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PNEUMATIC PRESSURE CONTROL SYSTEM for DYNAMELT DM5 PAIL UNLOADER UNITS OPERATIONS AND SERVICE MANUAL

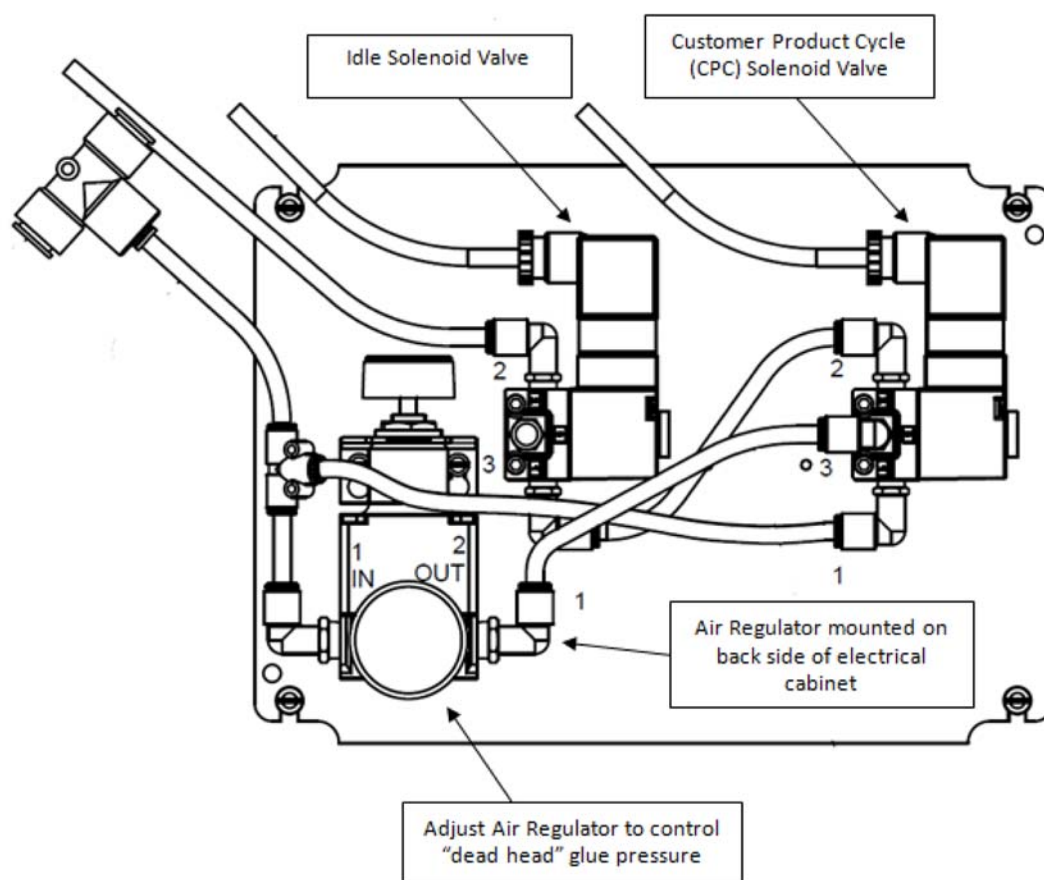
PN 821273 Three-Pressure

IMPORTANT ! - READ ALL INSTRUCTIONS BEFORE OPERATING THIS EQUIPMENT

It is the customer's responsibility to have all operators and service personnel read and understand this information. Contact your ITW Dynatec customer service representative for additional copies.

NOTICE! Please be sure to include the serial number of your application system each time you order replacement parts and/or supplies. This will enable us to send you the correct items that you need.

**ITW Dynatec Service Parts Direct Dial: 1-800-538-9540
ITW Dynatec Technical Service Direct Dial: 1-800-654-6711**



Description

The ITW Dynatec DM5 Platen Circulation Kit, 3-Pressure (PN 821273) provides the following advantages in systems where a DM5 Pail Unloader is supplying adhesive directly to adhesive application equipment, such as extrusion applicators, spray applicators or slot dies.

