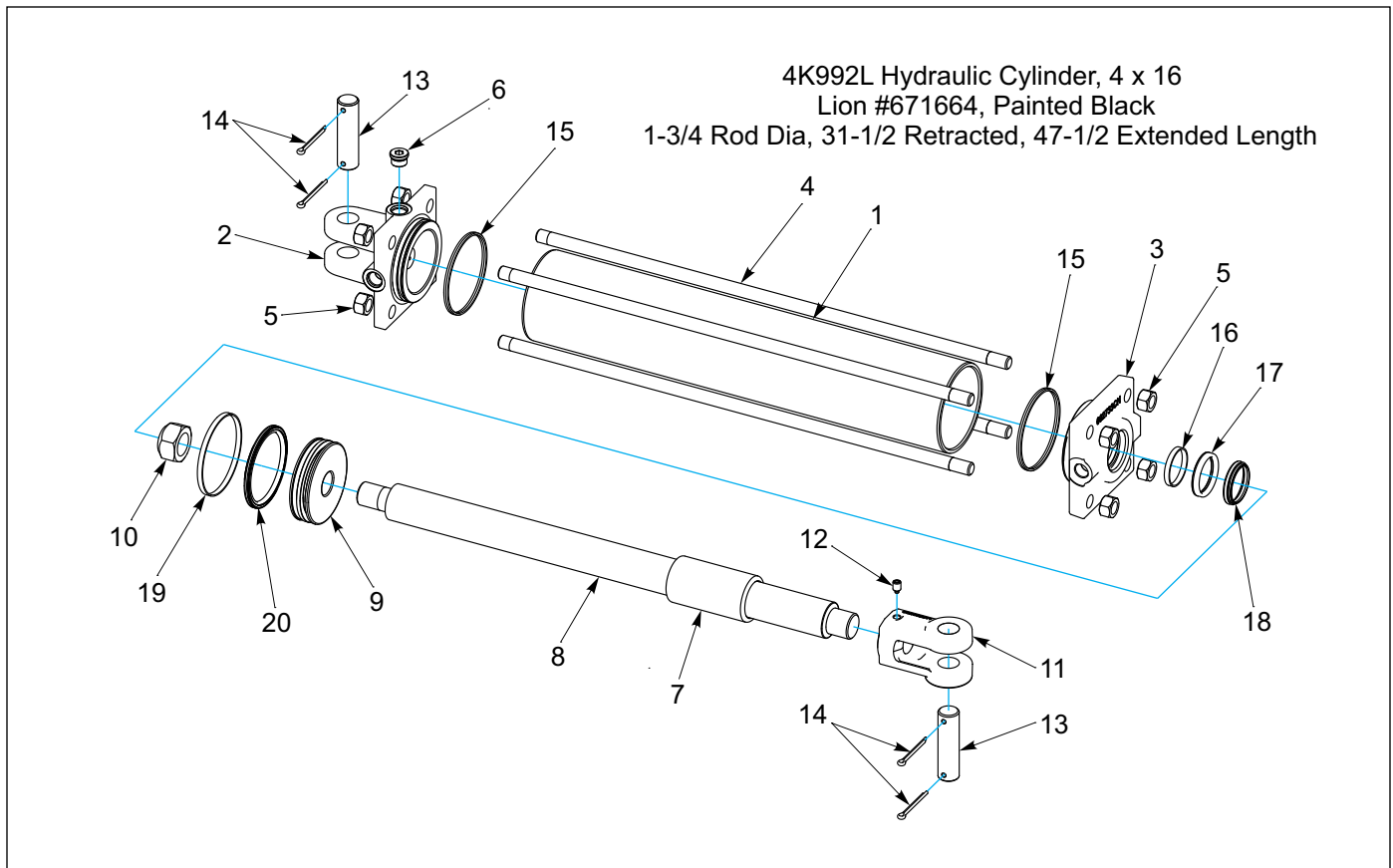


Figure 1-28: 4K992L Hydraulic Cylinder, 4 x 16 - Lion

4K992L Hydraulic Cylinder, 4 x 16 - Lion - 671664

ITEM	PART NUMBER	DESCRIPTION	QTY
	4K992	HYDRAULIC CYLINDER, 4 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1P804	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	STOP TUBE	1
8	NSS	ROD	1
9	NSS	PISTON	1
10	8J852	NUT,LOCK 1-1/8-12,GRB,ZP	1
11	2P741	CLEVIS, 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 12)	1
12	1P443	SET SCREW,3/8-16 x 1/2 NYLON TIP	1
13	5J650	PIN,1.0 x 3.625 H2	2
14	110-4224	PIN,COTTER-3/16 X 2IN LG	4
15	NSS	SEAL DUAL 4.00	2
16	NSS	WEAR RING 1.87-1.75-0.250	1
17	NSS	SEAL ZURCON U-CUP RU9 1.75	1
18	NSS	SEAL,WIPER 1.75	1
19	NSS	WEAR RING 4.00-3.88-0.250	1
20	NSS	SEAL SURCON WYNSEAL 4.00	1
21	1P745	SEAL KIT (INCLUDES ITEMS 15-20)	

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5J128P Hydraulic Cylinder, 3-1/2 x 8
 Prince #BD-0567, Painted Black
 1-3/8 Rod Dia, 20-1/4 Retracted, 28-1/4 Extended Length

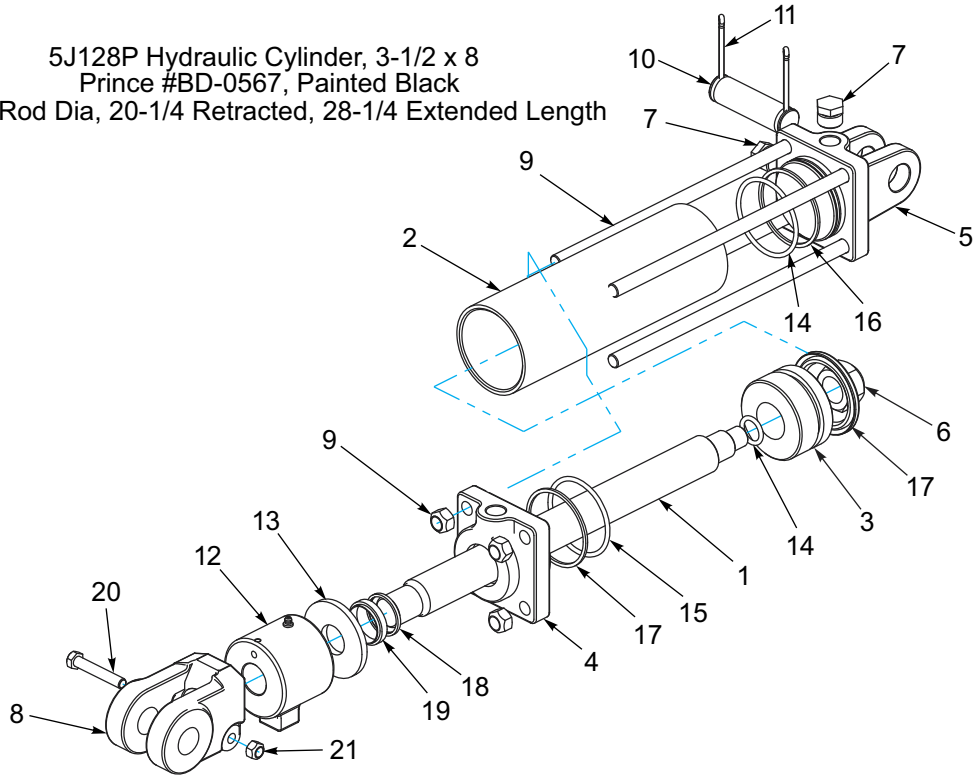


Figure 1-29: 5J128P Hydraulic Cylinder, 3-1/2 x 8 - Prince

5J128P Hydraulic Cylinder, 3-1/2 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	5J128	HYDRAULIC CYLINDER, 3-1/2 X 8	
1	7K936	PISTON ROD	1
2	5J183	TUBE	1
3	7K937	PISTON	1
4	7K938	GLAND	1
5	7J055	BUTT CLEVIS	1
6	6D918	LOCK NUT, 3/4-16 NF	1
7	1-007-010025	PLUG,3/4-16 O-RING BOSS	3
8	7K939	CLEVIS ASSEMBLY	1
9	7K932	TIE ROD ASSEMBLY	4
10	5J650	CLEVIS PIN	1
11	110-4224	PIN,COTTER 3/16 X 2IN LG	2
12	7K940	STROKE CONTROL	1
13	5J170	DUST COVER	1
14	NSS	O-RING	1
15	NSS	O-RING	2
16	NSS	BACK UP WASHER	2
17	NSS	CROWN SEAL	1
18	NSS	U-CUP	1
19	NSS	WIPER	1
20	1-654-010051-10	3/8-16 NC X 2 1/4" GR5	1
21	1-512-010005-05	HEX NUT, 3/8-16 NC, SELF-LOCKING	1
22	7K941	PMCK-BD-0567 SEAL KIT (INCLUDES ITEMS 14-19)	

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5J280G Hydraulic Cylinder, 3 x 8
 Hydraulic Gear #3008-01, Painted Black
 1-1/8 Rod Dia, 20-7/16 Retracted, 28-7/16 Extended Length

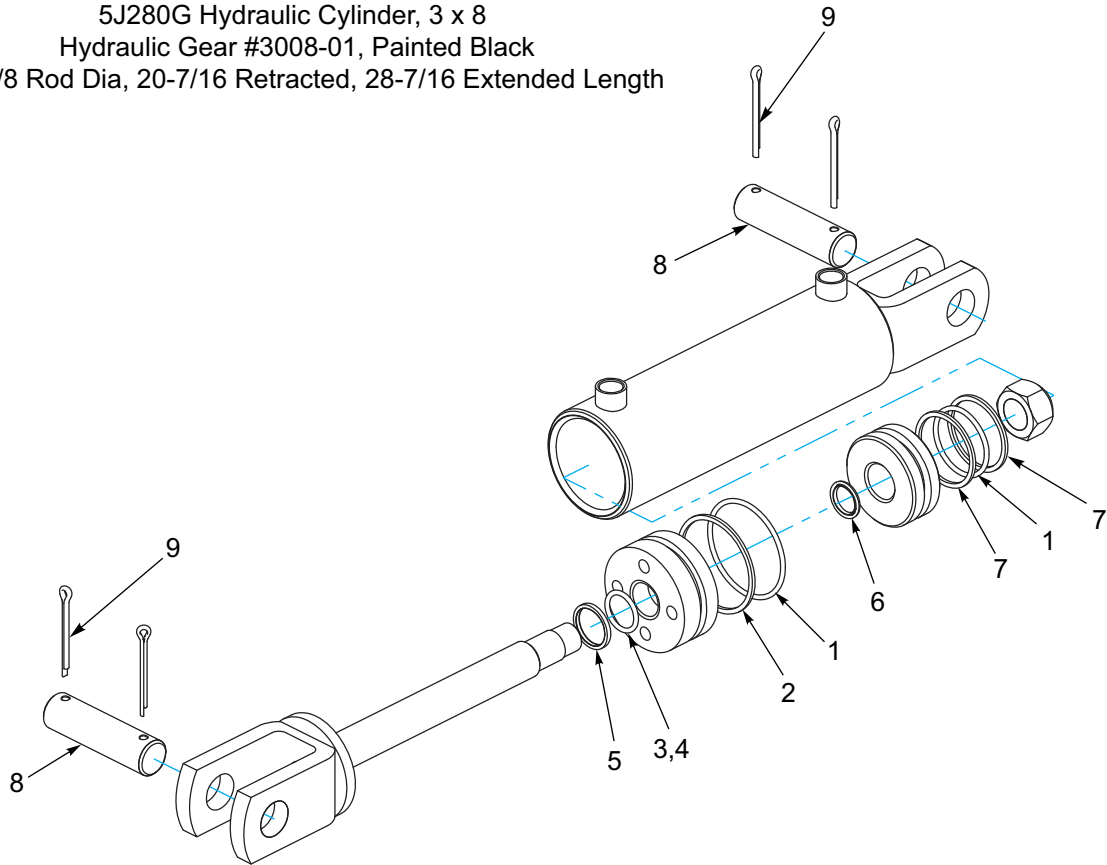


Figure 1-30: 5J280G Hydraulic Cylinder, 3 x 8 - Hydraulic Gear

5J280G Hydraulic Cylinder, 3 x 8 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	5J280	HYDRAULIC CYLINDER, 3 X 8	
1	NSS	O RING	2
2	NSS	BACK-UP RING	1
3	NSS	O RING	1
4	NSS	BACK UP RING	1
5	NSS	WIPER	1
6	NSS	SEAL	1
7	NSS	SPIRAL TEFLON BACK-UP RING	2
8	5J650	CYLINDER PIN	2
9	110-4224	PIN,COTTER3/16 X 2IN LG	4
10	3J263	SEAL KIT (INCLUDES ITEMS 1-7)	

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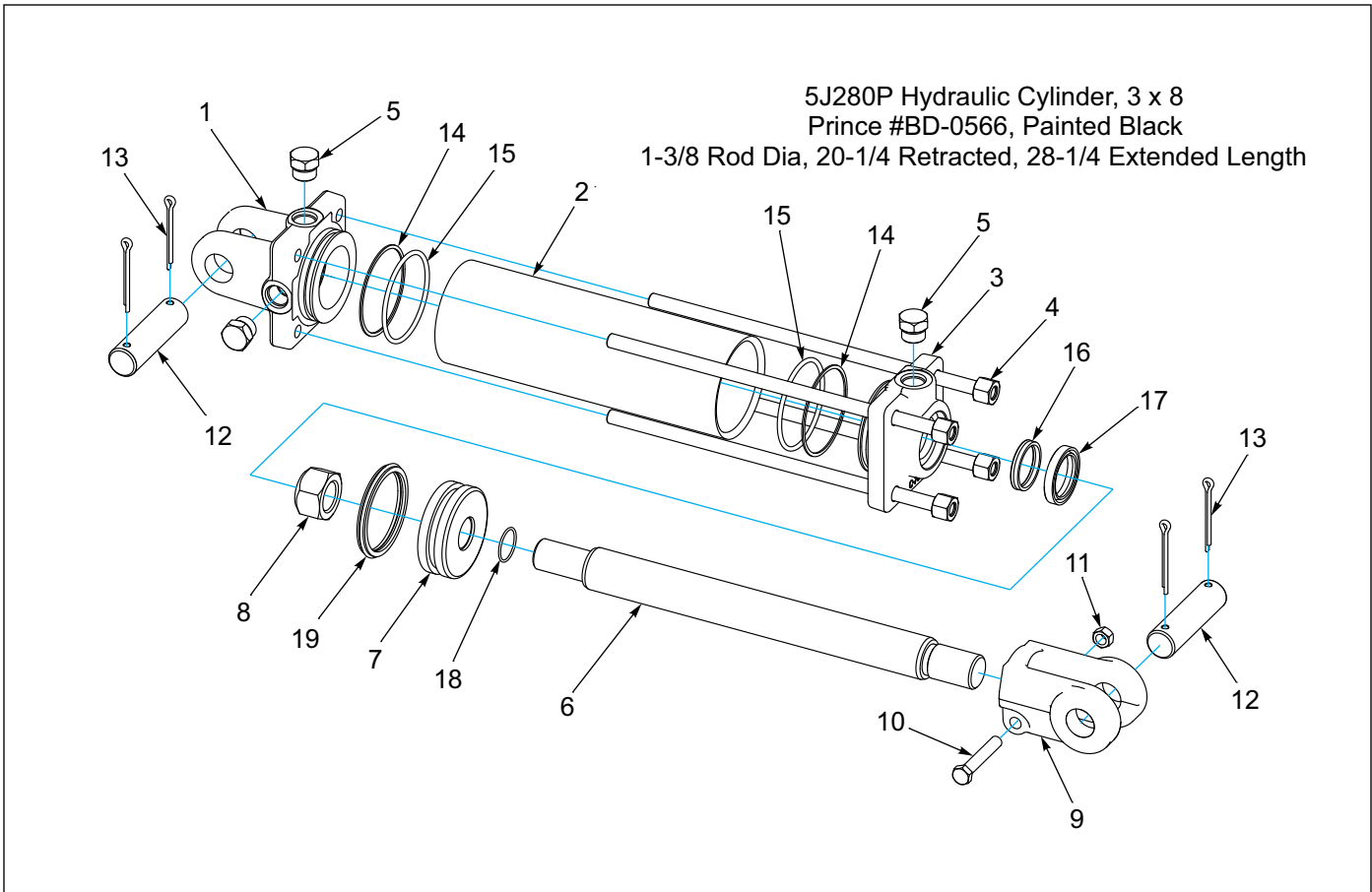


Figure 1-31: 5J280P Hydraulic Cylinder, 3 x 8 - Prince

5J280P Hydraulic Cylinder, 3 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	5J280	HYDRAULIC CYLINDER, 3 X 8	
1	NSS	BASE CLEVIS	1
2	NSS	TUBE	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD ASSEMBLY	1
5	1-007-010025	PLUG, 3/4-16 O-RING BOSS	1
6	NSS	PISTON ROD	1
7	7K930	PISTON	1
8	NSS	PISTON NUT	1
9	9D481	ROD CLEVIS (INCLUDES ITEMS 10 AND 11)	1
10	1-654-010051-10	SCREW, HX CP 3/8-16 X 2-1/4 GR5	1
11	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	2
12	5J650	PIN, 1.0 X 3.625 H2	2
13	110-4224	PIN,COTTER 3/16 X 2IN LG	1
14	NSS	B/U WASHER	2
15	NSS	O-RING	2
16	NSS	U-CUP	1
17	NSS	ROD WIPER	1
18	NSS	PISTON O-RING	1
19	NSS	PISTON SEAL	1
20	7K926	PMCK-BD-0565 SEAL KIT (INCLUDES ITEMS 14-19)	

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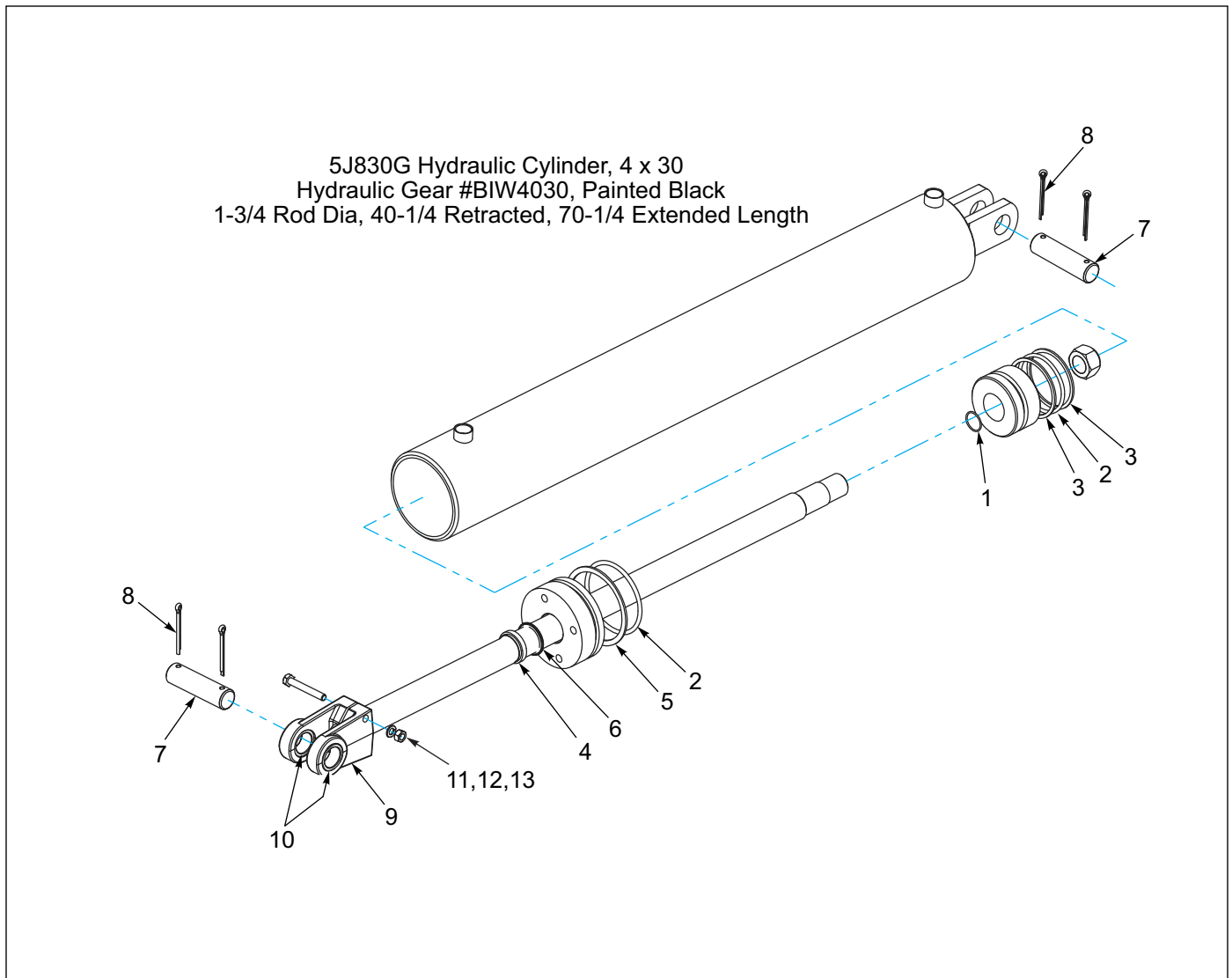


Figure 1-32: 5J830G Hydraulic Cylinder, 4 x 30 - Hydraulic Gear

5J830G Hydraulic Cylinder, 4 x 30 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	5J830	HYD CYLINDER - 4 X 30	
1	NSS	O-RING	1
2	NSS	O RING	2
3	NSS	SPIRAL TEFLON BACKUP	1
4	NSS	ROD WIPER	1
5	NSS	PARBACK	1
6	NSS	POLYSEAL	1
7	5J650	PIN, CLEVIS 1.0 X 3.625	1
8	110-4224	PIN,COTTER 3/16 X 2IN LG	4
9	5J195	CLEVIS (INCLUDES ITEM 10)	1
10	5K964	BUSHING	2
11	108628	SCREW HX CP 5/16 -18UNC X 2 1/4	1
12	1-512-010007-06	NUT, HEX 5/16-18	1
13	1-861-010034-10	WASHER LKG 5/16	1
14	8K604	SEAL KIT (INCLUDES ITEMS 4-6 AND 9-11)	

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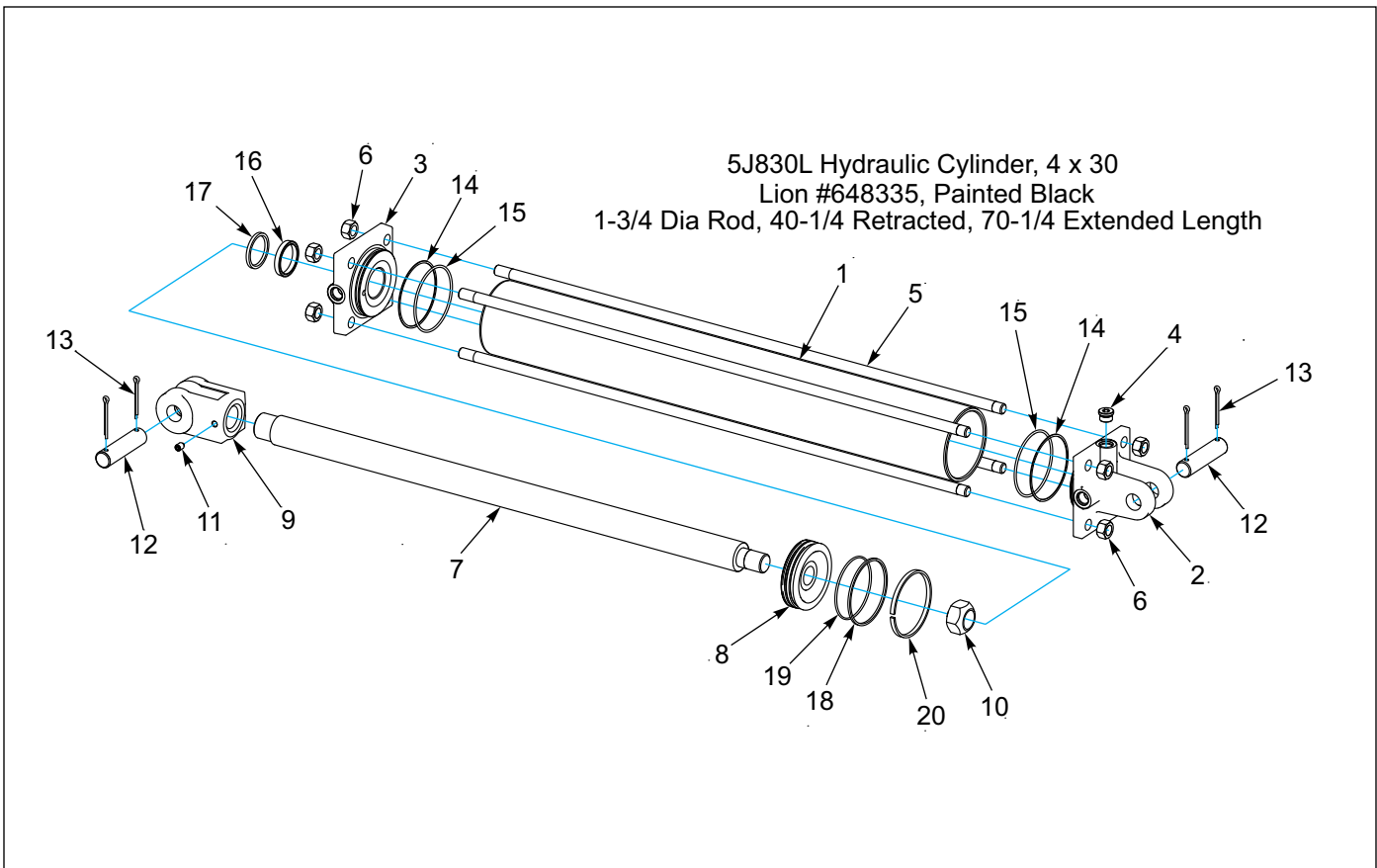


Figure 1-33: 5J830L Hydraulic Cylinder, 4 x 30 - Lion

5J830L Hydraulic Cylinder, 4 x 30 - Lion - 648335

ITEM	PART NUMBER	DESCRIPTION	QTY
	5J830	HYD CYLINDER - 4 X 30	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	2P738	CLEVIS, 1" PIN X 1.5-12 X 2.75 (INCLUDES ITEM 11)	1
10	8J852	NUT, LOCK 1-1/8-12, GRB, ZP	1
11	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
12	7J067	PIN, 1.0 X 4.0 H2	2
13	110-4224	PIN, COTTER 3/16 X 2IN LG	4
14	NSS	SEAL, BU#240 19PI-240	2
15	NSS	O-RING, 240 (3.75X4.0) DURO 90	2
16	NSS	SEAL, HALLITE 605 ROD 1.75D	1
17	NSS	SEAL, NOK-AR2573-EO 1.75BO	1
18	NSS	SEAL, PTFE PISTON RING 4DIA	1
19	NSS	O-RING, 153 (3.5 X 3.688) DUR	1
20	NSS	WEAR RING, 4.00-3.75-.25-GFN	1
21	1P745	SEAL KIT (INCLUDES ITEMS 14-20)	

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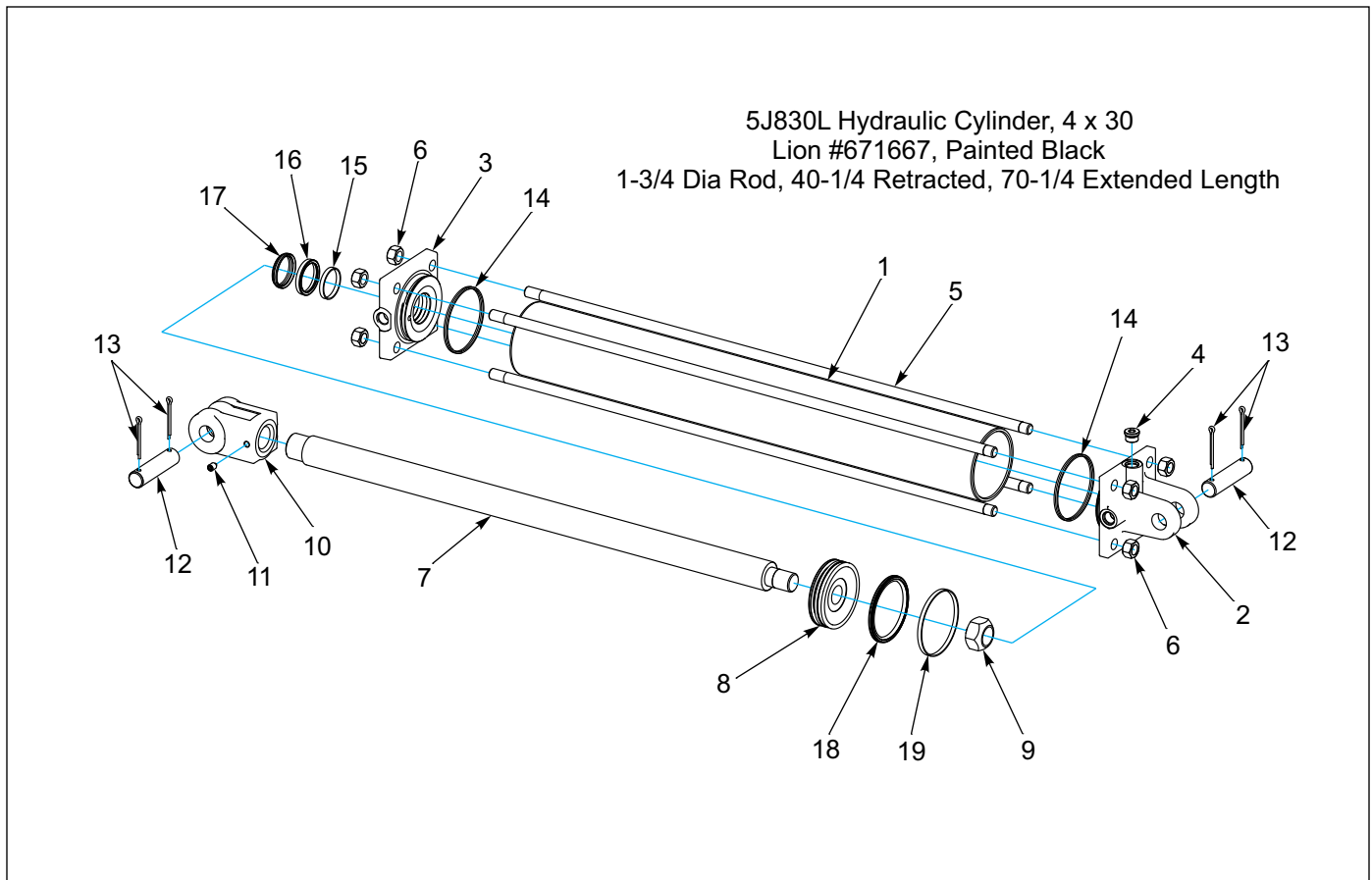


Figure 1-34: 5J830L Hydraulic Cylinder, 4 x 30 - Lion

5J830L Hydraulic Cylinder, 4 x 30 - Lion - 671667

ITEM	PART NUMBER	DESCRIPTION	QTY
	5J830	HYD CYLINDER - 4 X 30	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	8J852	NUT, LOCK 1-1/8-12, GRB, ZP	1
10	2P738	CLEVIS, 1" PIN X 1.5-12 X 2.75 (INCLUDES ITEM 11)	1
11	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
12	7J067	PIN, 1.0 X 4.0 H2	2
13	110-4224	PIN, COTTER 3/16 X 2IN LG	4
14	NSS	SEAL DUAL 4.00	2
15	NSS	WEAR RING 1.87-1.75-0.250	1
16	NSS	SEAL ZURCON U-CUP RU9 1.75	1
17	NSS	SEAL, WIPER 1.75	1
18	NSS	SEAL SURCON WYNSEAL 4.00	1
19	NSS	WEAR RING 4.00-3.88-0.250	1
20	1P745	SEAL KIT (INCLUDES ITEMS 14-19)	1

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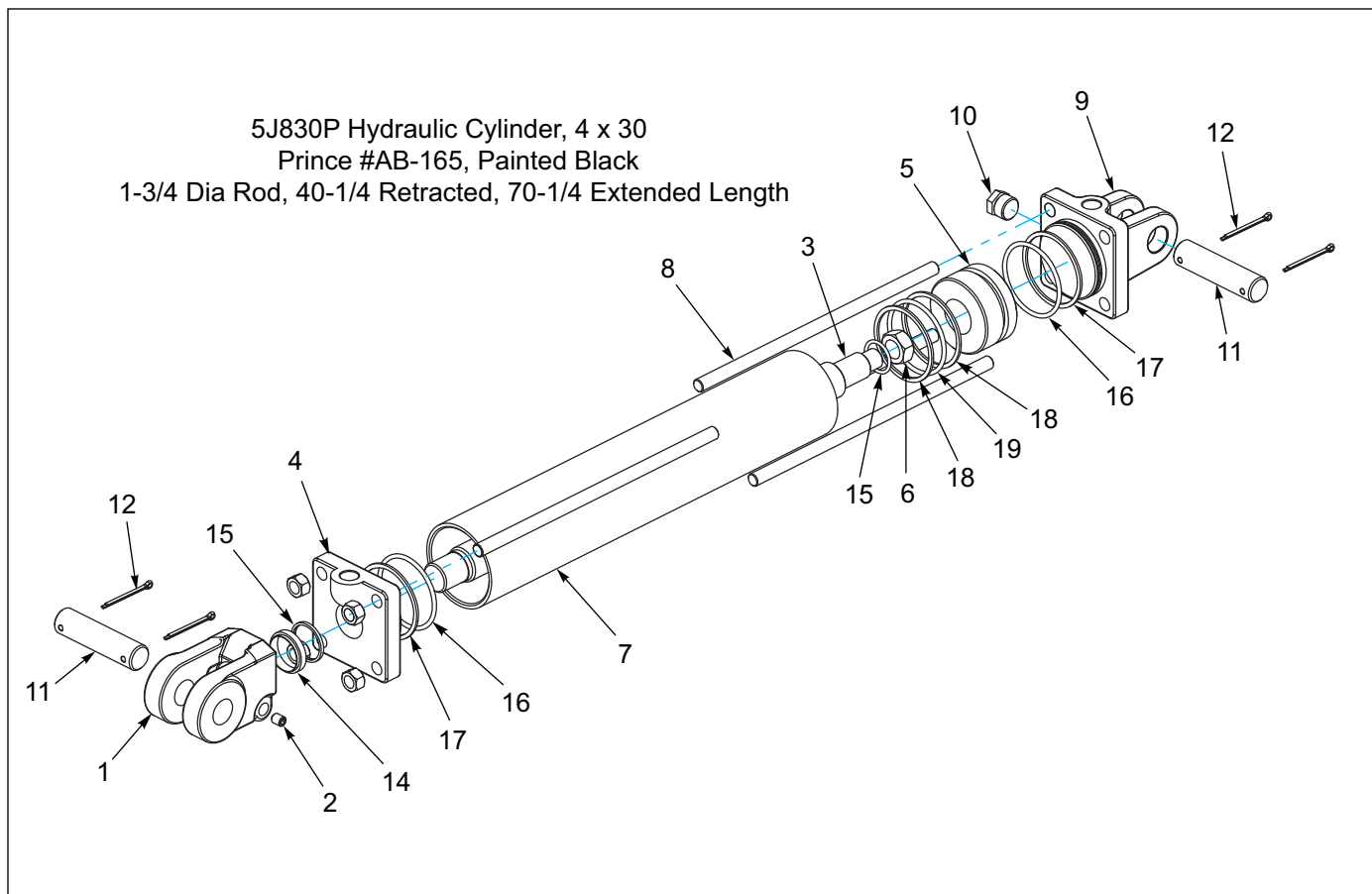


Figure 1-35: 5J830P Hydraulic Cylinder, 4 x 30 - Prince

5J830P Hydraulic Cylinder, 4 x 30 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	5J830	HYD CYLINDER - 4 X 30	
1	1J072	ROD END CLEVIS	1
2	NSS	SET SCREW, 3/8-24 NF X 1/2"	1
3	6J336	PISTON ROD	1
4	NSS	GLAND	1
5	NSS	PISTON	1
6	NSS	LOCKNUT, 1 1/4-12 NF	1
7	6J337	TUBE	1
8	6J338	TIE ROD	4
9	7J053	BASE	1
10	1-007-010025	PLUG,3/4-16 O-RING BOSS	1
11	7J067	CLEVIS PIN	2
12	110-4224	PIN,COTTER 3/16 X 2IN LG	4
13	NSS	O-RING	1
14	NSS	ROD WIPER	1
15	NSS	U-CUP	1
16	NSS	O-RING	2
17	NSS	BACK-UP WASHER	2
18	NSS	BACK UP WASHER	2
19	NSS	O-RING	1
20	1J070	SEAL KIT (INCLUDES ITEMS 13-19)	

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5K440G Hydraulic Cylinder, 3 x 8
 Hydraulic Gear #3008SAE, Painted Black
 1-1/4 Dia Rod, 18-1/4 Retracted, 26-1/4 Extended Length

