

HARTCO COIL CLIP TOOL

INSTRUCTION and PARTS MANUAL

STANLEY

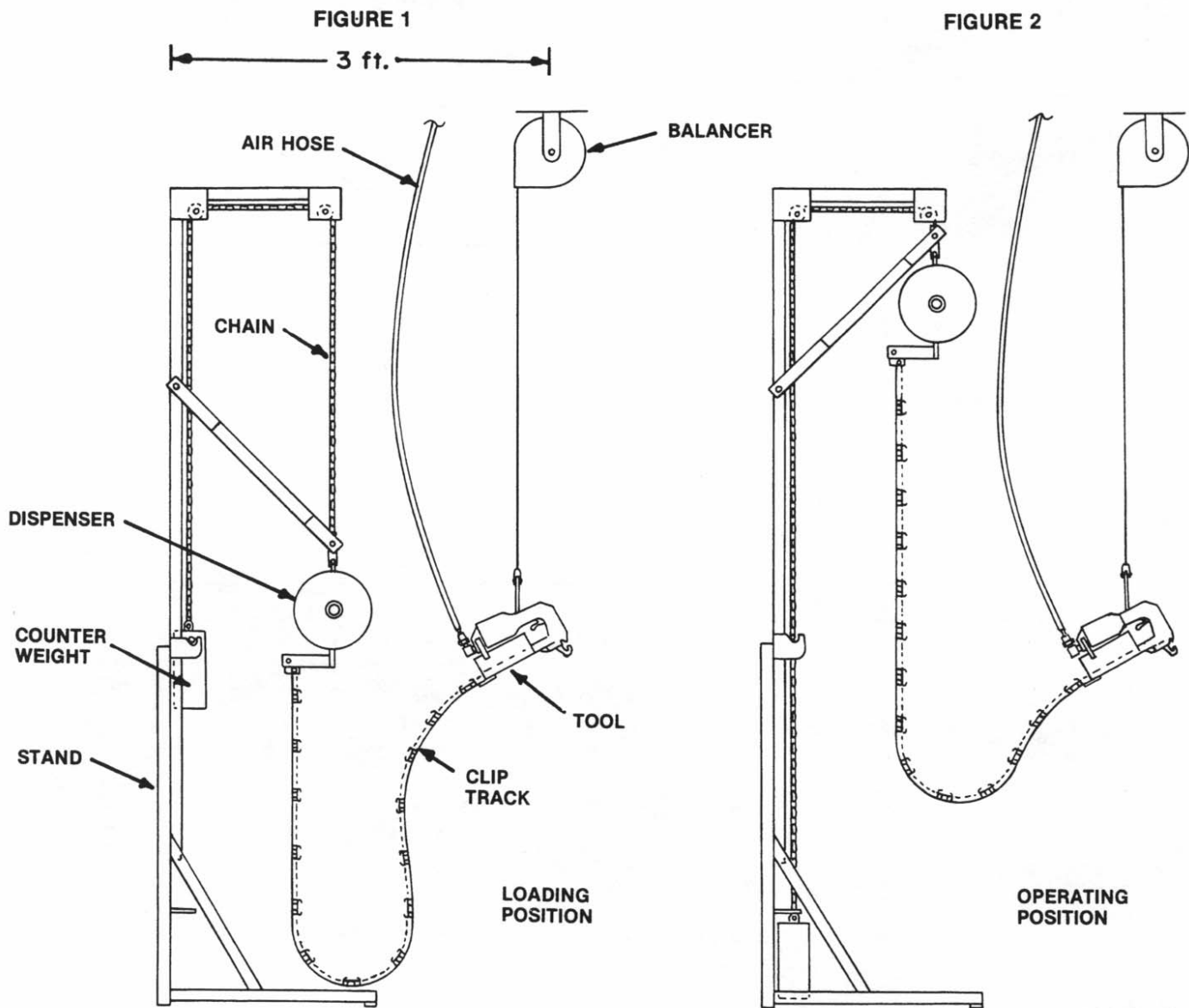
HARTCO

Stanley Fastening Systems

INSTRUCTIONS

The Coil Clip Tool system consists of the following components:

- A. The Coil Clip Tool
- B. The dispenser and track assembly
- C. The tool stand assembly
- D. The 3/8 hose assembly (10 ft. with 3/8 fittings and couplers) and tool balancer



LOADING

1. Coiled clips are loaded onto the dispenser by lowering the dispenser to working height by means of the counter weight and chain on the tool stand (FIGURE 1).

2. Load the coil of clips onto the dispenser in the DIRECTION OF THE ARROW that is stamped on the center tube.

3. Replace the dispenser disc to secure the clips in position, then remove the wire ties that hold the coiled clips. It is important to remove the wire ties or secure them in a manner that will not impede the feeding of the clips.

