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PLEASE NOTE:

Pictures in this catalog labeled with an “X” as a suffix represent a remanufactured product. Pictures labeled without an “X” represent NEW product.

- For Williams® Control Valves, use the six digit number for New Valves and use the WM with a suffix for a remanufactured part number where applicable.

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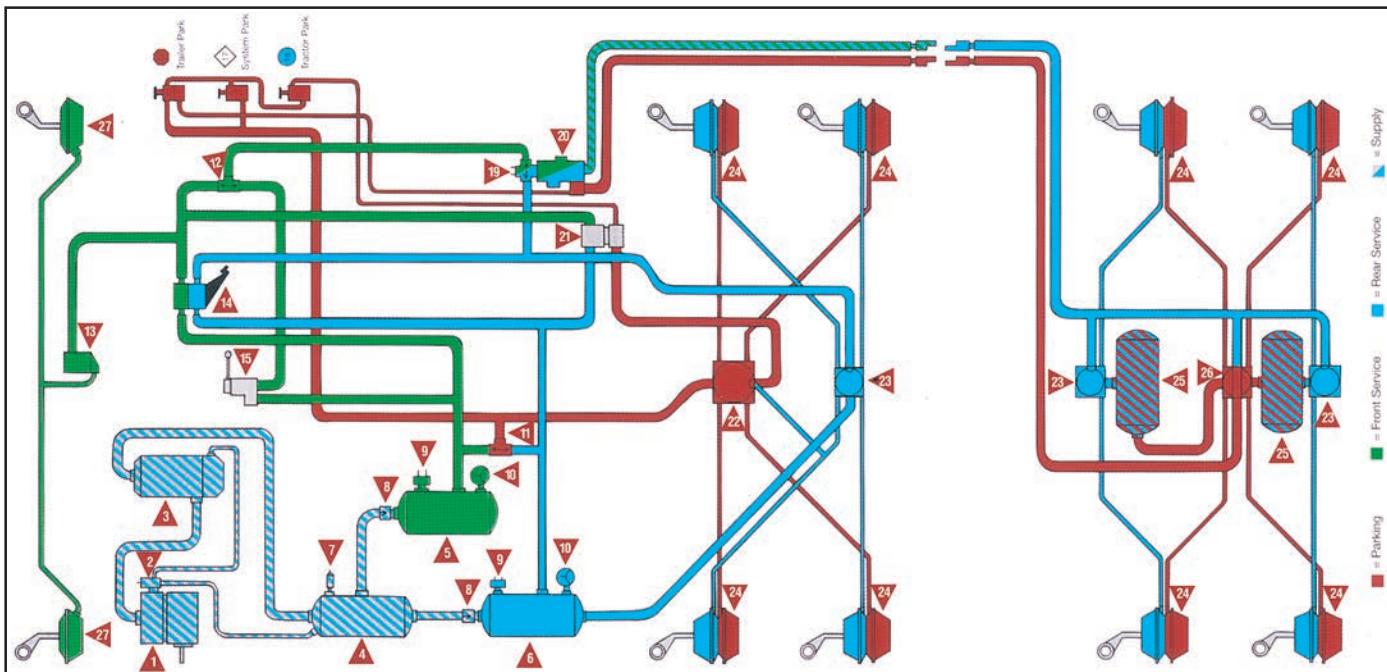
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AIR BRAKE SYSTEM TROUBLESHOOTING