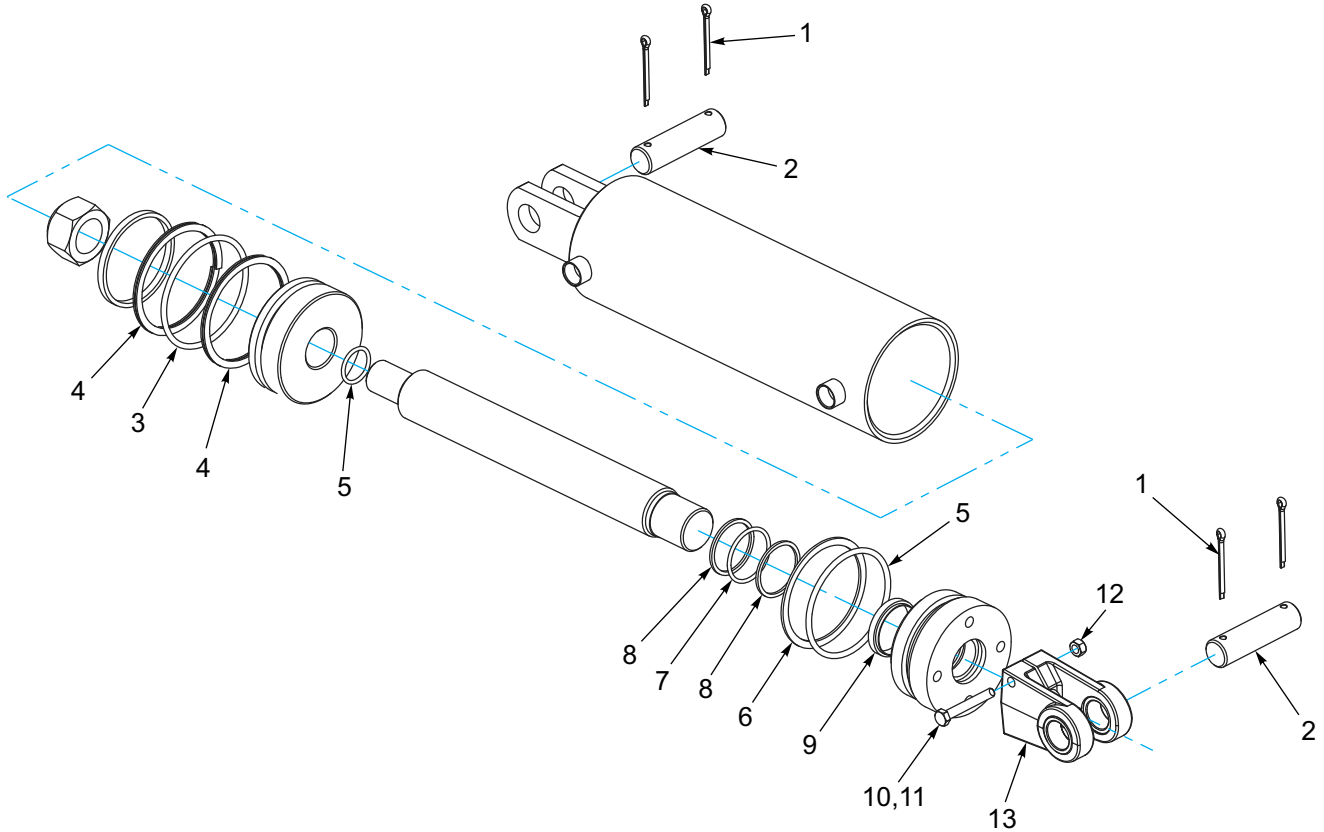


Figure 1-36: 5K440G Hydraulic Cylinder, 3 x 8 - Hydraulic Gear

5K440G Hydraulic Cylinder, 3 x 8 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	5K440	HYD CYLINDER - 3 X 8	
1	110-4224	PIN,COTTER 3/16 X 2IN LG	4
2	5J650	PIN	2
3	NSS	O-RING	2
4	NSS	SPIRAL BACKUP RING	2
5	NSS	SEAL	1
6	NSS	BACKUP RING, THK	1
7	NSS	O-RING	1
8	NSS	BACKUP RING	2
9	NSS	WIPER	1
10	108628	SCREW HX CP 5/16-18UNC X 2-1/4	1
11	1-861-010034-10	WASHER,LKG 5/16	1
12	1-512-010007-06	NUT, HEX 5/16-18	1
13	5J195	CLEVIS	1
14	5K838	SEAL KIT (INCLUDES ITEMS 3-9)	

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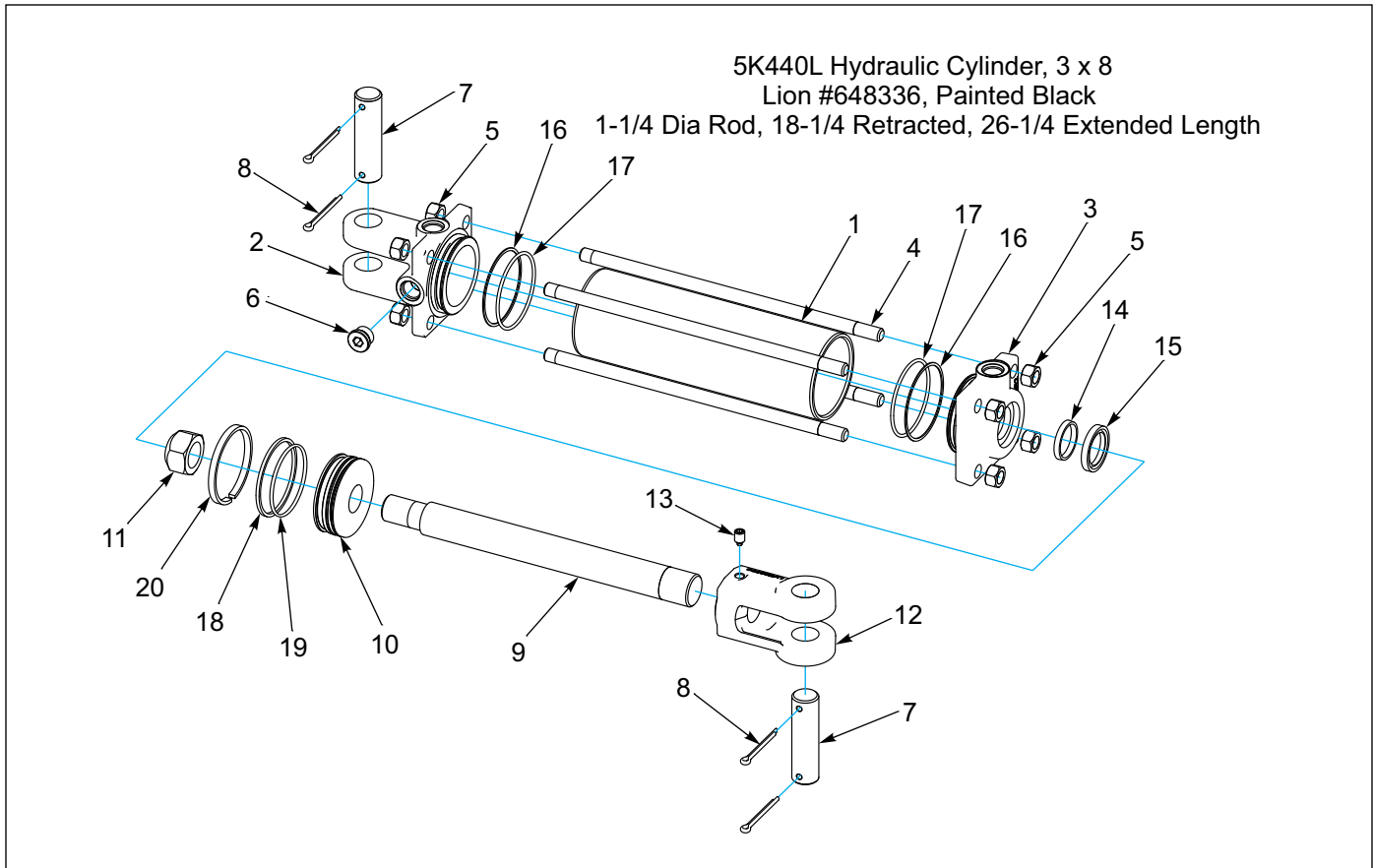


Figure 1-37: 5K440L Hydraulic Cylinder, 3 x 8 - Lion

5K440L Hydraulic Cylinder, 3 x 8 - Lion - 648336

ITEM	PART NUMBER	DESCRIPTION	QTY
	5K440	HYD CYLINDER - 3 X 8	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1-512-010007-09	NUT, HEX 1/2-13 ZP	8
6	NSS	PLUG, SOCKET HEAD 3/4-16	1
7	5J650	PIN, CLEVIS, 1.0X3.625	2
8	110-4224	PIN, COTTER 3/16 X 2IN LG	4
9	NSS	ROD	1
10	NSS	PISTON	1
11	NSS	NUT, LOCK 1-14, GrB, ZP	1
12	2P737	CLEVIS, 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 13)	1
13	1P443	SET SCREW, 3/8-16 x 1/2 NYLON TIP	1
14	NSS	SEAL, HALLITE 605 ROD 1-1/4 D	1
15	NSS	SEAL WIPER ROD, 1.250 METAL E	1
16	NSS	SEAL, BU#232 19PI-232	2
17	NSS	O-RING, 232 (2.75x3) BUNA N D9	2
18	NSS	SEAL, PTFE PISTION RING 3DIA	1
19	NSS	O-RING, 145 (2.562x2.75) DUR9	1
20	NSS	WEAR RING, 3.00-2.75-.25-GFN	1
21	1P743	SEAL KIT (INCLUDES ITEMS 14-20)	

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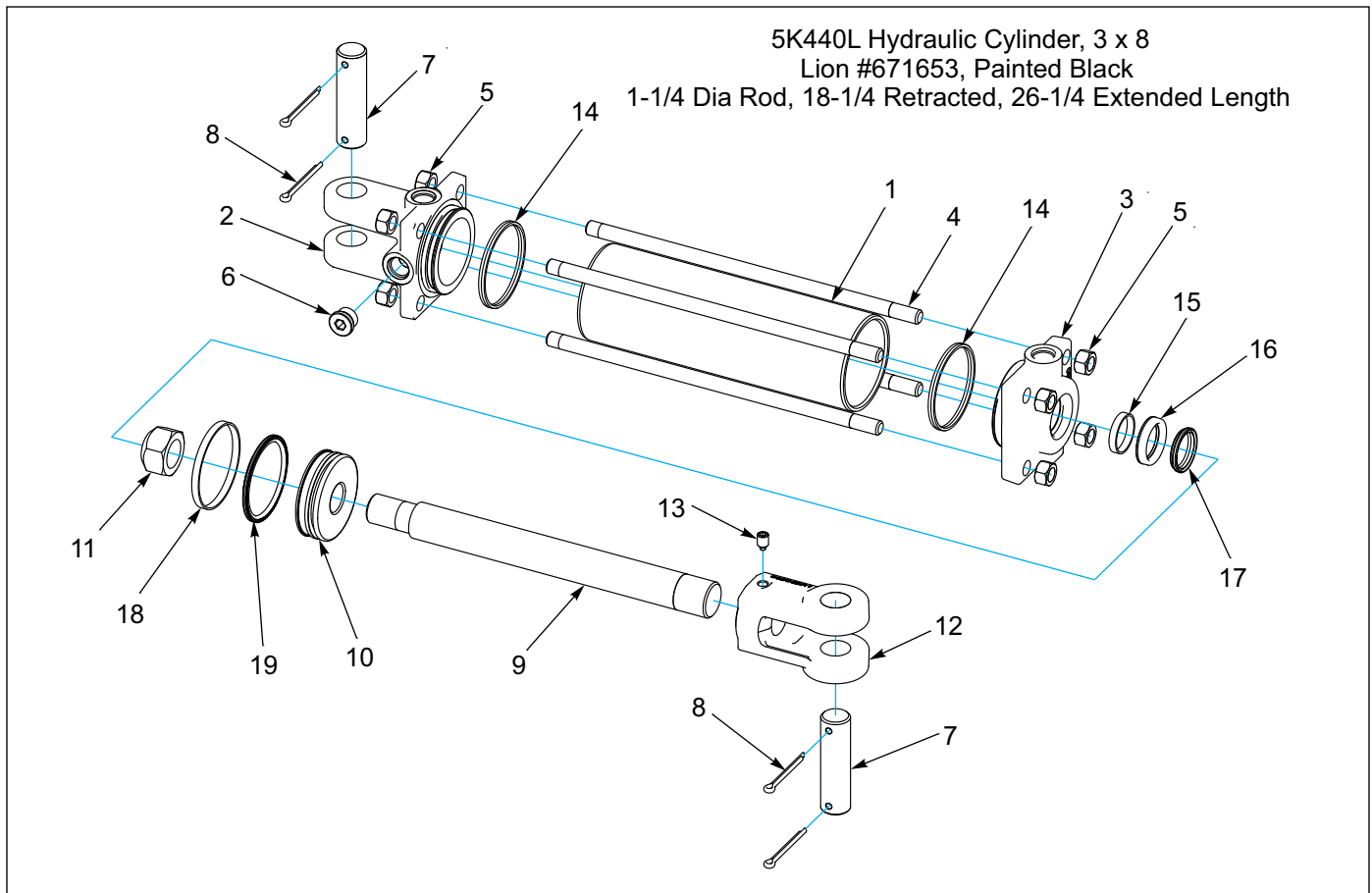


Figure 1-38: 5K440L Hydraulic Cylinder, 3 x 8 - Lion

5K440L Hydraulic Cylinder, 3 x 8 - Lion - 671653

ITEM	PART NUMBER	DESCRIPTION	QTY
	5K440	HYD CYLINDER - 3 X 8	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1-512-010007-09	NUT, HEX 1/2-13 ZP	8
6	NSS	PLUG, SOCKET HEAD 3/4-16	1
7	5J650	PIN, CLEVIS, 1.0X3.625	2
8	110-4224	PIN, COTTER 3/16 X 2IN LG	4
9	NSS	ROD	1
10	NSS	PISTON	1
11	NSS	NUT, LOCK 1-14, GrB, ZP	1
12	2P737	CLEVIS, 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 13)	1
13	1P443	SET SCREW, 3/8-16 x 1/2 NYLON TIP	1
14	NSS	SEAL DUAL 3.00	2
15	NSS	WEAR RING 1.37-1.25-0.250	1
16	NSS	SEAL ZURCON U-CUP RU9 1.25	1
17	NSS	SEAL WIPER 1.25 WNUC	1
18	NSS	WEAR RING 3.00-2.88-0.250	1
19	NSS	SEAL ZURCON WYNSEAL 3.00"	1
20	1P743	SEAL KIT (INCLUDES ITEMS 14-19)	

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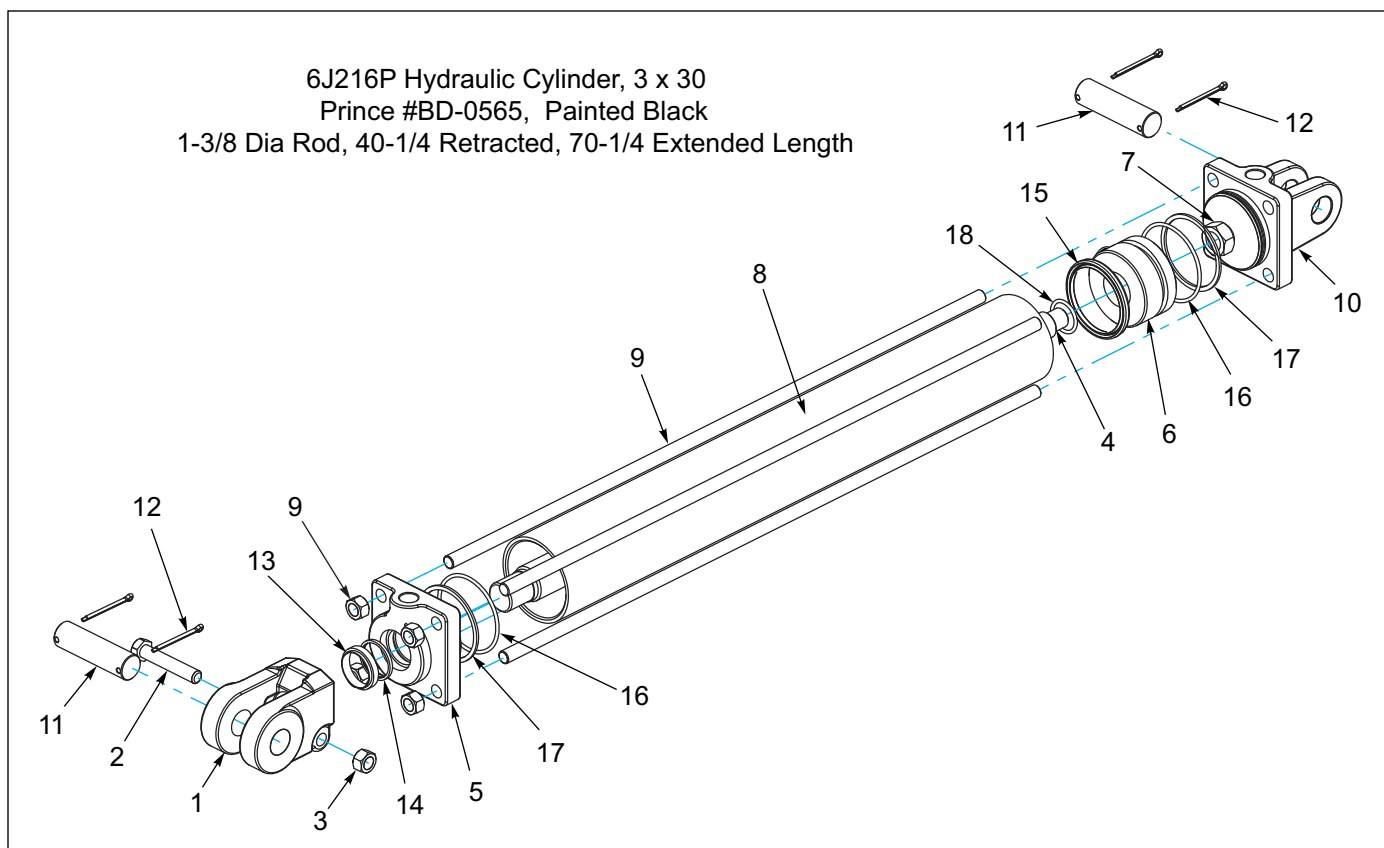


Figure 1-39: 6J216P Hydraulic Cylinder, 3 x 30 - Prince

6J216P Hydraulic Cylinder, 3 x 30 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	6J216	HYD CYLINDER - 3 X 30	
1	9D481	ROD CLEVIS	1
2	1-654-010051-10	SCREW, HX CP 3/8-16X2-1/4 GR5	1
3	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
4	7K929	ROD	1
5	7K931	GLAND	1
6	7K930	PISTON	1
7	NSS	PISTON NUT, 1-14 UNF, SELF LOCKING	1
8	6J340	TUBE	1
9	7K932	TIE ROD ASSEMBLY	4
10	7J049	BUTT END CLEVIS	1
11	5J650	CLEVIS PIN	2
12	110-4224	PIN,COTTER 3/16 X 2IN LG	4
13	NSS	ROD WIPER	1
14	NSS	BACK-UP RING	1
15	NSS	CROWN SEAL	1
16	NSS	O-RING - END CAP	2
17	NSS	BACK UP RING	2
18	NSS	O-RING	1
19	7K926	SEAL KIT (AFTER 08/2003 CYLINDER PAINTED BLACK) (INCLUDES ITEMS 13-18)	
20	9D482	SEAL KIT (PRIOR TO 08/2003 CYLINDER PAINTED RED) (INCLUDES ITEMS 13-18)	

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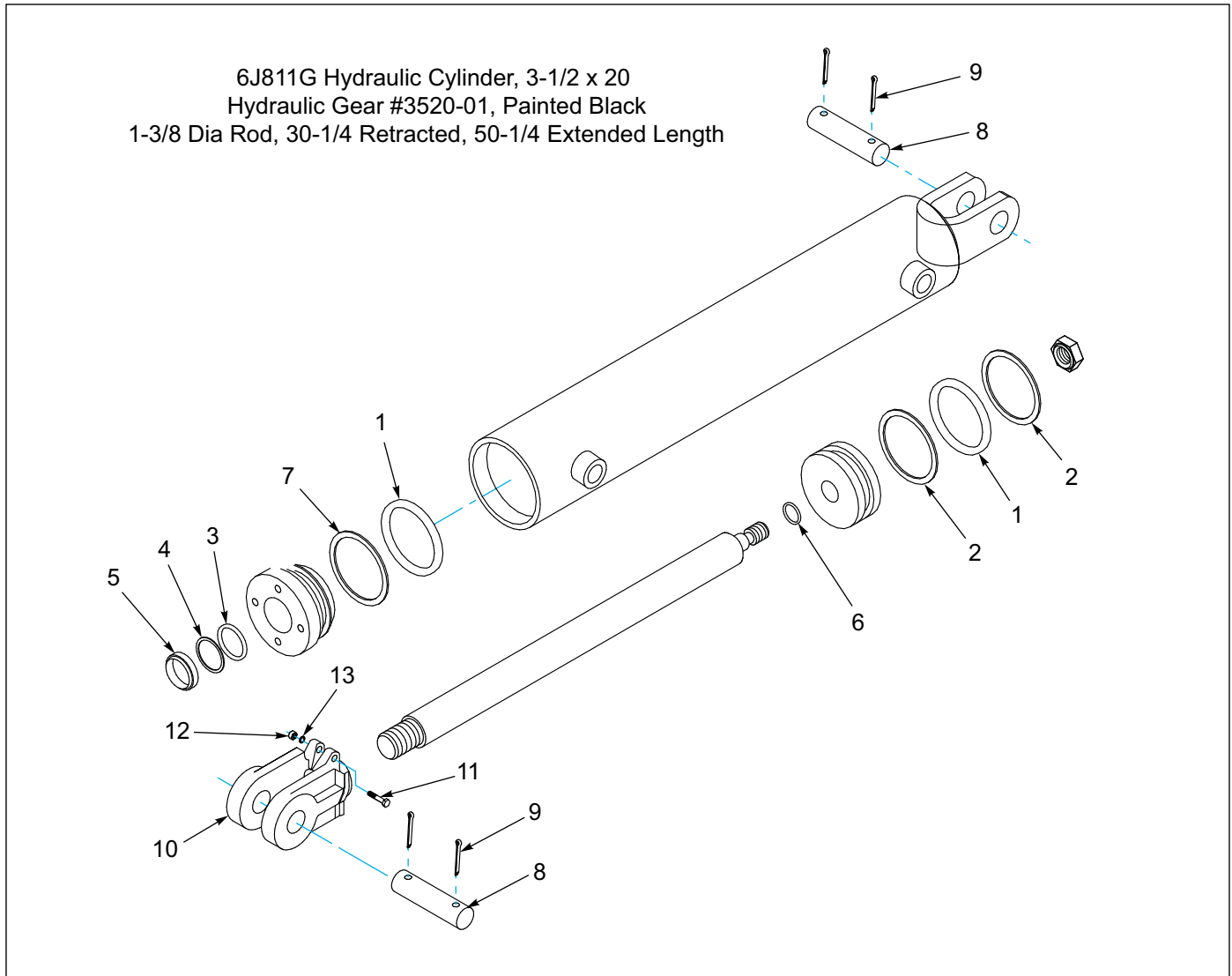


Figure 1-40: 6J811G Hydraulic Cylinder, 3-1/2 x 20 - Hydraulic Gear

6J811G Hydraulic Cylinder, 3-1/2 x 20 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	6J811	HYD CYLINDER - 3 1/2 X 20	
1	NSS	O RING	2
2	NSS	BACK-UP RING	2
3	NSS	O RING	1
4	NSS	BACK UP RING	1
5	NSS	ROD WIPER	1
6	NSS	O RING	1
7	NSS	BACK UP RING	1
8	5J650	CYLINDER PIN	2
9	110-4224	PIN,COTTER 3/16 X 2IN LG	4
10	5J195	ROD END CLEVIS	1
11	108628	SCREW HX CP 5/16-18UNCX2-1/4	1
12	1-512-010007-06	NUT, HEX 5/16-18	1
13	1-861-010034-10	WASHER,LKG 5/16	1
14	1J961	SEAL KIT (INCLUDES ITEMS 1-7)	

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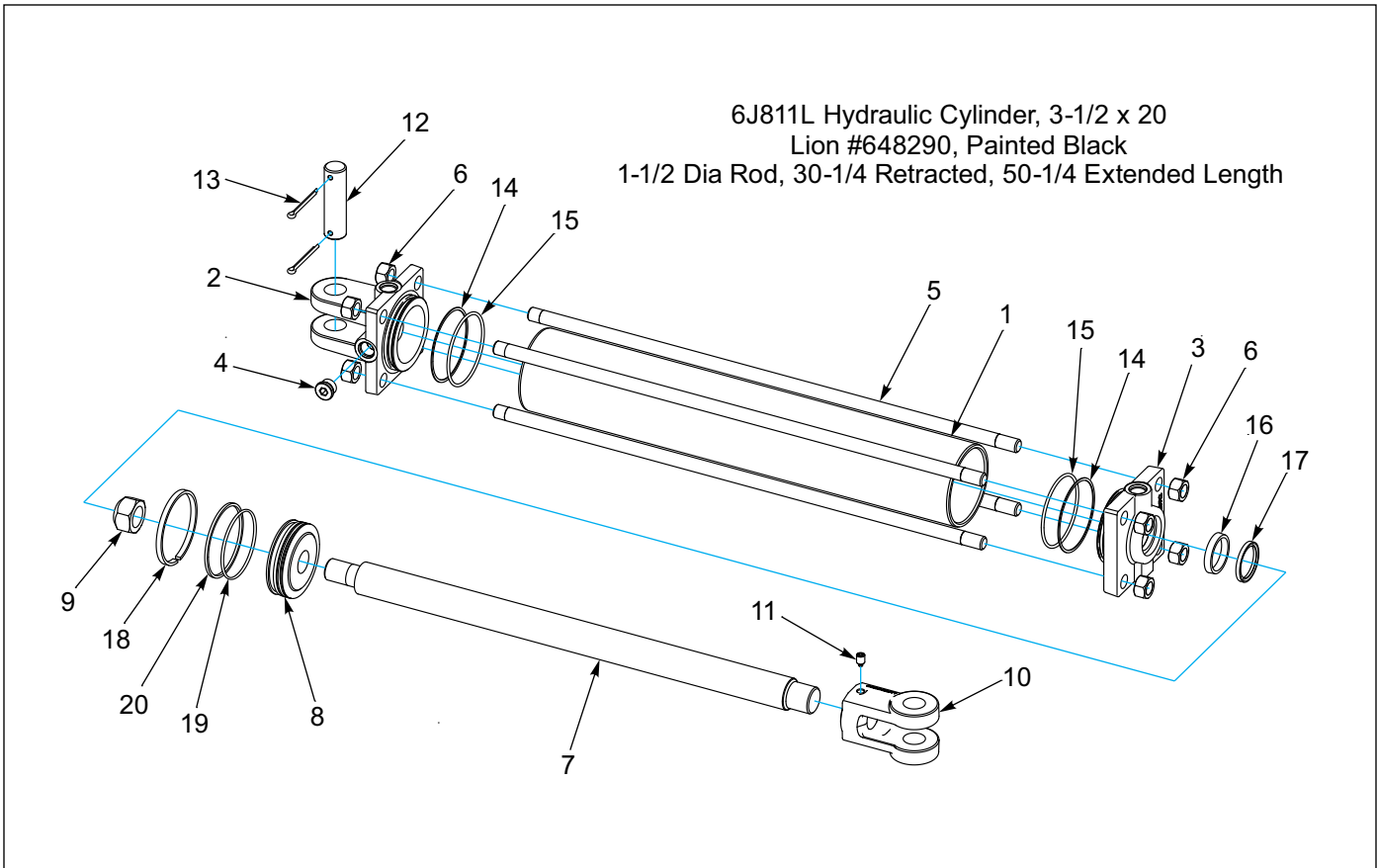


Figure 1-41: 6J811L Hydraulic Cylinder, 3-1/2 x 20 - Lion

6J811L Hydraulic Cylinder, 3-1/2 x 20 - Lion - 648290

ITEM	PART NUMBER	DESCRIPTION	QTY
	6J811	HYD CYLINDER - 3 1/2 X 20	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	NUT, LOCK 1-14, GrB, ZP	1
10	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 11)	1
11	1P443	SET SCREW, 3/8-16 x 1/2 NYLON TIP	1
12	5J650	PIN, 1.0 x 3.625 H2	1
13	110-4224	PIN, COTTER 3/16 X 2IN LG	2
14	NSS	SEAL, BU#236 19PI-236	2
15	NSS	O-RING, 236 (3.25x3.5) D90	2
16	NSS	SEAL, HALLITE 605 ROD 1-1/2 D	1
17	NSS	SEAL, NOK-AR2263-EO 1-1/2"BO	1
18	NSS	WEAR RING, 3.50-3.25-.25-GFN	1
19	NSS	O-RING, 151 (3.0x3.188) DUR90	1
20	NSS	SEAL, PTFE PISTON RING 3-1/2D	1
21	1P744	SEAL KIT (INCLUDES ITEMS 14-20)	

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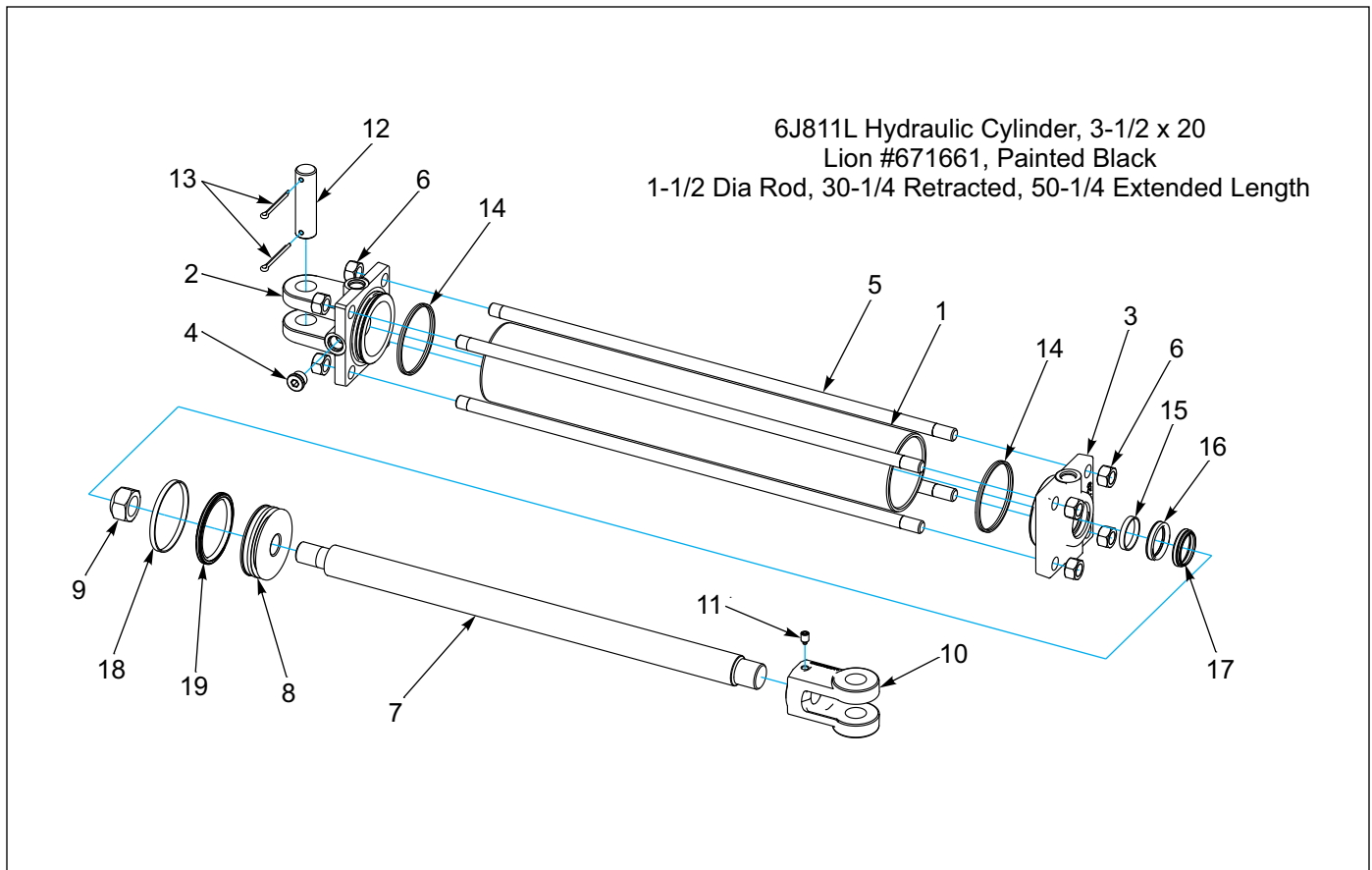


Figure 1-42: 6J811L Hydraulic Cylinder, 3-1/2 x 20 - Lion

6J811L Hydraulic Cylinder, 3-1/2 x 20 - Lion - 671661

ITEM	PART NUMBER	DESCRIPTION	QTY
	6J811	HYD CYLINDER - 3 1/2 X 20	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	NUT, LOCK 1-14, GrB, ZP	1
10	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 11)	1
11	1P443	SET SCREW, 3/8-16 x 1/2 NYLON TIP	1
12	5J650	PIN, 1.0 x 3.625 H2	1
13	110-4224	PIN, COTTER 3/16 X 2IN LG	2
14	NSS	SEAL DUAL 3.50	2
15	NSS	WEAR RING 1.63-1.50-0.250	1
16	NSS	SEAL ZURCON U-CUP RU9 1.50	1
17	NSS	SEAL WIPER 1.50 WNUC TSS	1
18	NSS	WEAR RING 3.50-3.38-0.250	1
19	NSS	SEAL ZURCON WYNSEAL 3.50"	1
20	1P744	SEAL KIT (INCLUDES ITEMS 14-19)	

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6J812G Hydraulic Cylinder, 2-1/2 x 20
 Hydraulic Gear, #2520-01, Painted Black
 1-1/4 Dia Rod, 30-1/4 Retracted, 50-1/4 Extended Length

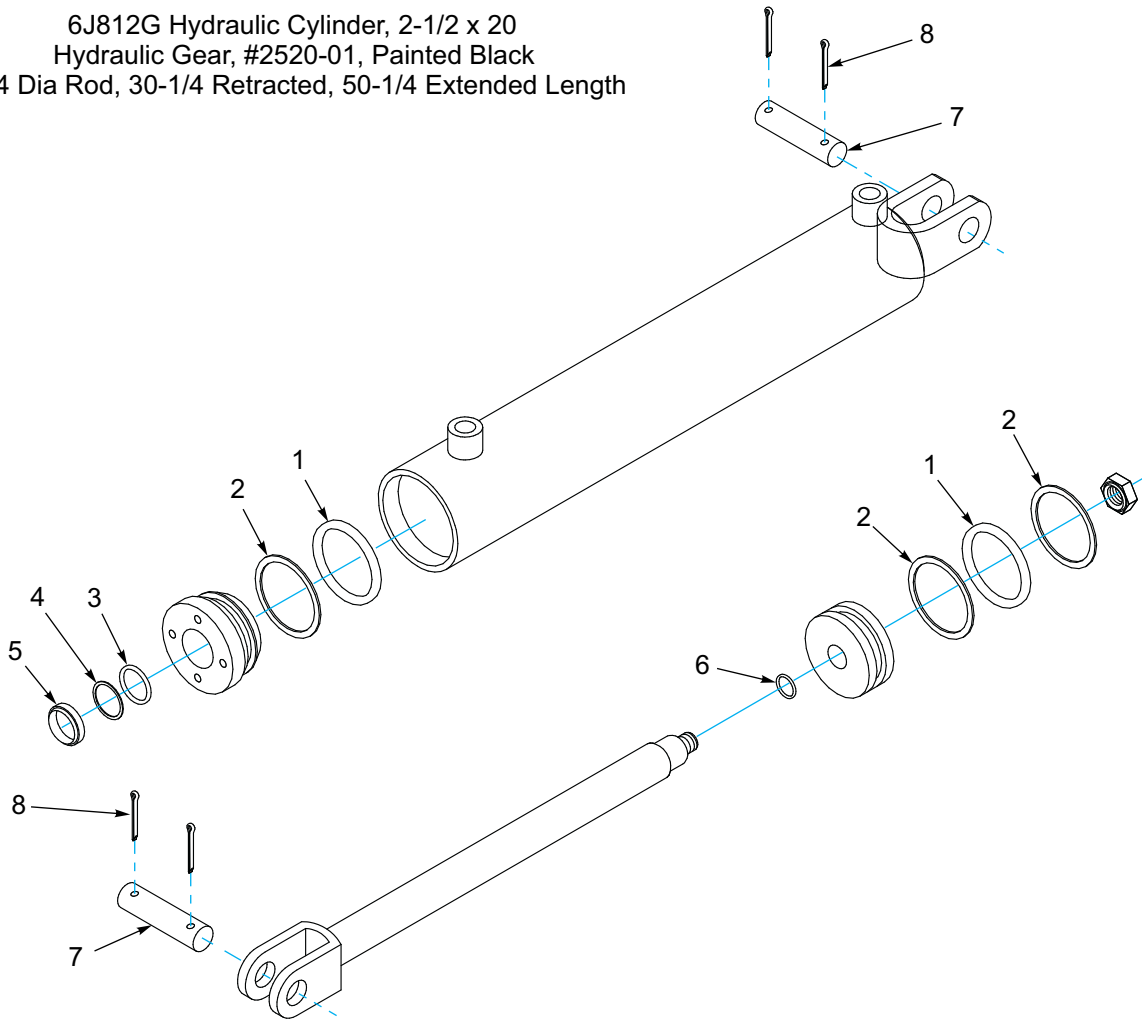


Figure 1-43: 6J812G Hydraulic Cylinder, 2-1/2 x 20 - Hydraulic Gear

6J812G Hydraulic Cylinder, 2-1/2 x 20 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	6J812	HYD CYLINDER - 2-1/2 X 20	
1	NSS	O RING	2
2	NSS	BACK-UP RING	3
3	NSS	O RING	1
4	NSS	BACK-UP RING	2
5	NSS	WIPER	1
6	NSS	SEAL	1
7	5J650	PIN, 1.0 x 3.625 H2	2
8	110-4224	PIN, COTTER 3/16 X 2IN LG	4
9	6J542	SEAL KIT (INCLUDES ITEMS 1-6)	

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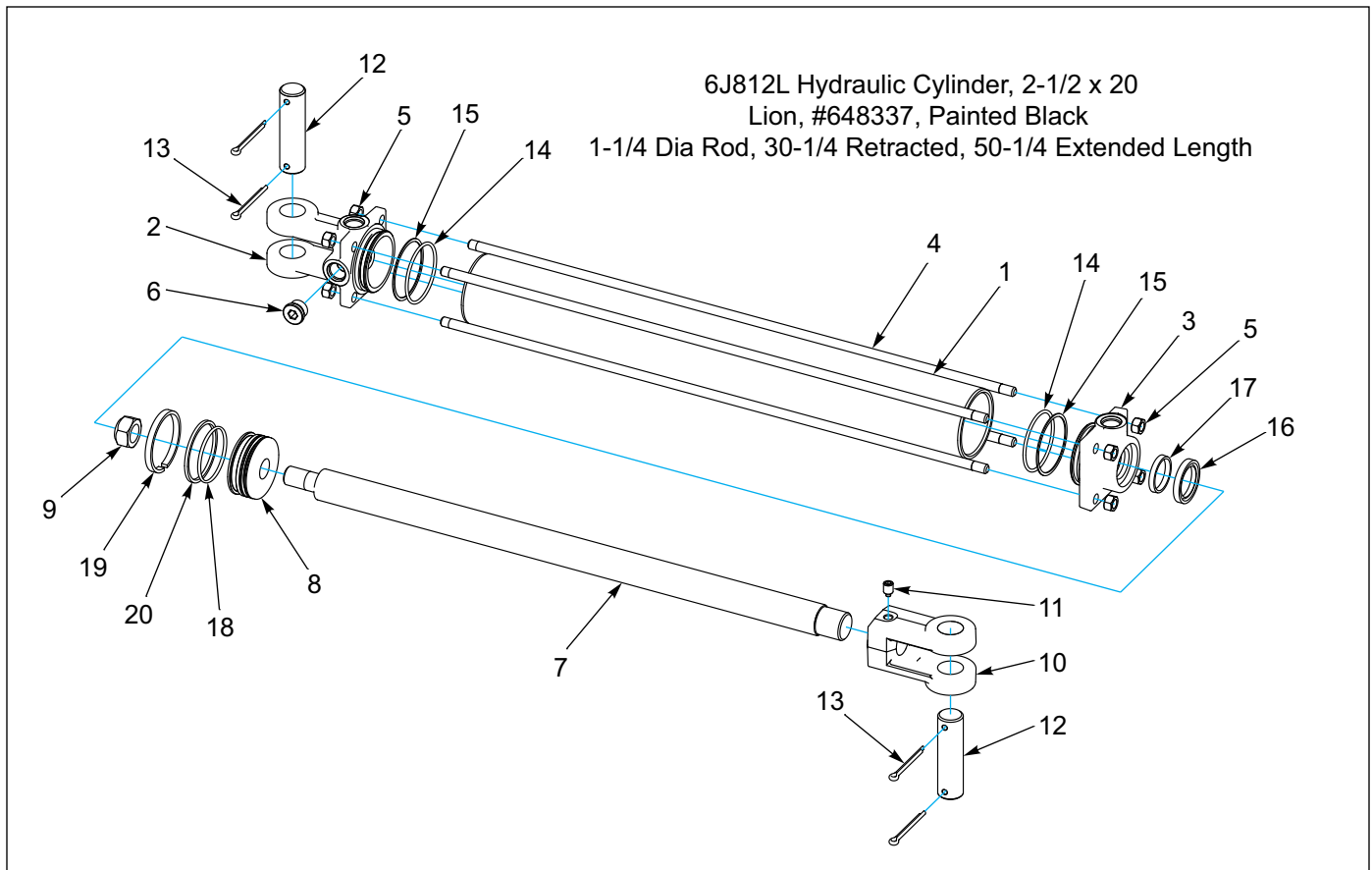


