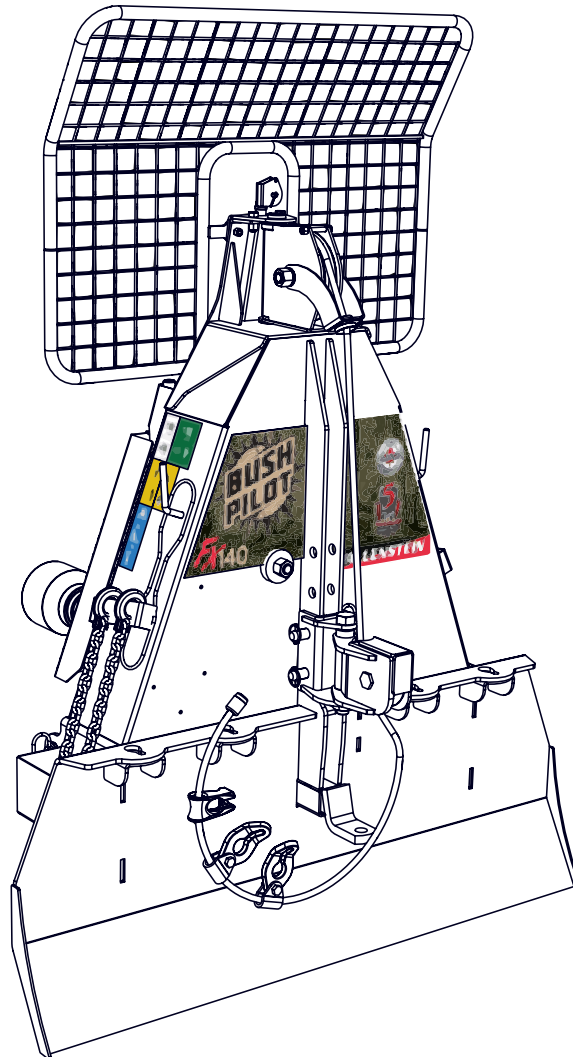




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FX140 FX140EU & FX140R Skidding Winch Parts Manual

S/N 51401 to 514093



Refer to the operators
manual for safe
operation and
maintenance

Foreword

EMB Mfg. has prepared this parts manual to assist customers in ordering quality OEM replacement parts.

Proper and regular service and replacing old, worn or broken parts with the correct Wallenstein parts are essential to prolonging the life of your Wallenstein product. Please refer to this manual before ordering any replacement parts.

All information contained in this parts manual is based on the latest product specification available at the time of printing this manual. If your product differs from the specifications contained within this manual contact EMB Mfg. for information.

EMB reserves the right to alter specifications on their products at any time.

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For parts and information please contact your dealer. If your dealer is no longer available please go to our website: <http://www.embmfg.com> and click on "FIND A DEALER NEAR YOU" for information on a local dealer.

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Maintenance should be performed by
trained personnel only.



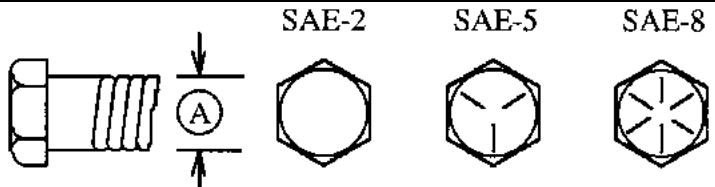
Refer to the operators
manual for safe
operation and
maintenance

Bolt Torque

CHECKING BOLT TORQUE

The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

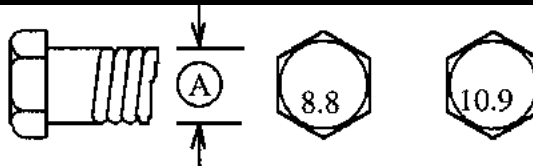
ENGLISH TORQUE SPECIFICATIONS						
Bolt Diameter "A"	Bolt Torque*					
	SAE 2 (N.m) (lb-ft)		SAE 5 (N.m) (lb-ft)		SAE 8 (N.m) (lb-ft)	
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970



Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

* Torque value for bolts and capscrews are identified by their head markings.

METRIC TORQUE SPECIFICATIONS				
Bolt Diameter "A"	Bolt Torque*			
	8.8 (N.m) (lb-ft)		10.9 (N.m) (lb-ft)	
M3	0.5	0.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



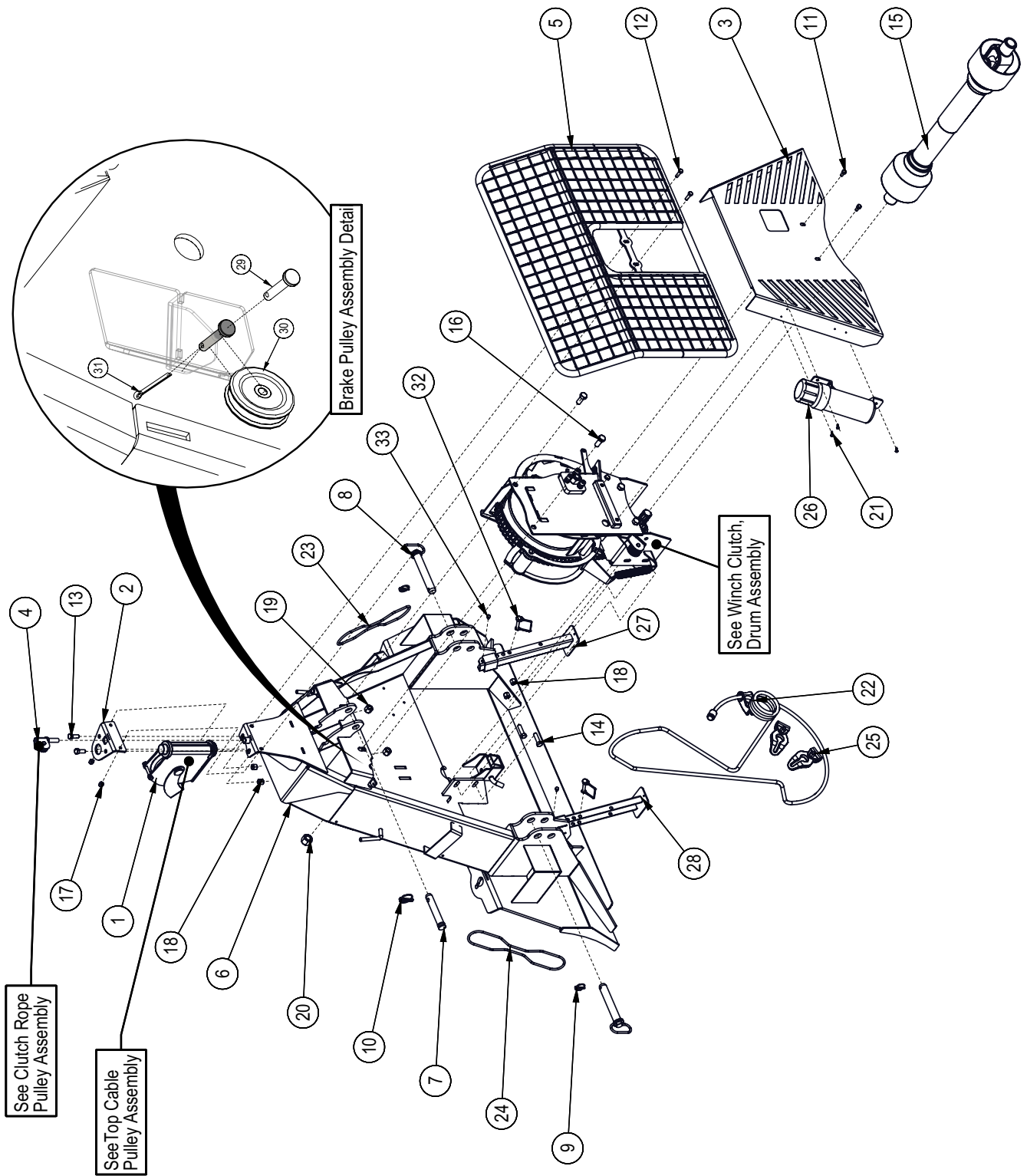
Hydraulic Fitting Torque

Tightening Flare Type Tube Fittings *

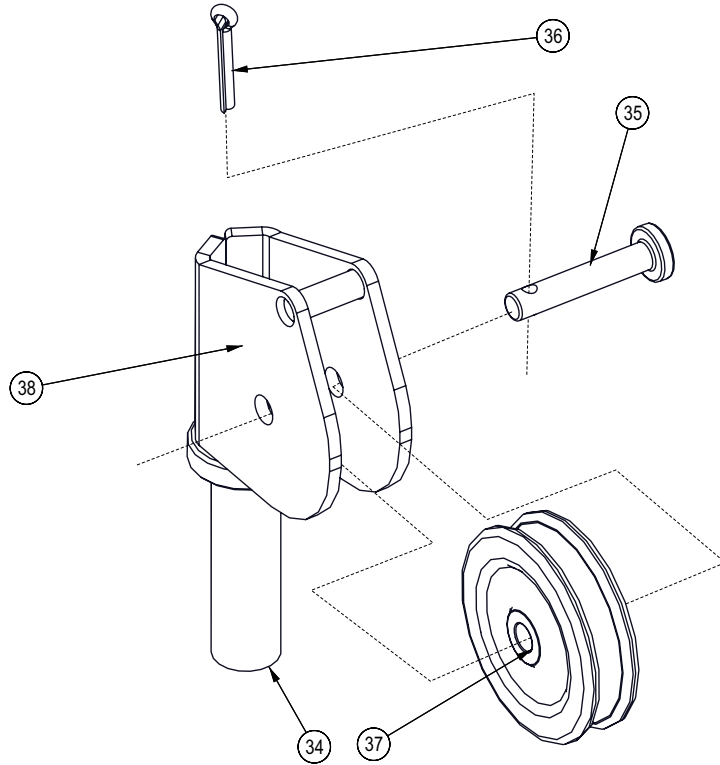
1. Check flare and flare seat for defects that might cause leakage.
 2. Align tube with fitting before tightening.
 3. Lubricate connection and hand tighten swivel nut until snug.
 4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.
- The torque values shown are based on lubricated connections as in reassembly.