4. Locate the beginning of the clip coil and feed the clips onto the clip track through the clip guides. The clips are to be fully engaged into the tool by cocking the feed pawl. Anti-backup wheels are to be resting on the clips to assure clips are held in place when the feed pawl indexes the clips. Clips may be removed from the tool by raising the anti-backup wheels with the lever lifts and disengaging the pawl.

5. Raise the dispenser and coiled clips to their working position and lock the counter weight to the tool stand (FIGURE 2). This facilitates the feeding of the clips and provides optimum mobility for tool movement. The clips are to feed from behind the operator and therefore the tool balancer is to be located 3 feet from the tool stand.

OPERATION AND CLIPPING PROCEDURE

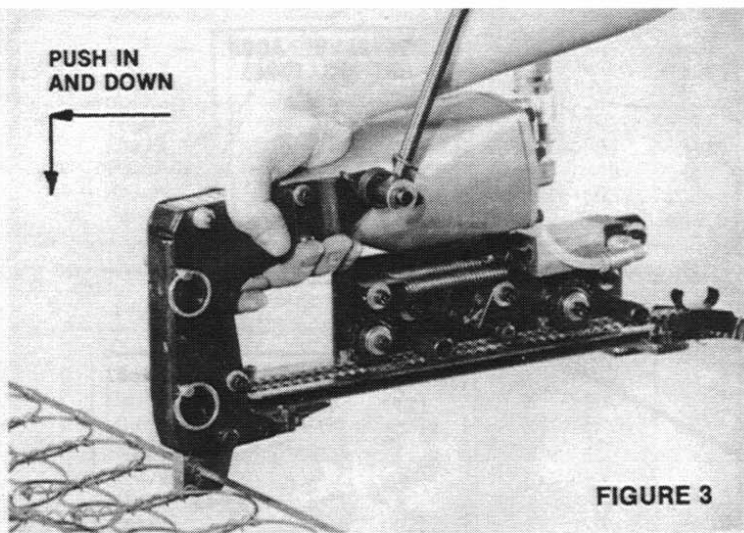


FIGURE 3

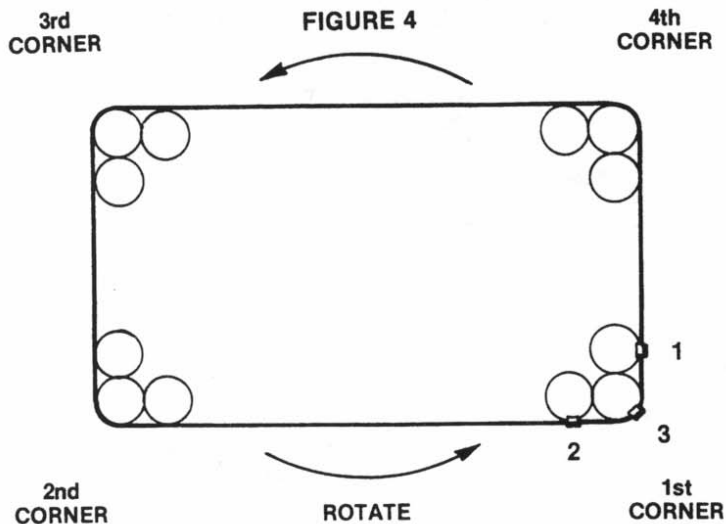


FIGURE 4

1. The coil clip tool requires 80 to 90 p.s.i. air pressure with adequate air supply. Consistent air pressure and volume is required to assure a tight clip application when skilled operators are applying 1 to 2 clips per second. Air consumption is 3.3 c.f.m. per coil clip tool at 1 clip per second.

2. A rotating table must be used when clipping inner-spring units. The work surface of the table is to be adjustable to the operator's height. Position the table height to allow the operator's arm to be in a relaxed, almost straight position. The proper table height and tool position will minimize operator fatigue.

3. Position the tool to the border wire and coil by pushing *in and down* to properly align the wires to the tool (FIGURE 3).

4. The clipping procedure for a right-handed operator is to rotate the table and innerspring unit in a counter-clockwise direction. A left-handed operator rotates and clips in a clockwise direction.

5. Follow this clipping procedure to assure the proper border wire position to maintain a square innerspring assembly (FIGURE 4).

A. Start by attaching the four corners of the border wire to the innerspring unit.

B. Follow FIGURE 4, which numerically illustrates the sequence to clip the coils at each corner.

C. Hold the border wire to the coil at position 2 while applying the clip at position 1. Then apply clips at 2 and 3. Repeat this procedure at each corner.

