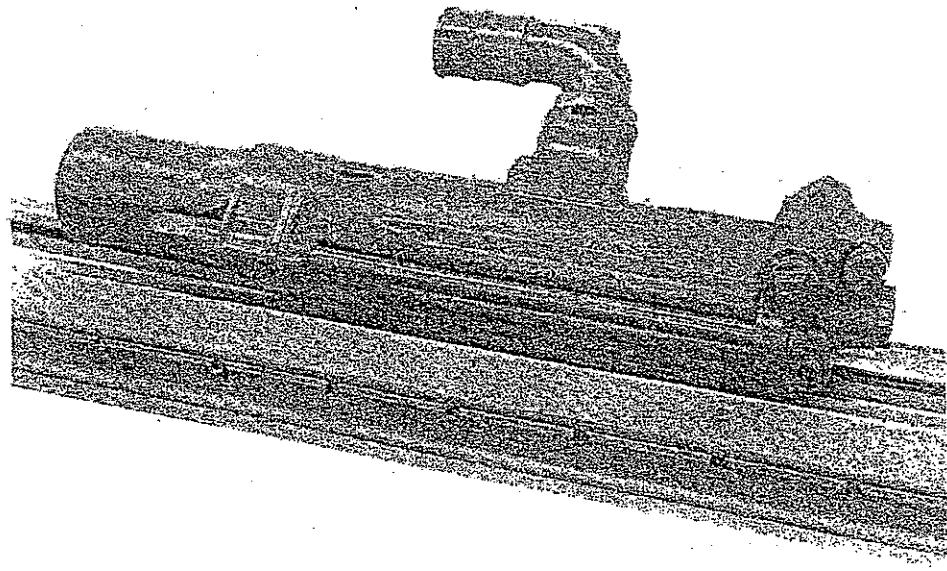


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PARTS MANUAL 40-5-504  
D93LJ  
First Edition

# Parts Manual

## D93LJ Derrick Drill



**GARDNER-DENVER COMPANY**  
QUINCY, ILLINOIS

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## D93LJ DERRICK DRILL

The Gardner-Denver D93LJ Derrick Drill is a 3-1/2" bore Drill. It is designed with large 1/2" x 4-1/2" wide cylinder ways. It also includes dual connections on the Backhead. Choose the most suitable connection and plug the opposite one. This drill also includes a Swivel Air Connection Tube on the Cylinder for use with Noise Control Exhaust Hose equipment. The D93LJ may be assembled on various types of feeds; it has the same center distance height as the DH99 Series Drills. Recommended Hose Size - 1-1/4" I. D.

## SERVICE AND MAINTENANCE

Any preventative maintenance program for the D93LJ Derrick Drill should begin with the selection of a good grade of high film strength rock drill oil. All major oil companies are prepared to recommend and furnish lubricants that have proven satisfactory for rock drill service. Constant lubrication with a correct rock drill oil in a Gardner-Denver Line Oiler will greatly extend the life and improve the operation of the D93LJ. It is recommended that the Line Oiler be filled at the beginning of each shift. Oil should show on the Drill Rod Shanks and at the exhaust when the Drill is receiving sufficient lubrication. When a Noise Control Exhaust Hose is used, oil will also begin to show at the hose end opening after a period of continuous operation. A Gardner-Denver adjustable-flow air Line Oiler is the best means of insuring the proper quantity of oil for the D93LJ.

## INSTRUCTIONS FOR ORDERING REPAIR PARTS

If repair parts are needed for this D93LJ Derrick Drill, apply to the nearest Gardner-Denver branch office and furnish the following information:

- (1) Part number as stamped on the part or as listed in the text of this parts list;
- (2) Name of Part;
- (3) Model designation and serial number of the D93LJ Derrick Drill.

