

CHAPTER 17

PNEUMATIC CONTROLS

17-1. Minimum maintenance activities for pneumatic controls

The tables that follow indicate items that must be performed to maintain systems and equipment at a minimum level of operational readiness. The listed action items should be supplemented by manufacturer-recommended maintenance activities and procedures for specific pieces of equipment.

17-2. General maintenance procedures for pneumatic controls

Maintenance actions included in this section are for various modes of operation, subsystems, or components. Table 17-1 provides maintenance information for air compressors and piping. Table 17-2 provides maintenance information for pneumatic control system instrumentation and electrical.

Table 17-1. Air compressor and piping

Air Compressor and Piping	
<i>Action</i>	<i>Frequency</i>
WARNING!	
BEFORE BEGINNING ANY MAINTENANCE ON THE AIR COMPRESSOR, DISCONNECT ELECTRICAL POWER, LOCKOUT AND TAG SWITCH AT MCC.	
Air Compressor and Lines	
Check oil pressure.	day
Check oil level:	
1 hp	week
¼ through ¾ hp	mo
Check percent on-time.	mo
Check air distribution system for leaks.	mo
Operate safety valves.	mo
Check and replace intake filter (more often if necessary).	mo
Check belt tension.	mo
Inspect valve assemblies.	6 mos
Check P/E switch setting.	yr
Inspect all electrical contacts.	yr
Check amp draw on motors.	yr
Check pump-up times.	yr
Change oil.	yr/2K hrs
Air Dryers	
Check air dryers for proper air drying. Change filter media if required. Repair or replace dryer if necessary.	week
Filters	
If filters are supplied on regulators, drain out condensation. If filters are not operating properly, repair or replace as needed.	mo
Pressure Regulator	
Check air pressure regulators for proper operation. Adjust, repair, or replace if necessary.	mo

Table 17-2. Pneumatic control system instrumentation and electrical

Pneumatic Control System Instrumentation & Electrical	
<i>Action</i>	<i>Frequency</i>
Transmitters and Controllers	
Calibrate and adjust in accordance with the manufacturer's recommendations.	mo
Thermometers	
Check for accuracy. Remove thermometers from their wells and check against calibrated thermometer in controlled temperature bath.	yr
Pressure Gauges	
Isolate pressure gauge by closing the proper valves. Remove and check in a fixture against a calibrated gauge. Adjust as required following equipment manufacturer's instructions	yr
Motors	
Check and clean cooling airflow passages on electric motors as necessary so that nothing obstructs airflow.	6 mos
All Electrical Devices	
Check, clean, and tighten terminals at motors, starters, disconnect switches, etc.	6 mos
Wiring	
Check insulation on conductors in starters, switches, and junction boxes at motors for cracks, cuts, or abrasions. Replace wiring as required and correct cause of damage.	6 mos