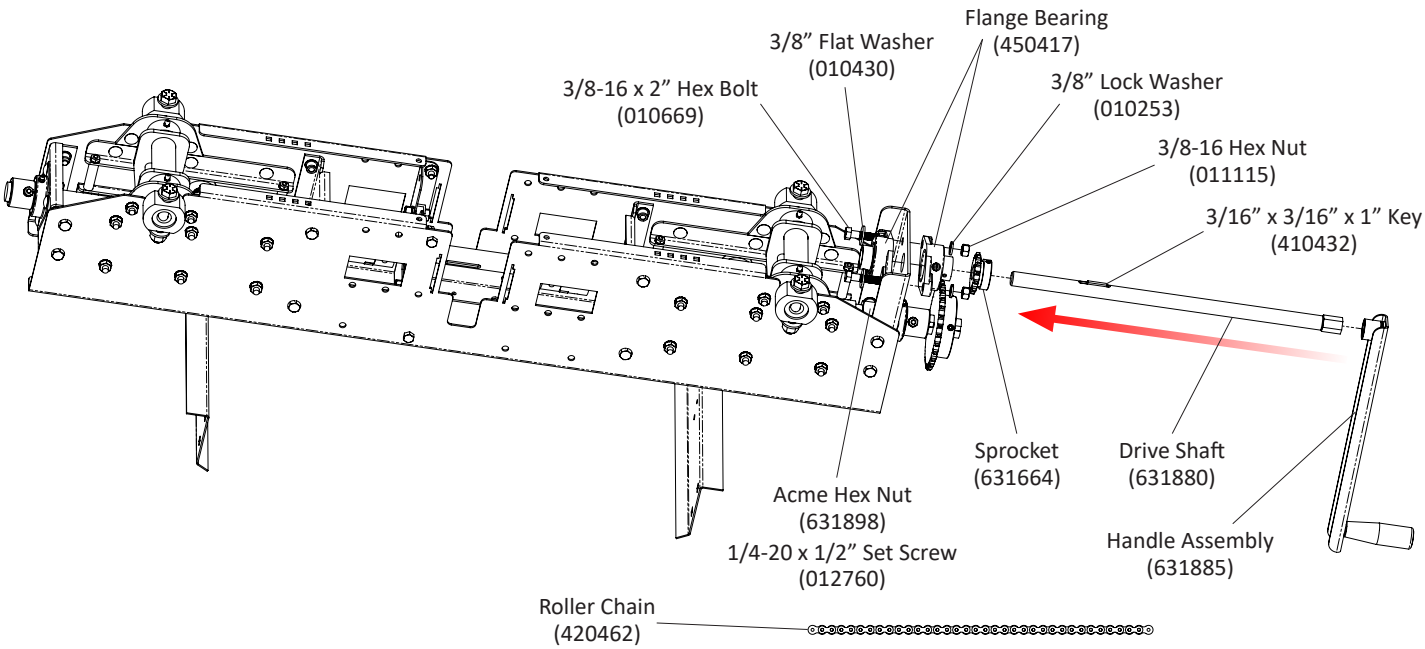
Manually Operated Expeller

Installation Quick Sheet

631653-MO

Installation

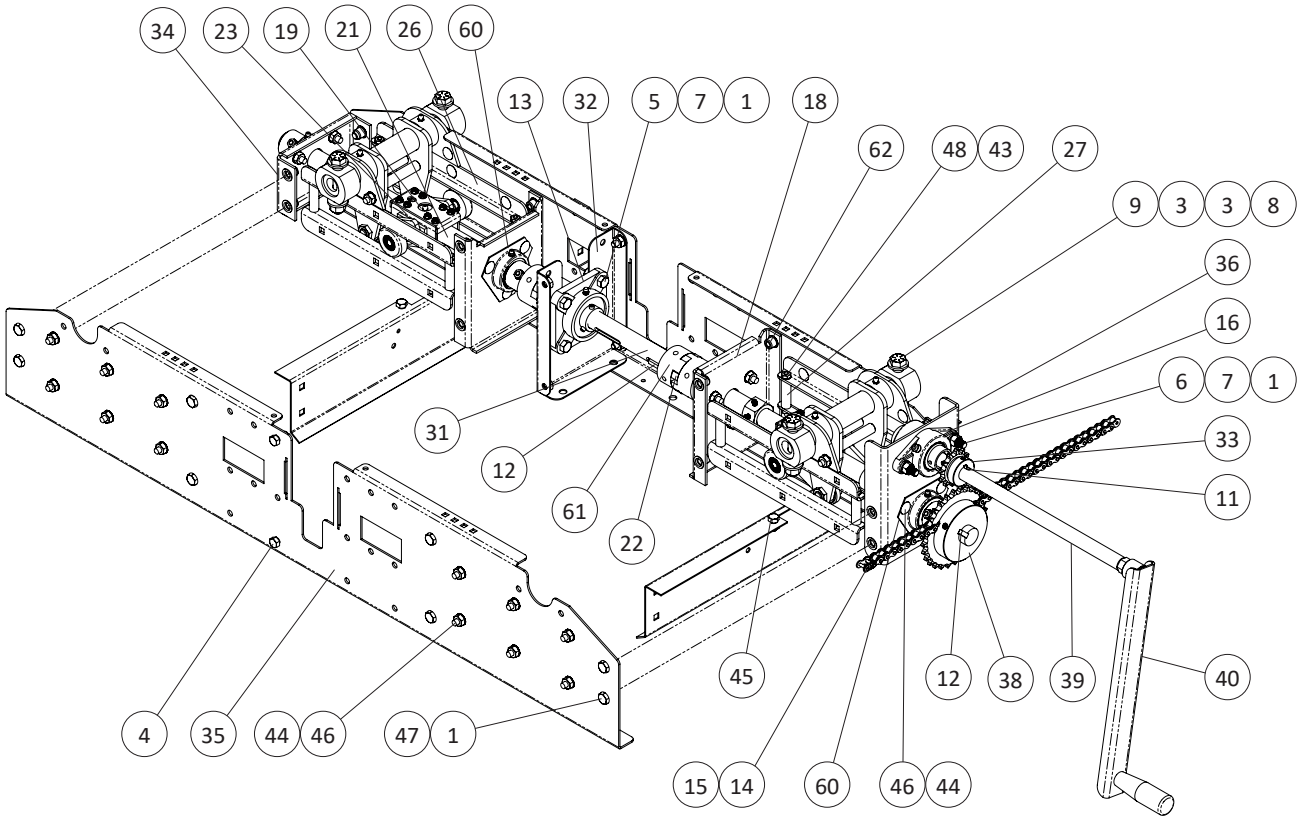
1. Please refer to the Freedom Nest Manual (990004) before beginning installation.
2. Assemble the bearings, sprocket, shaft, and handle as shown, using the hardware provided in the parts bag, as detailed in the table below. Ensure that the eccentric locking collars are secured to the bearings.
3. Wrap the roller chain around the sprockets and use the master link to secure the chain.
4. Set the Acme nuts as hard stops. Position the Acme nuts (1 on each end of the screw) at the desired end points, then tighten the set screws in the nuts to secure. For additional information, please refer to the ***Expeller Drive Units and Expeller Panels - Operation*** section in the Freedom Nest Manual (990004) for the proper procedure to set limits.

