

*Revised 7*

FOR RECORD ONLY  
NOT INCLUDED IN

DESCRIPTION REGULAR SERVICE 10-21-59  
MANUAL MAILING JNA

The Alemite Model 6594 Gun handles all types of light bodied, heavy bodied and viscous lubricants normally used for high pressure lubrication points. It includes a pipe extension and coupler assembly for lubricating bearings equipped with Hydraulic Fittings, which are standard on a large majority of vehicles and machines. Accessory adaptors suggested for use with Model 6594 Gun are as follows:

DESCRIPTION	ALEMITE NO.	ORDNANCE NO.
Adaptor, Extension Hose	6248	B-300333
Adaptor, 90° Angle	6238	B-300346
Adaptor, Hydraulic to Pin Type	5329	A-348864
Adaptor, Hydraulic to Button Head	6832-A	A-348865
Adaptor, Hydraulic to Push Type	6344	A-349744

This Model 6594 Gun, plus the above listed adaptors, makes up a convenient high pressure lubricating outfit for Field Service.

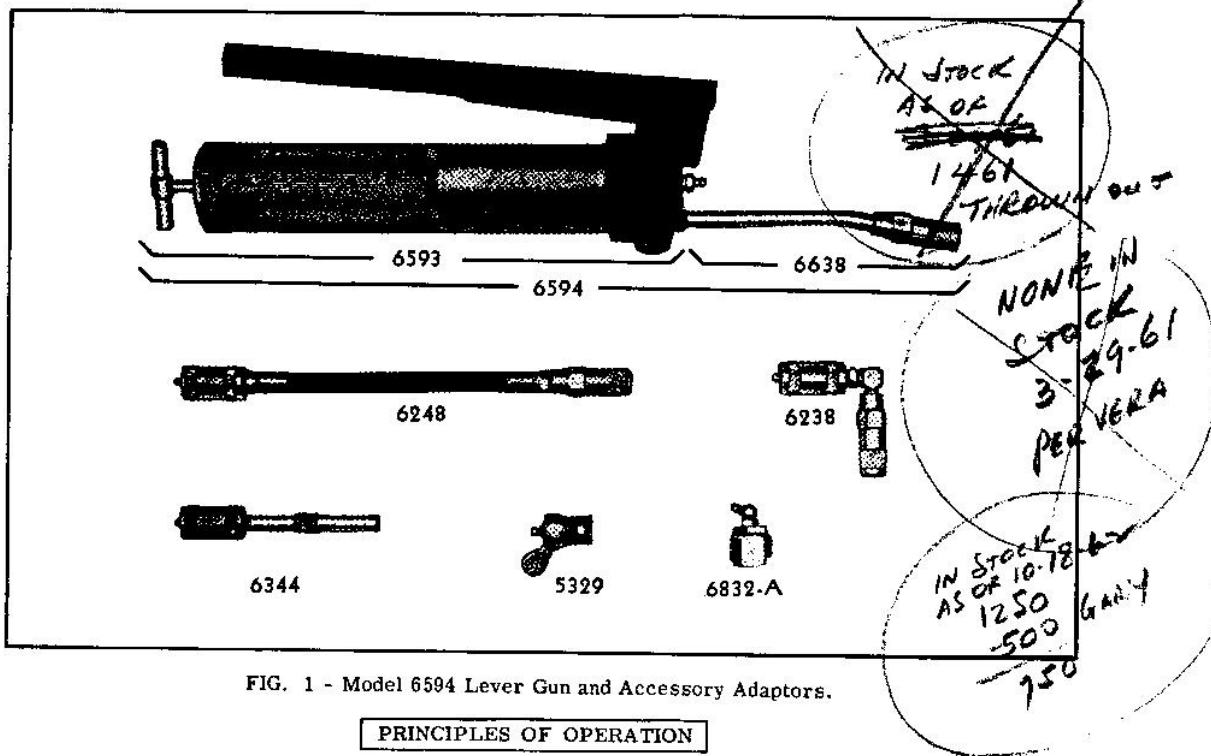


FIG. 1 - Model 6594 Lever Gun and Accessory Adaptors.