Figure 1-44: 6J812L Hydraulic Cylinder, 2-1/2 x 20 - Lion

6J812L Hydraulic Cylinder, 2-1/2 x 20 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	6J812	HYD CYLINDER - 2-1/2 X 20	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1-512-010007-07	NUT, HEX 3/8-16 ZP	8
6	NSS	PLUG, SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	1P805	NUT, HEX SLFLKG GRB 3/4-16	1
10	2P736	ROD CLEVIS (INCLUDES ITEM 11)	1
11	1P443	SET SCREW, 3/8-16 X 1/2 NYL	1
12	5J650	PIN, CLEVIS 1.0 X 3.625	2
13	110-4224	PIN, COTTER 3/16 X 2IN LG	4
14	NSS	O-RING, 228 (2.25X2.5) DURO	2
15	NSS	SEAL, BU#228 19PI-228	2
16	NSS	SEAL WIPER ROD, 1.250 METAL E	1
17	NSS	SEAL, HALLITE B605 ROD 1-1/4 D	1
18	NSS	O-RING, 137 (2.063X2.25) DUR9	1
19	NSS	WEAR RING, 2.50-2.25-.25-GFN	1
20	NSS	SEAL, PTFE PISTON RING 2-1/2D	1
21	1P742	SEAL KIT (INCLUDES ITEMS 14-20)	

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6K843G Hydraulic Cylinder, 3-1/2 x 16
 Hydraulic Gear #BIW3.5-1.5-16, Painted Black
 1-1/2 Dia Rod, 31-1/2 Retracted, 47-1/2 Extended Length

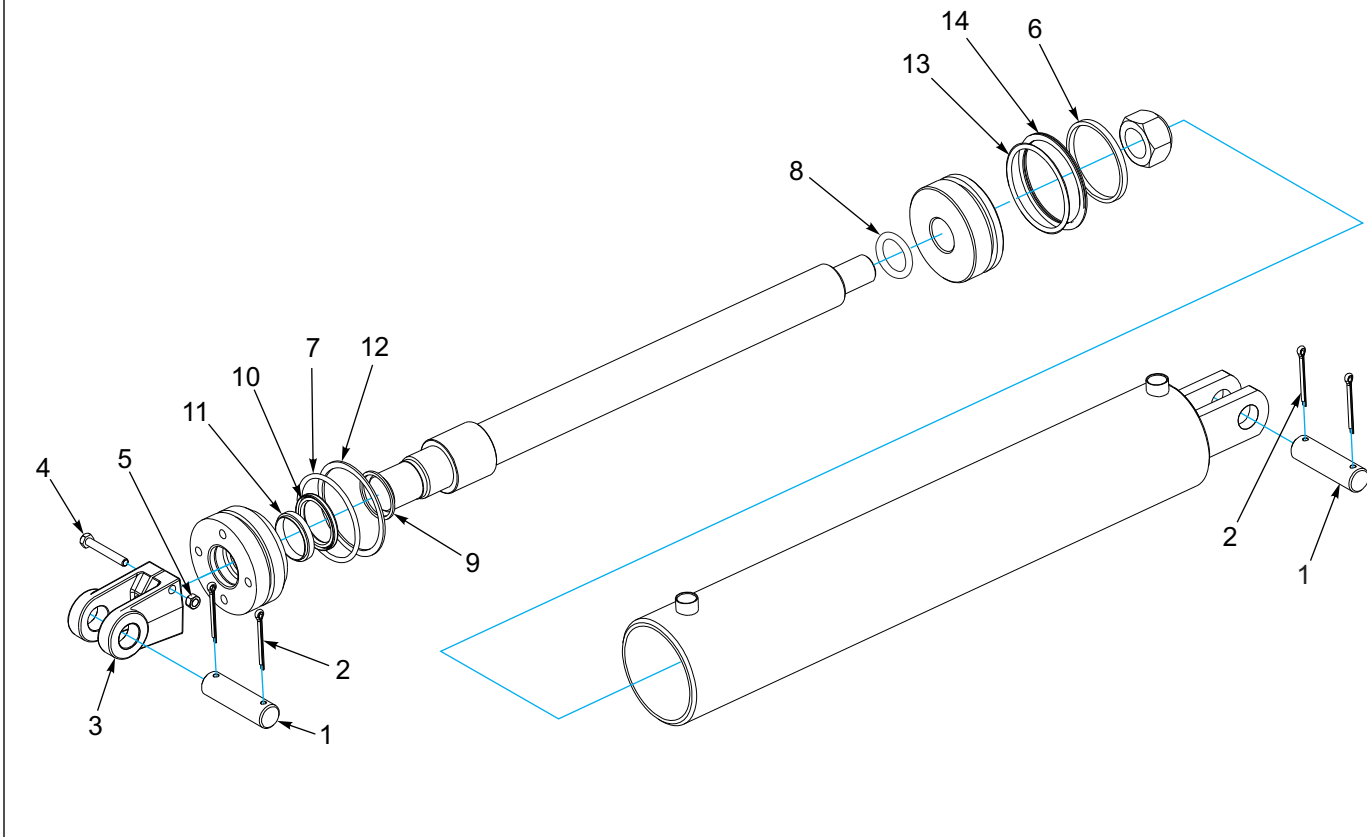


Figure 1-45: 6K843G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

6K843G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	6K843	HYD CYLINDER - 3 1/2 X 16	
1	5J650	PIN,CLEVIS 1.0X3.625	2
2	110-4224	PIN,COTTER 3/16 X 2IN LG	4
3	5J195	CLEVIS	1
4	1-654-010049-11	SCREW,HX CAP, 5/16-18UNCX2-1/2	1
5	104032	NUT,HX SLF-LKG W/MYL 5/16-18	1
6	NSS	WEAR RING	1
7	NSS	O-RING	1
8	NSS	O-RING	1
9	NSS	WEAR RING	1
10	NSS	POLYSEAL	1
11	NSS	WIPER	1
12	NSS	BACKUP RING	1
13	NSS	NITRILE ENERGIZER	1
14	NSS	SEAUN6 RING	1
15	7K260	SEAL KIT (INCLUDES ITEMS 6-14)	

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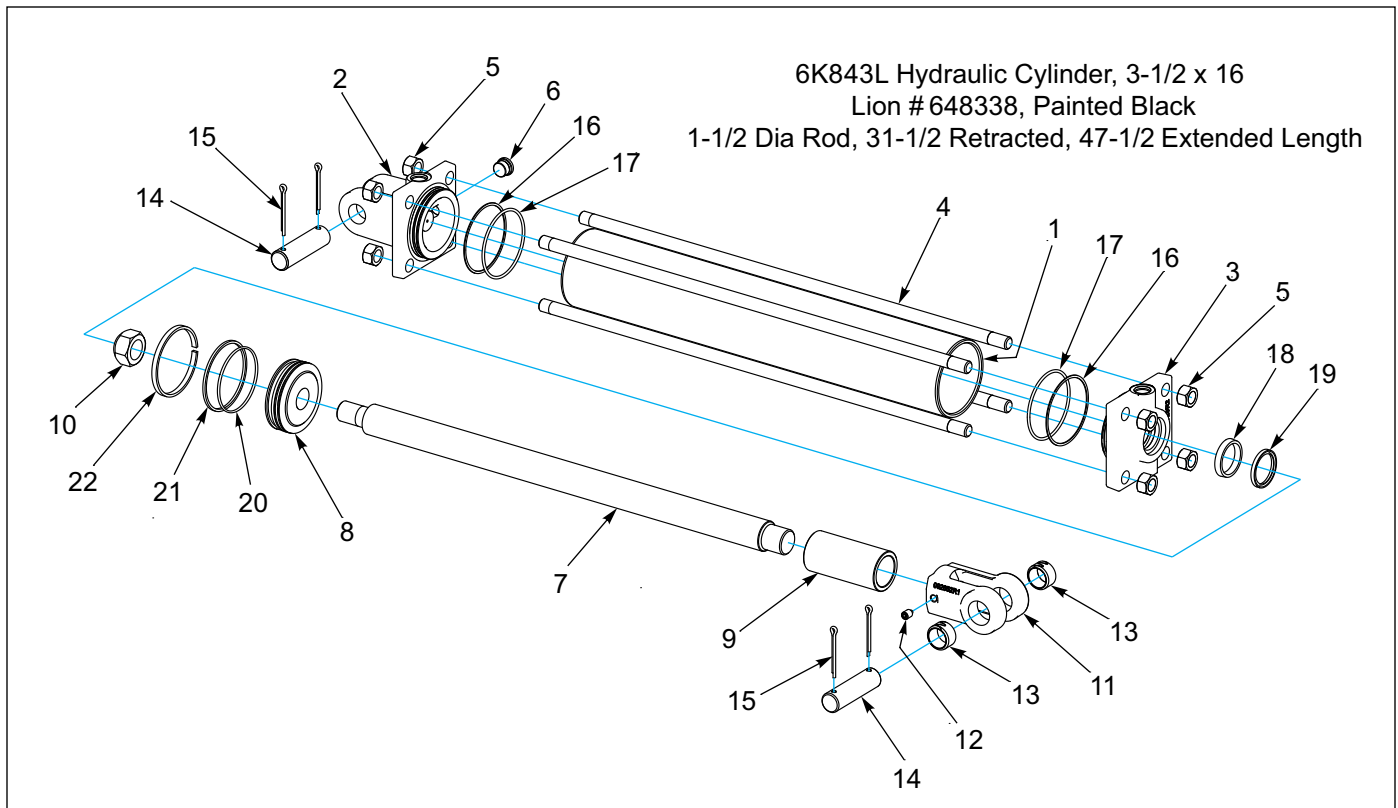


Figure 1-46: 6K843L Hydraulic Cylinder, 3-1/2 x 16 - Lion

6K843L Hydraulic Cylinder, 3-1/2 x 16 - Lion - 648338

ITEM	PART NUMBER	DESCRIPTION	QTY
	6K843	HYD CYLINDER - 3 1/2 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	NSS	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	STOP TUBE	1
10	NSS	NUT,LOCK 1-14,GRB,ZP	1
11	2P111	ROD CLEVIS (INCLUDES ITEMS 12 AND 13)	1
12	1P443	SET SCREW,3/8-16 X 1/2 NYLON TIP	1
13	3P079	SPRING BUSHING, 1.0 X 1.25 X 0.75	2
14	5J650	PIN, 1.0 X 3.625 H2	2
15	110-4224	PIN,COTTER 3/16 X 2IN LG	4
16	NSS	SEAL,BU#236 19PI-236	2
17	NSS	O-RING,236 (3.25 X 3.5) D90	2
18	NSS	SEAL,HALLITE 605 ROD 1-1/2D	1
19	NSS	SEAL,NOK-AR2263-EO 1-1/2"BO	1
20	NSS	O-RING,151 (3.0 X 3.188) DURO90	1
21	NSS	SEAL,PTFE PISTON RING 3-1/2D	1
22	NSS	WEAR RING,3.50-3.25-.25-GFN	1
23	1P744	LION CYLINDER SEAL KIT(3.5") (INCLUDES ITEMS 16-22)	

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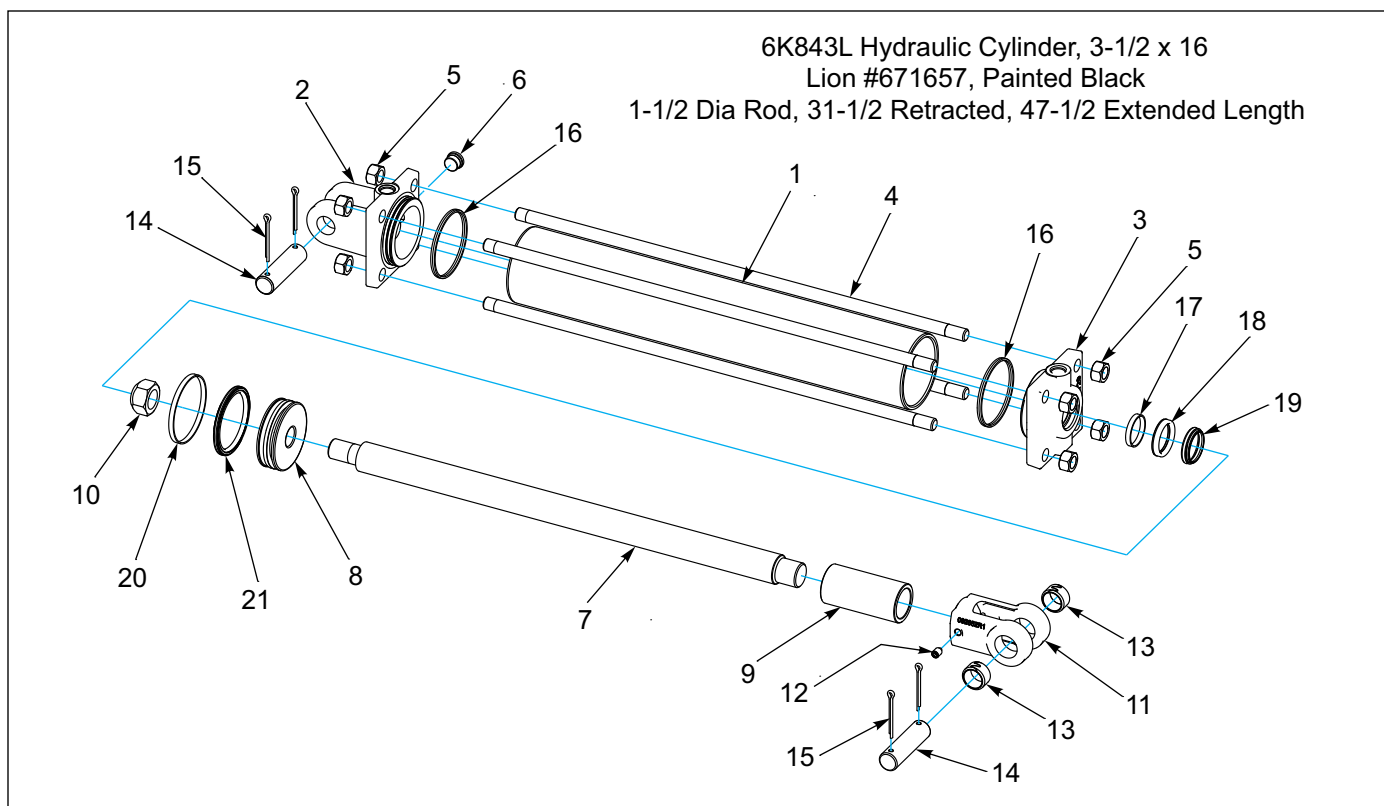


Figure 1-47: 6K843L Hydraulic Cylinder, 3-1/2 x 16 - Lion

6K843L Hydraulic Cylinder, 3-1/2 x 16 - Lion - 671657

ITEM	PART NUMBER	DESCRIPTION	QTY
	6K843	HYD CYLINDER - 3 1/2 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	NSS	NUT,HEX 5/8-18,ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	STOP TUBE	1
10	NSS	NUT,LOCK 1-14,GRB,ZP	1
11	2P111	ROD CLEVIS (INCLUDES ITEMS 12 AND 13)	1
12	1P443	SET SCREW,3/8-16 X 1/2 NYLON TIP	1
13	3P079	SPRING BUSHING, 1.0 X 1.25 X 0.75	2
14	5J650	PIN, 1.0 X 3.625 H2	2
15	110-4224	PIN,COTTER 3/16 X 2IN LG	4
16	NSS	SEAL,BU#236 19PI-236	2
17	NSS	O-RING,236 (3.25 X 3.5) D90	2
18	NSS	SEAL,HALLITE 605 ROD 1-1/2D	1
19	NSS	SEAL,NOK-AR2263-EO 1-1/2"BO	1
20	NSS	O-RING,151 (3.0 X 3.188) DURO90	1
21	NSS	SEAL,PTFE PISTON RING 3-1/2D	1
22	NSS	WEAR RING,3.50-3.25-.25-GFN	1
23	1P744	LION CYLINDER SEAL KIT(3.5") (INCLUDES ITEMS 16-22)	

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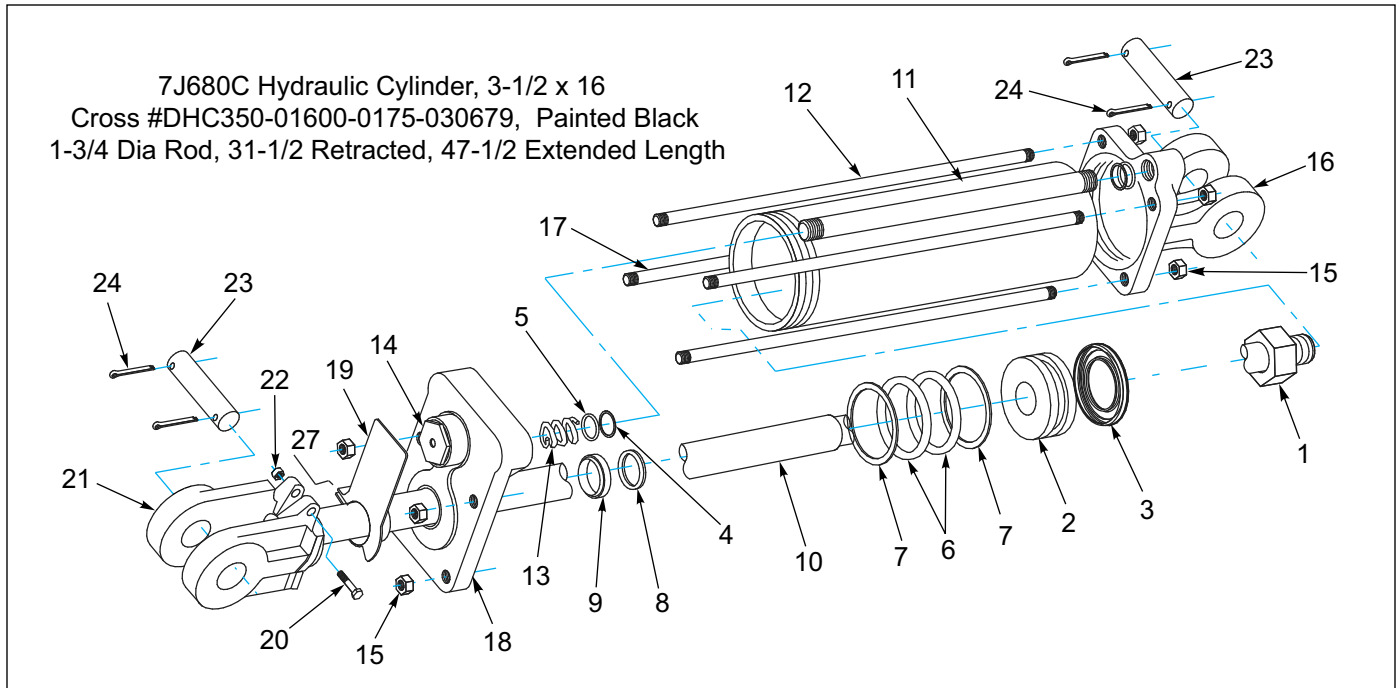


Figure 1-48: 7J680C Hydraulic Cylinder, 3-1/2 x 16 - Cross

7J680C Hydraulic Cylinder, 3-1/2 x 16 - Cross

ITEM	PART NUMBER	DESCRIPTION	QTY
	7J680	HYD CYLINDER - 3 1/2 X 16	
1	5K684	NUT	1
2	9K004	PISTON	1
3	NSS	CROWN SEAL	1
4	NSS	BACK-UP	2
5	NSS	O-RING	2
6	NSS	O-RING	2
7	NSS	BACK-UP	2
8	NSS	U-CUP	1
9	NSS	WIPER	1
10	9K003	ROD	1
11	9K002	TUBE	1
12	9K001	FEED TUBE	1
13	5K689	SPRING	1
14	5K690	CARTRIDGE ASSEMBLY	1
15	8K999	HEX NUT,9/16-18 UNF	8
16	8K998	BASE CLEVIS	1
17	8K997	TIE ROD	4
18	8K996	HEAD	1
19	8K995	ACTUATOR ASSEMBLY	1
20	7C937	HHCS, 3/8" X 1 3/4" SOCKET HD	1
21	8K994	ROD CLEVIS	1
22	1-512-010007-07	NUT, HEX 3/8-16 ZP	1
23	4J549	CLEVIS PIN	2
24	110-4224	PIN,COTTER 3/16 X 2IN LG	4
27	1-654-010049-06	SCREW,H/CAP 5/16-18UNCX1-1/4	1
28	9K005	SEAL KIT (INCLUDES ITENS 3-9)	

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7J680G Hydraulic Cylinder, 3-1/2 x 16
 Hydraulic Gear # [BIW#7J680], Painted Black
 1-3/4 Dia Rod, 31-1/2 Retracted, 47-1/2 Extended Length

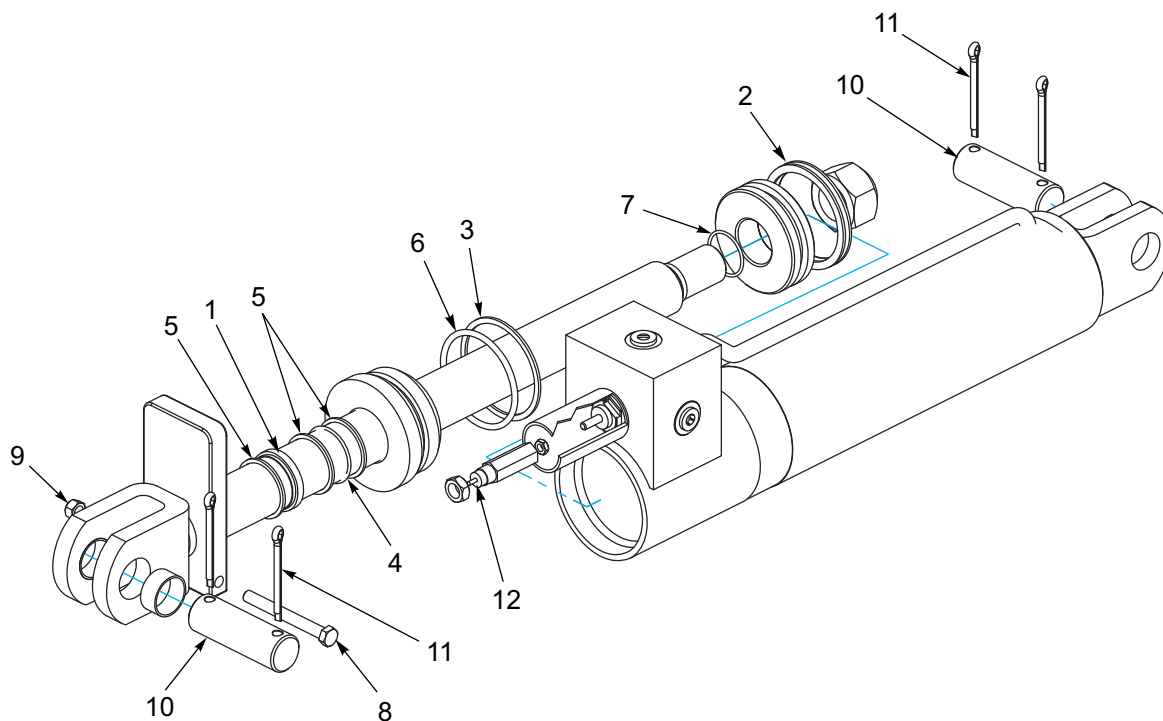


Figure 1-49: 7J680G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

7J680G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	7J680	HYD CYLINDER - 3 1/2 X 16	
1	NSS	ROD WIPER	1
2	NSS	PISTON SEAL	1
3	NSS	O-RING	2
4	NSS	O-RING	1
5	NSS	BACK-UP RING	2
6	NSS	BACK-UP RING	1
7	NSS	O-RING	1
8	1-654-010051-15	SCREW HXCP 3/8-16UNCX3-1/2 G5	1
9	1-512-010005-05	NUT, HEX, SLFLKG GRB 3/8-16	1
10	3J498	PIN (1.125 X 3.75)	2
11	1-557-010362-65	PIN COTTER, 1/4X2-1/2 ZP	4
12	NSS	SPRING ACTUATOR	1
13	9K052	SEAL KIT (INCLUDES ITEMS 1 - 7)	

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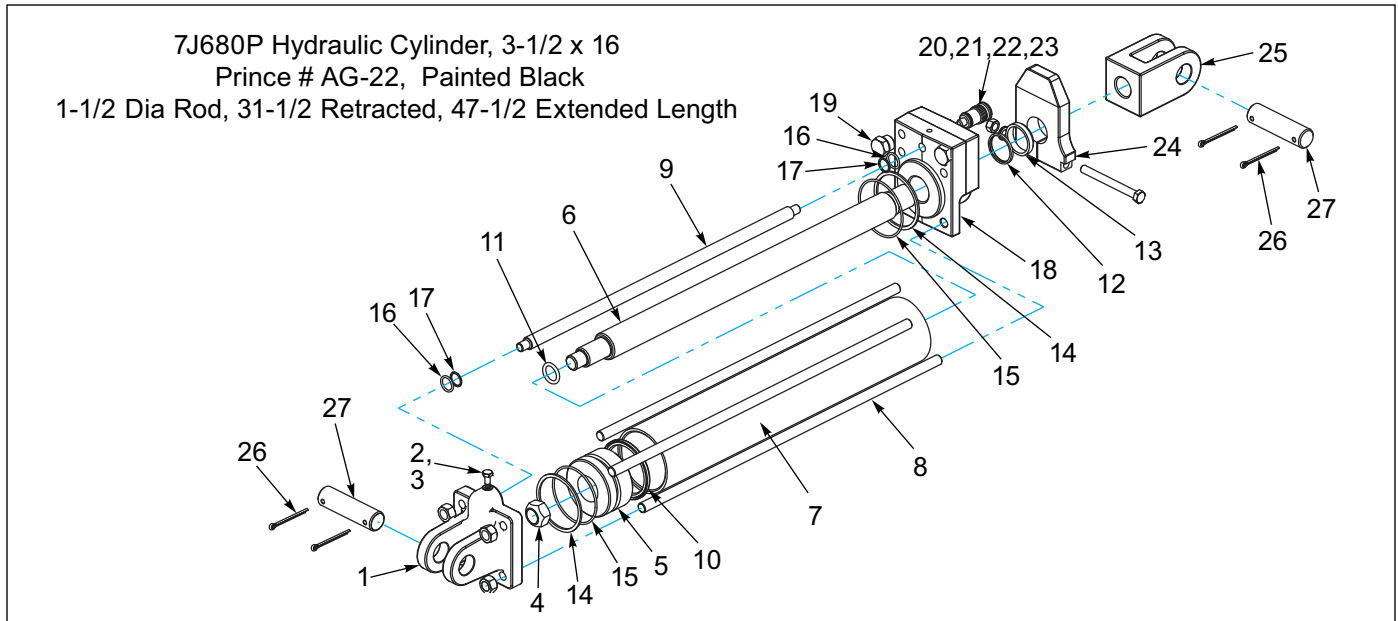


Figure 1-50: 7J680P Hydraulic Cylinder, 3-1/2 x 16 - Prince

7J680P Hydraulic Cylinder, 3-1/2 x 16 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	7J680	HYDRAULIC CYLINDER 3-1/2 X 16	
1	NSS	BUTT (BASE)	1
2	3J728	NYLTITE SEAL	1
3	3J730	CAPSCREW	1
4	6D918	LOCK NUT 3/4-16	1
5	9J244	PISTON	1
6	9J245	PISTON ROD	1
7	NSS	TUBE	1
8	9J247	TIE ROD	4
9	9J248	MANIFOLD TUBE	1
10	NSS	URETHANE SEAL	1
11	NSS	O-RING	1
12	NSS	U-CUP	1
13	NSS	WIPER	1
14	NSS	BACK-UP WASHER	2
15	NSS	O-RING	2
16	NSS	O-RING	2
17	NSS	BACK-UP WASHER	2
18	9J249	GLAND	1
19	1-007-010024	PLUG, 3/4-16 O-RING BOSS	2
20	9J638	VALVE ASSEMBLY	1
21	NSS	O-RING	1
22	NSS	O-RING	1
23	NSS	BACK-UP WASHER	1
24	3K884	STRIKER PLATE	1
25	9J251	CLEVIS ASSEMBLY	1
26	1-557-010362-65	PIN COTTER, 1/4X2-1/2 ZP	2
27	3J498	CLEVIS PIN	1
28	8J975	SEAL KIT (INCLUDES ITEMS 10-17)	

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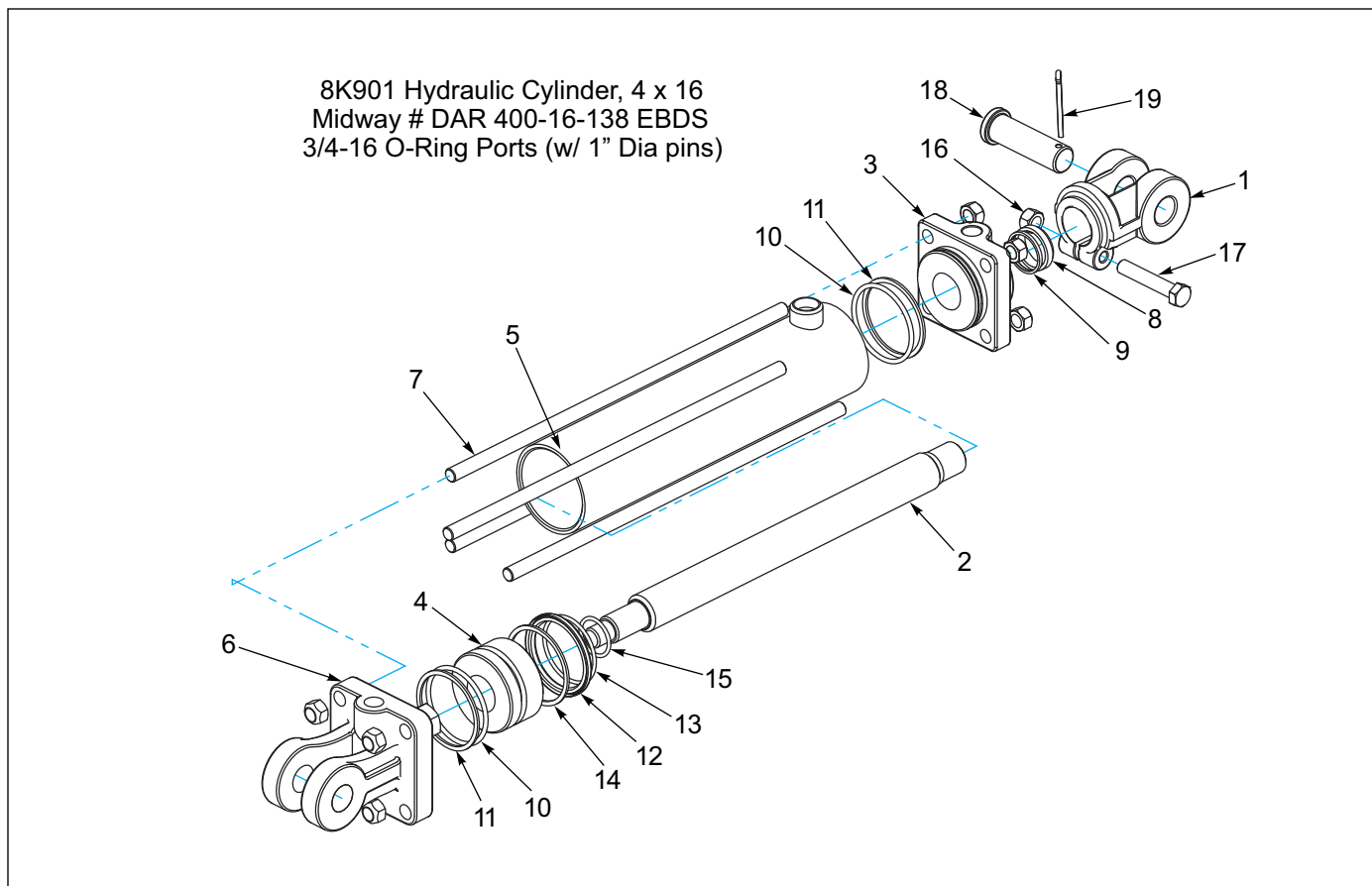


Figure 1-51: 8K901M Hydraulic Cylinder, 4 x 16 - Midway

8K901M Hydraulic Cylinder, 4 x 16 - Midway

ITEM	PART NUMBER	DESCRIPTION	QTY
	8K901	4 X 16 CYL W/1"PIN	
1	8K903	CLEVIS	1
2	8K904	ROD	1
3	8K906	HEAD	1
4	8K908	PISTON	1
5	8K910	TUBE	1
6	8K912	BASE	1
7	8K913	TIE ROD	4
8	NSS	ROD WIPER	1
9	NSS	U-CUP	1
10	NSS	O-RING	2
11	NSS	BACK-UP	2
12	NSS	TEFLON SEAL	1
13	NSS	LOADER O/R	1
14	NSS	WEAR RING	1
15	NSS	O-RING	1
16	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
17	7C937	SOCKET CAPSCREW FOR 7J680 CYL	1
18	9K038	CLEVIS PIN	1
19	110-4224	PIN,COTTER 3/16 X 2IN LG	1
20	8K895	SEAL KIT (INCLUDES ITEMS 8-15)	

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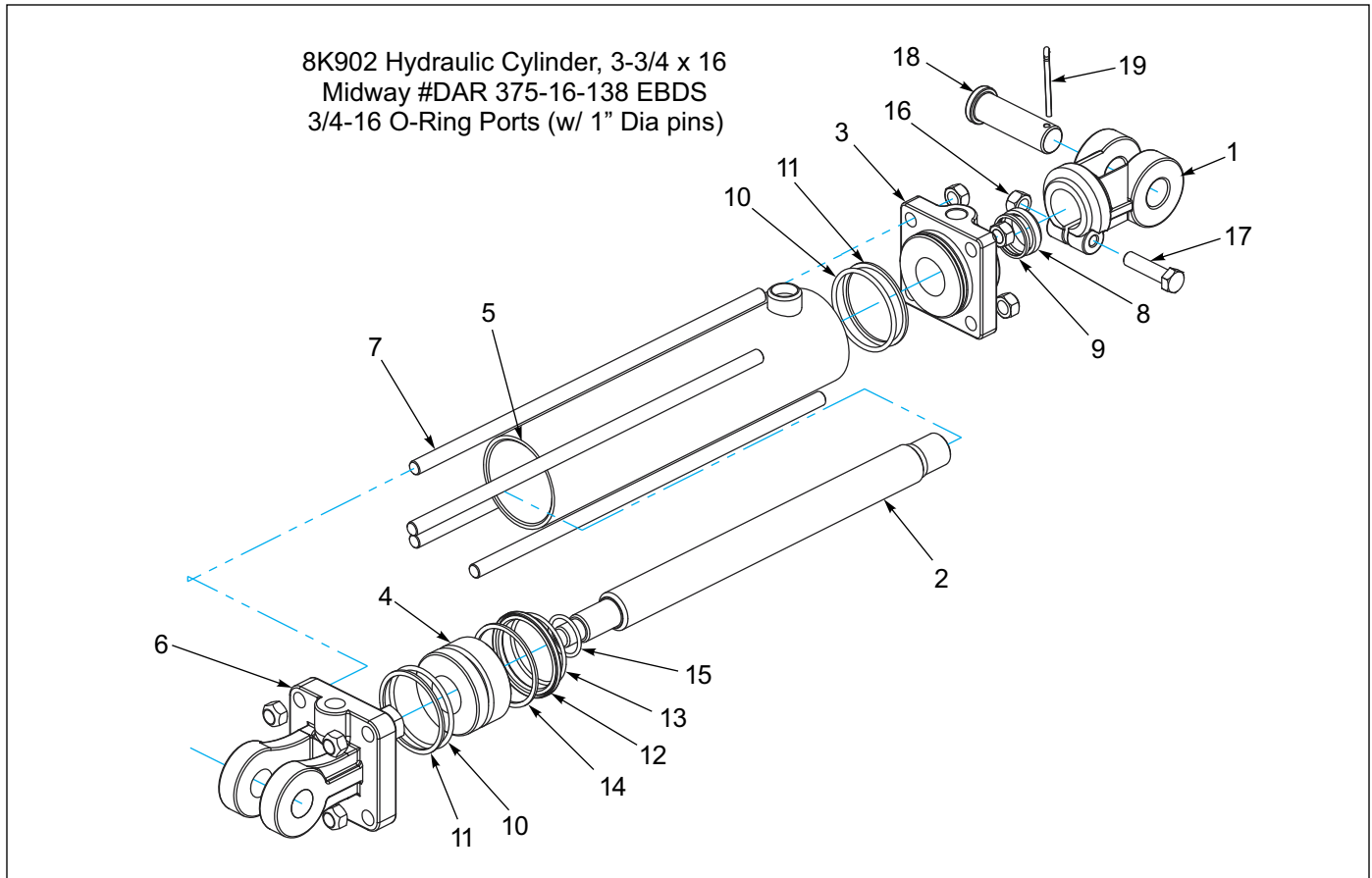


