

INSTRUCTIONS AND REPAIR PART LIST

for

TM20 AND TM30

TENSIONING MANIFOLDS

Form 6313
First Edition
April, 1975

PRINCIPLE OF OPERATION

TM20 and TM30 Tensioning Manifolds are automatic Winch control devices which maintain a uniform pull on the wire rope while the Winch is mounted on an erratically moving platform and the rope is firmly anchored at a given location.

Install Model TM20 for Winches using 200 cu-ft of air or less per minute.

Install Model TM30 for Winches using over 200 cu-ft of air per minute.

One Tensioning Manifold is required for each Winch. Be certain that both the Winch and Manifold are securely anchored. While the Tensioning Manifold should be connected as close as practical to the Winch, the Winch should not be used to support the weight of the Manifold.

Winches on which the Tensioning Manifold is going to be used should be equipped with the Remote Control Valve Chest (refer to Repair Part List of Winch). The Manifold should be piped to the left-hand side of the Valve Chest when facing the motor.

ADJUSTMENT OF THE TENSIONING CIRCUIT

Adjust the tensioning circuit as follows:

1. Close the Shut-off Valve (16) in the bypass circuit. Open the Pressure Regulator (7) to a pressure above line pressure so it will not pass air. Set the Relief Valve (11) at a point below its mid-range adjustment. The wire rope should be slack between the anchor and the Winch throughout the entire motion cycle.
2. Fully open the Shut-off Valve (2) in the tensioning circuit.
3. Gradually turn the adjusting screw on the Pressure Regulator (7) in until the Winch responds by taking up the slack in the wire rope.
4. Observe the Winch and wire rope through a complete motion cycle.
5. Repeat step 3 until the wire rope remains taut during an entire motion cycle.
6. Adjust the Relief Valve (11) so that it closes when the Winch winds in the wire rope and opens when the wire rope is being payed out.
7. Repeat steps 3 through 6 to obtain maximum uniformity in the rope tension (no jerking) through all phases of the motion cycle.

These adjustments (especially steps 3 through 6) should be performed in time with the motion cycle and rapidly enough to minimize any shock loads on the cable.

HOW TO ORDER

Order all repair parts for your Ingersoll-Rand Tool by the **NAME** and **NUMBER** shown in the Repair Part List section. **Never** use the illustration numbers which appear in the first column.

For prompt service and genuine Ingersoll-Rand parts, place orders with the nearest Ingersoll-Rand Branch Office.

Notice: The use of other than genuine Ingersoll-Rand replacement parts may result in decreased tool performance and increased maintenance, and may, at the Company's option, invalidate all warranties.

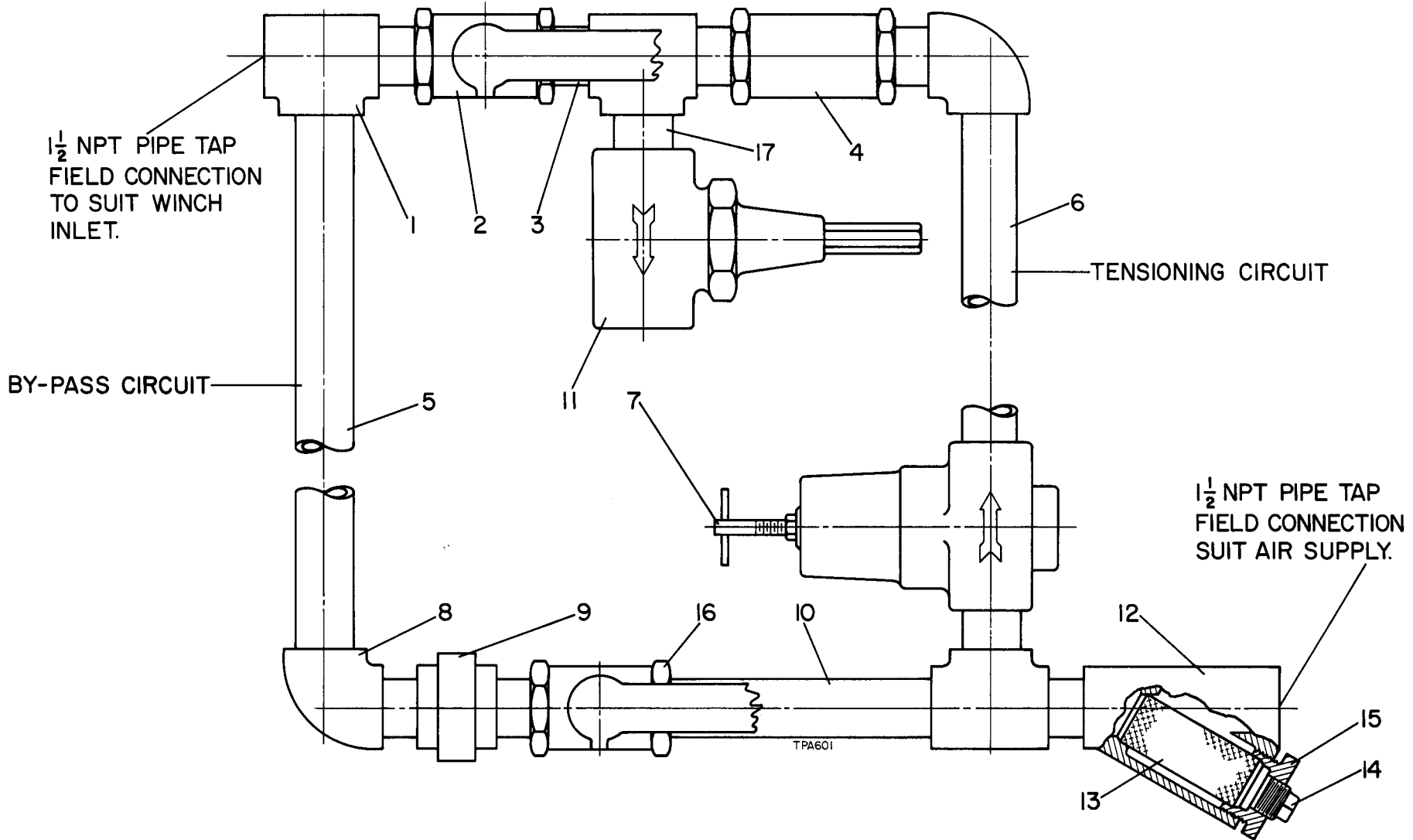
Refer All Communications to the Nearest
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TM30 TENSIONING MANIFOLD