D. Rotate the unit in the proper direction and apply the remaining clips.

DAILY MAINTENANCE

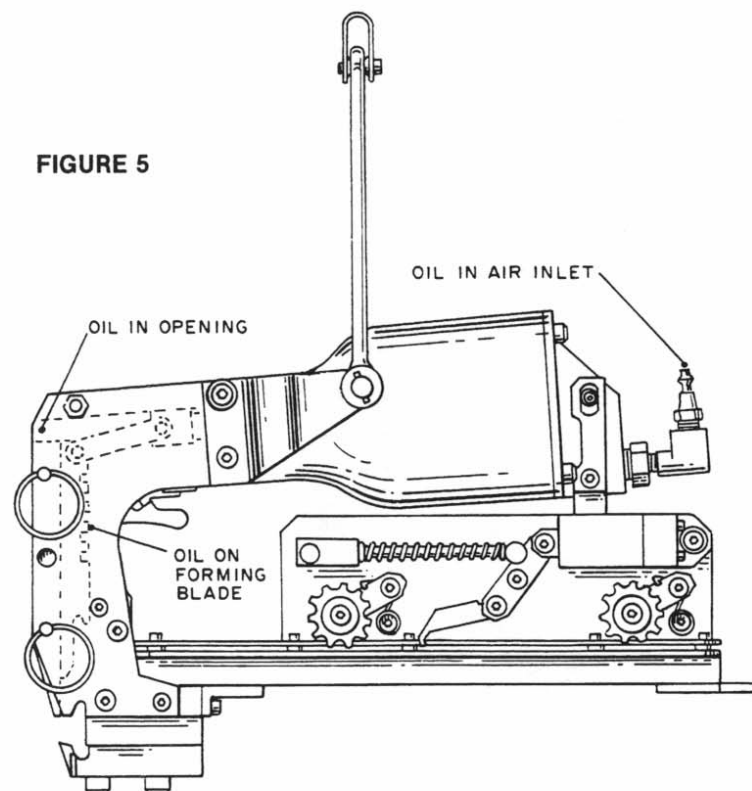


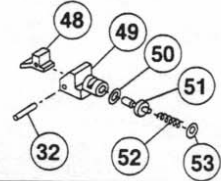
FIGURE 5

1. Lubricate the front of the blade with SAE 30 oil daily. The airline to the tool is to be equipped with an oiler (FIGURE 5).

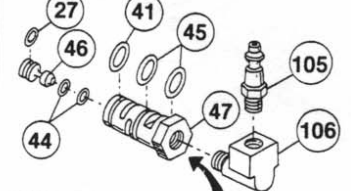
2. The clip feed mechanism should be checked daily for freedom. If dry, it should be lightly oiled with SAE 30 oil.

