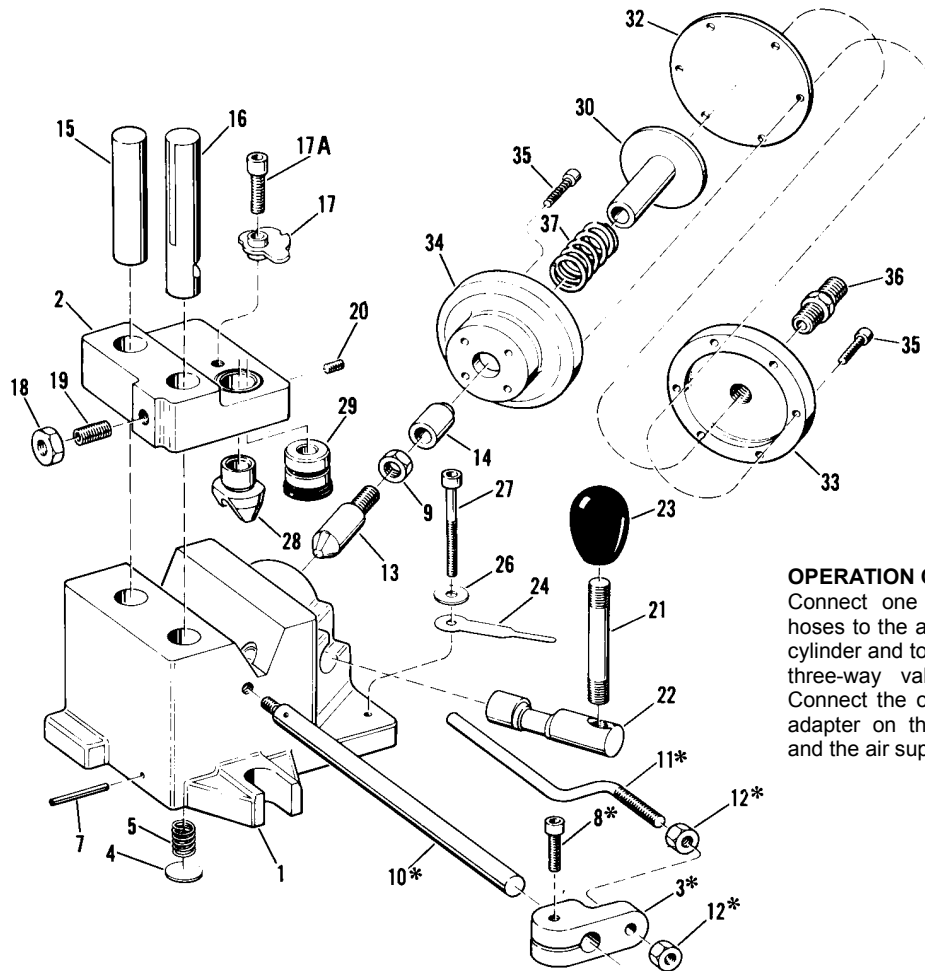


# ADJUSTABLE CROSS-HOLE DRILL JIGS



### OPERATION OF AIR JIGS:

Connect one of the two identical hoses to the adapter (36) on the air cylinder and to the side fitting on the three-way valve, marked "OUT." Connect the other hose to the end adapter on the valve marked "IN" and the air supply line.

### OPERATION:

To provide proper clearance for inserting and removing the work-piece, follow these instructions:

1. Loosen nut(s) (18) and screw(s) (19) at the back of the clamping plate (2); raise clamping plate; and place the workpiece in the V-block.
2. Place set gage (24) between workpiece and adapter liner -- (28) or (29).
3. Lower the clamping plate until the removable adapter liner (28) or (29) touches the set gage (24).
4. Secure the set screw(s) (19) and nut(s) (18) at the back of the clamping plate and remove set gage.
5. Attach the stop to the desired side and adjust to proper position. Insert your drill bushing and adjust bushing clamp (17) with screw (17A) to keep bushing from turning. The drill jig is then ready for operation.

### MAINTENANCE:

If jig becomes inoperable, disassemble as follows:

#### HAND OPERATED UNITS:

1. Loosen nut(s) (18) and screw(s) (19) and remove clamping plate (2) with guide pin (15) from the jig body (1).
2. Compress locking pin (16) fully into the body casting (1) with a vise.
3. Turn lock nut (9) onto the plunger (13) as far as it will go. Then crank (22) may be removed.

4. Remove plunger (13) and plunger cap (14). Locking pin (16) may then be removed with spring (5) and spring slug (4).  
Re-assemble as per the exploded view. After insertion of the spring slug (4), and spring (5), insert locking pin (16) with flat facing back of body casting (1).  
Compress locking pin (16) fully in vise. Insert plunger (13) with nut (9), plunger cap (14) and insert crank (22).  
When assembled, lock nut (9) must have sufficient tension against plunger cap (14) so that the crank (22) has no free movement.

