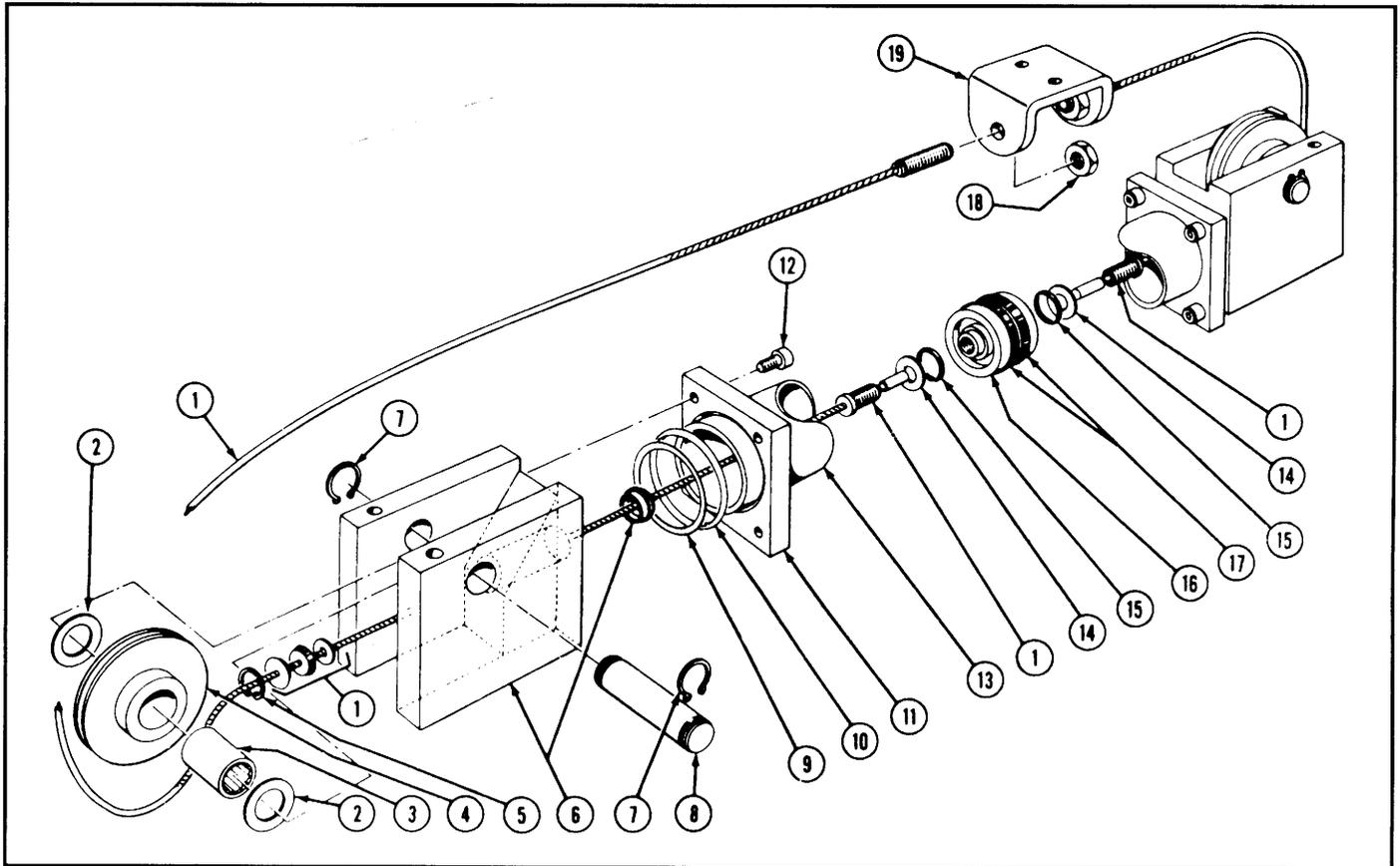




### Model 100-1 Cable Cylinder 1 INCH BORE

**Discontinued  
Product Style or  
Size. Parts Sheet  
is for use only  
with Repair Kits**



#### PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.
	1001-9002	Repair Kit, Pneumatic 3/64 Cable, Specify Stroke	1
	1001-9032	Repair Kit, Hydraulic, 3/64 Cable, Specify Stroke	
	1001-9042	Repair Kit, Pneumatic, 1/16 Cable, Specify Stroke	
	1001-9044	Repair Kit, Hydraulic, 1/16 Cable, Specify Stroke	
**1	1001-9001	Cable Assy., Pneumatic, 3/64 Cable, Specify Stroke	2
	1001-9029	Cable Assy., Hydraulic, 3/64 Cable, Specify Stroke	
	1001-9041	Cable Assy., Pneumatic, 1/16 Cable, Specify Stroke	
	1001-9043	Cable Assy., Hydraulic, 1/16 Cable, Specify Stroke	
2	0100-1306	Spacer, Pulley	4
3	1001-1055	Bearing	2
4	1050-1051	Pulley	2
5	1001-1023	Snap Ring, Internal	2

ITEM	PART NO.	DESCRIPTION	QTY.
6	1001-9003	Head Assy. (Includes Gland Insert), Single port	2
	1001-9019	Head Assy., 3 port	2
7	1001-1056	Snap Ring, External	4
8	1001-1052	Pulley Shaft	2
19	1001-1037	Gasket	2
10	1001-1044	Retaining Ring	2
11	1001-1041	Clamp Ring	2
12	1001-1065	Cap Screw, Socket Head	8
13	1001-1078	Tube - Alum. (Specify Stroke)	1
14	1001-1013	Washer, Piston	2
**15	1001-1021	O-Ring	2
16	1001-1040	Piston	1
**17	1001-1020	U-Cup	2
18	1001-1058	Lock Nut	2
19	1001-1057	Clevis	1

