



CREATING
VALUE

COMPRESSED AIR SYSTEM

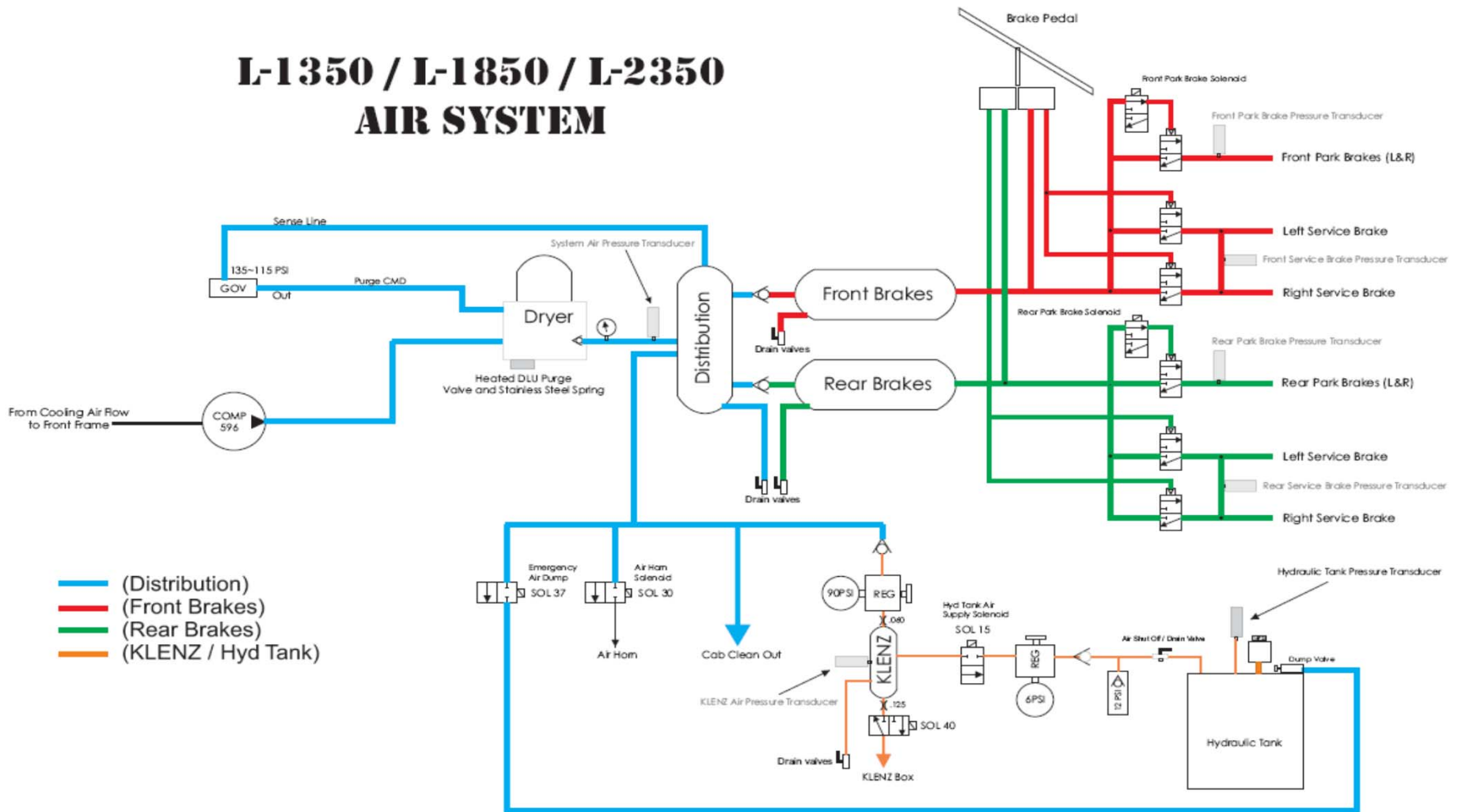
JOYGLOBAL

COMPRESSED AIR SYSTEM

- Theory of Operation
- Component Descriptions
- Circuit Descriptions
- Settings and Adjustments
- Troubleshooting
- Removal and Installation

THEORY OF OPERATION

L-1350 / L-1850 / L-2350 AIR SYSTEM



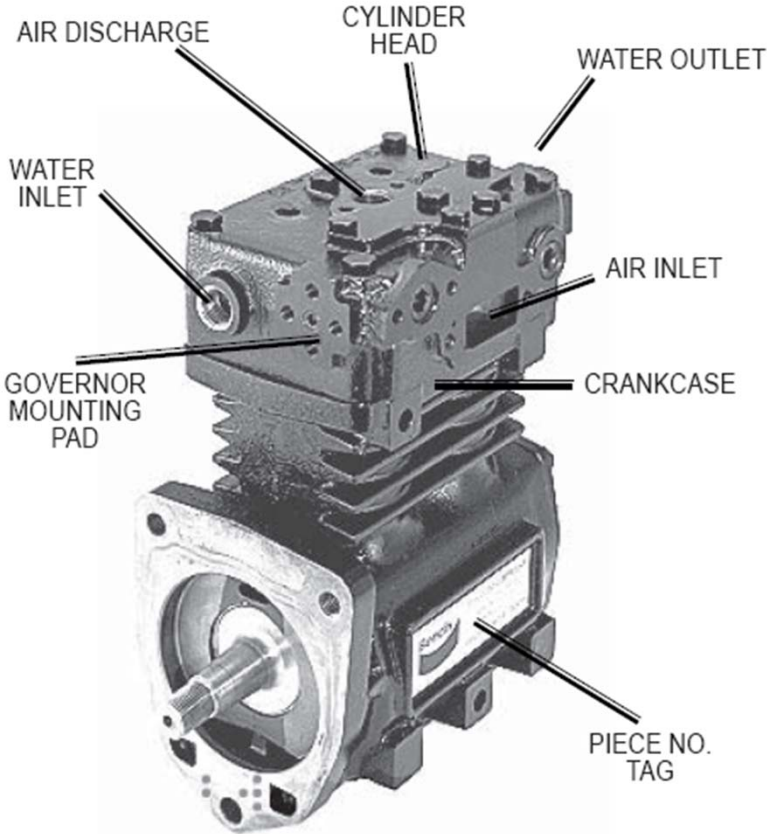
COMPONENT DESCRIPTION

COMPONENT DESCRIPTIONS

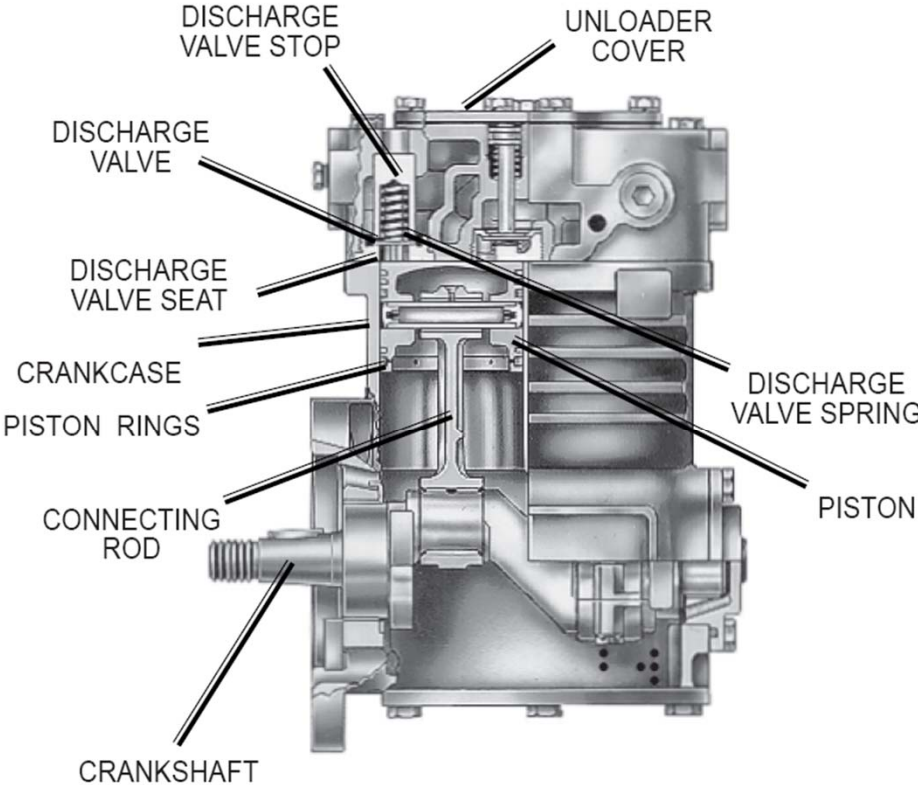
- Compressors
- Valves
- Tanks
- Solenoids
- Transducers

Model	Displacement (CFM) at 1250 RPM	Displacement (CFM) at 1900 RPM (120psi)	Displacement (CFM) at 1900 RPM (140psi)	Allowable inlet Temp °f	Allowable outlet Temp. °f	Boosted CFM at 1900RPM (120psi)	Lubrication	Cooling
750	16.5	11.7	10	250	400	34	Engine oil	Coolant
596	27	23	19.7	250	400	NA	PTO	Hyd Oil
922	31.7	27.8	23.8	170	350	NA	PTO	Coolant

BENDIX TU-FLO 750 COMPRESSOR

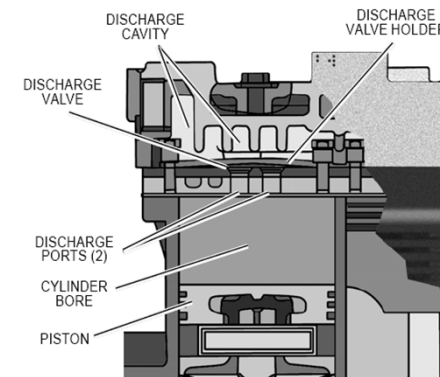
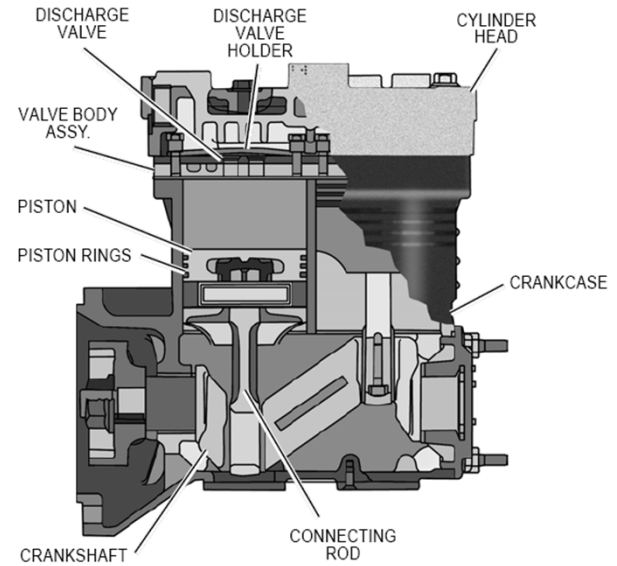
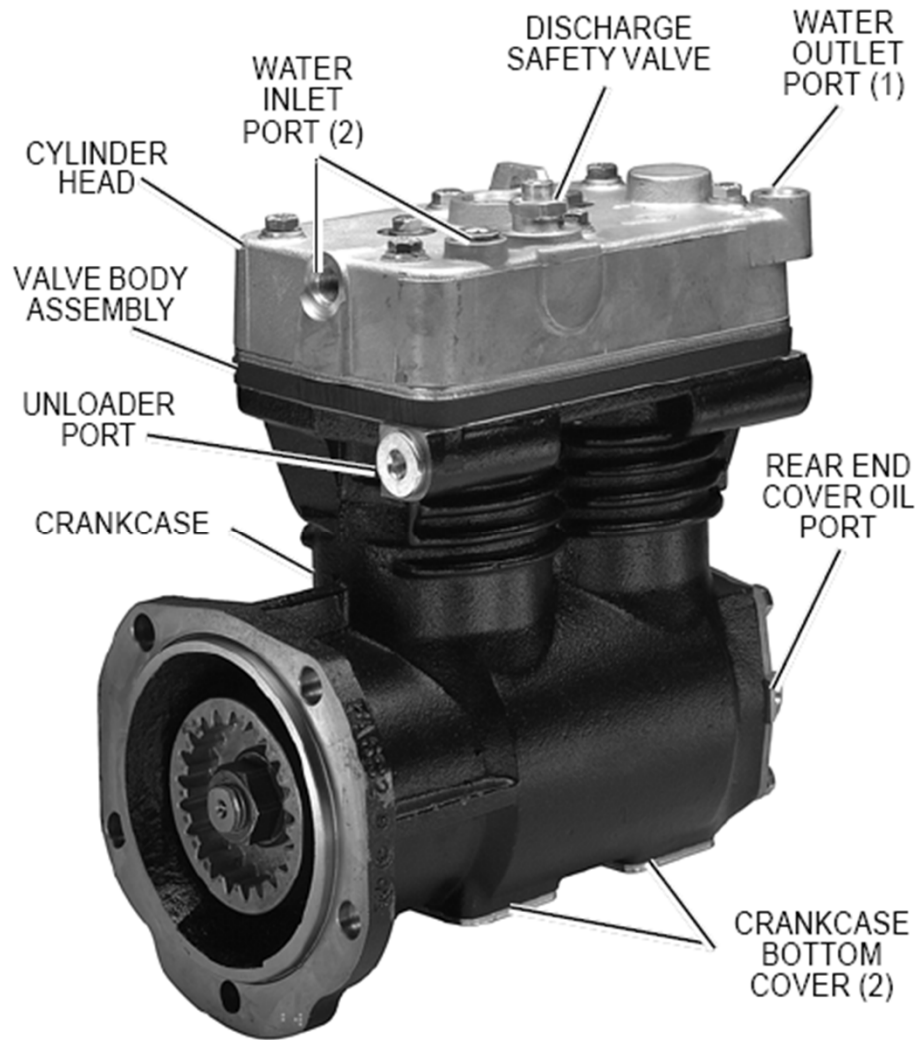


BENDIX® TU-FLO® 750 AIR COMPRESSOR
(EXTERIOR)



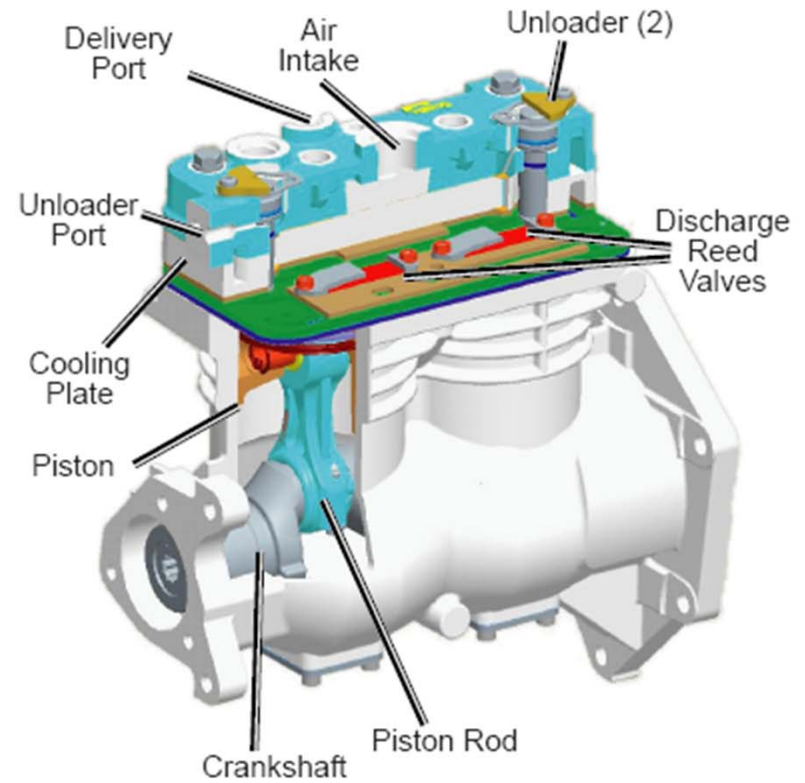
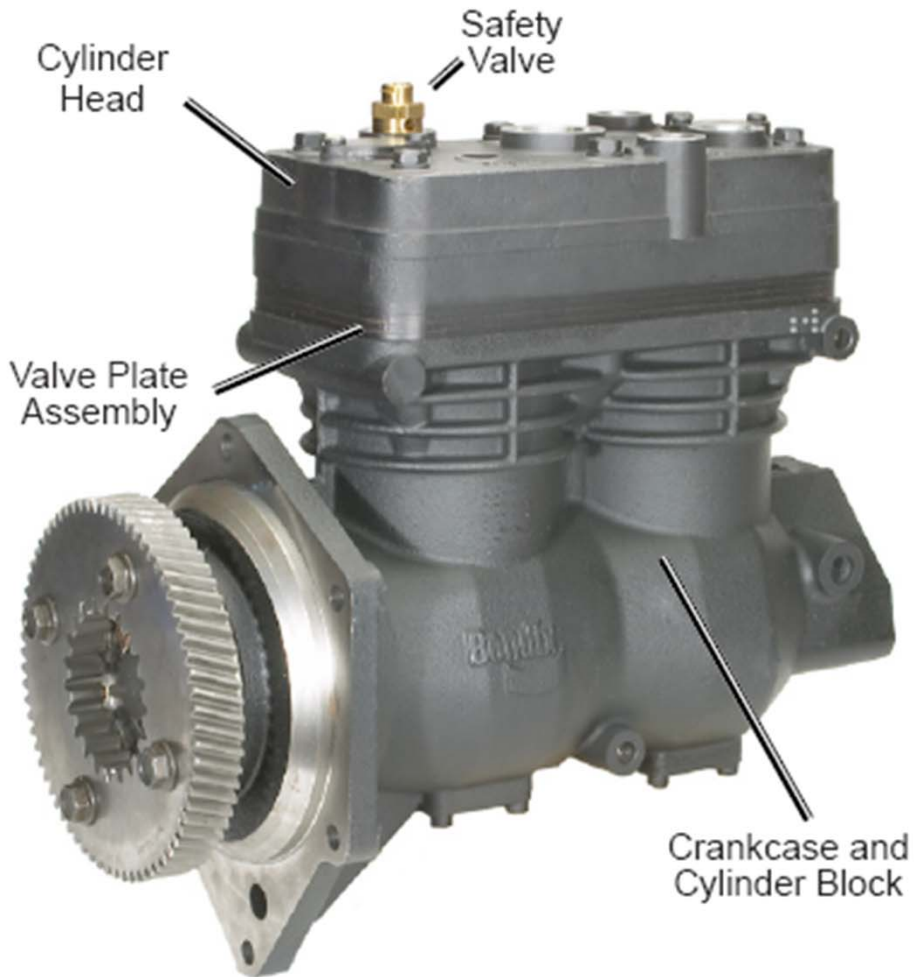
BENDIX® TU-FLO® 750 AIR COMPRESSOR
(CROSS SECTION)