HYDRAULIC FITTING TORQUE					
Tube Size OD	Nut Size Across Flats	Torque Value*		Recommended Turns To Tighten (After Finger Tightening)	
		(N.m)	(lb-ft)	(Flats)	(Turn)
(in.)	(in.)				
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	11/16	24	18	1	1/6
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

Main Assembly



Clutch Pulley

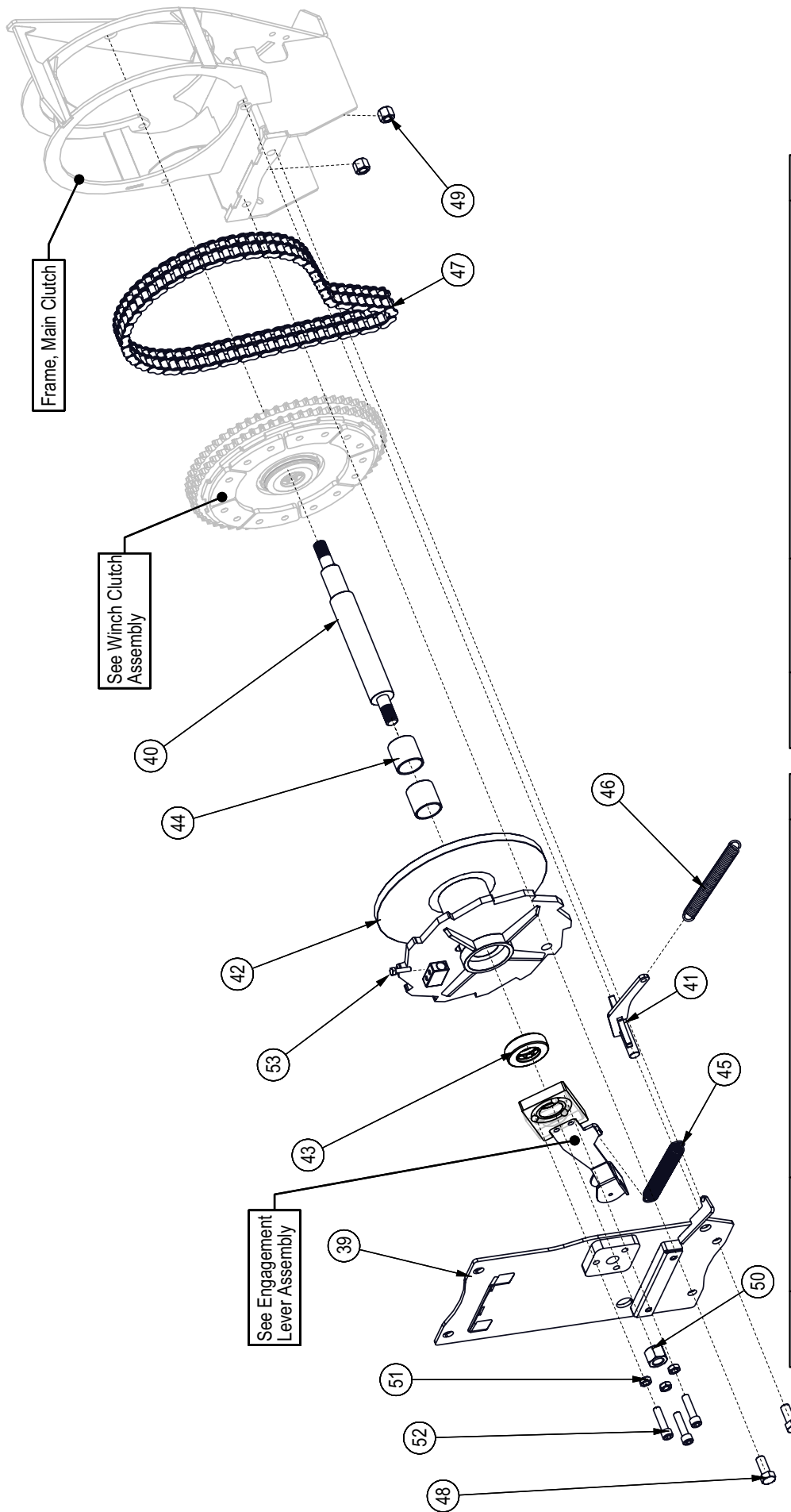


BOM ID	Part Number	Description	Qty
34	5012A207	Clutch Rope Pulley	1
35	Z11311	Clevis Pin, 1/4" x 1-1/8"	1
36	Z12311	Cotter Pin, 1/8" x 1"	1
37	Z92203	1/4 Groove Pulley 2 Diam.	1
38	5012W215	Clutch Rope Pulley Housing	1

Main Assembly - Parts List.

BOM ID	Part Number	Description	Qty
1	5012A205	Top Cable Pulley Assembly	1
2	5012L285	Top Pulley Capture Bracket	1
3	5013L327	Lower Protective Shield	1
4	5012A207	Clutch Rope Pulley	1
5	5012W226	Safety Screen	1
6	5013W325	Main Frame	1
7	Z11142	Toplink Pin, 1" x 4-5/16"	1
8	Z11271	Hitch Pin, 1-1/8" x 6-1/4"	2
9	Z12110	Lynch Pin, 3/16"	2
10	Z12140	Lynch Pin, 7/16"	1
11	Z71307	Hex Bolt, 3/8NC x 3/4"	2
12	Z71312	Hex Bolt, 3/8NC x 1-1/4"	2
13	Z71512	Hex Bolt, 1/2NC x 1-1/4"	2
14	Z71517	Hex Bolt, 1/2NC x 1-3/4"	2
15	Z44402	#4 Global PTO Shaft M8 Shear	1
16	Z71615	Hex Bolt, 5/8NC x 1-1/2"	2
17	Z72231	Hex Lock Nut, 3/8NC	2
18	Z72251	Hex Lock Nut, 1/2NC	4
19	Z72261	Hex Lock Nut, 5/8NC	2
20	Z72281	Hex Lock Nut, 7/8NC	1
21	Z76712	Self-tapping Screw, #10 x 3/4"	3
22	Z92121	Winch Cable, 1/2" x 165ft, Forged End	1
23	Z92201	Clutch Control Rope	1
24	Z92205	Drum Brake Rope 18'	1
25	Z92301	Keyhole Slider	2
26	Z96503	Manual Tube 3-1/2 Short	1
27	5012W218	Support Leg, LH	1
28	5012W217	Support Leg, RH	1
29	Z11311	Clevis Pin, 1/4" x 1-1/8"	1
30	Z92203	1/4 Groove Pulley 2 Diam.	1
31	Z12311	Cotter Pin, 1/8" x 1"	1
32	Z12432	Snap Lock Pin, 3/8" x 2-1/2"	2
33	Z71105	Hex Bolt, 1/4NC x 1/2"	2

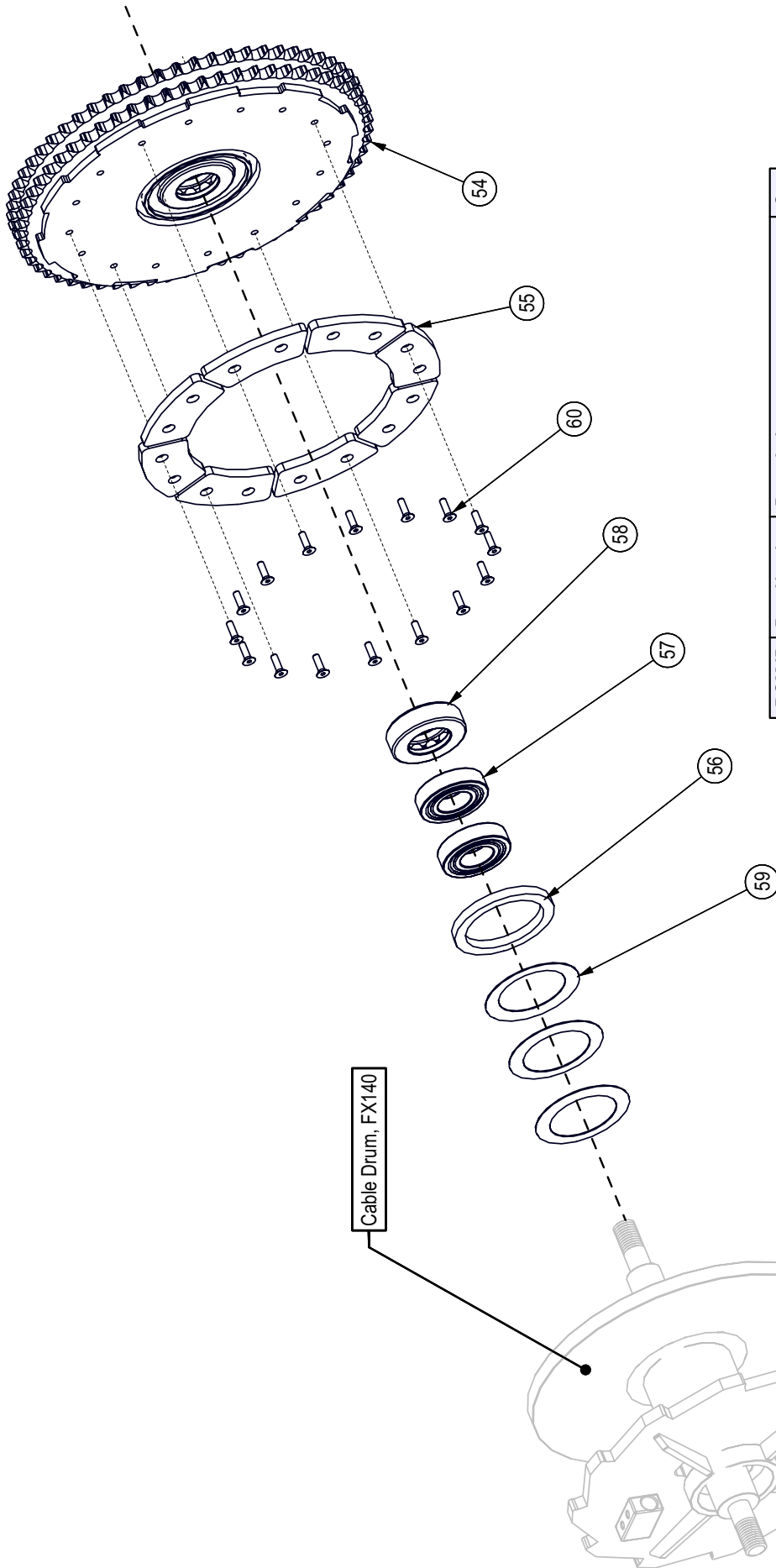
Cable Drum Assembly



BOM ID	Part Number	Description	Qty
47	Z42251	#60 Double Chain 76 Links	1
48	Z71615	Hex Bolt, 5/8NC x 1-1/2"	2
49	Z72261	Hex Lock Nut, 5/8NC	2
50	Z72281	Hex Lock Nut, 7/8NC	1
51	Z72352	Jam Nut, 1/2NF	3
52	Z75151	SHCS, 1/2NF x 2"	3
53	Z71212	Hex Bolt, 5/16NC x 1-1/4"	2