**PRINCIPLES OF OPERATION**

The Model 6594 Gun (Fig. 2) delivers lubricant at pressure of up to 7000 lbs. per square inch in the following manner:

When the upstroke of the piston "A" is made (by manually raising gun lever) atmospheric pressure on the back of the follower "B" forces lubricant through port "C" filling cylinder below piston (due to vacuum created in cylinder by upstroke piston).

On the downstroke, piston "A" seals port "C" and

drives the lubricant downward forcing the spring loaded ball check "D" open. The lubricant is then forced out port "E" through the pipe extension, coupling and fitting into the bearing. As the next upstroke of the piston "A" is started, lubricant pressure on the ball check "D" is released permitting check to close. Further upward movement of the piston creates a vacuum in the cylinder until the end of the piston reaches port "C", allowing atmospheric pressure to again force lubricant into the cylinder as described in above paragraph.

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(This automatic priming may, in some cases, have to be supplemented with manual priming. To accomplish this, the cross pin "F" at the lower end of the follower rod is engaged in the bayonet coup-

ling "G" attached to the follower, and positive priming is accomplished by applying force on the handle "H".)

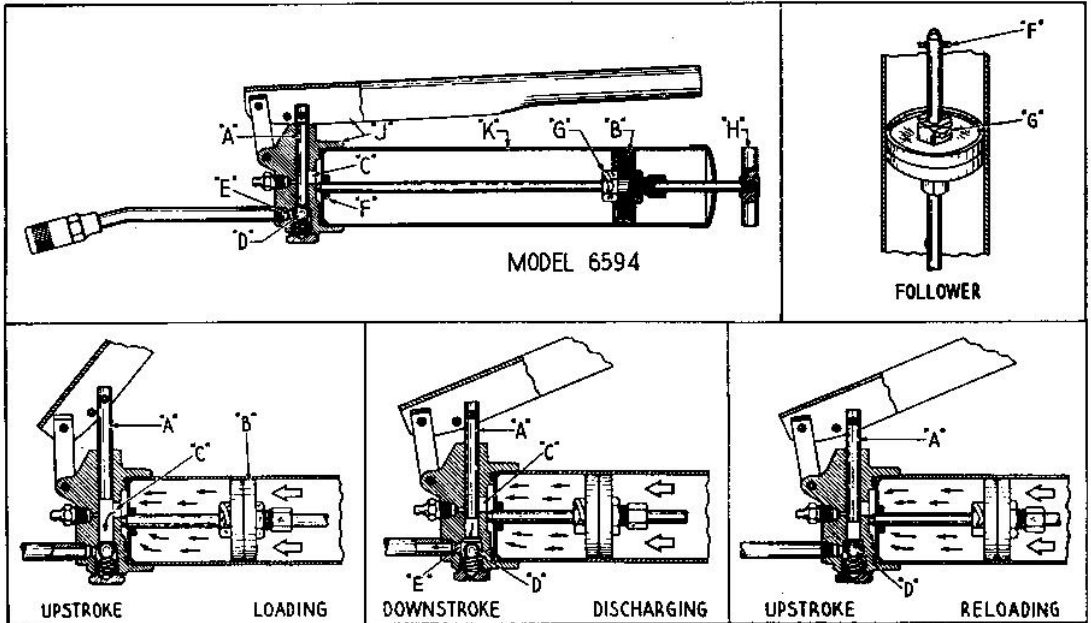


FIG. 2 - Operation of the 6594 Gun.

PREPARATION FOR OPERATION

1. Filling 6594 Gun

The 6594 Gun may be filled by two methods: (1) By means of a separate lubricant pump (Fig. 3); and (2) by suction (Fig. 4).