	SYMPOTM	CAUSE	REMEDY
1 ► Compressor	Passes excessive oil	Restricted oil return Excessive ring wear Restricted air intake Excessive engine crankcase pressure. Excessive air leak in system	Make sure oil return line is free of kinks and sharp bends. Minimum return line should be 5/8" O.D. or 1/2" I.D. Make sure oil return in compressor and mating engine surfaces are clear and aligned. Use caution when using gasket sealant. Check air intake to make sure air is properly filtered. Check discharge line for restriction or carbon build up. Clean or replace as necessary. Check compressor cooling system. Min. water line – 1/2" O.D. Min flow rate – 2.5 gal/min at engine governor speed. Water temp. 200° F max. Check engine or compressor air cleaner – replace as necessary. Test for excessive engine crankcase pressure. Clean breather or replace positive crankcase ventilation valve. Check air valves for leaks at exhaust ports. Check lines for cracks or leaks at fittings.
Excessive build up and recovery time (85-100 PSI in 40 seconds with engine at full governed RPM)		Excessive air leak in system	Check discharge line for restrictions and carbon build-up. Clean or replace line as necessary.
Noisy compressor		Excessive ring wear Restricted air intake Excessive engine crankcase pressure. Excessive air leak in system	Clean and lubricate. If plungers are bent, replace with new unloader kit. Replace governor.
Pumps beyond cut-out		Restricted air discharge line, or sticking reservoir inlet check valve Unloader valves sticking Faulty or mis-adjusted air governor Faulty compressor drive Loose drive gear or pulley	Check pulley to make sure belt is not slipping. If gear driven check gear. Replace if worn. Check compressor drive system. Tighten if necessary. Torque the crankshaft nut to 100 ft. lbs. maximum. Do not use impact wrench. Inspect drive gear and coupling. Fiber gears should be replaced when compressor is changed. Test governor for proper operation. Inspect air lines to and from governor for kinks and restrictions. Replace if necessary.
2 ► Governor	Flutters	Excessive worn drive gear Faulty or mis-adjusted governor or governor is improperly installed Unloader valves sticking	Clean and lubricate. If unloader stems are worn, replace.
3 ► Air Dryer	Dryer is constantly cycling or purging	Restricted reservoir line Out of adjustment Excessive air leak in system	Check governor reservoir line for kinks, restriction. Clean or replace line as necessary. Only adjust after making sure gauge is accurate. To raise pressure setting, turn adjustment screw counter-clockwise. To lower pressure setting, turn adjusting screw clockwise (1/4 turn = 4/6 PSI.) See #1 cause - Excessive air leak.
Dryer does not purge or exhaust air		Defective governor Defective check valve between dryer and first tank Kinked or plugged discharge	Check governor for proper "cut-out" pressure. Repair or replace governor. Repair or replace as necessary.
		Excessive air leak in system Line between governor and dryer kinked, plugged or frozen Faulty heater or thermostat (allowing purge valve to freeze) Faulty purge valve.	Check to see that air is passing through compressor discharge line. Check for kinks, bends or excessive carbon build up. Clean or replace discharge line. See #1 cause - Excessive air leak.
		Failure to drain tank Compressor passing excessive oil Contaminated air dryer desiccant cartridge	Check to make sure air flows through purge control line when compressor is unloaded. Clean or replace purge control line. Repair or replace thermostat/heater.
4 ► Supply Reservoir	Excessive water accumulation Excessive oil accumulation		After determining air reaches purge valve, repair or replace purge valve.
5 ► Front Brake Reservoir	Excessive oil or water accumulation Loses air pressure	See #4 See #8 and #11	Drain tank daily. Install air dryer or automatic drain valve. See #1. Replace desiccant cartridge.
6 ► Rear Brake Reservoir	Excessive oil or water accumulation Loses air pressure	See #4 See #8 and #11	
7 ► Safety Valve	Pops off at 150 PSI Pops off below 150 PSI Will not function	System pressure too high Plugged governor sensing line Faulty safety valve Faulty safety valve	Check governor "cut-out" setting. Readjust if necessary or replace governor if faulty. Clean or replace line. Replace valve #7. Test with shop air at 150 PSI. Replace valve if it does not pop off at 150 PSI.
8 ► One-Way Check Valve	Allows air to bleed back to supply reservoir	Dirty or faulty one-way check valve	Replace valve #8.