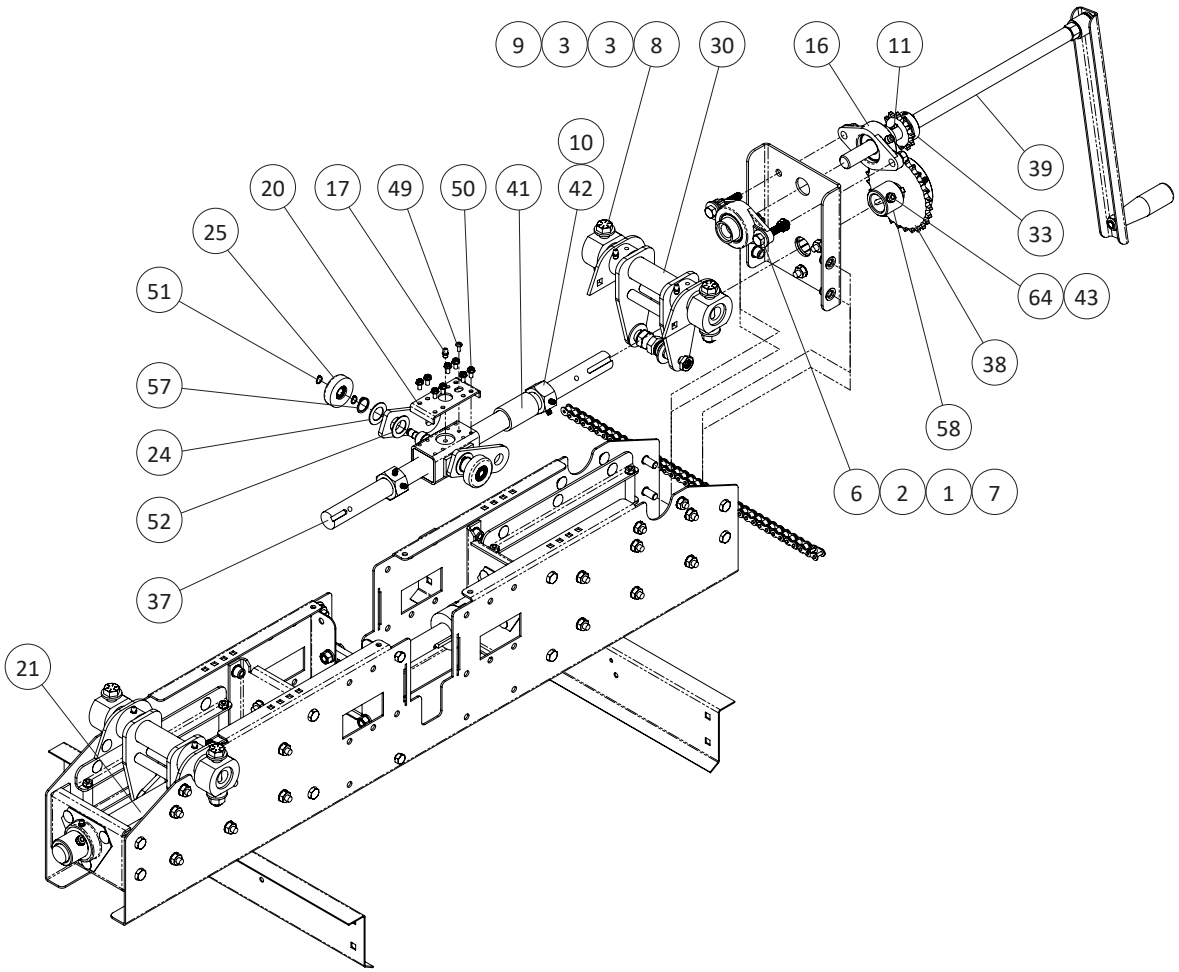


PART #	QTY	DESCRIPTION
CONTENTS OF PARTS BAG (631653-MO)		
010253	2	3/8" LOCK WASHER
010430	2	3/8" FLAT WASHER
010669	2	3/8-16 X 2" HEX BOLT
011115	2	3/8-16 HEX NUT
410432	1	3/16" X 3/16" X 1" KEY
450417	2	FLANGE BEARING, 3/4" ID
631664	1	SPROCKET, 3/4" BORE

PART #	QTY	DESCRIPTION
UNASSEMBLED COMPONENTS (631653-MO)		
420462	1.46	#40 ROLLER CHAIN
631880	1	DRIVE SHAFT, MANUAL EXPELLER
631885	1	HANDLE ASSEMBLY

Manually Operated Expeller (631653-MO) - Exploded Parts Drawing





©2025 Valco Industries, Inc.