BENDIX DURAFLO 596 COMPRESSOR

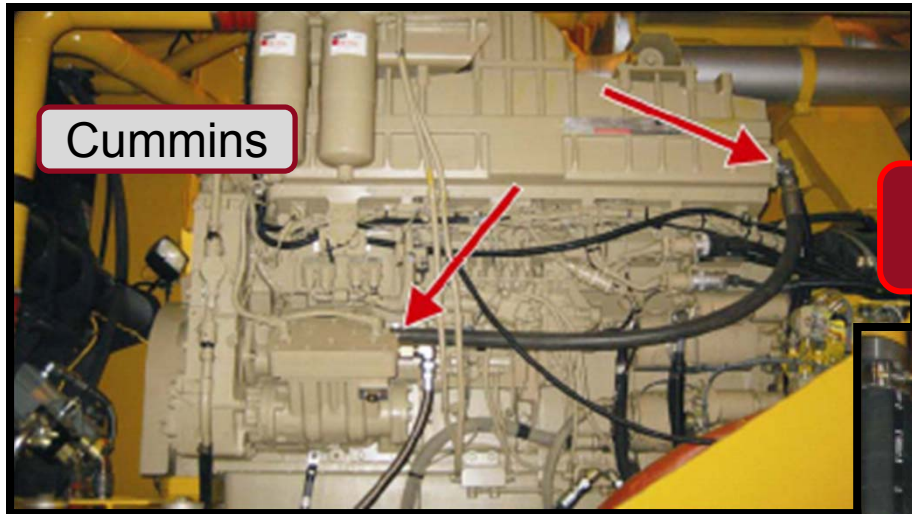


VIEW OF CYLINDER HEAD AND ONE CYLINDER BORE

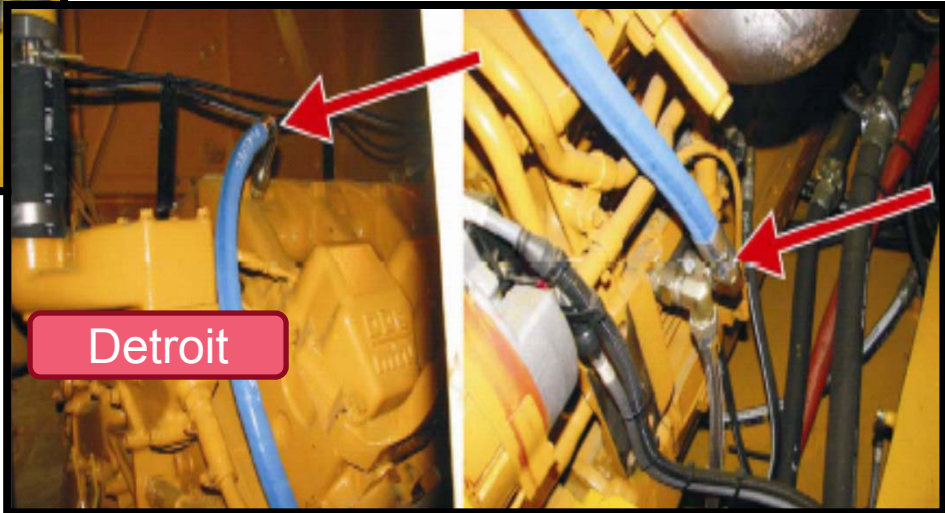
BENDIX BA-922 COMPRESSOR



COMPRESSOR INLET



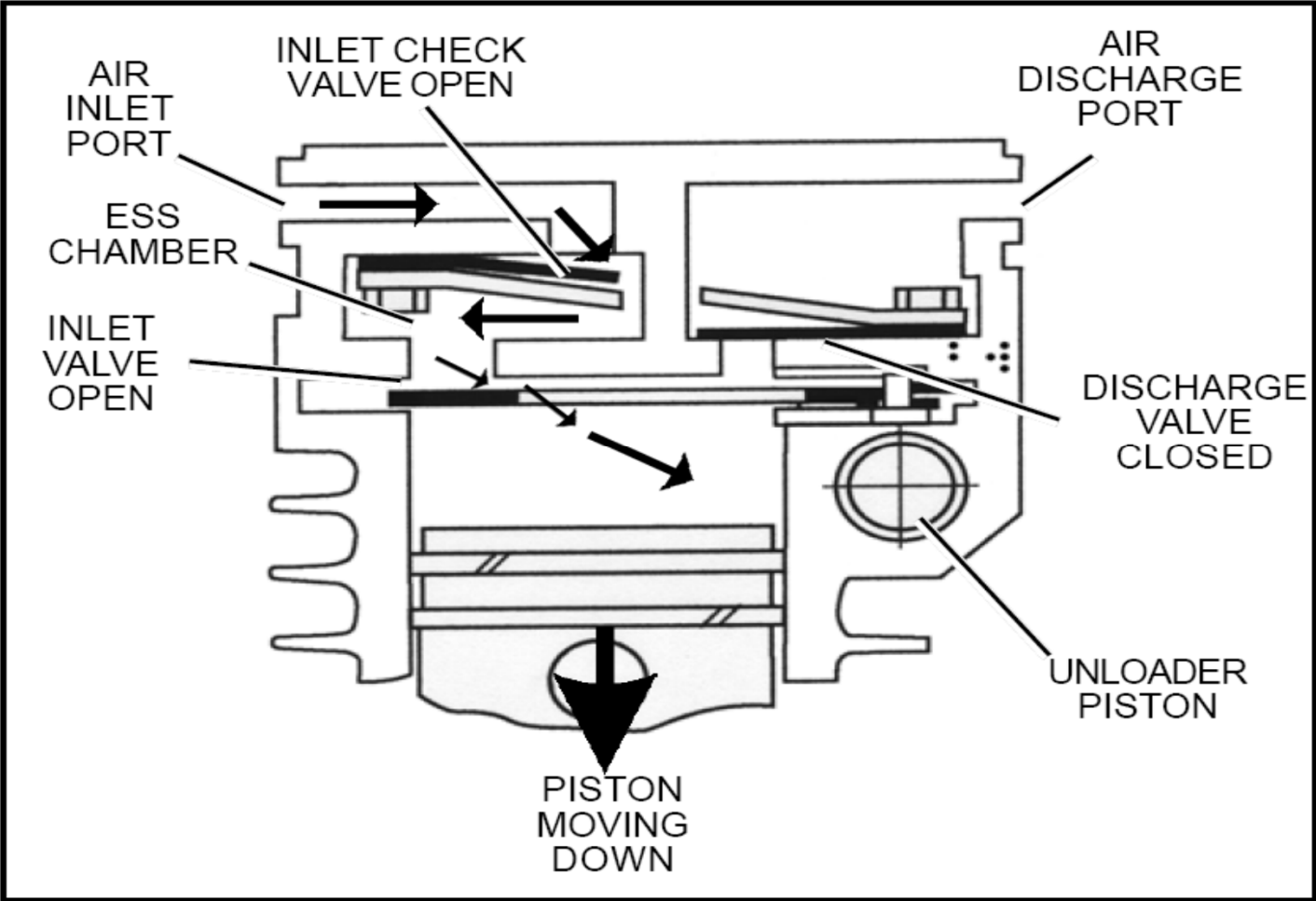
Engine Mounted TU-FLO 750 on L-950's



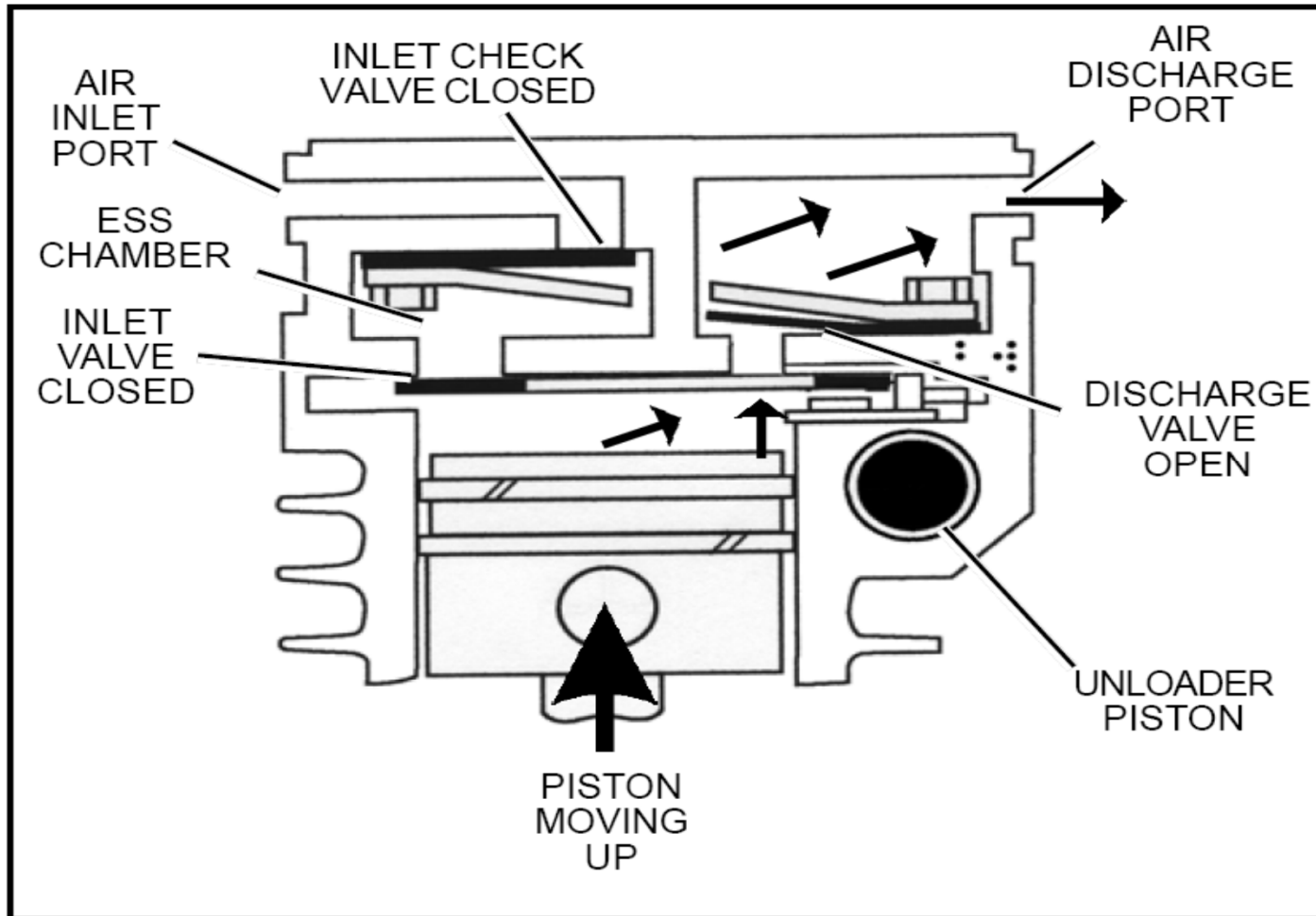
L-1350, L-1850, & L-2350



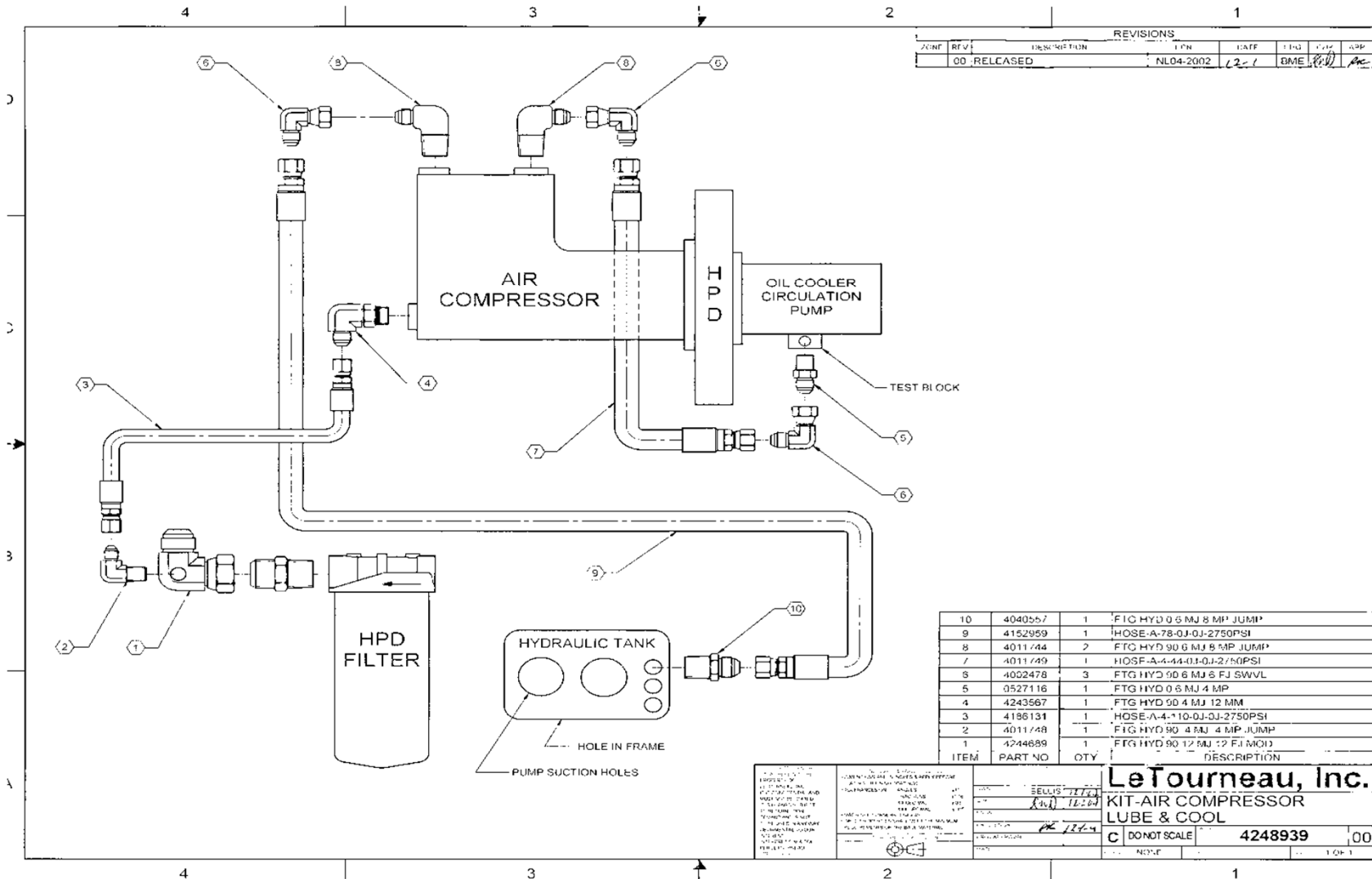
COMPRESSOR CYCLE - INTAKE



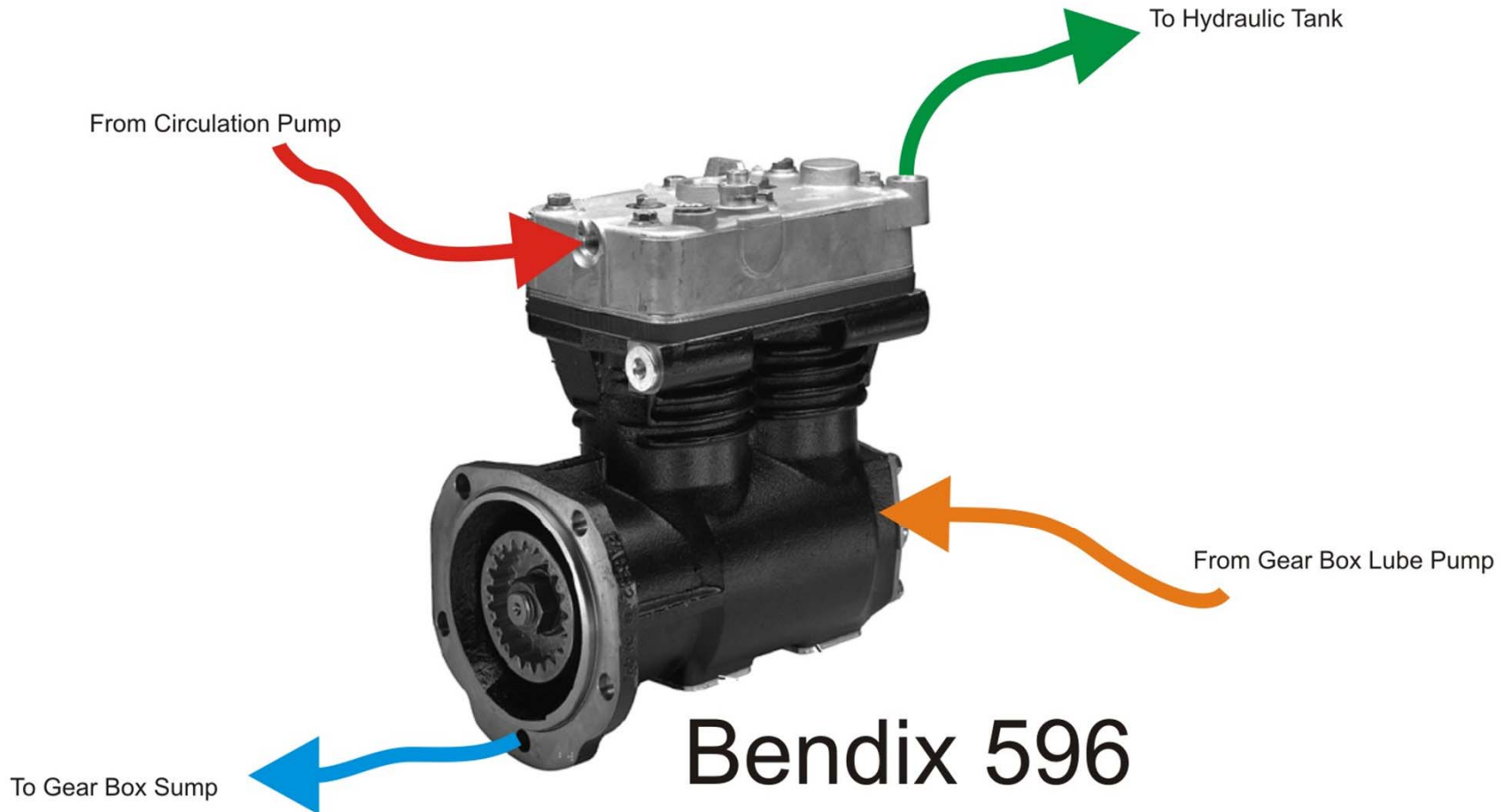
COMPRESSOR CYCLE - COMPRESSION



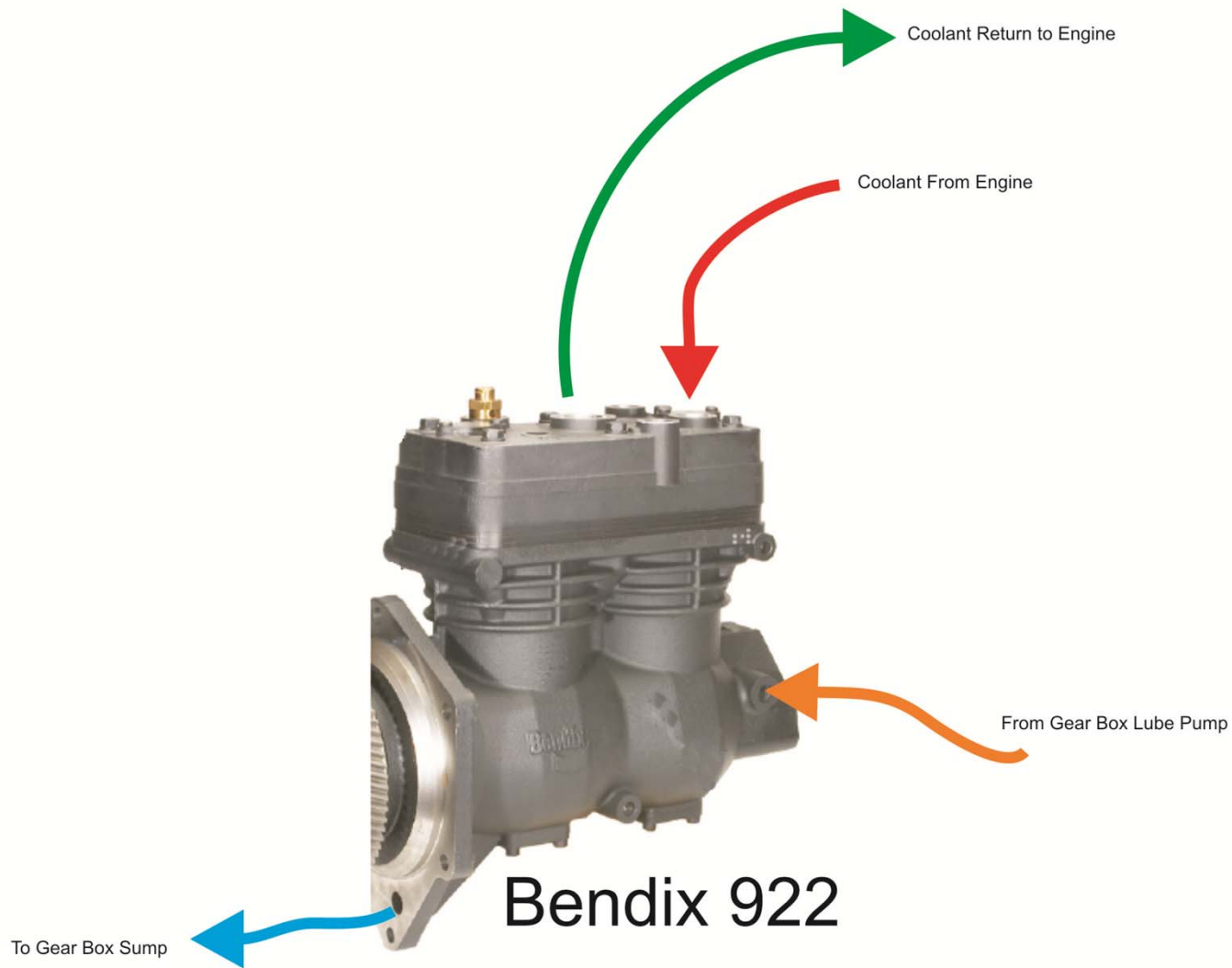
COMPRESSOR COOLING AND LUBE



596 COMPRESSOR COOLING LUBE CIRCUIT

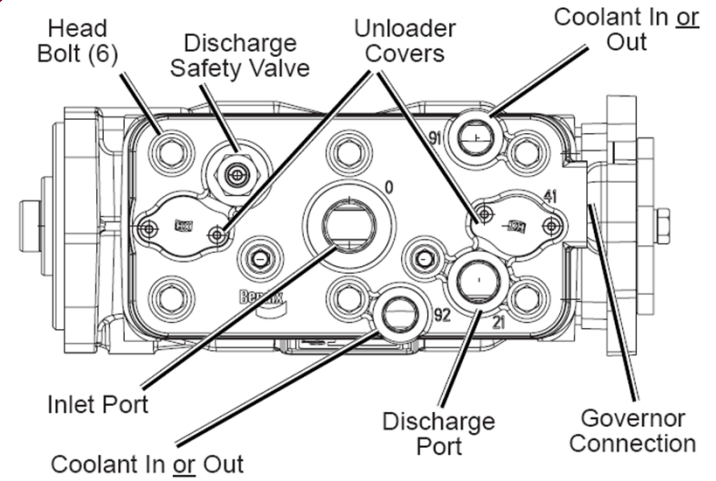
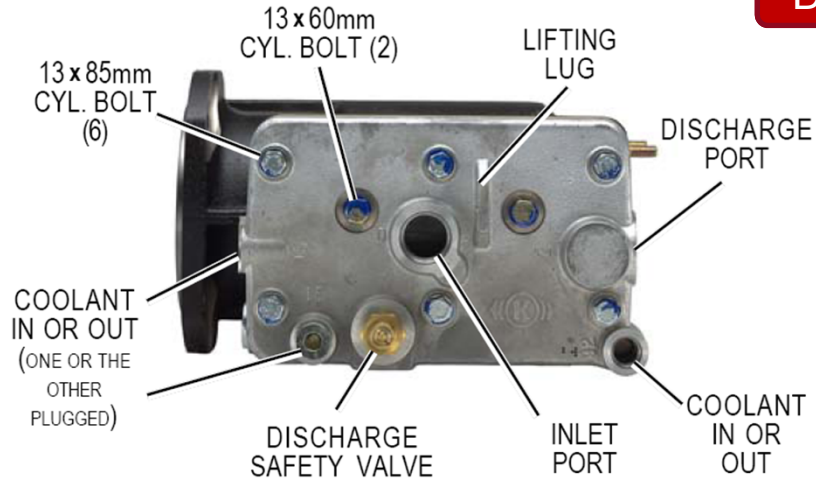


922 COMPRESSOR COOLING LUBE CIRCUIT



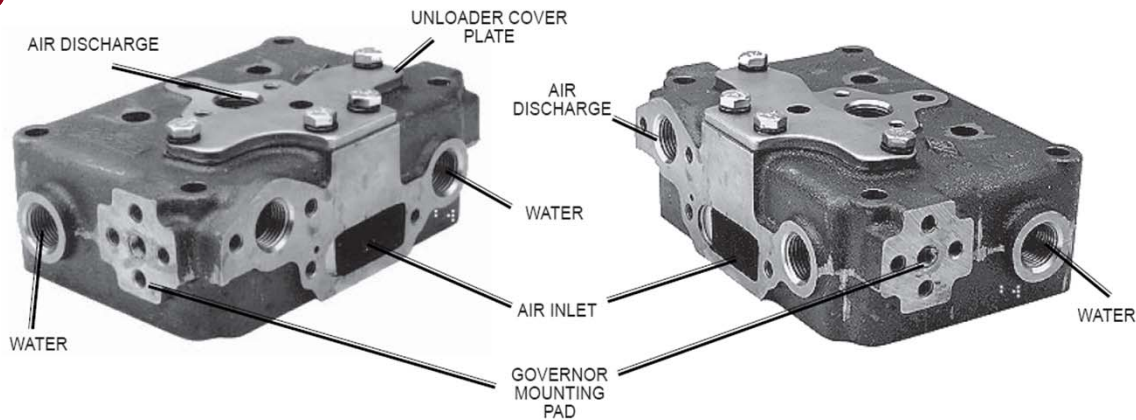
COMPRESSOR PORTING DESCRIPTION

DuraFlo 596

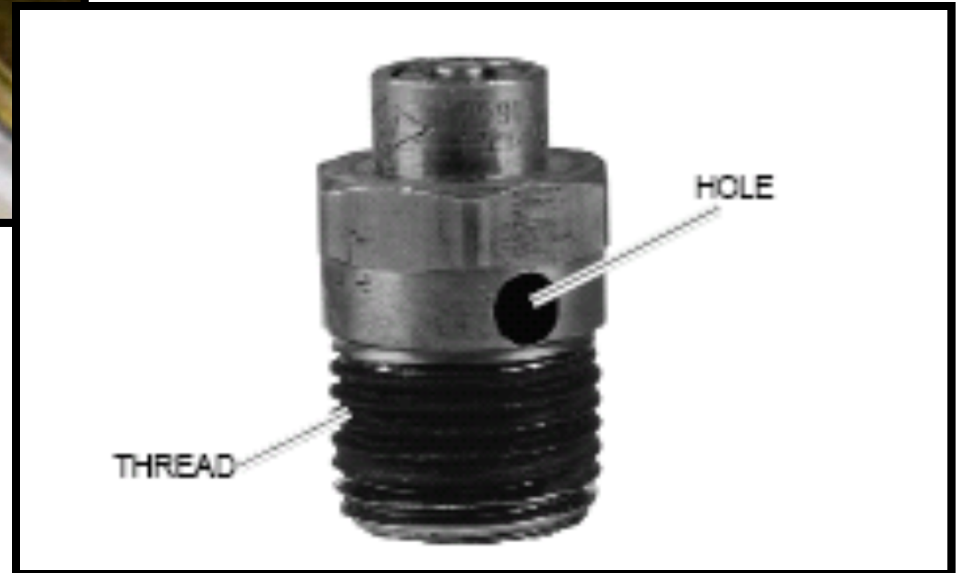


TU-Flo 750

BA-922



COMPRESSOR 250 PSI SAFETY RELIEF



COMPRESSOR OUTLET

STAINLESS STEEL 120 INCH HOSE



- This hose reduces air temperature
- Better heat dissipation than standard Teflon™ hoses