AIR BRAKE SYSTEM TROUBLESHOOTING

9 Low Pressure Switch Will not operate at pressures below 60 PSI Buzzer or light will not operate	Faulty buzzer or light Faulty dash gauge Bad ground connection	Repair or replace #9. Repair or replace #10. Check all wiring and ground to buzzer, light and low pressure switch.
10 Dash Gauge Improper reading	Faulty dash gauge	Calibrate or replace gauge #10.
11 Two-Way Check Valve Front or rear brake reservoir loses air pressure	Check valve not seating properly	Replace valve #11.
12 Two-Way Check Valve Foot valve leaks at exhaust port when hand valve is applied. Hand valve leaks at exhaust port when foot valve is applied.	Check valve not seating properly Check valve not seating properly	Replace valve #12 or #19. Replace valve #12.
13 Limiting and Quick Release Valve Front breaks release too slowly Severe front brake application. Leaks at exhaust port.	Possible contamination in valve Faulty valve Bad diaphragm in valve	Replace valve #13. Replace valve #13. Replace valve #13.
14 Foot Valve Leaks at exhaust with all brakes released. Leaks at exhaust with hand valve applied and foot valve released. Leaks at exhaust with foot brake applied. Brakes not modulating properly. First no brakes, then on all at once.	Leak in anti-compounding system Faulty two-way check valve Possible contamination in valve or faulty foot valve Faulty relay valve	Check #21 (Springbrake Valve) for bad double check valve causing back flow to foot valve. Repair or replace #21. Replace check valve #12 or #19. Replace foot valve #14. Replace relay valve #23.
15 Trailer Hand Control Valve Leaks at exhaust when only foot valve is applied. Leaks at exhaust port when in applied or released position.	Faulty two-way check valve Faulty hand control valve	Replace check valve #12. Replace hand control valve #15.
16 Trailer Charge Dash Valve (red octagon knob) Will not automatically pop out when air pressure is below 40 PSI. Trailer brakes will not immediately apply when valve is pulled. Leaks at exhaust port.	Faulty dash valve Dash valve not exhausting properly Faulty tractor protection valve Faulty dash valve	Replace dash valve #16. Replace dash valve #16. If dash valve will exhaust, replace tractor protection valve #20. Replace dash valve #16.
17 Tractor-Trailer Park Valve (yellow diamond knob) Leaks at exhaust port. Parking brakes will not release. Parking brakes will not apply.	Faulty park valve Defective springbrake valve Defective springbrake valve Defective springbrake	Replace valve #17. Replace valve #21. Replace valve #21. See #24.
18 Tractor Park Valve (round blue knob) Leaks at exhaust port. Tractor parking brakes will not release. Tractor parking brakes will not apply.	Faulty park valve Defective springbrake valve Defective springbrake valve Defective springbrake	Replace valve #18. Replace valve #21. Replace valve #21. See #24.
19 Double Check Valve with Stop Light Switch Brake lights will not come on when foot brake is applied.	Contamination in valve Bad wiring or bulb	Replace valve #19. Repair or replace as needed.
20 Tractor Protection Valve Will not respond to trailer charge valve. Will not shut off air in tractor service line when trailer air pressure is below 45 PSI.	Defective tractor protection valve	Replace valve #20.
21 Springbrake Valve Will not allow modulating control of springbrakes via foot valve after loss of service brake air pressure. Leaks at exhaust.	Faulty valve Contamination in valve	Replace valve #21. Replace valve #21.
22 Springbrake Control/Relay Valve Leaks at exhaust port. Slow application or release of springbrakes.	Contamination in valve Piston in springbrake control valve is sticking. Possible problem with springbrake, eg: misaligned push rod and slack adjuster	Replace valve #22. Replace valve #22. See #24, #27.
23 Service Brake Relay Valve Leaks at exhaust port with springbrakes released. Leaks at exhaust port with service brake applied.	Possible leak at center seal in springbrake Contamination in valve Faulty relay valve	Replace with new piggy back. Replace relay valve #23. Replace relay valve #23.
24 Tandem Springbrakes Service brakes are slow to apply. Service brake leaks Park brake slow to apply or release	Problem with relay valve #23 or springbrake valve #21 Possible problem with foundation brakes Brakes not properly adjusted Restriction or leak in air line Diaphragm failure Faulty springbrake control valve Diaphragm failure Leak in air system – not enough air pressure Broken return spring Broken barrel spring Center seal leaking in brake	Replace valve(s) #21 & #23. Check linings. S-cams, rollers and return springs. See #27. Repair or replace. Replace diaphragm. Replace #22. Replace piggy back. Repair leak. Replace service chamber Replace piggy back. Replace piggy back. Leak may be heard at relay valve #22.
 Springbrake leaks when parking brakes are released.		
25 Trailer Air Reservoir Excessive oil or water accumulation	See #4	
26 Springbrake Valve Leaks at exhaust port. Slow application or release of trailer park brakes.	Faulty or contaminated valve Possible problem with springbrake	Replace #26. See #24. Park brake slow to apply or release.
27 Service Chamber Leaks Slow to apply or release.	Diaphragm failure Faulty relay valve Restriction in air line Faulty quick release valve Possible problem with foundation brakes Brakes not properly adjusted	Replace diaphragm. Replace relay valve #23. Repair or replace line. Replace #13. Check linings, S-cams, rollers and return springs.