METHOD 1 - Filling gun by means of separate lubricant pump.

- a. Engage cross pin "F" (Fig. 2) at lower end of follower rod with bayonet coupling "G" of follower. This is accomplished by pulling back on handle "H" and turning handle counter-clockwise until pin is seated firmly in the follower coupling (see Fig. 2).

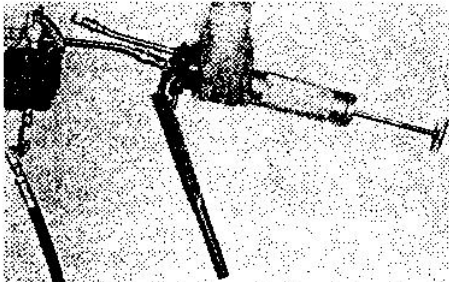


FIG. 3 - Filling 6594 Gun by means of a separate lubricant pump.

- b. Push handle "H" forward until follower reaches end of stroke.
- c. Hold the gun so that the lever arm falls into position when the piston is pulled out to a full stop (Fig. 3).

CAUTION: Gun cannot be filled unless piston clears port "C" (Fig. 2).

- d. Connect control valve of lubricant pump to hydraulic fitting on cylinder head of lever gun (Fig. 3).
- e. Open control valve, permitting lubricant to be pumped into gun until cylinder is full as indicated by handle being forced out to a full stop. Then stop pump. Continued pumping will cause grease to leak out at coupling.

METHOD 2 - Filling the gun by suction:

- a. Unthread head and lever "J" from the cylinder "K" (Fig. 2).
- b. Engage follower (see Method 1), paragraph (a) this section) and push follower rod in, to a full stop, so that follower is at open end of the cylinder "K" (Fig. 2).

- c. Place open end of the cylinder into surface of lubricant approximately two inches (Fig. 4). Then pull follower rod slowly all the way out, drawing the lubricant into the cylinder.

**CAUTION:** Care should be taken to keep open end of cylinder beneath surface of lubricant when filling to avoid formation of air pockets. Also, make sure that lubricant is absolutely clean.



FIG. 4 - Filling the 6594 Gun by suction.

- d. After filling, wipe off all excess grease on outside of cylinder.
- e. Replace head and lever assembly.

2. Manual Priming.

- a. Place follower rod on flat surface and move lever arm back and forth, (one full stroke each time) while pressing down on follower rod, until grease is delivered. Do not bend the follower rod.

**NOTE:** If gun ceases to deliver lubricant before it is empty, repeat the above operation.

- b. Disengage follower rod (turn in clockwise direction) and push rod into operating position (Fig. 5). Gun is now ready to use.

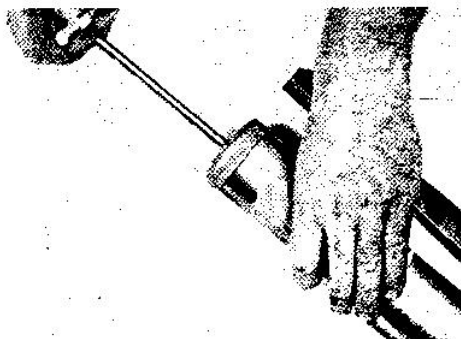


FIG. 5 - Pushing Follower Rod into place in the cylinder of the 6594 Gun.

**HOW TO OPERATE**

1. To Lubricate Hydraulic Fittings:

- a. Clean Hydraulic Fitting.
- b. Push Hydraulic Coupling onto Hydraulic Fitting (Fig. 6).

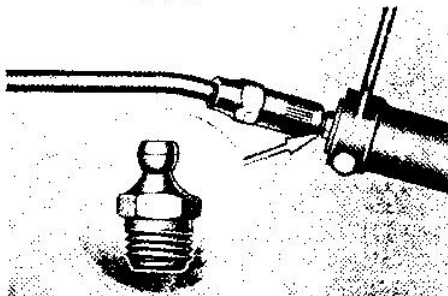


FIG. 6 - Model 6594 Gun used on Hydraulic Fitting.