#### AIR OPERATED UNITS:

1. Loosen nut(s) (18) and screw(s) (19) and remove clamping plate (2) with guide pin (15) from the jig body (1).
2. Compress locking pin (16) fully into the body casting (1) with a vise.
3. Turn lock nut (9) onto the plunger (13) as far as it will go.
4. Remove six screws (35) from cylinder cover (33) and remove cover, diaphragm (32), piston assembly (30), spring (37), and plunger (13) and nut (9). Locking pin (16) may then be removed with spring (5) and spring slug (4).  
Reassemble as per exploded view. After insertion of spring slug (4) and spring (5), insert locking pin (16) with flat facing back of body casting (1). Compress locking pin (16) fully in a vise. Insert  
(Cont. on next page)



Index No.	Part Name	MODEL NUMBER					
		305 and AR-305		605 and AR-605		905 and AR-905	
		Part No.	Price	Part No.	Price	Part No.	Price
1	Body Casting (Note 1)	305-1	--	605-1	--	905-1C	--
2	Clamping Plate Casting (Note 2)	305-2	\$60.50	605-2	\$83.19	905-2	\$121.00
3	Stop Clamp Casting	305-3	28.74	305-3	28.74	305-3	28.74
4	Spring Slug	305-4	1.31	305-4	1.31	905-4	1.31
5	Spring (red)	305-5	20.33	305-5	20.33	905-5	30.49
5	Spring (AR series) (blue)	305-5-AR	20.33	305-5-AR	18.48	905-5-AR	30.49
7	5/32 x 1 1/2 Rollpin	--	--	--	--	905-7	0.87
7	5/32 x 1 1/8 Rollpin	305-7	0.73	305-7	0.73	--	--
8	1/4-20 x 7/8 Screw	305-8	0.87	305-8	0.87	305-8	0.87
9	3/8-24 Nut, special	305-9	1.45	305-9	1.45	--	--
9	7/16-20 Nut	--	--	--	--	905-9	0.65
10	Stop Bar	305-10	16.64	305-10	16.64	305-10	16.64
11	Stop	305-11	8.71	305-11	8.71	305-11	8.71
12	5/16-18 Nut (2 required)	305-12	0.44	305-12	0.44	305-12	0.44
13	Plunger Bolt	305-13	24.68	605-13	24.68	905-13	45.01
14	Plunger Cap (Hand Operated only)	305-14	15.97	305-14	15.97	905-14	24.68
15	Guide Pin	305-15	15.97	605-15	20.33	905-15	30.49
16	Locking Pin	305-16	30.49	605-16	33.40	905-16	71.15
17	Adjustable Bushing Clamp	305-17	13.07	305-17	13.07	305-17	13.07
17A	1/4-20 x 5/8 Screw	305-17A	0.87	305-17A	0.87	305-17A	0.87
18	3/8-24 Nut	305-18	0.36	305-18	0.36	305-18	0.36
19	3/8 x 1 Screw	305-19	1.74	305-19	1.74	305-19	1.74
20	1/4-28 x 3/8 Screw	305-20	0.87	305-20	0.87	--	--
20	5/16-24 x 1/2 Screw	--	--	--	--	905-20	1.45
21	Handle	GM-3415	3.63	GM-3415	3.63	6815	5.66
22	Crank	GM-3418	15.97	GM-3418	15.97	GM-6818	30.49
23	Knob	OA-3421	3.48	OA-3421	3.48	SV-6821	3.48
24	Set Gauge	305-24	4.21	305-24	4.21	305-24	4.21
26	1/4 Flat Washer	305-26	0.58	305-26	0.58	305-26	0.58
27	1/4-20 x 1 1/2 Screw	305-27	1.31	--	--	--	--
27	1/4-20 x 2 1/8 Screw	--	--	605-27	1.89	--	--
27	1/4-20 x 7 Screw	--	--	--	--	905-27	12.78
28	Adapter Liner, with V-Taper	305-5/16	24.68	--	--	--	--
28	Adapter Liner, with V-Taper	305-1/2	24.68	--	--	--	--
29	Adapter Liner	--	--	605-5/16	36.30	905-5/16	72.60
29	Adapter Liner	--	--	605-1/2	36.30	905-1/2	72.60
29	Adapter Liner	--	--	605-3/4	36.30	905-3/4	72.60
29	Adapter Liner	--	--	--	--	905-1	72.60
29	Adapter Liner	--	--	--	--	905-1 3/8	72.60

**AIR CYLINDER PARTS**

30	Piston Assembly	305-29	\$30.49	305-29	\$30.49	905-29	\$53.72
32	Diaphragm	305-32	17.42	305-32	17.42	905-32	27.59
33	Cylinder Cover Casting	305-33	52.94	305-33	52.94	905-33	83.19
34	Cylinder Body Casting	305-34	60.50	305-34	60.50	905-34	75.63
35	3510-32 x 5/8 Screw (10 req.)	305-35	0.44	305-35	0.44	--	--
35	1/4-20 x 7/8 Screw (10 req.)	--	--	--	--	305-8	0.87
36	Adapter	33-16	3.19	33-16	3.19	33-16	3.19
37	Spring	GM PA-417	10.16	GM PA-417	10.16	PA-6817	8.71

**Note 1.** Price not shown, as replacement body castings are not available.

**Note 2.** Clamping plates are not interchangeable. If replacement is desired, the entire unit should be returned to the factory, freight charges prepaid, so that the new clamping plate can be properly fitted to your unit.

**WHEN ORDERING PARTS, INDICATE PART NUMBER, MODEL NUMBER AND PRICE.**

(Cont. from prev. page) plunger (13) with nut (9), spring (37), piston assembly (30), diaphragm (32), cylinder cover (33), and evenly and firmly tighten six screws (35). Lock nut (9) should be turned so that it lightly engages the piston rod (30).

When jig is disassembled, check each part for wear or damage. Replacement parts are available for immediate shipment from factory stock, or you may order through your local Heinrich distributor.