AIR BRAKE SYSTEM TROUBLESHOOTING

- 1.) Before replacing any valve with a new or remanufactured valve, be sure to blow the air lines out either using the vehicle's own air supply or shop air. Dirt is the greatest cause of premature air valve failure.
- 2.) If pipe dope is used on fittings, use it sparingly. This can also get into the unit and cause a failure.
- 3.) When installing fittings into a remanufactured valve, do not over tighten or it will crack the casting.
- 4.) With the introduction of spring brakes, anti-compounding and 121 air brake systems, because a valve is leaking air out of its exhaust, does not mean the valve is at fault. If a spring brake is leaking from the the spring brake to the service brake side, that air will travel back up the service line and out the exhaust of the next valve back. Before replacing a valve that has air leaking from its exhaust, disconnect the delivery lines from that valve to determine if air is being fed back from some other valve or unit.

TRUCKS, TRACTORS and BUSES

1.) Insufficient Brakes

- Brakes need adjusting, lubricating or relining.
- Low air pressure in the brake system (below 60 psi).
- Brake valve delivery pressure below normal.
- Wrong size actuators and/or slack adjusters.
- Failure of part of a dual air system.
- If remote mounted brake valve, check linkage.

2.) Brakes Apply Too Slowly

- Brakes need adjusting or lubricating.
- Low air pressure in the brake system (below 60 psi).
- Insufficient brake valve delivery pressure.
- Excessive leakage with brakes applied.
- Restricted tubing or hose.
- Treadle travel restricted.
- If remote mounted brake valve, check linkage.

3.) Brakes Release Too Slowly

- Brakes need adjusting or lubricating.
- Brake valve not returning to fully released position.
- Restricted tubing or hose.
- Exhaust port of brake valve, quick release valve, or relay valve restricted or plugged.
- Faulty brake valve, quick release valve, or relay valve.
- If remote mounted brake valve, check linkage.

4.) Brakes Do Not Apply

- No air pressure in brake system.
- Restricted or broken tubing or hose.
- Faulty brake valve.

If remote mounted brake valve, check linkage.

5.) Brakes Do Not Release

- Brake rigging binding.
- Brake not in fully released position.
- Faulty brake valve or relay valve.
- Restricted or collapsed tubing or hose.
- If remote mounted brake valve, check linkage.

6.) Brakes Grab or Erratic Brake

- Grease on brake lining = reline brakes.
- Faulty brake valve or relay valve.
- Brake rigging binding.
- No vehicle load = high brake pressure.

7.) Uneven Brakes

- Brakes need adjusting, lubricating or relining.
- Improper axle mounting.
- Grease on brake lining - reline brakes.
- Brake shoe return spring broken.
- Brake drum out of round.
- Brake chamber diaphragm failure.
- Wrong brake lining.
- Broken slack adjuster or foundation brake parts.

8.) Air Pressure Will Not Rise To Normal

- Faulty air gauge (registering incorrectly).
- Excessive valve or fitting leakage.
- Governor out of adjustment.
- Slipping compressor drive belt.
- Faulty compressor.
- Broken supply line.

9.) Air Pressure Rise To Normal Too Slowly

- Excessive valve or fitting leakage.
- Excessive reservoir volume.
- Clogged compressor air strainer.
- Engine speed too slow.
- Compressor discharge valve or inlet valves leaking.
- Compressor drive belt slipping or faulty drive coupling.
- Worn compressor.
- Excessive carbon in compressor cylinder head or discharge line.

