

6146XX-XXX OPEN STYLE HOSE REELS LOW, MEDIUM & HIGH PRESSURE (FOR AIR, WATER & PETROLEUM PRODUCTS)



**READ THIS MANUAL CAREFULLY BEFORE INSTALLING,
OPERATING OR SERVICING THIS EQUIPMENT.**

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

GENERAL DESCRIPTION

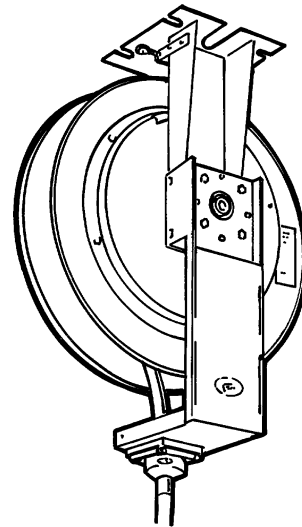
The ARO 6146XX-XXX Series Hose Reels are designed for use with air, water, petroleum products and other service fluids. They are primarily used in vehicle service and maintenance applications. The Reels have a maximum hose capacity of 60 feet of 1/4", 3/8" or 1/2" inside diameter hose. They may be mounted on the floor, ceiling or sidewall. They are furnished with a stop dog for automatic latching. The arm may be indexed in increments of 45° to facilitate positioning (see page 8 for dimensioning).

For mounting channel and reel enclosures, refer to Operator's Manual 614400-X.

OPERATING AND SAFETY PRECAUTIONS

DO NOT EXCEED MAXIMUM WORKING PRESSURE.

- **HEED ALL WARNINGS.**
- Use ARO replacement parts to assure compatible pressure rating.
- **WARNING: SYSTEM PRESSURE LIMITS.** System pressure should never exceed the maximum working pressure of any component or accessory used in the system.
- **WARNING: INJECTION HAZARD. NEVER ALLOW PRESSURIZED MATERIAL, FLUIDS OR AIR TO BE DIRECTED TOWARDS THE SKIN.** Although some Aro reel models are described as "low" pressure (less than 300 p.s.i. / 20.7 bar), BE CAREFUL. Serious injection injuries to the human flesh can occur at any pressure.
- **WARNING SPRING UNDER TENSION.** Be extremely careful when working on a reel when the spring is under tension, be certain to take all precautions necessary to insure safety.




MODEL DESCRIPTION CHART

6146 X X - X X X			
STYLE (PRESSURE)			
1 - Low Pressure (300 p.s.i. max.)			
2 - Medium Pressure (3000 p.s.i. max.)			
3 - High Pressure (5000 p.s.i. max.)			
HOSE I.D.			
0 - None	3 - 3/8"		
2 - 1/4"	4 - 1/2"		
HOSE LENGTH			
25 - 25 Feet	50 - 50 Feet	60 - 60 Feet	
CONTROL HANDLE (see page 3)			
A - None			
B - 635003, 210, 2608 (Low pressure)			
C - 635131 (Low pressure)			
D - 635390-11 (Medium pressure)			
E - 635390-2 (Medium pressure)			
F - 635390-2, 635101 (Medium pressure)			
G - 635391-1 (Medium pressure)			
H - 636111, Swivel (High pressure)			
J - 636101 636088, 636030 (High pressure)			

MODEL AND ACCESSORY DESCRIPTION CHARTS

61461X-XXX LOW PRESSURE SERIES - Air, Water

REEL MODEL	MAX PSI (BAR) 	HOSE	COUPLING	HOSE STOP	CONTROL HANDLE
614610-00A	300 (20.7)	NONE	77763-1	NONE	NONE
614612-XXA	300 (20.7)	622211-25,-50	77981-1	61661-1	NONE
614612-XXB	250 (17.3)	622211-25,-50	77981-1	61661-1	210, 2608, 635003
614613-XXA	300 (20.7)	623411-25,-50,-60	77763-1	5671	NONE
614613-XXB	250 (17.3)	623411-25,-50,-60	77763-1	5671	210, 2608, 635003
614613-XXC	250 (17.3)	623411-25,-50,-60	77763-1	5671	635131
614614-XXA	300 (20.7)	623508-25,-50,-60	77763-1	5668	NONE