## WARRANTY

Subject to the terms and conditions hereinafter set forth, Gardner-Denver Company (the Company) warrants products and parts sold by it, insofar as they are of its own manufacture, against defects of material and workmanship, under use and service in accordance with Company's written instructions, recommendations and ratings for installation, operating, maintenance and service of products, for a period of three months from the date of initial use, provided that such three month period shall in no case extend beyond one year from the date of shipment by Company. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT, AS COMPANY MAY ELECT, OF ANY DEFECTIVE PARTS, REGARDING WHICH, UPON DISCOVERY OF THE DEFECTS, THE PURCHASER HAS GIVEN IMMEDIATE WRITTEN NOTICE. Installation and transportation costs are not included. Company shall have option of requiring the return to it of the defective material, transportation prepaid, for inspection. COMPANY DOES NOT WARRANT THE MERCHANTABILITY OF ITS PRODUCTS AND DOES NOT MAKE ANY WARRANTY, EXPRESS OR IMPLIED, OTHER THAN THE WARRANTY CONTAINED HEREIN. Company has not authorized anybody to make any representation or warranty other than the warranty contained herein.

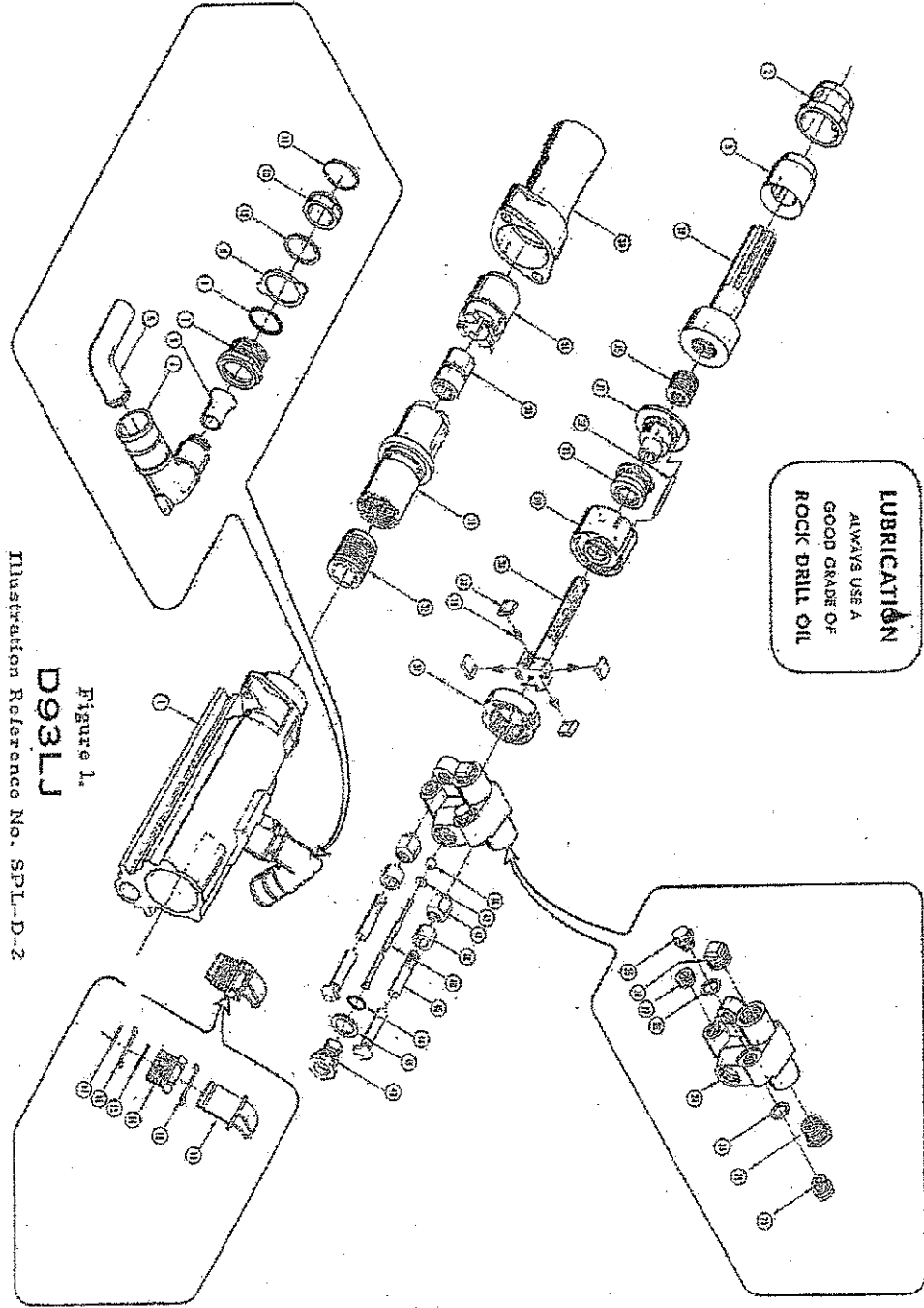


Illustration Reference No. SPL-D-2

D93LJ

Figure 1.

**LUBRICATION**  
ALWAYS USE A  
GOOD GRADE OF  
ROCK DRILL OIL

**D93LJ PARTS**  
CONSTRUCTION #1

- \* DRY GLAND
- \* 3-13/16" LUGGED CHUCK
- \* 5/16" TUBE

REF NO.	PART NO	NAME
1	1040785	ASM Cylinder, includes (1) D931Bx and (1) 1030786
1	1040751	ASM Cylinder, includes (1) D931BX and (1) 1039046
	D931BX	ASM Bushing, includes (1) D931B and (1) B931LB