- Relief of glue pressure in the DM5 output manifold/feed hose when the pump motor is disabled.
- Automatic flushing of fresh glue through the DM5 pressure relief mechanism each time the pump motor is enabled to prevent stale glue from degrading the pressure relief capabilities of the pail unloader.
- Maintenance of consistent glue pressure in the melt system, regardless of whether the glue applicator is activated or deactivated.
- Full, metered output to the application equipment when it is activated.
- Minimizing of glue “surge” or “bull-heading” when the glue applicator is first opened, caused by system pressure build-up.

The kit is composed of the following items:

- 1 x Regulation Assembly, 3-Pressure (PN 821352)
- 1 x Timer Relay (PN 821034) and
- 1 x Circuit Relay (PN 817898)

The 821273 DM5 Platen Circulation Kit (3-Pressure) works in conjunction with a Pneumatic Pressure Relief Valve (PPRV), 14:1 (PN 115540), which is installed in the DM5's lower pump block.

Operation

The air regulator that is part of Pressure Regulation Assembly (PN 821352) is easily accessible, being mounted on the back side of the DM5's electrical cabinet.

The solenoid valves that are part of Pressure Regulation Assembly (PN 821352) are mounted in the DM5's lower electrical cabinet and are designed to provide three different air pressures to the PPRV:

- Ambient (0psig) air pressure when the pump motor is disabled and for the first 10 seconds after the pump motor has been enabled and
- Either DM5 input air pressure or a regulated air pressure supplied by the 0 to 60 psi air regulator that is part of the Platen Circulation Kit; after the pump motor is enabled for more than 10 seconds.

The "Idle Solenoid" provides switching of air pressure to the PPRV, based upon the status of the motor enable circuit. This is controlled by the Timer Relay (PN 821034) and the DM5's motor speed control equipment. This solenoid activates 10 seconds after the DM5's pump motor has been enabled and deactivates immediately upon disabling the pump motor, providing the following functions:

- Automatic relief of system glue pressure when the pump motor is disabled and
- Zero pressure on the PPRV for 10 seconds after the pump is enabled allowing fresh glue to be flushed through the DM5's pressure relief passages and PPRV; helping to prevent stale glue from plugging the pressure relief passages and PPRV.

NOTE: The 10 second delay before "Idle Solenoid" activation should not be overridden or adjusted.

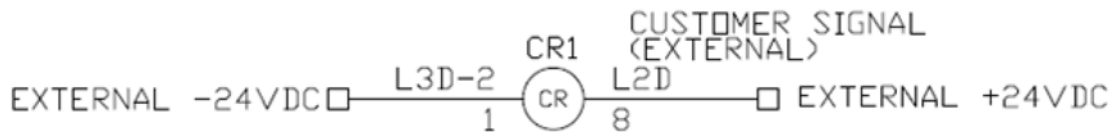
Deactivating the "Idle Solenoid" supplies ambient (i.e. 0 psi) pressure to the PPRV. Activating the solenoid provides air pressure, as determined by the "CPC (Customer Product Cycle) Solenoid" included in the kit.

The “CPC Solenoid” is designed to provide either of two different air pressures to the “Idle Solenoid”. These pressures are:

- Full DM5 air pressure, as determined by the setting of the main air regulator that supplies all air inputs to the Pail Melter, when the “CPC Solenoid” is activated; or
- Air pressure, as adjusted on the 0 to 60 psi air regulator that is supplied as a part of the kit, when the “CPC Solenoid” is deactivated.

Note the following:

A customer-supplied 24VDC signal must be provided for control of the “CPC Solenoid”. This customer-supplied, 24VDC signal should be landed on terminals (1) and (8) of CR-1 (contact relay) in the electrical cabinet (see below).



The “CPC Solenoid” should be activated (i.e. 24VDC applied across CR-1 in unison with activation of the system’s glue application equipment and likewise, deactivated in unison with deactivation of the glue application equipment.