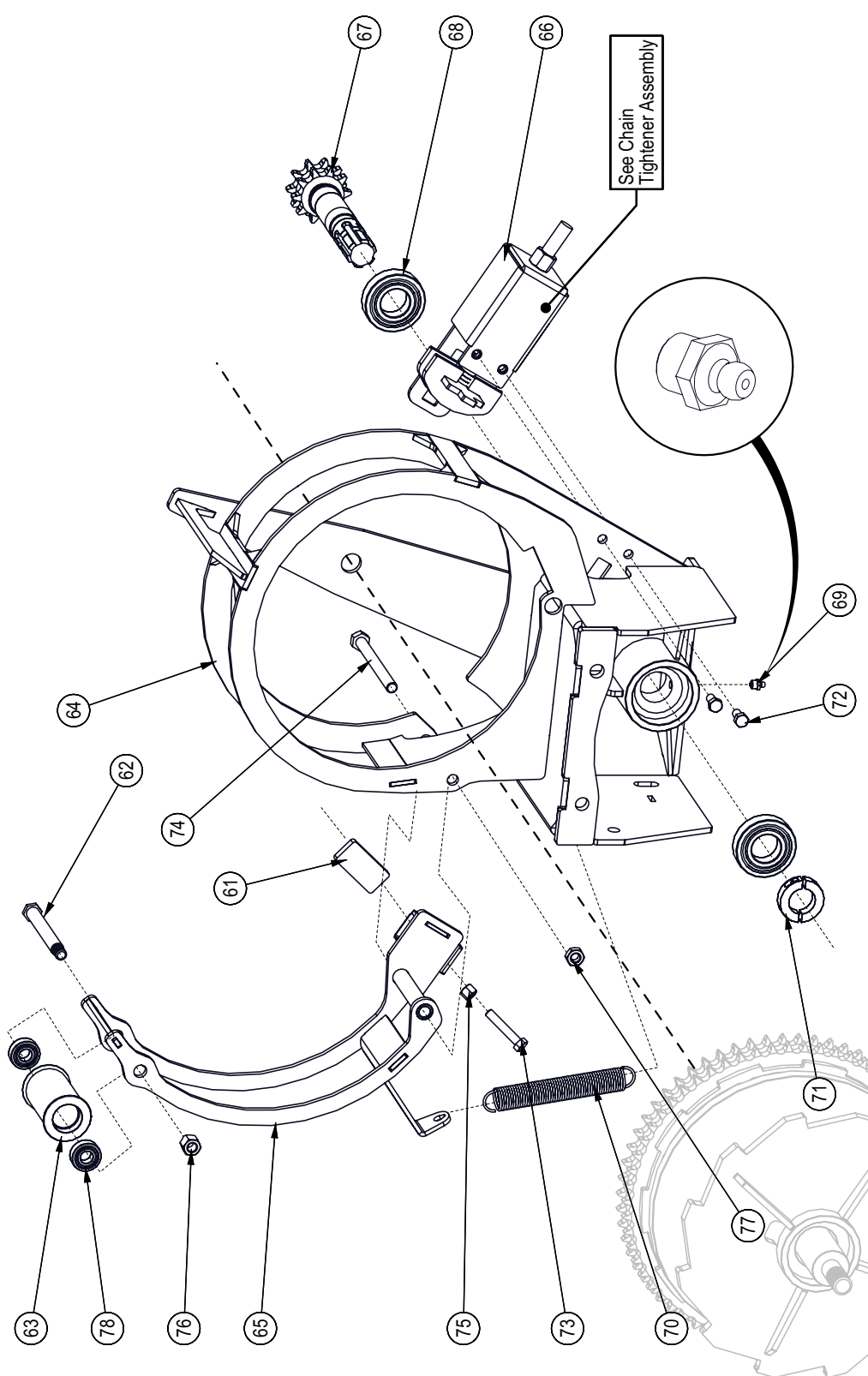
BOM ID	Part Number	Description	Qty
39	5012W203	Drum Frame Capture Plate	1
40	5012M214	Main Drum Shaft	1
41	5012W206	Lock Dog	1
42	5013W307	FX120 Cable Drum	1
43	Z22101	1-3/4 Bore Shielded Thrust Bearing	1
44	Z27101	Fiberglide Bearing 1-3/4" ID x 2" long x 1/8" wall	2
45	Z31403	Ext Spring, 27mm OD x 178mm x 0.105"	1
46	Z31405	Ext Spring, 7/8" OD x 7" x 0.125"	1

Clutch Assembly



BOM ID	Part Number	Description	Qty
54	5013W309	60 Tooth Double Sprocket	1
55	5012M215	Clutch Pad Set (8 pieces)	1
56	5012M228	Nylon Bearing Washer	1
57	Z21202	Ball Bearing 6207-2RS	2
58	Z22101	1-3/4 Bore Shielded Thrust Bearing	1
59	Z34101	Cup Spring, 2-3/4" ID x 4" OD x 1mm	3
60	Z75211	FHCS, 1/4NC x 7/8"	16

Cable Frame Assembly

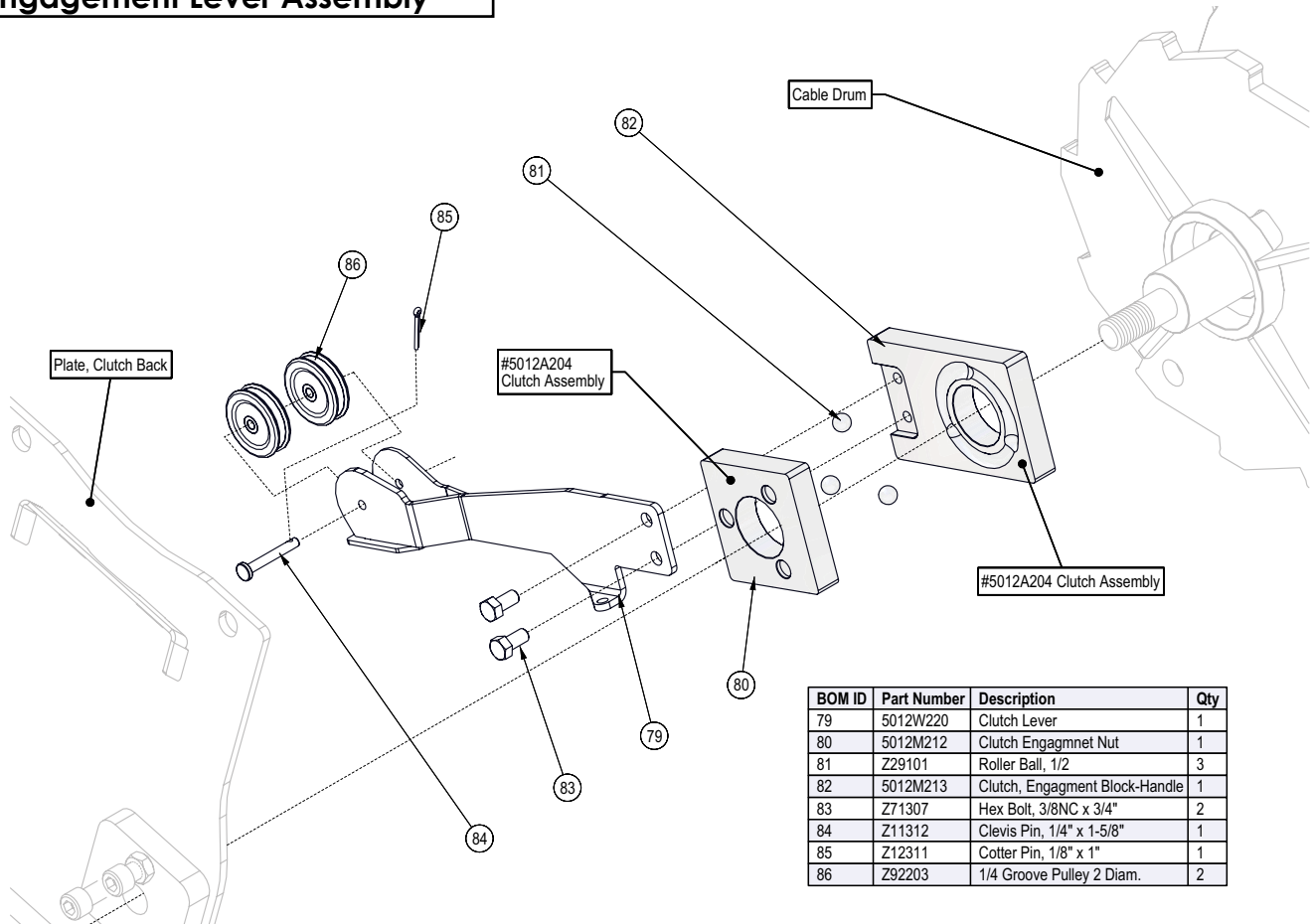


BOM ID	Part Number	Description	Qty
75	Z72231	Hex Lock Nut, 3/8NC	1
76	Z72251	Hex Lock Nut, 1/2NC	1
77	Z72351	Jam Nut, 1/2NC	1
78	Z21203	Ball Bearing 6202 2RS	2