10.) Air Pressure Rises Above Normal

- Faulty air gauge (registering incorrectly).
- Governor out of adjustment.
- Faulty governor and safety valve.
- Restriction in line between governor and compressor or restricted unloading valve.
- Too much clearance at compressor unloader valves or compressor unloading mechanism stuck in closed position.

11.) Air Pressure Drops Quickly With Engine Stopped and Brakes Released

- Leaking brake valve.
- Leaking tubing or hoses.
- Compressor discharge valves leaking.
- Governor leaking.
- Excessive leakage elsewhere in the air brake supply system.
- Inadequate reservoir volume - high air demand.

12.) Air Pressure Drops Quickly With Engine Stopped and Brakes Fully Applied

- Leaking brake chamber, actuator, rotocylinder or brake cylinder.
- Valve left open.
- Leaking brake valve.
- Leaking tubing or hose line.
- Excessive water in reservoirs.
- Inadequate reservoir volume.

13.) Compressor Knocks Continously or Intermittently

- Loose drive pulley.
- Back lash in drive gears or drive coupling.
- Worn or burnt out bearings.
- Excessive carbon deposits in compressor cylinder head.

14.) Safety Valve ‘Blows Off’

- Safety valve out of adjustment.
- Air pressure in the air brake system above normal due to faulty unloader mechanism or faulty governor.

15.) Excessive Oil or Water in the Brake System

- Reservoirs not being drained often enough.
- Compressor passing excessive oil.
- Compressor air strainer restricted.
- Excessive engine oil pressure.
- Back pressure from engine crankcase.
- Excessive oil (flooding) in compressor crankcase.

AIR BRAKE SYSTEM TROUBLESHOOTING

- 1.) Before replacing any valve with a new or remanufactured valve, be sure to blow the air lines out either using the vehicle's own air supply or shop air. Dirt is the greatest cause of premature air valve failure.
- 2.) If pipe dope is used on fittings, use it sparingly. This can also get into the unit and cause a failure.
- 3.) When installing fittings into a remanufactured valve, do not over tighten or it will crack the casting.
- 4.) With the introduction of spring brakes, anti-compounding and 121 air brake systems, because a valve is leaking air out of its exhaust, does not mean the valve is at fault. If a spring brake is leaking from the the spring brake to the service brake side, that air will travel back up the service line and out the exhaust of the next valve back. Before replacing a valve that has air leaking from its exhaust, disconnect the delivery lines from that valve to determine if air is being fed back from some other valve or unit.

TRAILERS

** The air brake system of a trailer is entirely dependent upon the air brake system of the towing vehicle for its air supply and control. Therefore, the air air brake system of the towing vehicle must be in good condition; otherwise it will be impossible to obtain a good brake performance on the trailer. Before condemning the air brake system on a trailer, always be sure the air brake system on the towing vehicle is functioning properly. The following is based on on the assumption the tractor air brake system is functioning properly.

1.) Insufficient Brakes

- Brakes need adjusting, lubricating or relining.
- Tractor protection valve not in "normal" position.
- Faulty relay emergency valve.
- No trailer air supply - clogged emergency line.
- Low air pressure in the brake system (below 80 psi).
- Brake valve delivery pressure in towing vehicle below normal.
- Restricted tubing or hose.
- Wrong size actuators.

2.) Brakes Apply Too Slowly

- Brakes need adjusting or lubricating.
- Low air pressure in the brake system (below 80 psi).
- Brake valve delivery pressure in towing vehicle below normal.
- Restricted tubing, hose, or line filter.
- Excessive leakage with brakes applied.
- Faulty relay emergency valve.

3.) Brakes Release Too Slowly

- Brakes need adjusting or lubricating.
- Brake rigging binding.
- Exhaust port of relay emergency valve restricted or plugged.
- Restricted tubing or hose.

4.) Brakes Do Not Apply

- Connecting hoses to trailer crossed.
- Faulty relay emergency valve.
- Tractor protection valve not functioning properly or not in normal position (see operating instructions).
- No air pressure in air brake system.
- Restricted tubing or hose.
- Hoses between tractor and trailer not connected.