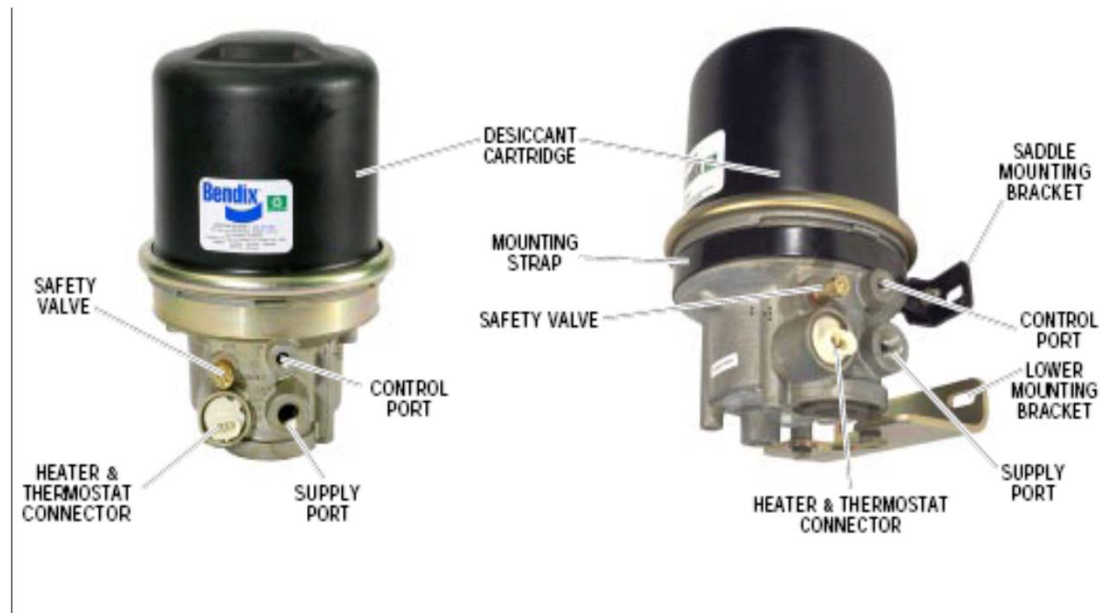
- Outlet Temperature is about 375 degrees

- This hose brings it down to about 175 degrees

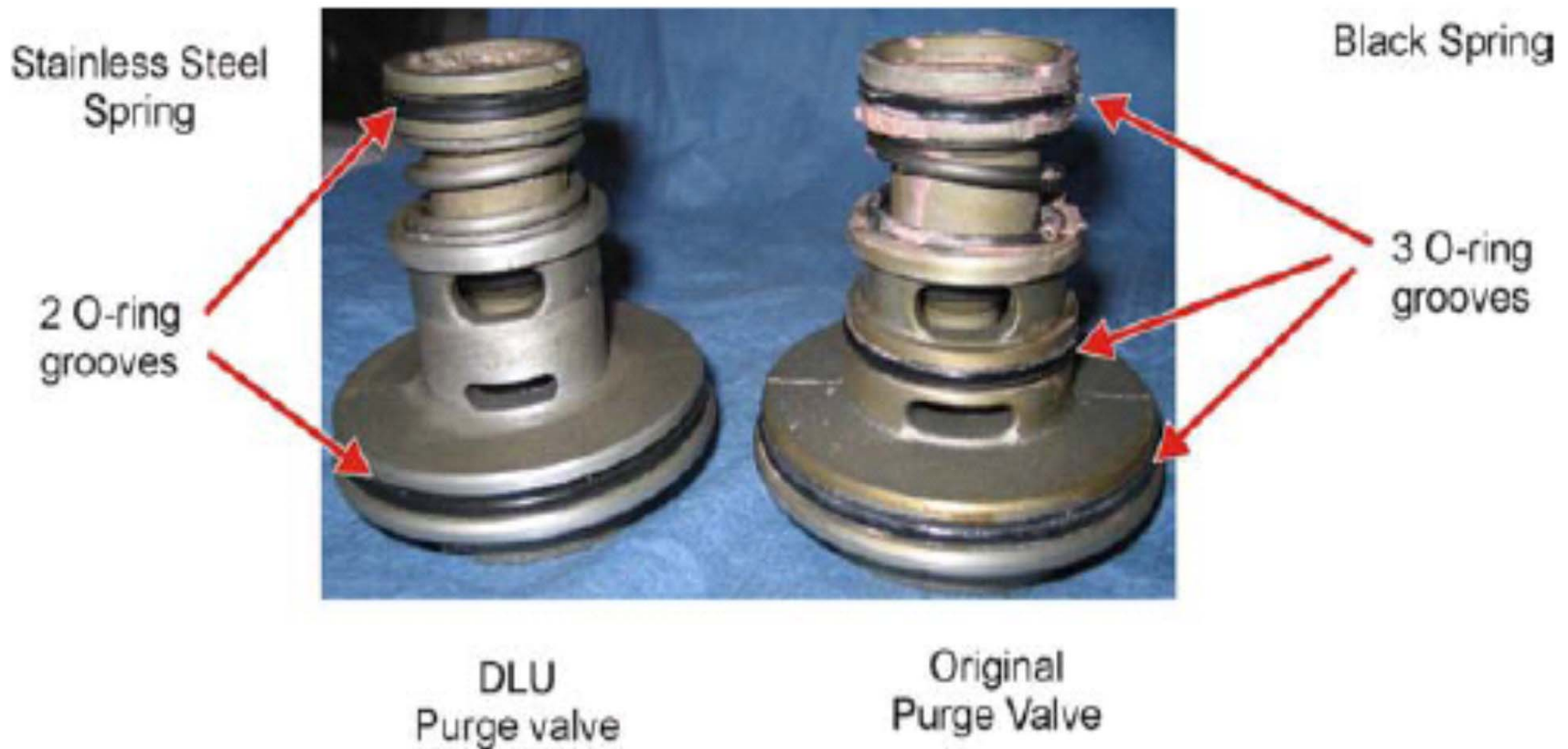


AD-IP BENDIX AIR DRYER DESCRIPTION

- 200 PSI Safety Relief
- 24 VDC Heater and Thermostat
- Desiccant Cartridge
- DLU Purge Valve
- Outlet Check Valve

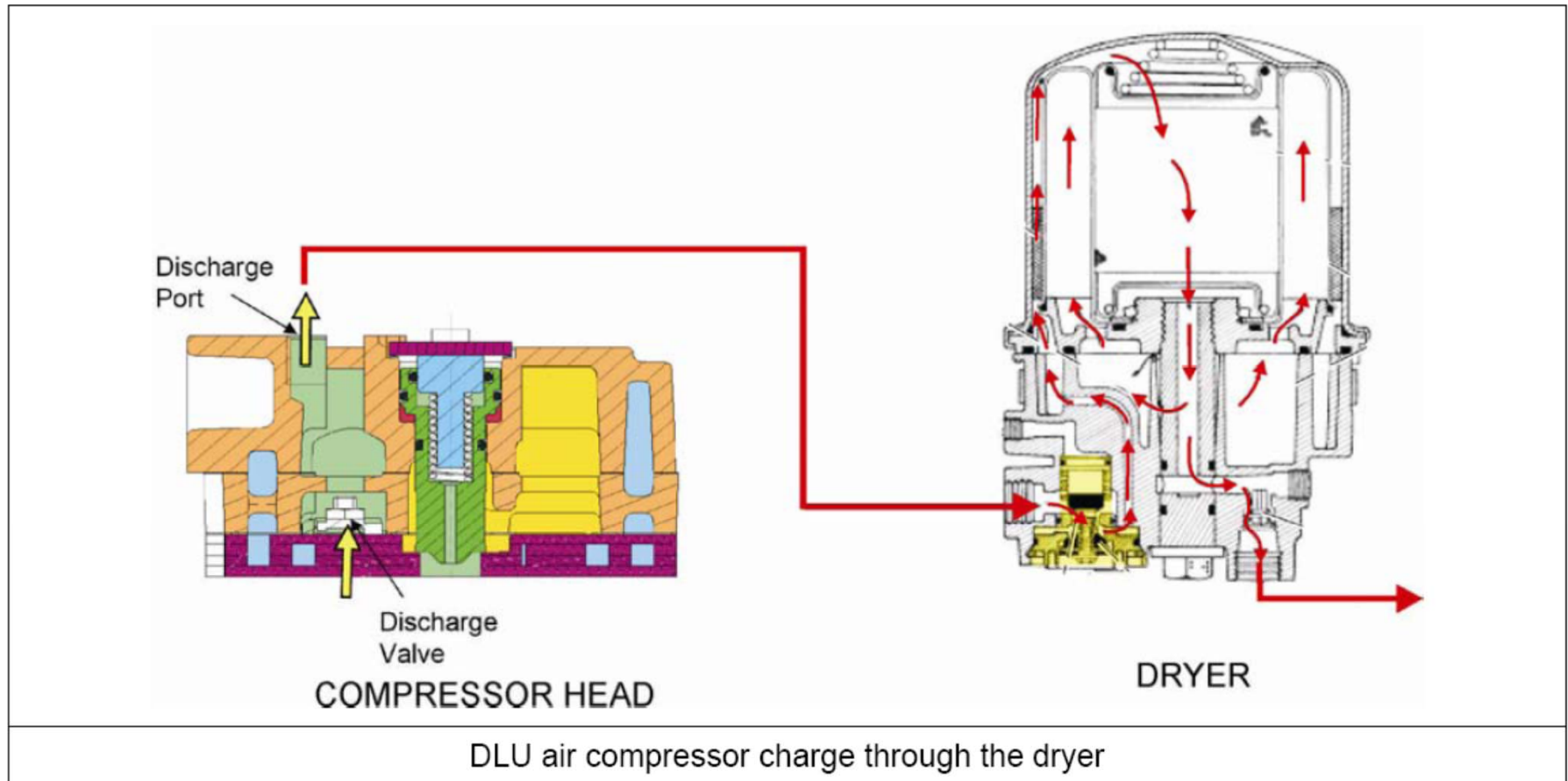


AIR DRYER DLU (DISCHARGE LINE UNLOADER)

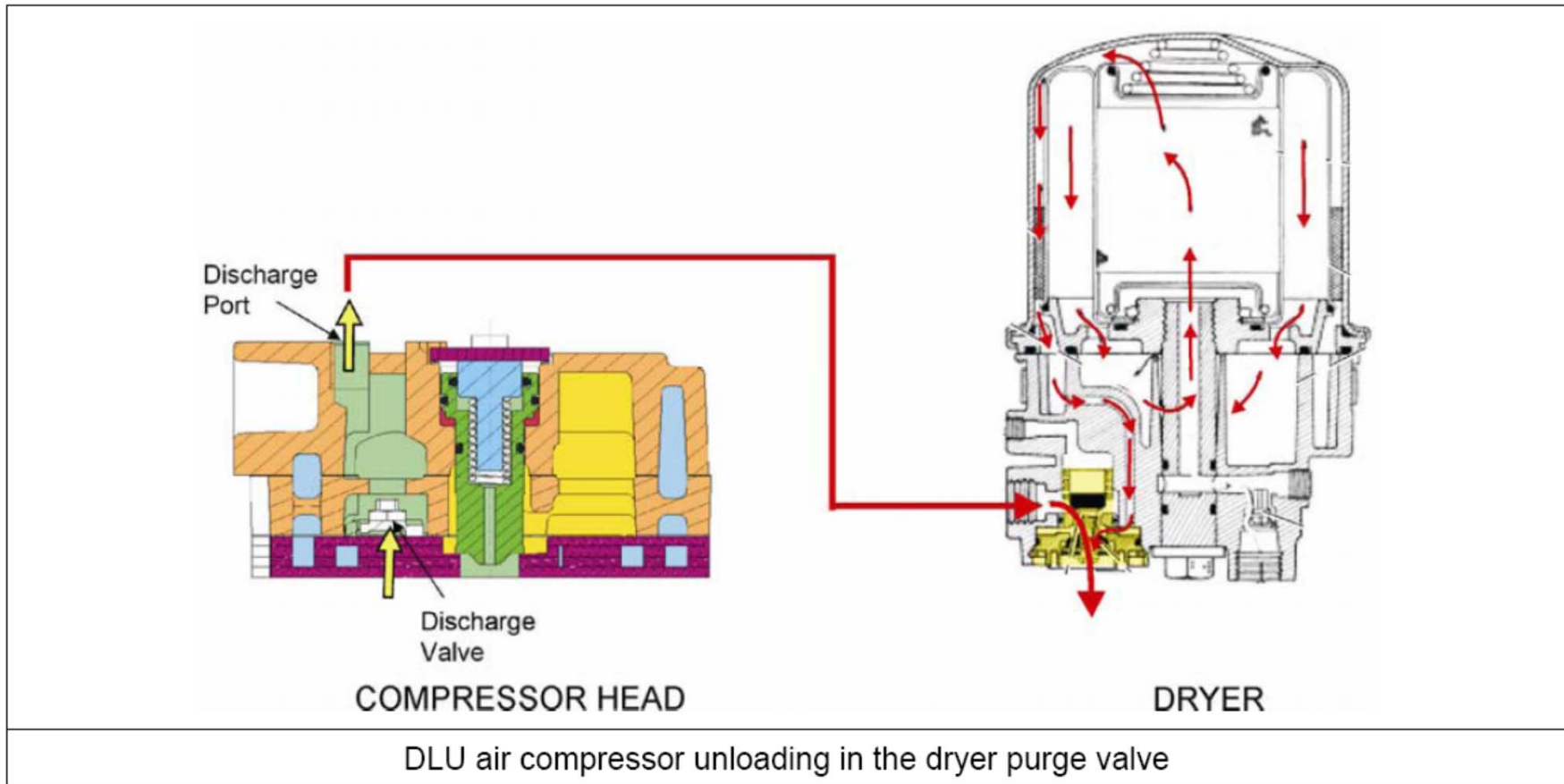


Purge valve comparison

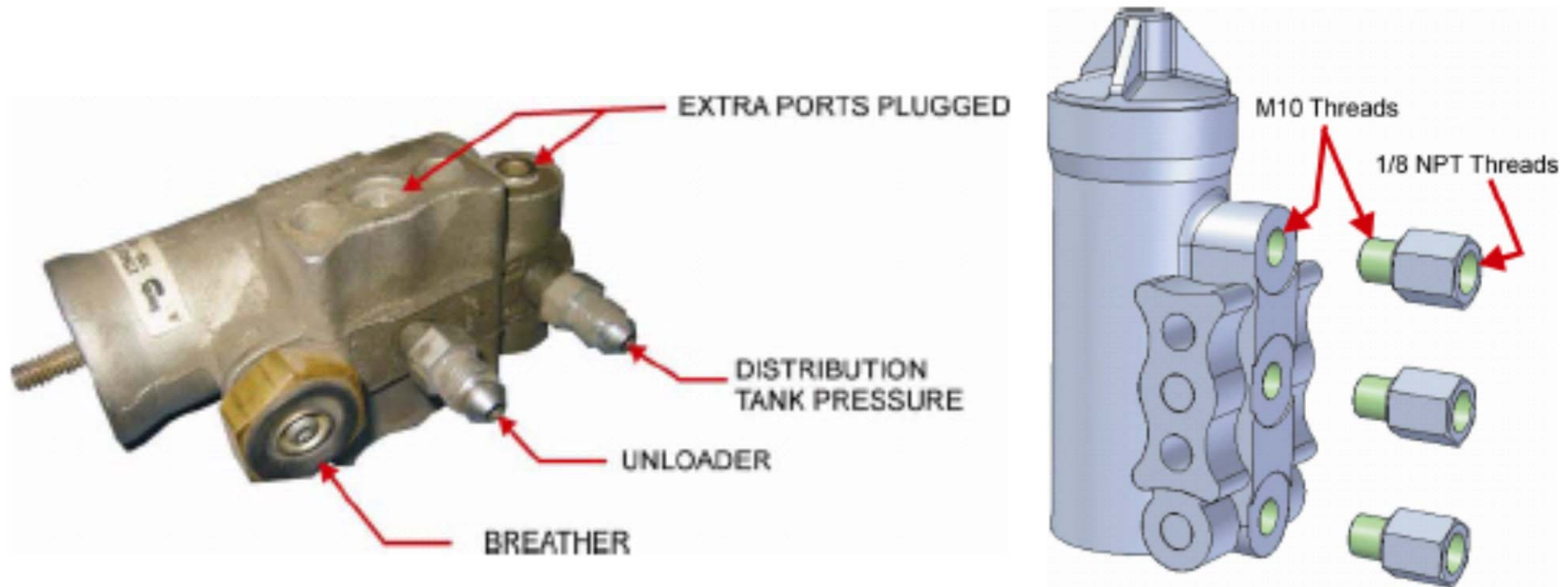
DRYER OPERATION CYCLE - SYSTEM CHARGING



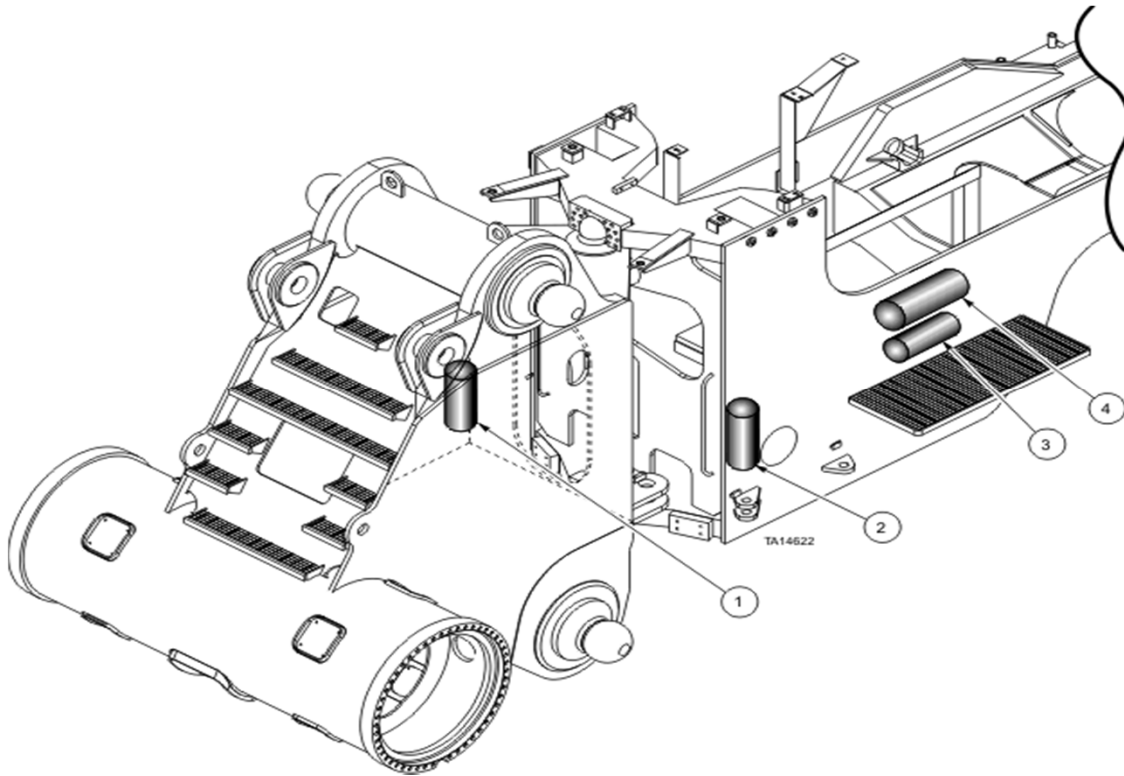
DRYER OPERATION CYCLE – SYSTEM UNLOADING AND PURGE



GOVERNOR DESCRIPTION



DISTRIBUTION TANKS - GENERAL LOCATION



1. Front Brakes
2. Main Receiver
3. KLENZ
4. Rear Brakes

950 [Except KLENZ] = 1791 cu.in.

1350-1850-2350 [Except KLENZ] = 2146 cu.in.

KLENZ = 557 cu.in.