BOM ID	Part Number	Description	Qty
68	Z21202	Ball Bearing 6207-2RS	2
69	Z29201	Grease Fitting, 1/8NPT	1
70	Z31403	Ext Spring, 27mm OD x 178mm x 0.105"	1
71	Z46311	Clamp-on Shaft Collar	1
72	Z71307	Hex Bolt, 3/8NC x 3/4"	2
73	Z71320	Hex Bolt, 3/8NC x 2"	1
74	Z71555	Hex Bolt, 1/2NC x 5-1/2"	1

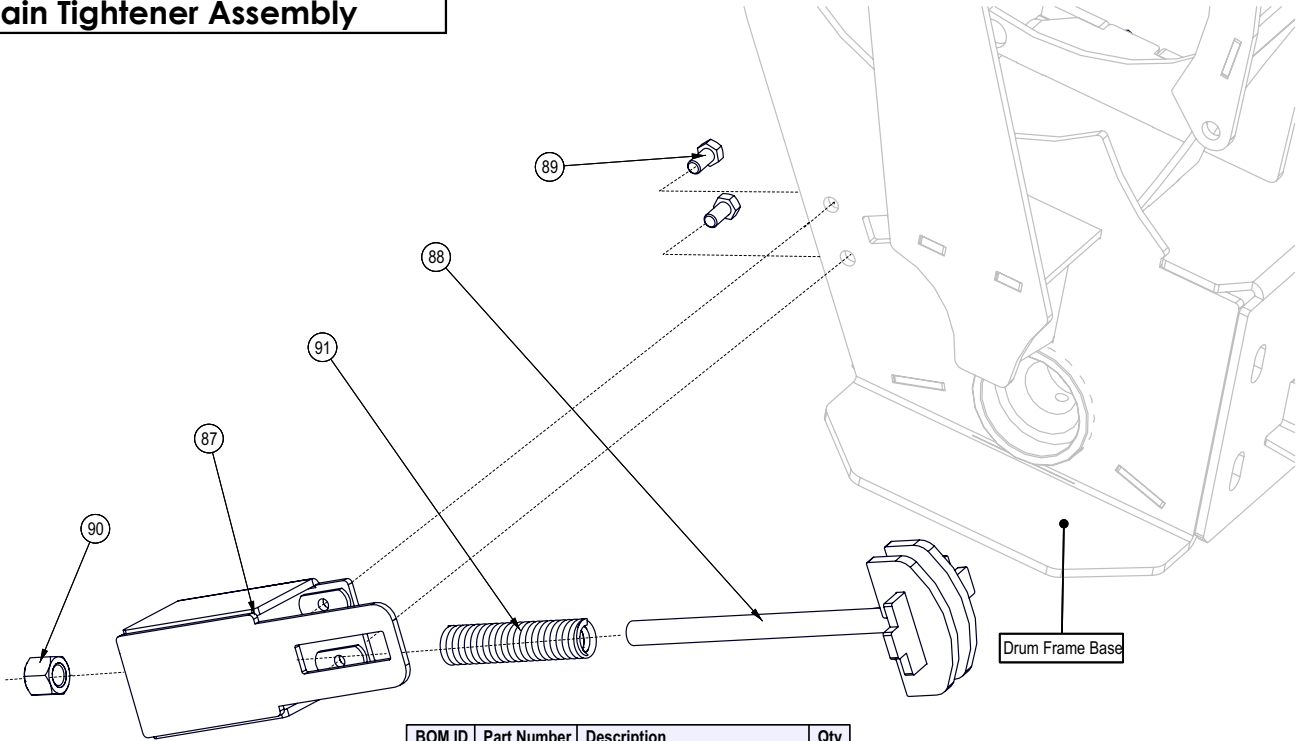
BOM ID	Part Number	Description	Qty
61	5012M204	Block, Drum Brake	1
62	5012M205	Cable Roller Pin	1
63	5012M206	Brake Arm Cable Roller	1
64	5012W202	Drum Frame Base	1
65	5012W204	Drum Brake Arm	1
66	5013A303	Double Auto Chain Tightener	1
67	5013W308	PTO Spline Shaft w/ Sprocket	1

Engagement Lever Assembly



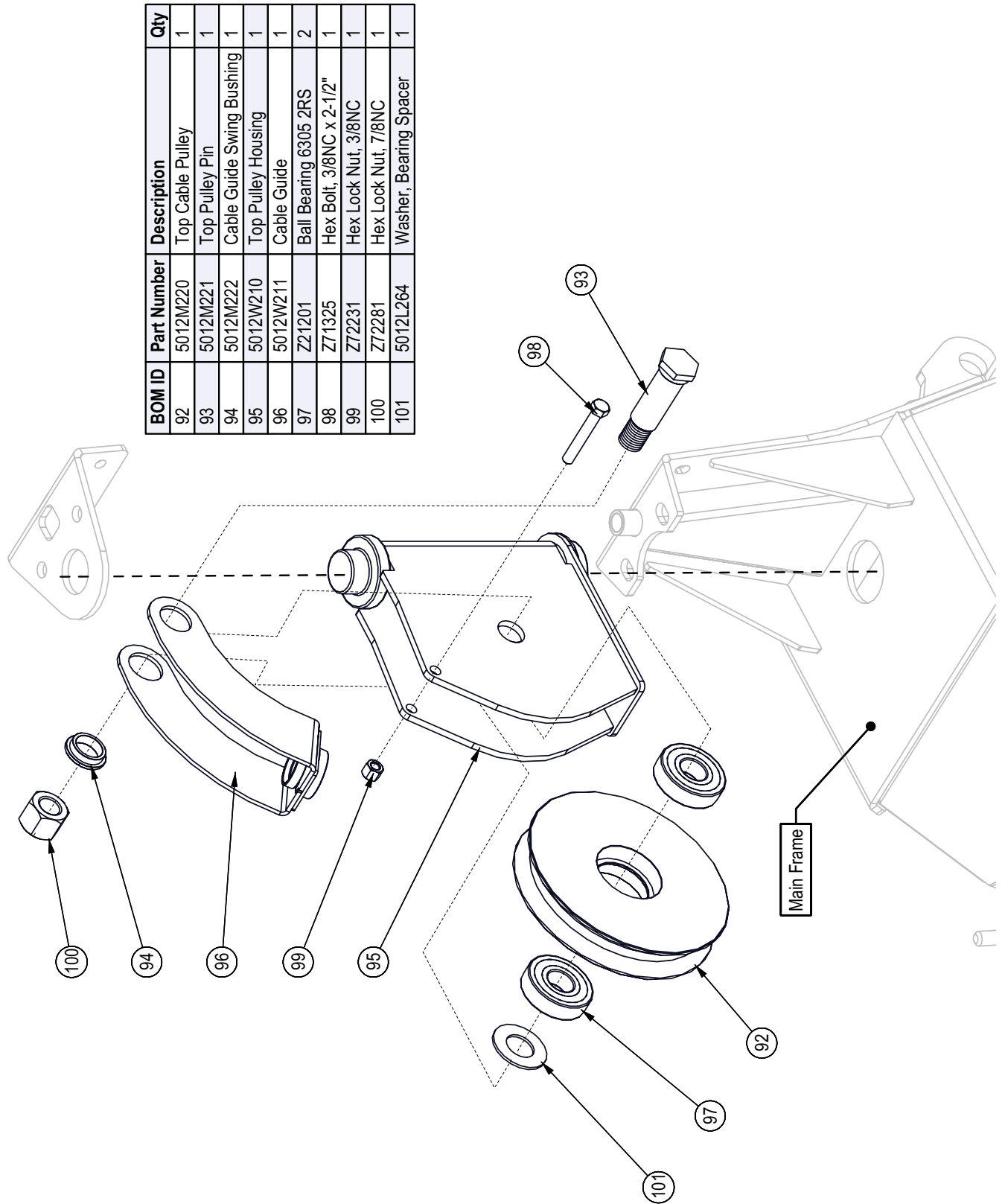
BOM ID	Part Number	Description	Qty
79	5012W220	Clutch Lever	1
80	5012M212	Clutch Engagmet Nut	1
81	Z29101	Roller Ball, 1/2	3
82	5012M213	Clutch, Engagement Block-Handle	1
83	Z71307	Hex Bolt, 3/8NC x 3/4"	2
84	Z11312	Clevis Pin, 1/4" x 1-5/8"	1
85	Z12311	Cotter Pin, 1/8" x 1"	1
86	Z92203	1/4 Groove Pulley 2 Diam.	2

Chain Tightener Assembly



BOM ID	Part Number	Description	Qty
87	5013W321	Chain Tightener Housing	1
88	5013W305	Chain Tightener Plunger	1
89	Z71307	Hex Bolt, 3/8NC x 3/4"	2
90	Z72261	Hex Lock Nut, 5/8NC	1
91	Z32401	Comp Spring, 1" OD x 7" x 0.162"	1

