POP® Rivet Tool

ProSet® 3400 Series

Maintenance Manual

Emhart® Teknologies
POP®

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Introduction

POP® ProSet® 3400 tools are light weight, Air/Hydraulic rivet setting tools recommended for use with genuine POP® Brand Rivets per the following chart:

Rivet Type	Material (Body – Mandrel)	Rivet Diameter			
		1/8"(*) [3.2 mm]	5/32" (*) [4.0 mm]	3/16" (**) [4.8 mm]	1/4" (†) [6.4 mm]
Open End & MultiGrip™	Al – Al	✓	✓	✓	✓
	Al – St / SS	✓	✓	✓	✓
	St – St	✓	✓	✓	✓
	SS – SS; Mo – St /SS	✓	✓	✓	✓
Closed End	Al – Al	✓	✓	✓	✓
	Al – St / SS; Cu – St	✓	✓	✓	✓
	St – St	✓	✓	✓	✓
	SS – SS	✓	✓	✓	✓
LSR Rivets	Al – Al	✓	✓	✓(†)	NA
T - Rivet	Al – St	✓	✓	✓(†)	✓
Self Plugger	St – St	✓	✓	✓(†)	✓
HR™ Rivets	St – St	✓	✓	✓(†)	✖
HS Rivets	Al – Al; St – St,	NA	NA	NA	✓
Ultra-Grip®	Al – Al; St – St; SS – SS	NA	NA	✓(†)	✓

Al: Aluminum, St: Steel, SS: Stainless Steel, Cu: Cooper, Mo: Monel . (*) Use PRG540-46 Jaws and FAN276-064 Jaw Pusher set up. (**) Use PRG540-46 Jaws and DPN276-006 Jaw Pusher set up. (†) Use PRG540-44 Jaws and DPN276-006 Jaw Pusher set up.

Safety Instructions

TO INSURE PROPER FUNCTIONING AND SAFE OPERATION READ THIS MANUAL CAREFULLY BEFORE SETTING UP OR OPERATING THE POP® ProSet® 3400 SERIES TOOLS

1. **DO NOT** use this tool in a manner other than that recommended by Emhart Teknologies.
2. Always wear eye protection when using or when near a tool that is in use.
3. This tool is **NOT** designed for use in explosive atmospheres.
4. Inspect tool for damage before connecting to air supply including all air connections.
5. Trained personnel must perform tool repair and/or maintenance at the prescribed intervals.
6. Disconnect the air supply when adjusting, servicing or removing any part of the tool.
7. Keep fingers off the trigger when connecting the air supply or if the air supply fails.
8. Keep fingers away from the front of the tool when connecting the air supply or setting rivets.
9. **DO NOT** point the tool at anyone.
10. **DO NOT** operate tool with the Nose Housing removed.
11. **DO NOT** operate tool without the Deflector or Collector.
12. **DO NOT** modify the tool in any way. Modification will make void any applicable warranties and could result in damage to the tool or physical injury to the user.
13. **DO NOT** look into the tool from the front or the back during use or when connected to air supply.
14. The operating pressure must not exceed 100 psi (6.9 bar).
15. **DO NOT** direct tool exhaust towards anyone.
16. Wash hands if exposed to hydraulic fluid or lubricant.
17. Keep hair, fingers and loose clothing away from moving parts of the tool.

Specifications

	ProSet® 3400	ProSet® 3400MCS
Weight	4.19 lbs. (1.90 kg)	4.41 lbs. (2.00 kg)
Length	12.17” (309 mm)	13.15” (344 mm)
Height	12.44” (316 mm)	10.20” (316 mm)
Stroke	1.02” (26 mm)	1.02” (26 mm)
Air Consumption	0.172 cu. ft. per rivet (4.86 ℓ per rivet)	2.83 scfm (max.) (80 ℓ /min (max.))
Pulling Force	4160 lbs. @ 90 psi (18500 N @ 0.62 MPa)	
Noise Level	$L_{Aeq,T}$ = 78.5 dB(A), L_{WA} = 84.0 dB(A), L_{Peak} = 103.6 dB(C)	
Vibration Level	0.61 m/s^2, Time to 2.5 m/s^2 > 24hrs (EAV)	

Packaged Accessories

Qty	Item	ProSet® 3400	ProSet® 3400MCS	Part No.
1	ProSet® 3400 Rivet Tool	✓	✓	-
1	Operating Instructions	✓	✓	P449
1	Maintenance Manual	✓	✓	P551
1	Nosepiece for 4 size open end rivets	✓	✓	PRN414
1	Nosepiece for 5 size open end rivets	✓	✓	PRN514
1	Nosepiece for 6 size open end rivets	✓	✓	PRN614
1	Nosepiece for 8 size open end rivets	Installed	Installed	PRN811
1	Jaw Pusher (Assy) for 4&5 size rivets	✓	✓	FAN276-064
1	Air Line Assembly	✓	✓	FAN276-154
1	4 mm Hex. Socket Screw Key	✓	✓	DPN239-139
1	Warranty Card	✓	✓	FG2184