REPAIR PART LIST

ILLUSTRATION NUMBER (Do Not Use For Ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING	
		TM20	TM30
	Tensioning Manifold	TM20	TM30
1	Pipe Tee, 1 1/2" NPT (3)	TM20-900	TM20-900
2	Shut-off Valve, 1 1/2" NPT	TM20-901	TM20-901
3	Pipe Nipple, 1 1/2" NPT x 2 1/2" long (8)	TM20-902	TM20-902
4	Check Valve	TM20-903	TM20-903
5	Pipe Nipple, 1 1/2" NPT x 14 15/16" long	TM20-904	TM20-904
6	Pipe Nipple, 1 1/2" NPT x 8" long	TM20-905	TM20-905
7	Pressure Regulator	TM20-906	TM20-906
8	Pipe Elbow, 1 1/2" NPT (2)	TM20-907	TM20-907
9	Pipe Union, 1 1/2" NPT	TM20-908	TM20-908
10	Pipe Nipple, 1 1/2" NPT x 11 1/4" long	TM20-909	TM20-909
11	Relief Valve		
	3/4" NPT	TM20-910	- - - -
	1 1/2" NPT	- - - -	TM30-910
12	Air Strainer Assembly	20BM-A267AT	20BM-A267AT
13	Air Strainer Screen	20BM-61AT	20BM-61AT
14	Air Strainer Plug	22SR-165	22SR-165
15	Air Strainer Cap	20BM-268AT	20BM-268AT
16	Shut-off Valve	TM20-901	TM20-901
17	Pipe Nipple		
	3/4" NPT x 2 1/2" long	D02-456	- - - -
	1 1/2" NPT x 2 1/2" long	- - - -	TM20-902
*	Pipe Bushing 1 1/2" NPT to 3/4" NPT	TM20-911	- - - -

* Not illustrated.

ADJUSTMENT FOR BYPASSING THE TENSIONING CIRCUIT

If the application requires that the Winch sometimes be manually operated, a Remote Control Block (refer to Repair Part List of Winch) should be installed in the air supply line immediately upstream of the Manifold. In such cases as this, the reverse port of the Remote Control Block is piped to the reverse port of the Valve Chest on the Winch.

Adjust the Valves in the Manifold as follows:

1. Close the Shut-off Valve (2) in the tensioning circuit.
2. Open the Shut-off Valve (16) in the bypass circuit.

3. Open the Pressure Regulator (7) to a pressure above the line pressure.
4. Operate the Winch with the Remote Control Block.

AIR STRAINER

Periodically clean the Air Strainer (12). Shut off the air supply and unscrew the Air Strainer Plug (14) from the Strainer Cap (15). Turn on the air momentarily and blow out the dirt. If the Screen (13) becomes clogged to the extent that the above method fails to clean it properly, unscrew the Strainer Cap and remove the Screen. Wash the Screen thoroughly in clean kerosene or other solvent.

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