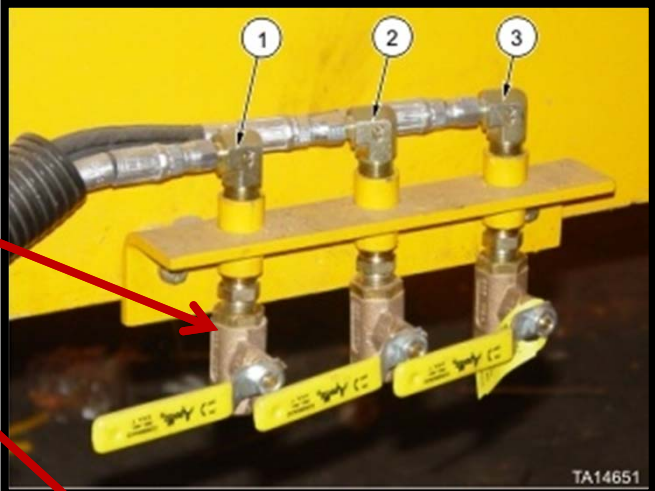
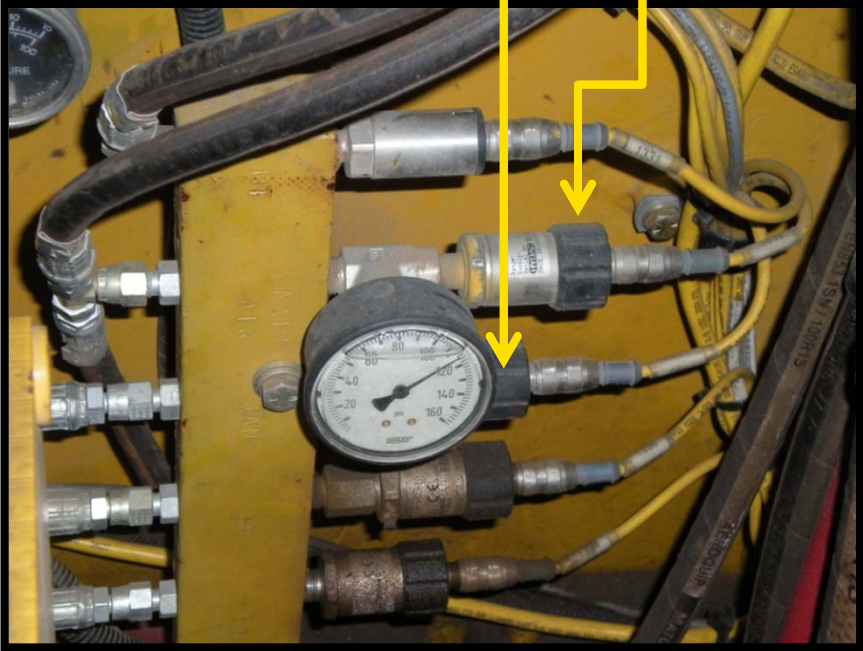
Distribution Tanks Valves

Check Valve



175 psi Safety Valve

Distribution Tank Drain Valve
Gauge
Transducer



AUXILIARY FUNCTIONS - AIR HORN AND CAB CLEANOUT

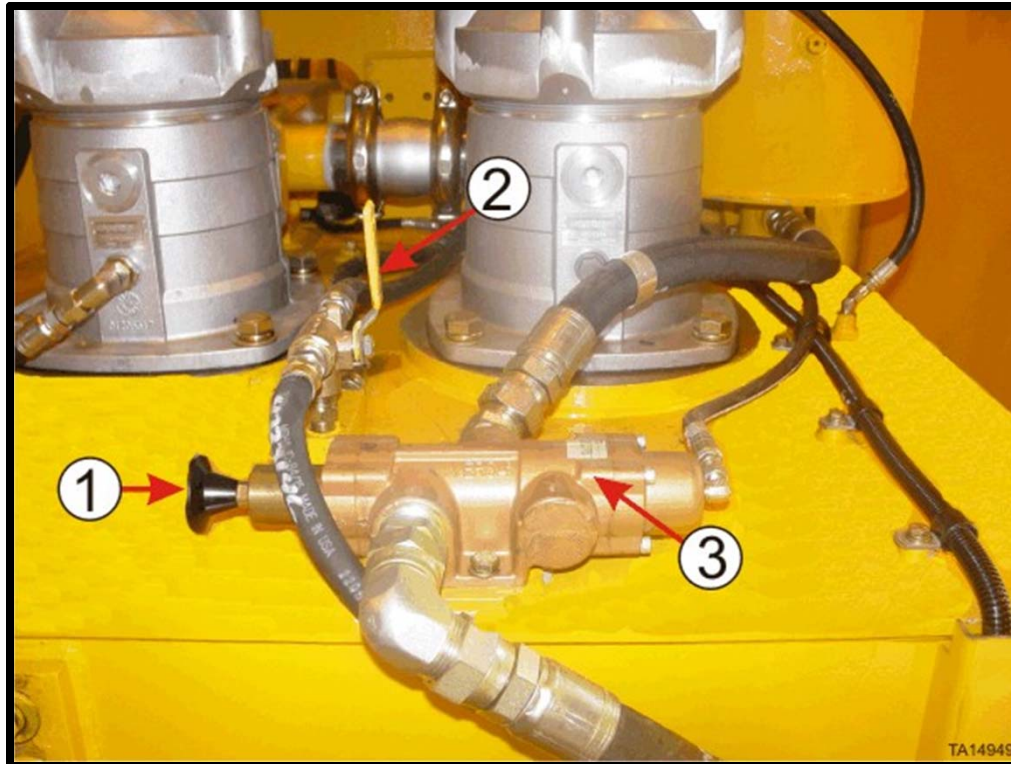


Air Horn Solenoid 30

Cab Cleanout



AUXILIARY FUNCTIONS - DUMP VALVE SOLENOID 37



1. Shuttle Valve Actuator
2. Manual Valve
3. Valve Body

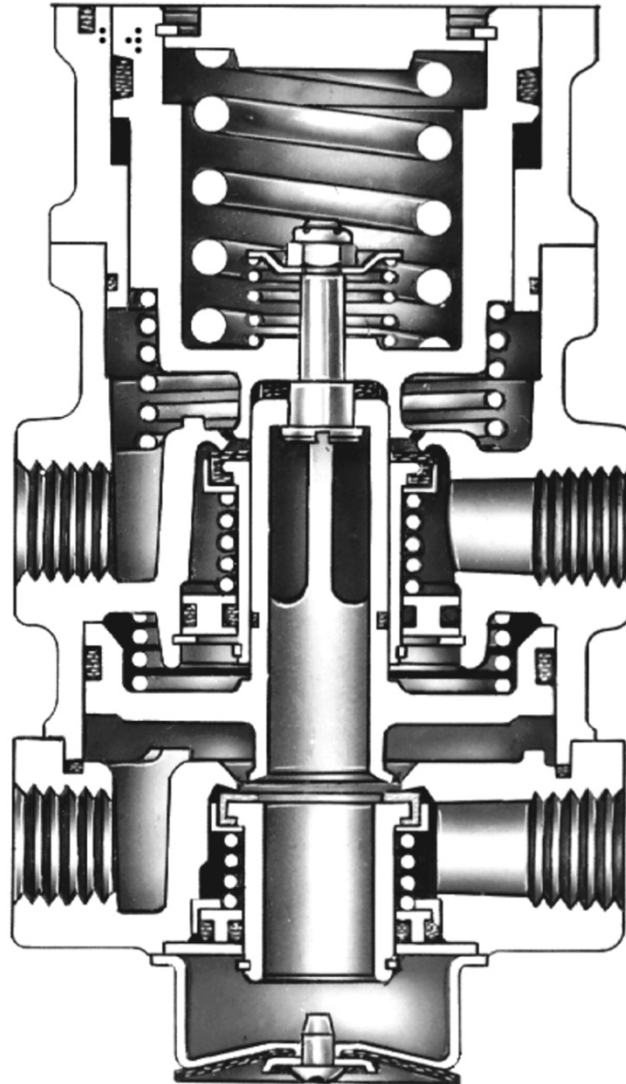
AIR SYSTEM BRAKE COMPONENTS

- Brake Pedal
- Park Brake Solenoid (Front Solenoid # 34 Rear Solenoid # 35)
- Brake Relay Valve
- Brake Actuator
- Pressure Transducer

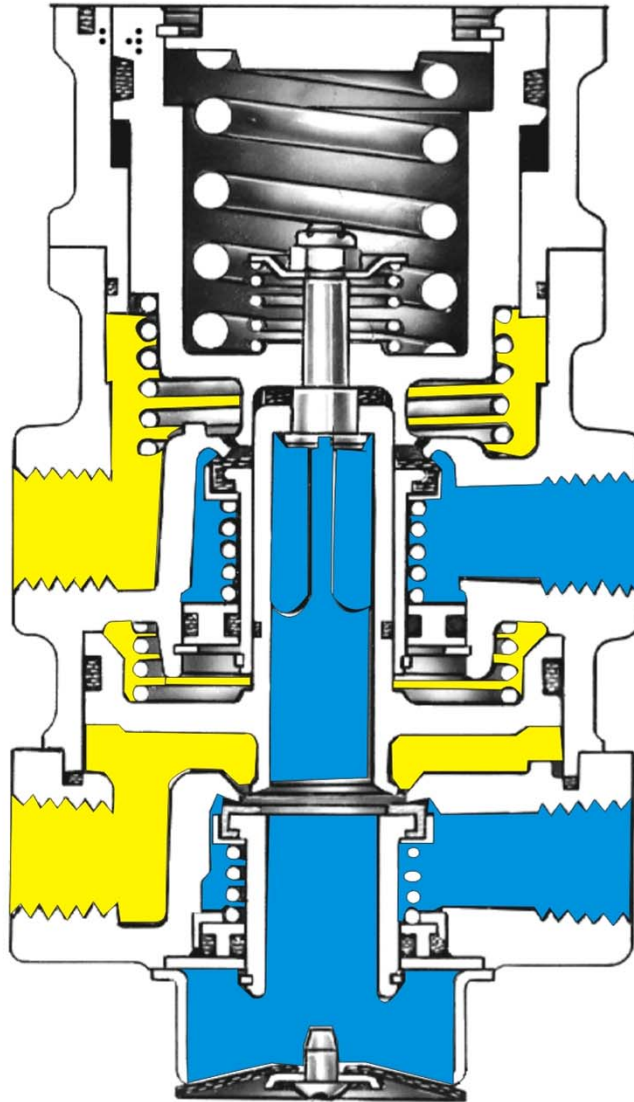
BRAKE PEDAL



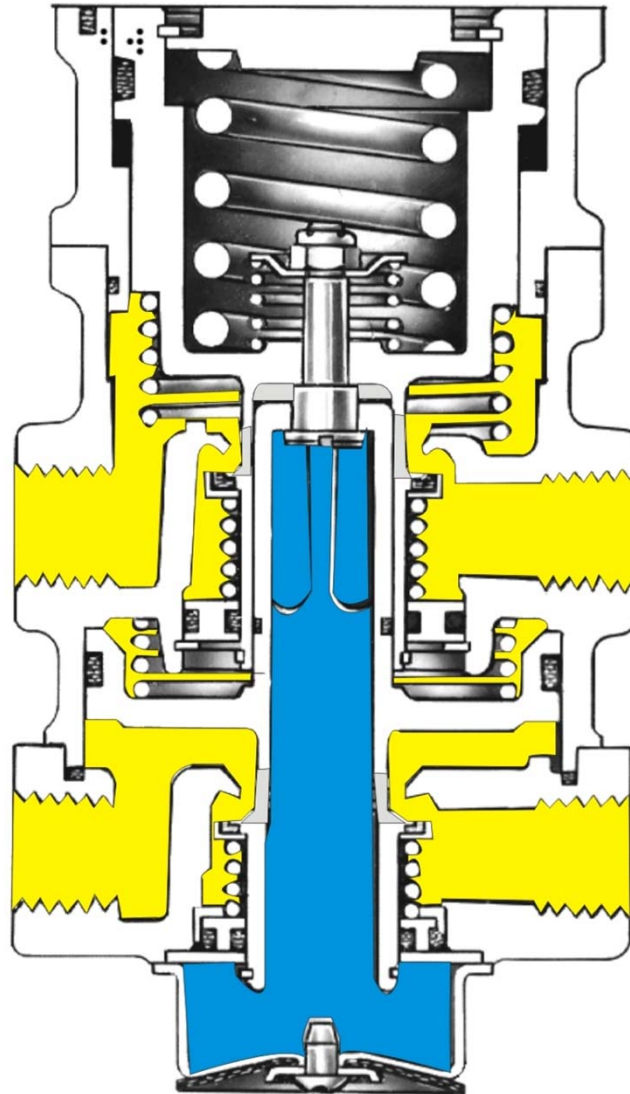
TREADLE VALVE



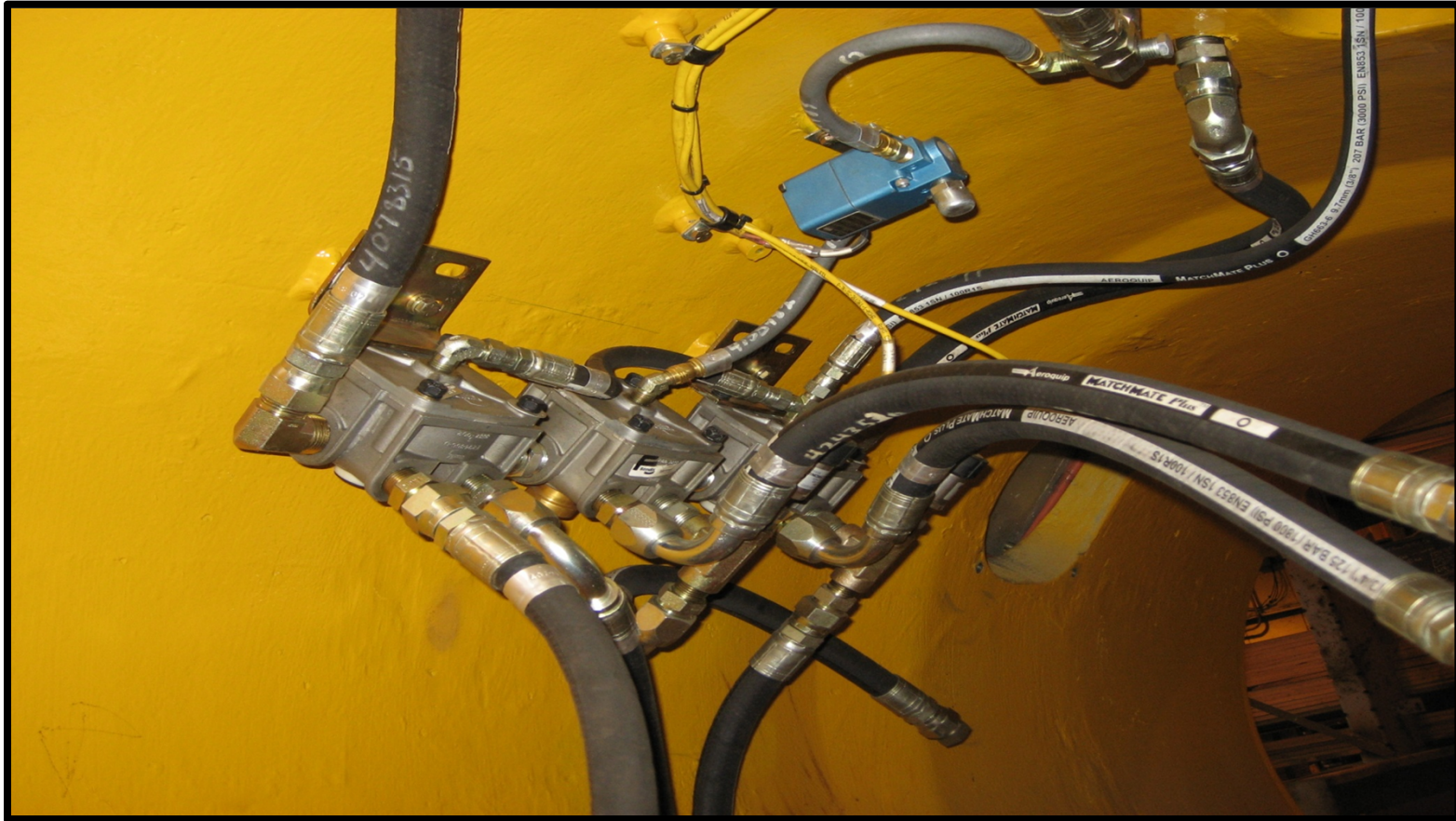
TREADLE VALVE



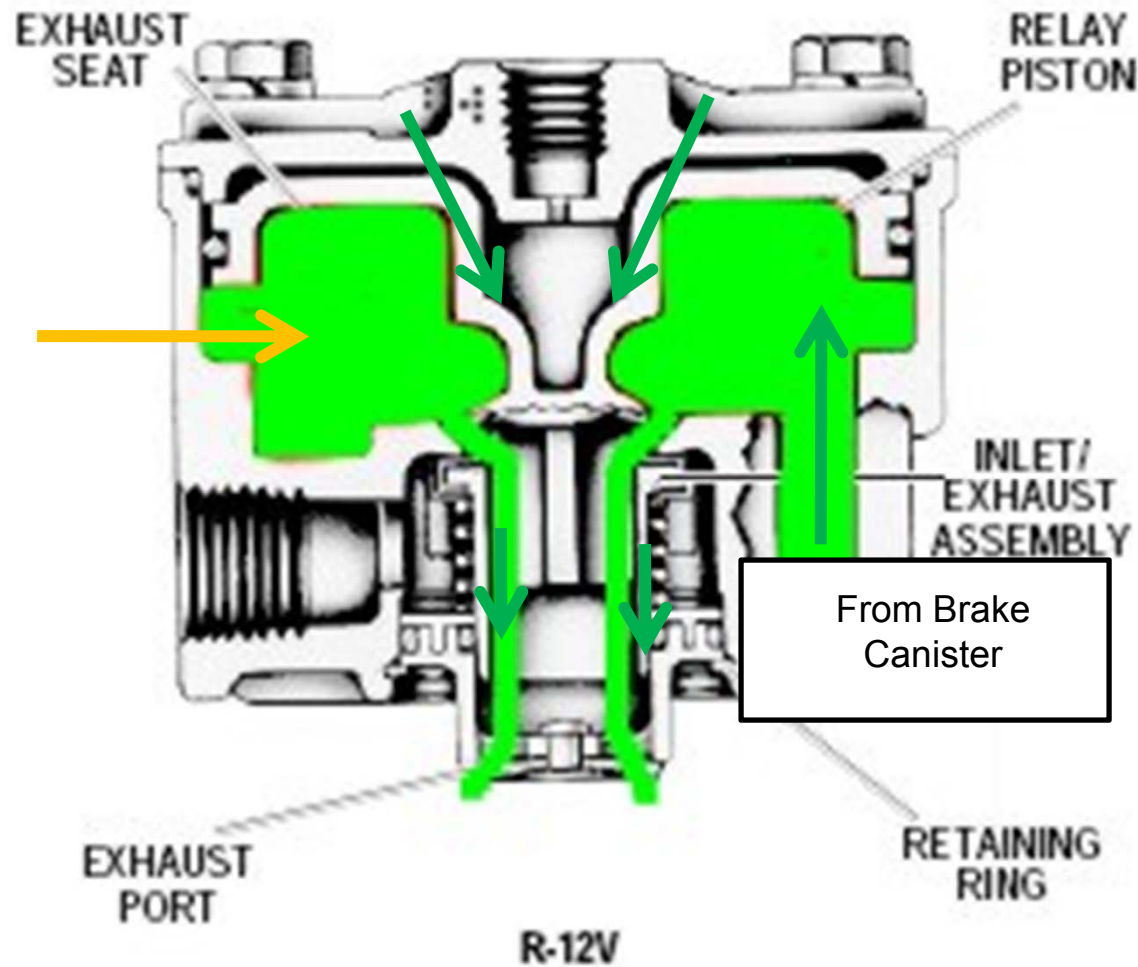
TREADLE VALVE



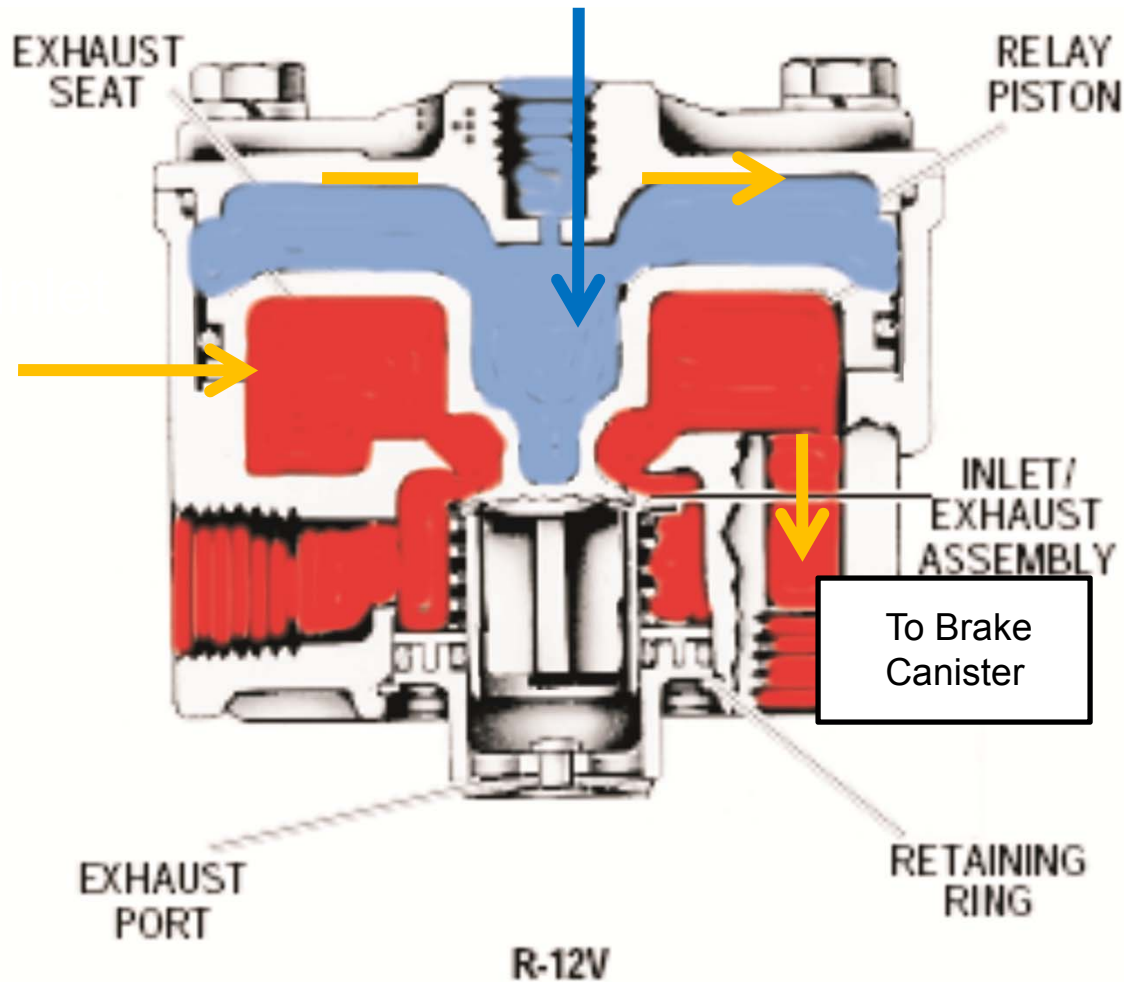
BRAKE RELAY VALVES



BRAKE RELAY VALVE - NOT ACTUATED

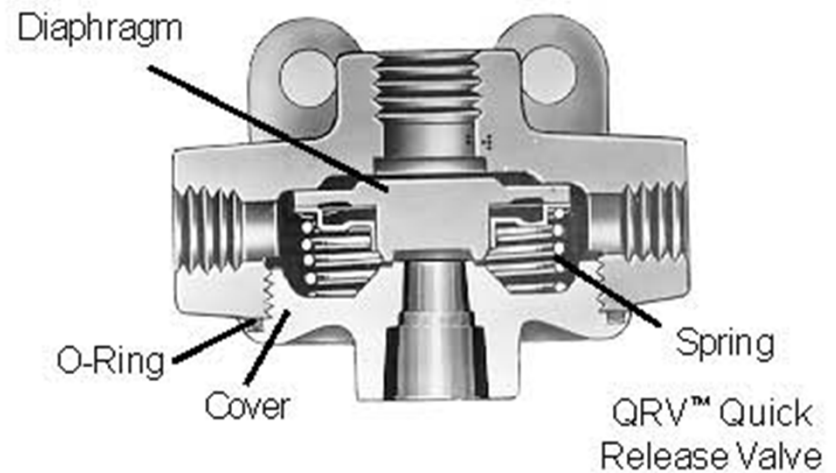
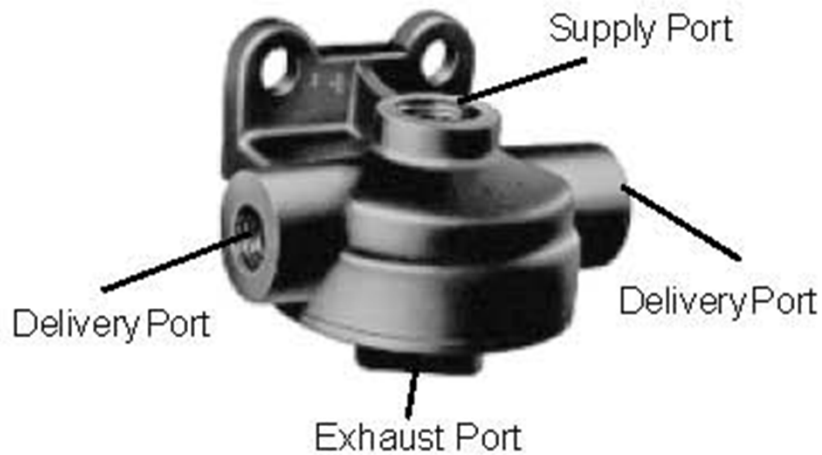