- c. Operate gun lever up and down until bearing is lubricated.
- d. Remove coupling from fitting by pulling up to one side (Fig. 7).

2. To lubricate Hydraulic Fittings that cannot be reached with regular pipe extension and coupler assembly furnished on 6594 Gun:

- a. Attach accessory adaptor to Hydraulic Coupling. Two adaptors are available for use with the 6594 Gun:

6248 Adaptor - Figure 8

6238 Adaptor - Figure 9

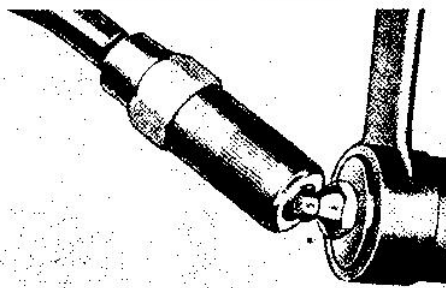


FIG. 7 - Disengaging the 6594 Gun from Hydraulic Fitting.

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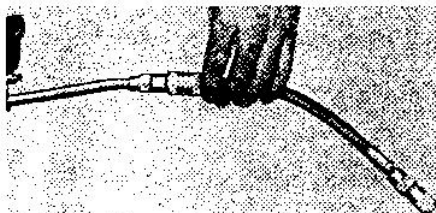


FIG. 8 - Placing the 6248 Adaptor (Extension Hose) on the 6594 Gun.

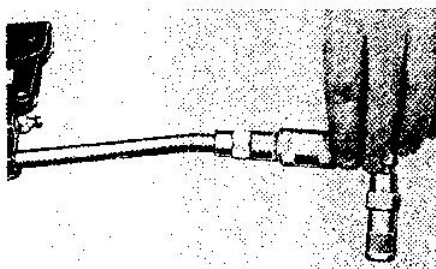


FIG. 9 - Placing 6238 Adaptor (90° Angle) on the 6594 Gun.

- b. Follow instructions under paragraph 1-b, c and d, this section, for lubricating fittings.

### 3. To Lubricate Pin Type Fittings:

- a. Clean Pin Type Fitting.
- b. Connect the 5329 Adaptor (accessory) to Pin Type Fitting (Fig. 10).
- c. Connect Hydraulic Coupling of 6594 Gun to fitting of the 5329 Adaptor and operate gun lever until bearing is lubricated (Fig. 11).

### 4. To Lubricate Standard Button Head Fittings:

- a. Clean Button Head Fitting.
- b. Connect the 6832-A Adaptor (accessory) to the fitting.

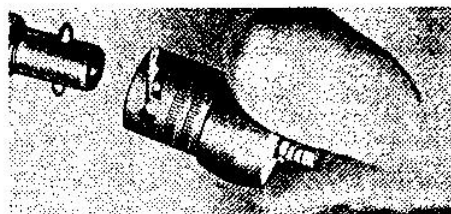


FIG. 10 - Connecting the 5329 Adaptor (Hydraulic to Pin Type) to fitting.

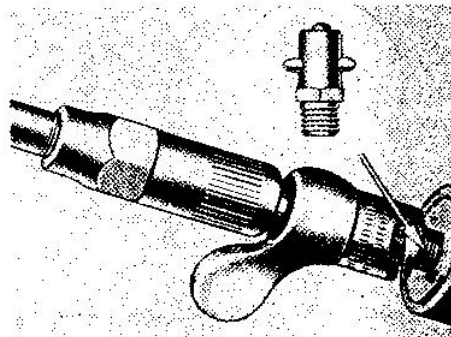


FIG. 11 - The 6594 Gun used on 5329 Adaptor.