2	D931B	Bushing
3	D931LB	Liner
	1030786	ASM Air Connection Tube - Consists of next 10 parts
4	DH123157	Elbow
5	DH123158	Inner Tube
6	DH123159	Tube Retainer
7	DH143146P	ASM Swivel Spud, includes (1) OR33
8	OR33	O-Ring
9	DH143146T	Lock Washer
10	DH143149A	Lock Nut
11	DH143150	Spring
12	1039806	Washer
	D105	Locking Instructions
	1039046	ASM Exhaust Deflector - Consists of the next 5 parts
13	1039002	Exhaust Deflector
14	DH143146P	ASM Swivel Spud, includes (1) OR33
15	OR33	O-Ring
16	DH143146T	Lock Washer
17	1039050	Retainer Ring
18	1039010	Lock Washer
19	D939HA	Hammer
20	1029859	Valve Chest
21	D9315B	Valve Plug
22	D9315D	Dowel
23	D9316	Automatic Valve
<b>BACK HEAD</b>		
	1030843	ASM Back Head - Consists of the next 6 parts
24	1030844	Back Head (Dual)
25	S481P	Plug (only 1 included in Back Head) (2 required)
26	S481W	Washer (only 1 included in Back Head) (2 required)
27	PP5A	Plug
28	PP7	Plug
29	PB21	Pipe Bushing
<b>CHUCK AND RELATED PARTS</b>		
30	D9317A	Chuck End
31	D937LA	Chuck Driver
32	D937	Driver Nut
33	D897CL	Driver Bushing
34	D897BDL	Chuck, 1-1/4" Lug Shank (Locking Type)
<b>ROTATION</b>		
35	D931038	Rifle Nut
36	D931138	Rifle Bar
37	D9333A34	Ratchet Ring
38	R10411A	Pawl (4 required)
39	R10411CB	Spring (4 required)
<b>AIR AND WATER CONNECTIONS</b>		
40	D93J27E	Air Tube - 5/16" Dia.
41	729D	Gasket
42	1739A	Washer
43	1039146	Gland, includes (1) OR18
44	OR18	O-Ring
45	D8340	Washer
<b>MISCELLANEOUS</b>		
46	D933	Side Rod (2 required)
47	CF793N	Nut (2 required)
48	CF793S	Washer (2 required)

## D93LJ

### CONSTRUCTION #2

- WET GLAND
- 3-13/16" LUGGED CHUCK
- 5/16" TUBE

Construction #2 uses the following parts in place of similar parts used in D93LJ Construction #1.