Figure 1-52: 8K902M Hydraulic Cylinder, 3-3/4 x 16 - Midway

8K902M Hydraulic Cylinder, 3-3/4 x 16 - Midway

ITEM	PART NUMBER	DESCRIPTION	QTY
	8K902	3-3/4 X 16 CYL W/1"PIN	
1	8K903	CLEVIS	1
2	8K904	ROD	1
3	8K905	HEAD	1
4	8K907	PISTON	1
5	8K909	TUBE	1
6	8K911	BASE	1
7	8K913	TIE ROD	4
8	NSS	ROD WIPER	1
9	NSS	U-CUP	1
10	NSS	O-RING	2
11	NSS	BACK-UP	2
12	NSS	TEFON SEAL	1
13	NSS	LOADER O/R	1
14	NSS	WEAR RING	1
15	NSS	O-RING	1
16	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
17	7C937	SOCKET CAPSCREW-FOR 7J680 CYL	1
18	9K038	CLEVIS PIN	1
19	110-4224	PIN,COTTER 3/16 X 2IN LG	1
20	8K894	SEAL KIT (INCLUDES ITEMS 8-15)	

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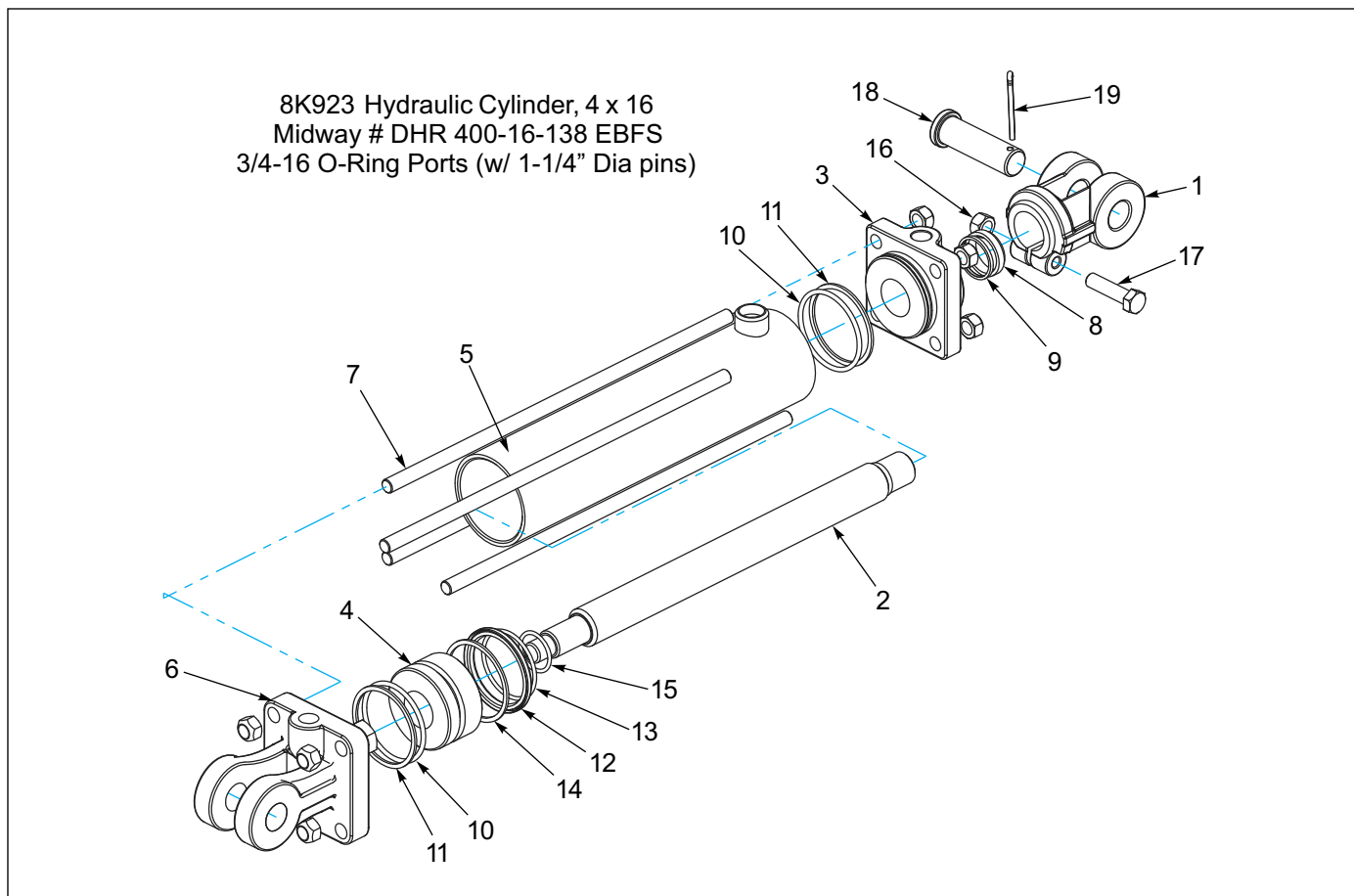


Figure 1-53: 8K923M Hydraulic Cylinder, 4 x 16 - Midway

8K923M Hydraulic Cylinder, 4 x 16 - Midway

ITEM	PART NUMBER	DESCRIPTION	QTY
	8K923	4 X 16 CYL W/1-1/4" PINS	
1	8K921	CLEVIS	1
2	8K904	ROD	1
3	8K906	HEAD	1
4	8K908	PISTON	1
5	8K910	TUBE	1
6	8K925	BASE	1
7	8K913	TIE ROD	4
8	NSS	ROD WIPER	1
9	NSS	U-CUP	1
10	NSS	O-RING	2
11	NSS	BACK-UP	2
12	NSS	TEFON SEAL	1
13	NSS	LOADER O/R	1
14	NSS	WEAR RING	1
15	NSS	O-RING	1
16	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
17	7C937	SOCKET CAPSCREW-FOR 7J680 CYL	1
18	9K039	CLEVIS PIN	1
19	110-4224	PIN,COTTER 3/16 X 2IN LG	2
20	8K895	SEAL KIT (INCLUDES ITEMS 8-15)	

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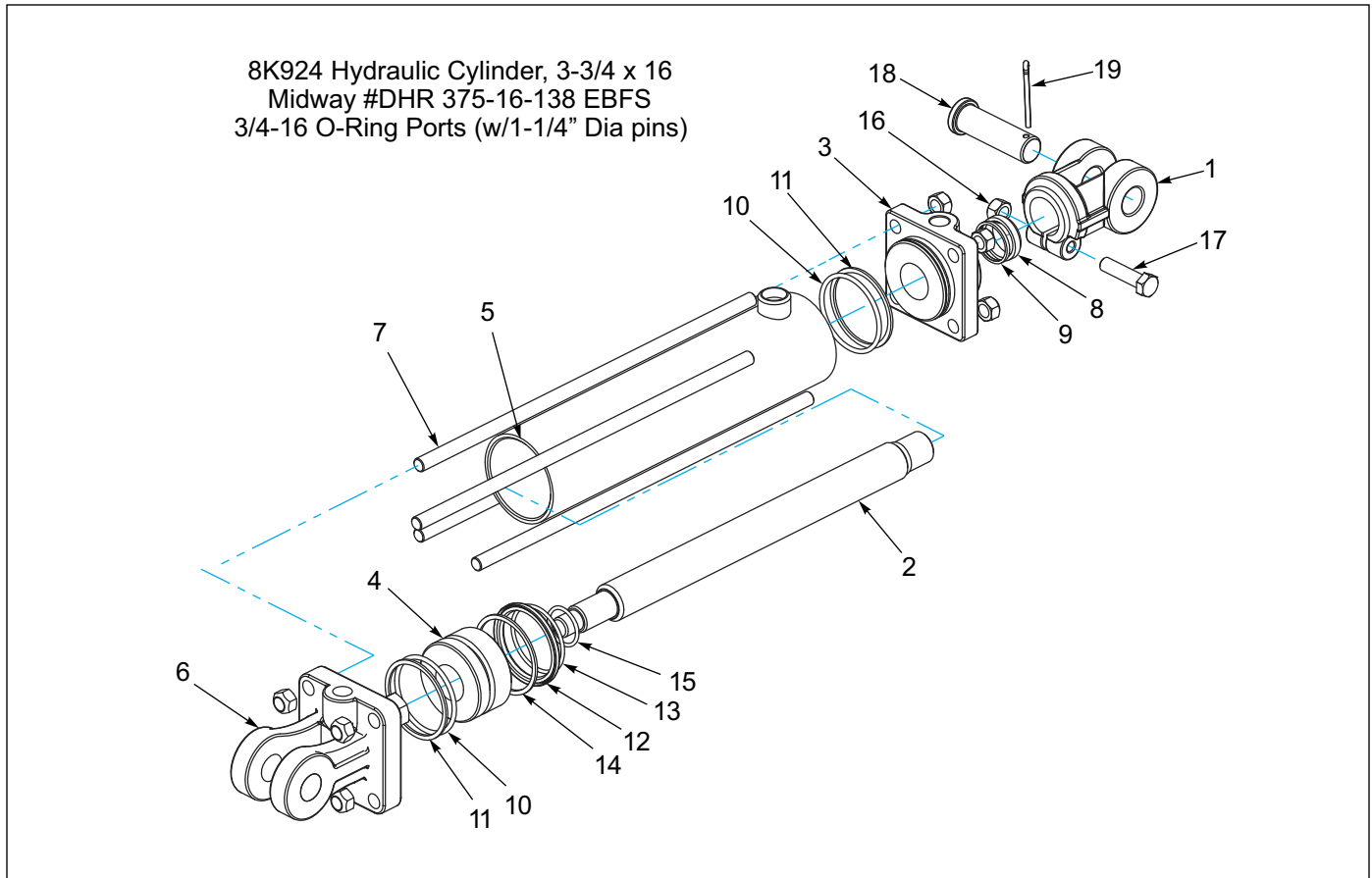


Figure 1-54: 8K924M Hydraulic Cylinder, 3-3/4 x 16 - Midway

8K924M Hydraulic Cylinder, 3-3/4 x 16 - Midway

ITEM	PART NUMBER	DESCRIPTION	QTY
	8K924	3-3/4 X 16 CYL W/1-1/4" PINS	
1	8K921	CLEVIS	1
2	8K904	ROD	1
3	8K905	HEAD	1
4	8K907	PISTON	1
5	8K909	TUBE	1
6	8K922	BASE	1
7	8K913	TIE ROD	4
8	NSS	ROD WIPER	1
9	NSS	U-CUP	1
10	NSS	O-RING	2
11	NSS	BACK-UP	2
12	NSS	TEFON SEAL	1
13	NSS	LOADER O/R	1
14	NSS	WEAR RING	1
15	NSS	O-RING	1
16	1-512-010005-05	NUT, HEX SLFLKG GRB 3/8-16	1
17	7C937	SOCKET CAPSCREW-FOR 7J680 CYL	1
18	9K039	CLEVIS PIN	1
19	110-4224	PIN,COTTER 3/16 X 2IN LG	1
20	8K895	SEAL KIT (INCLUDES ITEMS 8-15)	

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9D137G Hydraulic Cylinder, 3 x 16
 Hydraulic Gear #3016-01, Painted Black
 1-3/8 Dia Rod, 26-1/4 Retracted, 42-1/4 Extended Length

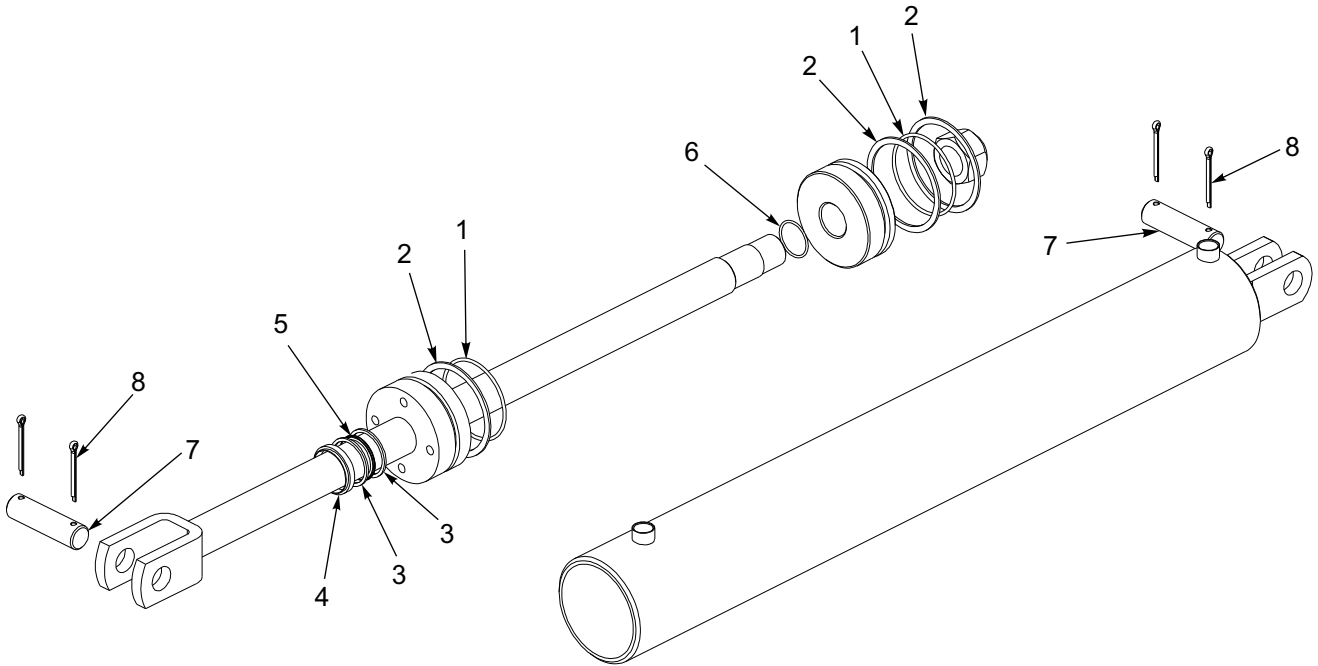


Figure 1-55: 9D137G Hydraulic Cylinder, 3 x 16 - Hydraulic Gear

9D137G Hydraulic Cylinder, 3 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D137	HYD CYLINDER - 3 X16	
1	NSS	O RING	2
2	NSS	BACK-UP RING	3
3	NSS	BACK UP RINGS	2
4	NSS	WIPER	1
5	NSS	ROD SEAL	1
6	NSS	O RING	1
7	5J650	PIN,CLEVIS 1.0X3.625	2
8	110-4224	PIN,COTTER 3/16 X 2IN LG	4
9	1J966	SEAL KIT (INCLUDES ITEMS 1-6)	

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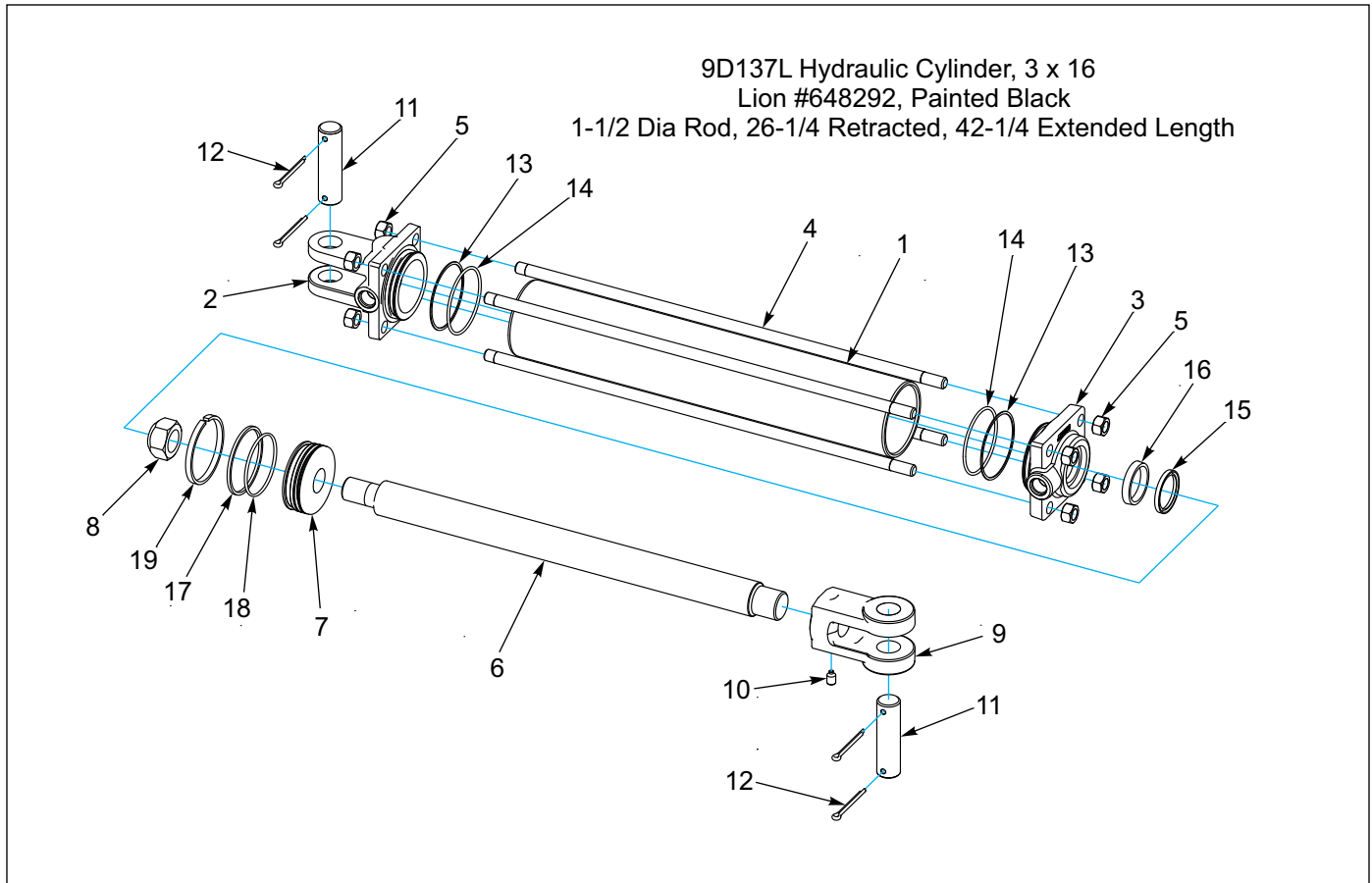


Figure 1-56: 9D137L Hydraulic Cylinder, 3 x 16 - Lion

9D137L Hydraulic Cylinder, 3 x 16 - Lion - 648292

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D137	HYD CYLINDER - 3 X16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	NSS	NUT,HEX 5/8-18,ZP	8
6	NSS	ROD	1
7	NSS	PISTON	1
8	NSS	NUT, LOCK 1-14,GRB,ZP	1
9	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 10)	1
10	1P443	SET SCREW, 3/8-16 X 1/2 NYL	1
11	5J650	CLEVIS PIN (1.0 X 3.625 H2)	2
12	110-4224	PIN,COTTER 3/16 X 2IN LG	4
13	NSS	SEAL, BU#236 19PI-236	2
14	NSS	O-RING, 236 (3.25X3.5) D90	2
15	NSS	SEAL, HALLITE 605 ROD 1-1/2 D	1
16	NSS	SEAL, NOK-AR2263-EO 1-1/2"BO	1
17	NSS	WEAR RING, 3.50-3.25-.25-GFN	1
18	NSS	O-RING, 151 (3.0x3.188) DUR90	1
19	NSS	SEAL, PTFE PISTION RING 3-1/2 DIA.	1
20	1P744	SEAL KIT (INCLUDES ITEMS 13-19)	

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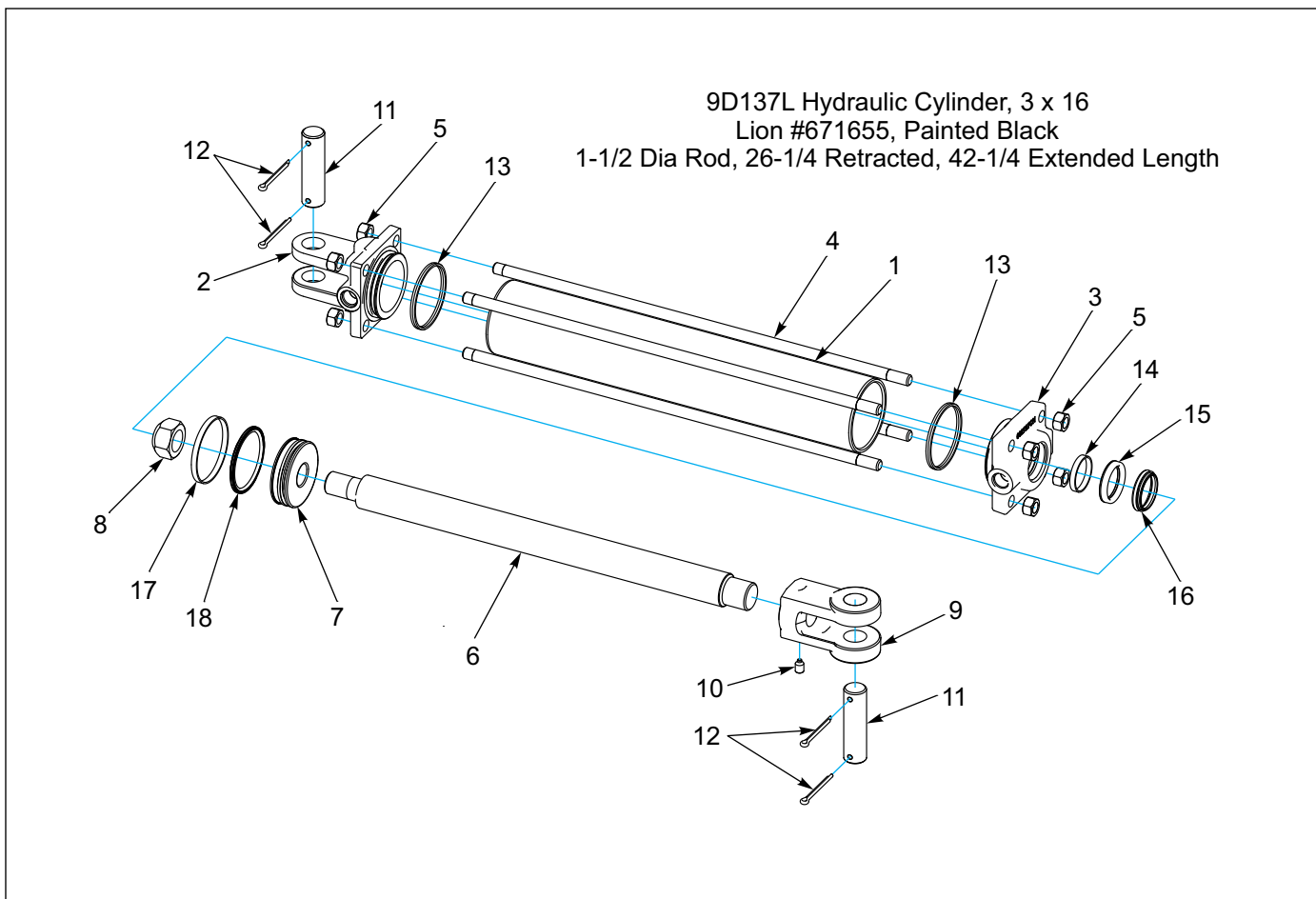


Figure 1-57: 9D137L Hydraulic Cylinder, 3 x 16 - Lion

9D137L Hydraulic Cylinder, 3 x 16 - Lion - 671655

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D137	HYD CYLINDER - 3 X16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	NSS	NUT,HEX 5/8-18,ZP	8
6	NSS	ROD	1
7	NSS	PISTON	1
8	NSS	NUT, LOCK 1-14,GRB,ZP	1
9	2P737	ROD CLEVIS 1" PIN X 1.25-12 X 2.625 (INCLUDES ITEM 10)	1
10	1P443	SET SCREW, 3/8-16 X 1/2 NYL	1
11	5J650	CLEVIS PIN (1.0 X 3.625 H2)	2
12	110-4224	PIN,COTTER 3/16 X 2IN LG	4
13	NSS	SEAL DUAL 3.00	2
14	NSS	WEAR RING 1.63-1.50-0.250	1
15	NSS	SEAL ZURCON U-CUP RU9 1.50	1
16	NSS	SEAL WIPER 1.50 WNUC TSS	1
17	NSS	WEAR RING 3.00-2.88-0.250	1
18	NSS	SEAL ZURCON WYNSEAL 3.00"	1
19	1P744	SEAL KIT (INCLUDES ITEMS 13-18)	

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9D282G Hydraulic Cylinder, 2 x 6
 Hydraulic Gear #2006-01, Painted Black
 1" Dia Rod, 16-1/4 Retracted, 22-1/4 Extended Length

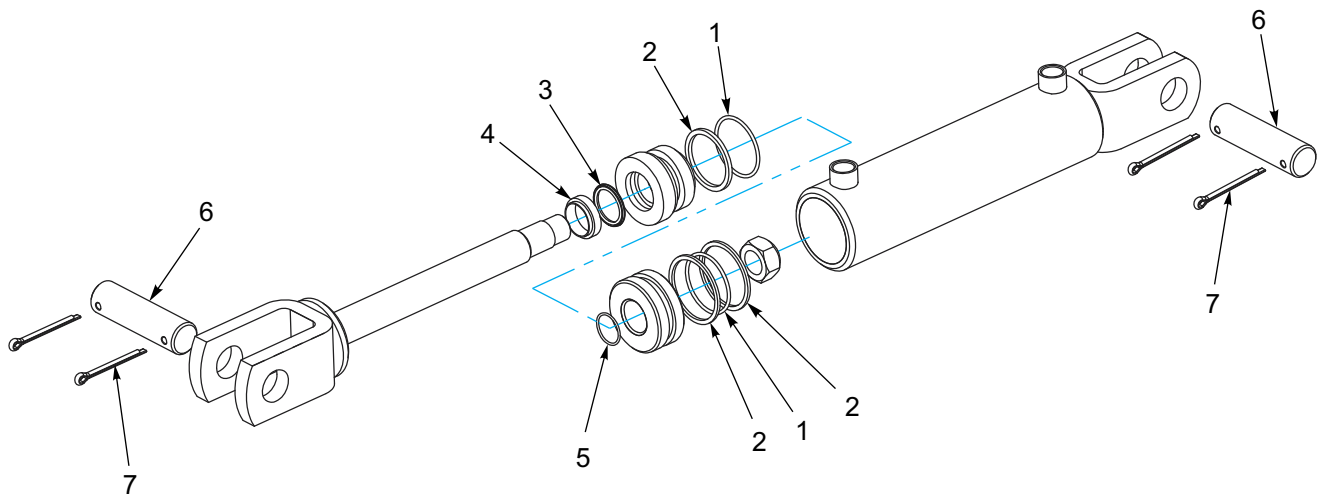


Figure 1-58: 9D282G Hydraulic Cylinder, 2 x 6 - Hydraulic Gear

9D282G Hydraulic Cylinder, 2 x 6 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D282	HYD CYLINDER - 2 X 6	
1	NSS	O RING	2
2	NSS	BACK-UP RING	3
3	NSS	ROD SEAL & BACK UP RINGS	1
4	NSS	WIPER	1
5	NSS	O-RING	1
6	5J650	CYLINDER PIN	2
7	110-4224	PIN,COTTER 3/16 X 2IN LG	4
8	3J573	SEAL KIT (INCLUDES ITEMS 1-5)	

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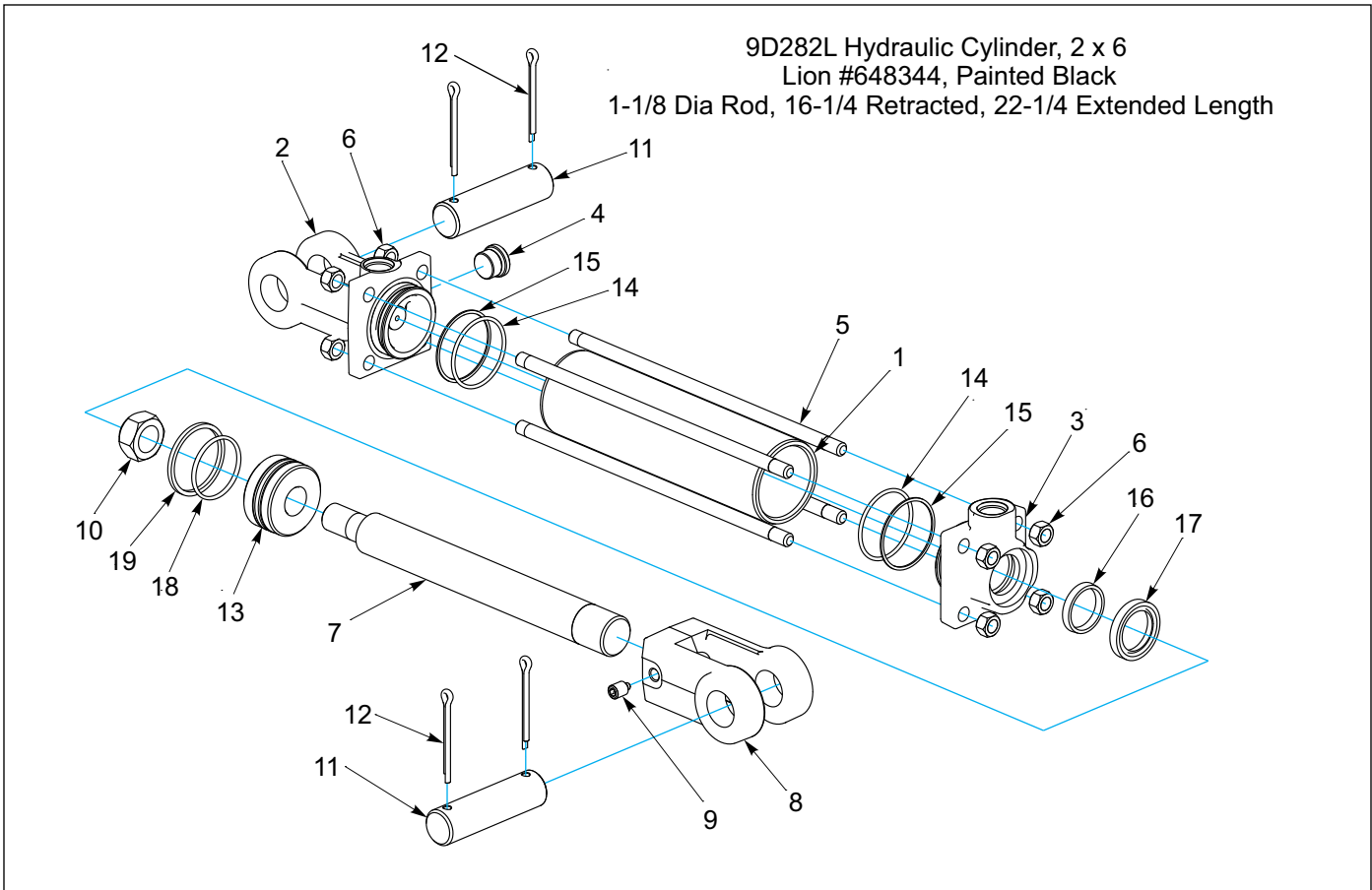


Figure 1-59: 9D282L Hydraulic Cylinder, 2 x 6 - Lion

9D282L Hydraulic Cylinder, 2 x 6 - Lion - 648344

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D282	HYD CYLINDER - 2 X 6	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16 (NOT SHOWN)	1
5	NSS	TIE ROD	4
6	1-512-010007-07	NUT, HEX 3/8-16 ZP	8
7	NSS	ROD	1
8	2P736	ROD CLEVIS (INCLUDES ITEM 9)	1
9	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
10	1P805	NUT, LOCK 3/4-16, GRB, ZP	1
11	5J650	PIN, 1.0 X 3.625 H2,	2
12	110-4224	PIN, COTTER 3/16 X 2IN LG	4
13	NSS	PISTON	1
14	NSS	O-RING, 133 (1.812X2) BUNA-N D9	2
15	NSS	SEAL, BU#133 19PI-133	2
16	NSS	SEAL, HALLITE 605 ROD 1.125D	1
17	NSS	SEAL, WIPER ROD 1.125 METAL E	1
18	NSS	O-RING, 129 (1.562X1.75) DUR9	1
19	NSS	SEAL, PTFE PISTON RING 2DIA	1
20	1P741	SEAL KIT (INCLUDES ITEMS 14-19)	

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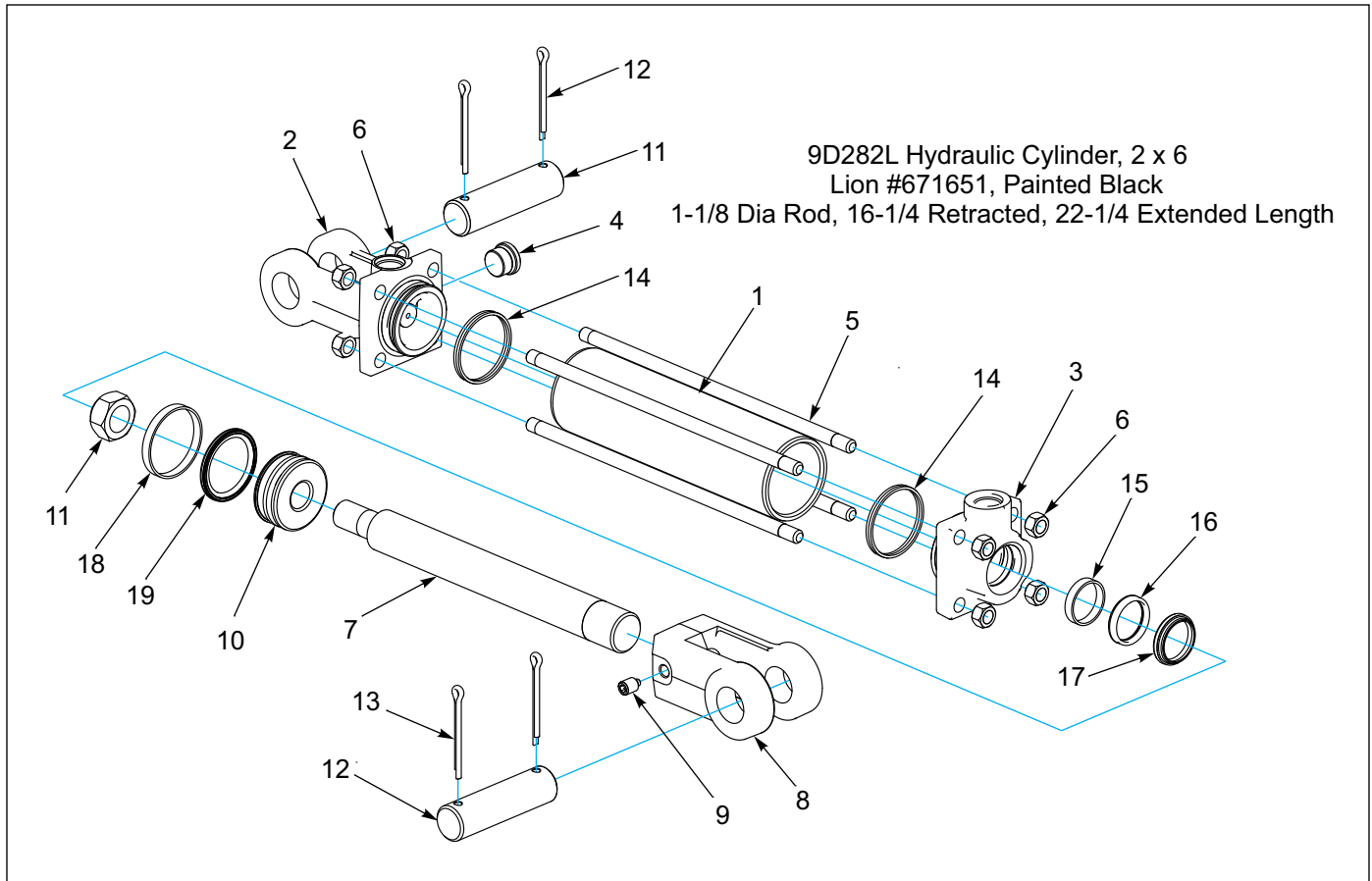


Figure 1-60: 9D282L Hydraulic Cylinder, 2 x 6 - Lion

9D282L Hydraulic Cylinder, 2 x 6 - Lion - 671651

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D282	HYD CYLINDER - 2 X 6	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16 (NOT SHOWN)	1
5	NSS	TIE ROD	4
6	1-512-010007-07	NUT, HEX 3/8-16 ZP	8
7	NSS	ROD	1
8	2P736	ROD CLEVIS (INCLUDES ITEM 9)	1
9	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
10	NSS	PISTON	1
11	1P805	NUT, LOCK 3/4-16, GRB, ZP	1
12	5J650	PIN, 1.0 X 3.625 H2,	2
13	110-4224	PIN, COTTER 3/16 X 2IN LG	4
14	NSS	SEAL DUAL 2.00-.170	2
15	NSS	WEAR RING 1.25-1.13-0.250	1
16	NSS	SEAL ZURCON U-CUP RU9 1.13	1
17	NSS	SEAL WIPER 1.13 WNUC	1
18	NSS	WEAR RING 2.00-1.88-0.250	1
19	NSS	SEAL ZURCON WYNSEAL 2.00"	1
20	1P741	SEAL KIT (INCLUDES ITEMS 14-19)	1

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9D524G Hydraulic Cylinder, 3-1/2 x 16