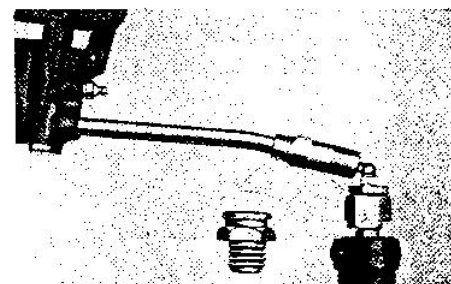


FIG. 12 - 6594 Gun and 6832-A Adaptor used on Button Head Fitting.

- c. Connect Hydraulic Coupling of the 6594 Gun to fitting of the 6832-A Adaptor and operate gun lever until bearing is lubricated (Fig. 12).

## MAINTENANCE

With a reasonable amount of care the 6594 Gun will give complete satisfaction under the most rigorous operating conditions. Periodic service checks of gun, as well as the adaptors used with it, insure efficient, dependable operation at all times. Suggested checks are listed below and methods of completing them are described in detail in the sections following.

1. Check Extension and Coupler Assembly.
2. Check Ball Check Valve.
3. Check Piston and Lever Action.
4. Check Follower Leathers.
5. Check Hydraulic Fitting.

1. Extension and Coupler Assembly.

The Extension and Coupler Assembly, just like any other adaptor, should be periodically checked for excess wear (preventing tight coupling contact on fitting and allowing lubricant to escape) and should be thoroughly cleaned when this check is made.

- a. Remove head and lever assembly from the cylinder.
- b. Place extension in vise and turn head and lever assembly counter-clockwise until disengaged from extension (Fig. 13).

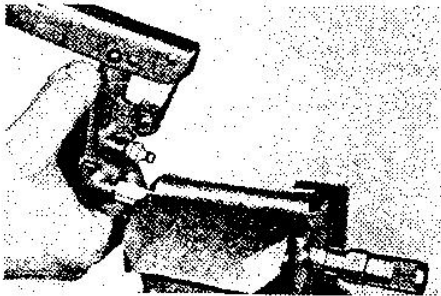


FIG. 13 - Remove extension from the 6594 Gun.

- c. Unlock vise and tighten coupler body securely in vise. With wrench, loosen coupler sleeve (Fig. 14).

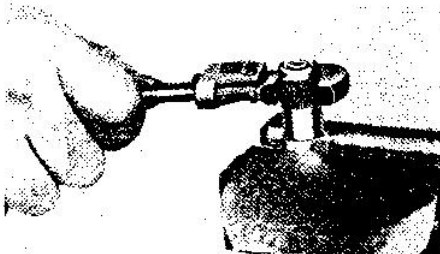


FIG. 14 - Remove sleeve from coupler.

- d. Remove spring, nozzle body assembly, jaws, and gasket from sleeve. Wipe all parts clean and examine jaws, sleeve and nozzle tip for excess wear. If all parts are in good condition, they can be reassembled. If any of the parts are worn or damaged, they should be replaced.

NOTE: Jaws are constructed so that they can be reversed when one end becomes worn.

- e. Reassemble nozzle, jaws, etc., inside sleeve. Place reassembled sleeve on coupler body and tighten.

- f. Attach extension and coupler assembly to head and lever assembly and tighten.

2. Ball Check Valve.

The Ball Check Valve should be cleaned periodically as any dirt carried by the grease and lodged between the ball and seat will prevent the ball from seating and greatly retard or completely stop grease delivery.

- a. With 3/4" open end wrench, remove plug (Fig. 15).

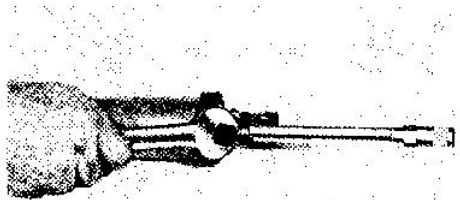


FIG. 15 - Remove ball check plug.