**NOTE: A Repair Kit contains all parts marked with (\*\*)**

## MODEL 100-1 CABLE CYLINDER

### INSTALLATION

When uncrating cylinder, BE EXTRA CAREFUL NOT TO SCRATCH OR MAR THE NYLON COVERING ON THE CABLE. If possible, keep plastic wrapping on cylinder until ready to install. Cylinder may be mounted by use of bolt holes in head bracket extensions. When attaching cable bracket to driven mechanism, be sure it is in perfect alignment and that it does not deflect the cable to the side which would cause excessive wear.

## WARNING!

### Pretensioning Instructions

All cable cylinders are shipped without being pretensioned. They must be tensioned after mounting to insure the maximum service life of the device.

There are two (2) types of stretch in cable — constructional and elastic. The constructional stretch is removed by proof loading of the cable. The elastic stretch is removed by proper pretensioning of the cables.

#### — PROOF LOADING OF CABLES —

On Cylinders Without Automatic Tensioners —

Step I — Tighten the clevis terminal lock nuts equally with a torque wrench to torques listed in Figure III A.

Step II — Let set for 30 seconds.

Step III — Loosen lock nuts to remove tension. (But tight enough to eliminate any slack.)

Step IV — Follow Pretensioning Instructions.

#### — PRETENSIONING —

Block the load some distance from the end of travel to keep cylinder from bottoming. Next apply a pressure that is 15-20% higher than actual load pressure.

**Load pressure is defined as the pressure required to move the load. Note when the load is stopped externally before the piston bottoms the relief valve or regulator setting becomes the load pressure.**

Upon pressurizing you will notice one cable will become tight and the other will become slack. Manually adjust out the slack. Release the pressure. Block load on the opposite side and pressurize the other port. Repeat the manual adjustment on the other cable. Release pressure and remove blocks.

The cylinder is now pretensioned. Additional manual adjustment should not be required.

It is suggested, however, that the cable be checked periodically from a preventive maintenance standpoint.

If the load cannot be blocked for cable pretensioning as

stated above an alternate method can be used.

#### — ALTERNATE METHOD —

Tighten clevis terminal lock nuts with a torque wrench to total pretensioning torque as stated for various models in Fig. III B.

### TO REBUILD CYLINDER

1. Remove cylinder from machinery.
2. Disconnect cable from cable bracket and remove pulleys on both ends of cylinder.
3. Remove internal retaining rings (5) from both heads and remove one head from cylinder by removing the four cap screws (12).
4. Pull piston towards the removed head, and remove from tube.
5. Disconnect cables from piston and pull back through head and gland to remove.
6. Install new "U" cups and "O" rings on piston and rethread new cables through heads and connect to piston.
7. Being careful not to damage cable or "V" packing, reinstall washers and seal in gland and head and reinstall retaining rings. (Always lubricate seals when installing.)
8. Push piston back into tube by gently tucking in the "U" cup with a screwdriver or pencil. Mount head back on cylinder with cap screws (12).
9. Relubricate pulley bearings. Replace pulleys and connect cable to cable bracket.
10. Operate cylinder back and forth by hand several times to be sure it is properly assembled before applying air.
11. Reinstall cylinder on machinery.

#### Note:

Wrench - for Item -5 on Parts List  
Waldes Truarc No. S0109

### MAINTENANCE

Cylinder should be kept as clean as possible around pulleys, gland, etc. Always use air that is adequately lubricated with SAE 10 or 20 non-detergent oil.

Your Tol-O-Matic Cable Cylinder will give you many cycles of trouble-free service. However, should a leak occur, a rebuilding kit can be obtained which enables you to replace all the seals in the cylinder to return it to new operative condition.

FIGURE III A

#### TORQUE TO PROOF LOAD THE CABLE

S100-1 (3/64 x 3/32 CABLE) ...	15 In. Lbs.	200-3	210 In. Lbs.
S100-1 (1/16 x 3/32 CABLE) ...	20 In. Lbs.	200-4	210 In. Lbs.
100-150	45 In. Lbs.	500-2	210 In. Lbs.
100-75	45 In. Lbs.	200-6	535 In. Lbs.
200-2	115 In. Lbs.	200-8	535 In. Lbs.
200-25	115 In. Lbs.		

FIGURE III B

MODEL NO.	PRETENSIONING TORQUE	STARTING TORQUE OF NUTS ON TERMINALS	TOTAL PRETENSIONING TORQUE
S100-1	2.5 IN. LBS.	10	12.5 IN. LBS.
100-150	8.0 IN. LBS.	20	28.0 IN. LBS.
100-75	11.0 IN. LBS.	20	31.0 IN. LBS.
200-2	46.0 IN. LBS.	25	71.0 IN. LBS.
200-25	73.0 IN. LBS.	25	98.0 IN. LBS.
200-3	105.0 IN. LBS.	25	130.0 IN. LBS.
200-4	187.5 IN. LBS.	25	212.5 IN. LBS.
500-2	115.0 IN. LBS.	25	140.0 IN. LBS.
200-6	294.0 IN. LBS.	30	324.0 IN. LBS.
200-8	362.5 IN. LBS.	30	392.5 IN. LBS.



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