61462X-XXX MEDIUM PRESSURE SERIES - Motor Oil, Gear Oil, ATF

REEL MODEL	MAX PSI (BAR)	HOSE	COUPLING	HOSE STOP	CONTROL HANDLE
614620-00A	3000 (207)	NONE	77763-1	NONE	NONE
614624-XXA	3000 (207)	623508-25,-50,-60	77763-1	5668	NONE
614624-XXD	1000 (69)	623508-25,-50,-60	77763-1	5668	635390-11
614624-XXE	1000 (69)	623508-25,-50,-60	77763-1	5668	635390-2
614624-XXF	1000 (69)	623508-25,-50,-60	77763-1	5668	635101, 635390-2
614624-XXG	1000 (69)	623508-25,-50,-60	77763-1	5668	635391-1

61463X-XXX HIGH PRESSURE SERIES - Chassis Grease

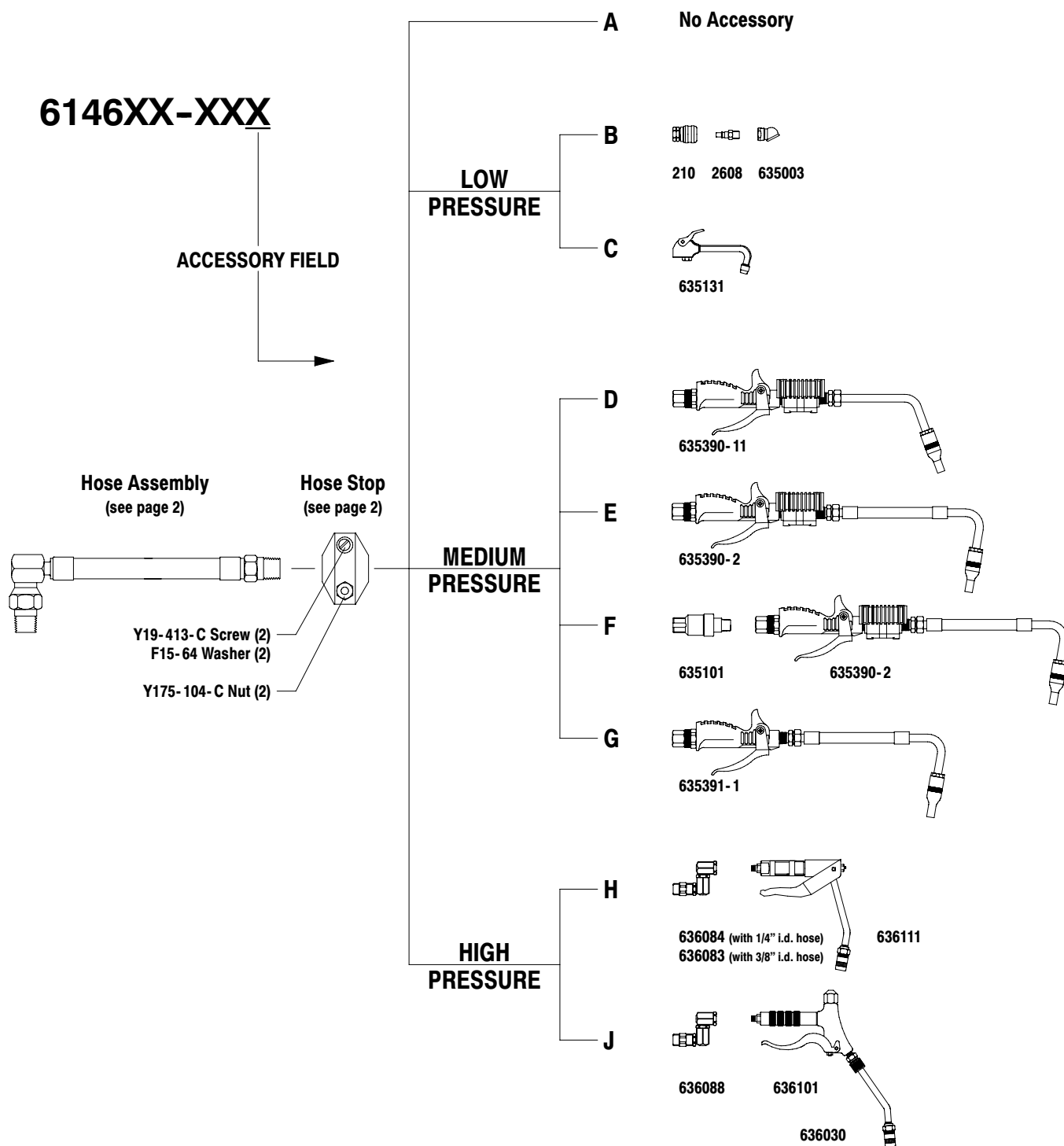
REEL MODEL	MAX PSI (BAR)	HOSE	COUPLING	HOSE STOP	CONTROL HANDLE
614630-00A	5000 (345)	NONE	77763-1	NONE	NONE
614632-XXA	5000 (345)	624212-25,-50	77981-1	61661-1	NONE
614632-XXH	5000 (345)	624212-25,-50	77981-1	61661-1	636084, 636111
614633-XXA	4000 (276)	624405-25,-50	77763-1	5671	NONE
614633-XXH	4000 (276)	624405-25,-50	77763-1	5671	636083, 636111
614633-XXJ	4000 (276)	624405-25,-50	77763-1	5671	636030, 636088, 636101

