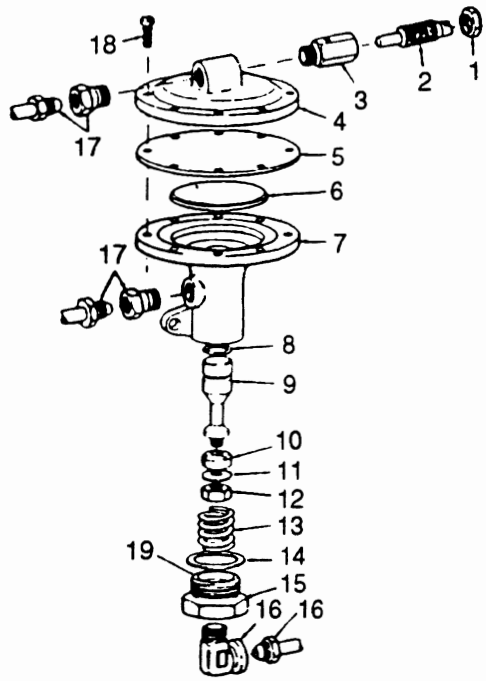
CHAMPION service data for air compressor components

AUTOMATIC TANK DRAIN VALVE

REPLACEMENT PARTS LIST			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	M2399	1	NUT, Timer Lock
2	TD-6	1	SCREW, Timer
3	TD-5	1	BODY, Timer
4	TD-2	1	COVER, Diaphragm
5	TD-9	1	DIAPHRAGM
6	TD-4	1	PLATE, Diaphragm
7	TD-1	1	BODY, Valve
8	TD-16	1	RING, O
9	TD-7	1	STEM, Valve
10	TD-3	1	DISC, Valve
11	TD-18	1	WASHER, Disc Backup
12	M745	1	NUT, Hex Brass
13	P01882A	1	SPRING, Valve
14	TD-17	1	GASKET
15	TD-10	1	PLUG, Intake
16	M2881	1	FITTING, Compression
17	M2863	2	FITTING, Compression
18	M3473	8	SCREW, Fillister Heat Machine
19	M1651	1	SCREEN
	Z-TD-1	1	TANK DRAIN ASSEMBLY, Complete
	Z-TD-1A		TANK DRAIN w/installation Kit (Champion Units)
	Z-TD-1C		DRAIN w/Kit (Commandair Units)
	Z-5941	1	REPAIR KIT Includes items 5 & 8 thru 14



OPERATION

At the end of each pumping cycle, any compressor equipped with a centrifugal unloader* or pressure switch with a pressure release valve, exhausts air from the lines between compressor and tank. This exhausted air is used to actuate the Champion Automatic Tank Drain Valve.

The exhausted air is delivered into the diaphragm cover, (4) depressing the diaphragm (5). This forces the diaphragm plate (6) and valve stem (9) down, unseating valve disc (10). Storage tank pressure then forces moisture accumulation at the bottom of tank through flexible tube and tank drain valve (see diagram reverse side). Timer (1, 2 & 3) allows the exhaust air depressing the diaphragm to bleed off. The length of time required to bleed off air determines draining time of valve. The timer screw (2) opens or closes air bleed holes providing the operating range necessary to assure complete drainage.

*Only compressors equipped with centrifugal unloaders or unloader-type pressure switches can use this valve. The auto tank drain WILL NOT WORK with gasoline driven or continuous run units using head unloader.

INSTALLATION

The Champion valve may be mounted vertically or horizontally as required. It must be mounted rigidly to compressor or tank using mounting flange. The flange has been drilled to accommodate ¼" bolts. A new tank drain fitting with flexible tube attached may be ordered or existing manual drain fitting and tube may be retained and used. Make sure flexible tube reaches bottom of tank. Connect as shown using 1/8" or 1/4" compression fittings.

Where necessary to run connection into diaphragm cover on timer side, timer may be unscrewed and placed on the opposite side. When adjusting timer, timer screw should be turned to give draining time just long enough to exhaust all trace of moisture. Turning timer screw (2) CLOCKWISE LENGTHENS DISCHARGE TIME - COUNTER-CLOCKWISE SHORTENS DISCHARGE TIME. Tighten lock nut (1) when timer screw is set.

SERVICING

IF VALVE FAILS TO OPEN. Check for leaks in line from unloader or pressure release valve to automatic drain valve. Check to see that timer has not been unscrewed too far. If trouble persists, remove intake plug (15) and clean chamber. If this fails, remove diaphragm cover (4) and check diaphragm and diaphragm plate for cause of non-operation.

IF VALVE FAILS TO CLOSE. Check timer adjustment to see that air is bleeding out.