Refer to illustration and listing on Pages 2-3.

REF. NO.	PART NO.	NAME
40	D9327F	Water Tube - 5/16" Tube
43	1039134	Backhead Gland - Includes (1) OR18
44	OR18	O Ring
	D9313X	Asm Water Connection - See Page 9 for breakdown

## D93LJ

### CONSTRUCTION #3

- AUTOMATIC WET GLAND
- 3-13/16" LUGGED CHUCK
- 5/16" TUBE FOR CUP SEAL
- SWIVEL AIR CONNECTION

Construction #3 uses the following parts in place of similar parts used in D93LJ Construction #1.

Refer to illustration and listing on Pages 2-3.

REF. NO.	PART NO.	NAME
40	D9327G	Water Tube - 5/16" Tube
43	D83N40X	Asm Gland - See Page 10
	D9313X	Asm Water Connection - See Page 9 for breakdown
	D93J147X	Asm Air Connection - See Page 9 for breakdown

## D93LJ

### CONSTRUCTION #5

- WET OR AUTOMATIC WET
- 3-13/16" LUGGED CHUCK
- 5/16" TUBE
- SWIVEL AIR CONNECTION

Construction #5 uses the following parts in place of similar parts used in D93LJ Construction #1.

Refer to illustration and listing on Pages 2-3.

REF. NO.	PART NO.	NAME
40	D9327F	Water Tube - 5/16" Tube
43	1039134	Asm Gland - Includes (1) OR18
44	OR18	O Ring
43	D83N40X	Asm Gland - See Page 10
	D9313X	Asm Water Connection - See Page 9 for breakdown
	D93J147X	Asm Air Connection - See Page 9 for breakdown

## D93LJ

### CONSTRUCTION #6

- DRY GLAND
- 3-13/16" LUGGED CHUCK
- 3/8" TUBE

Construction #6 uses the following parts in place of similar parts used in D93LJ Construction #1.

Refer to illustration and listing on Pages 2-3.

REF. NO.	PART NO.	NAME
19	D93D9A	Hammer
36	D93D1138	Rifle Bar
	1030856	Asm Backhead - See Page 8 for breakdown
40	D93J27C	Air Tube- Not for Cup Seal
40	D93J27G	Air Tube- For 5/16" Cup Seal Shank
40	D93J27F	Air Tube- For 3/8" Cup Seal Shank
41	9347G	Gasket
42	D99D39	Washer

## D93LJ

### CONSTRUCTION #7

- WET GLAND
- 3-13/16" LUGGED CHUCK
- 3/8" TUBE FOR CUP SEAL
- SWIVEL AIR CONNECTION

Construction #7 uses the following parts in place of similar parts used in D93LJ Construction #1.

Refer to illustration and listing on Pages 2-3.

REF. NO.	PART NO.	NAME
	1030856	Asm Backhead - See Page 8 for breakdown
19	D93D9A	Hammer
36	D93D1138	Rifle Bar
40	D93J27F	Air Tube-3/8" for Cup Seal Shank
40	D93J27G	Air Tube-5/16" for Cup Seal Shank
41	9347G	Gasket
42	D99D39	Washer
43	I039134	Backhead Gland - Includes (1) OR18
44	OR18	O Ring
	D9313X	Asm Water Connection - See Page 9 for breakdown
	D93J147X	Asm Water Connection - See Page 9 for breakdown

## D93LJ

### CONSTRUCTION #10

- DRY GLAND
- 3-13/16" LUGGED CHUCK
- 5/16" TUBE
- CYLINDER WITH SIDE EXHAUST

Construction #10 uses the following parts in place of similar parts used in D93LJ Construction #1.