1-3/8 Dia Rod, 26-1/4 Retracted, 42-1/4 Extended Length

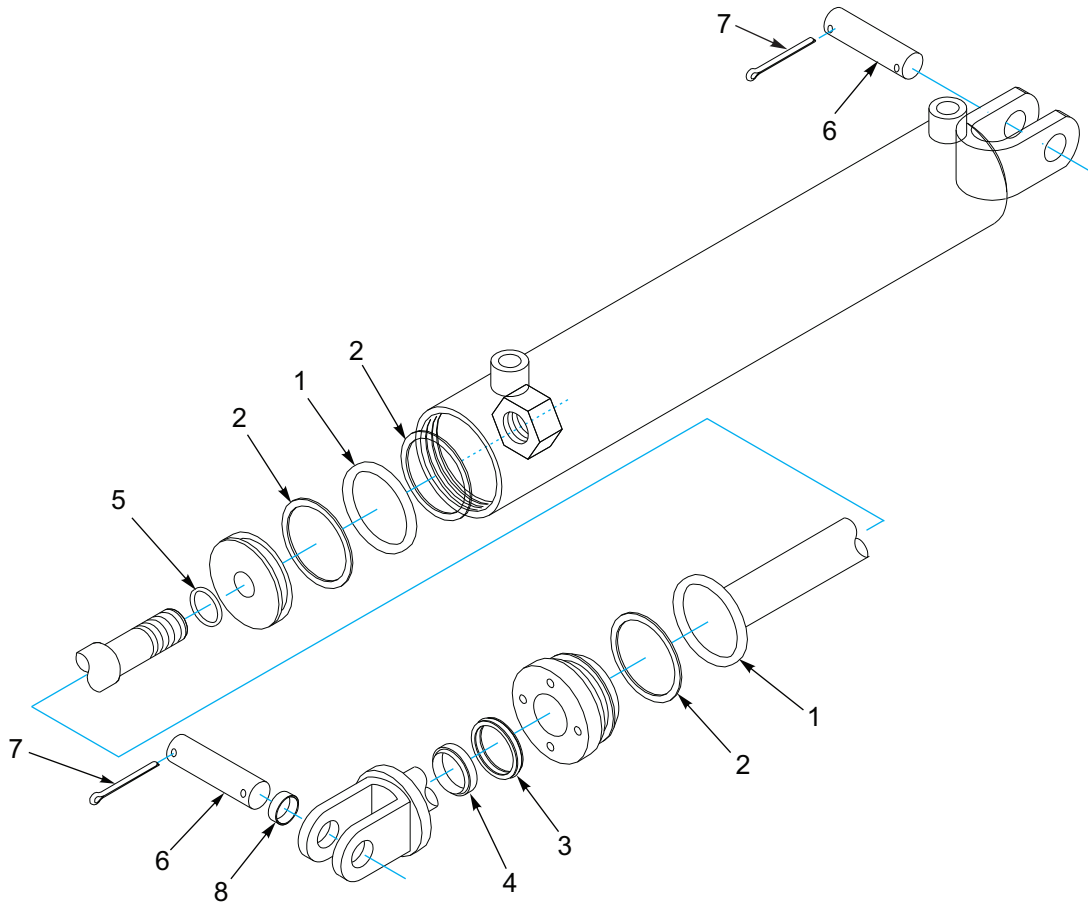


Figure 1-61: 9D524G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

9D524G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D524	HYD CYLINDER - 3-1/2 X 16	
1	NSS	O RING	2
2	NSS	BACK-UP RING	3
3	NSS	ROD SEAL & BACK UP RINGS	1
4	NSS	WIPER	1
5	NSS	O RING	1
6	5J650	PIN,CLEVIS 1.0X3.625	2
7	110-4224	PIN,COTTER 3/16 X 2IN LG	4
8	8J918	TENSION BUSHING	2
9	1J961	SEAL KIT (INCLUDES ITEMS 1-5)	

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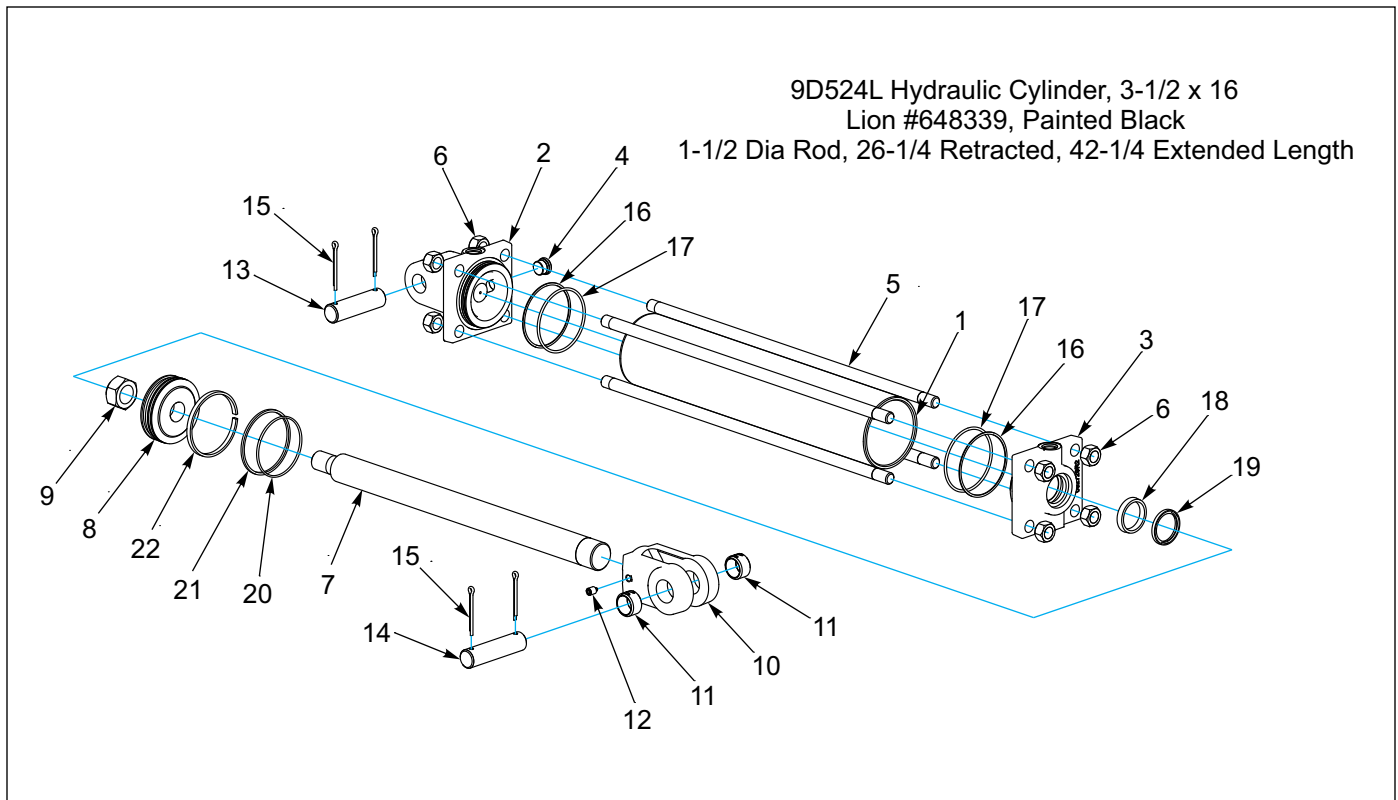


Figure 1-62: 9D524L Hydraulic Cylinder, 3-1/2 x 16 - Lion

9D524L Hydraulic Cylinder, 3-1/2 x 16 - Lion - 648339

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D524	HYD CYLINDER - 3-1/2 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	NUT, LOCK 1-14, GRB, ZP	1
10	2P740	ROD CLEVIS W/BUSHINGS (INCLUDES ITEMS 11 AND 12)	1
11	3P079	SPRING BUSHING, 1.0X1.25X0.75	2
12	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
13	5J650	PIN, 1.0 X 3.625 H2	1
14	7J067	PIN, 1.0 X 4.0 H2	1
15	110-4224	PIN, COTTER 3/16 X 2IN LG	4
16	NSS	SEAL, BU#236 19PI-236	2
17	NSS	O-RING, 236 (3.25X3.5) D90	2
18	NSS	SEAL, HALLITE 605 ROD 1-1/2 D	1
19	NSS	SEAL, NOK-AR2263-EO 1-1/2 BO	1
20	NSS	O-RING, 151 (3.0 X 3.188) DUR90	1
21	NSS	SEAL, PTFE PISTON RING 3-1/2D	1
22	NSS	WEAR RING, 3.50-3.25-.25-GFN	1
23	1P744	SEAL KIT (INCLUDES ITEMS 16-22)	

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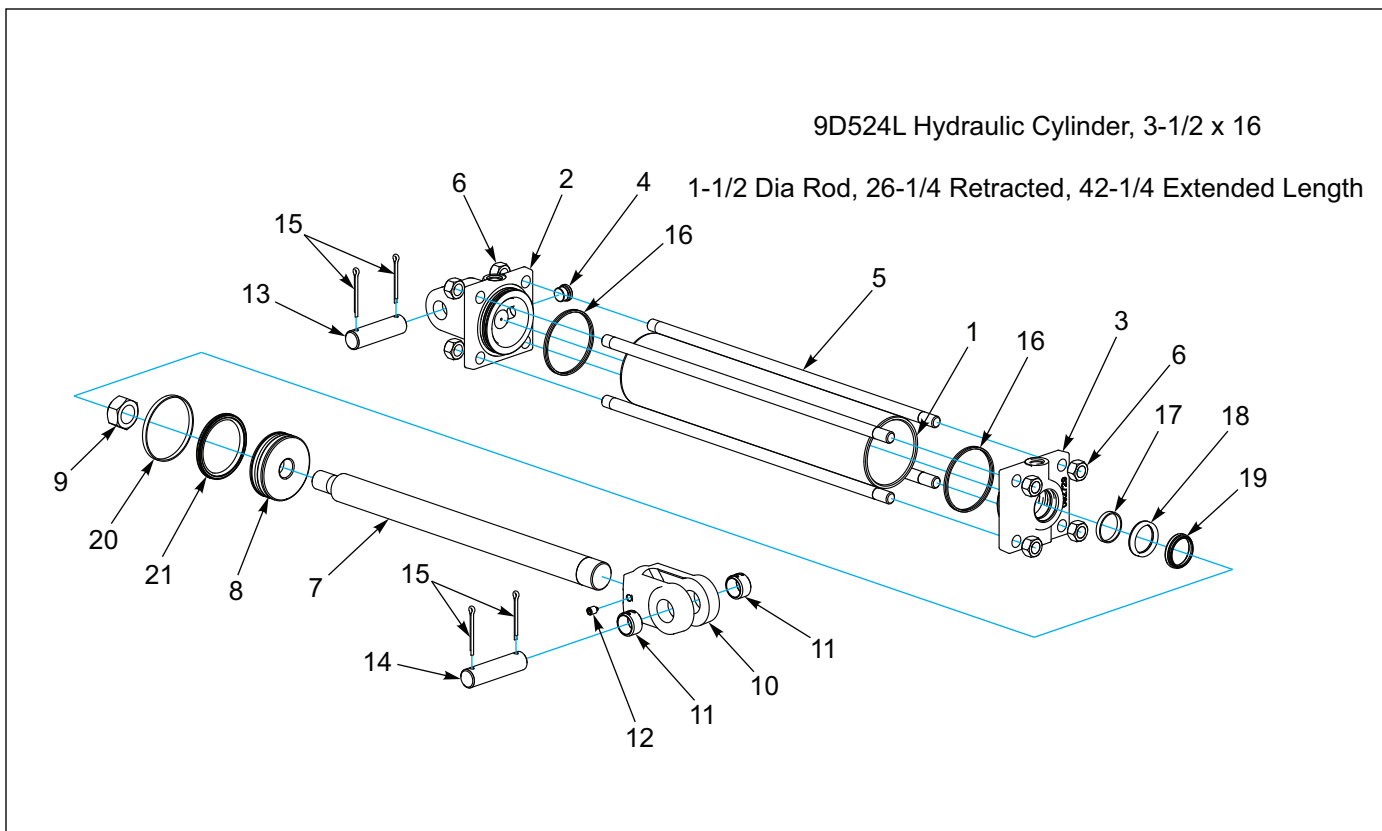


Figure 1-63: 9D524L Hydraulic Cylinder, 3-1/2 x 16 - Lion

9D524L Hydraulic Cylinder, 3-1/2 x 16 - Lion - 671656

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D524	HYD CYLINDER - 3-1/2 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	NSS	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	NSS	NUT, LOCK 1-14, GRB, ZP	1
10	2P740	ROD CLEVIS W/BUSHINGS (INCLUDES ITEMS 11 AND 12)	1
11	3P079	SPRING BUSHING, 1.0X1.25X0.75	2
12	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
13	5J650	PIN, 1.0 X 3.625 H2	1
14	7J067	PIN, 1.0 X 4.0 H2	1
15	110-4224	PIN, COTTER 3/16 X 2IN LG	4
16	NSS	SEAL DUAL 3.50	2
17	NSS	WEAR RING 1.63-1.50-0.250	1
18	NSS	SEAL ZURCON U-CUP RU9 1.50	1
19	NSS	SEAL WIPER 1.50 WNUC TSS	1
20	NSS	WEAR RING 3.50-3.38-0.250	1
21	NSS	SEAL ZURCON WYNSEAL 3.50"	1
22	1P744	SEAL KIT (INCLUDES ITEMS 16-21)	1

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9D731G Hydraulic Cylinder, 4 x 16
 Hydraulic Gear #4016-01, Painted Black
 1-3/4 Dia Rod, 26-1/4 Retracted, 42-1/4 Extended Length

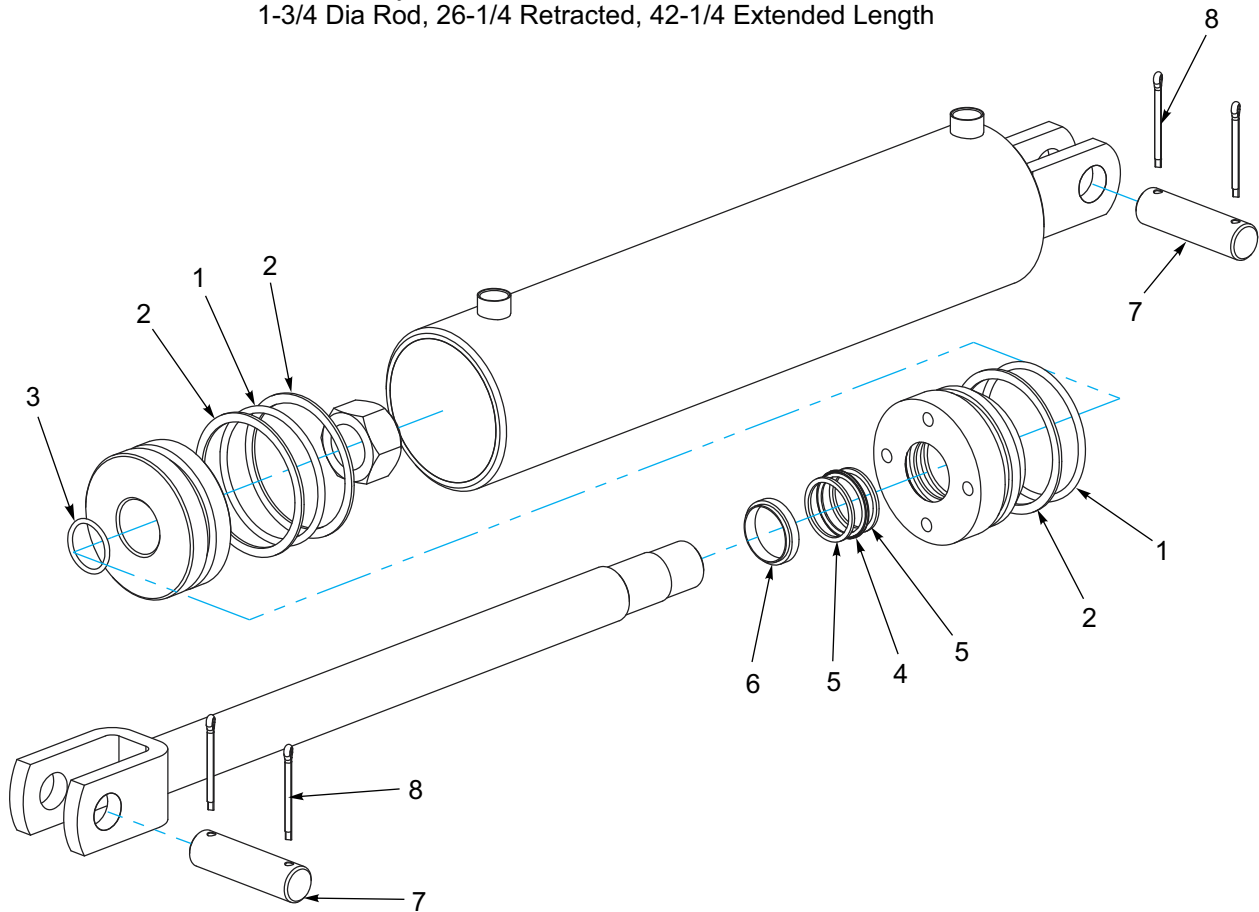


Figure 1-64: 9D731G Hydraulic Cylinder, 4 x 16 - Hydraulic Gear

9D731G Hydraulic Cylinder, 4 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D731	HYD CYLINDER - 4 X 16	
1	NSS	O-RING	2
2	NSS	BACK-UP RING	3
3	NSS	O-RING	1
4	NSS	ROD SEAL	1
5	NSS	BACK-UP RING	2
6	NSS	WIPER	1
7	5J650	CYLINDER PIN	2
8	110-4224	PIN,COTTER 3/16 X 2IN LG	4
9	1J956	SEAL KIT (INCLUDES ITEMS 1-6)	

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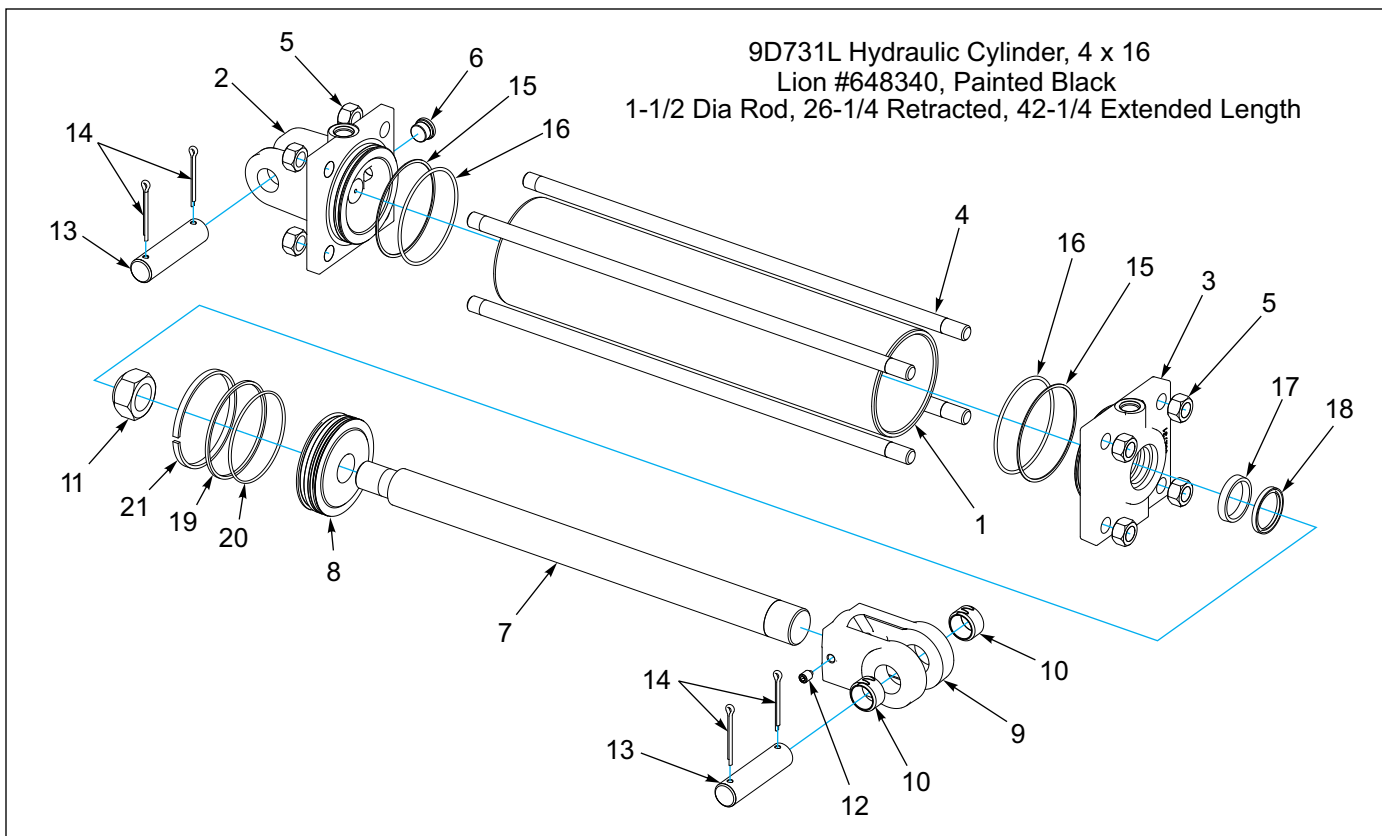


Figure 1-65: 9D731L Hydraulic Cylinder, 4 x 16 - Lion

9D731L Hydraulic Cylinder, 4 x 16 - Lion - 648340

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D731	HYD CYLINDER - 4 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1P805	NUT,HEX SLFLKG GRB 3/4-16	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	2P740	ROD CLEVIS W/BUSHINGS (INCLUDES ITEMS 10 AND 12)	1
10	3P079	SPRING BUSHING,1.0x1.25x0.75	2
11	8J852	NUT,LOCK 1-1/8-12,GrB,ZP	1
12	1P443	SET SCREW,3/8-16 x 1/2 NYLON TIP	1
13	7J067	PIN,1.0 x 4.0 H2	2
14	110-4224	PIN,COTTER 3/16 X 2IN LG	4
15	NSS	SEAL,BU#240 19PI-240	2
16	NSS	O-RING,240 (3.75x4.0) DURO 90	2
17	NSS	SEAL,HALLITE 605 ROD 1-1/2 D	1
18	NSS	SEAL,NOK-AR2263-EO 1-1/2"BO	1
19	NSS	SEAL,PTFE PISTON RING 4DIA	1
20	NSS	O-RING,153 (3.5x3.688) DUR	1
21	NSS	WEAR RING,4.00-3.75-.25-GFN	1
22	1P745	SEAL KIT (INCLUDES ITEMS 15-21)	1

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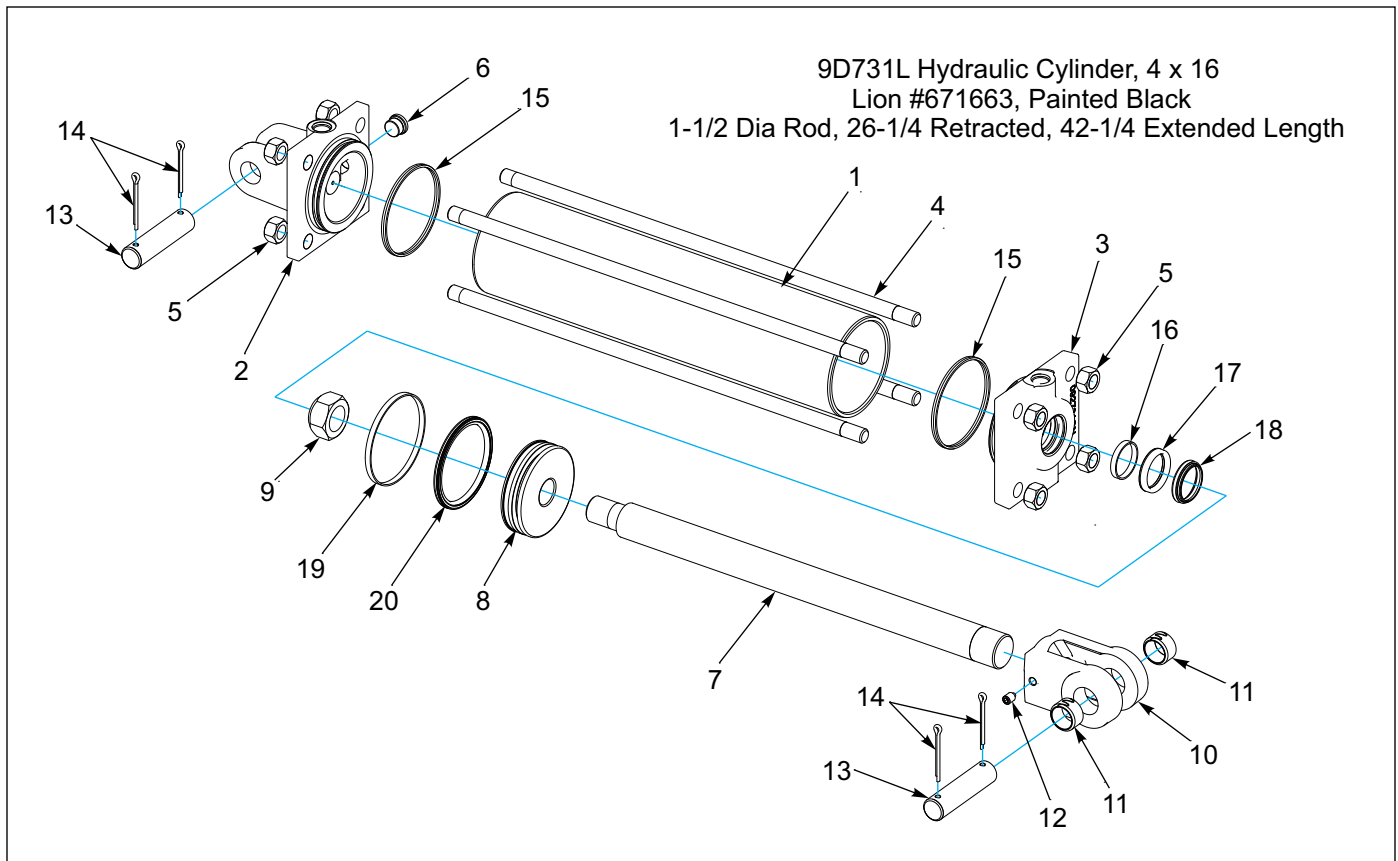


Figure 1-66: 9D731L Hydraulic Cylinder, 4 x 16 - Lion

9D731L Hydraulic Cylinder, 4 x 16 - Lion - 671663

ITEM	PART NUMBER	DESCRIPTION	QTY
	9D731	HYD CYLINDER - 4 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1P805	NUT,HEX SLFLKG GRB 3/4-16	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	8J852	NUT,LOCK 1-1/8-12,GrB,ZP	1
10	2P740	ROD CLEVIS W/BUSHINGS (INCLUDES ITEMS 11 AND 12)	1
11	3P079	SPRING BUSHING,1.0x1.25x0.75	2
12	1P443	SET SCREW,3/8-16 x 1/2 NYLON TIP	1
13	7J067	PIN,1.0 x 4.0 H2	2
14	110-4224	PIN,COTTER 3/16 X 2IN LG	4
15	NSS	SEAL DUAL 4.00	2
16	NSS	WEAR RING 1.63-1.50-0.250	1
17	NSS	SEAL ZURCON U-CUP RU9 1.50	1
18	NSS	SEAL WIPER 1.50 WNUC TSS	1
19	NSS	WEAR RING 4.00-3.88-0.250	1
20	NSS	SEAL SURCON WYNSEAL 4.00	1
21	1P745	SEAL KIT (INCLUDES ITEMS 15-20)	

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9J440G Hydraulic Cylinder, 2 1/2 x 6
 Hydraulic Gear #2506-01, Painted Black
 1-1/4 Dia Rod, 16-1/4 Retracted, 22-1/4 Extended Length

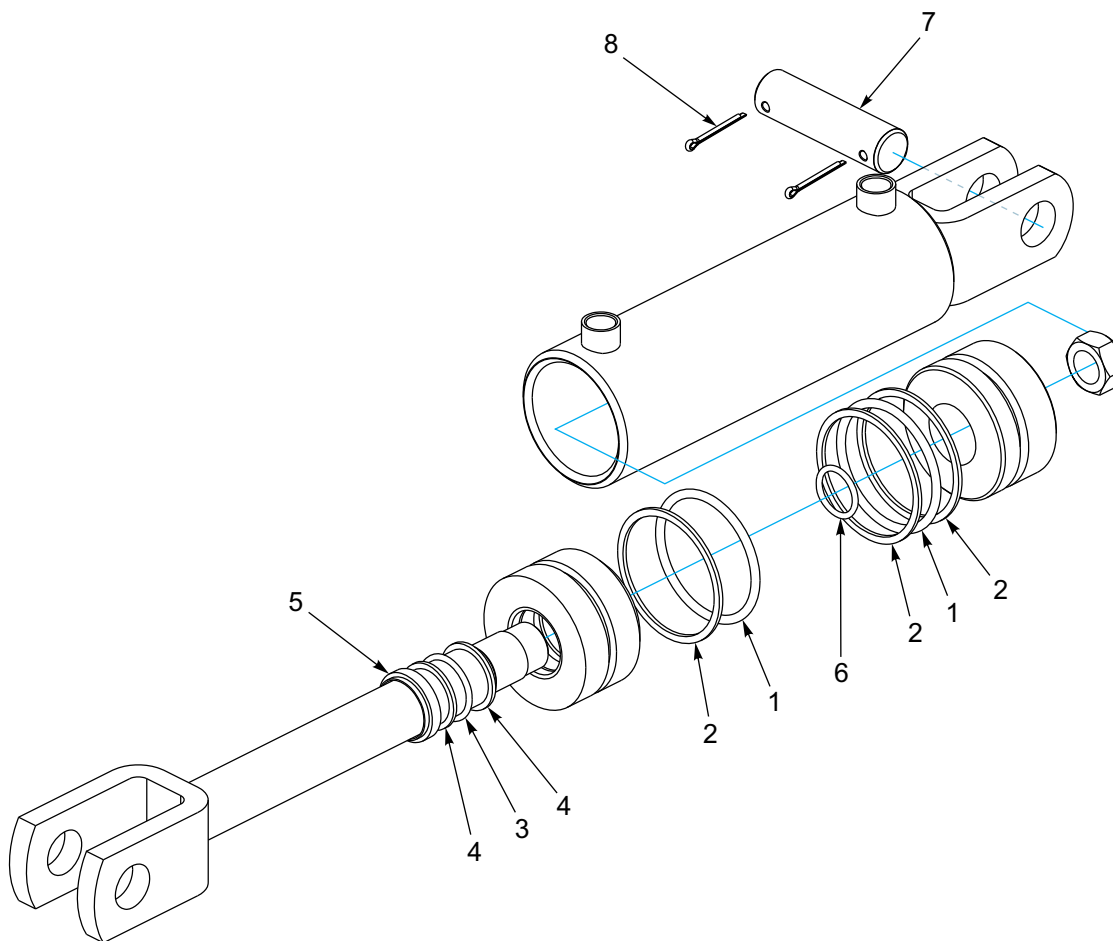


Figure 1-67: 9J440G Hydraulic Cylinder, 2-1/2 x 6 - Hydraulic Gear

9J440G Hydraulic Cylinder, 2-1/2 x 6 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9J440	HYD CYLINDER - 2-1/2 X 16	
1	NSS	O-RING	2
2	NSS	BACK-UP RING	2
3	NSS	O-RING	1
4	NSS	BACK UP RING	2
5	NSS	WIPER	1
6	NSS	O-RING	1
7	5J650	PIN,CLEVIS 1.0X3.625	1
8	110-4224	PIN,COTTER 3/16 X 2IN LG	2
9	6J542	SEAL KIT (INCLUDES ITEMS 1-6)	

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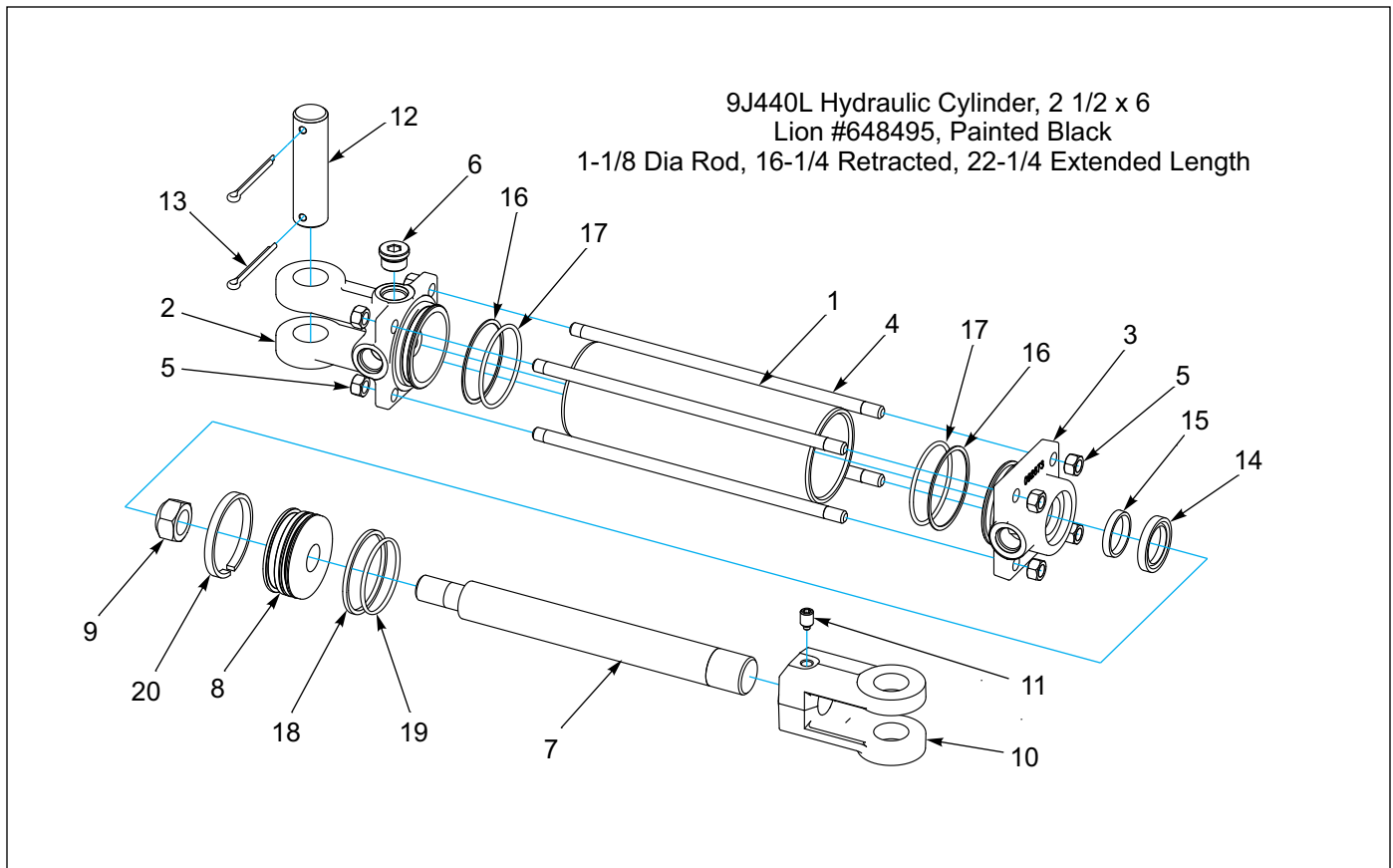


Figure 1-68: 9J440L Hydraulic Cylinder, 2-1/2 x 6 - Lion

9J440L Hydraulic Cylinder, 2-1/2 x 6 - Lion - 648495

ITEM	PART NUMBER	DESCRIPTION	QTY
	9J440	HYD CYLINDER - 2-1/2 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1-512-010007-07	NUT,HEX 3/8-16 ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	1P805	NUT,LOCK 3/4-16,GRB,ZP	1
10	2P735	ROD CLEVIS (INCLUDES ITEM 11)	1
11	1P443	SET SCREW,3/8-16 X 1/2 NYLON TIP	1
12	5J650	PIN,1.0 X 3.625 H2	1
13	110-4224	COTTER PIN, 3/16 X 2IN LG	2
14	NSS	SEAL,WIPER ROD 1.125 METAL E	1
15	NSS	SEAL,HALLITE 605 ROD 1.125D	1
16	NSS	SEAL,BU#228 19PI-228	2
17	NSS	O-RING,228 (2.25X2.5) DURO	2
18	NSS	SEAL,PTFE PISTON RING 2-1/2D	1
19	NSS	O-RING,137 (2.063X2.25) DUR9	1
20	NSS	WEAR RING,2.50-2.25-.25-GFN	1
21	1P742	SEAL KIT (INCLUDES ITEMS 14-20)	

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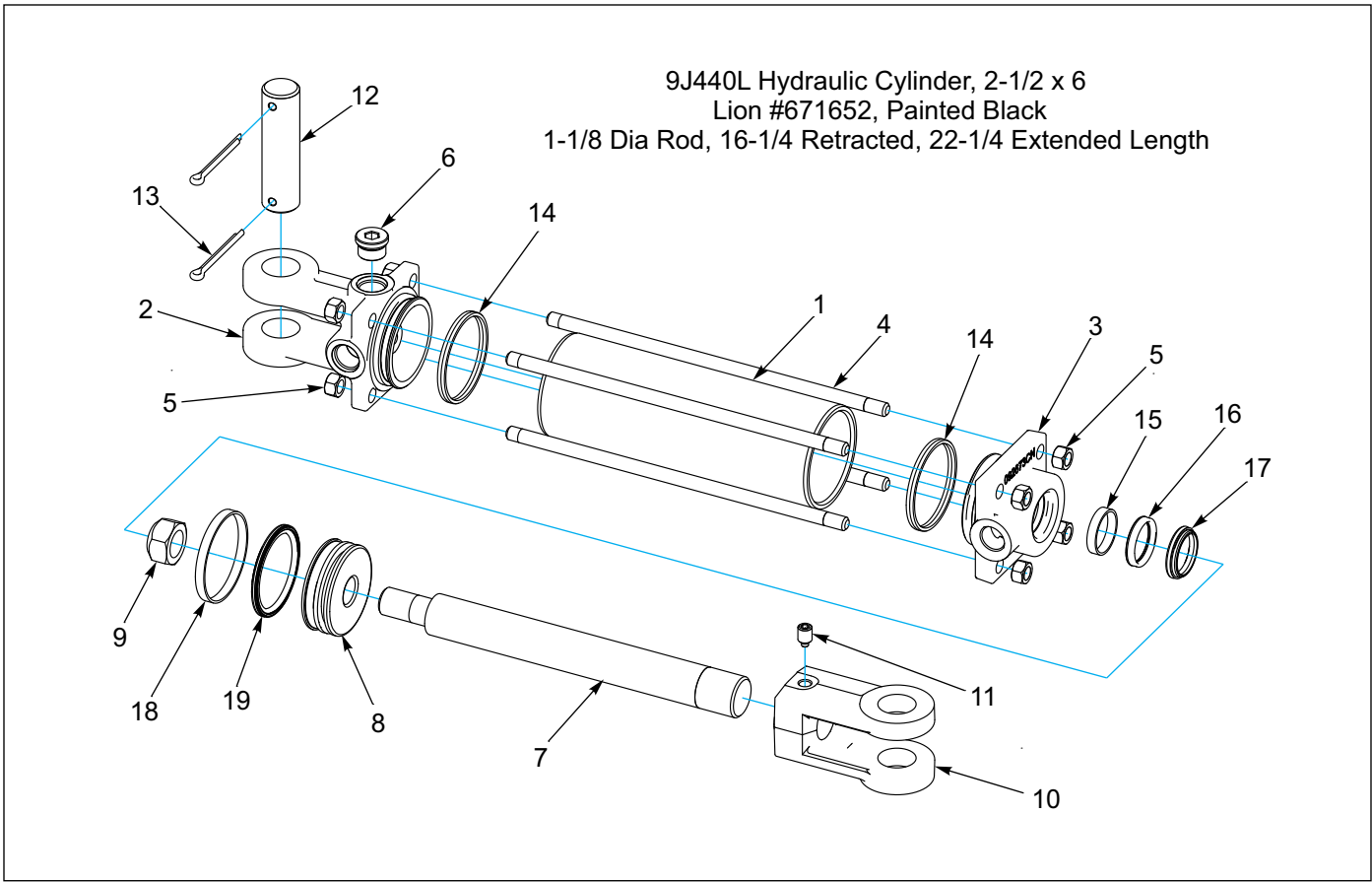