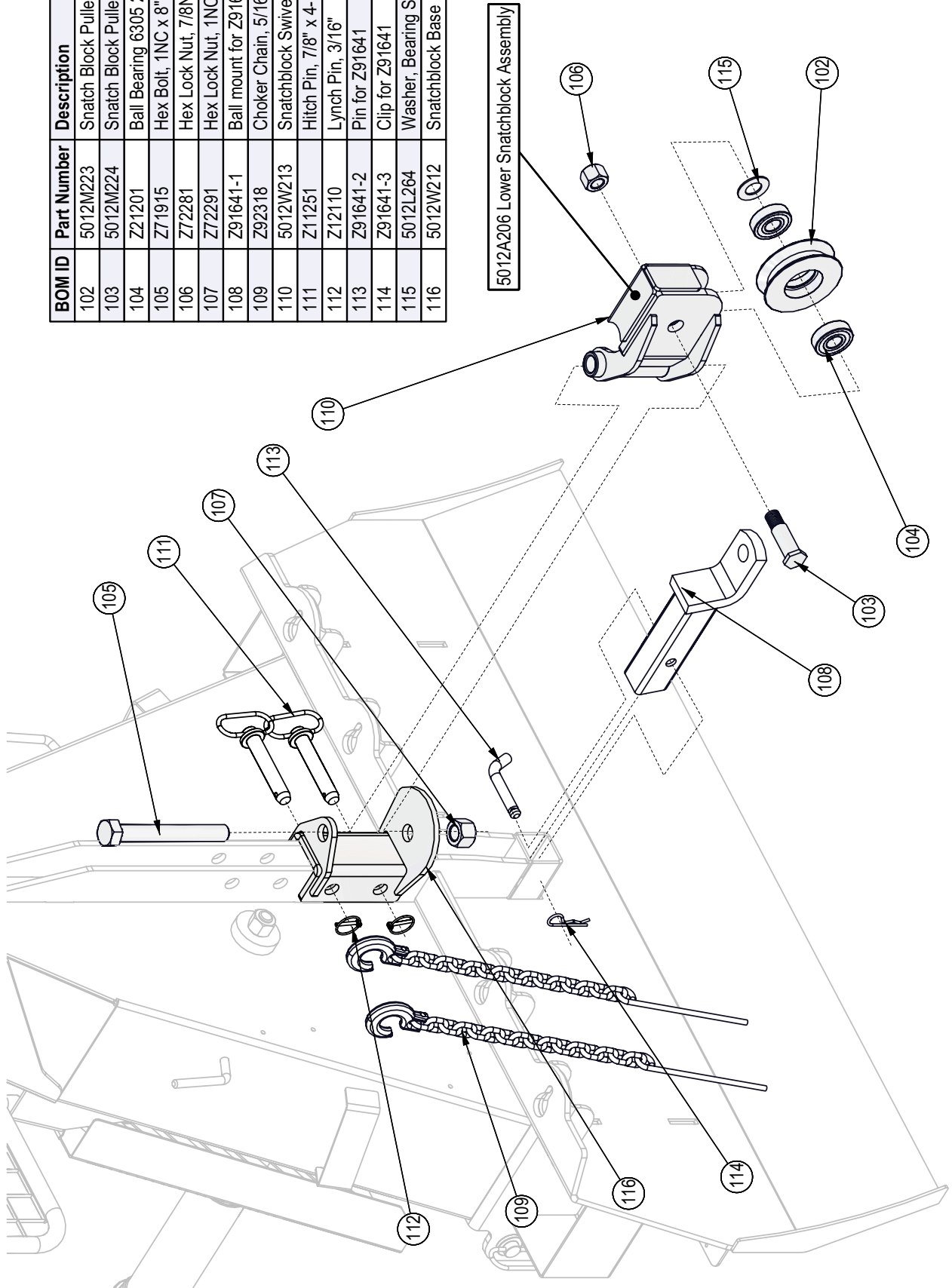
Top Cable Pulley Assembly



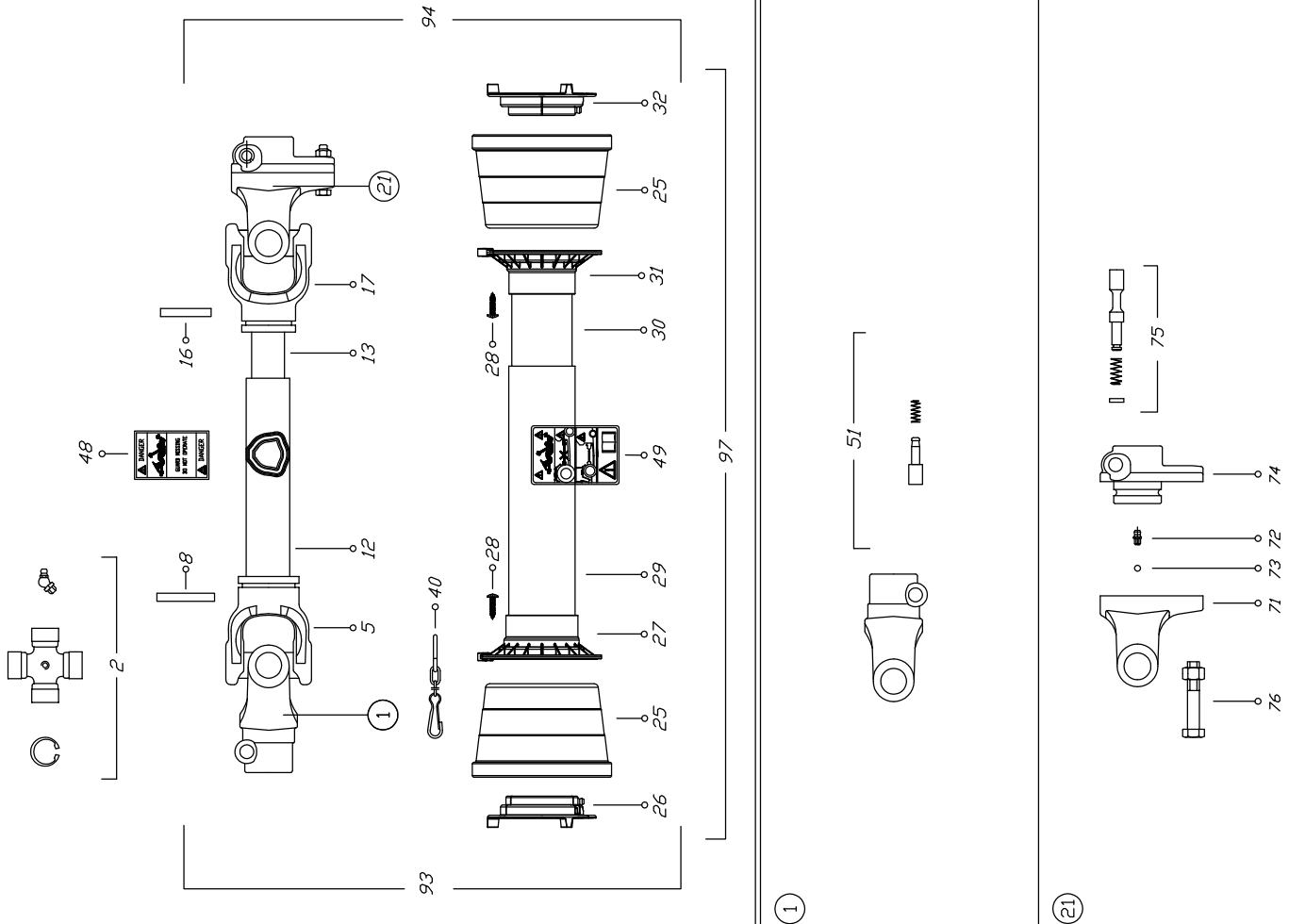
BOM ID	Part Number	Description	Qty
92	5012M220	Top Cable Pulley	1
93	5012M221	Top Pulley Pin	1
94	5012M222	Cable Guide Swing Bushing	1
95	5012W210	Top Pulley Housing	1
96	5012W211	Cable Guide	1
97	ZZ1201	Ball Bearing 6305 2RS	2
98	Z71325	Hex Bolt, 3/8NC x 2-1/2"	1
99	Z72231	Hex Lock Nut, 3/8NC	1
100	Z72281	Hex Lock Nut, 7/8NC	1
101	5012L264	Washer, Bearing Spacer	1

Snatch Block Assembly

BOM ID	Part Number	Description	Qty
102	5012M223	Snatch Block Pulley	1
103	5012M224	Snatch Block Pulley Pin	1
104	Z21201	Ball Bearing 6305 2RS	2
105	Z71915	Hex Bolt, 1NC x 8"	1
106	Z72281	Hex Lock Nut, 7/8NC	1
107	Z72291	Hex Lock Nut, 1NC	1
108	Z91641-1	Ball mount for Z91641	1
109	Z92318	Choker Chain, 5/16" x 90"	2
110	5012W213	Snatchblock Swivel Housing	1
111	Z11251	Hitch Pin, 7/8" x 4-1/4"	2
112	Z12110	Lynch Pin, 3/16"	2
113	Z91641-2	Pin for Z91641	1
114	Z91641-3	Clip for Z91641	1
115	5012L264	Washer, Bearing Spacer	1
116	5012W212	Snatchblock Base	1