Refer to illustration and listing on Pages 2-3.

REF. NO.	NAME NO.	NAME
1	1034674	Asm Cylinder - Includes reference numbers 2 & 3 on Page 3

## D93LJ CONSTRUCTION #11

- DRY GLAND
- 6" COLLARED CHUCK LINER
- BISCUIT-TYPE RETAINER
- 5/16" TUBE

Construction #11 uses the following parts in place of similar parts used in D93LJ Construction #1.

Refer to illustration and listing on Pages 2-3.

REF. NO.	PART NO.	NAME
30	1045164	Chuck End
31	D937HA	Chuck Driver
43	1039146	Asm Gland - Includes (1) OR18
44	OR18	O Ring
	D93AR7T6H	Chuck Liner - 1" Q. Oct.
	D93AR7T6P	Chuck Liner - 1-1/8" Hex.
	D93AR7T6F	Chuck Liner - 1" Hex.
	1037866	Chuck Liner - 1-5/16" x 6" Shank
	D73HRR36	Steel Retainer - 1" Hex.
	D73HRR36D	Steel Retainer - 1" Q.O. - 1-1/8" Hex.
	D73HRR36E	Steel Retainer - 1" Q.O. (Rubber collar)
	B7236P	Detent (2 required)
	B7236BA	Spring (2 required)

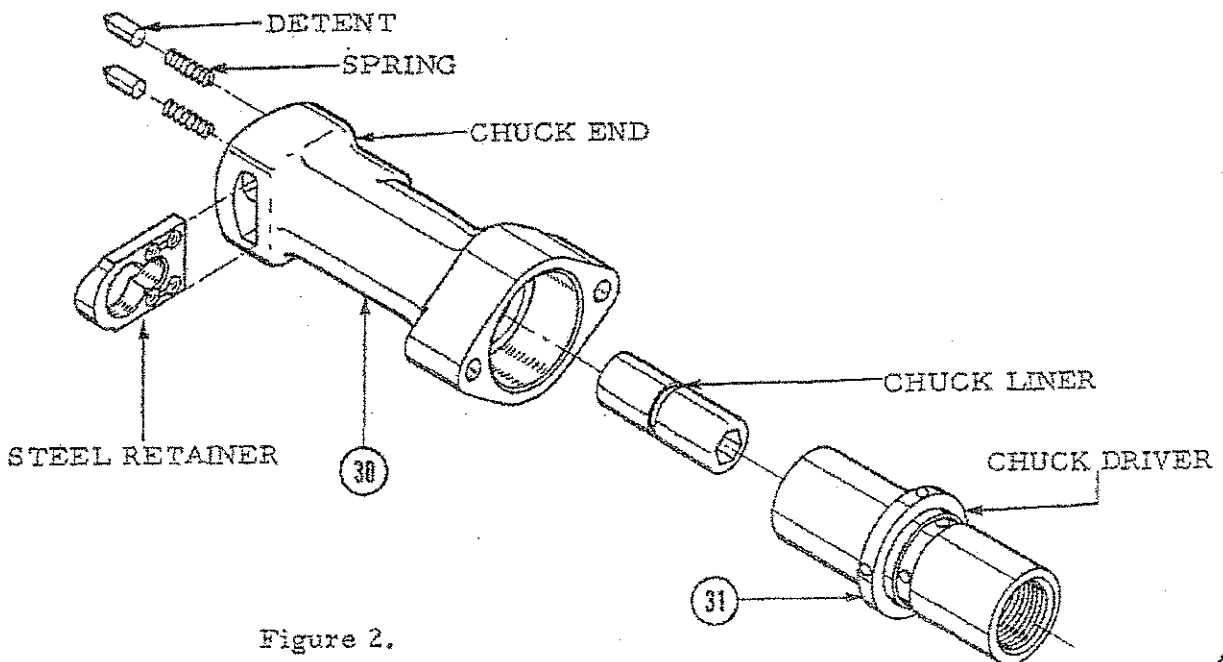


Figure 2.