5.) Brakes Do Not Release

- Connecting hoses to trailer crossed.
- Brake valve on towing vehicle in applied position.
- Brake rigging binding.
- Relay emergency valve in emergency position.
- Faulty relay emergency valve.
- Restricted tubing or hose.
- Tractor protection valve not functioning properly or not placed in "normal" position.

6.) Brakes Grab

- Grease on brake lining - reline brakes.
- Brake rigging binding.
- Faulty relay emergency valve.
- Faulty brake valve on towing vehicle.
- No trailer load.

7.) Uneven Brakes

- Brakes need adjusting, lubricating or relining.
- Grease on brake lining - reline brakes.
- Brake shoe return spring broken.
- Brake drum out of round.
- Leaking brake chamber or actuator diaphragm.
- Restricted tubing or hose.
- Broken slack adjuster or foundation brake parts.

8.) Excessive Leakage With Brakes Released

- Relay emergency valve or drain valve leaking.
- Leaking tubing or hose.
- Hose uncoupled or leaking hose coupling.

9.) Excessive Leakage With Brakes Fully Applied

- Faulty relay emergency valve.
- Leaking brake chamber diaphragm.
- Leaking tubing or hose.
- Hose uncoupled or leaking hose coupling.

10.) Excessive Leakage with Relay Emergency Valve in Emergency Position

- Faulty relay emergency valve.

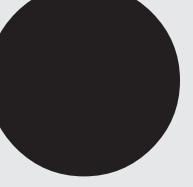
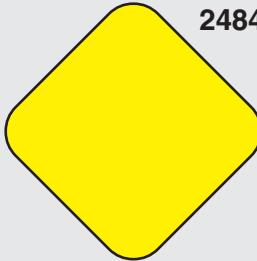
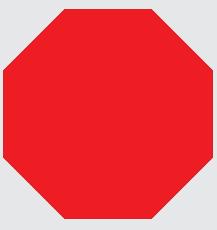
11.) Excessive Oil and Water Present in the Air Brake System.

- Reservoirs not drained often enough.

AIR BRAKE SYSTEM TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
1) Dryer is constantly cycling or purging.	<ul style="list-style-type: none"> a. Excessive system leak. b. Defective governor. c. Defective one way valve between air dryer and wet tank. d. Kinked or plugged discharge line. 	<ul style="list-style-type: none"> a. Repair air leak. b. Check governor for proper "cut-in," "cut-out" pressure and excessive leakage. Repair or replace governor. c. Check to see if air is passing through check valve. d. Check to see if air passes through discharge line. Check for kinks, bends, excessive carbon deposits. Clean or replace discharge line.
2) Water and sludge appear in wet tank.	<ul style="list-style-type: none"> a. Plugged desiccant cartridge or filter. b. Improper length or material of discharge line. c. Restricted purge orifice. d. No purge cycle. e. Compressor passing excessive oil. 	<ul style="list-style-type: none"> a. Replace dessicant cartridge filter. b. Use minimum of six-foot tubing for two-cylinder compressor; ten-foot for one cylinder compressor. Flex hose can be substituted at a ratio of 1- 1/2' of flex hose for each 1' of metal. c. Clean orifice with small drill bit or wire. d. See cause and remedy for problem #5. e. Check for proper compressor installation. Replace compressor if necessary.
3) Safety valve on air dryer opens during operation.	<ul style="list-style-type: none"> a. Plugged or saturated desiccant cartridge or filter. b. Defective one way check valve. c. Restricted discharge line. 	<ul style="list-style-type: none"> a. See remedy 2E, replace desiccant cartridge/filter. b. Check to see if air is passing through check valve. Repair or replace check valve. c. Clean or replace air discharge line.
4) Constant leak of air from purge valve.	<ul style="list-style-type: none"> a. Purge control line connected to reservoir or exhaust port of governor. b. Inlet and outlet air connections reversed. c. Purge valve frozen open. d. Restricted discharge line. e. Faulty governor. 	<ul style="list-style-type: none"> a. Purge control line must be connected to unloader port of governor. b. Compressor discharge line must be connected to dryer inlet port. c. Repair or replace thermostat/heater. d. Check to see if air passes through discharge line. Check for kinks, bends or excessive carbon deposits. e. Check governor for proper "cut-in," "cut-out" pressure and excessive leakage. Repair or replace governor.
5) Air dryer does not purge or exhaust air.	<ul style="list-style-type: none"> a. Line between governor and dryer kinked, plugged, broken or frozen. b. Faulty heater or thermostat. c. Faulty purge valve. 	<ul style="list-style-type: none"> a. Check to make sure air flows through purge control line when compressor is unloaded. Clean or replace purge control line. b. Repair or replace thermostat/heater. c. After determining air reaches purge valve, repair purge valve.
6) Slow air pressure build up.	<ul style="list-style-type: none"> a. Restricted line. b. Plugged desiccant or filter. 	<ul style="list-style-type: none"> a. Check to see if air passes through discharge line. Check for kinks, bends or excessive carbon deposits. Clean or replace discharge line. b. Replace desiccant cartridge.
7) Heater inoperative.	<ul style="list-style-type: none"> a. Broken wire or bad connection. b. Blown fuse. c. Defective thermostat. 	<ul style="list-style-type: none"> a. Repair or replace wiring to heater. b. Check fuse and replace if necessary. c. Repair or replace thermostat.