3. Tighten bolts as necessary.

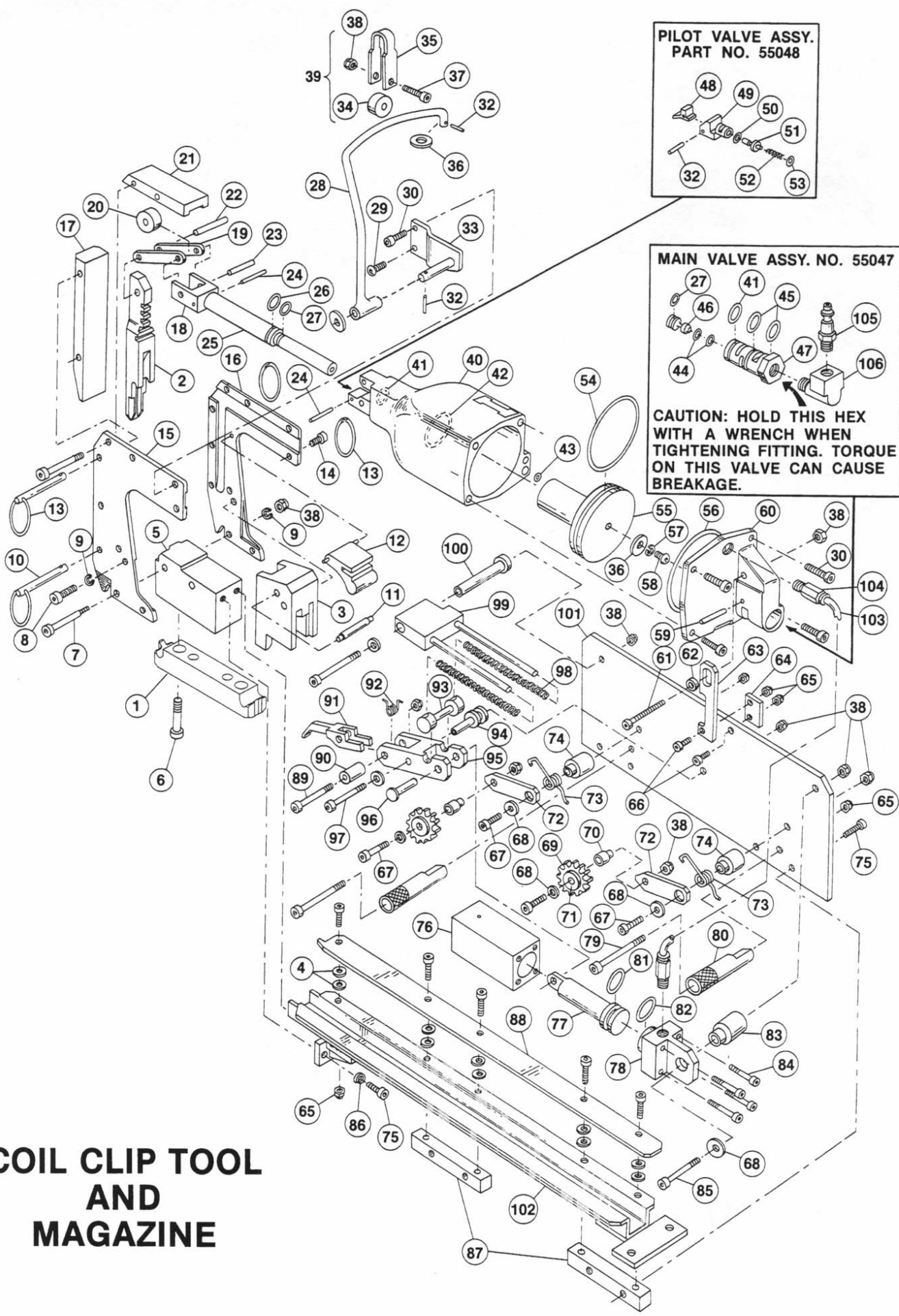
**PILOT VALVE ASSY.
PART NO. 55048**



MAIN VALVE ASSY. NO. 55047



CAUTION: HOLD THIS HEX WITH A WRENCH WHEN TIGHTENING FITTING. TORQUE ON THIS VALVE CAN CAUSE BREAKAGE.



**COIL CLIP TOOL
AND
MAGAZINE**

TOOL & MAGAZINE PARTS

IDENT. NO.	PART NAME	QTY	PART NUMBER				
			Model 50	Model 49	Model 48	Model 44	Model 30
1	Anvil	1	55997	55997	55997	55997	55997
2	Blade	1	55239	55239	55954	55942	55938
3	Blade Guide	1	55232	55232	55398	55491	55398
4	Washer #10 Lock	-	15033 Qty0	15033 Qty1	15033 Qty2	15033 Qty3	15033 Qty2

IDENT. NO.	PART NAME	Button Hd. Cap Screw	QTY	PART NO.
5	Anvil Holder		1	56271
6	Button Hd. Cap Screw 5/16-24 x 1		1	15327
7	Shoulder Screw		2	55056
8	Soc. Hd. Cap Screw 1/4-20 x 5/8		1	15028
9	Washer 1/4 I.D. Lock		5	15031
10	Pin, Front Plate		2	55970
11	Pin, Side Plate		3	55002
12	Trigger		1	55012
13	Ring		4	15328
14	Button Hd. Cap Screw 1/4-20 x 1/2		2	15061
15	Side Plate, Left Hand		1	55004
16	Side Plate, Right Hand		1	55003
17	Front Plate		1	55947
18	Yoke		1	55017
19	Link		2	55008
20	Roller		1	55103
21	Top Plate		1	55011
22	Pin-Former		1	55009
23	Piston Pin		1	55018
24	Dowel Pin 1/8 x 7/8		2	15004
25	Piston Rod		1	55019
26	O-Ring 3/8 x 9/16 x 3/32		1	15054
27	O-Ring 3/8 x 1/2 x 1/16		2	15014
28	Hanger (Suspension)		1	55926
29	Button Hd. Cap Screw 1/4-20 x 5/8		1	15000
30	Soc. Hd. Cap Screw 1/4-20 x 3/4		5	15001
32	Roll Pin 3/32 x 1/2		3	15002
33	Suspension Bracket		1	55397
34	Roller Bearing		1	15037
35	Hanger Yoke		1	55095
36	Washer 3/8 I.D.		2	15038
37	Button Hd. Cap Screw 1/4-20 x 1		1	15316
38	Flex Nut Std. 1/4-20 x 1		1	15023
39	Hanger Yoke Assembly		1	55094
40	Housing		1	55020
41	O-Ring 9/16 x 3/4		2	15010
42	O-Ring 1 x 1-1/4		1	15015
43	O-Ring 1/4 x 3/8		1	15011
44	O-Ring 3/8 x 9/16		2	15012
45	O-Ring 5/8 x 3/4		2	15013
46	Valve Piston		1	55025
47	Valve Body		1	55024
48	Valve Lever		1	55013
49	Pilot Valve Body		1	55014
50	O-Ring 1/8 x 1/4		1	15008
51	Pilot Valve Stem		1	55015
52	Spring		1	55016
53	O-Ring 5/16 x 7/16		1	15009
54	O-Ring 2-3/4 x 3-1/8		1	15017
55	Piston		1	55021
56	O-Ring 2-7/8 x 3		1	15016
57	Washer 5/16 I.D. Lock		1	15029
58	Piston Cap Screw		1	55022
59	Roll Pin 5/32 x 1		1	15005
60	Cap		1	55401