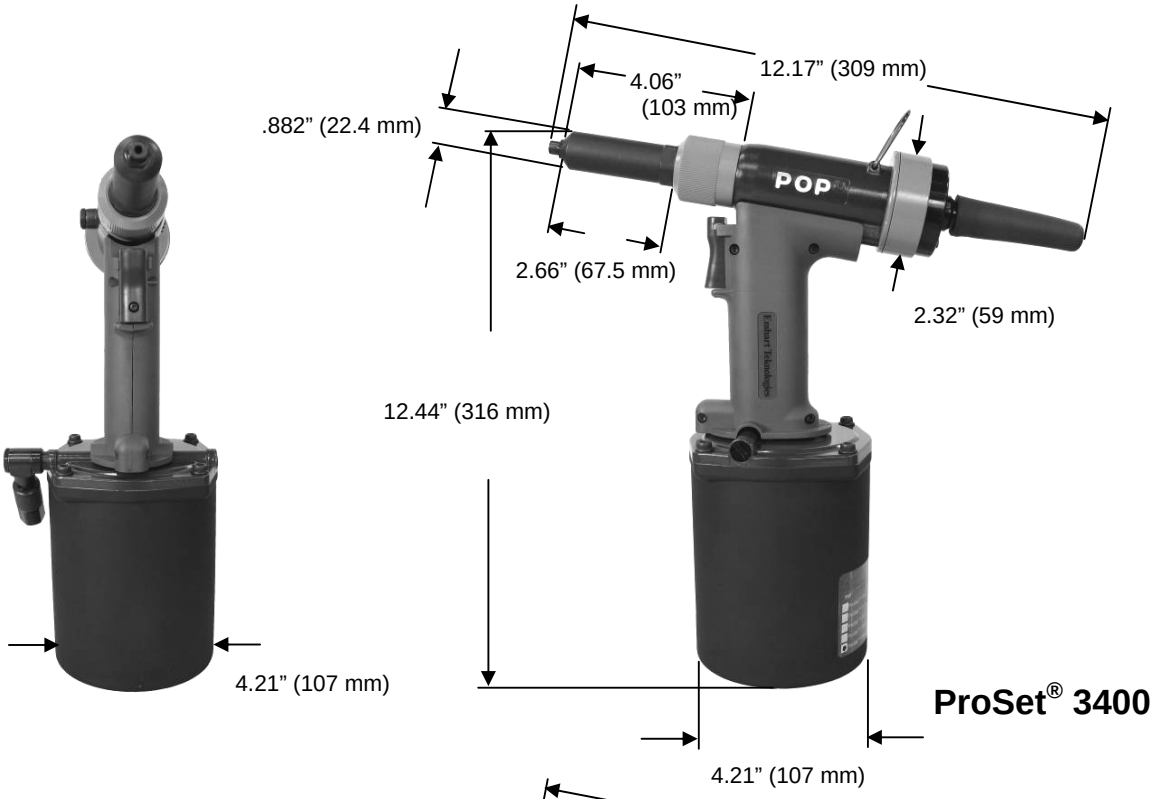
Tool Requirements

Air supply *	6 scfm (150 ℓ /min) Minimum
Recommended Operating Pressure	72.5-90 PSI (0.50-0.62 MPa) dry, filtered
Maximum Operating Pressure	100 PSI (0.69 MPa) dry, filtered
Hydraulic Oil **	POP® p/n: PRG540-130 [1 qt. (.945 ml)]
Jaw Lubricant **	POP® p/n: PRG510-130 [6 oz. (177 ml)]
Seal Lubricant **	POP® p/n: PSA075508P [1 ¾ oz. (54 g)]

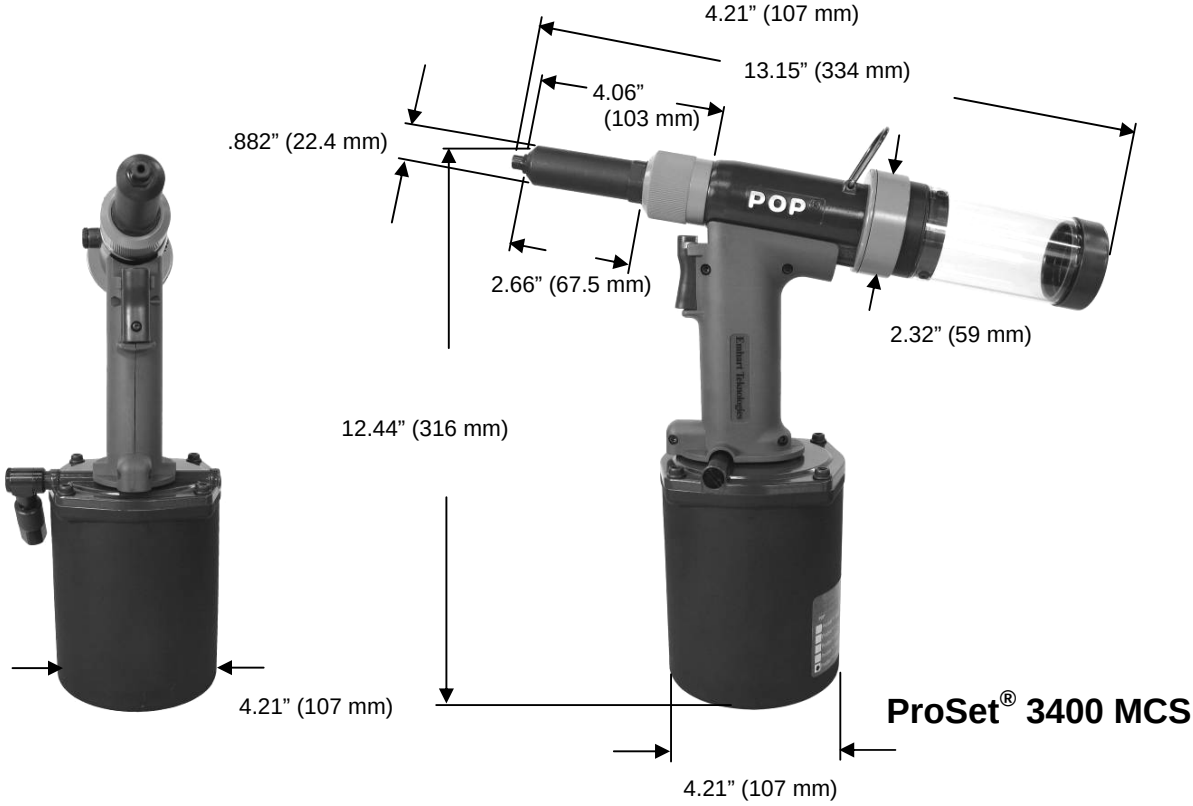
(*) Note: For best results and long service life, use dry, filtered air supply.

(**) Note: See lubricant safety information.

ProSet® 3400 Tool Dimensions



ProSet® 3400



ProSet® 3400 MCS

Common Nosepieces

Rivet Diameter	Open End	Closed End		HR Rivets		HS Rivets	Ultra-Grip®	Jaw Pusher
		Steel Mandrel	*Aluminum Mandrel*	*Aluminum Body*	*Steel Body*			
1/8" (3.2 mm)	PRN414*	PRN424	PRN434	PRN414*	PRN4HR	-	-	FAN276-064*
5/32" (4.0 mm)	PRN514*	PRN524	PRN534	PRN514*	PRN5HR	-	-	
3/16" (4.8 mm)	PRN614*	PRN624	PRN634	PRN614*	PRN6HR	-	N-406	DPN276-006*
1/4" (6.4 mm)	PRN811*	PRN822	-	PRN811*	-	PRN8PS	PRN8PS or N-407	

* Included with the tool

For T-Rivets use PRN625 nosepiece when using 3/16" (4.8mm) diameter rivets and PRN825 for ¼" (6.4mm) diameter rivets. For Monobolt® rivets use N-410 nosepiece for 3/16" (4.8mm) and N-414 for ¼" (6.4mm) diameter rivets.