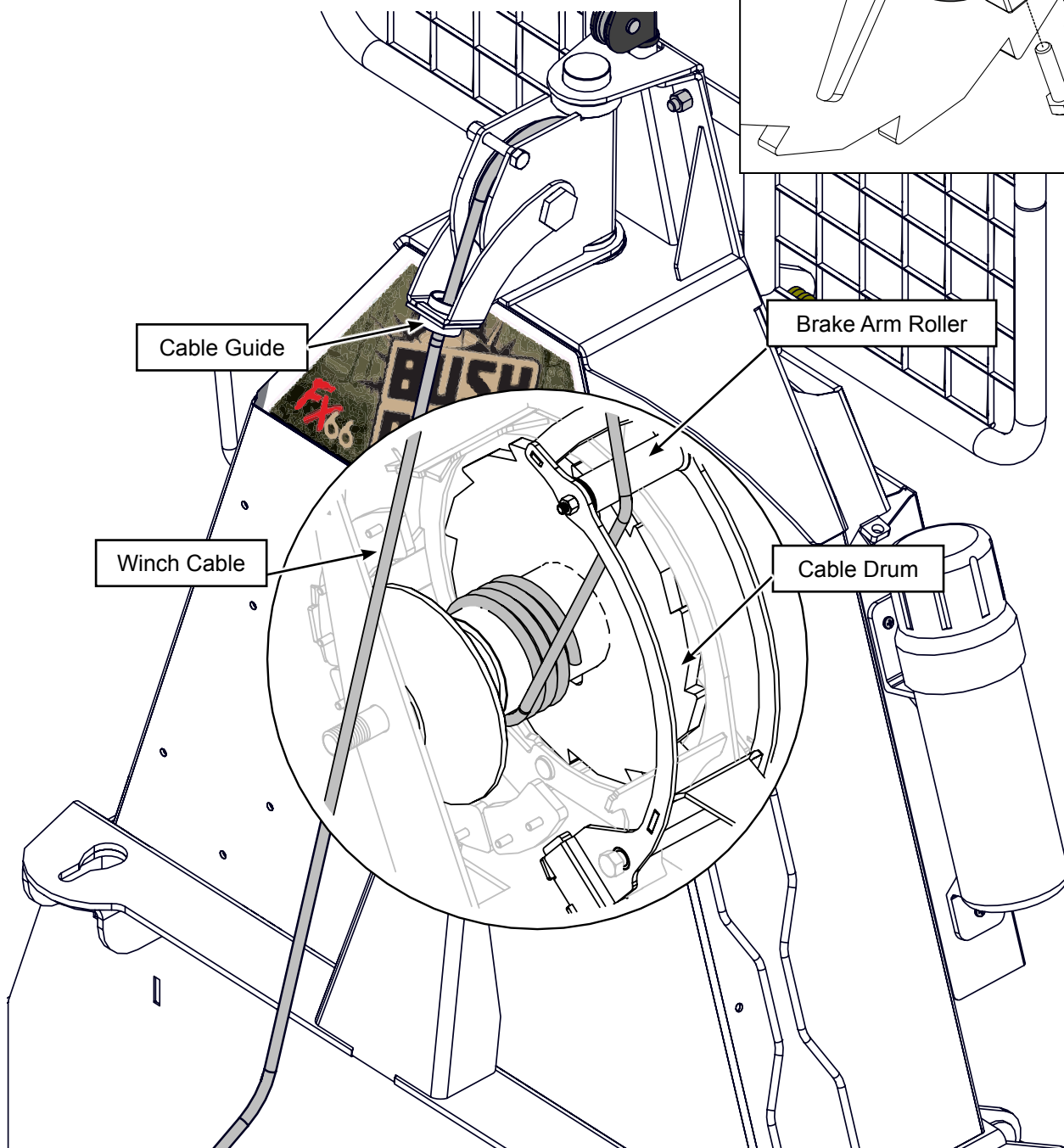
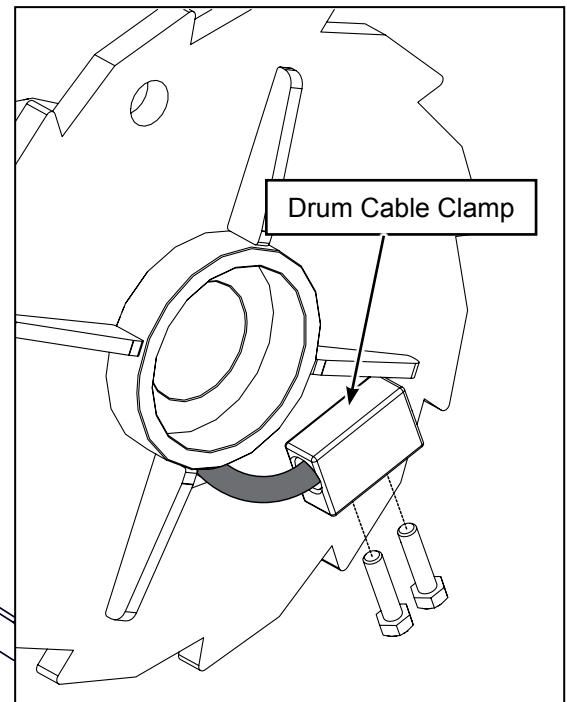
PTO Shaft



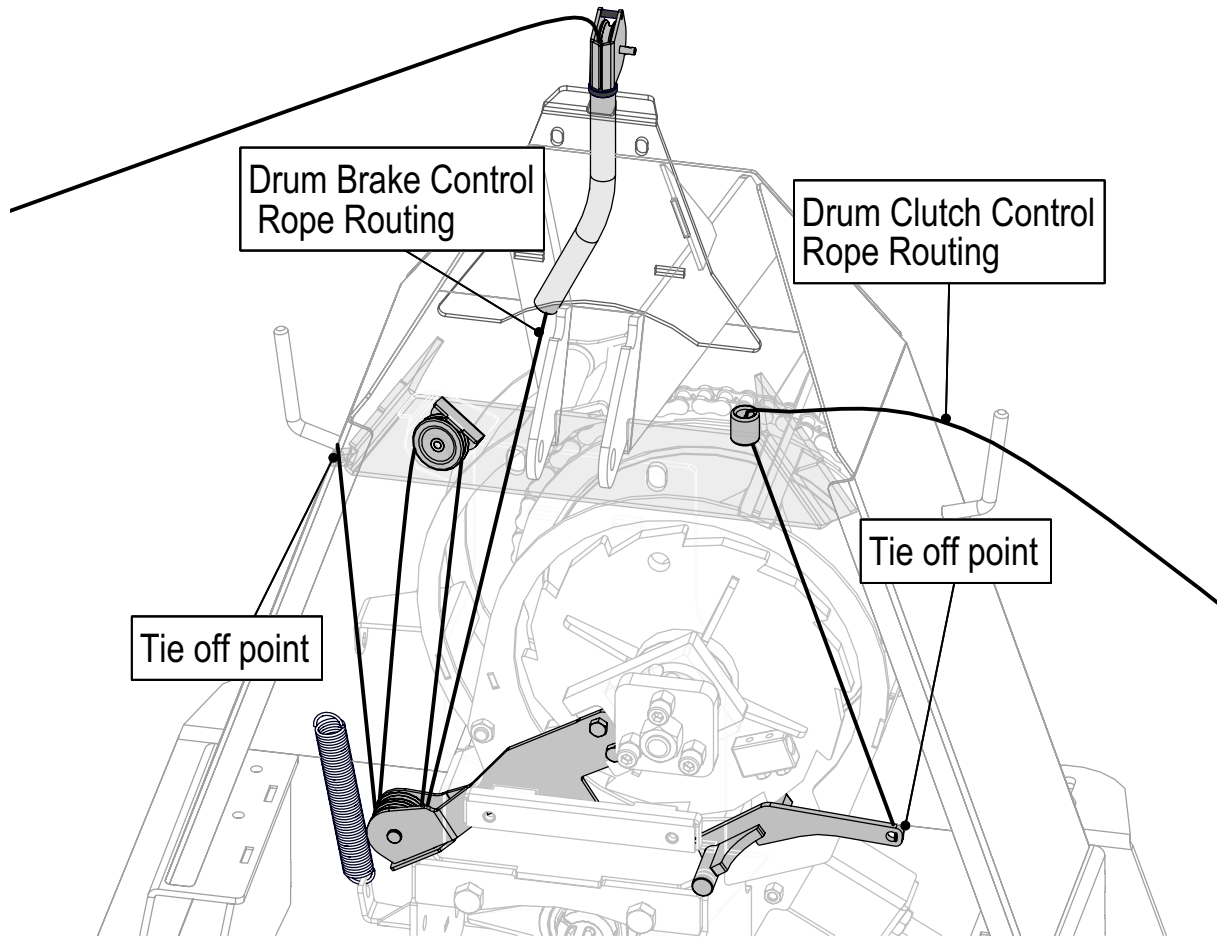
Binacchi SPARE PARTS LIST : B4N061USA60098			
POS.	DESCRIPTION	Q.	Part #
01	YOKE	1	0800403
02	CROSS JOURNAL ASS.	2	08204
05	OUTER TUBE YOKE	1	08004021
08	FLEXIBLE PIN	1	098700860
12	CM. 100 CARDAN TUBE(*)	1	09881433100
13	CM. 100 CARDAN TUBE(*)	1	09881364100
16	FLEXIBLE PIN	1	098700855
17	INNER TUBE YOKE	1	08004011
21	SHEAR BOLT M8X1.25X45	1	Z44902
25	CONE SHIELD BELL 03-04	2	021904C001
26	OUTER BEARING 03-04	1	025504C001
27	OUTER BASE CONE 03-04	1	025404C001
28	SCREW	6	0998052242
29	OUTER SAFETY TUBE	1	0988966NB4061
30	INNER SAFETY TUBE	1	0988961NB4061
31	INNER BASE CONE 03-04	1	025404C002
32	INNER BEARING 03-04	1	025504C002
40	CHAIN	1	0252000001
48	LABEL DANGER OUTER DRIVE TUBE	1	09872006
49	EXTERNAL SHIELD LABEL	1	09872003
51	COMPLETE PUSH BUTTTON	1	0986014047
71	YOKE FOR LB4	1	08896904
72	GREASE NIPPLE	1	0984010150
73	STEEL BALL	23	098680104
74	HUB	1	088964
75	PUSH PIN SET	1	0986014075
76	NUT AND BOLT M8 x 1.25 x 45 10.9	1	Z44902
93	OUTER HALF SHAFT	1	B4N061US2
94	INNER HALF SHAFT	1	B4N061US1098
97	SAFETY GUARD	1	083US04061