IDENT. NO.	PART NAME	QTY	PART NO.
61	Soc Hd. Cap Screw 1/4-20 x 1-1/4	1	15063
62	Magazine Bracket Spacer	1	55109
63	Magazine Rear Bracket	1	55420
64	Magazine Rear Bracket Plate	1	55426
65	Flex Nut 10-24	6	15044
66	Soc. Hd. Cap Screw 10-24 x 1/2	3	15226
67	Soc. Hd. Cap Screw 1/4-20 x 1	1	15022
68	Washer 1/4 I.D. x 1/16 Thick	7	15047
69	Anti-Backup Wheel	2	55429
70	Bearing Shaft	2	55428
71	Torrington One-Way Clutch	2	15236
72	Lever	2	55411
73	Wheel Arm Spring	2	55410
74	Lever Spacer	2	55412
75	Soc. Hd. Cap Screw 10-32 x 1/2	10	15021
76	Cylinder	1	55415
77	Piston	1	55416
78	Cylinder Cap	1	55417
79	Shoulder Screw 1/4 x 1	2	15234
80	Lever Lift	2	55427
81	O-Ring 7/16 x 5/8	1	15244
82	O-Ring 1/2 x 5/8	1	15243
83	Cylinder Spacer	1	55413
84	Soc. Hd. Cap Screw 10-32 x 7/8	4	15231
85	Soc. Hd. Cap Screw 1/4-20 x 1-1/2	2	15073
86	Washer #10 Lock	2	15033
87	Magazine Support Bracket	2	55408
88	Rail Cover	1	55407
89	Shoulder Screw 1/4 x 1-1/4	1	15235
90	Crank Lever	1	55423
91	Pawl	1	55409
92	Pawl Spring	1	55406
93	Spring Rod Guide	1	55424
94	Crank Spacer	1	55419
95	Crank	1	55418
96	Piston Pin	1	55414
97	Soc. Hd. Cap Screw 1/4-20 x 1-3/4	1	15078
98	Pusher Spring	2	55422
99	Spring Support Rod Assembly	1	55431
100	Spring Support Spacer	1	55425
101	Support Plate	1	55421
102	Magazine	1	55402
103	Cylinder Tube	1	55405
104	1/4 Tube Fitting	2	15331
105	3/8 Coupler Plug	1	15204
106	Street EL	1	15034

WARNING

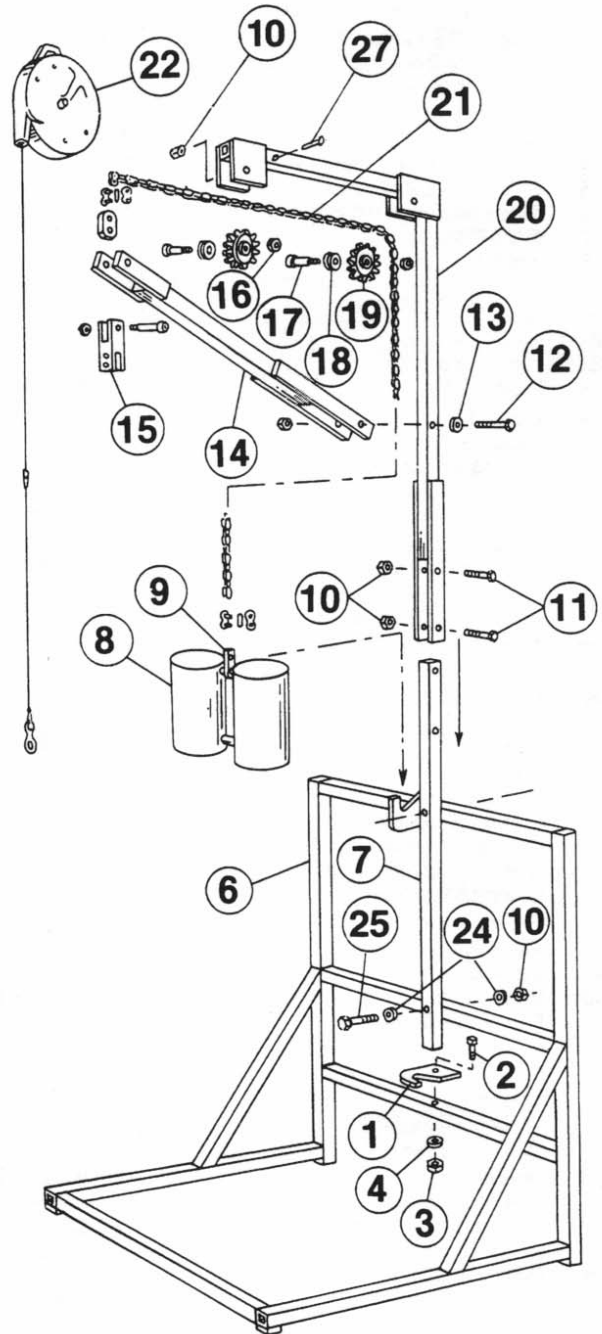
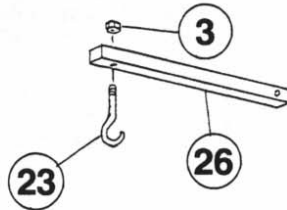
**Keep Fingers and Hands Away From Jaws
This Tool Squeezes with 2,000 Pounds of Force**