Manually Operated Expeller (631653-MO) - Parts List

ITEM #	PART #	QTY	DESCRIPTION
MANUALLY OPERATED EXPELLER (631653-MO)			
1	010253	22	3/8” LOCK WASHER
2	010430	2	3/8” FLAT WASHER
3	010437	8	1/2” FLAT WASHER
4	010643	4	5/16-18 X 3/4” HEX BOLT
5	010664	4	3/8-16 X 1” HEX BOLT
6	010669	2	3/8-16 X 2” HEX BOLT
7	011115	6	3/8-16 HEX NUT
8	011117	4	1/2-13 HEX NUT
9	011419	4	1/2-13 X 3-1/4” HEX BOLT
10	012760	4	1/4-20 X 1/2” SET SCREW
11	410432	1	3/16” X 3/16” X 1’ KEY
12	421135	5	1/4” X 1/4” X 1’ KEY
13	420451	1	BEARING, 1’ FLANGE
14	420462	1.46	#40 ROLLER CHAIN
15	420463	1	#40 MASTER LINK
16	450417	2	FLANGE BEARING, 3/4” ID
17	611143	6	1/4-28 GREASE FITTING
18	630083	2	BEARING BLOCK
19	630146	1	LEFT HAND ACME NUT
20	630428	2	KEEPER, ACME NUT
21	630453	1	ACME SCREW, 1-5TPI, LH
22	630464	2	LOVEJOY SPIDER
23	630481	2	LOAD COLLAR
24	630486	4	SHORT SWING ARM
25	630487	4	WHEEL, 1-11/16” OD, 3/8” ID
26	630496	8	SWING ARM CHANNEL RAIL
27	630497	8	SWING RAIL TUBE SPACER
28	630502	4	BUSHING, 1/2” ID X 5/8” OD X 3/8”
29	631311	2	NOTCHED HORIZONTAL SUPPORT
30	631654	2	SWING ARM ASSEMBLY
31	631659	1	DRIVE SHAFT, JOINING
32	631660	1	DRIVE HOUSING STABILIZER

ITEM #	PART #	QTY	DESCRIPTION
MANUALLY OPERATED EXPELLER (631653-MO)			
33	631664	1	SPROCKET, 3/4” BORE
34	631674	1	EXTERIOR BEARING BLOCK
35	631675	2	DRIVE HOUSING
36	631875	1	EXTERIOR BEARING BLOCK
37	631876	1	ACME SCREW, 1-5TPI, RH
38	631877	1	SPROCKET, #40 ROLLER CHAIN 28T
39	631880	1	DRIVE SHAFT, MANUAL EXPELLER
40	631885	1	HANDLE ASSEMBLY
41	631891	1	1” X 2” SPACER
42	631898	2	ACME HEX NUT, RH 1-5
43	690003	12	1/4-20 K-LOCK HEX NUT
44	690020	52	5/16-18 K-LOCK HEX NUT
45	690026	4	5/16-18 X 5/8” HEX CAP SCREW
46	690027	44	5/16-18 X 3/4” CARRIAGE SCREW
47	690084	16	3/8-16 X 3/4” HEX CAP SCREW
48	690159	8	1/4-20 X 2-1/4” HEX BOLT
49	690187	2	#8-18 X 3/8” PAN SCREW
50	690197	16	#10-32 X 3/8” SCREW
51	690249	8	RETAINING RING, 3/8”
52	690250	8	ROUND SHIM, 3/4” ID X 1-1/4” OD
53	690251	8	ROUND SHIM, 1/2” ID X 7/8” OD
54	690252	4	5/8” FLAT WASHER
55	690253	4	1/2-13 X 1” HEX BOLT
56	690254	4	1/2-13 X 7/32” HEX JAM NUT
57	690255	4	RETAINING RING, EXT
58	970053	4	LOAD COLLAR
59	970055	4	THRUST BEARING
60	970056	4	FLANGE, 9113
61	970070	4	LOVEJOY HUB, 1” WITH KEYWAY
62	970121	12	3/8-16 THREADED INSERT
63	970749	1	ACME NUT, RH
64	970794	4	1/4-20 X 1-3/4” SCREW