6146XX-XXX SERIES HOSE INFORMATION

HOSE PART #	HOSE I.D.	BRAID TYPE	THREAD SIZE	MODELS USED ON
622211-25,-50	1/4"	2 - fabric	1/4 - 18 n.p.t.f. - 1 (m) 90° x 1/4 - 18 n.p.t.f. - 1 (m)	6146X2-25,-50
623411-25,-50,-60	3/8"	1 - wire	1/2 - 14 n.p.t.f. - 1 (m) 90° x 1/4 - 18 n.p.t.f. - 1 (m)	6146X3-25,-50,-60
623508-25,-50,-60	1/2"	1 - wire	1/2 - 14 n.p.t.f. - 1 (m) 90° x 1/2 - 14 n.p.t.f. - 1 (m)	6146X4-25,-50,-60
624212-25,-50	1/4"	2 - wire	1/4 - 18 n.p.t.f. - 1 (m) 90° x 1/4 - 18 n.p.t.f. - 1 (m)	6146X2-25,-50
624405-25,-50	3/8"	2 - wire	1/2 - 14 n.p.t.f. - 1 (m) 90° x 3/8 - 18 n.p.t.f. - 1 (m)	6146X3-25,-50
OPTIONAL HOSE				
624506-2-F	1/2"	2 - wire	1/2 - 14 n.p.t.f. - 1 (m) 90° x 1/2 - 14 n.p.t.f. - 1 (m)	614630-X, 614632-X

 Reel Maximum Working Pressure is limited by hoses and / or accessories used.
DO NOT exceed the MAXIMUM WORKING PRESSURE of any hoses and / or accessories in the system.

ACCESSORY MENU



OPERATING INSTRUCTIONS

- When pulling hose from reel, pull on hose itself, not on control handle or swivel.
- When hose is withdrawn from reel as far as possible, do not continue to pull or jerk in order to gain an extra inch.
- To catch hose in extended position, pull out to desired length and then let retract slowly until it catches.
- To retract hose back on to the reel, let it go back rapidly until only a few feet remain out, then slow it down. **Do Not** permit hose to back onto the reel (or reel cabinet when used).