BRAKE RELAY VALVE - ACTUATED

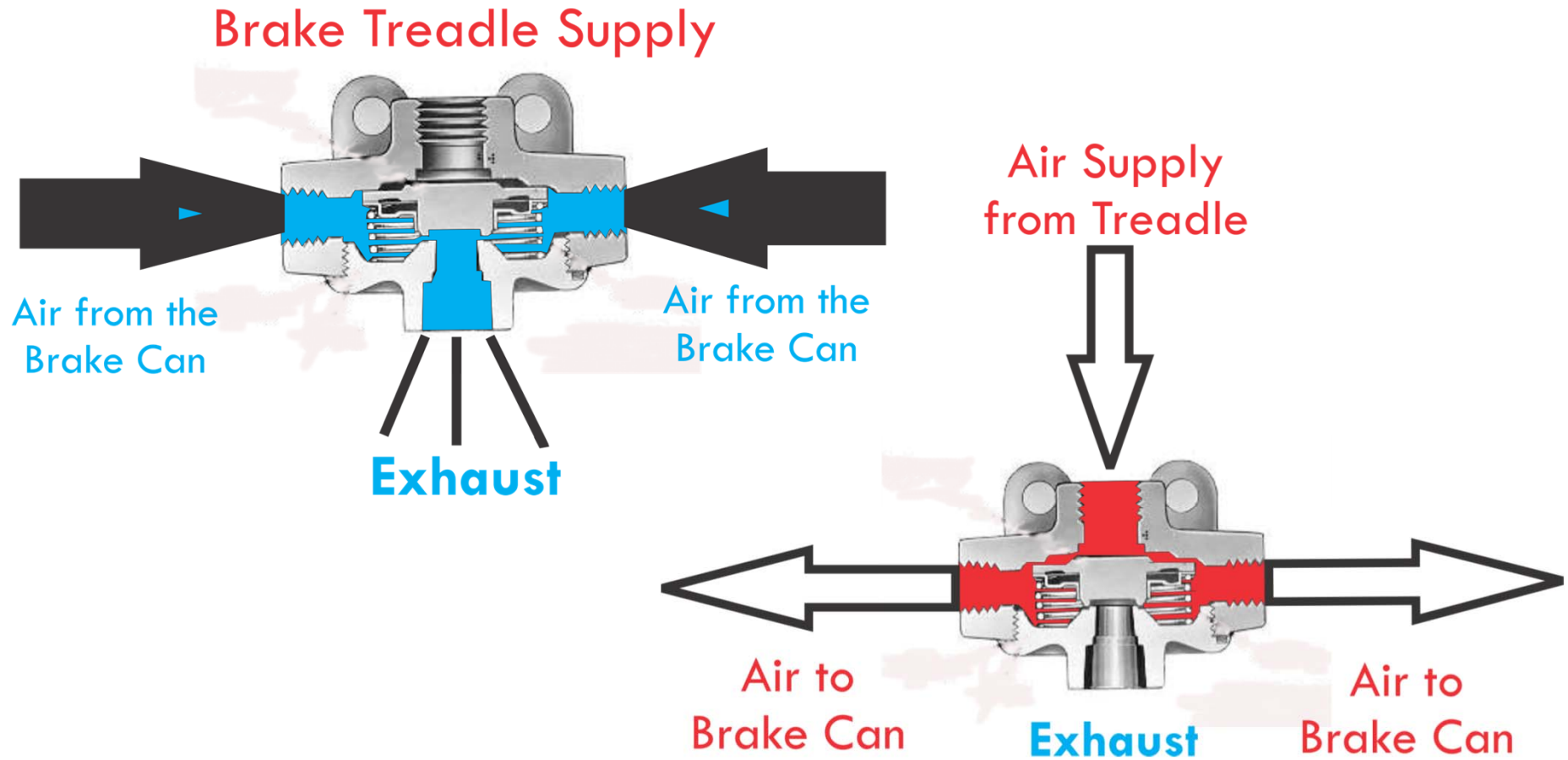


L-950 QUICK REACTION VALVE

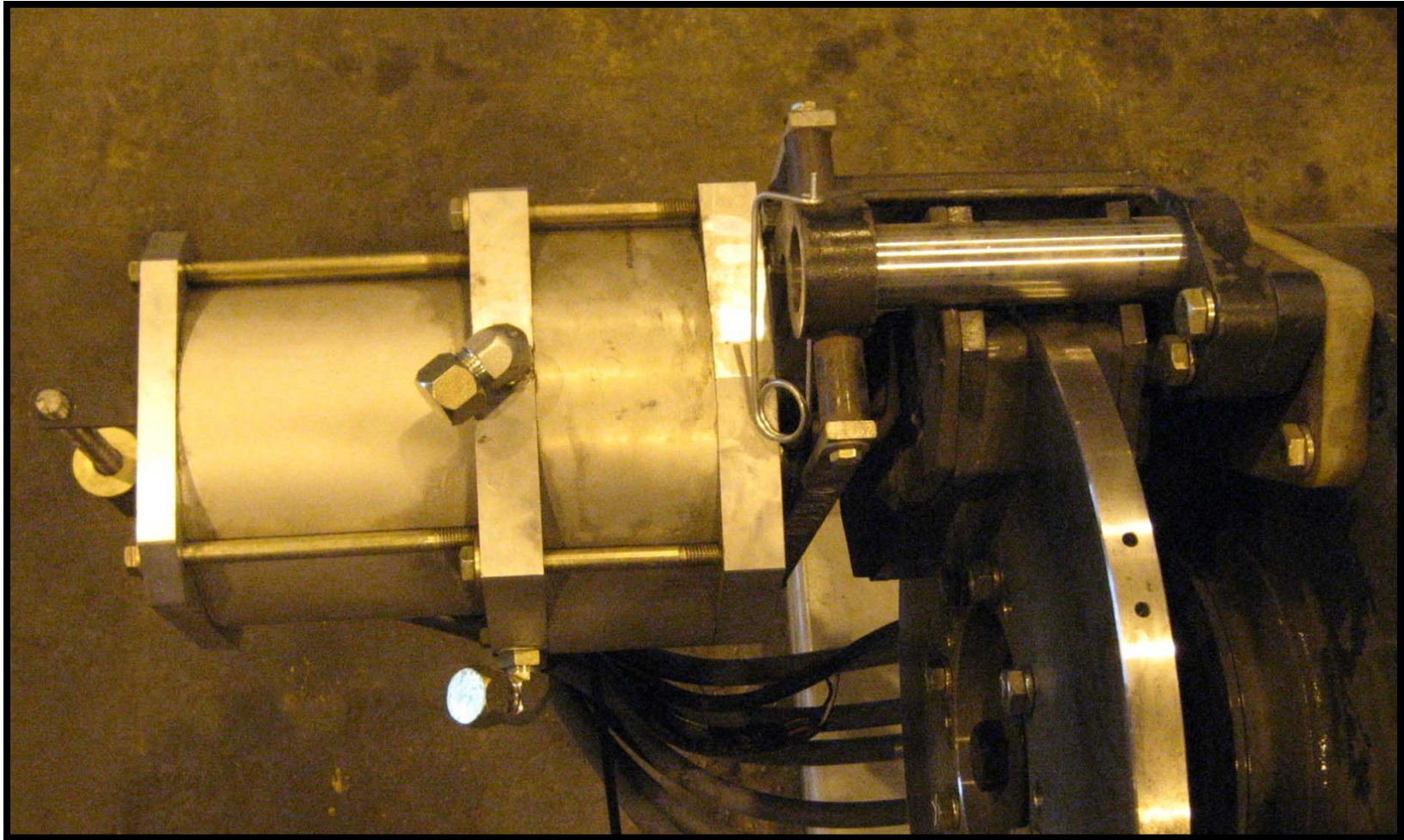
QRV™ Quick Release Valve



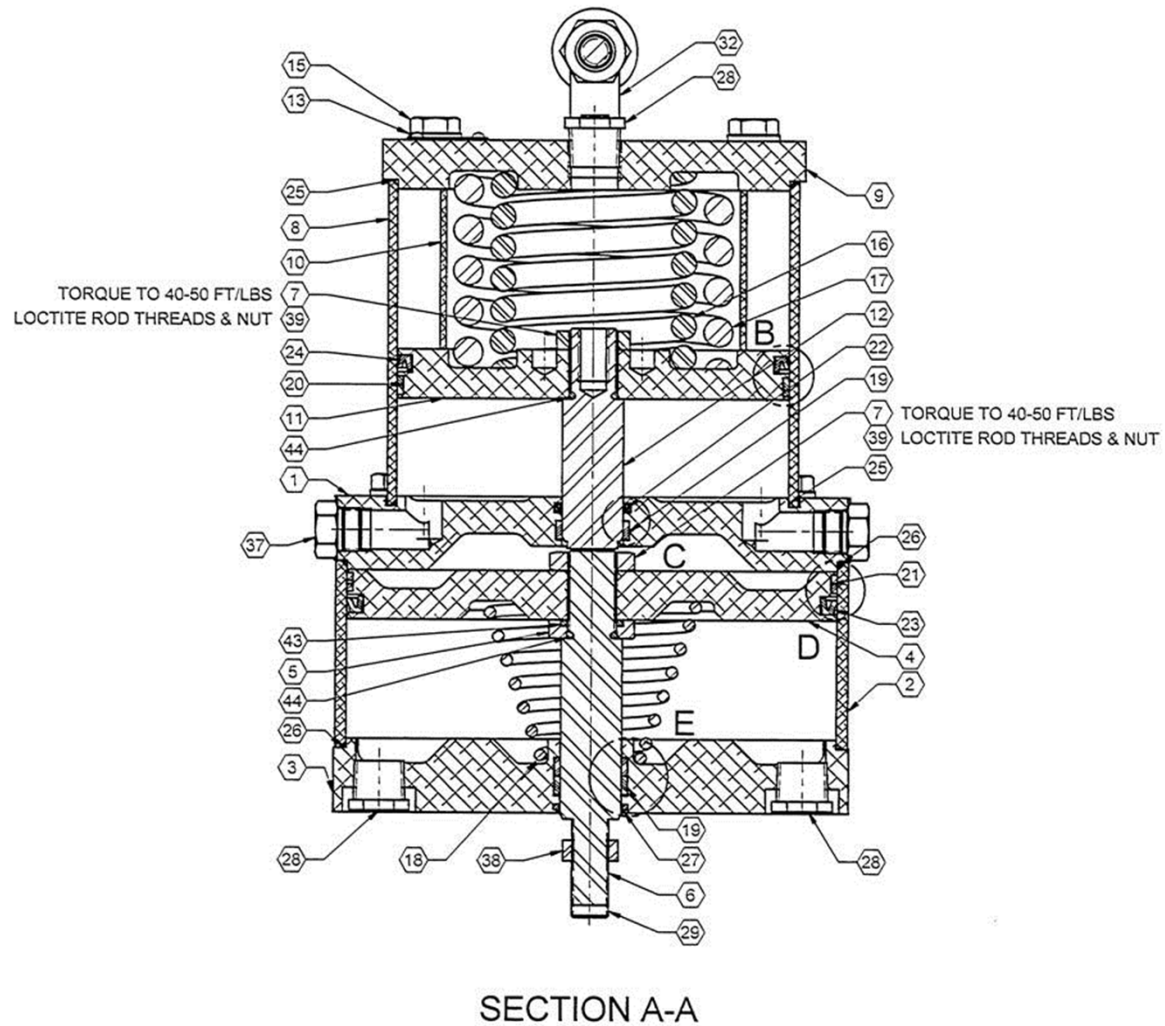
L-950 QUICK REACTION VALVE



BRAKE ACTUATOR



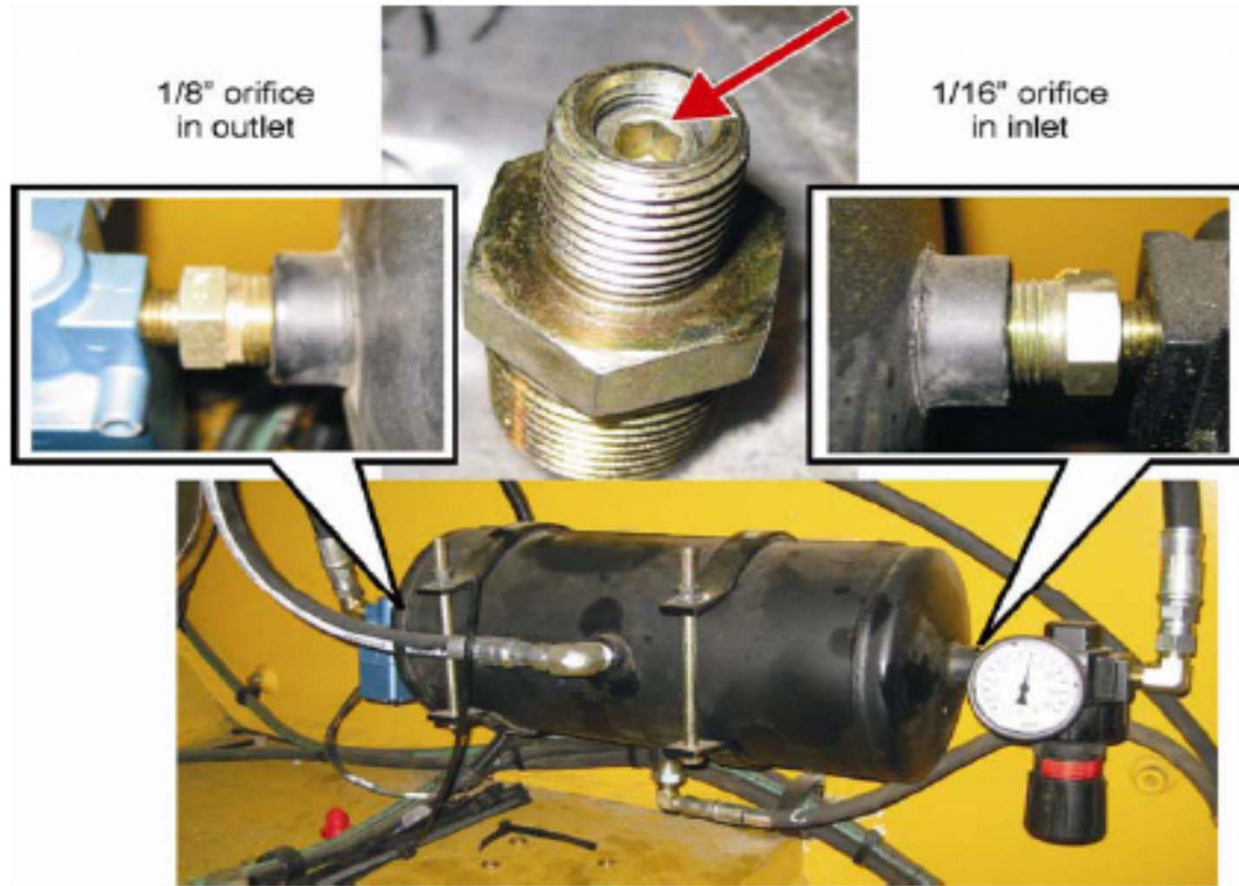
BRAKE ACTUATOR



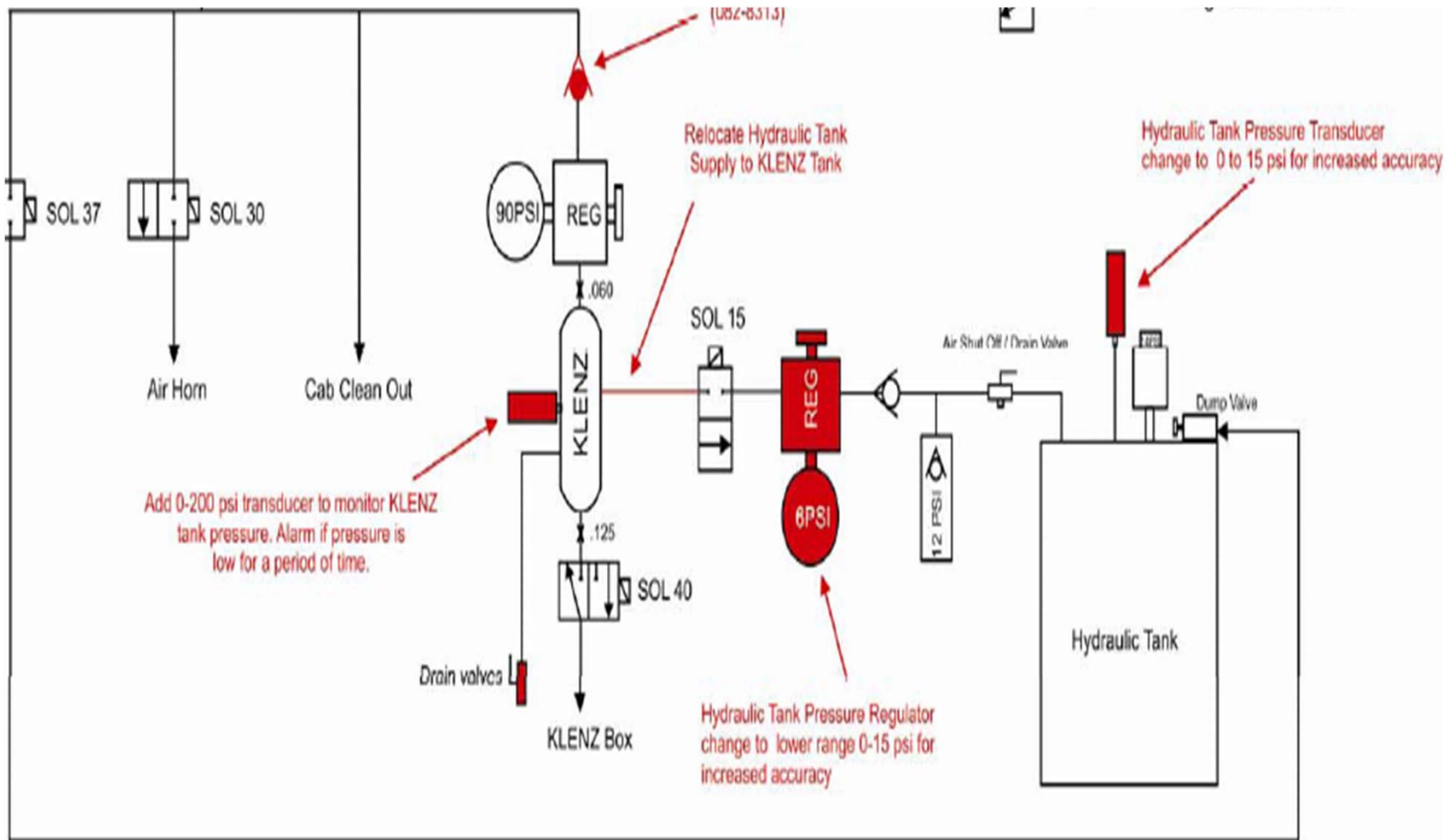
BRAKE PRESSURE TRANSDUCER



KLENZ TANK

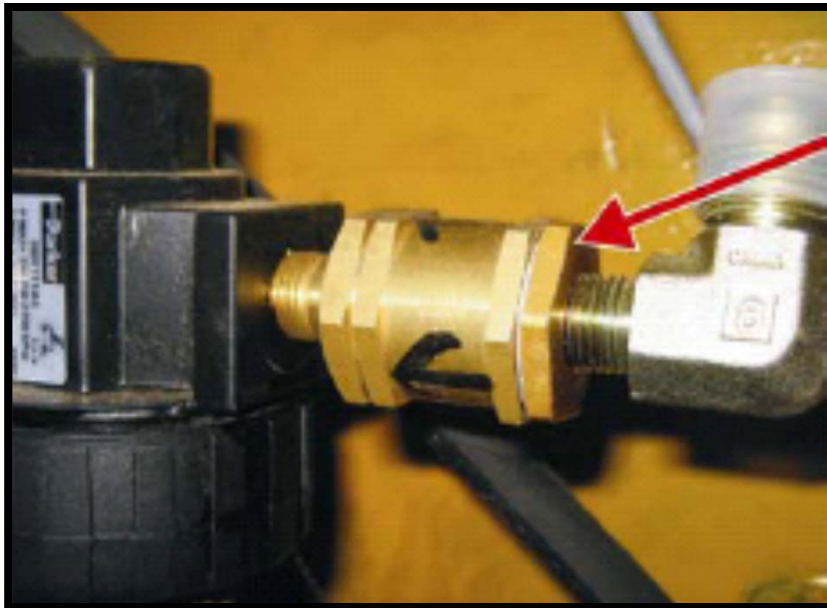


NEW KLENZ COMPONENTS



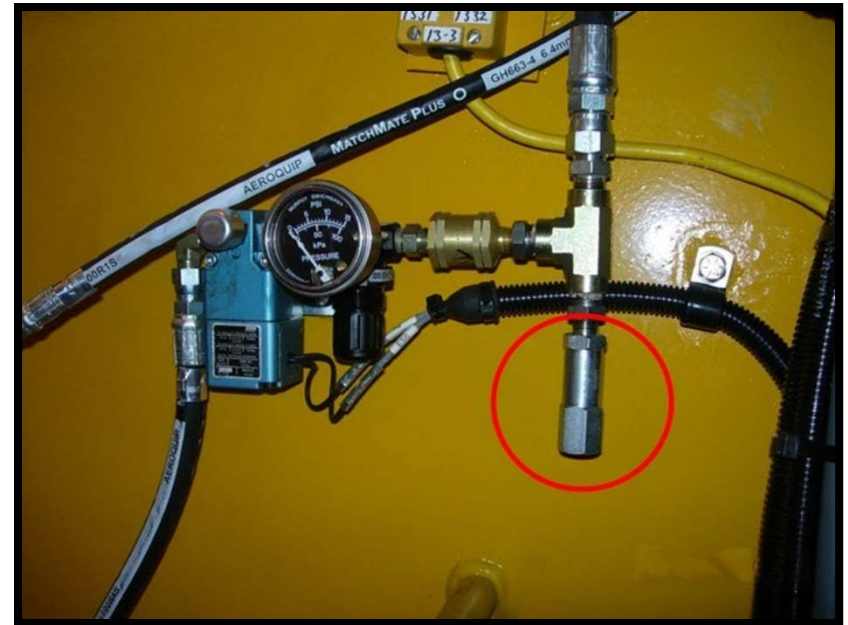
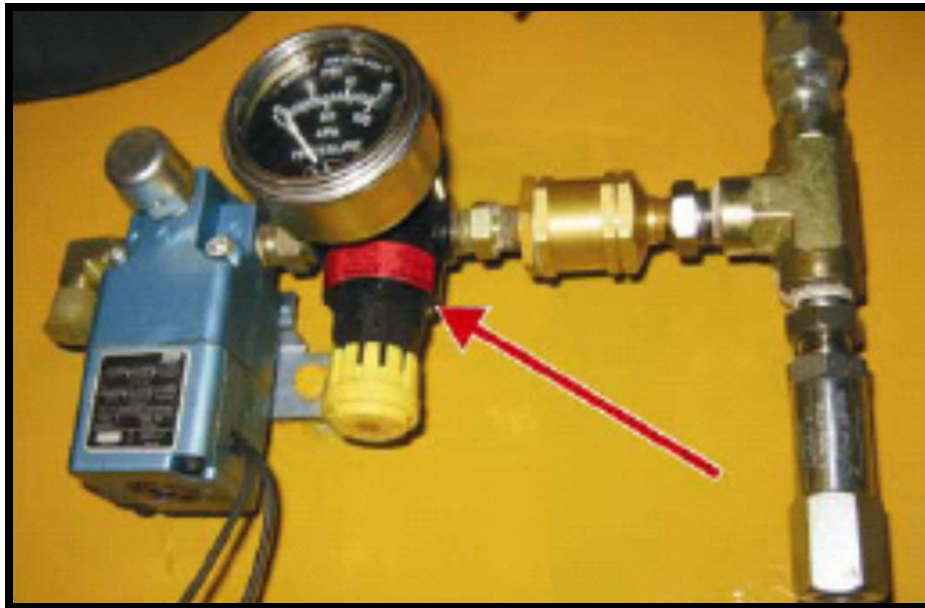
KLENZ REGULATOR