Instruct operators to use the Hartco Clinching Tool without placing hands or fingers near blade or anvil (jaws). Put wires only between blade and anvil. When clearing jams or repairing tool, be sure air is disconnected.

**NOTE: WHEN ORDERING ANY ITEM FROM THIS MANUAL,
PLEASE USE DESIGNATED PART NUMBER.**

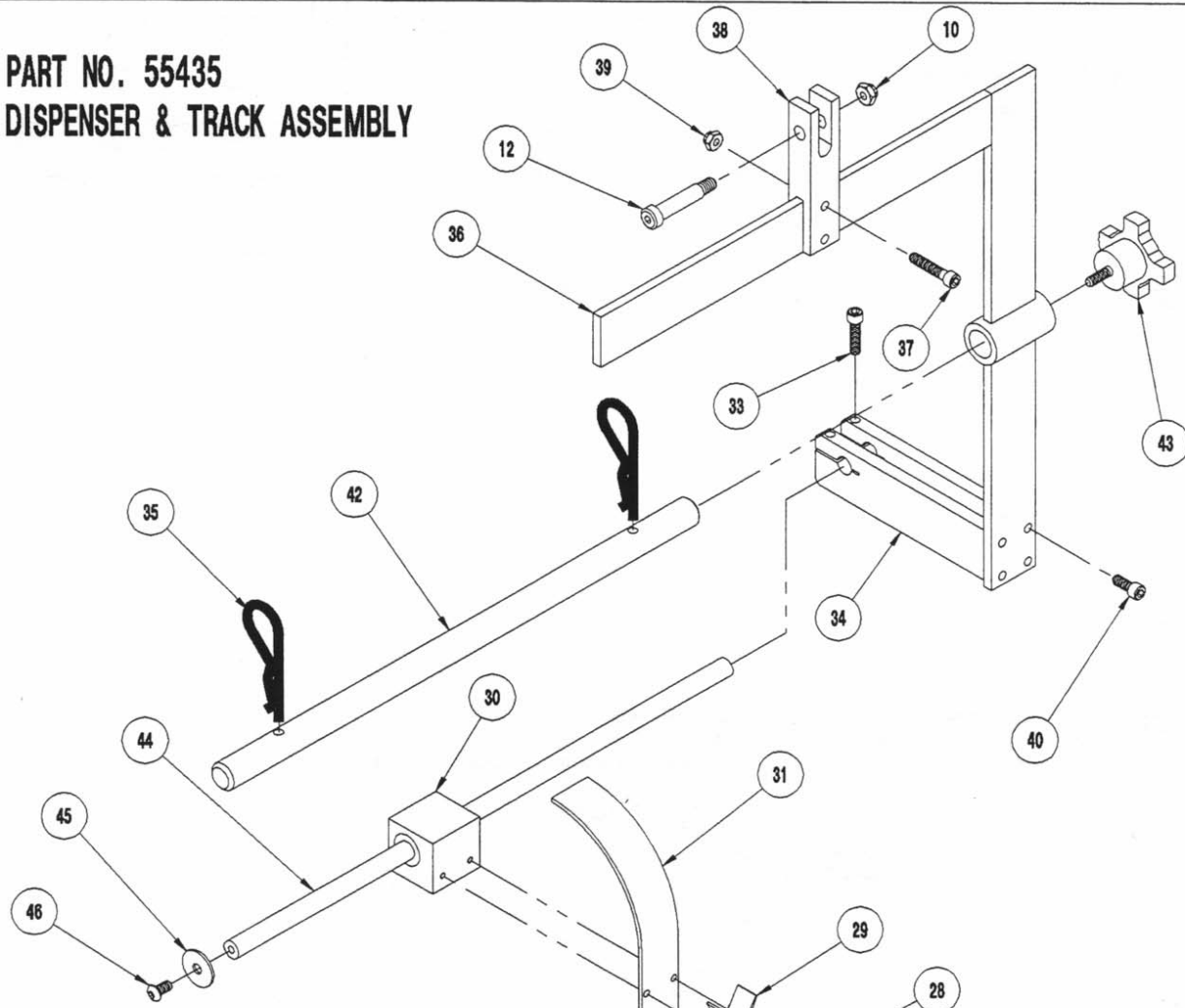
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PART NO. 55450 TOOL STAND ASSEMBLY