Figure 1-69: 9J440L Hydraulic Cylinder, 2-1/2 x 6 - Lion

9J440L Hydraulic Cylinder, 2-1/2 x 6 - Lion - 671652

ITEM	PART NUMBER	DESCRIPTION	QTY
	9J440	HYD CYLINDER - 2-1/2 X 6	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	TIE ROD	4
5	1-512-010007-07	NUT,HEX 3/8-16 ZP	8
6	NSS	PLUG,SOCKET HEAD 3/4-16	1
7	NSS	ROD	1
8	NSS	PISTON	1
9	1P805	NUT,LOCK 3/4-16,GRB,ZP	1
10	2P735	ROD CLEVIS (INCLUDES ITEM 11)	1
11	1P443	SET SCREW,3/8-16 X 1/2 NYLON TIP	1
12	5J650	PIN,1.0 X 3.625 H2	1
13	110-4224	COTTER PIN, 3/16 X 2IN LG	2
14	NSS	SEAL DUAL 2.50	2
15	NSS	WEAR RING 1.25-1.13-0.250	1
16	NSS	SEAL ZURCON U-CUP RU9 1.13	1
17	NSS	SEAL WIPER 1.13 WNUC	1
18	NSS	WEAR RING 2.50-2.38-0.250	1
19	NSS	SEAL ZURCON WYNSEAL 2.50"	1
20	1P742	SEAL KIT (INCLUDES ITEMS 14-19)	1

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9J493G Hydraulic Cylinder, 4 x 24
 Hydraulic Gear #4024-02, Painted Black
 1-3/4 Dia Rod, 34-1/4 Retracted, 58-1/4 Extended Length

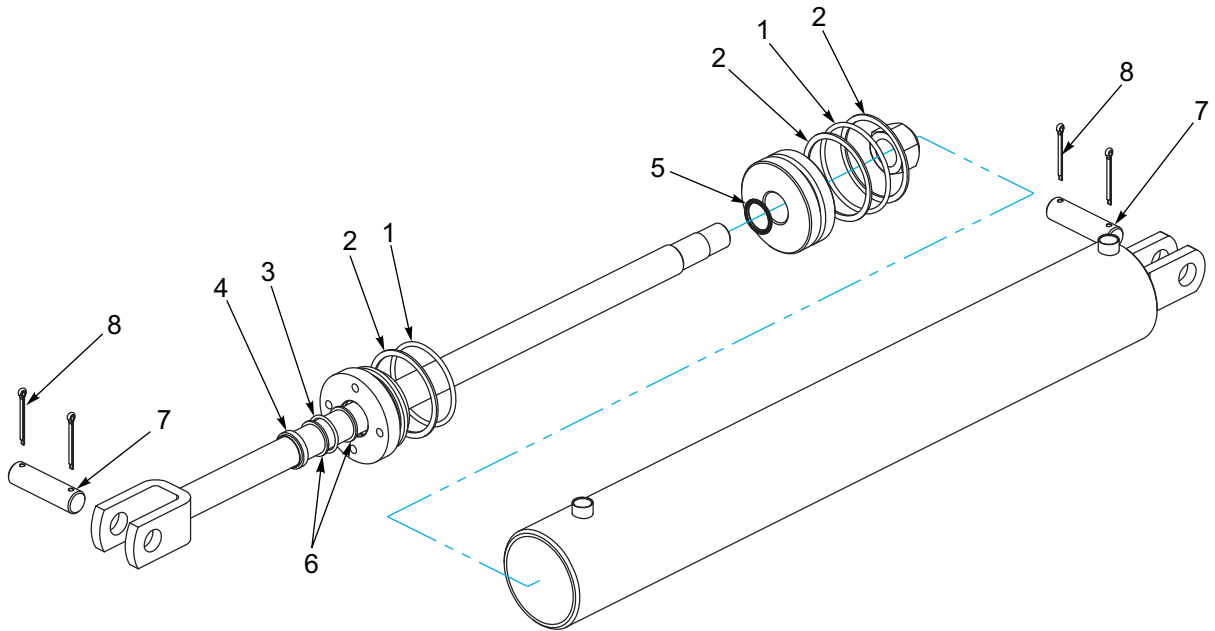


Figure 1-70: 9J493G Hydraulic Cylinder, 4 x 24 - Hydraulic Gear

9J493G Hydraulic Cylinder, 4 x 24 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9J493	HYD CYLINDER - 4 X 24	
1	NSS	O-RING	2
2	NSS	BACK-UP RING	2
3	NSS	O-RING	1
4	NSS	WIPER	1
5	NSS	O-RING	1
6	NSS	BACK-UP RING	1
7	3J498	PIN, 1-1/4 X 3-3/4	2
8	1-557-010362-63	PIN,COTTER 1/4X2 ZP	4
9	1J956	SEAL KIT (INCLUDES ITEMS 1-6)	

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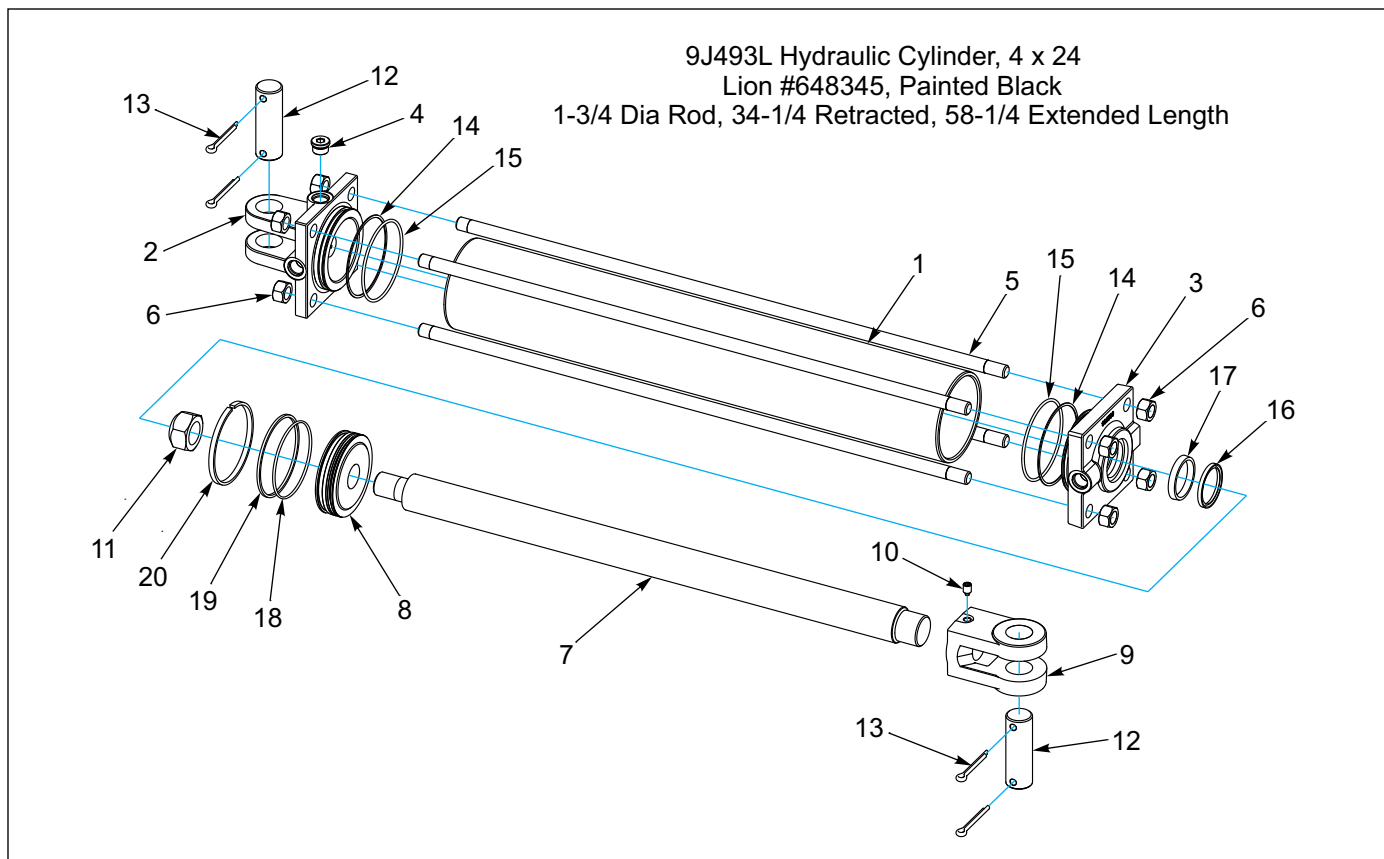


Figure 1-71: 9J493L Hydraulic Cylinder, 4 x 24 - Lion

9J493L Hydraulic Cylinder, 4 x 24 - Lion - 648345

ITEM	PART NUMBER	DESCRIPTION	QTY
	9J493	HYD CYLINDER - 4 X 24	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	1P804	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	2P739	CLEVIS 1.25PIN X 1.5 X 2.75 (INCLUDES ITEM 10)	1
10	1P443	SET SCREW, 3/8-16 x 1/2 NYLON TIP	1
11	8J852	NUT, LOCK 1-1/8-12, GrB, ZP	1
12	3J498	PIN, 1.25 x 3.75 H2	2
13	1-557-010362-63	PIN, COTTER 1/4X2 ZP	4
14	NSS	SEAL, BU#240 19PI-240	2
15	NSS	O-RING, 240 (3.75x4.0) DURO 90	2
16	NSS	SEAL, NOK-AR2573-EO 1.75BO	1
17	NSS	SEAL, HALLITE 605 ROD 1.75D	1
18	NSS	O-RING, 153 (3.5x3.688) DUR	1
19	NSS	SEAL, PTFE PISTON RING 4DIA	1
20	NSS	WEAR RING, 4.00-3.75-.25-GFN	1
21	1P745	SEAL KIT (INCLUDES ITEMS 14-20)	

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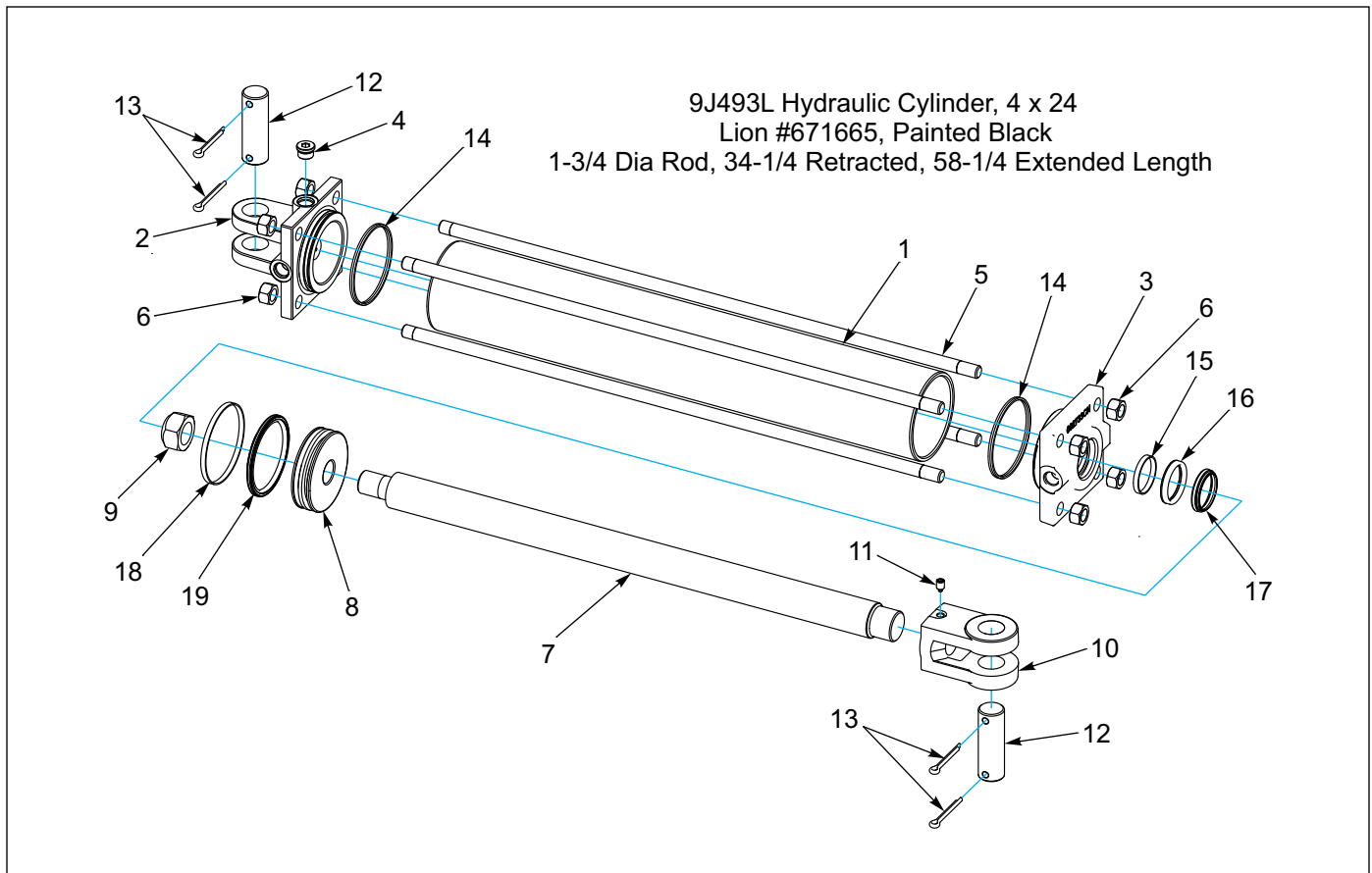


Figure 1-72: 9J493L Hydraulic Cylinder, 4 x 24 - Lion

9J493L Hydraulic Cylinder, 4 x 24 - Lion - 671665

ITEM	PART NUMBER	DESCRIPTION	QTY
	9J493	HYD CYLINDER - 4 X 24	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	PLUG, SOCKET HEAD 3/4-16	1
5	NSS	TIE ROD	4
6	1P804	NUT, HEX 5/8-18, ZP	8
7	NSS	ROD	1
8	NSS	PISTON	1
9	8J852	NUT, LOCK 1-1/8-12, GrB, ZP	1
10	2P739	CLEVIS 1.25PIN X 1.5 X 2.75 (INCLUDES ITEM 11)	1
11	1P443	SET SCREW, 3/8-16 x 1/2 NYLON TIP	1
12	3J498	PIN, 1.25 x 3.75 H2	2
13	1-557-010362-63	PIN, COTTER 1/4X2 ZP	4
14	NSS	SEAL DUAL 4.00	2
15	NSS	WEAR RING 1.87-1.75-0.250	1
16	NSS	SEAL ZURCON U-CUP RU9 1.75	1
17	NSS	SEAL, WIPER 1.75	1
18	NSS	WEAR RING 4.00-3.88-0.250	1
19	NSS	SEAL SURCON WYNSEAL 4.00	1
20	1P745	SEAL KIT (INCLUDES ITEMS 14-19)	

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9K389G Hydraulic Cylinder, 4-1/2 x 14
 9K389G Hydraulic Cylinder, 4-1/2 x 14
 Hydraulic Gear #BIV4.5-1.75-14, Painted Black
 Hydraulic Gear #BIV4.5-1.75-14, Painted Black
 1-3/4 Dia Rod, 31-3/4 Retracted, 45-3/4 Extended Length
 1-3/4 Dia Rod, 31-3/4 Retracted, 45-3/4 Extended Length

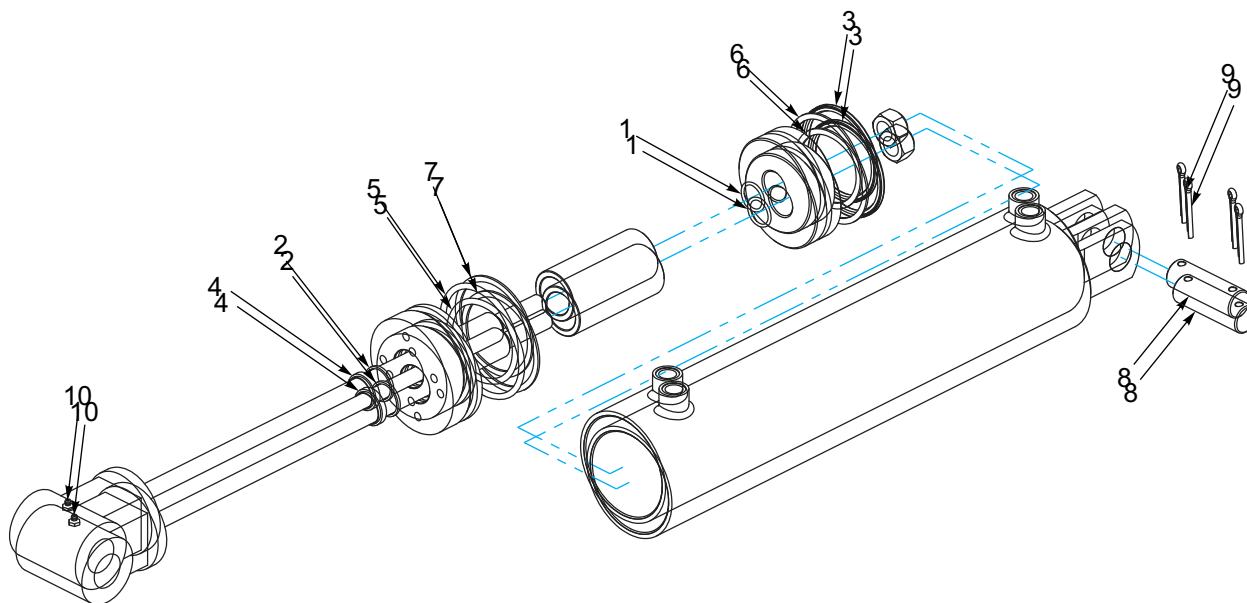


Figure 1-73: 9K389G Hydraulic Cylinder, 4-1/2 x 14 - Hydraulic Gear

9K389G Hydraulic Cylinder, 4-1/2 x 14 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9K389	HYD CYLINDER - 4-1/2 X 14	
1	NSS	O-RING	1
2	NSS	POLYSEAL	1
3	NSS	CROWN SEAL	1
4	NSS	ROD WIPER	1
5	NSS	O-RING	1
6	NSS	PARBACK (BACK-UP) RING	1
7	NSS	VENTED BACK-UP RING	1
8	3J498	PIVOT PIN (REAR)	1
9	1-557-010362-63	PIN,COTTER 1/4X2 ZP	2
10	5000	LUBE FITTING, 1/8 NPT STR.	1
11	9K434	SEAL KIT (INCLUDES ITEMS 1-7)	

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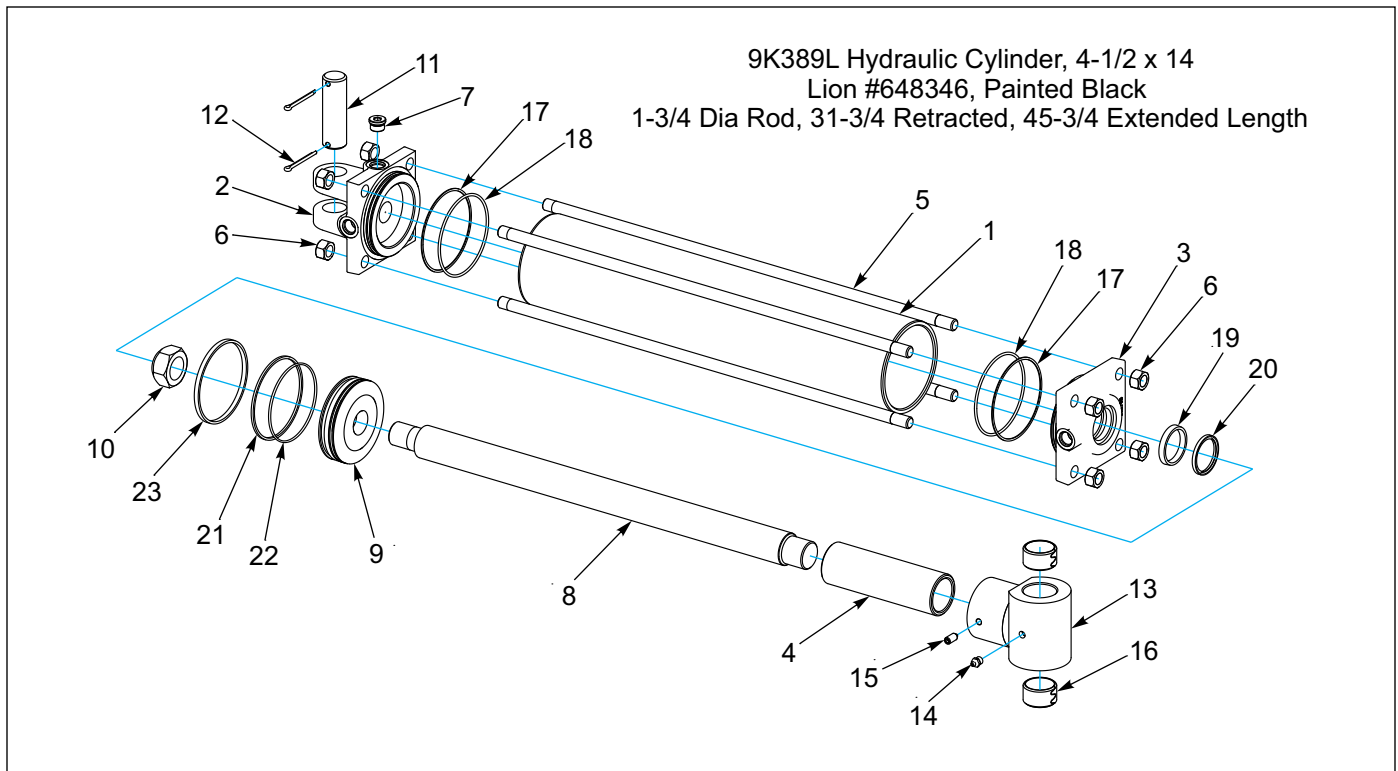


Figure 1-74: 9K389L Hydraulic Cylinder, 4-1/2 x 14 - Lion

9K389L Hydraulic Cylinder, 4-1/2 x 14 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	9K389	HYD CYLINDER - 4-1/2 X 14	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	STOP TUBE	1
5	NSS	TIE ROD	4
6	1P804	NUT,HEX 5/8-18,ZP	8
7	NSS	PLUG,SOCKET HEAD 3/4-16	1
8	NSS	ROD	1
9	NSS	PISTON	1
10	1J951	NUT, LOCK 1-1/4-12,ZP	1
11	4J549	PIN, 1.25 X 4.0 H2	1
12	110-4224	PIN,COTTER 3/16 X 2IN LG	2
13	1P440	CROSS TUBE,1.5-12 THRD (INCLUDES ITEMS 14-16)	1
14	5000	FIT,GREASE 1/8PTF x 0.688	1
15	1P444	SET SCREW,3/8-16 x 3/4 NYLON TIP	1
16	1P439	SPRING BUSHING,1.5x1.75x1.0	2
17	NSS	SEAL,BU#244	2
18	NSS	O-RING,244 (4.25x4.5) D90	2
19	NSS	SEAL,HALLITE 605 ROD 1.75D	1
20	NSS	SEAL,NOK-AR2573-EO 1.75BO	1
21	NSS	SEAL,PTFE PISTON RING 4.5D	1
22	NSS	O-RING,155 (4.0x4.188) DUR90	1
23	NSS	WEAR RING,4.50-4.25-.25-GFN	1
24	1P746	SEAL KIT (INCLUDES ITEMS 17-23)	

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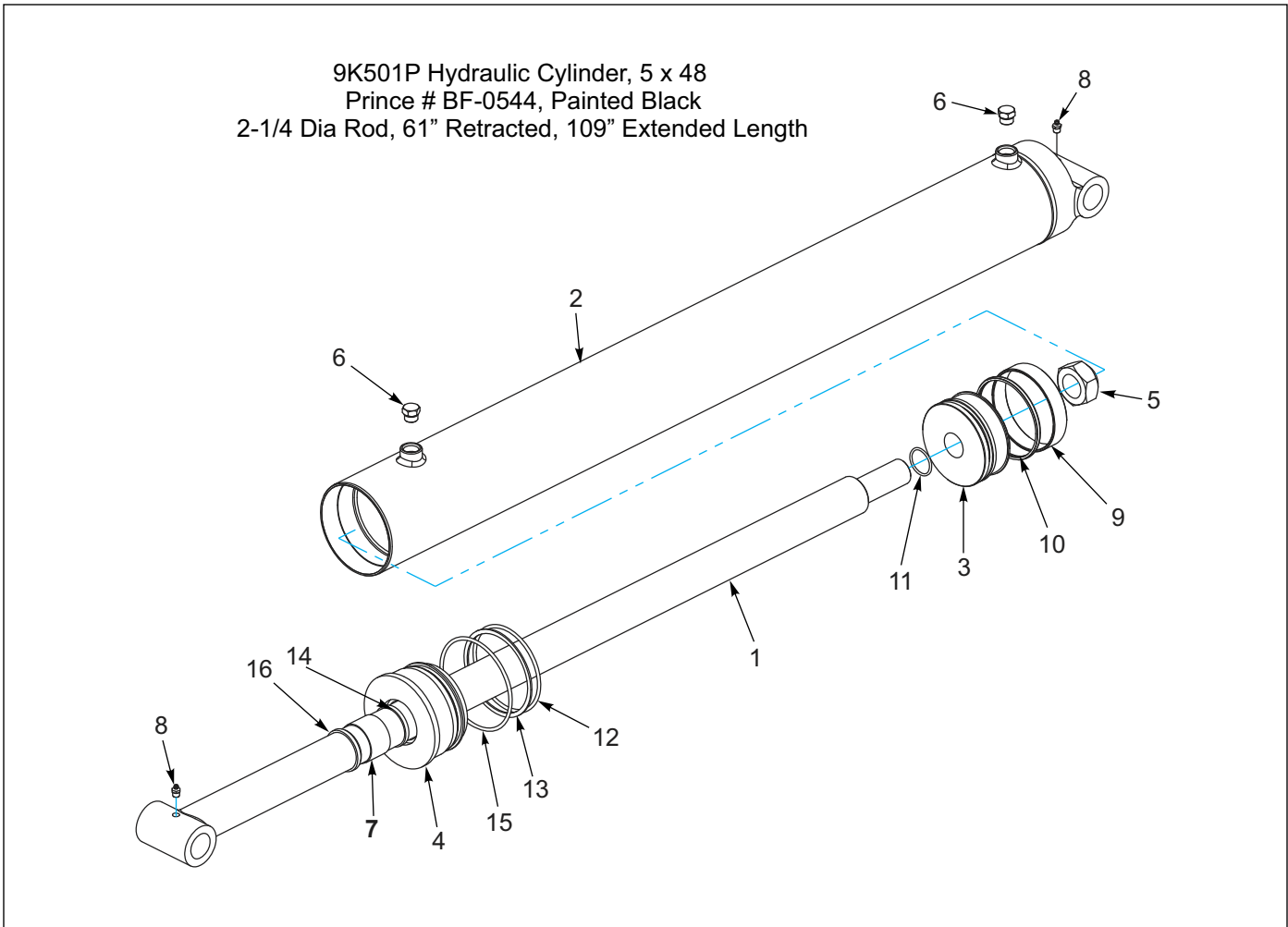


Figure 1-75: 9K501P Hydraulic Cylinder, 5 x 48 - Prince

9K501P Hydraulic Cylinder, 5 x 48 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	9K501	HYD CYLINDER - 5 X 48	
1	9K704	PISTON ROD ASSEMBLY	1
2	9K448	BUTT & TUBE ASSEMBLY	1
3	9K449	PISTON	1
4	9K450	GLAND	1
5	9K447	LOCK NUT, 1 1/2-6 NC	1
6	9K460	PORT PLUG	2
7	9K459	DX BUSHING	1
8	9K461	LUBE FITTING	2
9	NSS	BEARING RING	1
10	NSS	CROWN SEAL	1
11	NSS	O-RING	1
12	NSS	O-RING	1
13	NSS	BACKUP WASHER	1
14	NSS	U-CUP	1
15	NSS	O-RING	1
16	NSS	WIPER	1
17	9K670	SEAL KIT (INCLUDES ITEMS 10-16)	

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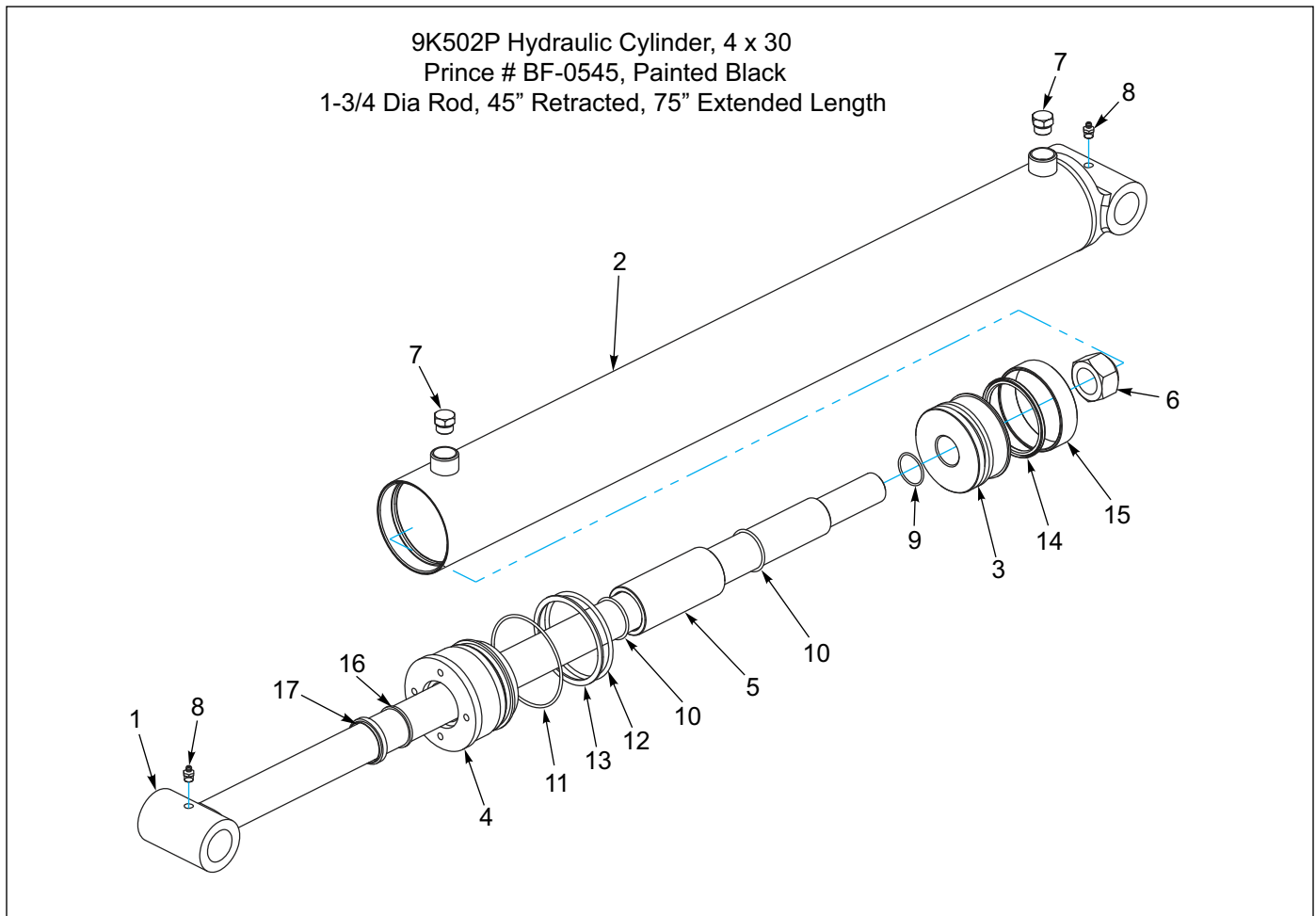


Figure 1-76: 9K502P Hydraulic Cylinder, 4 x 30 - Prince

9K502P Hydraulic Cylinder, 4 x 30 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	9K502	HYD CYLINDER - 4 X 30	
1	9K466	PISTON ROD ASSEMBLY	1
2	9K467	BUTT & TUBE ASSEMBLY	1
3	9K468	PISTON	1
4	9K469	GLAND	1
5	9K470	SPACER	1
6	NSS	LOCK NUT, 1 1/4-12	1
7	NSS	SHIPPING PLUG	2
8	NSS	LUBE FITTING	2
9	NSS	O-RING	1
10	NSS	O-RING	2
11	NSS	O-RING	1
12	NSS	O-RING	1
13	NSS	BACKUP WASHER	1
14	NSS	CROWN SEAL	1
15	NSS	BEARING RING	1
16	NSS	U-CUP	1
17	NSS	CANNED WIPER	1
18	9K671	SEAL KIT (INCLUDES ITEMS 9-17)	

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9K733G Hydraulic Cylinder, 3-1/2 x 16
 Hydraulic Gear #BIW3.5-1.75-16, Painted Black
 1-3/4 Dia Rod, 31-1/2 Retracted, 47-1/2 Extended Length

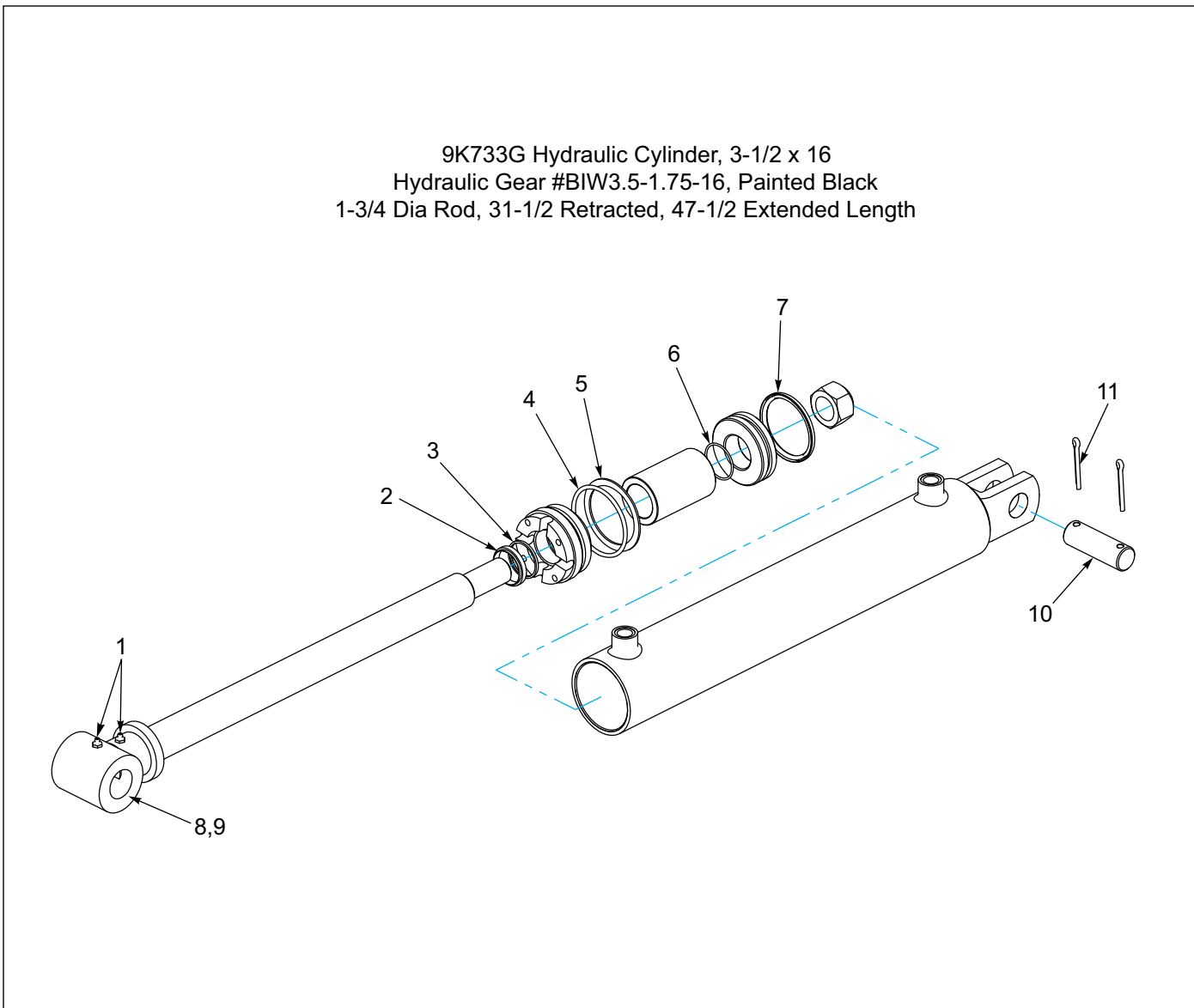


Figure 1-77: 9K733G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

9K733G Hydraulic Cylinder, 3-1/2 x 16 - Hydraulic Gear

ITEM	PART NUMBER	DESCRIPTION	QTY
	9K733	HYD CYLINDER - 3-1/2 X 16	
1	5000	ZERK FITTING 1/8NPT	2
2	NSS	ROD WIPER	1
3	NSS	U-CUP	1
4	NSS	O-RING	1
5	NSS	BACK-UP RING	1
6	NSS	O-RING	1
7	NSS	POLYSEAL	1
8	1P483	CROSS TUBE (INCLUDES ITEMS 1 AND 9)	1
9	1P196	SPRING BUSHING (NOT SHOWN)	2
10	3J498	1 1/4" DIA PIN	1
11	1-557-010362-63	PIN,COTTER 1/4X2 ZP	2
12	1P122	SEAL KIT (INCLUDES ITEMS 2-7)	