# D93LJ

## CONSTRUCTION #9

- DRY GLAND
- 3-13/16" LUGGED CHUCK
- 3/8" TUBE
- DERRICK CYLINDER

Construction #9 uses the following parts in place of similar parts used in D93LJ Construction #1.

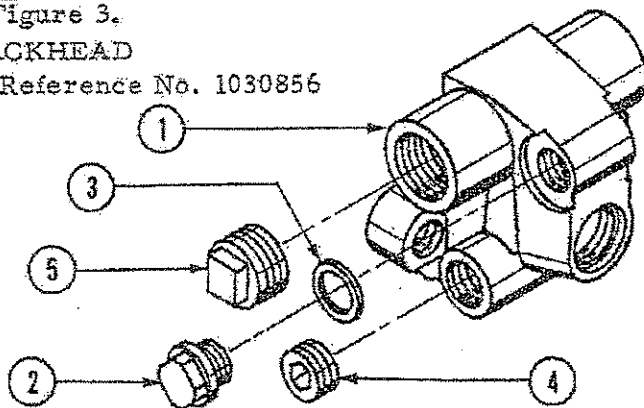
Refer to illustration and listing on Pages 2-3.

REF. NO.	PART NO.	NAME
	1030856	Asm Backhead - See Below for Breakdown.
19	D93D9A	Hammer
36	D93D1138	Rifle Bar
40	D93J27C	Air Tube
40	D93J27F	Air Tube - For 3/8" Cup Seal Shank
40	D93J27G	Air Tube - For 5/16" Cup Seal Shank
41	9347G	Gasket
42	D99D39	Washer

Figure 3.

### BACKHEAD

Illustration Reference No. 1030856



REF. NO.	PART NO.	NAME
1	1030856	Asm Backhead - Includes the following 4 parts:
2	S481P	Plug
3	S481W	Washer
4	PP5A	Pipe Plug
5	PP7	Pipe Plug

D9313X  
 WATER CONNECTION  
 Illustration Ref. No. 1030400

REF. NO.	PART NO.	NAME
	D9313X	Asm Water Connection - Consists of the next 9 parts:
1	10713A	Water Connection Screen
2	10713BA	Water Connection Gasket
3	10713C	Spud
4	10713G	Spud Gasket
5	1045253	Hose (1/2" x 12" Long)
6	760	Water Valve Complete
7	SHC62KC	Hose Nipple
8	BDT3	Hose Clamp (2 required)
	D9313TX	Asm Connection Elbow - Consists of the next 5 parts:
9	D9313T	Elbow - Includes (1) OR10
10	OR10	O Ring
11	D9313D	Swivel Connection Nut
12	D9313R	Tube Retaining Ring
13	D9313E	Nut Washer

Figure 4.