COMMON PARTS LIST

REF	DESCRIPTION (Size)	(QTY)	PART NO.	REF	DESCRIPTION (Size)	(QTY)	PART NO.
1	Screw (1/4" - 14 x 1")	(4)	Y334-108-C	19	Stop Dog	(1)	73337
2	Roller, Nylon	(4)	78159-1	20	Receiver Assembly	(1)	61980-1
3	Roller Pin	(2)	77711-1	21	Shaft	(1)	77195-1
4	Roller Plate	(1)	77720-1	22	Lock Washer (1/2")	(1)	Y14-816-C
5	Nut (1/4" - 20)	(8)	Y12-4-C	23	Nut (1/2" - 20)	(1)	Y11-108-C
6	Lock Washer (1/4")	(6)	Y117-416	24	Retaining Ring (.281" dia.)	(1)	Y145-8
7	Cage Assembly	(1)	61973-1	25	Washer	(1)	29538
8	Arm Assembly	(1)	61979-1	26	Spring	(1)	79126-1
9	Spacer	(2)	71800	27	Link	(1)	70709
10	Lock Washer (1/4")	(3)	Y14-416-C	28	E-Ring (1.375)	(1)	Y180-18
11	Screw (1/4" - 20 x 7/8")	(2)	Y61-410-C	29	Washer	(1)	91089
12	Nut (3/8" - 16)	(1)	Y12-106-C	30	Link Nut	(1)	77727-1
13	Screw	(1)	4543	31	Nut (1/4" - 20)	(1)	Y12-104-C
14	Hub Assembly	(1)	60762	32	Screw (1/4" - 20 x 1-1/2")	(1)	Y197-158-C
15	Bearing Stud	(1)	78171-1	(The following parts retain the hose)			
16	Bracket Assembly	(1)	71829-1	33	"U" Bolt	(1)	71796
17	Screw (5/16" - 18 x 1/2")	(8)	Y6-51-C	34	Spacer	(2)	74003-1
18	Base Assembly	(1)	61946-1	35	Nut (1/4")	(2)	Y107-4-Z

REEL DISASSEMBLY AND ASSEMBLY

Note: Relieve All Pressure From System before service.

1. Remove hose stop and let reel unwind slowly and carefully to relieve all spring tension.
2. Remove nuts, washers, and "U" bolt, to allow unthreading of hose from "B" hose coupling.
3. Remove "A" swivel from swivel body.
4. Remove (5) nuts and remove (7) spring cage assembly from receiver.

NOTE: A replacement spring is available only in a cage.

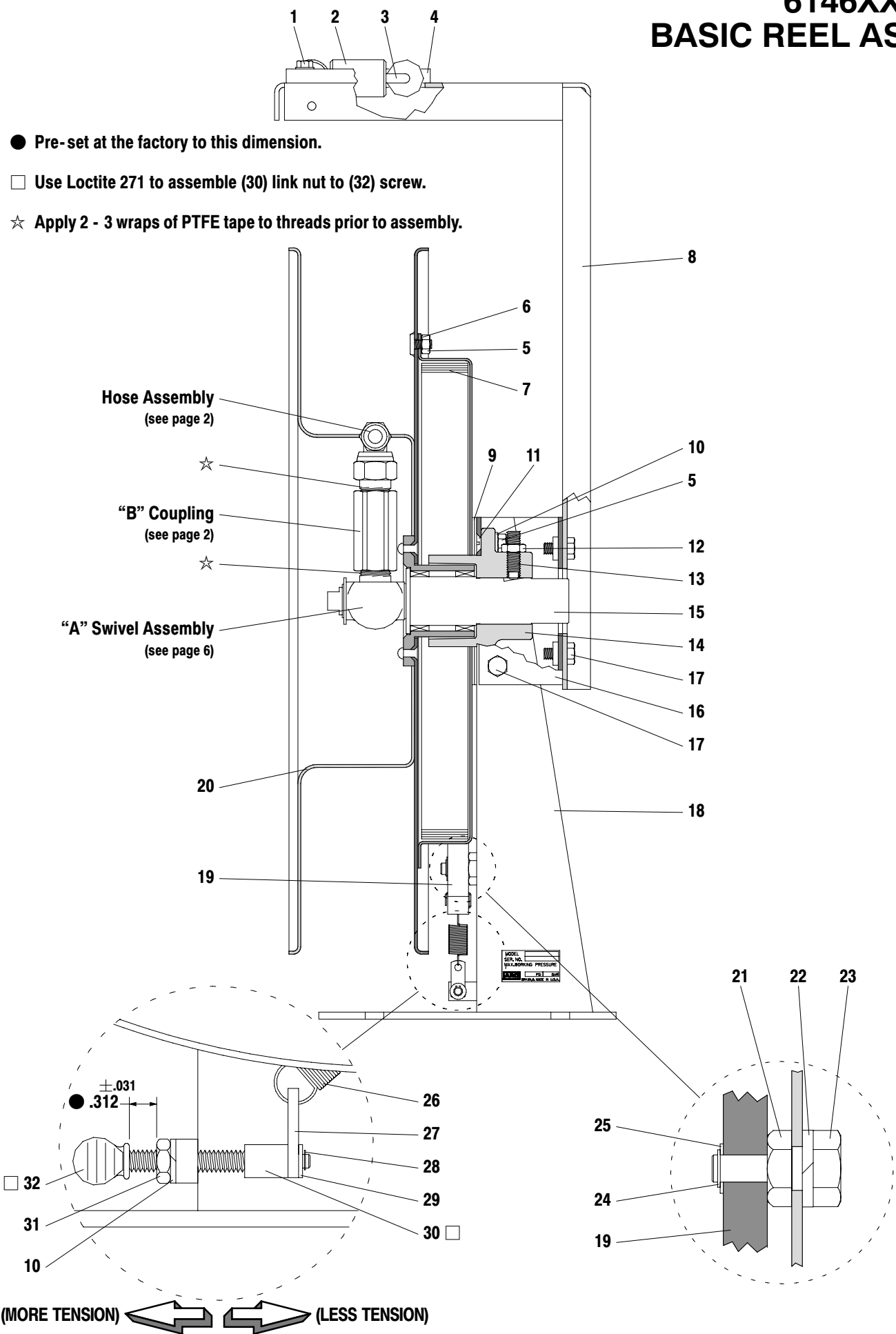
NOTE: See page 7 for disassembly of Swivel Section.