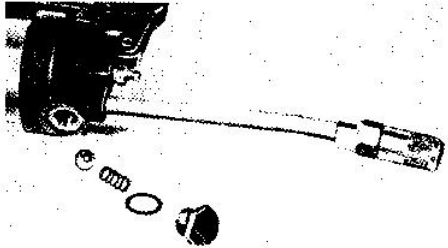


FIG. 16 - Ball check assembly removed.

- b. Remove gasket, spring and ball (Fig. 16).
- c. Clean spring and ball of all dirt and insert clean rag (must be lintless) into ball check housing and clean ball seat.
- c. Reassemble cleaned ball and spring. Replace plug, using new gasket. Tighten with wrench.

3. Piston and Lever

If piston is scored or broken it must be replaced.

NOTE: It is not necessary to remove lever arm before removing piston.

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- a. Remove head and lever assembly from container.
- b. Place lever in vise and file head off rivet holding piston to lever (Fig. 17).



FIG. 17 - File head off piston retaining rivet.

- c. Remove rivet (Fig. 18).

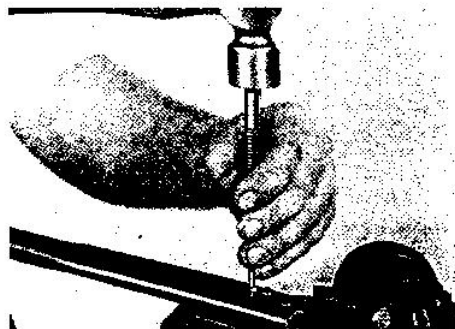


FIG. 18 - Remove piston retaining rivet.

- d. Remove assembly from vise and slide piston out of cylinder head (Fig. 19).
- e. Slide new piston into cylinder head and insert new rivet.
- f. Placing rivet head on vise, use a ball peen hammer and flatten out opposite end of rivet.
- g. Test lever for free action of piston.
- h. If lever link is broken, replace with a new part by removing retaining rivets in the same manner as described above.

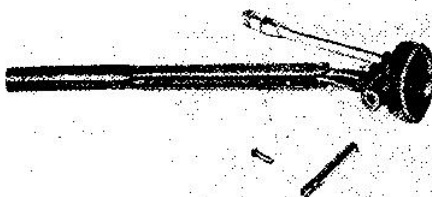


Figure 19 - Remove piston.

4. Follower.

Remove back cap from container and examine follower for excess wear. If in good condition, reassemble. If not, replace follower as follows:

- a. Place rod in vise and unthread handle.
- b. Remove rod from vise and slide cap and follower off rod.
- c. Slide new follower onto the rod.
- d. Replace cap and handle.

CAUTION: Be sure follower bayonet coupling faces follower rod cross pin.