Basic Tool Operation

Before operating the tool check the following:

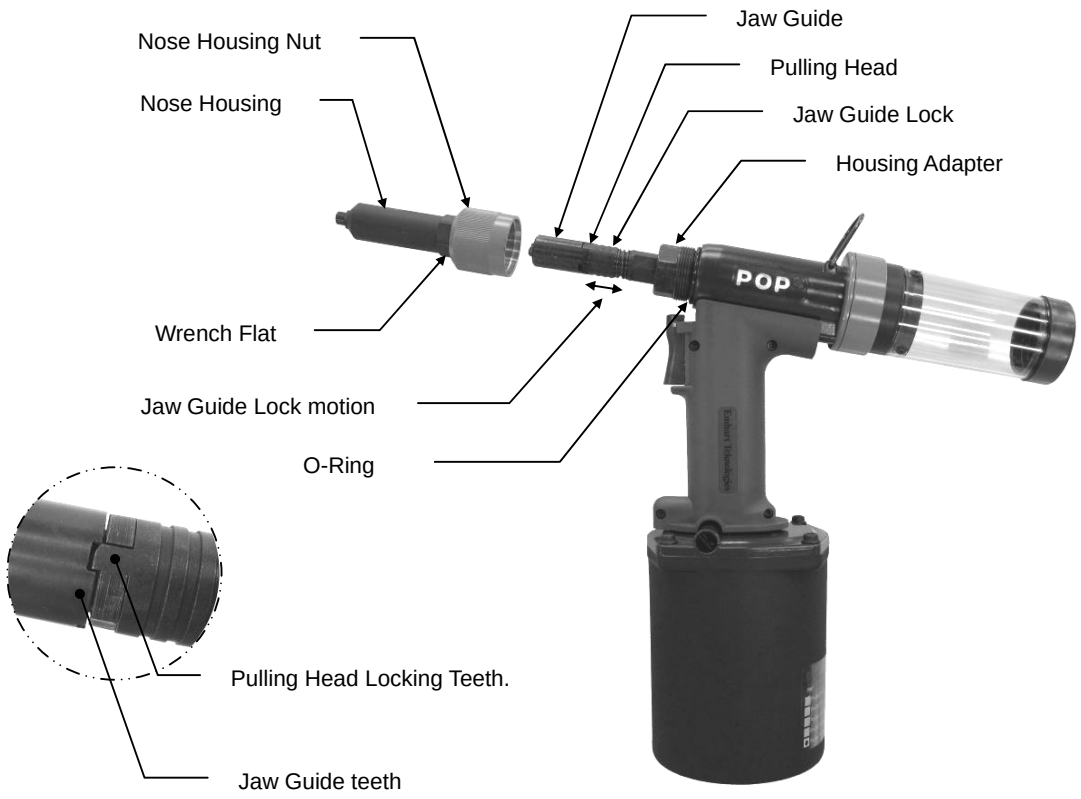
- Inspect tool for damage or leaking oil – **do not use tool if it is damaged or leaking oil.**
- Check that correct nosepiece is fitted and tightened to 60 - 65 in-lbs [6.8 – 7.3 N-m] torque.
- Check that the Nose Housing Nut (8) is tight – hand tighten only.
- Connect tool to air supply – see air supply requirements (page 4).
- Fit Mandrel Collector (113) – (MCS tool only).
- Open air supply valve by sliding red OS Slider (130) on side of tool (see note below).
- Insert rivet into nosepiece.
- Position rivet in work piece.
- Pull trigger to set rivet.
- Release trigger – if equipped, MCS suction will draw spent mandrel into the collector.

! **Note: The ProSet® 3400 has an OS (Open-Shut) Valve for switching the air supply ON and OFF to save air when the tool is not in use.**

Air Supply ON: Open OS Valve by sliding OS Slider in the direction shown (up).

Air Supply OFF: Close OS Valve by sliding OS Slider in the direction shown (down).

Front End Service



For optimum tool performance, Front-End maintenance should be performed regularly as per the “Preventative Maintenance Schedule”.

! Note: UNPLUG AIR SUPPLY while servicing front-end to avoid INJURY.

1. **REMOVE NOSE HOUSING:**

   Unscrew the Nose Housing Nut by hand and slide Nose Housing off the tool.

2. **REMOVE JAW GUIDE TO ACCESS JAWS AND INTERNAL PARTS:**

   Pull back the Jaw Guide Lock to disengage the Jaw Guide Lock teeth and unscrew and remove the Jaw Guide.
   Remove Jaws, Jaw Pusher, and Jaw Pusher Spring for servicing.

3. **CLEAN PARTS:**

   Clean Jaws, Jaw Guide, Jaw Pusher, Spring and thread area of the Pulling Head.
   Apply Seal Lubricant to outside surface of Jaws and inside surface of the Jaw Guide.

4. **REASSEMBLY OF INTERNAL PARTS AND JAW GUIDE:**

   Place the Jaws into the Jaw Guide and slide the Jaw Pusher Spring and Jaw Pusher into the Pulling Head.
   Apply a small amount of Seal Lubricant to the Pulling Head threads and Jaw Guide Lock teeth. Screw the Jaw Guide onto the Pulling Head until it stops. Check to make sure the teeth are engaged.

   Apply Jaw Lubricant to the Jaw area by submerging the assembled Jaw Guide into Jaw lube about 1 in. (25mm). Clean off excess Jaw Lube from the outside of the Jaw Guide.
   (! Make sure the air supply is disconnected !)

5. **REINSTALL NOSE HOUSING ASSEMBLY:**

   Refit the Nose Housing and hand-tighten the Nose Housing Nut securely against the O-Ring. If the nut is not tightened sufficiently against the O-Ring there may be a loss of suction on the MCS tool version.

Mandrel Collection System (MCS) – ProSet® 3400 MCS

For safety purposes, removing the Collector from the tool automatically turns the MCS suction OFF. Refitting the Collector turns the MCS suction ON.

MCS suction ON

MCS suction OFF

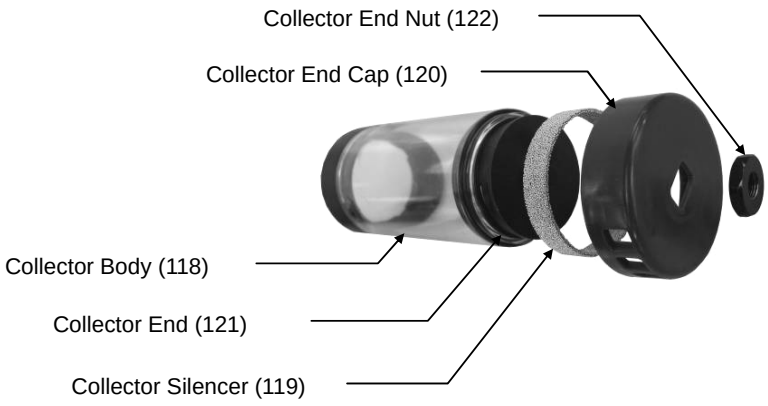
Cleaning the Collector Silencer

For optimum performance, the Collector Silencer should be cleaned at regular intervals as per the "Preventative Maintenance Schedule".