- Check inlet
- Set at 90 psi

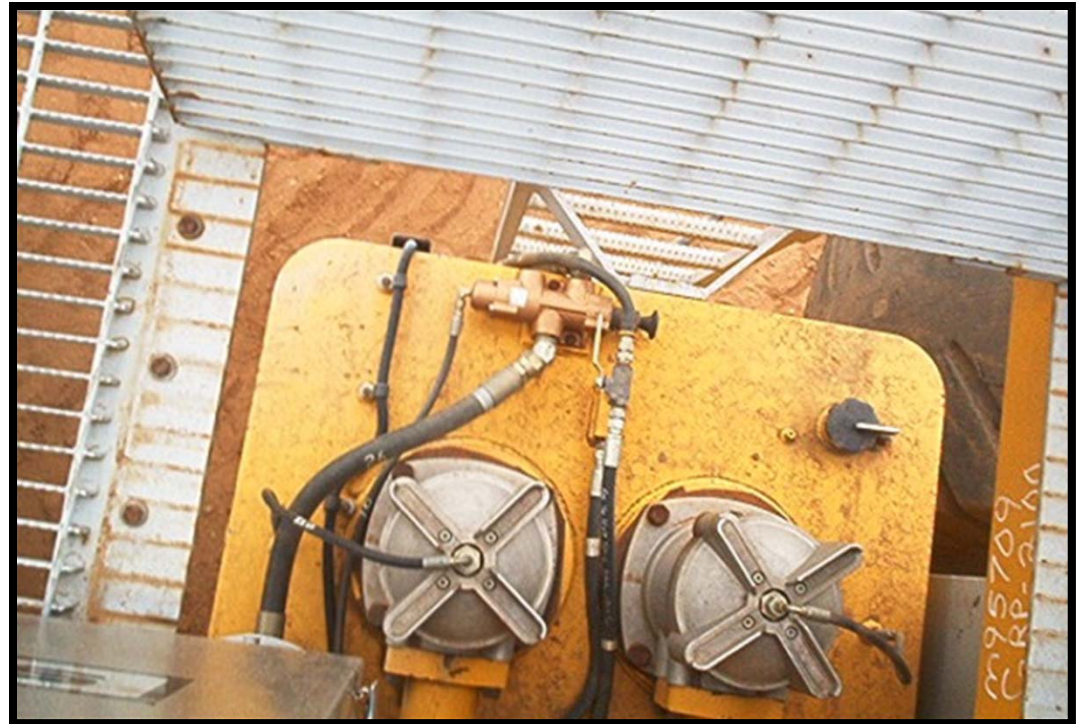


KLENZ TANK TO HYDRAULIC TANK

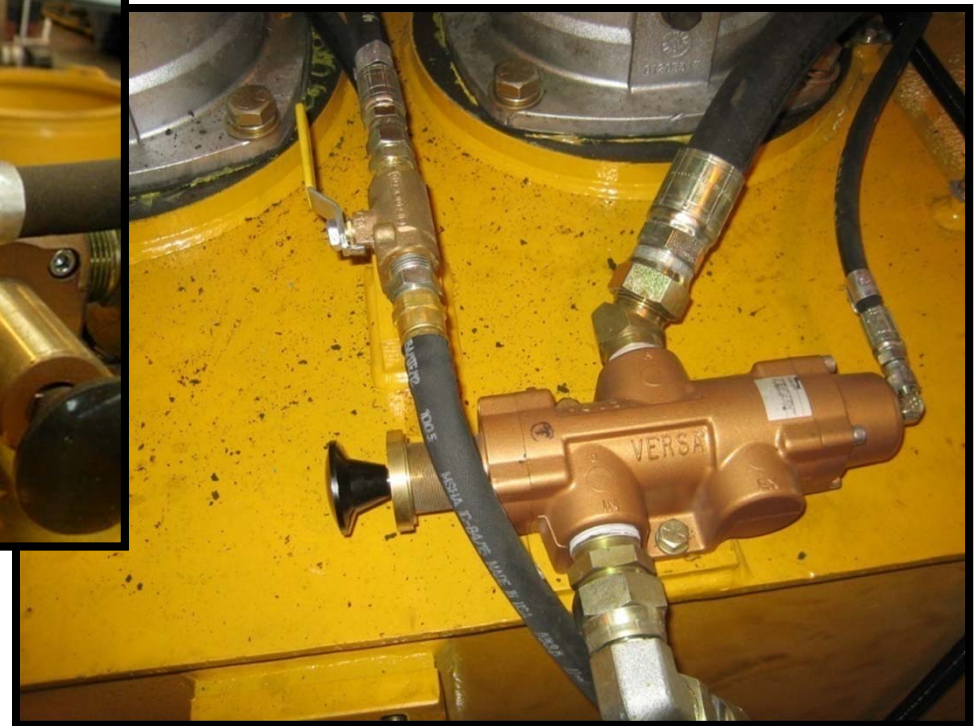
- Solenoid 15
- 6 psi Regulator
- 12 psi Check Valve



AIR SYSTEM - HYDRAULIC TANK AIR



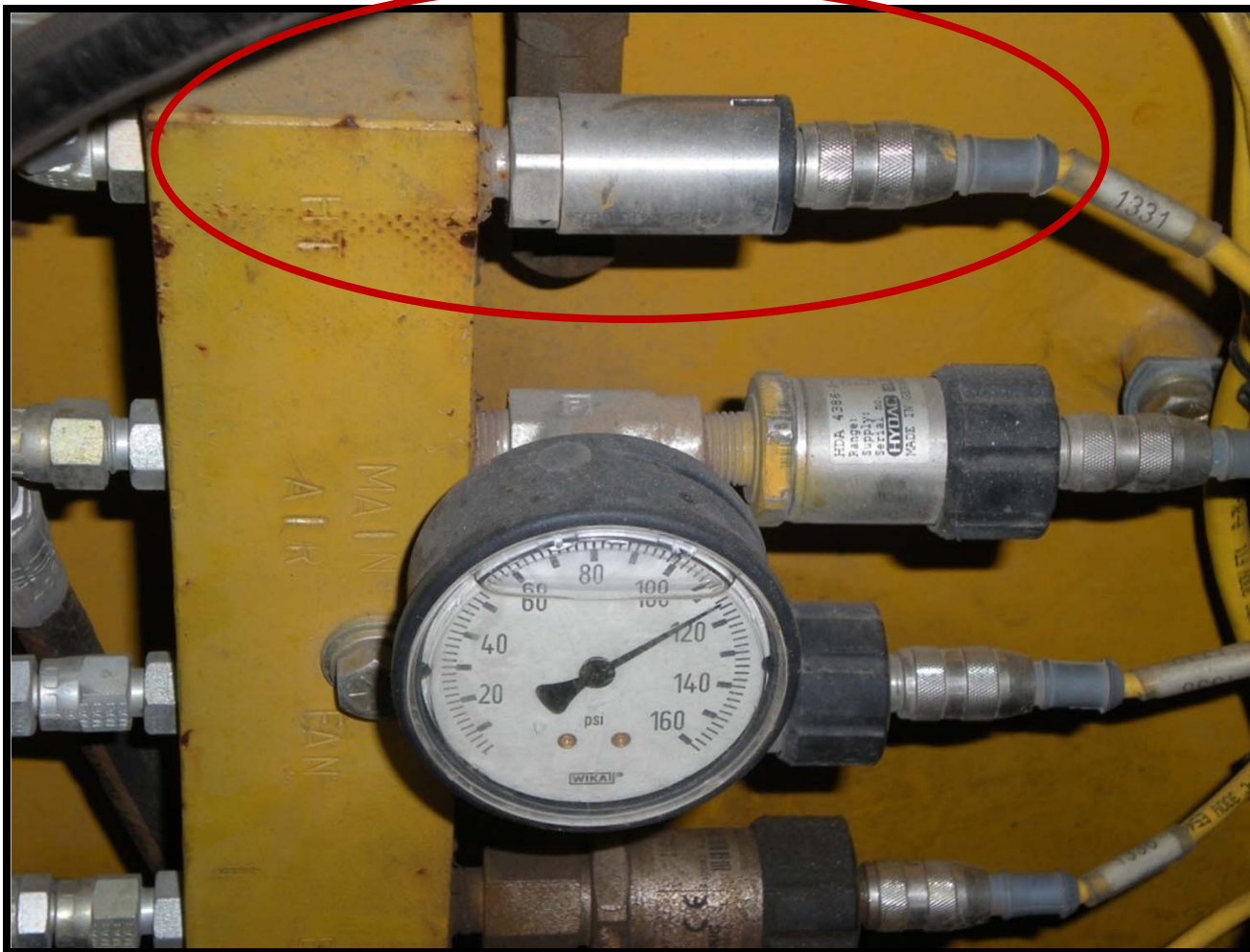
AIR SYSTEM - HYDRAULIC TANK DUMP VALVES



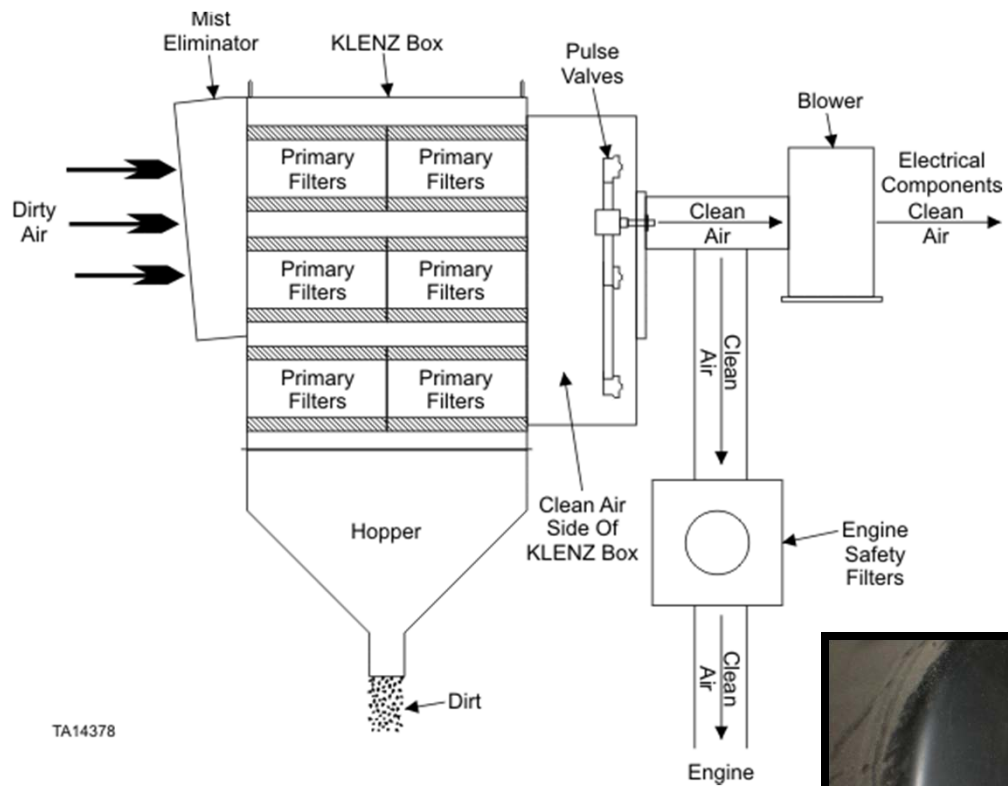
AIR SYSTEM HYDRAULIC SURGE TANK



AIR SYSTEM HYDRAULIC TANK TRANSDUCER



AIR SYSTEM KLENZ



AIR SYSTEM KLENZ PULSE VALVE

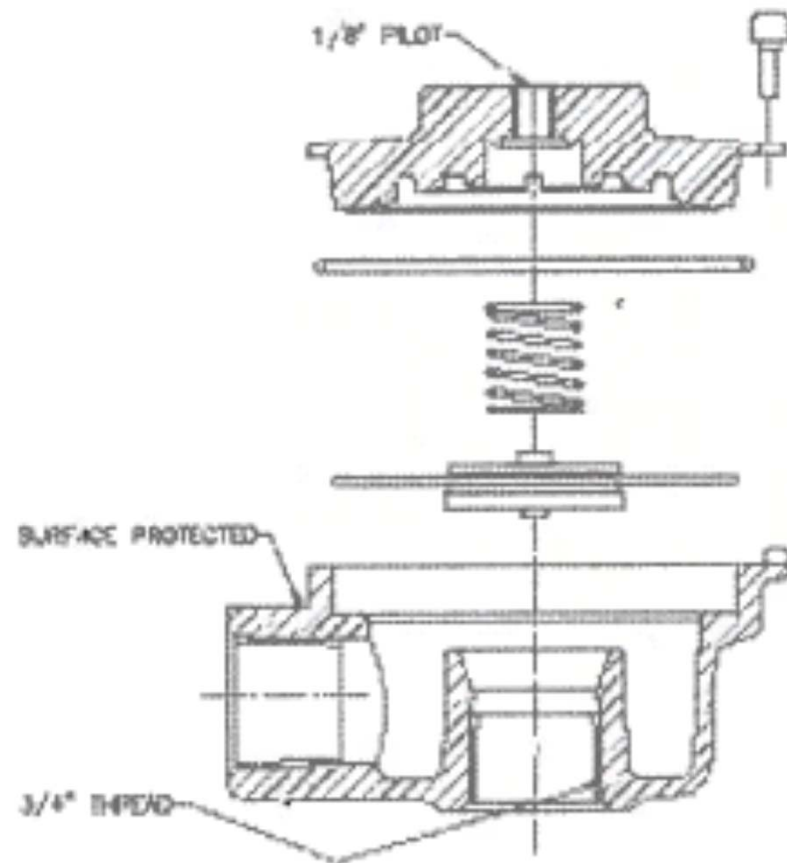
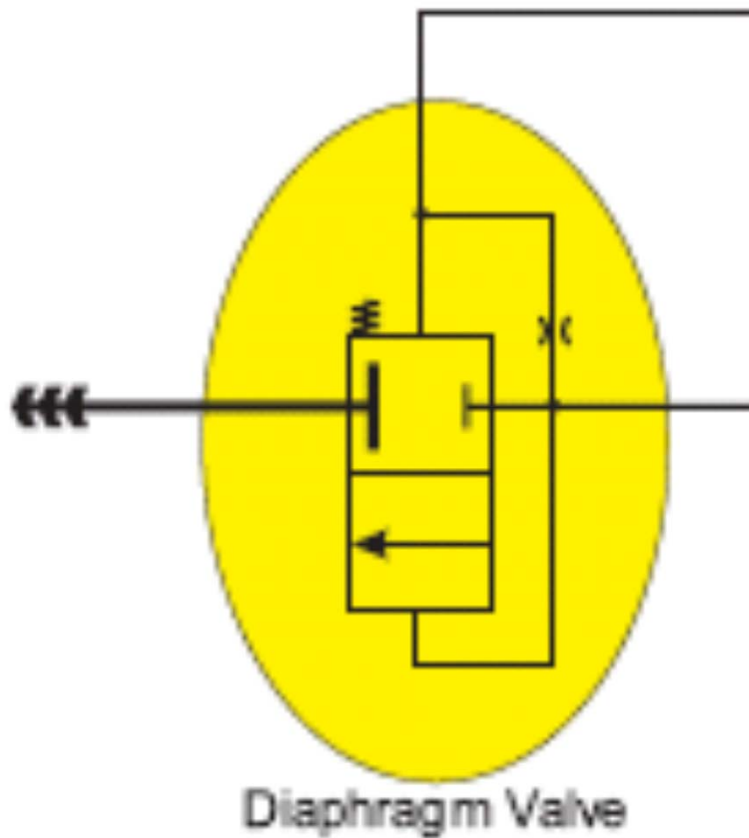
New Style