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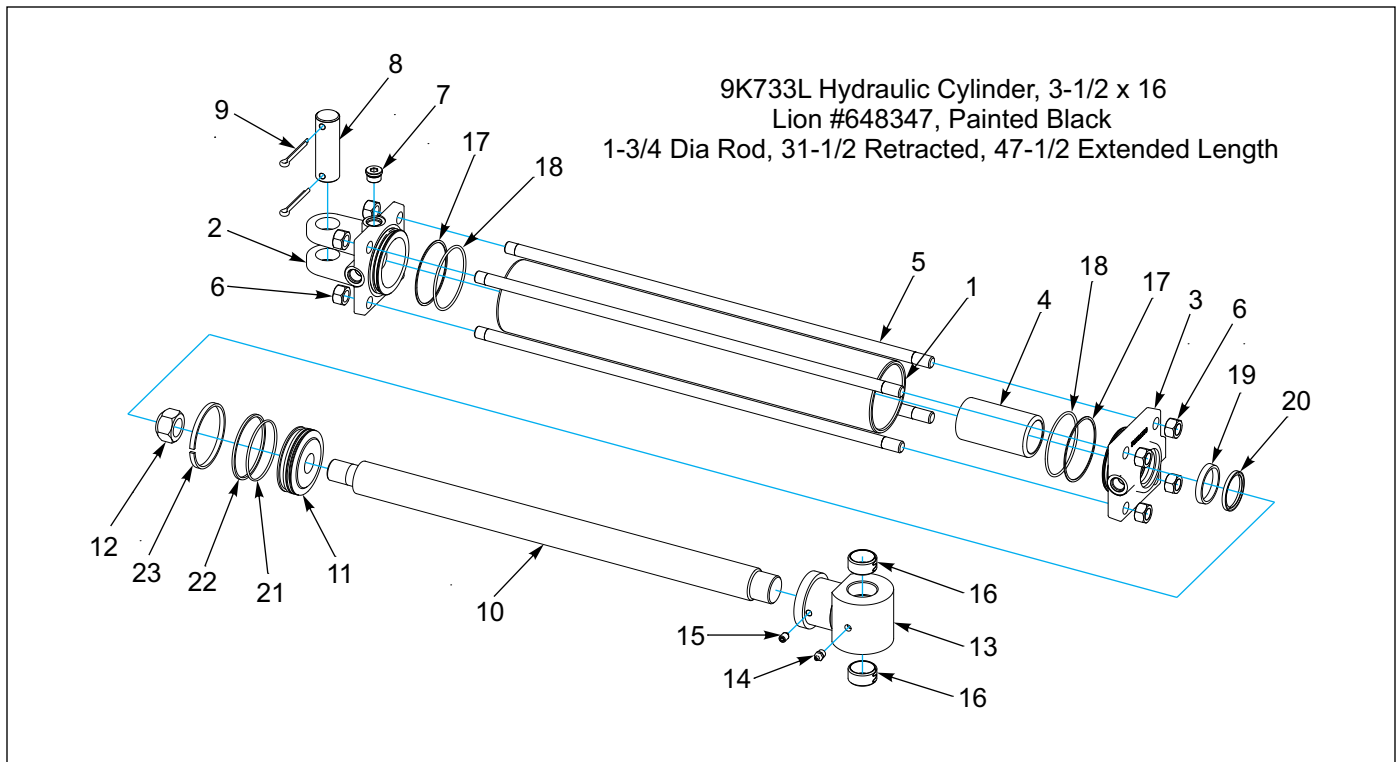


Figure 1-78: 9K733L Hydraulic Cylinder, 3-1/2 x 16 - Lion

9K733L Hydraulic Cylinder, 3-1/2 x 16 - Lion - 648347

ITEM	PART NUMBER	DESCRIPTION	QTY
	9K733	HYD CYLINDER - 3-1/2 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	STOP TUBE	1
5	NSS	TIE ROD	4
6	NSS	NUT,HEX 5/8-18,ZP	8
7	NSS	PLUG,SOCKET HEAD 3/4-16	1
8	3J498	PIN,1.25 X 3.75	1
9	1-557-010362-63	PIN,COTTER 1/4 X 2 ZP	2
10	NSS	ROD	1
11	NSS	PISTON	1
12	1-512-010005-19	NUT,LOCK 1-8, GRB,ZP	1
13	1P483	CROSS TUBE,ROD END 1.5-12 THRD (INCLUDES ITEMS 14-16)	2
14	5000	ZERK FITTING 1/8NPT	1
15	1P443	SET SCREW,3/8-16 X 1/2 NYLON TIP	1
16	1P196	SPRING BUSHING,1.25X1.5X0.75	2
17	NSS	SEAL,BU#236 19PI-236	2
18	NSS	O-RING,236 (3.25X3.5) D90	2
19	NSS	SEAL,HALLITE 605 ROD 1.75D	1
20	NSS	SEAL,NOK-AR2573-EO 1.75BO	1
21	NSS	O-RING,151 (3.0X3.188) DUR90	1
22	NSS	SEAL,PTFE PISTON RING 3-1/2D	1
23	NSS	WEAR RING,3.50-3.25-.25-GFN	1
24	1P744	SEAL KIT (INCLUDES ITEMS 17-23)	

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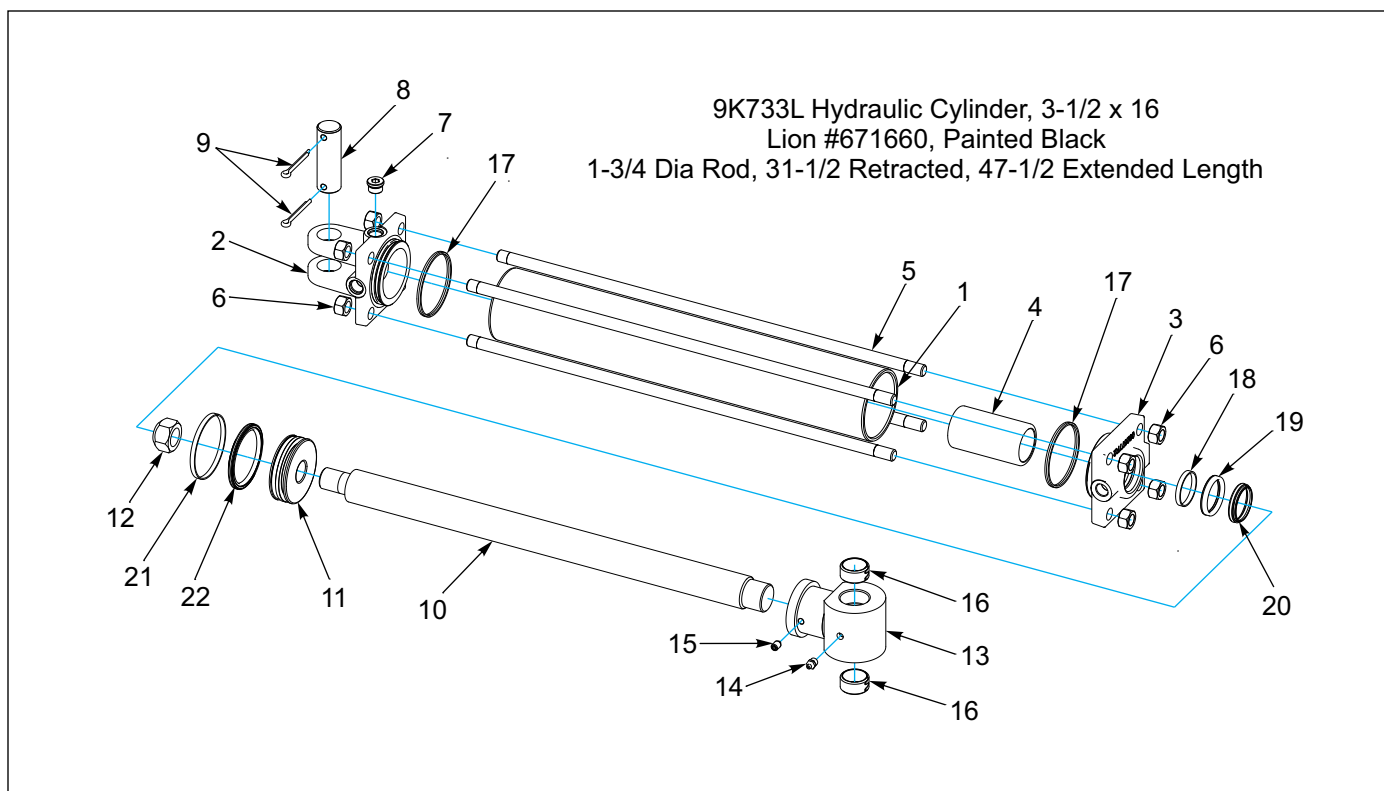


Figure 1-79: 9K733L Hydraulic Cylinder, 3-1/2 x 16 - Lion

9K733L Hydraulic Cylinder, 3-1/2 x 16 - Lion - 671660

ITEM	PART NUMBER	DESCRIPTION	QTY
	9K733	HYD CYLINDER - 3-1/2 X 16	
1	NSS	TUBE	1
2	NSS	CLEVIS CAP	1
3	NSS	ROD CAP	1
4	NSS	STOP TUBE	1
5	NSS	TIE ROD	4
6	NSS	NUT,HEX 5/8-18,ZP	8
7	NSS	PLUG,SOCKET HEAD 3/4-16	1
8	3J498	PIN,1.25 X 3.75	1
9	1-557-010362-63	PIN,COTTER 1/4 X 2 ZP	2
10	NSS	ROD	1
11	NSS	PISTON	1
12	1-512-010005-19	NUT,LOCK 1-8, GRB,ZP	1
13	1P483	CROSS TUBE,ROD END 1.5-12 THRD (INCLUDES ITEMS 14-16)	1
14	5000	ZERK FITTING 1/8NPT	1
15	1P443	SET SCREW,3/8-16 X 1/2 NYLON TIP	1
16	1P196	SPRING BUSHING,1.25X1.5X0.75	2
17	NSS	SEAL DUAL 3.50	2
18	NSS	WEAR RING 1.87-1.75-0.250	1
19	NSS	SEAL ZURCON U-CUP RU9 1.75	1
20	NSS	SEAL, WIPER 1.75	1
21	NSS	WEAR RING 3.50-3.38-0.250	1
22	NSS	SEAL ZURCON WYNSEAL 3.50"	1
23	1P744	SEAL KIT (INCLUDES ITEMS 17-22)	

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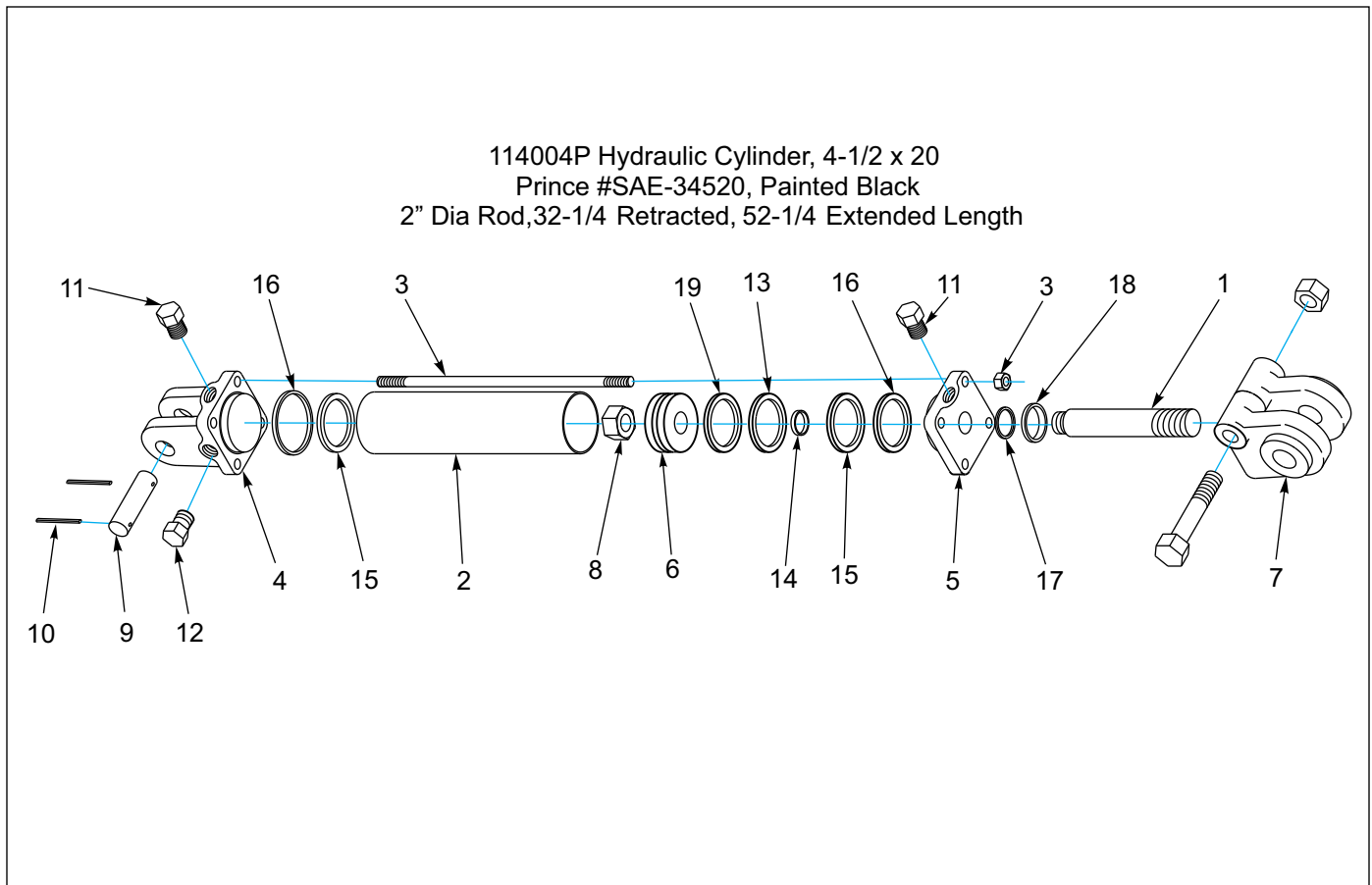


Figure 1-80: 114004 Hydraulic Cylinder, 4-1/2 x 20 - Prince

114004 Hydraulic Cylinder, 4-1/2 x 20 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	114004	CYLINDER, HYD 4-1/2X20 3000PSI	
1	163037	PISTON ROD	1
2	NSS	TUBE	1
3	NSS	TIEROD ASSY	4
4	NSS	BUTT	1
5	163038	GLAND ASSY	1
6	NSS	PISTON	1
7	100000362	CLEVIS ASSY	1
8	NSS	LOCKNUT	1
9	NSS	CLEVIS PIN	2
10	NSS	COTTER PIN	4
11	NSS	PLASTIC PLUG	2
12	NSS	PORT PLUG	1
13	NSS	CROWN SEAL	1
14	NSS	O-RING	1
15	NSS	O-RING	2
16	NSS	BU-WASHER	2
17	NSS	U-CUP	1
18	NSS	WIPER	1
19	NSS	BEARING RING	1
20	132077	SEAL KIT (INCLUDES ITEMS 13-18)	

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116344P Hydraulic Cylinder, 2-1/2 x 20
 Prince #BC-0063, Painted Black
 1-1/4 Dia Rod, 34" Retracted, 54" Extended Length

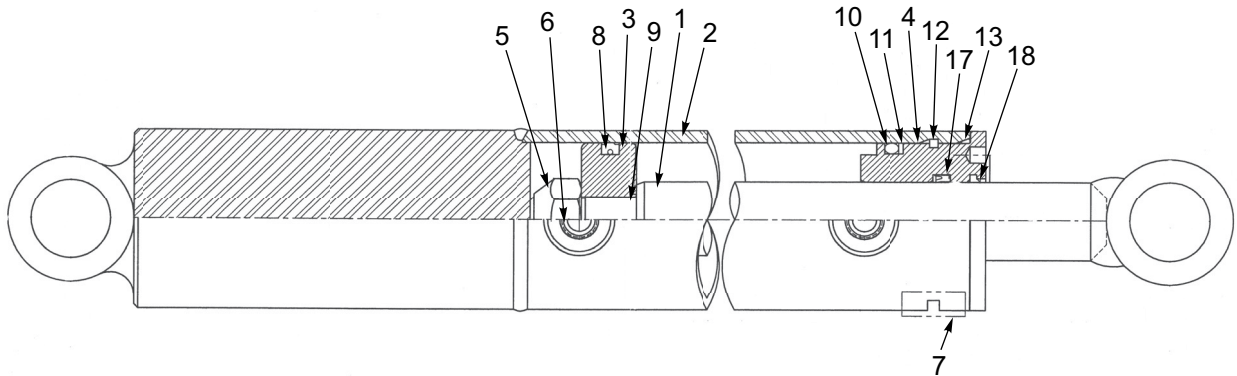


Figure 1-81: 116344 Hydraulic Cylinder, 2-1/2 x 20 - Prince

116344 Hydraulic Cylinder, 2-1/2 x 20 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	116344	CYLINDER, HYD 2-1/2X20	
1	120802	PISTON ROD ASSEMBLY	1
2	NSS	BUTT AND TUBE ASSEMBLY	1
3	117512	PISTON	1
4	120803	GLAND	1
5	NSS	LOCKNUT	1
6	NSS	PORT PLUG	2
7	NSS	SQUARE WIRE TAPE	1
8	NSS	CROWN SEAL	1
9	NSS	O-RING	1
10	NSS	O-RING	1
11	NSS	BU-WASHER	1
12	NSS	SQUARE RET. WIRE	1
13	NSS	O-RING	1
14	NSS	U-CUP	1
15	NSS	WIPER	1
16	NSS	INSTALLATION RING	1
17	NSS	U-CUP	1
18	NSS	WIPER	1
19	117514	SEAL KIT (INCLUDES ITEMS 8-18)	

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129251P Hydraulic Cylinder, 1-3/4 x 6
 Prince #F175060CSSTCX, Painted Black
 1" Dia Rod, 14" Retracted, 20" Extended Length

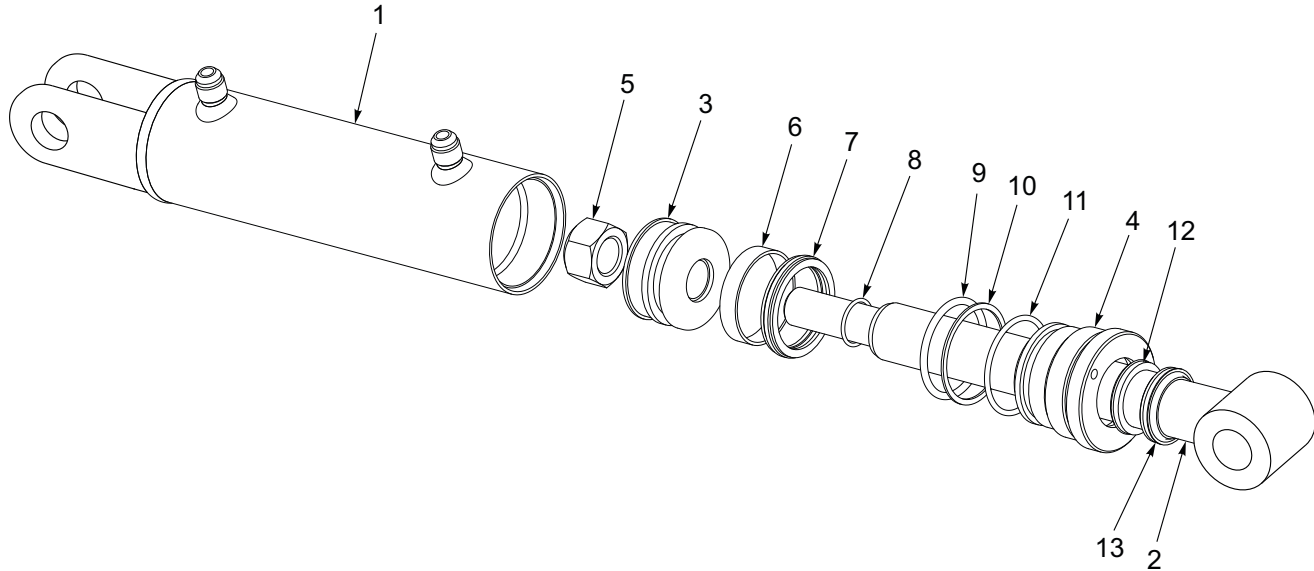


Figure 1-82: 129251 Hydraulic Cylinder, 1-3/4 x 6 - Prince

129251 Hydraulic Cylinder, 1-3/4 x 6 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	129251	CYLINDER,HYD 1-3/4X6	
1	NSS	BUTT AND TUBE ASSEMBLY	1
2	169650	PISTON ROD	1
3	NSS	PISTON	1
4	169651	GLAND	1
5	NSS	LOCKNUT	1
6	NSS	BEARING RING	1
7	NSS	CROWN SEAL	1
8	NSS	O-RING	1
9	NSS	O-RING	1
10	NSS	BU-WASHER	1
11	NSS	O-RING	1
12	NSS	U-CUP	1
13	NSS	WIPER	1
14	131868	PACKING KIT (INCLUDES ITEMS 6-13)	

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167308P Hydraulic Cylinder, 4 x 10
 Prince #5530, Painted Black
 1-3/4 Dia Rod, 22-1/4 Retracted, 32-1/4 Extended Length

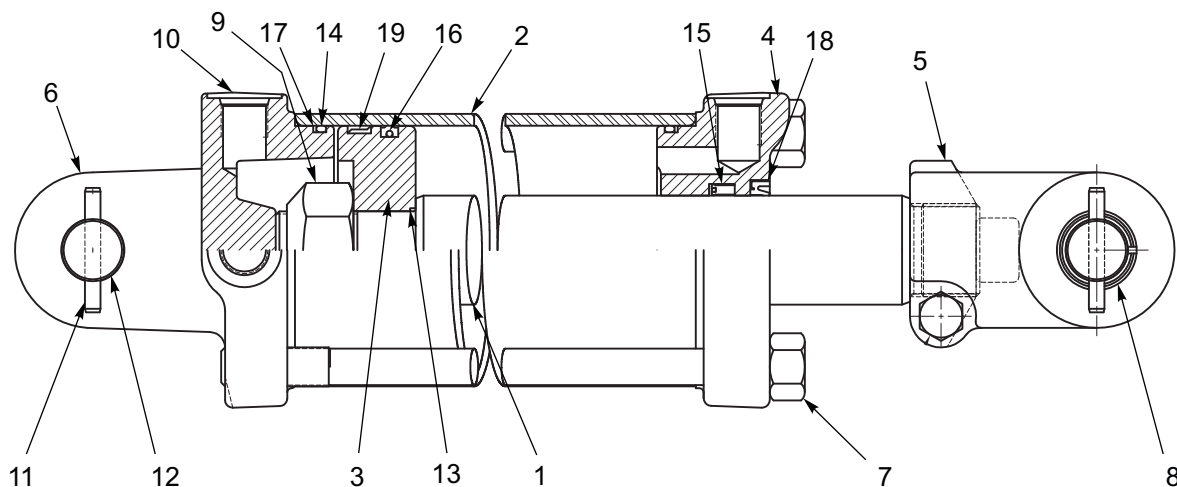


Figure 1-83: 167308 Hydraulic Cylinder, 4 x 10 - Prince

167308 Hydraulic Cylinder, 4 x 10 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	167308	CYLINDER, HYDRAULIC 4 X 10 3000 PSI	
1	154099	PISTON ROD	1
2	NSS	TUBE	1
3	NSS	PISTON	1
4	154101	GLAND	1
5	154102	CLEVIS ASSEMBLY	1
6	NSS	BUTT	2
7	NSS	TIEROD ASSEMBLY	4
8	NSS	BUSHING	2
9	NSS	LOCKNUT	1
10	NSS	SHIPPING PLUG	3
11	NSS	ROLL PIN	4
12	NSS	CLEVIS PIN	2
13	NSS	O-RING	1
14	NSS	O-RING	2
15	NSS	U-CUP	1
16	NSS	CROWN SEAL	1
17	NSS	BU-WASHER	2
18	NSS	WIPER	1
19	NSS	BEARING RING	1
20	154104	PACKING KIT (INCLUDES ITEMS 13 - 19)	

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167310P Hydraulic Cylinder, 3-1/2 x 6
 Prince #BH-0830, Painted Black
 1-1/2 Dia Rod, Retracted and Extended Length - N/A

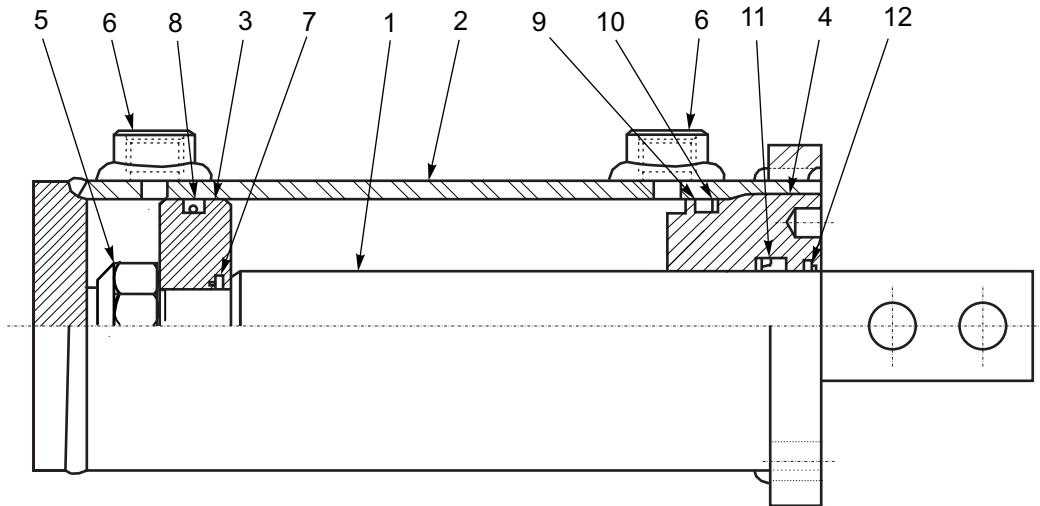


Figure 1-84: 167310 Hydraulic Cylinder, 3-1/2 x 6 - Prince

167310 Hydraulic Cylinder, 3-1/2 x 6 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	167310	CYLINDER, HYDRAULIC 3-1/2" X 6"	
1	142803	PISTON ROD	1
2	NSS	BUTT AND TUBE ASSEMBLY	1
3	NSS	PISTON	1
4	142806	GLAND	1
5	NSS	LOCKNUT	1
6	NSS	PORT PLUG	2
7	NSS	O-RING	1
8	NSS	CROWN SEAL	1
9	NSS	O-RING	1
10	NSS	BU-WASHER	1
11	NSS	U-CUP	1
12	NSS	CANNED WIPER	1
13	142807	PACKING KIT (INCLUDES ITEMS 7-12)	

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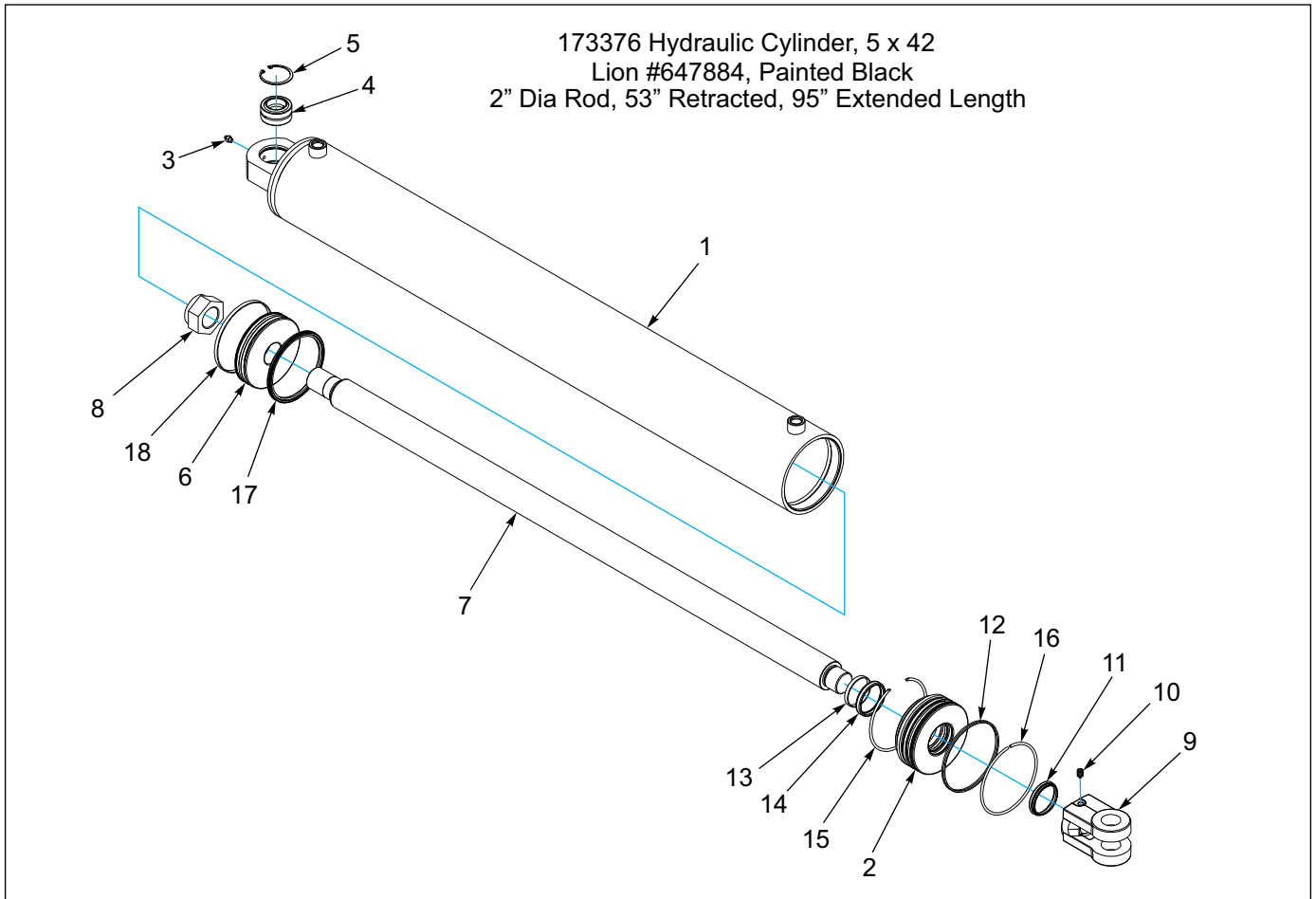


Figure 1-85: 173376 Hydraulic Cylinder, 5 x 42 - Lion

173376 Hydraulic Cylinder, 5 x 42 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	173376	HYD CYLINDER, 5X42	
1	NSS	TUBE WELDT 5.00-42.00-RR-W	1
2	NSS	CYLINDER HEAD 5.00-2.00-RR-TSS	1
3	1-298-010001-1	ZERK FITTING 1/4 SAE	1
4	173404	SPHERICAL BUSHING, 1-1/4 BORE	1
5	173403	RETAINING RING, N5000-200	1
6	NSS	PISTON 5.00-1.500-TSS-ISO-WR	1
7	NSS	ROD CYL 2.00-42.00-1.50-1.50	1
8	NSS	NUT HEX 1-1/2-12UNF LOCK GR	1
9	2P739	CLEVIS 1.25PIN X 1.5 X 2.75 (INCLUDES ITEM 10)	1
10	1P443	SET SCREW, 3/8-16 X 1/2 NYL	1
11	NSS	SEAL WIPER 2.00 WNUC TSS	1
12	NSS	SEAL DUAL 5.00 Z20 PU	1
13	NSS	WEAR RING 2.12-2.00-0.250	1
14	NSS	SEAL ZURCON U-CUP RU9 2.00	1
15	NSS	RETAINING RING INTERNAL 5.00	1
16	NSS	RETAINING RING EXTERNAL 5.00	1
17	NSS	SEAL SURCON WYNSEAL 5.00"-IS	1
18	NSS	WEAR RING 5.00-4.88-0.250	1
19	173405	SEAL KIT (INCLUDES ITEMS 11-18)	

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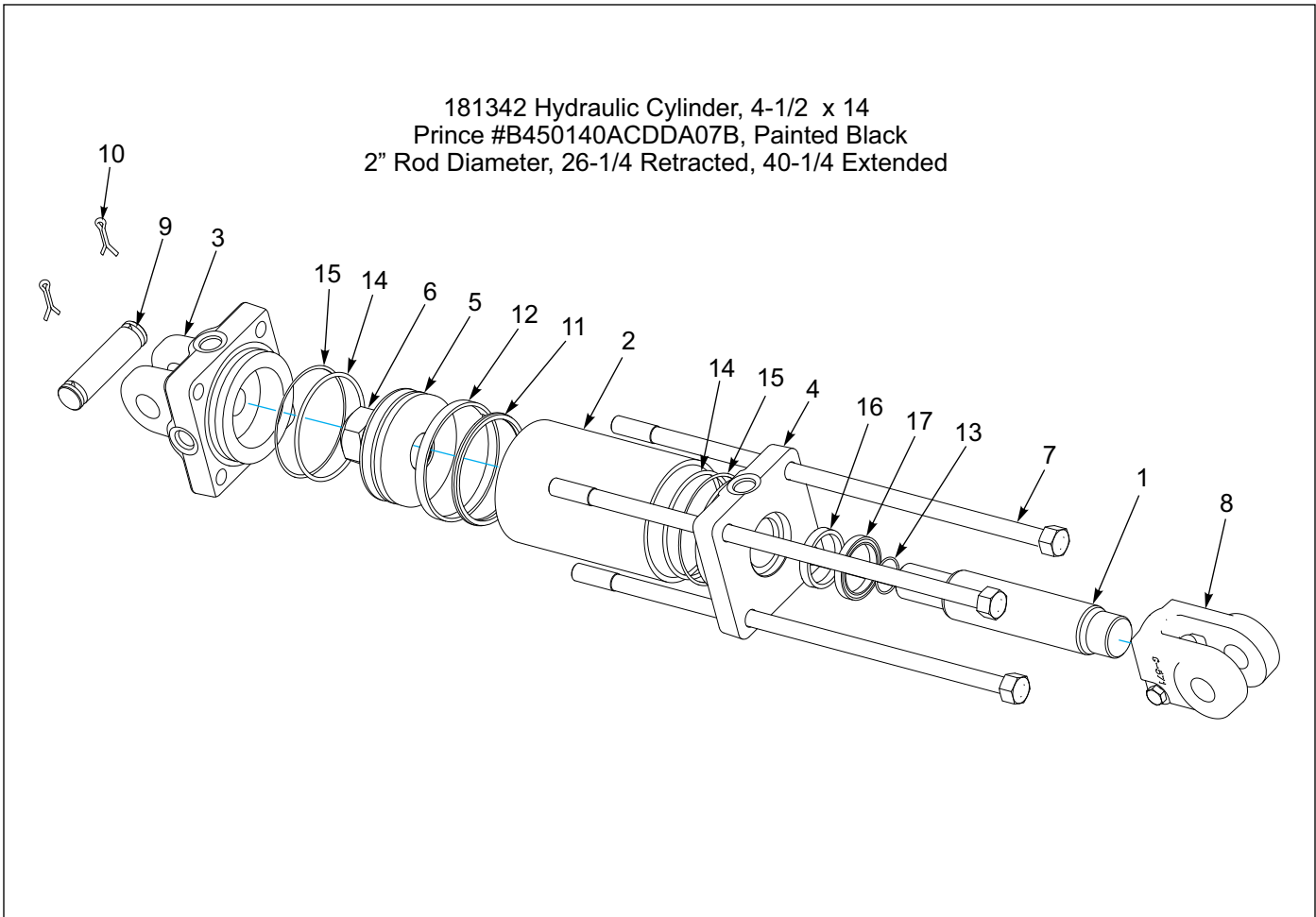


Figure 1-86: 181342 Hydraulic Cylinder, 4-1/2 x 14 - Prince

181342 Hydraulic Cylinder - 4-1/2 x 14 (Side Port) - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	181342	CYLINDER, HYDRAULIC 4-1/2 X 14	
1	NSS	PISTON ROD	1
2	NSS	TUBE	1
3	NSS	BUTT	1
4	163038	GLAND	1
5	NSS	PISTON	1
6	NSS	LOCKNUT	1
7	NSS	TIE ROD ASSEMBLY	1
8	100000362	CLEVIS ASSEMBLY	1
9	4J549	HINGE PIN (1.25 X 4.0)	2
10	110-4224	PIN,COTTER 3/16 X 2IN LG	4
11	NSS	CROWN SEAL	2
12	NSS	BEARING RING	1
13	NSS	O-RING	1
14	NSS	O-RING	2
15	NSS	BU-WASHER	2
16	NSS	U-CUP	1
17	NSS	WIPER	1
18	132077	SEAL KIT, PMCK-SAE-34500 (INCLUDES ITEMS 11-17)	

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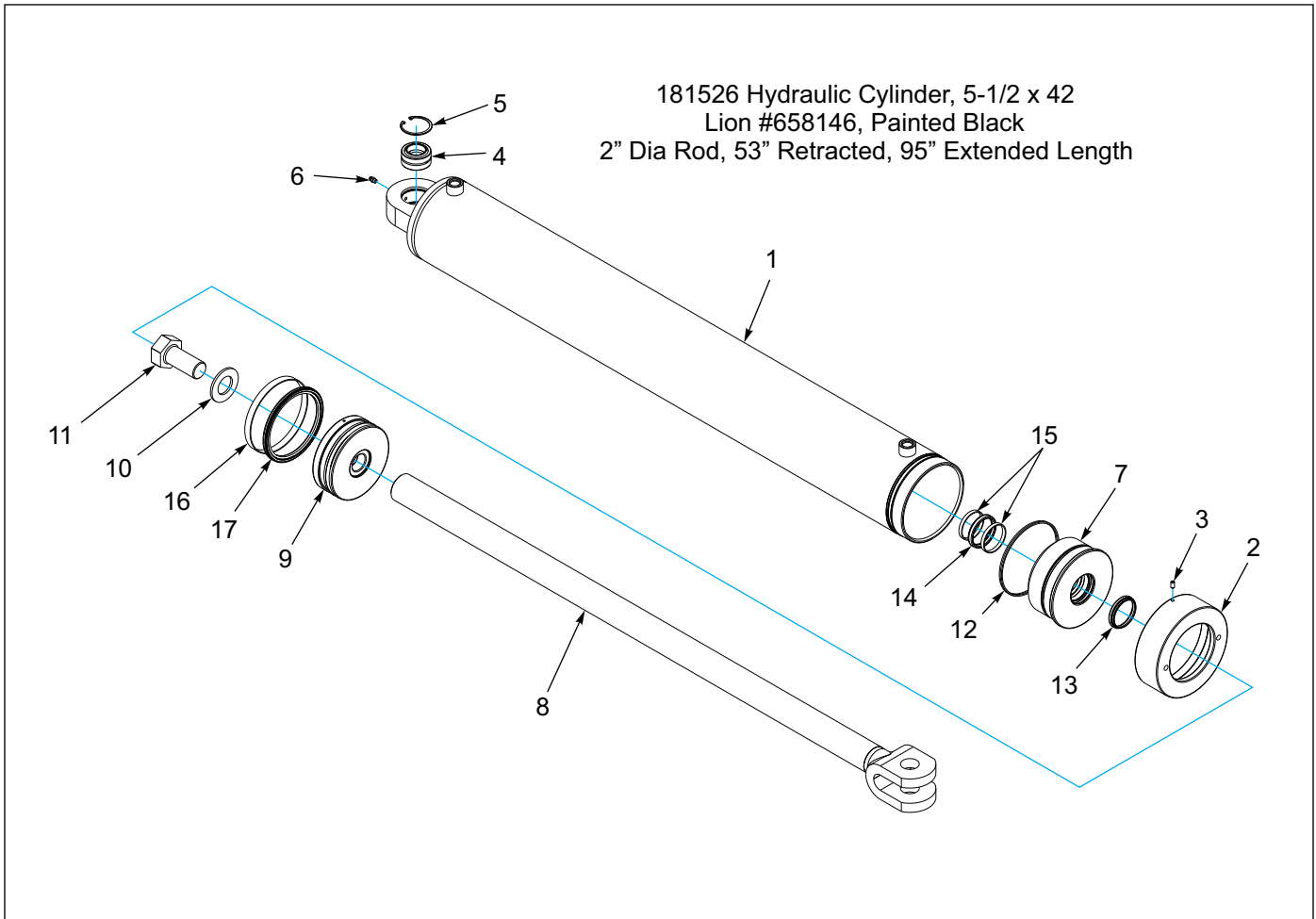