REEL ASSEMBLY

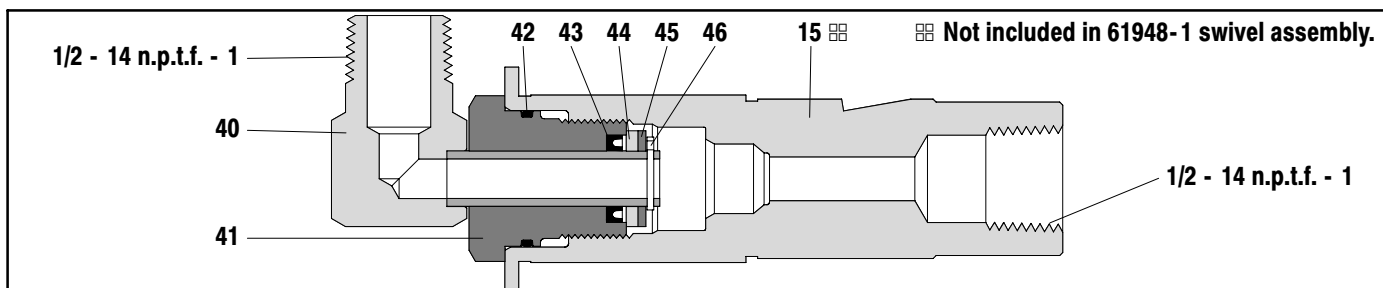
1. Reassemble in reverse order.
2. Align (7) spring and cage assembly with (20) hose receiver with outside loop over pin and other end through slot in hub as shown on decal on reel stand.

6146XX-X BASIC REEL ASM.

- Pre-set at the factory to this dimension.
- Use Loctite 271 to assemble (30) link nut to (32) screw.
- ☆ Apply 2 - 3 wraps of PTFE tape to threads prior to assembly.