The air pressure input to the DM5 (i.e. main air supply to the pail unloader) should be adjusted to 80 to 85 psi (5.5 to 6 bar).

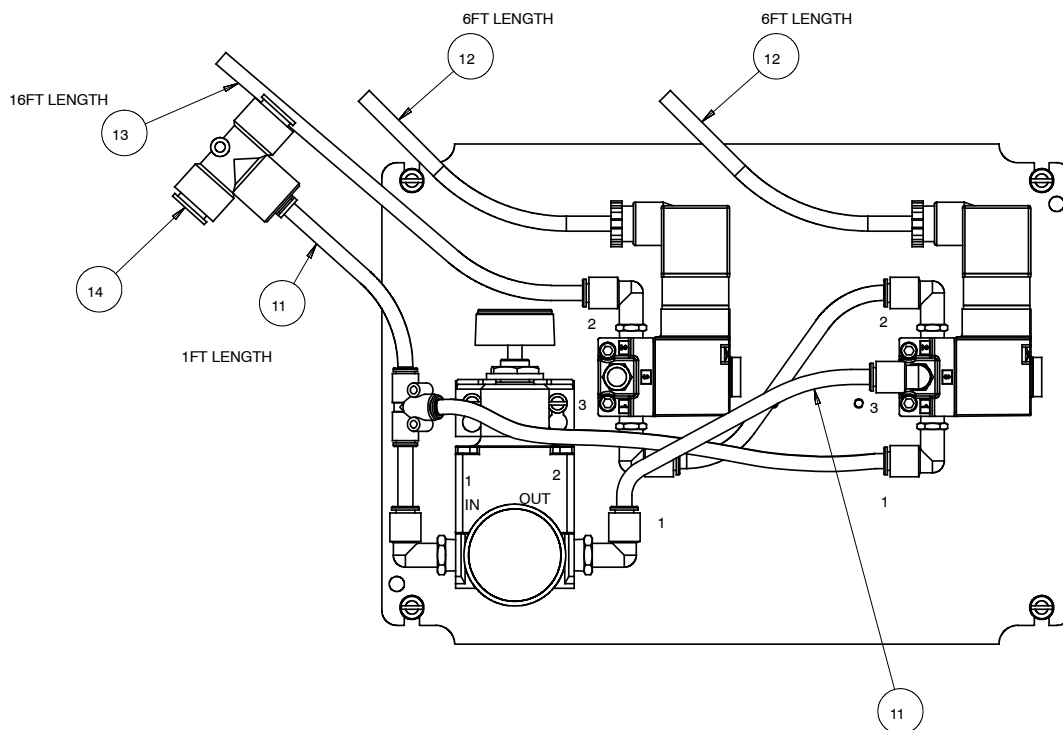
The air pressure of the 0 to 60 psi air regulator that is part of this kit should be adjusted so the glue pressure in the system is consistent, whether the applicator is activated or deactivated. This is done by observing the system glue pressure when the applicator is activated, then deactivating the applicator, while the pump is still operating, and adjusting the 0 to 60 psi air regulator so the system pressure is the same as when the applicator was activated. Doing this will minimize the “surge” or “bull-heading” caused by build-up of pressure in the system when the applicator is closed.

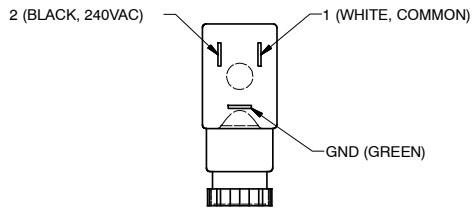
PN 821352 3-Position Pressure Relief Assembly