! **Note: UNPLUG AIR SUPPLY while servicing Collector to avoid INJURY.**

1. CLEAN THE COLLECTOR :

- Remove and empty the Collector (113) by turning counterclockwise.
- Remove the Collector End Nut (122) (17mm wrench) and remove the Collector End Cap (120).
- Remove the Collector Silencer (119).
- Clean and remove debris from all components.



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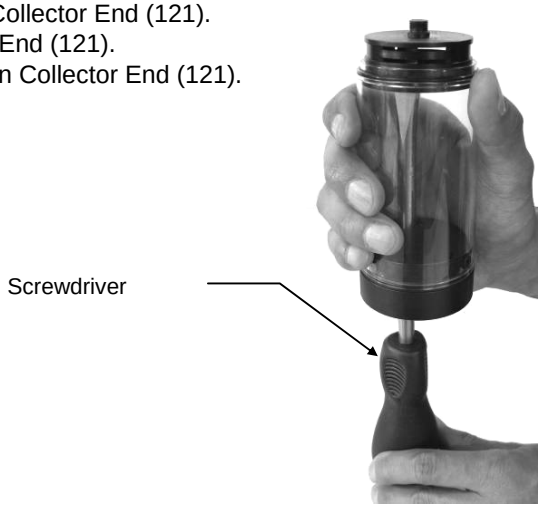
2. RE-ASSEMBLE THE COLLECTOR :

- Secure Collector End (121) to Collector Body (118). Use a screwdriver or similar tool to hold the Collector End in place during re-assembly (see picture below).
- Place the Collector Silencer (119) onto the Collector End (121).
- Place Collector End Cap (120) on Collector End (121).
- Install and tighten Collector End Nut (122) on Collector End (121).