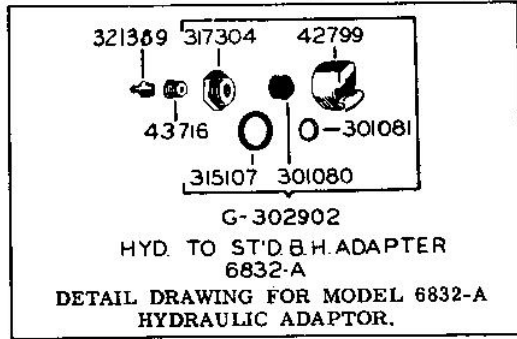
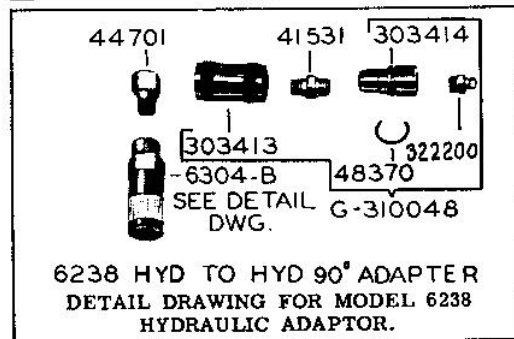
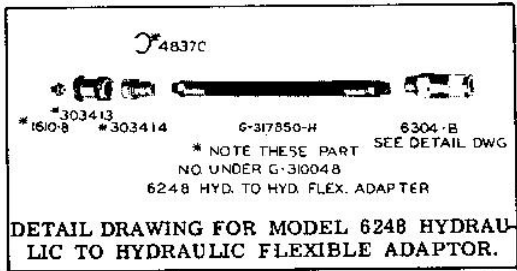
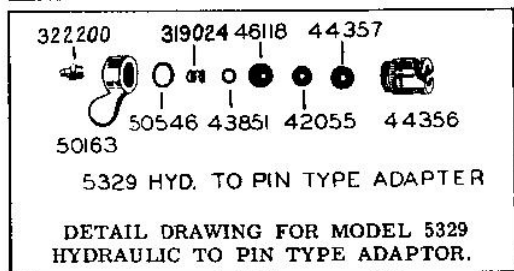
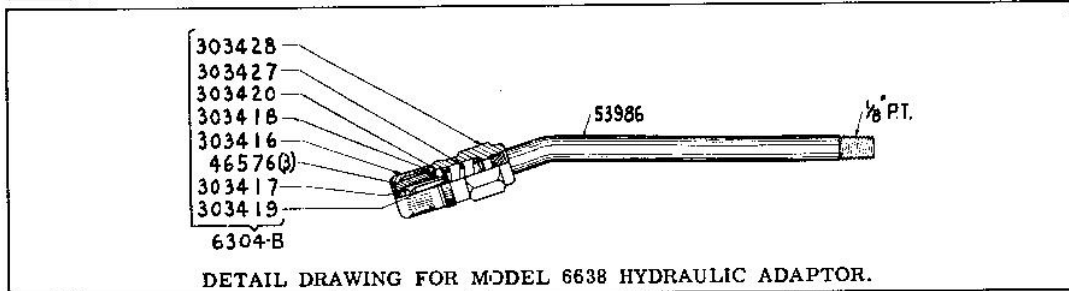
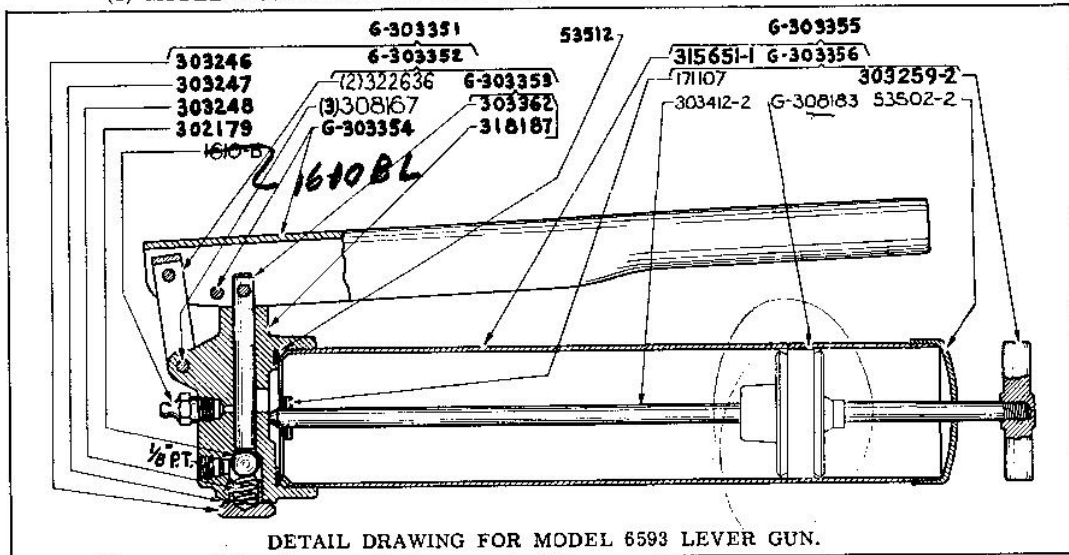
5. Hydraulic Loader.