Figure 1-87: 181526 Hydraulic Cylinder, 5-1/2 x 42 - Lion

181526 Hydraulic Cylinder, 5-1/2 x 42 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	181526	HYD CYLINDER,5-1/2 X 42 (50'-52' MODELS)	
1	NSS	TUBE WELDT 5.50-42.00	1
2	NSS	HEAD NUT 5.50 CAP STYLE	1
3	110-0104	SET SCREW,1/4-20 x 1/2 FLAT PT	1
4	173404	SPHERICAL BUSHING,1-1/4	1
5	173403	RETAINING RING,N5000-200	1
6	1-298-010001-1	FIT,GREASE 1/4-28 TAPER	1
7	NSS	CYL HEAD 5.50-2.50-SF-TSS-WR	1
8	NSS	ROD WELDT 2.00-42.00	1
9	NSS	PISTON 5.5-1.25-TSS-WR-BOLT	1
10	NSS	WASHER 2.50-1.375-.165 HARDEN	1
11	NSS	SCREW 1.25-12UNFx2.50L GR8	1
12	NSS	SEAL DUAL 5.5 Z20 PU	1
13	NSS	SEAL WIPER 2.00 SNAP IN DA24	1
14	NSS	SEAL SURCON U-CUP RU9 2.00	1
15	NSS	WEAR RING 2.12-2.00-0.250	2
16	NSS	WEAR RING 5.50-5.25-0.500	1
17	NSS	SEAL ZURCON WYNSEAL 5.50	1
18	183661	SEAL KIT (INCLUDES ITEMS 12-17)	

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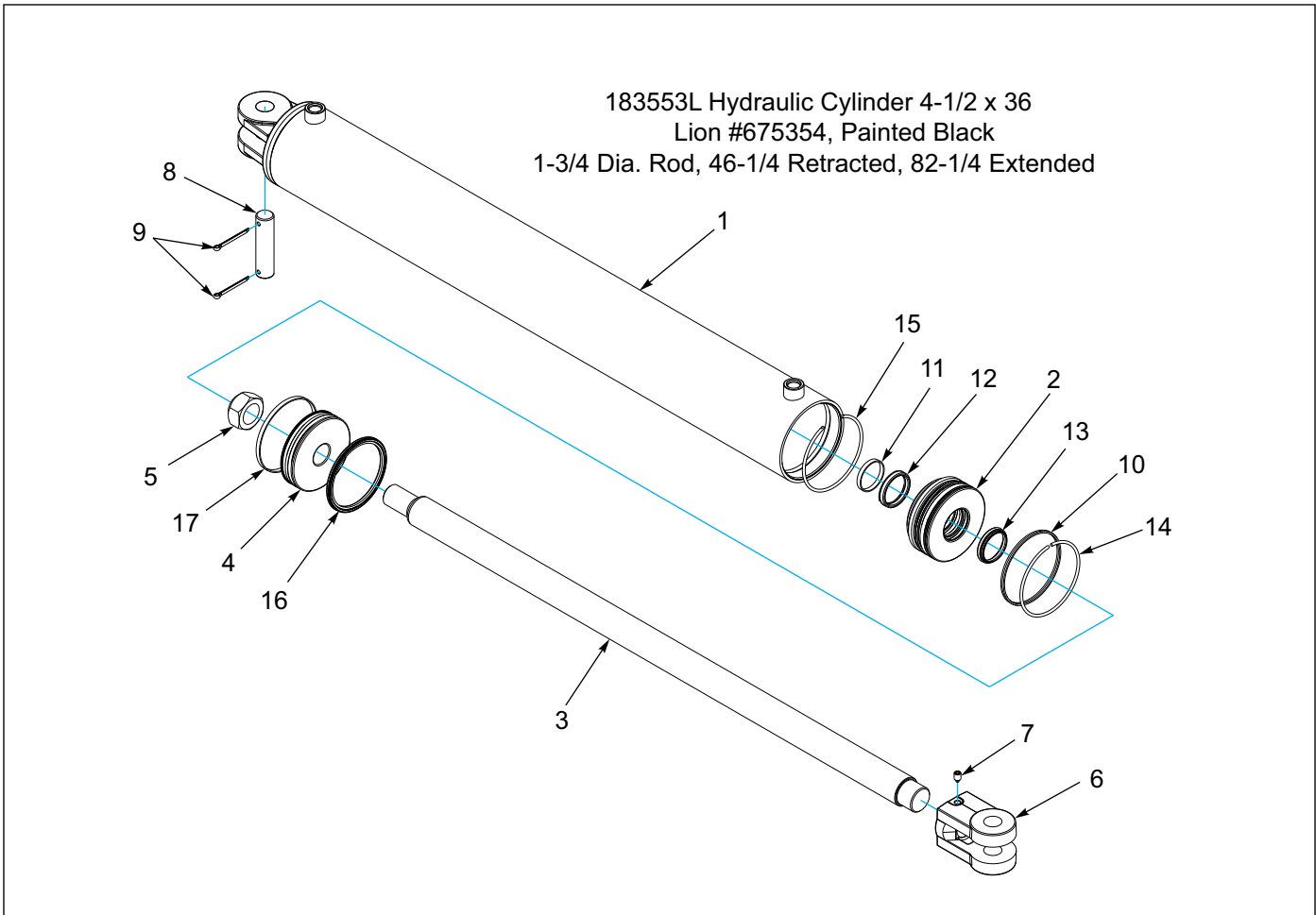


Figure 1-88: 183553 Hydraulic Cylinder, 4-1/2 x 36 - Lion

183553 Hydraulic Cylinder, 4-1/2 x 36 - Lion

ITEM	PART NUMBER	DESCRIPTION	QTY
	183553	HYD CYLINDER - 4-1/2" X 36"	
1	NSS	TUBE WELDT 4.5-36.00-RR-W	1
2	NSS	CYL HEAD 4.5-1.75-RR-TSS-WR	1
3	NSS	ROD CYL 1.75-36.00-1.25-1.50	1
4	NSS	PISTON 4.50-1.250-TSS-ISO-WR	1
5	1J951	NUT, LOCK 1-1/4-12, ZP	1
6	2P738	CLEVIS, 1" PIN X 1.5-12 X 2.75 (INCLUDES ITEM 7)	1
7	1P443	SET SCREW, 3/8-16 X 1/2 NYLON TIP	1
8	7J067	CLEVIS PIN	1
9	110-4224	PIN, COTTER 3/16 X 2IN LG	2
10	NSS	SEAL DUAL 4.50 Z20 PU	1
11	NSS	WEAR RING 1.87-1.75-0.250	1
12	NSS	SEAL ZURCON U-CUP RU9 1.75	1
13	NSS	SEAL WIPER 1.75 SNAP IN DA24	1
14	NSS	RETAINING RING EXTERNAL 4.50	1
15	NSS	RETAINING RING INTERNAL 4.50	1
16	NSS	SEAL ZURCON WYNSEAL 4.50"-IS	1
17	NSS	WEAR RING 4.50-4.38-0.250	1
18	185302	SEAL KIT FOR 183553 CYL (INCLUDES ITEMS 10-15)	1

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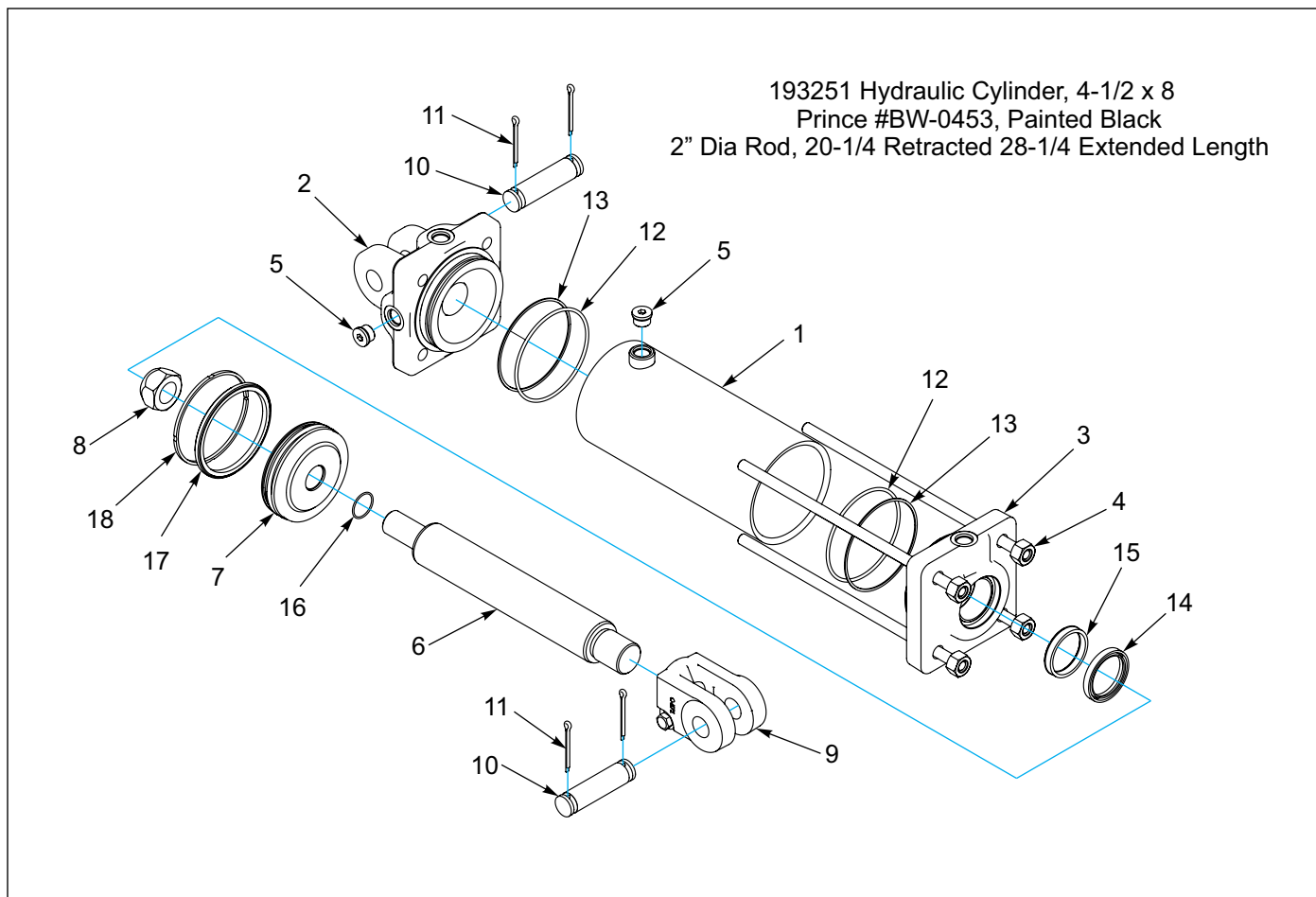


Figure 1-89: 193251 Hydraulic Cylinder, 4-1/2 x 8 - Prince

193251 Hydraulic Cylinder, 4-1/2 x 8 Re-Phase - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	193251	HYD CYL 4-1/2 X 8 RE-PHASE	
1	NSS	TUBE ASSY	1
2	142000004	BUTT	1
3	082000092	ROD CAP	1
4	NSS	TIE ROD ASSY	4
5	NSS	PORT PLUG	2
6	NSS	PISTON ROD	1
7	NSS	PISTON	1
8	220000211	LOCKNUT	1
9	100000326	CLEVIS ASSY	1
10	190400004	CYLINDER PIN 4IN	2
11	110-4224	PIN,COTTER 3/16 X 2IN LG	4
12	NSS	O-RING	2
13	NSS	BU-WASHER	2
14	NSS	WIPER	1
15	NSS	U-CUP	1
16	NSS	O-RING	1
17	NSS	CHAMF TEFLON SEAL	1
18	NSS	BEARING RING	1
19	113216	SEAL KIT,PMCK-AU-0650 (INCLUDES ITEMS 12-18)	

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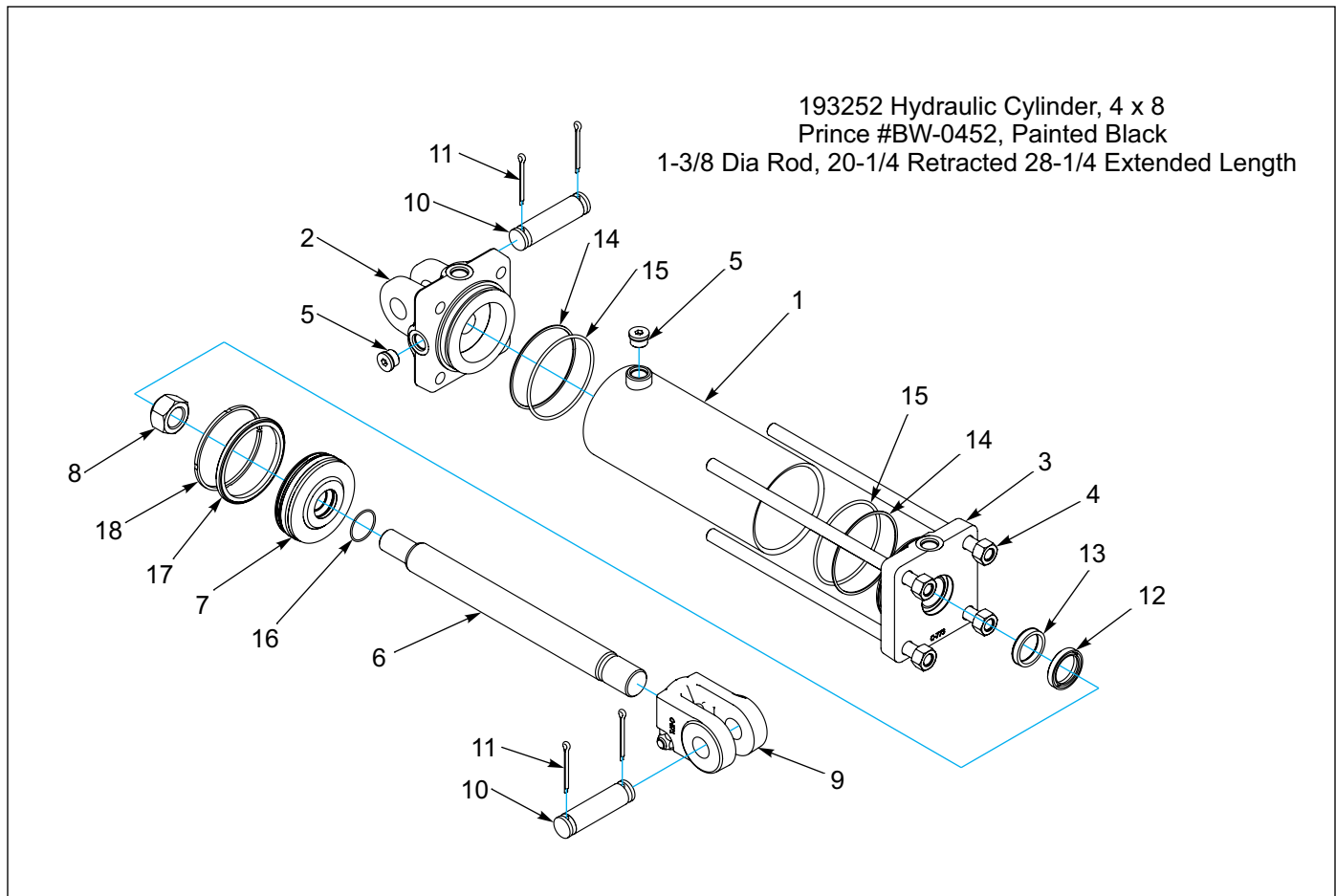


Figure 1-90: 193252 Hydraulic Cylinder, 4 x 8 - Prince

193252 Hydraulic Cylinder, 4 x 8 Re-Phase - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	193252	HYD CYL 4 X 8 RE-PHASE	
1	NSS	TUBE ASSY	1
2	147375	BUTT	1
3	081900374	GLAND ASSY	1
4	NSS	TIE ROD ASSY	4
5	NSS	PORT PLUG	2
6	NSS	PISTON ROD	1
7	NSS	PISTON	1
8	NSS	PISTON NUT	1
9	118241	CLEVIS ASSY	1
10	190400004	CYLINDER PIN 4IN	2
11	110-4224	PIN, COTTER 3/16 X 2IN LG	4
12	NSS	ROD WIPER	1
13	NSS	U-CUP	1
14	NSS	BU-WASHER	2
15	NSS	O-RING	2
16	NSS	O-RING	1
17	NSS	RECT TEFLON	1
18	NSS	BEARING RING	1
19	113215	SEAL KIT, PMCK-AU-0649 (INCLUDES ITEMS 12-18)	

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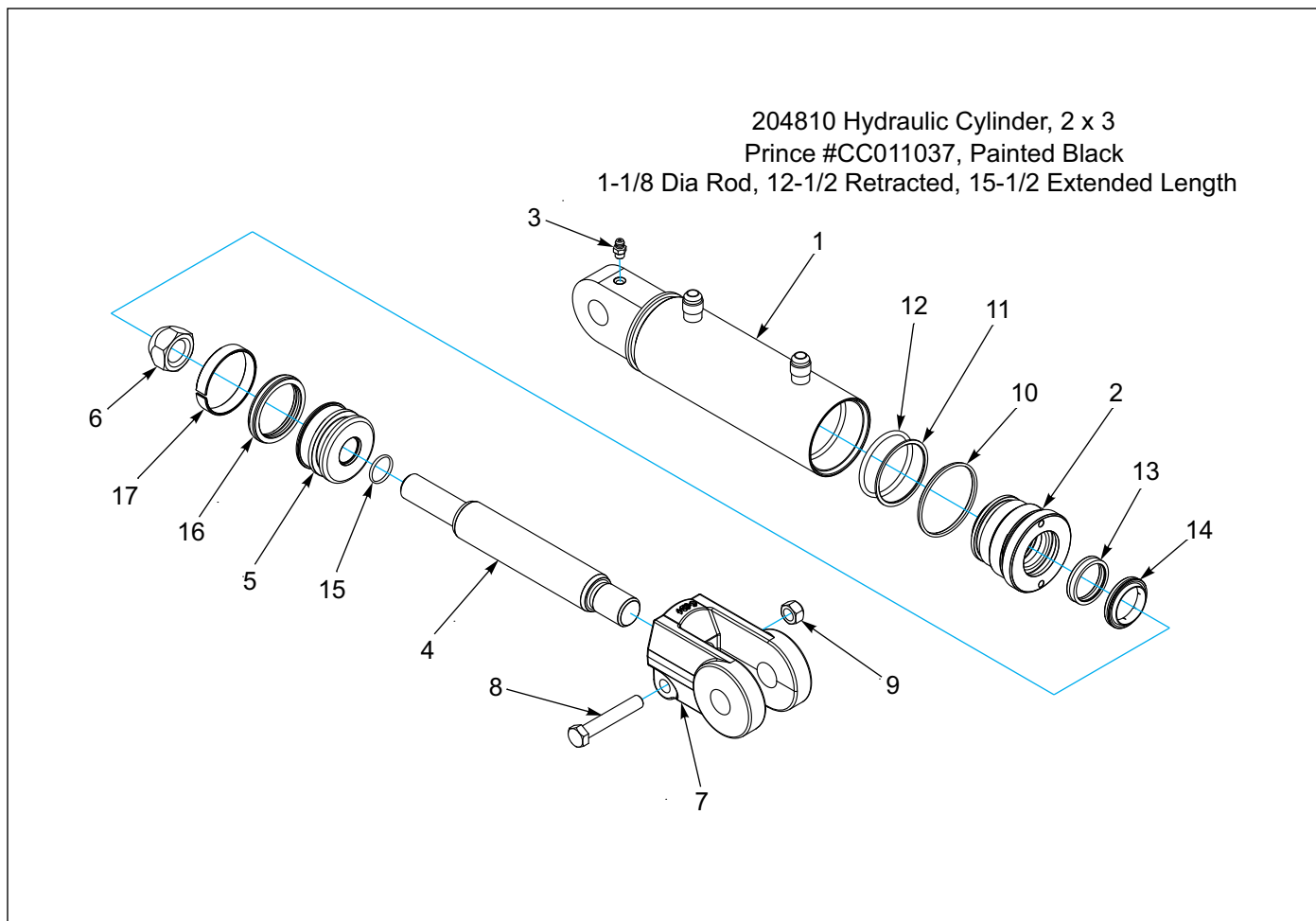


Figure 1-91: 204810 Hydraulic Cylinder, 2 x 3 - Prince

204810 Hydraulic Cylinder, 2 x 3 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	204810	HYD CYL, 2 X 3	
1	NSS	BUTT AND TUBE ASM	1
2	NSS	GLAND	1
3	1-298-010001-1	FIT,GREASE 1/4-28 TAPER	1
4	NSS	ROD	1
5	NSS	PISTON	1
6	NSS	LOCKNUT	1
7	NSS	CLEVIS	1
8	1-654-010051-10	SCREW,HX CP 3/8-16X2-1/4GR5	1
9	1-512-010005-05	NUT,HEX,SLFLKG GRB 3/8-16	1
10	NSS	O-RING	1
11	NSS	BU-WASHER	1
12	NSS	O-RING	1
13	NSS	U-CUP	1
14	NSS	ROD WIPER	1
15	NSS	O-RING	1
16	NSS	CROWN SEAL	1
17	NSS	PISTON BEARING SEAL	1
18	208425	SEAL KIT (INCLUDES ITEMS 10-17)	

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1-242-010171-3 Hydraulic Cylinder, 4 x 8
 Prince #SAE-34008, Painted Black
 1-3/4 Dia Rod, 20-1/4 Retracted, 28-1/4 Extended Length

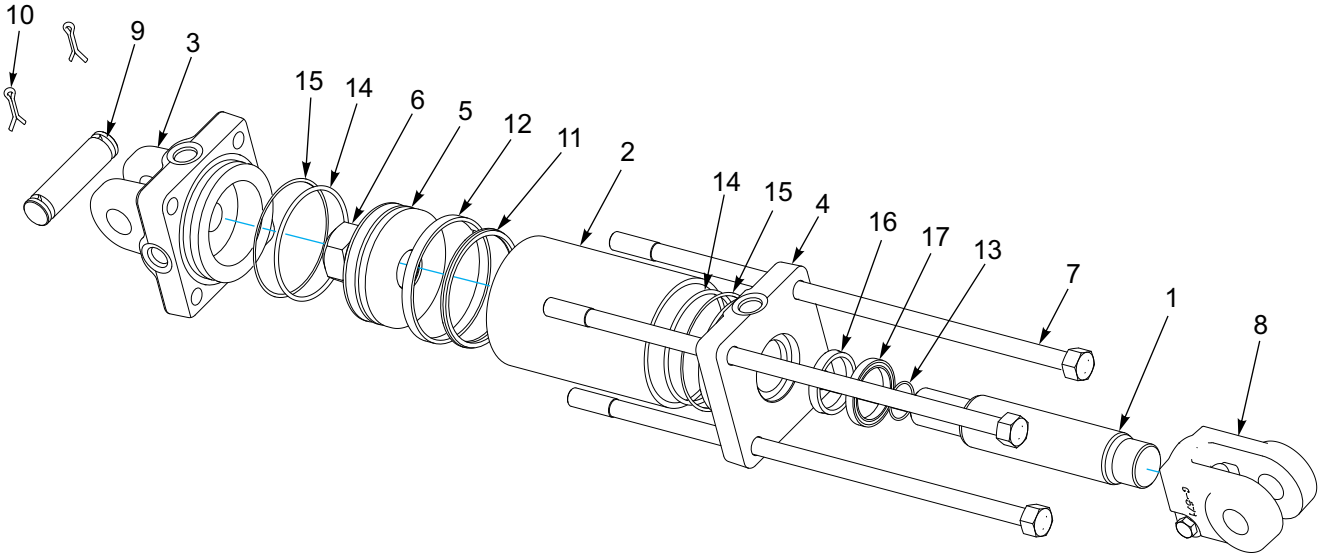


Figure 1-92: 1-242-010171-3 Hydraulic Cylinder, 4 x 8 - Prince

1-242-010171-3 Hydraulic Cylinder, 4 x 8 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	1-242-010171-3	CYLINDER, HYDRAULIC 4 X 8 3000 PSI	
1	011000318	PISTON ROD	1
2	NSS	TUBE	1
3	NSS	BUTT	1
4	162674	GLAND	1
5	NSS	PISTON	1
6	NSS	LOCKNUT	1
7	NSS	TIEROD ASSEMBLY	4
8	100000326	CLEVIS ASSEMBLY	1
9	190400035	CLEVIS PIN	2
10	110-4224	PIN,COTTER 3/16 X 2IN LG	4
11	NSS	CROWN SEAL	1
12	NSS	O-RING	1
13	NSS	O-RING	2
14	NSS	BU-WASHER	2
15	NSS	U-CUP	1
16	NSS	WIPER	1
17	NSS	BEARING RING	1
18	1-242-010178-3	PACKING KIT (INCLUDES ITEMS 11-17)	

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1-242-010172-3 Hydraulic Cylinder, 4 x 24
 Prince #BA-0288, Painted Black
 1-3/4 Dia Rod, 34-1/4 Retracted, 58-1/4 Extended Length

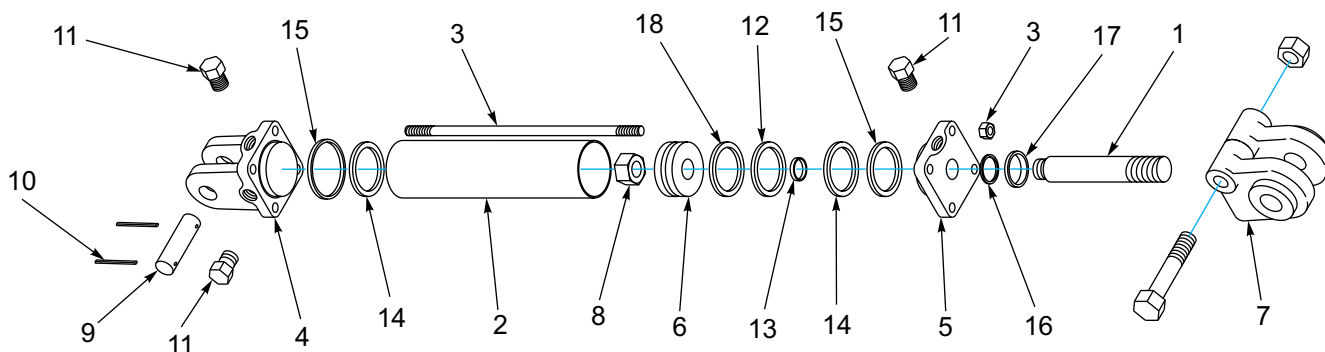


Figure 1-93: 1-242-010172-3 Hydraulic Cylinder, 4 x 24 - Prince

1-242-010172-3 Hydraulic Cylinder, 4 x 24 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	1-242-010172-3	CYL HYD 4 X 24 3000 PSI	
1	111863	PISTON ROD	1
2	NSS	TUBE	1
3	NSS	TIE ROD ASSY	4
4	NSS	BUTT	1
5	111872	GLAND ASSY	1
6	111868	PISTON	1
7	100000326	CLEVIS ASSY	1
8	220000212	LOCKNUT	1
9	111790	CLEVIS PIN	2
10	111789	ROLL PIN	4
11	1-007-010025	PLUG, 3/4-16 O-RING BOSS	3
12	NSS	CROWN SEAL	1
13	NSS	O-RING	1
14	NSS	O-RING	2
15	NSS	BU-WASHER	2
16	NSS	U-CUP	1
17	NSS	WIPER	1
18	111912	BEARING RING	1
19	1-242-010178-3	SEAL KIT (INCLUDES ITEMS 12 - 18)	

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1-242-010172-5 Hydraulic Cylinder, 5 x 24
 Prince #BA-0292, Painted Black
 2" Rod Diameter, 36-1/4 Retracted, 60-1/4 Extended

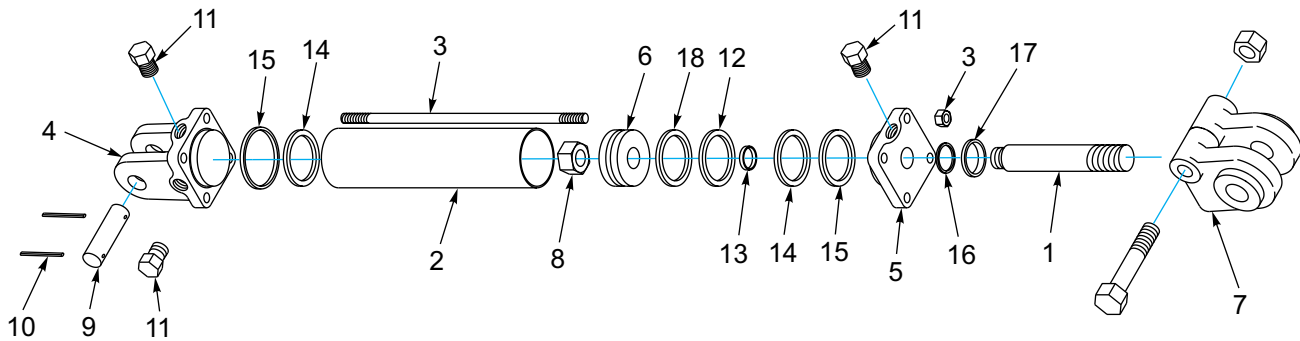


Figure 1-94: 1-242-010172-5 Hydraulic Cylinder, 5 x 24 - Prince

1-242-010172-5 Hydraulic Cylinder, 5 x 24 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	1-242-010172-5	CYL HYD 5 X 24 3000 PSI	
1	011100728	PISTON ROD	1
2	111864	TUBE	1
3	111879	TIE ROD ASSY	4
4	111878	BUTT	1
5	111873	GLAND ASSY	1
6	111869	PISTON	1
7	100000362	CLEVIS ASSY	1
8	111908	LOCKNUT	1
9	111880	CLEVIS PIN	2
10	111789	ROLL PIN	4
11	111907	PORT PLUG, 7/8-14 O-RING BOSS	3
12	NSS	CROWN SEAL	1
13	NSS	O-RING	1
14	NSS	O-RING	2
15	NSS	BU-WASHER	2
16	NSS	U-CUP	1
17	NSS	WIPER	1
18	111912	BEARING RING	1
19	125488	SEAL KIT (INCLUDES ITEMS 12 - 18)	

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1-242-010180-3 Hydraulic Cylinder, 4 x 20
 Prince #SAE-34020, Painted Black
 1-3/4 Dia Rod, 30-1/4 Retracted, 50-1/4 Extended Length

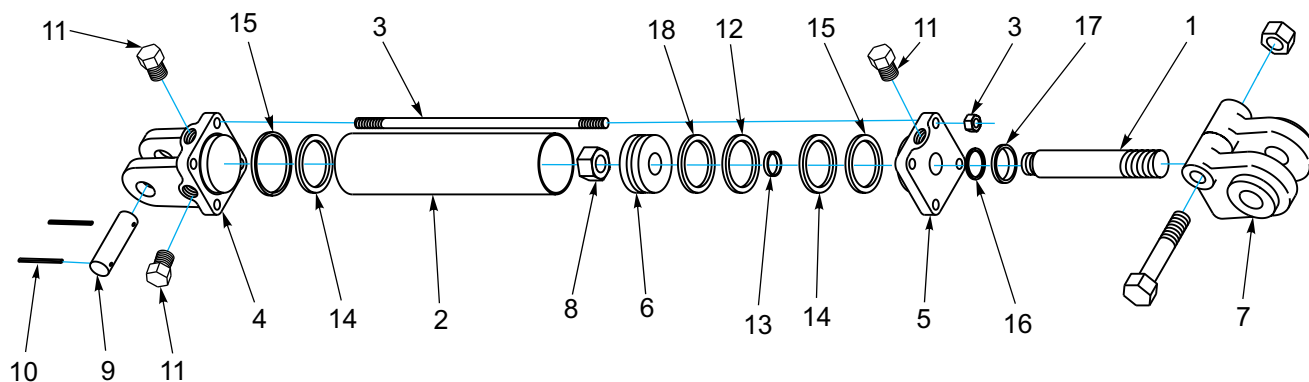


Figure 1-95: 1-242-010180-3 Hydraulic Cylinder, 4 x 20 - Prince

1-242-010180-3 Hydraulic Cylinder, 4 x 20 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	1-242-010180-3	CYLINDER, HYD 4X20STRK 3000PSI	
1	011000323	PISTON ROD 4X20 SAE34020	1
2	NSS	TUBE	1
3	NSS	TIE ROD ASSY	4
4	NSS	BUTT	1
5	NSS	GLAND ASSY	1
6	NSS	PISTON	1
7	100000326	CLEVIS ASSY	1
8	220000212	LOCKNUT	1
9	111790	PIN,CLEVIS #190400104 1500	2
10	111789	PIN,ROLL #190100057 1500	4
11	1-007-010025	PLUG, 3/4-16 O-RING BOSS	3
12	NSS	CROWN SEAL	1
13	NSS	O-RING	1
14	NSS	O-RING	2
15	NSS	BU-WASHER	2
16	NSS	U-CUP	1
17	NSS	WIPER	1
18	NSS	BEARING RING	1
19	1-242-010178-3	SEAL KIT (INCLUDES ITEMS 12-18)	

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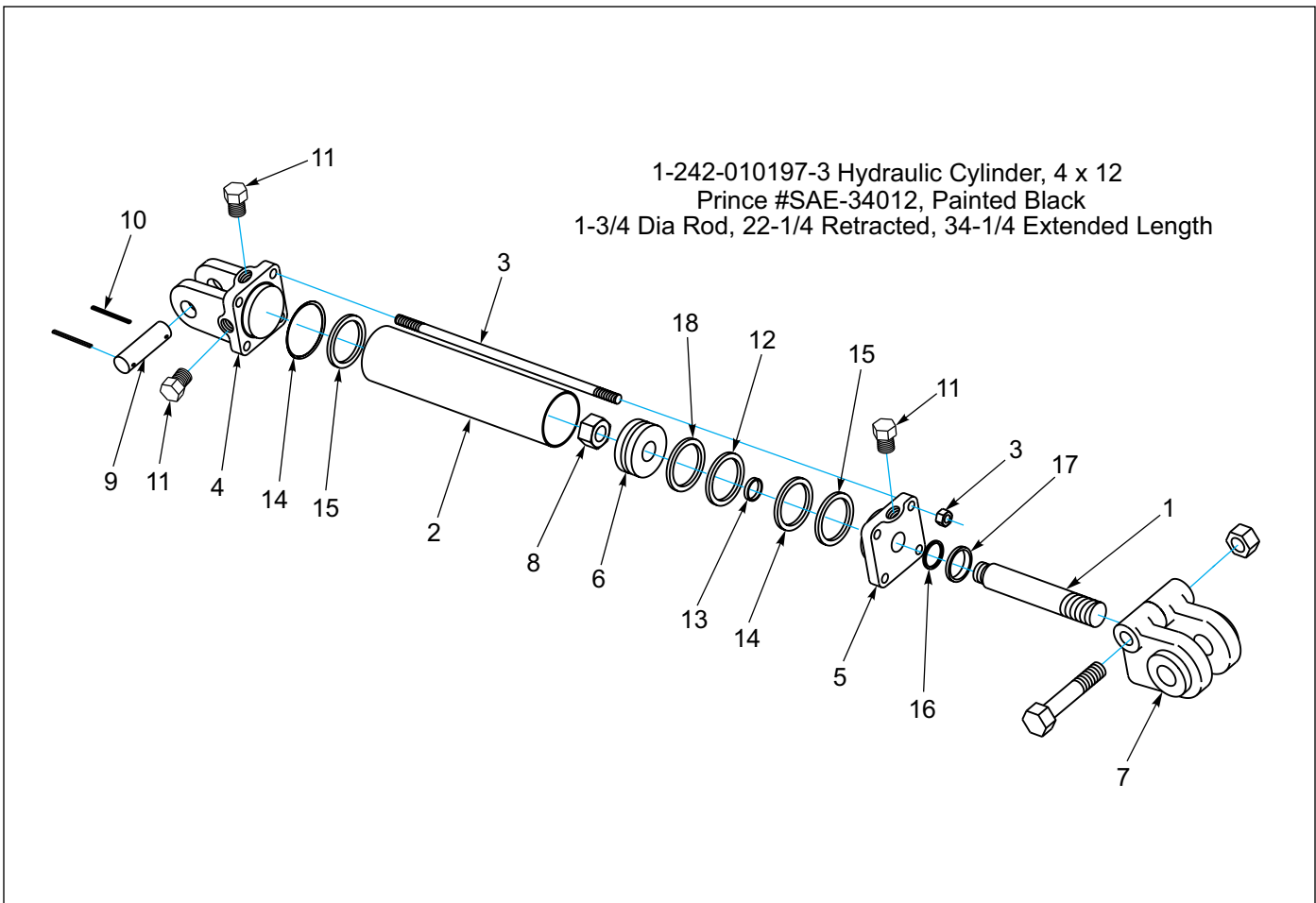


Figure 1-96: 1-242-010197-3 Hydraulic Cylinder, 4 x 12 - Prince

1-242-010197-3 Hydraulic Cylinder, 4 x 12 - Prince

ITEM	PART NUMBER	DESCRIPTION	QTY
	1-242-010197-3	CYLINDER, HYD 4X12 3000PSI	
1	NSS	PISTON ROD 4X12	1
2	NSS	TUBE	1
3	NSS	TIE ROD ASSY	4
4	NSS	BUTT	1
5	NSS	GLAND ASSY	1
6	NSS	PISTON	1
7	100000326	CLEVIS ASSY	1
8	220000212	LOCKNUT	1
9	111790	CLEVIS, PIN	2
10	111789	ROLL PIN	4
11	1-007-010025	PORT PLUG	1
12	NSS	CROWN SEAL	1
13	NSS	O-RING	1
14	NSS	O-RING	2
15	NSS	BU-WASHER	2
16	NSS	U-CUP	1
17	NSS	WIPER	1
18	NSS	BEARING RING	1
19	1-242-010178-3	SEAL KIT (INCLUDES ITEMS 12-18)	

Document Control Revision Log:

Date	Revision	Improvement(s) Description and Comments	Team Member
03/2017	0317	Updated drawing and added new cylinders	WML
12/2017	1217	Lion Cylinders were changed to an improved sealing package	WML



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