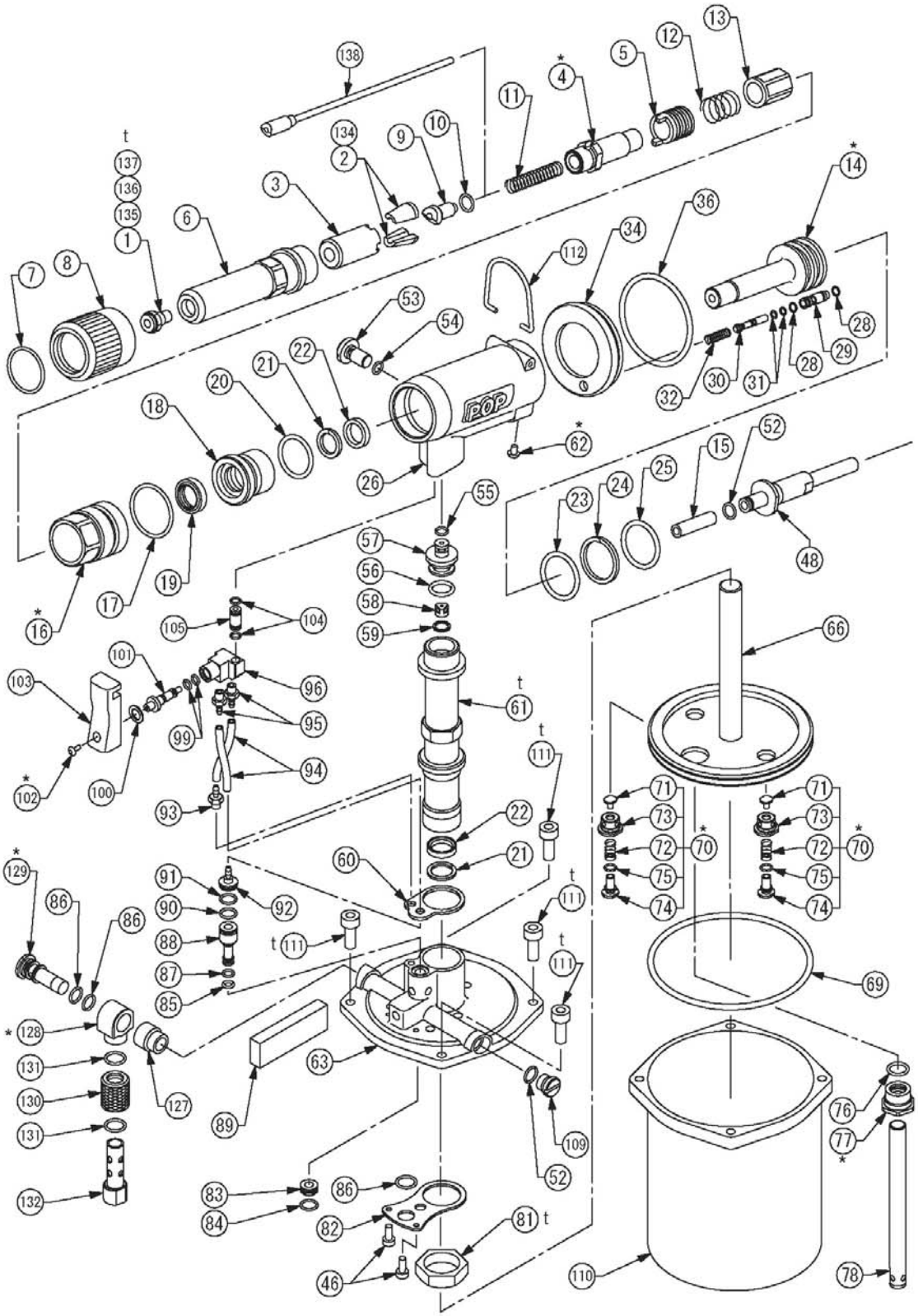


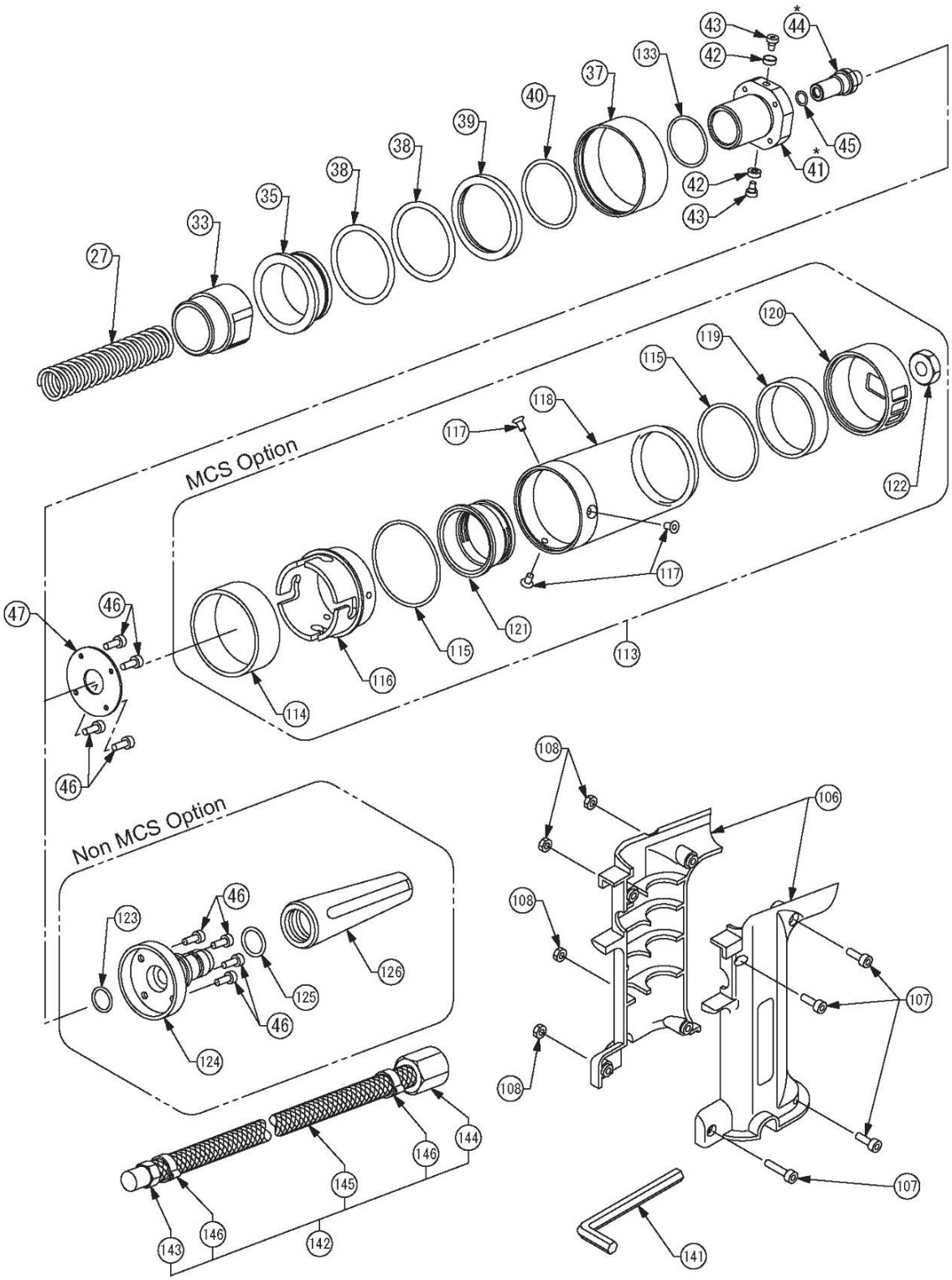
Tool Assembly Torque Requirements

Item	Part No.	Description	Torque Value
1	PRN811	Nosepiece 8 size	60 – 65 in-lbs (6.8 – 7.3 N-m)
137	PRN614	Nosepiece 6 size	
136	PRN514	Nosepiece 5 size	
135	PRN414	Nosepiece 4 size	
61	DPN276-031	Sleeve Lower	55 - 63 ft-lbs (75 - 85 N-m)
81	DPN276-043	Sleeve Lock Nut	44 - 52 ft-lbs (60 - 70 N-m)
111	DPN907-003	Socket Head Cap Screw	46 - 51 in-lbs (5.2 – 5.8 N-m)

See exploded **ProSet®** 3400/3400MCS Diagram

ProSet® 3400/3400MCS Diagram





(*) These items require Loctite® 242 adhesive.

(†) These items have a specific tightening torque as indicated in the “Tool Assembly Torque Requirements” table.