IDENT. NO.	PART NAME	QTY	PART NO.
1	Swing Latch	1	55455
2	Soc. Hd. Cap Screw 1/4-20 x 1-3/4	1	15078
3	Flex Nut 1/4-20	2	15023
4	Washer 1/4 I.D. x 1/16 Thick	1	15047
6	Clip Coil Stand	1	55462
7	Upright Bar	1	55461
8	Counter Weight	1	55456
9	Chain Link	2	55457
10	Flex Nut 5/16-18	7	15046
11	Soc. Hd. Cap Screw 5/16-18 x 2	2	15103
12	Shoulder Screw 3/8 x 1-1/2	2	15113
13	Washer 3/8 I.D. x 1/8 Thick	1	15240
14	Pivot Arm	1	55459
15	Pivot Link	1	55437
16	Flex Nut 3/8-16	2	15126
17	Shoulder Screw 1/2 x 1-1/4	2	15246
18	Washer 1/2 I.D. x 3/32 Thick	4	15242
19	Sprocket Assembly	2	55448
20	Split Upright Bar	1	55286
21	#40-1/2 Pitch Roller Chain x 10 ft.	1	15245
22	Balancer	1	15211
23	I-Hook 1/4-20 x 2-1/2	1	15779
24	Washer 5/16 I.D. x 1/16 Thick	4	15592
25	Soc. Hd. Cap Screw 5/16-18 x 3-1/2	2	15778
26	Balancer Extension	1	55995
27	Soc. Hd. Cap Screw 5/16-18 x 1-1/2	1	15082

**PART NO. 55435
DISPENSER & TRACK ASSEMBLY**



IDENT. NO.	PART NAME	QTY.	PART NO.	
10	Flex Nut 5/16-18	1	15046	
12	Shoulder Screw 3/8 x 1 1/2	1	15113	
27	Flex Nut 8-32	26	15020	
28	Sac. Hd. Cap Screw 8-32 x 1/4	30	15019	
*	29	Track Clip Guide	14	55436
	30	Track Carriage	1	55442
**	31	Clip Track	1	55440
	33	Sac. Hd. Cap Screw 1/4-20 x 1	2	15022
	34	Carriage Rod Bracket	2	55443
	35	Hair Pin	2	15525
	36	Clip Coil Dispenser	1	55449
	37	Sac. Hd. Cap Screw 1/4-20 x 1-1/4	2	15063
	38	Pivot Link	1	55437
	39	Flex Nut 1/4-20	2	15023
	40	Sac. Hd. Cap Screw 1/4-20 x 5/8	4	15028
	41	Clip Track Stiffener	1	55446
	42	Dispenser Shaft	1	56305
	43	Hand Knob	1	55982
	44	Bearing Block Guide Rod	1	56306
	45	Flat Washer 1/4 Wide	1	15595
	46	Sac. Button Hd. Cap Screw 1/4-20 x 1/2	1	15061

* Item 29 is P/N 55466 for wider than 7/16 clips
 ** Item 31 is P/N 55478 for wider than 7/16 clips

April 25, 1996

RECOMMENDED SPARE PARTS LIST
COIL CLIP SYSTEM

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
15000	4	BUTTON HEAD CAP SCREW
15001	2	SOCKET HEAD CAP SCREW
15004	1	DOWEL PIN
15010	2	O-RING
15013	2	O-RING
15014	2	O-RING
15015	2	O-RING
15021	2	SOCKET HEAD CAP SCREW
15023	4	FLEX NUT
15028	2	SOCKET HEAD CAP SCREW
15031	4	LOCK WASHER
15033	2	LOCK WASHER
15061	4	BUTTON HEAD CAP SCREW
15063	2	SOCKET HEAD CAP SCREW
15327	2	BUTTON HEAD CAP SCREW
15328	4	RING
55002	1	SIDE PLATE PIN
55018	1	PISTON PIN
55047	1	MAIN VALVE ASSEMBLY
55056	1	SHOULDER BOLT
55109	1	MAGAZINE BRACKET SPACER
55405	1	AIR CYLINDER TUBE
55406	1	PAWL SPRING
55436	2	CLIP TRACK CLIP GUIDE
55440	1	CLIP TRACK

It is highly recommended that at least one spare Blade and Anvil be kept on hand.