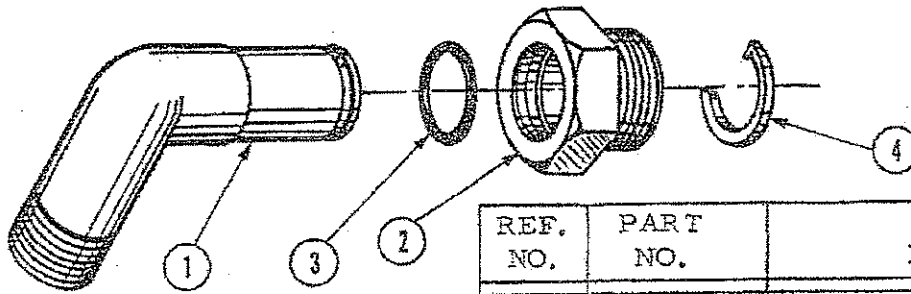
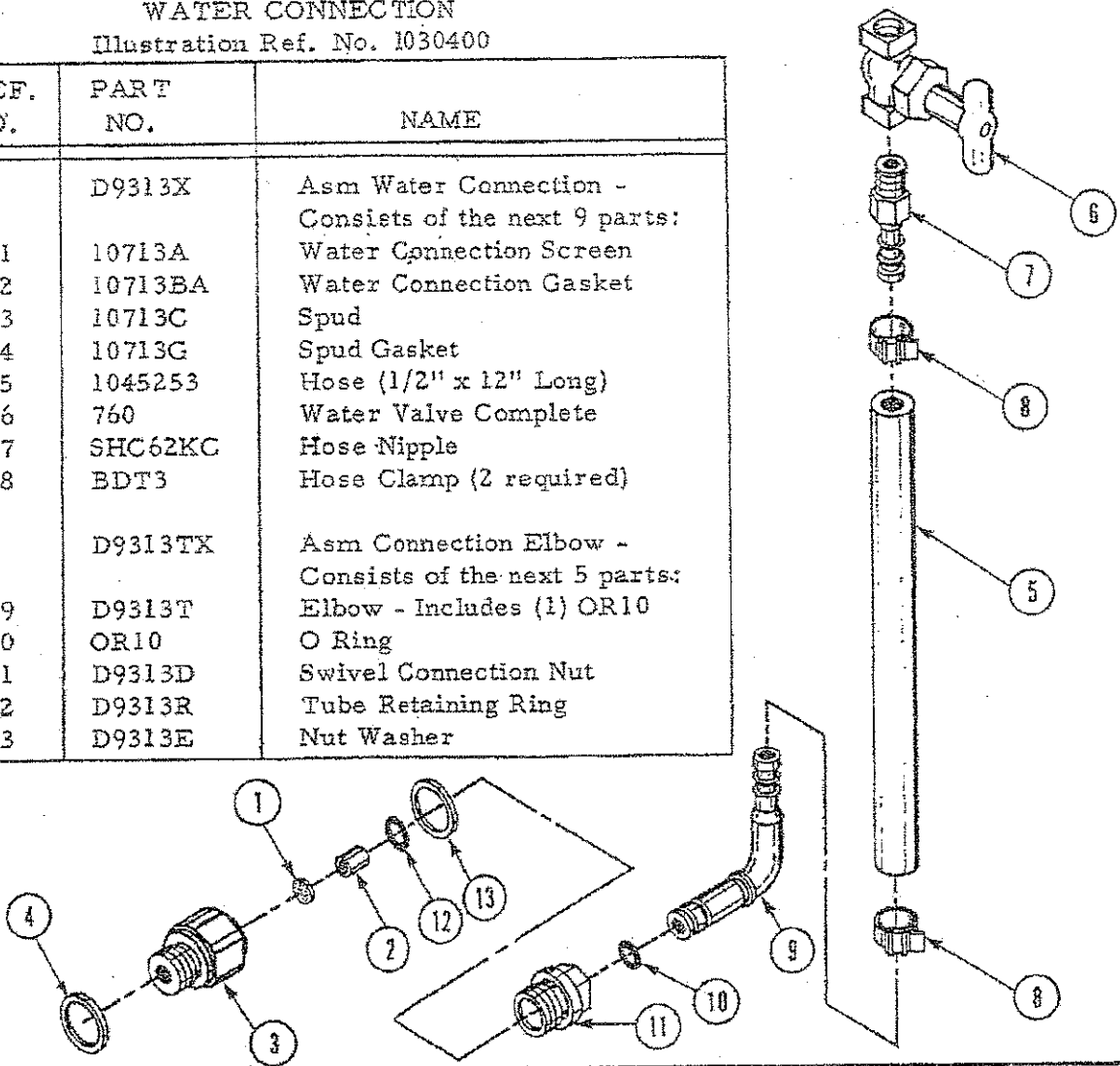