Parts List

Item	Part No.	Description	3400	3400 MCS
1	PRN811	Nosepiece	1	1
2	PRG540-44	Jaws	1	1
3	DPN276-001	Jaw Guide	1	1
4	DPN276-002	Pulling Head	1	1
5	DPN276-003	Jaw Guide Lock	1	1
6	DPN276-004	Nose Housing	1	1
7	DPN900-059	O-Ring	1	1
8	DPN276-005	Nose Housing Nut	1	1
9	DPN276-006	Jaw Pusher	1	1
10	DPN900-060	O-Ring	1	1
11	DPN901-019	Jaw Pusher Spring	1	1
12	DPN901-020	Spring	1	1
13	DPN276-007	Pulling Head Joint	1	1
14	DPN276-008	Hydraulic Piston	1	1
15	DPN276-009	Spacer Pipe	1	1
16	DPN276-010	Housing Adapter	1	1
17	DPN900-061	O-Ring	1	1
18	DPN276-011	Rod Seal Case	1	1
19	DPN908-015	Scraper	1	1
20	DPN900-062	O-Ring	1	1
21	DPN908-021	B.U-Ring	2	2
22	DPN908-022	Penta Seal	2	2
23	DPN900-063	O-Ring	1	1
24	DPN908-023	B.U-Ring	1	1
25	DPN900-064	O-Ring	1	1
26	DPN276-012	Handle Upper	1	1
27	DPN901-021	Return Spring	1	1
28	DPN900-065	O-Ring	2	2
29	DPN276-013	MCS Valve Case	1	1
30	DPN276-014	MCS Valve Rod	1	1
31	DPN900-066	O-Ring	2	2
32	DPN901-022	Spring	1	1
33	DPN276-015	End Cap Adapter	1	1
34	DPN276-016	MCS Cap Front	1	1
35	DPN276-017	Slider	1	1
36	DPN900-067	O-Ring	1	1
37	DPN276-019	MCS Cap Tail	1	1
38	DPN900-068	O-Ring	2	2
39	DPN276-018	Slider Pusher	1	1
40	DPN900-069	O-Ring	1	1
41	DPN276-020	End Cap	1	1
42	DPN276-061	Collar	2	2
43	DPN276-021	Collar Screw	2	2
44	DPN276-023	Ejector Guide	1	1
45	DPN900-013	O-Ring	1	1
46	DPN907-002	Socket Head Cap Screw	6	6
47	DPN276-024	End Cap Plate	-	1
48	FAN276-022	Ejector (Assembly)	1	1
52	DPN900-045	O-Ring	2	2
53	DPN239-047	Fill Screw	1	1
54	DPN900-007	O-Ring	1	1
55	DPN900-070	O-Ring	1	1
56	DPN900-036	O-Ring	1	1
57	DPN276-028	Sleeve Upper	1	1
58	DPN276-029	Restrictor	1	1
59	DPN902-002	Retaining Ring	1	1
60	DPN276-030	Upper Plate	1	1
61	DPN276-031	Sleeve Lower	1	1
62	DPN276-085	Pan Head Screw	1	1
63	FAN276-033	Handle Lower Assembly	1	1
66	FAN276-036	Air Piston Assembly	1	1
69	DPN900-071	O-Ring	1	1
70	FAN275-022	EXT Valve (Assembly)	2	2
71	DPN275-025	EXT Valve Head	2	2
72	DPN901-008	EXT Valve Spring	2	2
73	DPN275-024	EXT Valve Case	2	2
74	DPN275-023	EXT Valve Rod	2	2
75	DPN900-030	O-Ring	2	2
76	DPN900-072	O-Ring	1	1
77	DPN276-039	Tube Seal Case	1	1
78	FAN276-040	Tube Assembly	1	1
81	DPN276-043	Sleeve Lock Nut	1	1
82	DPN276-044	Bottom Plate	1	1
83	DPN276-045	J Valve Cap	1	1
84	DPN900-073	O-Ring	1	1
85	DPN900-012	O-Ring	1	1
86	DPN900-074	O-Ring	3	3
87	DPN900-035	O-Ring	1	1
88	DPN276-046	J Valve Rod	1	1
89	DPN239-069	EXT Silencer	1	1
90	DPN900-075	O-Ring	1	1
91	DPN900-076	O-Ring	1	1
92	DPN276-047	J Valve Fitting	1	1
93	DPN276-048	H.L Fitting	1	1
94	DPN276-049	Air Tube	2	2
95	DPN239-120	Fitting	2	2
96	FAN239-074	S Valve Case Assembly	1	1
99	DPN900-014	O-Ring	2	2
100	DPN902-001	Retaining Ring	1	1
101	DPN239-078	S Valve Rod	1	1
102	DPN906-001	Button Head Cap Screw	1	1
103	DPN239-150	Trigger	1	1
104	DPN900-015	O-Ring	2	2
105	DPN239-083	Connect Tube	1	1
106	DPN276-050	Handle R,L	1	1
107	DPN907-001	Socket Head Cap Screw	4	4
108	DPN239-086	Hexagon Nut	4	4
109	DPN276-051	Plug	1	1
110	DPN276-052	Chamber	1	1
111	DPN907-009	Socket Head Cap Screw	4	4
112	DPN276-063	Hook	1	1
113	FAN276-055	Collector (Assembly)	-	1
114	DPN276-056	Collector Lock Collar	-	1
115	DPN900-077	O-Ring	-	2
116	DPN276-057	Collector Lock	-	1
117	DPN903-001	Flat Head Cap Screw	-	3
118	DPN276-058	Collector Body	-	1
119	DPN276-059	Collector Silencer	-	1
120	DPN276-060	Collector End Cap	-	1
121	DPN276-062	Collector End	-	1
122	DPN239-152	Collector End Nut	-	1
123	DPN900-079	O-Ring	1	-
124	DPN276-080	Deflector Adapter	1	-
125	DPN900-022	O-Ring	1	-
126	PRG510-56	Deflector	1	-
127	DPN276-053	R Joint Spacer	1	1
128	DPN276-076	R Joint	1	1
129	DPN276-054	R Joint Adapter	1	1
130	DPN276-078	OS Slider	1	1
131	DPN900-078	O-Ring	2	2
132	DPN276-077	OS Joint	1	1
133	DPN900-080	O-Ring	1	1
		Accessories		
134	PRG540-46	Jaws	1	1
135	PRN414	Nosepiece 4 size	1	1
136	PRN514	Nosepiece 5 size	1	1
137	PRN614	Nosepiece 6 size	1	1
138	FAN276-064	Jaw Pusher (Assembly)	1	1
141	DPN239-139	HS Screw Key 4mm	1	1
142	FAN276-154	Air Line Assembly	1	1
143	DPN276-155	Air Line Fitting	1	1
144	DPN276-156	Hose Female Fitting	1	1
145	DPN276-157	Air Tube	1	1
146	DPN276-158	Ear Clamp	2	2

Optional Parts and Kits are also available separately.

Part No.		Description	
FAN276-075		**ProSet® 3400 Font End Extension Kit – 7.9" length**	
		Contains:	
2	*PRG540-44*	*Jaws*	1
3	*DPN276-001*	*Jaw Guide*	1
5	*DPN276-003*	*Jaw Guide Lock*	1
7	*DPN900-059*	*O-Ring*	1
8	*DPN276-005*	*Nose Housing Nut*	1
9	*DPN276-006*	*Jaw Pusher*	1
10	*DPN900-060*	*O-Ring*	1
11	*DPN901-019*	*Jaw Pusher Spring*	1
12	*DPN901-020*	*Spring*	1
	DPN276-067	*Nose Housing*	1
	DPN276-068	*Pulling Head Extension*	1
	DPN276-069	*Pulling Head Joint*	1
	FAN276-072	*Jaw Pusher (Assembly)*	1
FAN276-152		**ProSet® 3400/3400MCS Seal Kit**	
		Contains:	
7	*DPN900-059*	*O-Ring*	1
17	*DPN900-061*	*O-Ring*	1
19	*DPN908-015*	*Scraper*	1
20	*DPN900-062*	*O-Ring*	1
21	*DPN908-021*	*B.U-Ring*	2
22	*DPN908-022*	*Penta Seal*	2
23	*DPN900-063*	*O-Ring*	1
24	*DPN908-023*	*B.U-Ring*	1
25	*DPN900-064*	*O-Ring*	1
45	*DPN900-013*	*O-Ring*	1
54	*DPN900-007*	*O-Ring*	1
69	*DPN900-071*	*O-Ring*	1
76	*DPN900-072*	*O-Ring*	1
86	*DPN900-074*	*O-Ring*	2
131	*DPN900-078*	*O-Ring*	2

Part No.		Description	
FAN276-165		**ProSet® 3400 MCS Retrofit Kit**	
		Contains:	
47	*DPN276-024*	*End Cap Plate*	1
113	*FAN276-055*	*Collector Assembly*	1
FA203-408		**Remote MCS (MCS5000) Adaptor Kit for 4, 5 & 6 Size Rivets**	
		Contains:	
	MCS5000-78	*Adapter Cap*	1
	MCS5000-81	*Strain Relief*	1
	PRT5250-24	*Tapered Bushing 4 size rivets*	1
	PRT5250-26	*Tapered Bushing 5 & 6 size rivets*	1
	PRT5250-98	*Fitting for 5 & 6 size rivets*	1
	PRT5250-99	*Fitting for 4 size rivets*	1
FA203-414		**Remote MCS (MCS5000) Adaptor Kit for 8 Size Rivet**	
	MCS5000-23	*3/8" Hose Fitting*	2
	MCS5000-24	*3/8" Hose – 15ft*	1
	MCS5000-78	*Adapter Cap*	1
PRH840-3400		**PRH840 Corner Head Adaptor**	
	DPN276-081	*Corner Head Adapter*	1
	DPN276-082	*Draw Bolt*	1
	DPN905-008	*Socket Set Screw*	3
	PRH840-19	*Draw Bolt Pin*	1
PRH850-3400		**PRH850 Corner Head Adaptor**	
	DPN276-083	*Corner Head Adapter*	1
	DPN276-084	*Draw Bolt*	1
	DPN905-008	*Socket Set Screw*	3
	PRH850-19	*Draw Bolt Pin*	1
RP4-501		**RP4/RP5 Receptacle for ProSet® 3400**	
RP6-501		**RP6 Receptacle for ProSet® 3400**	