Cable Install

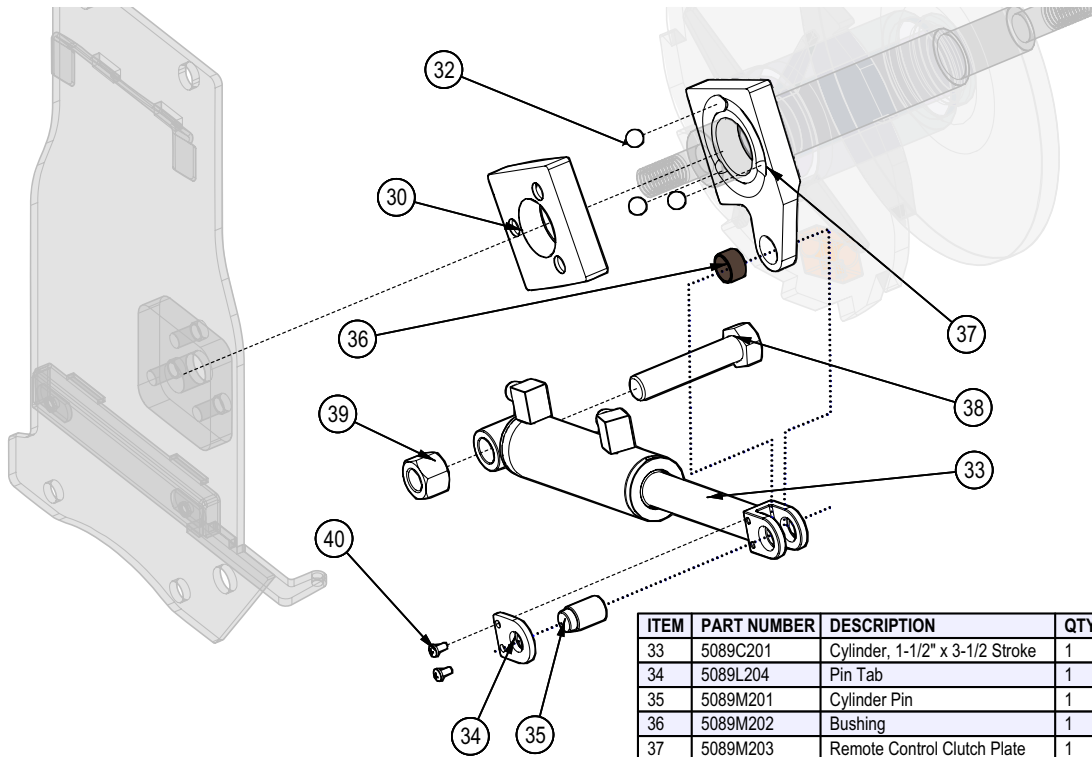
Feed cable through the eye of cable guide and over the pulley down into drum. Cable must be routed under brake roller on drum band coiler. Insert cable into hole in drum and tighten clamp.



Brake & Clutch Rope Routing

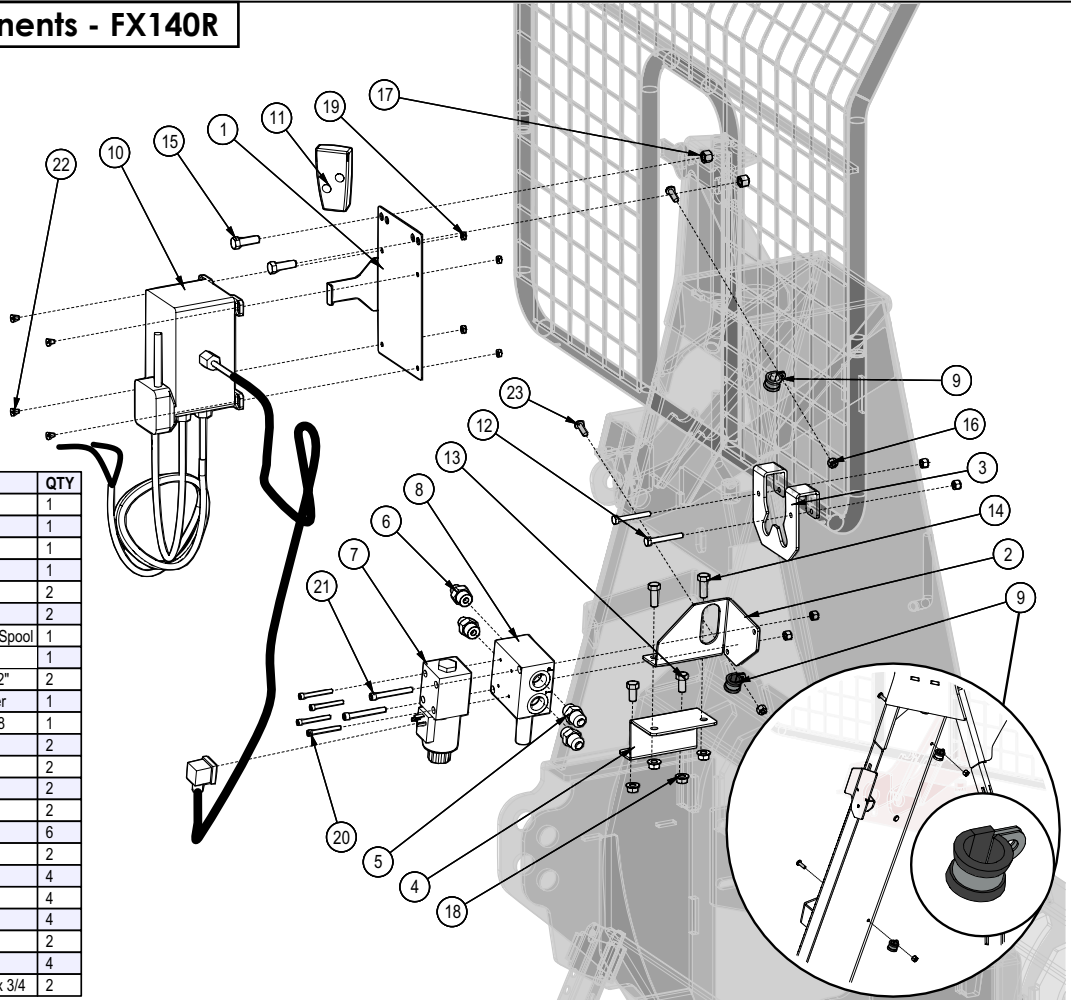


Cylinder / Clutch Plate Assembly - FX140R



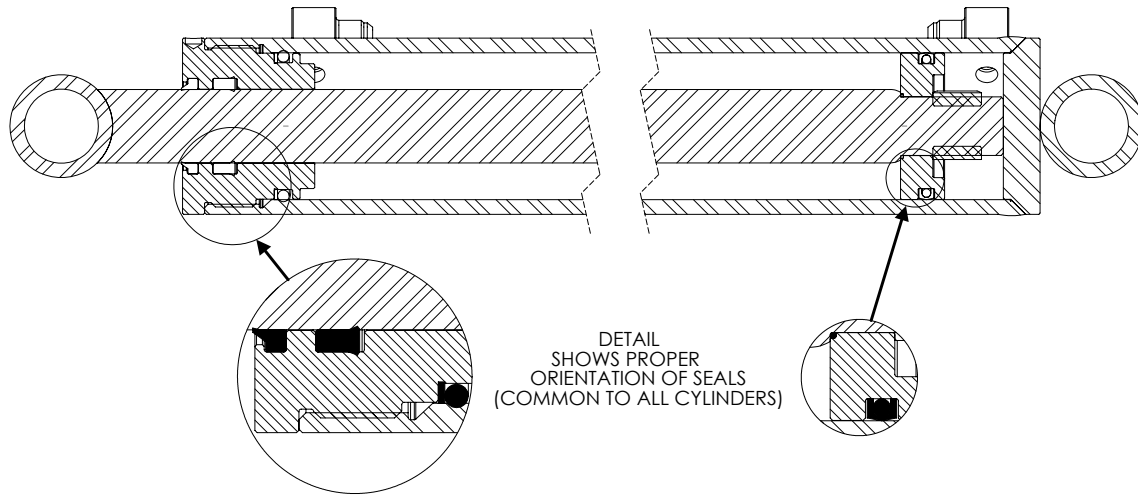
ITEM	PART NUMBER	DESCRIPTION	QTY
33	5089C201	Cylinder, 1-1/2" x 3-1/2 Stroke	1
34	5089L204	Pin Tab	1
35	5089M201	Cylinder Pin	1
36	5089M202	Bushing	1
37	5089M203	Remote Control Clutch Plate	1
38	Z71735	Hex Bolt, 3/4NC x 3-1/2	1
39	Z72271	Hex Lock Nut, 3/4NC	1
40	Z78302	Machine Screw, #10-32NF x 3/8	2