Item No. Part Number Qty. Description

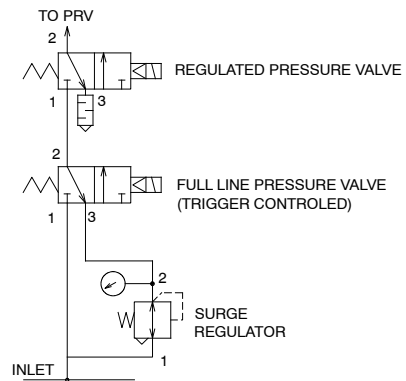
15	107208	4	E A	SCR,PH PNHD,M5X0.8X8,ZN
14	118259	1	E A	FTG,TEE,1/2x1/4,BRANCH,TUBE
13	N07677	1 6	F T	TUBING,TFE,.25 OD X.125I
12	N08236	12	FT	CABLE,18GA,3C,SV
11	775-005	4	F T	TUBING,1/4 POLY,CLEAR
10	111965	4	E A	WSHR, FLAT, M5, SST
9	N02312	2	E A	SCR,PAN HD,8-32 X 3/8
8	078A157	4	E A	SHCS,8-32 X 1
7	N06504	1	E A	FTG,UNION TEE,1/4 TUBE
6	N02745	1	EA	MUFFLER,PNEU EXH,1/8NPT
5	N06436	5	EA	FTG,ELB,1/4TUB X 1/8NPT
4	N06412	2	E A	FTG,EL,1/4MPTX1/4TUBE
3	118643	1	E A	REG,PRECIS,0-60 PSI,1/4 NPT
2	107201	2	EA	VLV,SOL,3W,240,PLUG-IN
1	817806	1	E A	INSRT,PNL,2POS PNEU PRSR

SPLICE 1/2 TEE INTO EXISTING 1/2 SUPPLY
INSIDE PEDESTAL BASE AT INSTALL.

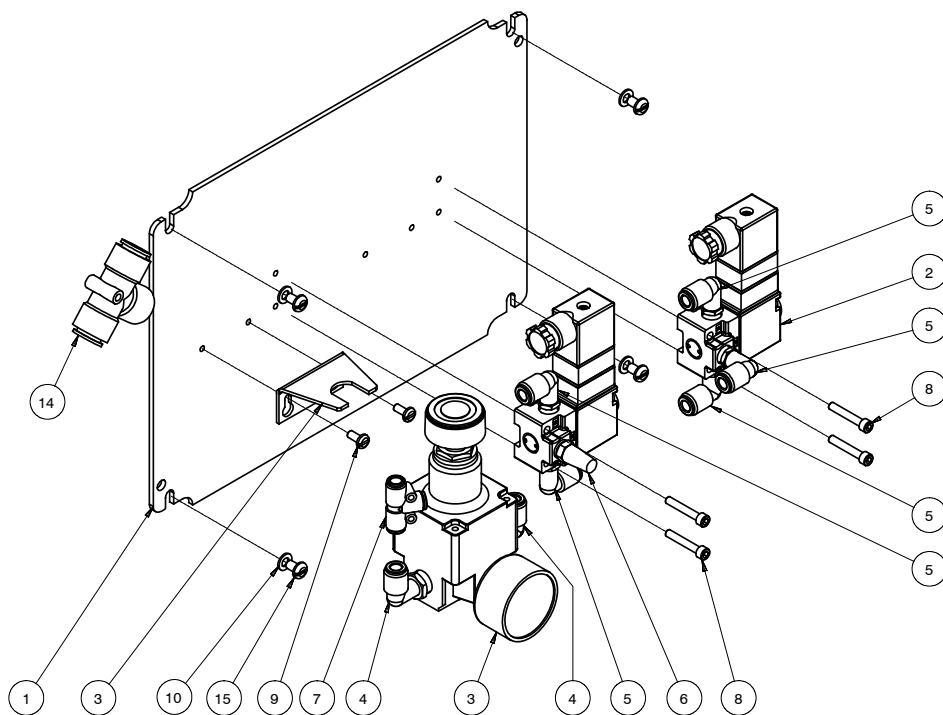




ELECTRICAL DIAGRAM
(LOOKING AT CONNECTOR)



PNEUMATIC SCHEMATIC



PN 821352 3-Position Pressure Relief Assembly