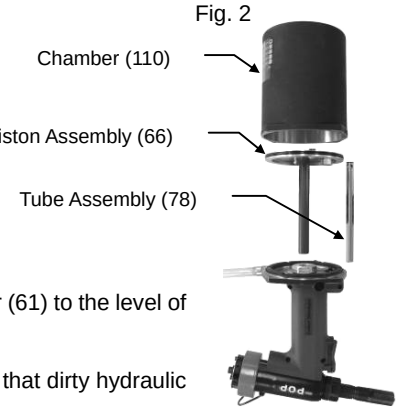
Hydraulic Oil Charging Procedure

! IMPORTANT. TOOL MUST BE DISCONNECTED FROM THE AIR SUPPLY. USE ONLY APPROVED HYDRAULIC OIL SPECIFIED IN THIS MANUAL.

Fig. 1

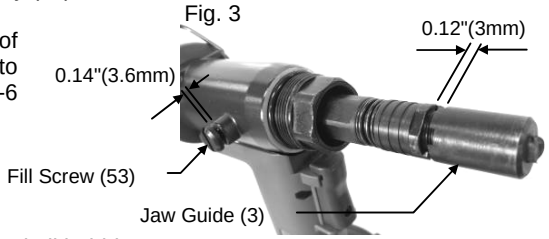
1. Disconnect from air supply.
2. Remove Nose Housing (6) and Collector (113).
3. Remove four Socket Head Cap Screws (111) using 4mm Hex-Key wrench (141-accessory). (Fig. 1)
4. Turn tool upside down and remove Chamber (110).
   Then pull out Air Piston Assembly (66) and Tube Assembly (78). (Fig. 2)

Fig. 2



5. Drain the oil from the tool into a waste oil container.
6. Clean the dirt off the Air Piston Assembly (66) and inner Chamber (110) with a clean rag.
   Apply a thin layer of Seal Lubricant to inner Chamber.
7. Loosen Jaw Guide (3) approximately 3 full turns or a 0.12" (3mm) gap and loosen Fill Screw (53) approximately 3 - 3½ full turns or a 0.14"(3.6mm) gap (Fig. 3).
8. Secure the tool upside down again and pour hydraulic oil into Sleeve Lower (61) to the level of the Backup Ring (white part) (21). (Fig. 4)
9. Push Air Piston Assembly (66) into Sleeve Lower (61) to half-way point so that dirty hydraulic oil and air bubbles will come out from the loosened Fill Screw (53).
   Hold Air Piston Assembly until no more oil or bubbles come out. (Fig. 5)
10. Loosely tighten Fill Screw (53) and pull out Air Piston Assembly (66).

Fig. 3



11. Pour more hydraulic oil into Sleeve Lower (61) to the level of the Backup Ring and push Air Piston Assembly (66) into Sleeve Lower (61). Push Air Piston inwards then outwards 5-6 times in a slow, constant motion.
    Then pull it out and check for bubbles rising to the oil surface.
    If there are still bubbles, repeat the procedure until there are no more bubbles (Fig. 6).
    It may be necessary to repeat this procedure 2-3 times to bleed all bubbles from the oil.
    If after 3 attempts, there are still bubbles in the oil, go back to step No.5 and start again by draining the hydraulic oil.

Fig. 4

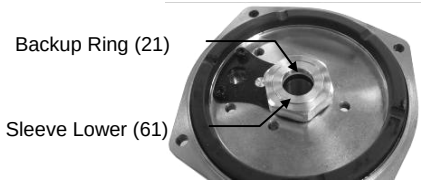


Fig. 5

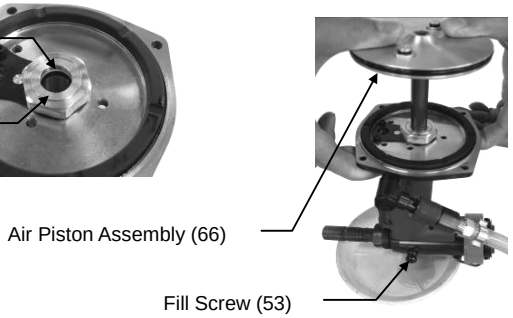
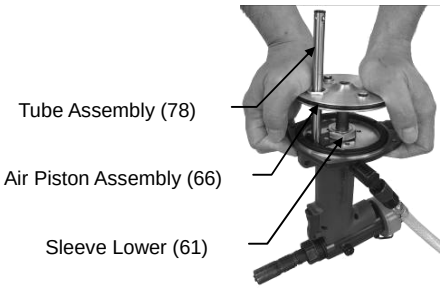


Fig. 6



12. When there are no more bubbles in the oil, top off the hydraulic oil in the Sleeve Lower (61) to the level of the Backup Ring (21).

13. Make sure the Jaw Guide (3) is loose (see step No.7). Push the Air Piston Assembly (66) and Tube Assembly (78) into the Sleeve Lower (61) to the half-way point. While holding the Air Piston at the half-way point, replace the Nose Housing and hand tighten.

14. With a clean rag, wipe off any oil on the Air Piston Assembly (66), Handle Lower Assembly (63), and Sleeve Lower (61). Put Chamber (110) over Air Piston Assembly (66) then turn the tool upright and tighten the four Socket Head Cap Screws (111) to a Torque of 65 - 75 in-lbs (7.5 – 8.5 N-m).

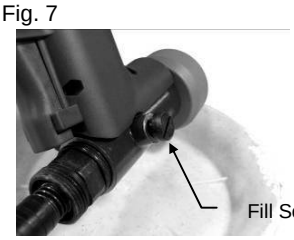
15. Remove the Nose Housing (6), and tighten the Jaw Guide (3) by hand until it stops.

16. Loosen the Fill Screw (53) approximately 3 - 3½ full turns or a 0.14"(3.6mm) gap to allow excess hydraulic oil and bubbles to escape. When no more oil comes out, tighten the Fill Screw (Fig. 7).

17. Wipe off any dirt and oil on the tool.

18. Replace the Nose Housing (6) and Collector (113).

Fig. 7



Note: During assembly and disassembly, do not allow any metal swarf or dirt into the Hydraulic Oil and inner Chamber.