If the Hydraulic Loader becomes clogged, it must be replaced (to remove see Fig. 20).



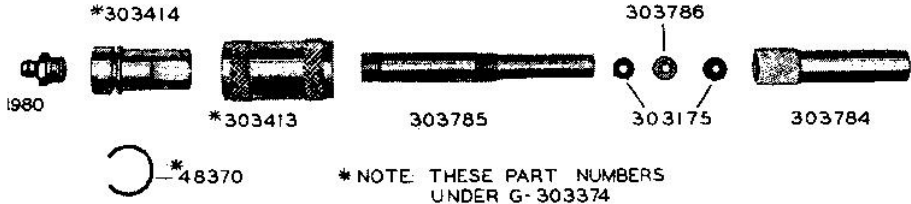
Figure 20 - Remove Hydraulic Fitting.

NOTE: MODEL 6594 LEVER GUN CONSISTS OF ONE (1) MODEL 6593 LEVER GUN PLUS ONE (1) MODEL 6638 HYDRAULIC ADAPTOR.



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\* NOTE: THESE PART NUMBERS  
UNDER G-303374

DETAIL DRAWING FOR MODEL 6344 HYDRAULIC TO PUSH TYPE ADAPTOR.

COMPOSITE PARTS LIST

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1610-B	Hydraulic Fitting	G-303351	Cylinder Head Assembly
1980	Hydraulic Fitting	G-303352	Cylinder & Lever Assembly
5329	Hydraulic to Pin Type Fitting	G-303353	Cylinder & Piston Assembly
6238	Hyd. to Hyd. 90° Fitting	G-303354	Lever
6248	Hyd. to Hyd. Flexible Adaptor	G-303355	Cylinder & Follower Assembly
6304-B	Hydraulic Coupler	G-303356	Follower & Handle Assembly
6344	Hydraulic to Push Type Adaptor		
6638	Hydraulic Extension		
6832-A	Hyd. to Hyd. Standard Adaptor	303362	Piston - 2-15/16"
41531	Adaptor		
42055	Washer		
42799	Body	G-303374	Sleeve Assembly
43716	Fitting Body - 45°	303412-2	Follower Stem 12-1/4"
43851	Washer	303413	Sleeve
44356	Coupling Body	303414	Extension
44357	Leather Cup Washer	• 303416	Sleeve
44701	Angle Body - 90° - 1/8" P. T.	• 303417	Nozzle Body
46118	Leather Cup Washer	• 303418	Washer
• 46576	Double-End Jaw	• 303419	Washer
		303420	Packing
48370	Wire Ring	• 303427	Spring
50163	Thumb Nut	• 303428	Coupler
50546	Copper Washer	303784	Nozzle Body
		303785	Extension
53502-2	Cap	303786	Washer
53512	Gasket 2-13/16"	308167	Rivet
		G-308183	Follower Assembly
53986	Extension 1/8" P. T. x 6-1/2"	G-310048	Hydraulic Adaptor
171107	Pin 11/16"	315107	Gasket
301080	Rubber Seal	315651-1	Cylinder
301081	Steel Washer		
302179	Ball	317304	Bushing
G-302902	Button-Head Coupler	317850-H	Hose Assembly
303175	Gasket	318187	Cylinder Head
303246	Plug	319024	Spring 13/32"
303247	Gasket 23/32" O. D.	321389	Body 1/8" P. T.
303248	Spring 5/16" O. D.	322200	Hydraulic Fitting
303259-2	Handle	322636	Link
		398696	Unit Repair Kit for 6304-B

NOTE: 7 parts indicated by (•) included in 398696 Unit Repair Kit.