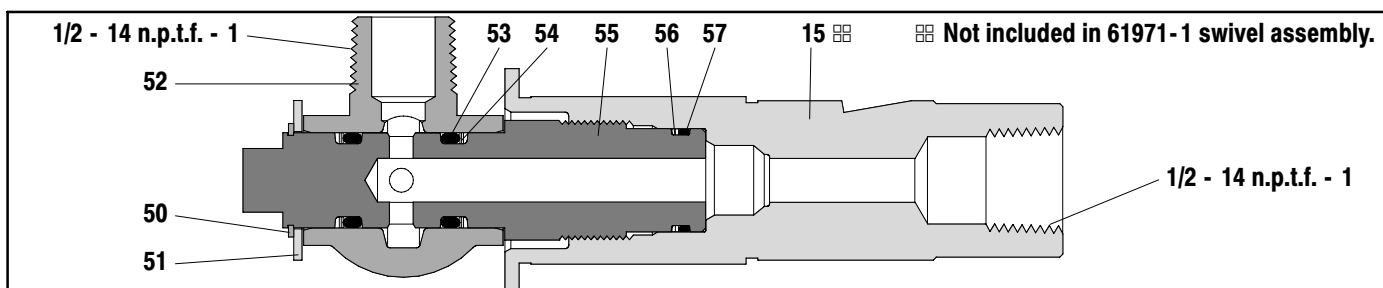


61461X-XXX 61948-1 LOW PRESSURE SWIVEL ASM. (300 PSI MAX. W.P.)



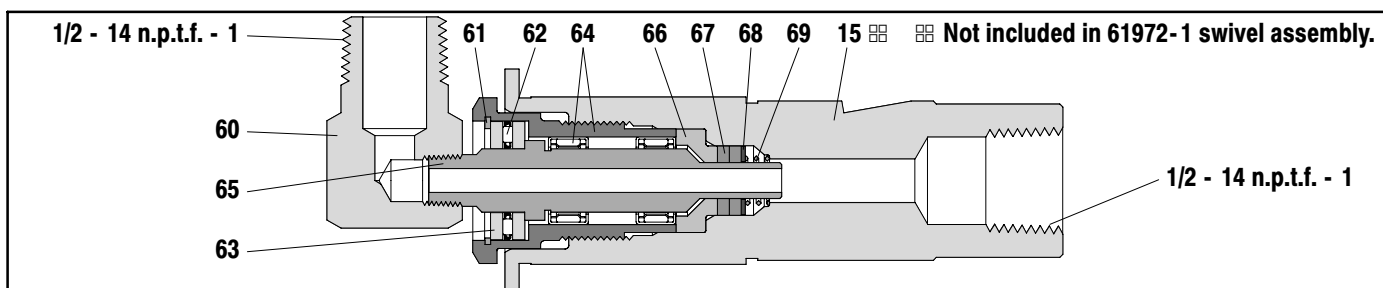
REF	DESCRIPTION (Size)	(QTY)	PART NO.	REF	DESCRIPTION (Size)	(QTY)	PART NO.
40	Stem Assembly	(1)	61976-1	44	Washer (Nylon)	(1)	71759
41	Swivel Nut	(1)	79127-1	45	Washer (Steel)	(1)	71760
42	"O" Ring (Buna) (1/16" x 1-1/16" o.d.)	(1)	Y325-21	46	Pin	(1)	Y15-22-S
43	Packing (Buna)	(1)	71787				

61462X-XXX 61971-1 MEDIUM PRESSURE SWIVEL ASM. (3000 PSI MAX. W.P.)



REF	DESCRIPTION (Size)	(QTY)	PART NO.	REF	DESCRIPTION (Size)	(QTY)	PART NO.
50	Retaining Ring (.750)	(1)	Y145-23	54	Spiral Ring	(2)	72469
51	Washer	(1)	74004-1	55	Shaft	(1)	79123-1
52	Swivel Body	(1)	77728-1	56	Spiral Ring	(1)	79124-1
53	"O" Ring (Buna) (3/32" x 3/4" o.d.)	(2)	Y325-113	57	"O" Ring (Buna) (1/16" x 13/16" o.d.)	(1)	Y325-17

61463X-XXX 61972-1 HIGH PRESSURE SWIVEL ASM. (5000 PSI MAX. W.P.)