All of these parts can be purchased in one kit by ordering p/n 56024.

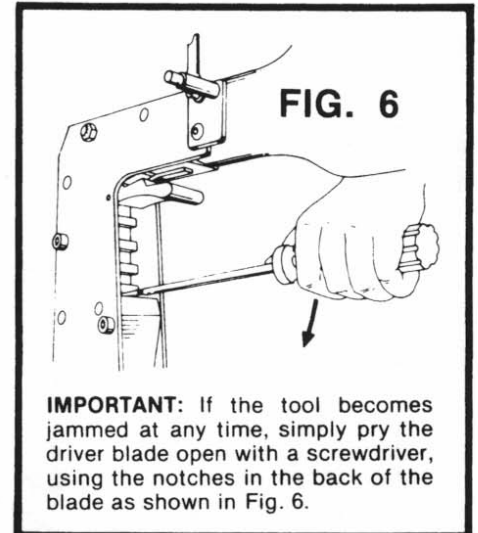
APPLICATION INFORMATION

COILED CLIP APPLICATION CHART FOR INNERSPRINGS (7/16" WIDE CLIPS)

COIL WIRE SIZES	BORDER WIRE SIZES				
	5 Ga. .207 (5.25mm)	6 Ga. .192 (4.87mm)	8 Ga. .162 (4.11mm)	9 Ga. .148 (3.76mm)	10 Ga. .135 (3.43mm)
17 Ga. .054 (1.37mm)			CC-13 CC-19	CC-13	
16½ Ga. .058 (1.47mm)			CC-13 CC-19	CC-13	
16 Ga. .062 (1.57mm)		CC-33	CC-13 CC-19	CC-13	CC-15
15½ Ga. .067 (1.70mm)		CC-33	CC-19	CC-13 CC-19	CC-15 CC-13
15 Ga. .072 (1.83mm)		CC-33	CC-19 CC-26	CC-19	CC-13 CC-15
14½ Ga. .076 (1.93mm)		CC-33	CC-26	CC-19 CC-26	CC-13
14 Ga. .080 (2.03mm)	CC-31	CC-32 CC-33	CC-26	CC-26	CC-13
13½ Ga. .086 (2.18mm)	CC-31	CC-32	CC-26	CC-26	
13 Ga. .092 (2.34mm)	CC-31	CC-32	CC-26	CC-26	
12¾ Ga. .095 (2.41mm)	CC-31	CC-32	CC-33	CC-26	
12½ Ga. .098 (2.49mm)	CC-31	CC-32	CC-33	CC-26	

TOOL APPLICATION

MODEL #	CLIP SIZE
M-50	CC-15 CC-13
M-49	CC-19 CC-26
M-48	CC-32 CC-33
M-44	CC-31



TROUBLE SHOOTING INFORMATION

PROBLEM	CAUSE	REMEDY
1. Tool does not fire.	Sticky main valve.	Lubricate and manually move main valve piston.
2. Sluggish Tool.	Dry main valve. Housing o-rings worn. Pilot valve o-ring sticking.	Lubricate. Replace. Replace and lubricate.
3. Clips not feeding.	Clips restricted in magazine or clip track. Blade does not return. Pawl spring broken. Anti-backup wheels not engaged.	Make sure clips feed freely. Replace housing o-rings, check piston screw. Replace. Lower wheels to engage clips.
4. Clip jamming.	Clips not feeding under blade. Wires placed in bottom of anvil.	Make sure clips feed freely in magazine and clip track. All remedies in #3. Push in and down with the tool to align the clip to the wires.
5. Loose clips.	Low air pressure. Tool cycle too fast. Worn anvil or blade. Clip placement.	Increase to 90 p.s.i. Tool requires full cycle. Replace. Center clip to coil and clip at tangent point.
6. Wire Tails or Burrs on clips.	Worn blade. (check for wear grooves on cutting edge.)	Replace.

HARTCO machines and clips are covered by one or more of the following U.S. patents as well as other foreign patents: 3,613,878; 3,641,656; 3,647,593; 4,062,087; 4,102,586; 4,189,523; 4,244,731. Other patents pending.

STANLEY HARTCO
Stanley Fastening Systems

UNITED STATES
7707 N. Austin Ave.
Skokie, IL 60077
TEL 847-967-1122
TEL 800-323-1484
FAX 847-967-9808