Remote Control Components - FX140R

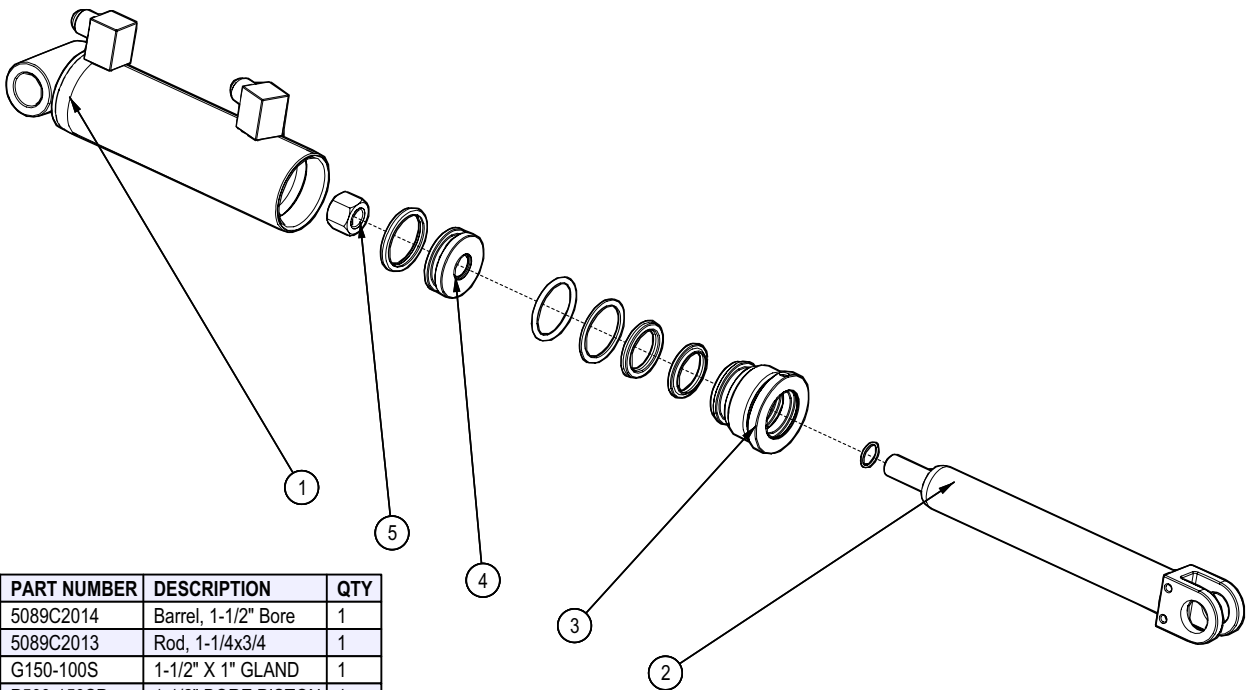


ITEM	PART NUMBER	DESCRIPTION	QTY
1	5089L205	Remote Box Mount	1
2	5089L208	Hydraulic Mount Base	1
3	5089L209	Hose Hanger	1
4	5089L210	Valve Mount Extension	1
5	Z51643	#8ORB x #8JIC	2
6	Z51644	#8ORB x #6JIC	2
7	Z56509	Solenoid 4-2 Valve - Motor Spool	1
8	Z56511	Subplate, Relief x 3000PSI	1
9	Z62819	Rubberized Wire Clamp, 1/2"	2
10	Z66208	Dual State Remote Receiver	1
11	Z66209	Remote Handset for Z56208	1
12	Z71120	Hex Bolt, 1/4NC x 2	2
13	Z71307	Hex Bolt, 3/8NC x 3/4	2
14	Z71310	Hex Bolt, 3/8NC x 1	2
15	Z71312	Hex Bolt, 3/8NC x 1-1/4	2
16	Z72211	Hex Lock Nut, 1/4NC	6
17	Z72231	Hex Lock Nut, 3/8NC	2
18	Z72531	Flange Nut 3/8NC	4
19	Z72752	Machine Nut, #10-32NF	4
20	Z75102	SHCS, #10-24NC x 1-3/4	4
21	Z75117	SHCS, 1/4NC x 2-1/4	2
22	Z75202	FHCS, #10-32NF x 3/8	4
23	Z78301	Machine Screw, 1/4-20NC x 3/4	2

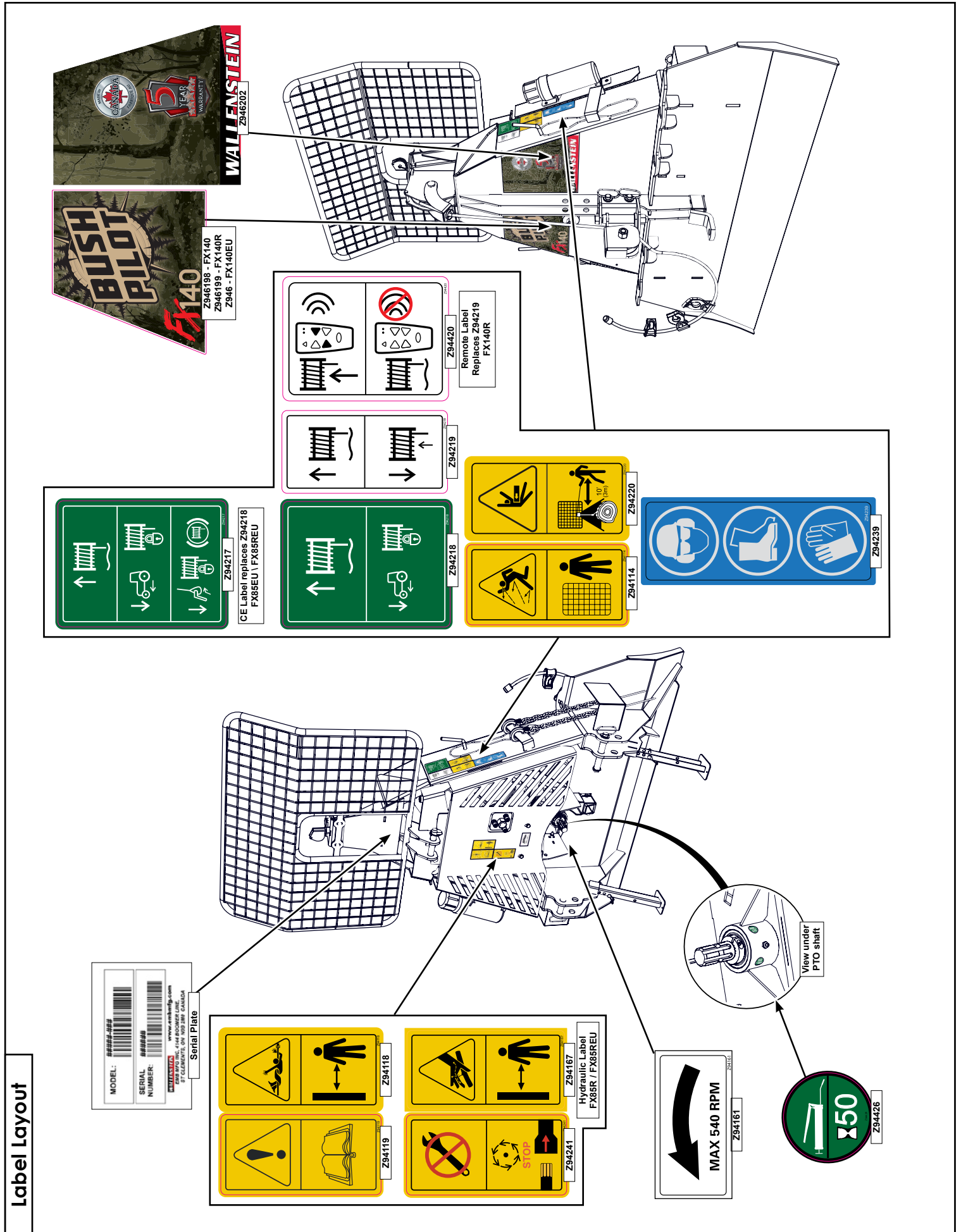
Cylinder Seal Installation - FX140R



Hydraulic Cylinder Detail - FX140R

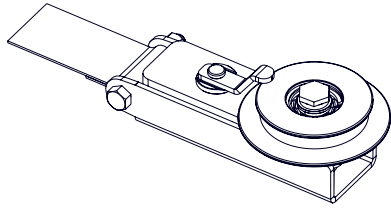


ITEM	PART NUMBER	DESCRIPTION	QTY
1	5089C2014	Barrel, 1-1/2" Bore	1
2	5089C2013	Rod, 1-1/4x3/4	1
3	G150-100S	1-1/2" X 1" GLAND	1
4	P500-150SP	1-1/2" BORE PISTON	1
5	Z72251	Hex Lock Nut, 1/2NC	1

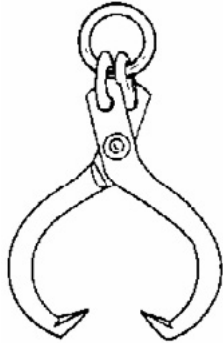


Label Layout

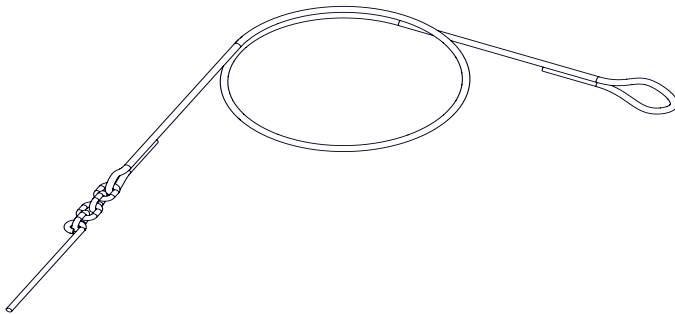
Accessories



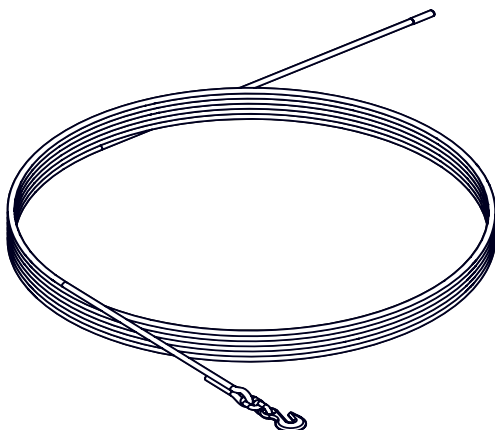
#5089A100 SELF RELEASING SNATCH BLOCK



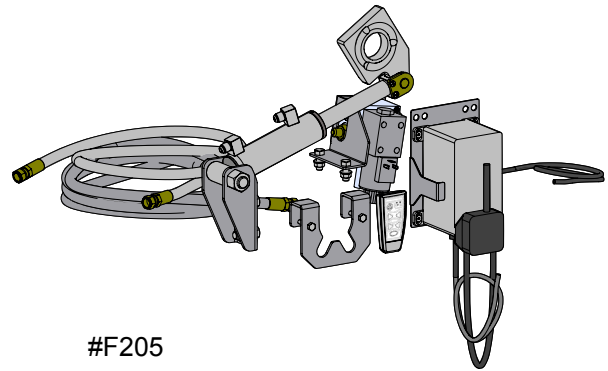
#Z99003 LOGGING TONGS



#Z92125 5 FT SYNTHETIC CHOKER WITH ROD CHAIN END
#Z92126 7 FT SYNTHETIC CHOKER WITH ROD CHAIN END



#Z92123 200 FT 7/16" SYNTHETIC MAINLINE WITH HOOK



#F205

#F205 REMOTE CONTROL WINCH KIT

For all **FX140 / FX120 Skidding Winches**

Dealer installed accessory.

F205 Remote Control retrofit kit for existing FX Skidding Winches.

Convenient and easy to use, eliminates the need to make your way back to the FX winch to engage the clutch.



#Z97090 OPERATORS MANUAL
Available as a download at
www.embmfg.com