REF	DESCRIPTION (Size)	(QTY)	PART NO.	REF	DESCRIPTION (Size)	(QTY)	PART NO.
60	Swivel Body	(1)	79122-1	65	Shaft	(1)	79065-1
61	Snap Ring (.938)	(1)	Y147-93	66	Spacer	(1)	79066-1
62	Bearing	(1)	42363	67	Packing	(2)	79106-1
63	Race	(2)	42384-2	68	Washer	(1)	79105-1
64	Shaft / Bearing	(1)	61975-1	69	Spring	(1)	F51-62

SERVICE INSTRUCTIONS

NOTE: Refer to parts list on pages 4 and 5 for parts shown “()”.

ADJUSTING TENSION ON HOSE

To increase tension:

1. Pull four or five wraps of hose out of reel.
2. Engage stop dog in position.
3. Put wraps back on reel with reel in stationary position until desired tension is obtained.

To relieve tension:

1. Engage stop dog in position.
2. Remove wraps of hose with reel in stationary position until desired tension is obtained.
3. Adjust hose stop to desired length.

HOSE REPLACEMENT

- See pages 4 and 5.

CAUTION: RELIEVE ALL PRESSURE FROM SYSTEM

1. Pull hose out as far as possible and lock into position with stop dog.
2. Remove (33) “U” bolt, (34) spacers and (35) nuts.
3. Unthread hose from “B” coupling.

4. To install new hose, reverse the above procedure leaving a little slack between the swivel and the hose clamp.

NOTE: Use PTFE tape on the threads upon assembly.

CAUTION: Tighten hose clamp securely so the pull is on the hose clamp and not on the swivel nut. **DO NOT** tighten so tightly that the hose I.D. is collapsed.

ADJUSTING STOP DOG TENSION

- The stop dog is the mechanism which allows the hose to be unwound from the reel to any desired length and locked in position while it is used.
- If stop dog will not catch, more tension is required on it.

To increase tension: Refer to parts view page 5.

1. The tension is set at the factory (see lower left figure on page 5) to $.312 \pm .031$ gap between (31) nut and flat on (32) screw.
2. Back the screw out (turn counter-clockwise) to increase the stop dog torsion spring tension.
3. If stop dog catches too often and will not allow hose to rewind freely, the tension on it should be decreased.

To decrease tension:

- Turn in the screw (turn clockwise) until hose will rewind freely.

SWIVEL ASSEMBLY SERVICE

Service Note: Inspect parts which have been removed for wear or damage and replace as needed.

61948-1 Low pressure swivel disassembly.

1. Unthread the (41) swivel to remove the swivel assembly.
 2. Remove (40) stem from the (41) swivel nut by removing the (46) pin.
 3. Remove the (45) steel washer, (44) nylon washer and (43) packing.
 4. Remove (42) “O” ring from (41) swivel nut.
 5. Reassemble in reverse order, lubricating parts as shown.
- NOTE: (43) Packing lips are oriented toward the material pressure.

61971-1 Medium pressure swivel disassembly.

1. Remove (50) retaining ring, (51) washer and (55) swivel body from (55) shaft.
2. Remove the (55) shaft from (15) bearing stud.
3. Remove (57) “O” ring and (56) spiral ring from (55) shaft.

4. Remove two (54) rings and two (53) “O” rings from the (55) shaft.
5. Reassemble in reverse order, lubricating parts as shown.

61972-1 High pressure swivel Disassembly.

1. Remove (64) shaft / bearing assembly from the bearing stud. At this point, parts (66) through (69) may stay inside the stud and should be easily removed by tapping it sharply on the work bench.
2. Use the flats on the (65) shaft and remove the (60) swivel body.
3. Remove (61) snap ring, two (63) races and (62) bearing from (65) shaft.
4. Reassemble in reverse order, lubricating parts as shown.

NOTES:

1. Presoak the two (67) packings in 30 wt. oil before assembly.
2. Be sure the (69) spring is in proper alignment, when reinstalling.

OPEN STYLE REEL DIMENSIONAL DATA

These models are typically shipped in position "A". To change arm angle, remove (17) screws, move to position "B" or "C" and replace screws.

- Models with exposed arm may be mounted on the floor, ceiling or side wall.

- The discharge support arm angle must be adjusted accordingly to avoid sharp bending of the hose.