Figure 5.  
 D93J147X

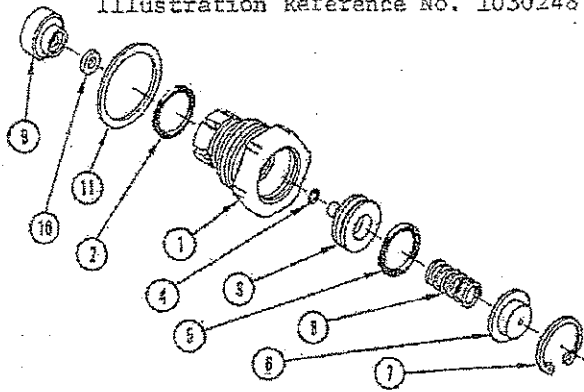
AIR CONNECTION

Illustration Ref. No. 1030491

REF. NO.	PART NO.	NAME
	D93J147X	Asm Air Connection - Consists of the next 4 parts:
1	CF93147	Connection Tube
2	D93J46	Connection Nut - Includes (1) ORP218B
3	ORP218B	O Ring
4	D93J49	Lock Ring

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Figure 6.  
D83N40X AUTOMATIC GLAND  
Illustration Reference No. 1030248



REF. NO.	PART NO.	NAME
	D83N40X	Asm Gland - Consists of the next 10 parts:
1	D83N40	Asm Gland - Includes (1) OR18
2	OR18	O Ring
3	D83N41	Poppet Valve - Includes (1) OR3 and (1) OR18
4	OR3	O Ring
5	OR18	O Ring
6	D83N42	Cap
7	TRR5	Retainer Ring
8	D83N43	Spring
9	D83N44	Retainer
10	D83N45	Valve Seat
11	D8340	Washer

## ADDITIONAL EQUIPMENT

Items described below are available for use with the D93LJ Derrick Drill.

Contact a Gardner-Denver Sales Office for price and delivery information.

D937KL	Chuck - 1-1/4" Tang. Lug
D9327G	Air Tube - 5/16" - Chrome Plated for use with Cup Seal
1033471	Automatic Wet Gland - Pressure Regulated This Gland is recommended for use in areas where high water pressure promotes leakage of water which in turn causes rapid Chuck wear by washing away the lubricating oil. This Gland automatically restricts the pressure of the water passed into the water tube to 75% of the airline pressure at the Drill backhead. The Gland is not recommended for water pressure above 500 psi.

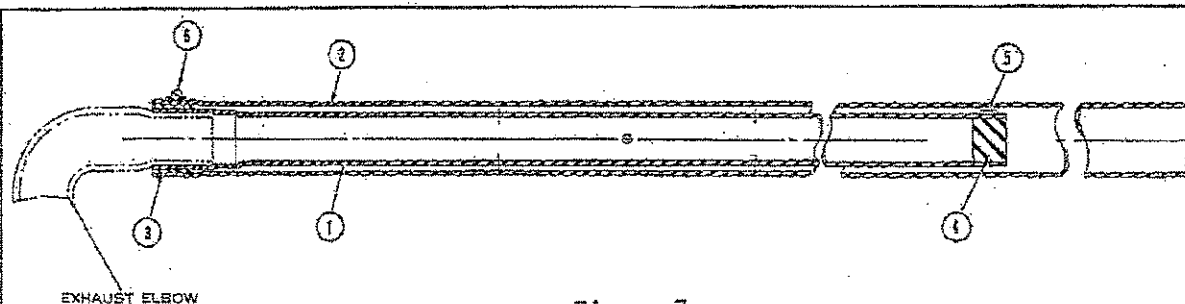


Figure 7.

	1029439	Asm Silencer - Connects to the Exhaust Tube - Consists of the next 6 parts:
1	1029435	Silencer Hose
2	1029783	Air Hose (20 ft.)
3	1029468	Spacer
4	1029480	Plug
5	BDT7	Hose Clamp
6	HC48	Hose Clamp