Maintenance

Preventative Maintenance Schedule		
Item	**Action**	**Frequency**
Clean and lubricate Front End of tool	See “Front End Service”	1 x per day or 5,000 rivet settings.
Inspect jaws	Look for broken jaws and damage or wear on jaw teeth.	During “Front End Service” or when jaws slip on mandrel.
Collector	Empty Collector	When the quantity of stored spent Mandrels starts to interfere with mandrels entering the Collector. (Storage quantity depends on rivet – approx. 50-60 1/4” (6.4mm) rivets).
	Clean Collector Silencer	Once a week or when MCS suction will not pull spent mandrels into the Collector.

Note: Only use Emhart specified greases and lubricants

Safety Data

SEAL LUBE *(P/N: PSA075508P)*

LUBRIPLATE® 130-AA

Manufactured by:
Fiske Brothers Refining Co.
Phone: (419) 691-2491
Emergency: (800) 255-3924

ALVANIA® EP Grease 1

Prod Code: 71124
Manufactured by:
Shell Oil Products
Phone: (877) 276-7285
MSDS#: 57072E-5

First Aid:
SKIN:
Remove any contaminated clothing and wash with soap and warm water. If injected by high pressure under skin, regardless of the appearance of its size, contact a physician IMMEDIATELY. Delay may cause loss of affected part of body.

INGESTION:
Call a physician immediately. Do not induce vomiting.

EYES:
Flush with clear water for 15 minutes or until irritation subsides. If irritation persists, consult a physician.

Fire:

FLASH POINT: COC- 400°F

Cool exposed containers with water. Use foam, dry chemical, carbon dioxide or water spray.

Environment:
WASTE DISPOSAL:
Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste disposal facility or site.

SPILLAGE:
Scrape up grease, wash remainder with suitable petroleum solvent or add absorbent.

Handling/ Storage:
Keep containers closed when not in use. Do not handle or store near heat, sparks, flame or strong oxidants.

Lubriplate® is a registered trademark of Fiske Brothers Refining Company.

JAW LUBE *(P/N: PRG510-130)*

SUNPAR 107

Manufactured By:
Sunoco, Inc.
Emergency Phone: (800) 424-9300

First Aid:
SKIN:
Wash with soap and water until no odor remains. If redness or swelling develops, obtain medical assistance. Wash cloths before reuse.

INGESTION:
Do not induce vomiting! Do not give liquids! Obtain emergency medical attention. Small amounts that accidentally enter mouth should be rinsed out until taste of it is gone.

EYES:
Flush with water.

Fire:

FLASH POINT: Greater than 200°F

Can be made to burn. Use water spray, regular foam, dry chemical or carbon dioxide.

Environment:
WASTE DISPOSAL:
Do not flush to drain or storm sewer. Contract authorized disposal service.

SPILLAGE:
Contain Spill. Absorb onto inert material. Shovel, sweep or vacuum spill.

Handling/ Storage:
NFPA Class IIIB Storage. Avoid prolonged breathing of mist or vapor. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling.

Please refer to the actual MSDS for complete safety and handling information. These can be obtained from the point of purchase.

HYDRAULIC OIL *(P/N: PRG540-130)*

MOBIL DTE 26

Manufactured By:
ExxonMobil Corporation
Emergency Phone: (609) 737-4411
MSDS Fax on Demand:
(613) 228-1467 MSDS # 602649-00

Shell TELLUS 68

Manufactured By:
SOPUS Products
Health Information: (877) 504-9351
MSDS Assistance:
(877) 276-7285 MSDS # 402288L-0

Distributed By:
Emhart Teknologies
Phone: (203) 924-9341

First Aid:
SKIN:
Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention.

INGESTION:
Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention.

EYES:
Flush with water. If irritation occurs, get medical attention.

Fire:

FLASH POINT: 390°F/198.9°C

Material will float and can be re-ignited on the surface of water. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO_2) to extinguish flames. Do not use a direct stream of water.

Environment:
SPILLAGE:
Soak up residue with an absorbent such as clay, sand or other suitable material. Place in a non-leaking container and seal tightly for proper disposal.
Handling:
Wash with soap and water before eating, drinking, smoking, applying cosmetics or using toilet. Properly dispose of leather articles such as shoes or belts that cannot be decontaminated. Use in a well ventilated area.
Storage:
Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Troubleshooting

Symptom	Probable Cause	Remedy
TOOL FAILS TO OPERATE	Tool not connected to air supply. OS Valve is in “OFF” position. Insufficient air pressure. Air pressure is too high. Tool is low on hydraulic fluid.	Connect to recommended air supply source. Slide OS Valve to ON position. Adjust air supply pressure. Adjust air supply pressure. Service tool by qualified service personnel.
TOOL NOT RETURNING	Possible jam due to debris in Nose Housing.	Perform “Front End Service” and check for debris or damage.
TOOL LOSING STROKE	Tool low on hydraulic fluid.	Service tool by qualified service personnel.
JAWS SLIPPING ON MANDRELS	Jaws dirty or need lubrication. Jaws worn.	Clean and lube jaws. Replace jaws.
JAWS FAIL TO OPEN	Dirty Nose Housing, Jaws or Jaw Guide. Nose Housing or Nosepiece loose. Excess hydraulic oil in tool.	Perform “Front End Service” and clean inside of Nose Housing. Tighten Nose Housing or Nosepiece. Service tool by qualified service personnel.
MANDREL STICKING IN JAWS	Jaws dirty or need lubrication.	Perform “Front End Service” to clean and lubricate Jaws.
RIVET FAILS TO INSERT INTO NOSEPIECE	Incorrect nosepiece. Shear ring stuck in hole of nosepiece.	Install correct nosepiece. Remove shear ring, check for the correct Nosepiece and review application parameters to ensure proper riveting.
RIVET MANDREL DOES NOT BREAK	Rivet not fully set. Mandrel break load requirement too high. Insufficient air pressure.	Repeat stroke required, or change rivet. Upgrade tool. Adjust air supply pressure to recommended level.
MCS NOT WORKING	Tool not connected to air supply. Collector not tight or missing. Mandrel path blocked.	Connect to recommended air supply source. Check Collector. Clear mandrel path.
LOW VACUUM	Dirty Collector Silencer. Collector is full of mandrels. Insufficient air pressure.	Clean or change Collector Silencer. Discard the mandrels. Adjust air supply pressure.

EC Declaration of Conformity

We, Emhart Teknologies

Tucker Fasteners Limited
Birmingham B42 1BP
United Kingdom.

Declare that:

ProSet® 3400
ProSet® 3400 MCS

Conforms to the following standards:

EN ISO 12100 part 1 and part 2
ISO 3744
ISO prEN 792 part 1
EN ISO 4871
ISO prEN 15744
EN 28662 - 1
EN 12096

Following the provisions of the Machine Directive 98/37/EEC which replaces Directive 89/392/EEC and its amending Directives 91/368/EEC, 93/44/EEC and 93/68/EEC.

Signed: _____
Eymard Chitty, Vice President, R&D

Birmingham
1st. July 2008

Notes

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