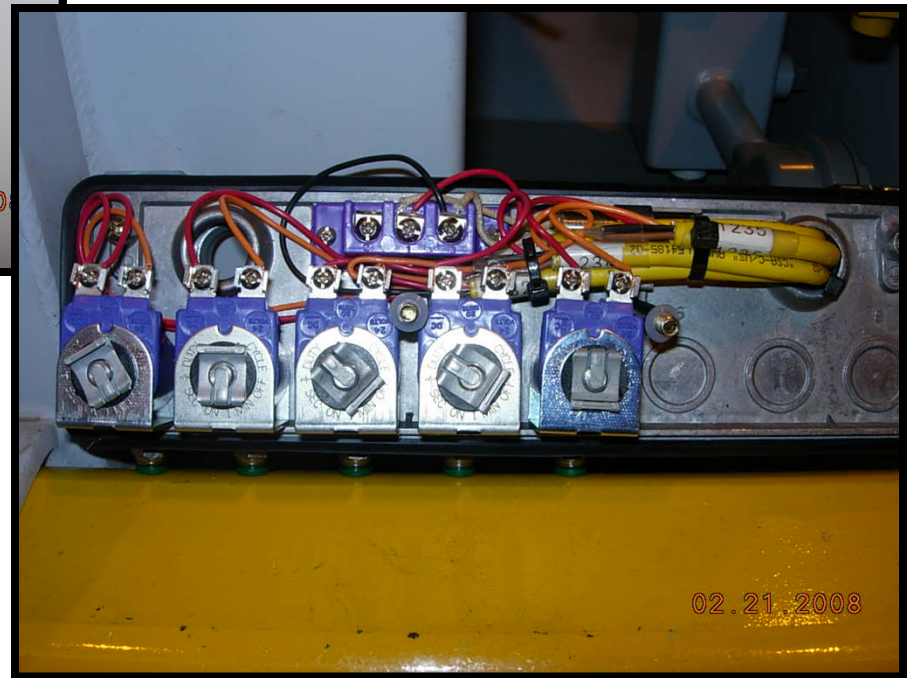


Old Style



AIR SYSTEM PULSE VALVE OPERATION





Parts

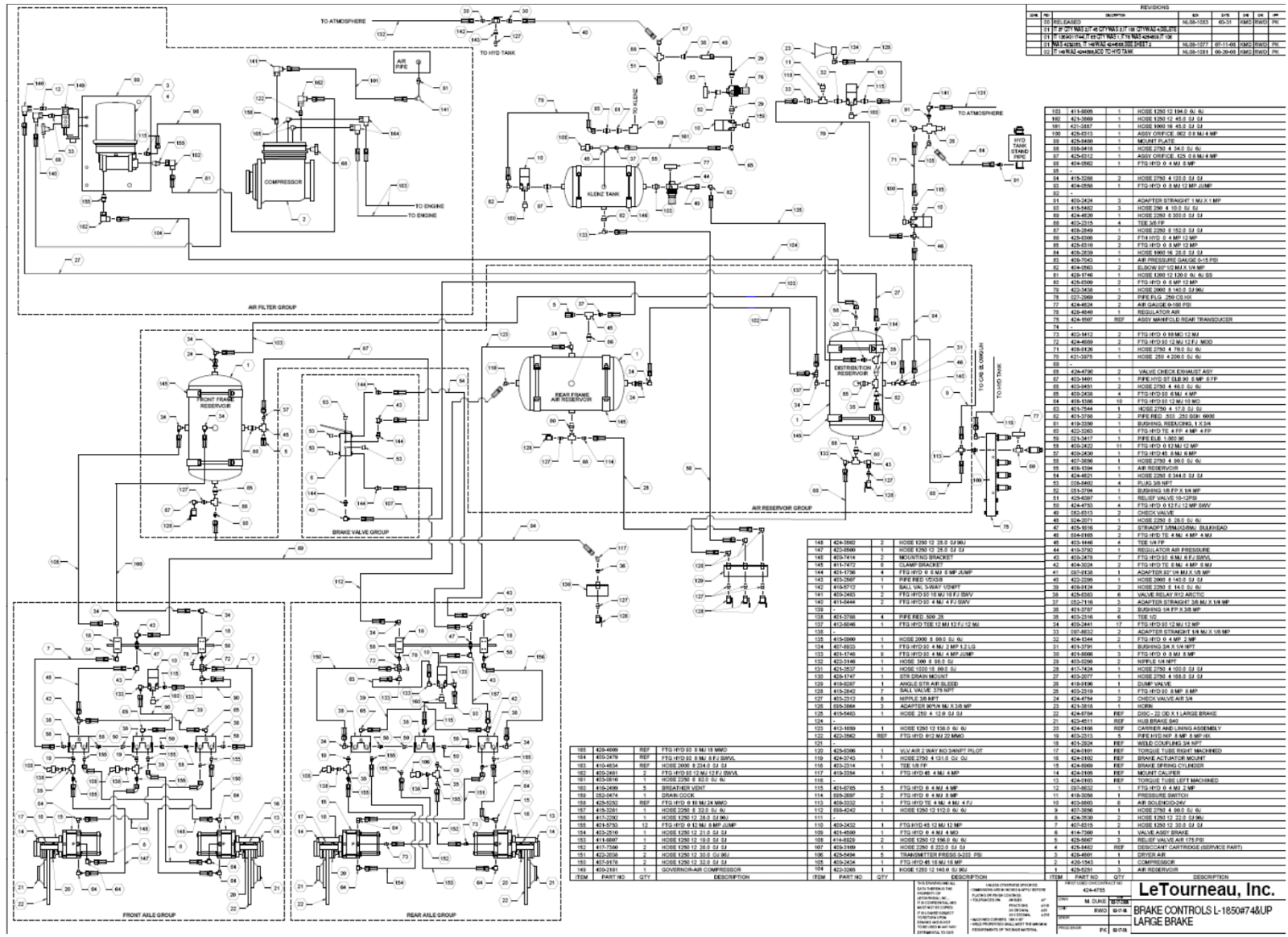
Large Style



Small Style

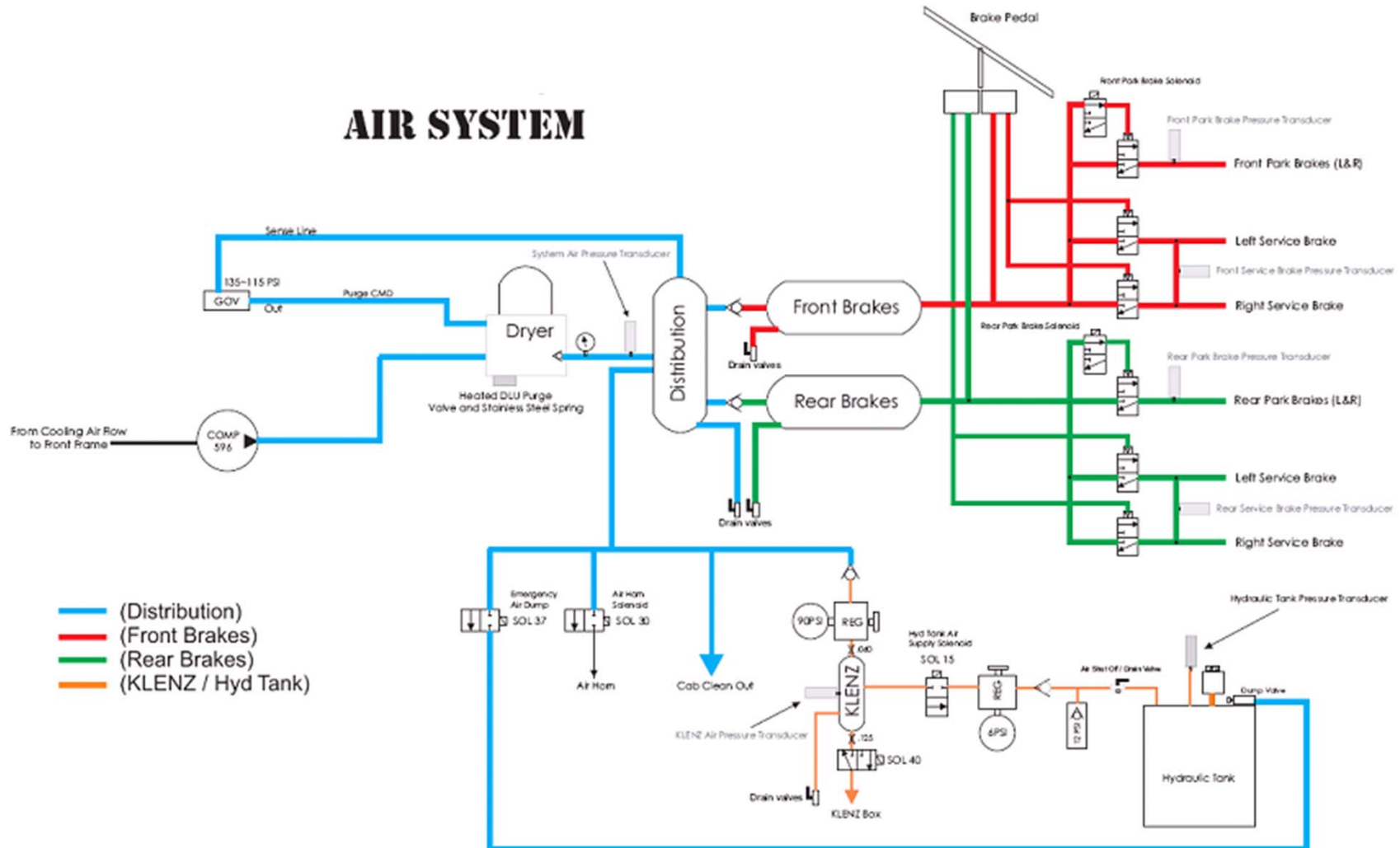


AIR SYSTEM COMPLETE

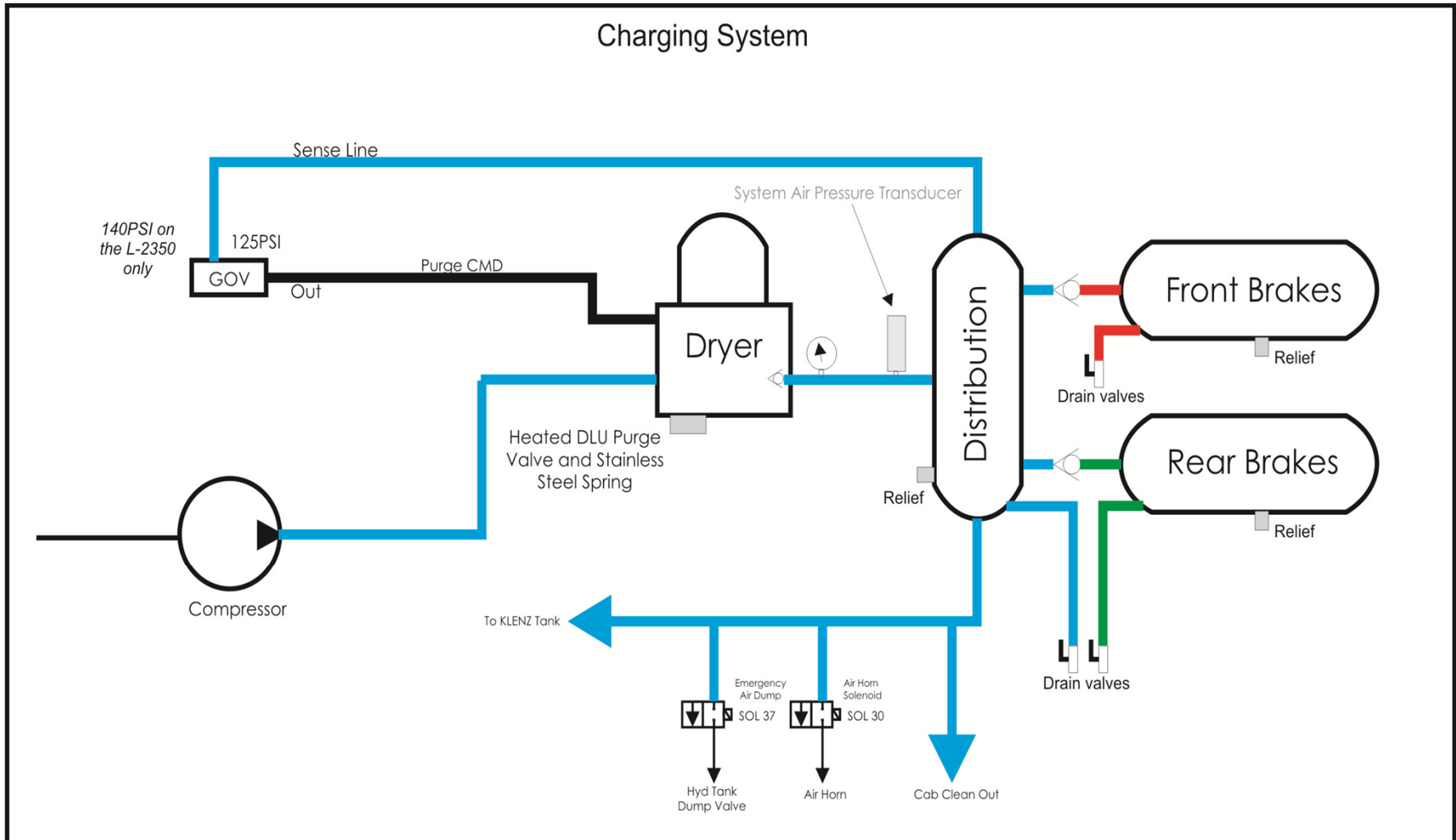


CIRCUIT DESCRIPTIONS

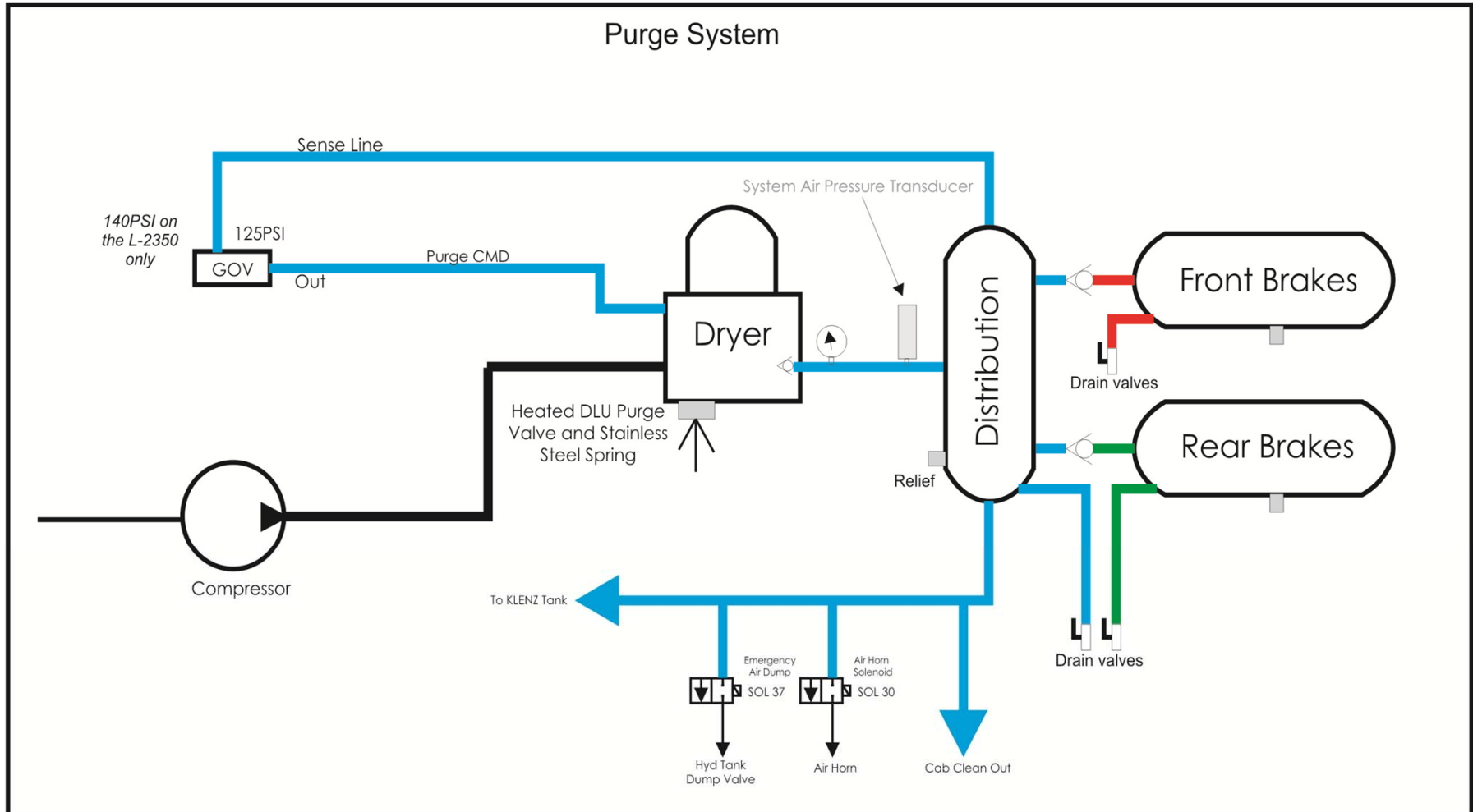
50 SERIES AIR SYSTEM



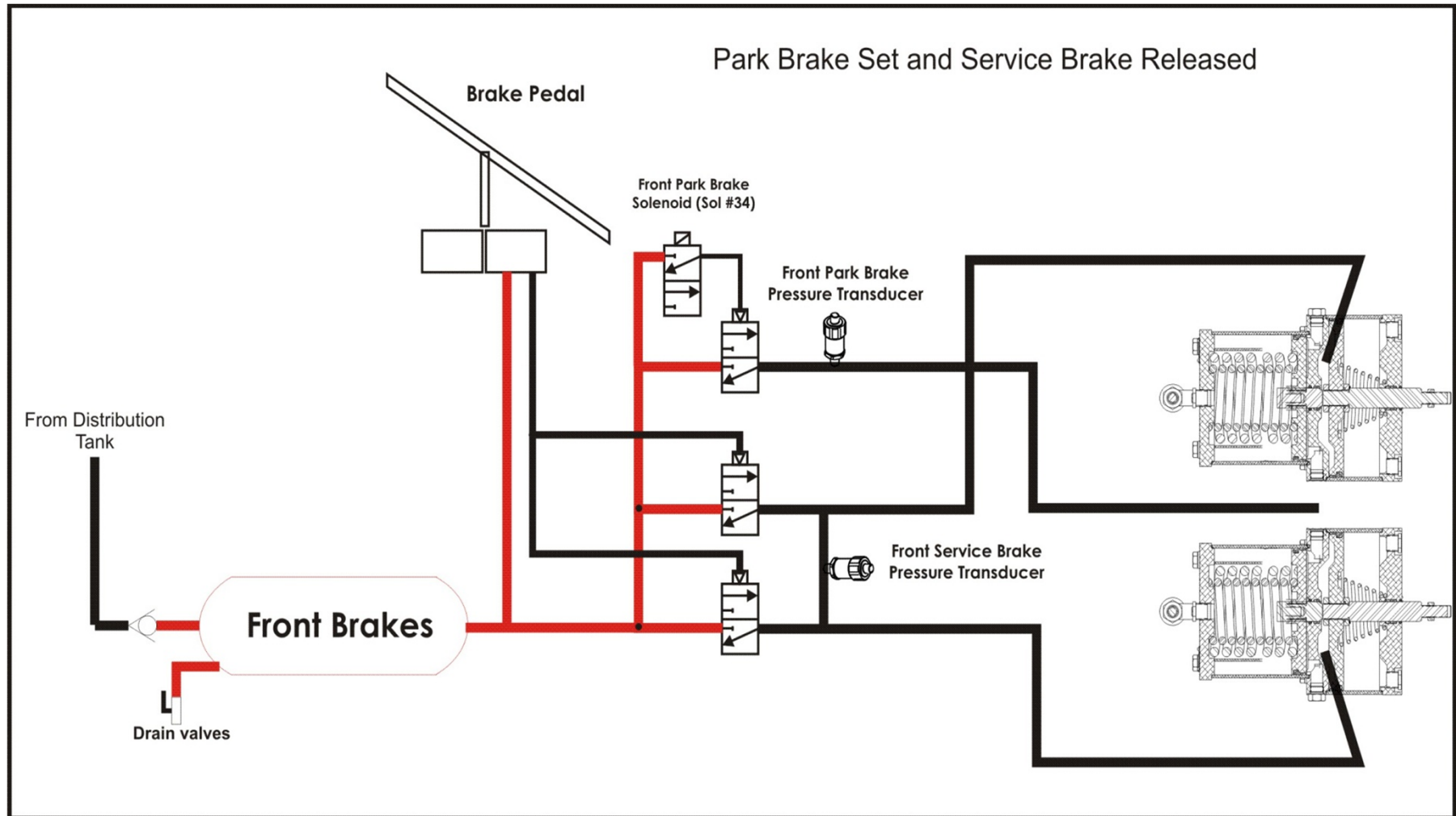
AIR SYSTEM CHARGING



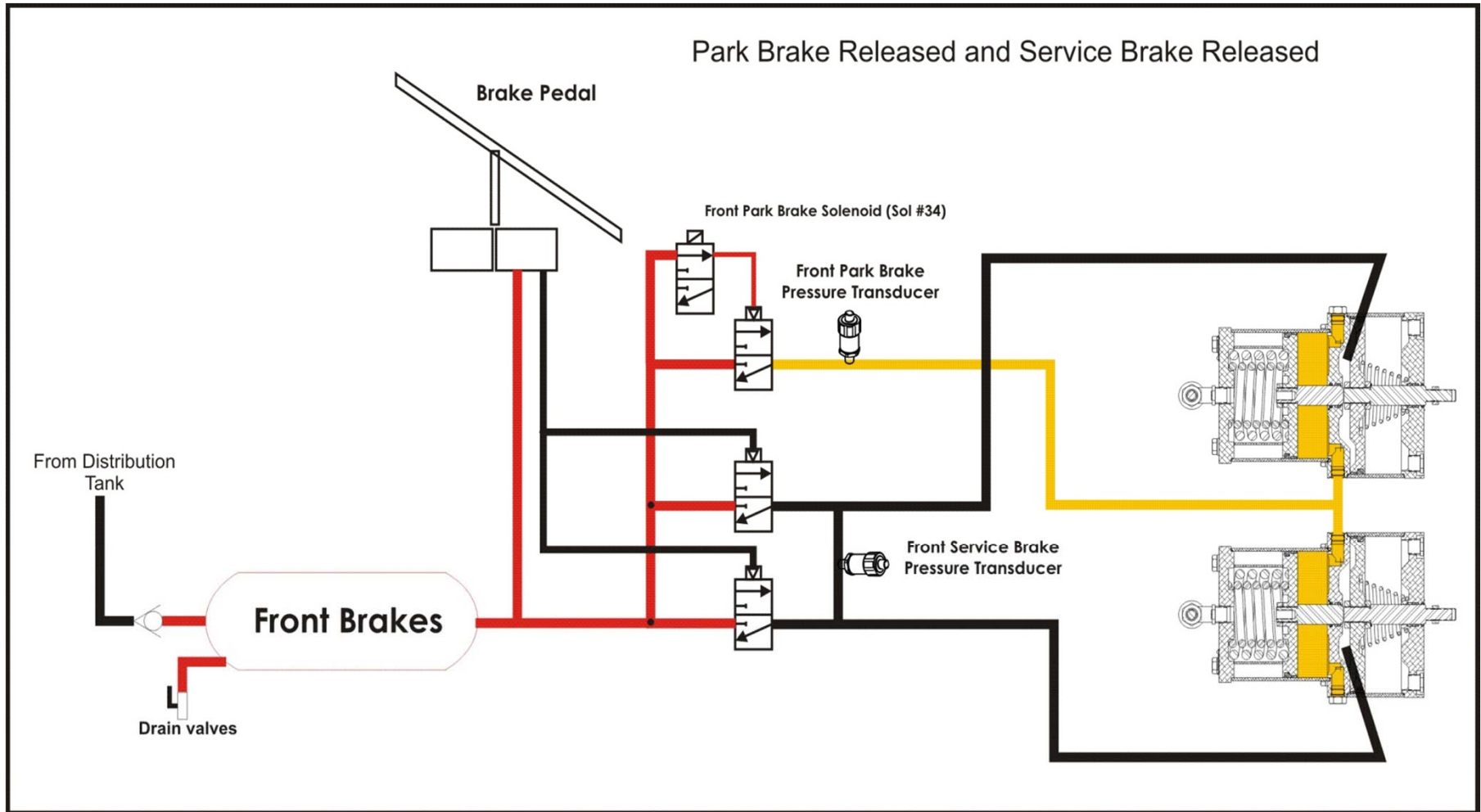
AIR SYSTEM PURGE



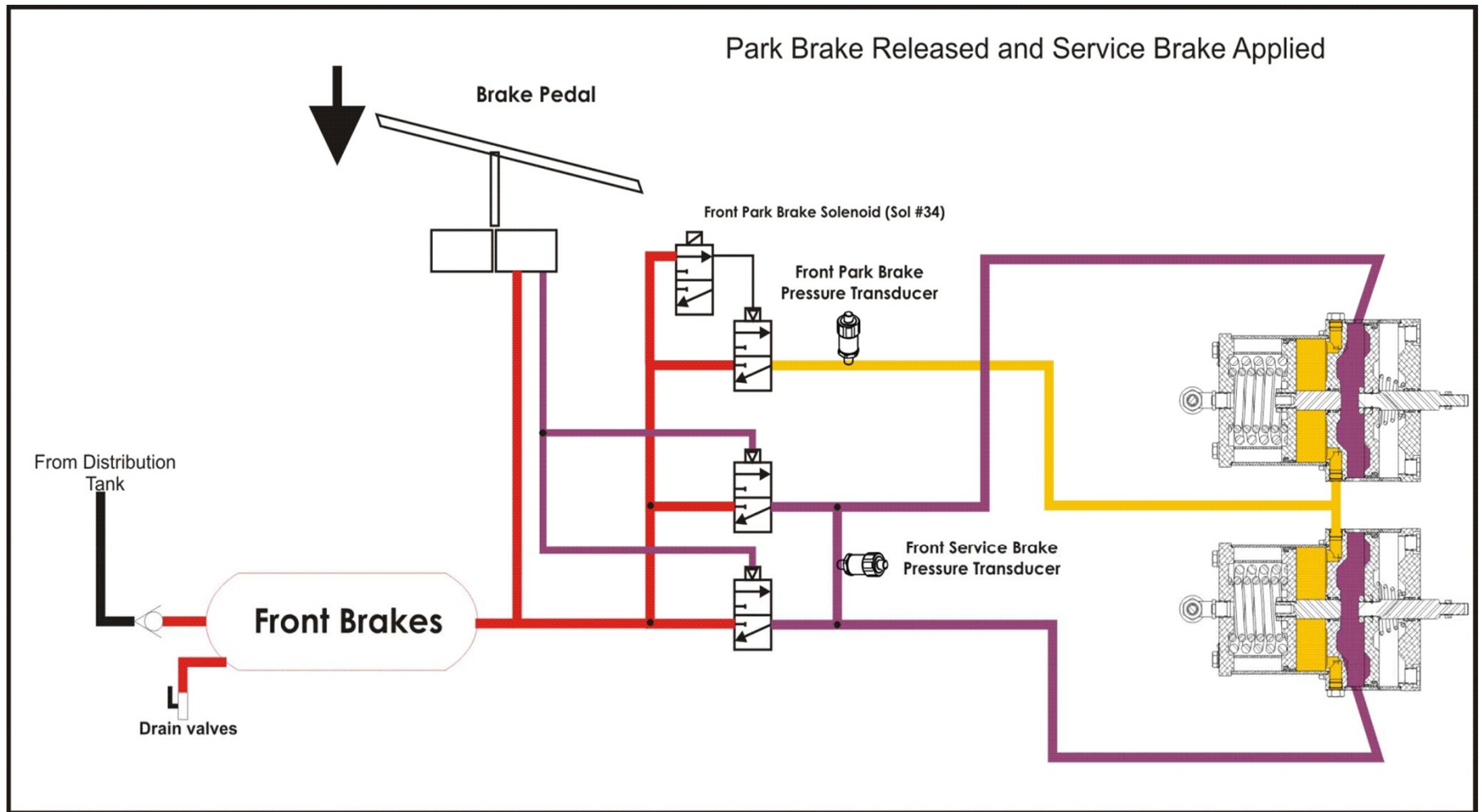
AIR SYSTEM PARK BRAKE SET



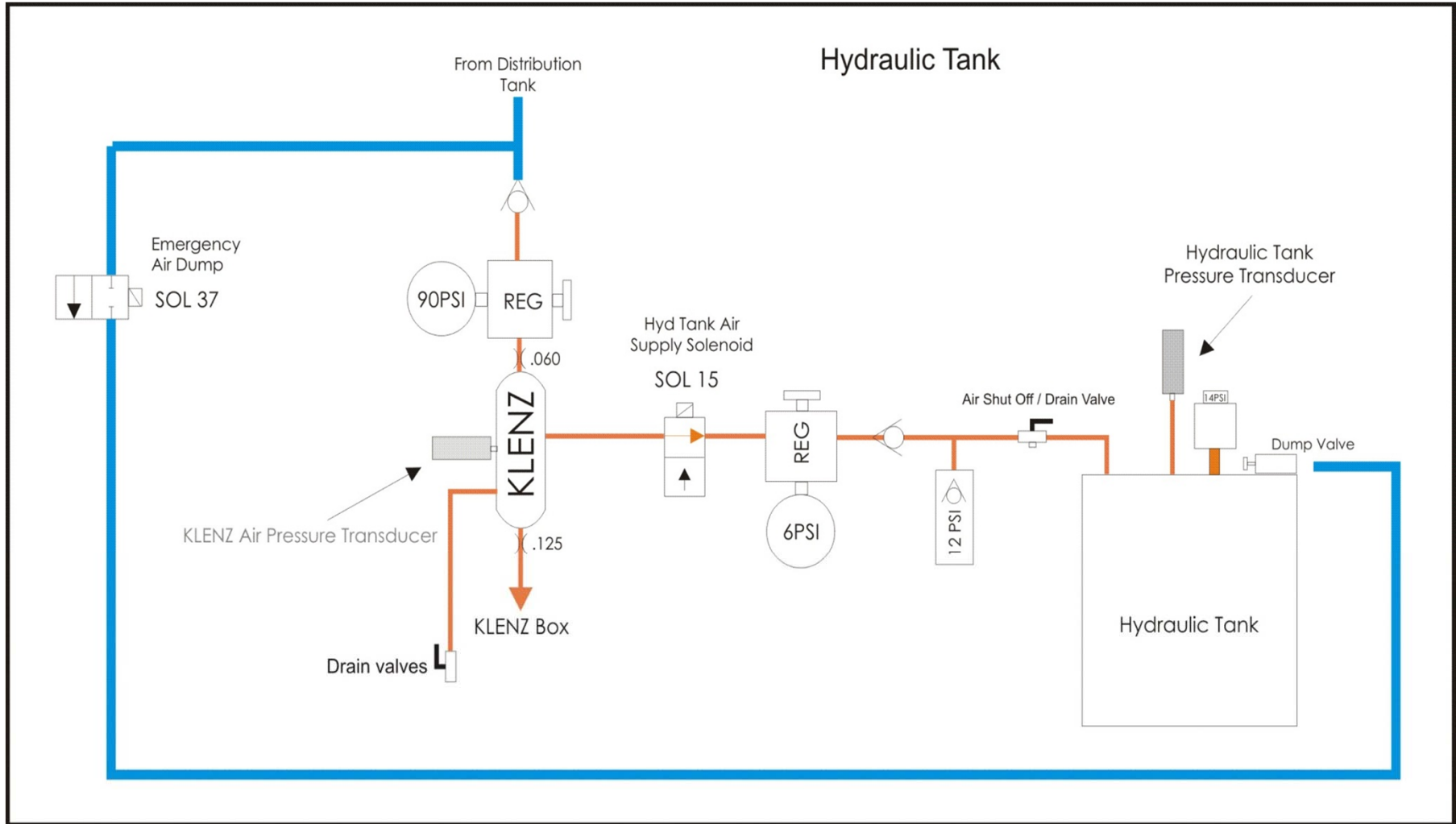
AIR SYSTEM PARK BRAKE RELEASED



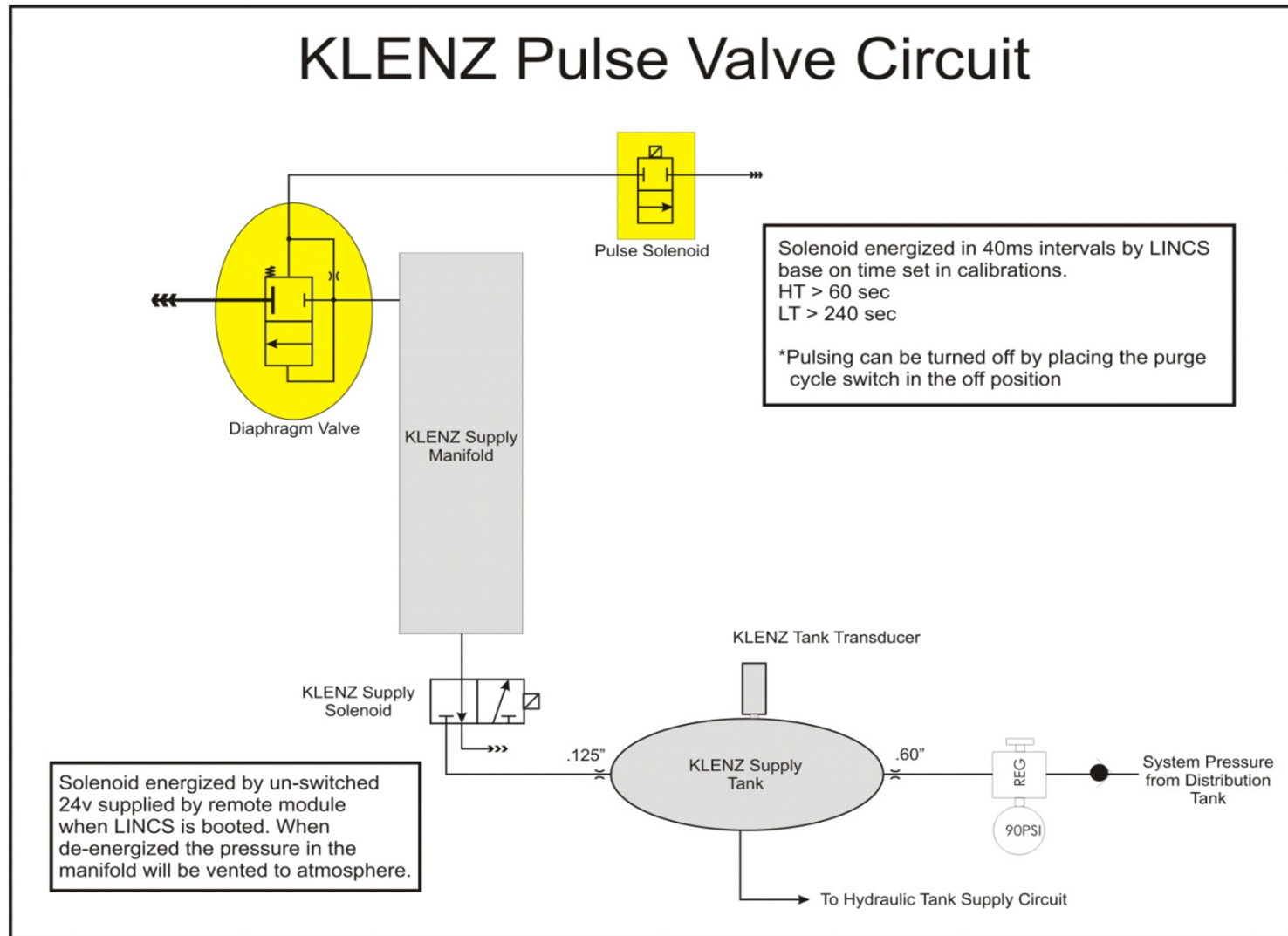
AIR SYSTEM SERVICE BRAKE APPLIED



AIR SYSTEM HYDRAULIC AIR SUPPLY



KLENZ CIRCUIT OPERATION



SETTINGS & ADJUSTMENTS

	L-950, L-1350, L-1850	L-2350
Compressor Governor	130~135 psi	140~145 psi
Hydraulic Tank	6 to 8psi	6 to 8psi
Klenz System	90 psi	90 psi

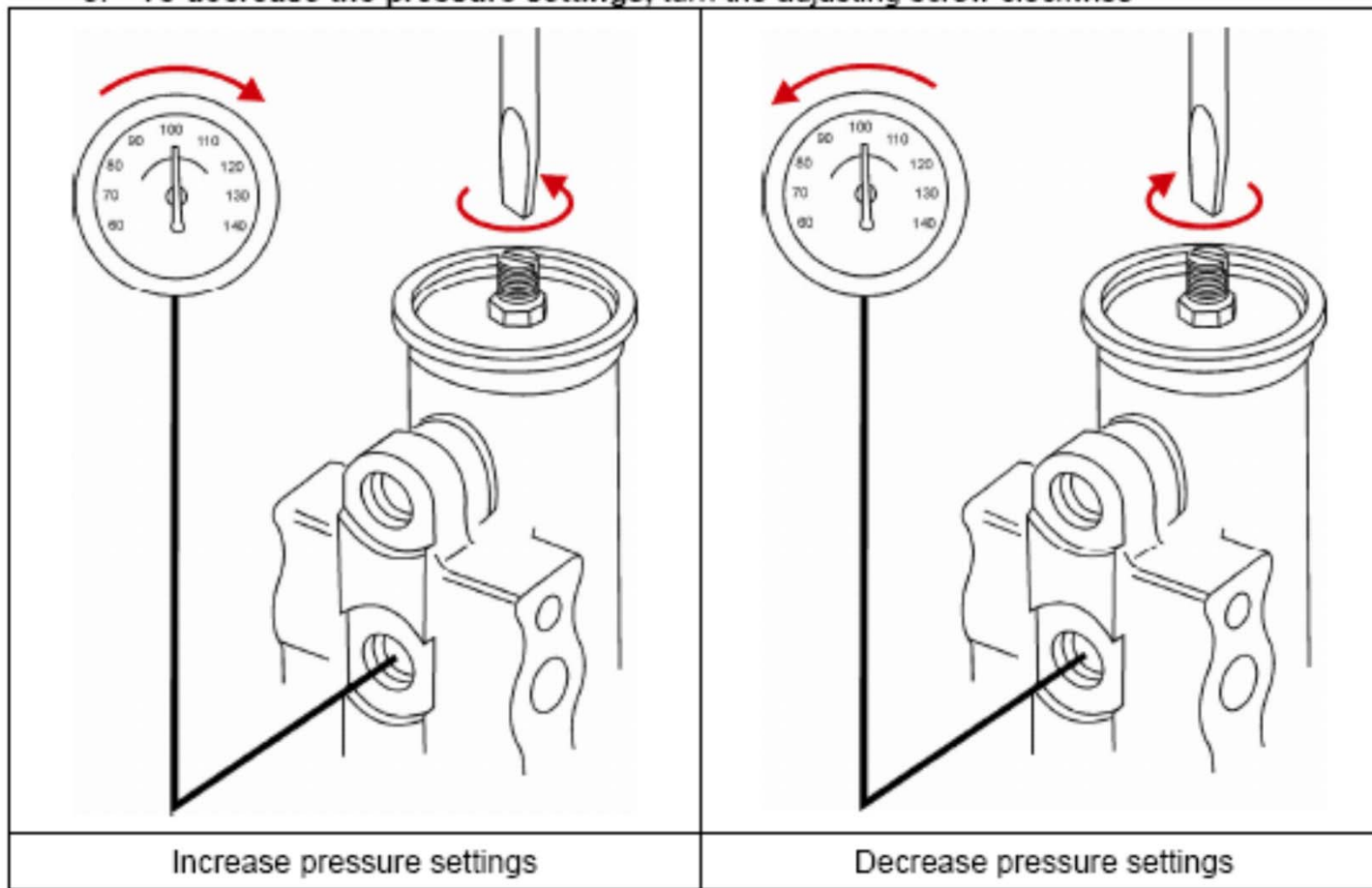
AIR SYSTEM ADJUSTMENTS

- Old style governor settings