If air continuously bleeds from timer while compressor IS running, centrifugal unloader or pressure switch release valve is leaking. Check compressor or pressure switch instructions for remedy.

If air continuously bleeds from timer when compressor IS NOT running, inspect compressor check valve. Replace check valve disc if air is leaking back from tank.

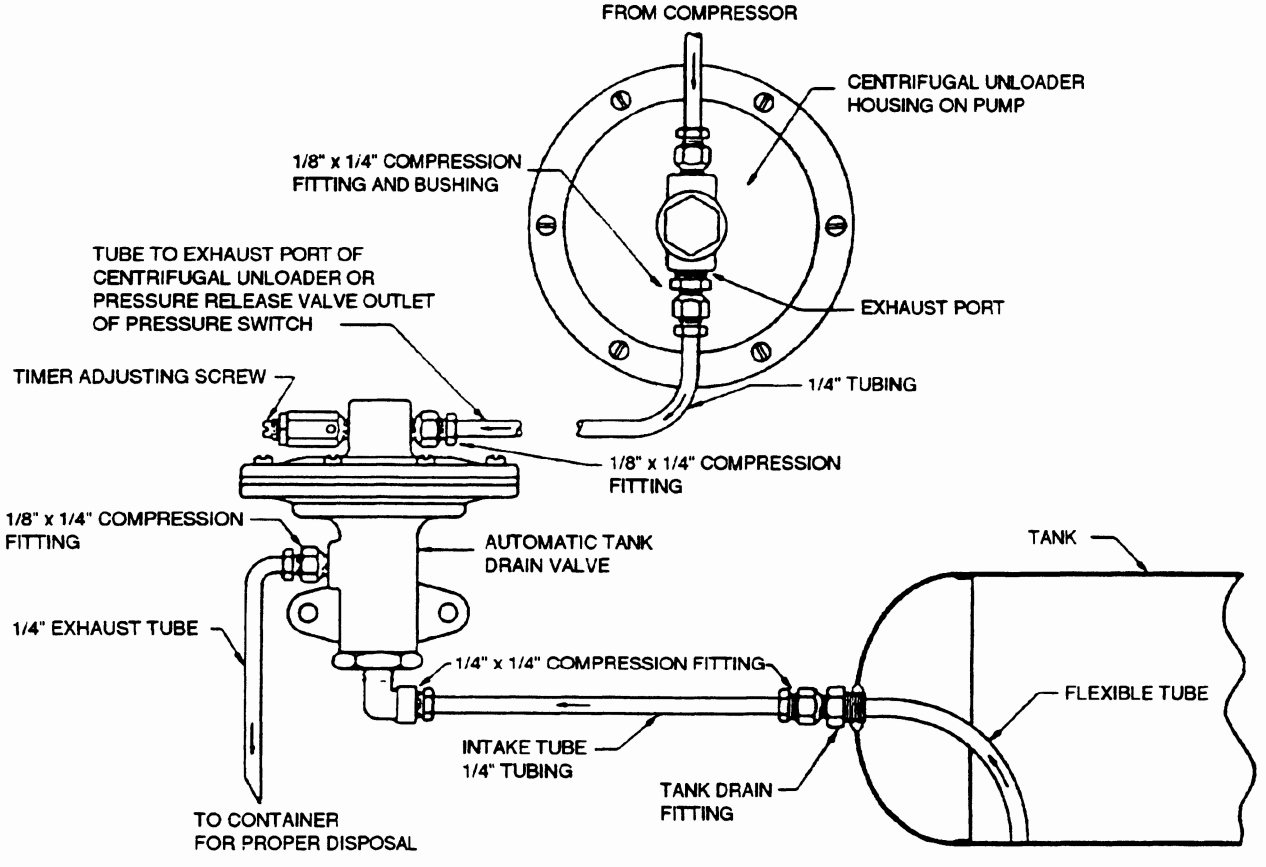
If timer works correctly and valve fails to close, remove intake plug (15), spring (13) and valve stem assembly. This assembly includes valve stem (9), "O" ring (8), disc (10) and nut (12). They are not attached to diaphragm plate (6) and will drop out through bottom of valve chamber opening. Clean intake chamber and disc (10). Replace disc if scored.

IF VALVE OPENS AND ONLY AIR IS EXHAUSTED. Check flexible tube in tank. It must reach to the bottom of the tank and be free of leaks.

Timer may be adjusted under operating conditions.

⚠ WARNING

Drain tank completely of air and water before installing or servicing valve. Failure to relieve pressure may cause injury or equipment damage



INSTALLATION OF CHAMPION AUTOMATIC TANK DRAIN FOR COMPRESSORS EQUIPPED WITH CENTRIFUGAL UNLOADER

CHAMPION

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