 - L1350, L1850, and L2350 = 140 to 145 psi
 - L950 = 130 to 135 psi
- New style governor settings
 - L2350 = 140 to 145 psi
 - L1850, L1350, L1150, and L950 = 125 to 130psi
- KLENZ Tank Regulator = 90 psi
- Hydraulic Tank Regulator = 6 to 8 psi

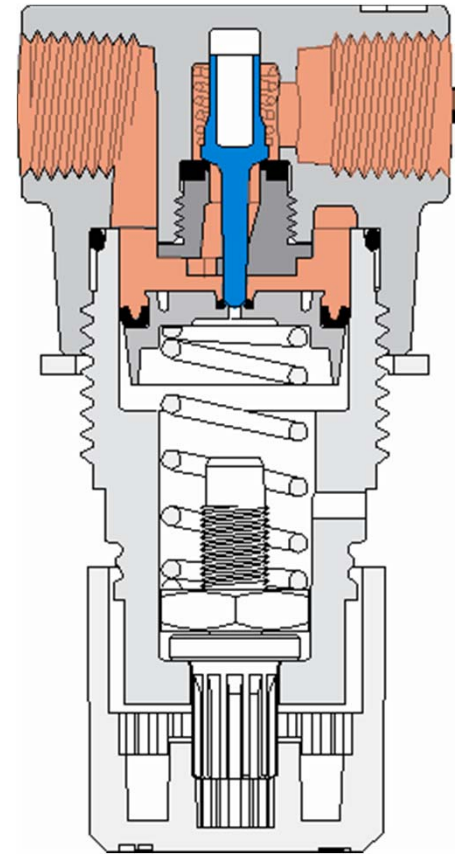
AIR SYSTEM MAIN GOVERNOR SETTING

Adjustment of D-2 governor:

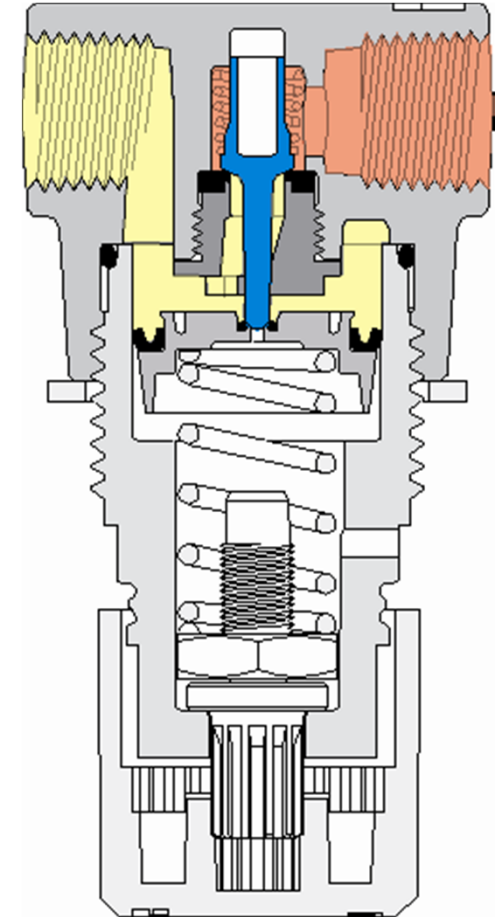
1. Remove the waterproof cap
2. Use a flat blade screwdriver to hold the adjusting screw.
3. Loosen the adjusting screw jam nut
4. To increase the pressure settings, turn the adjusting screw counter-clockwise
5. To decrease the pressure settings, turn the adjusting screw clockwise



AIR SYSTEM REGULATOR SETTINGS

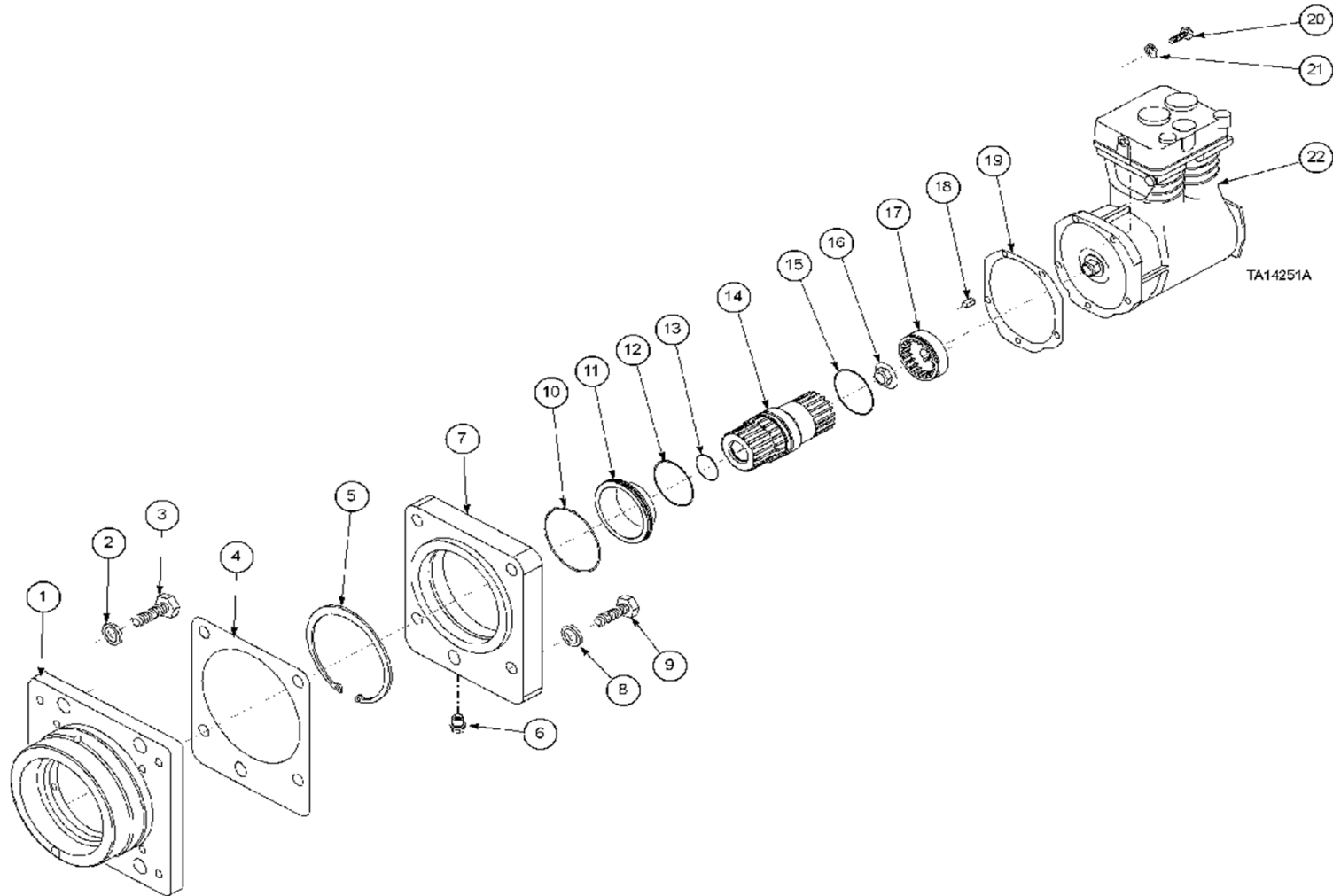


AIR SYSTEM REGULATOR SETTINGS

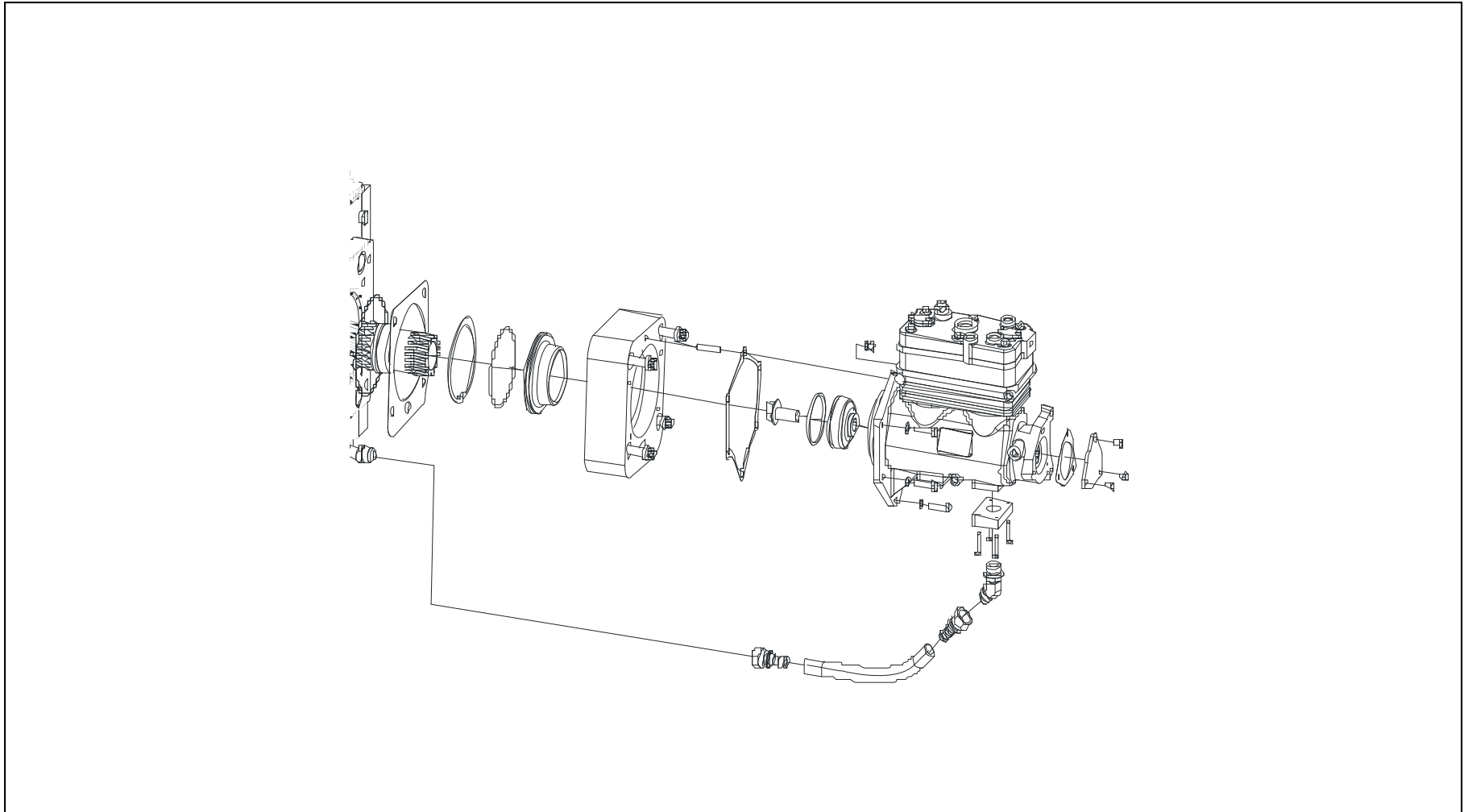


INSTALLATION & REMOVAL

AIR SYSTEM BENDIX 596 BREAK DOWN



AIR SYSTEM BENDIX 922 BREAK DOWN



TROUBLESHOOTING

50 Series Diagnostic Tool

JOYGLOBAL



P&H Brand LeTourneau-Series
wheel loader