REPLACEMENT KNOBS FOR DASH CONTROL VALVES

243953 	244282 	240920 	240931 	
248437 	240302 	245186 	245841 	
248433 	248434 	247348 	248435 	
291357 	KN20901 	KN20900 (FITS KN20615 & 101437) 	290655 291054** 	
290997 	291172* 	241866 	239059 	
A25079 	293511 	293510 	298818 	298817 

7/8" Hex Nut Available (PART NUMBER 239357)

Roll pins included with Knobs.

All part numbers furnished with .387 diameter hole to fit 3/8" valve stem unless otherwise indicated.

All 3/8" valve stem areas are STEEL REINFORCED.

* # 291172 Furnished with .255 diameter hole to fit 1/4" valve stem.

** # 291054 Furnished with .320 diameter hole to fit 5/16" valve stem.

MADE
IN
U.S.A.

WILLIAMS® Control Knobs are also Available.

BENDIX®- AIR COMPRESSORS

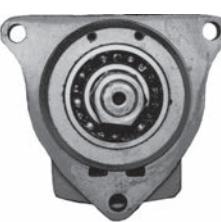
AIR COMPRESSOR SIZES and CFM

BX-2150 9.5 CFM AT 1250 RPM 	TU-FLO 400 7.25 CFM AT 1250 RPM 	TU-FLO 500 12 CFM AT 1250 RPM 	TU-FLO 501 12 CFM AT 1250 RPM 
TU-FLO 550 13.2 CFM AT 1250 RPM 	TU-FLO 600 14.5 CFM AT 1250 RPM 	TU-FLO 700 15.5 CFM AT 1250 RPM 	TU-FLO 750 16.5 CFM AT 1250 RPM 
TU-FLO 1000 24 CFM AT 1250 RPM 	TU-FLO 1400L 31 CFM AT 1250 RPM 	<p>WE REMANUFACTURE QUALITY HEAVY DUTY AIR COMPRESSORS FOR A WIDE RANGE OF VEHICLE APPLICATIONS.</p>	

BENDIX®- AIR COMPRESSORS

AIR COMPRESSOR FLANGES

REMANUFACTURED EXCHANGE COMPRESSORS

FLANGES	ENGINES	TU-FLO 500	TU-FLO 501	TU-FLO 700	TU-FLO 1400	TU-FLO 550	TU-FLO 750
	Caterpillar® 3406 Caterpillar® 3406B Caterpillar® 3408 Mack® 6 Cylinder Caterpillar® 3176 Caterpillar® 3116	285131X ---- 284310X 284662X ---- ----	286546X 103274X 286552X 286544X 286620X*	289349X 103278X 289744X 289340X ---- ----	---- 104583X ---- ---- 104584X 107553X ----	---- 107509X --- 107511X 109603X 107981X	---- 107508X ---- 107510X 109604X ----
	Mack® 8 Cylinder	277122X	286574X 102953X*	289348X	----	108329X	107869X
	Cummins® NH,NTC,KT,KTA Series Engines	284718X* 284699X	286554X 286618X*	289339X	----	107506X	107507X
	Cummins® VTB-903 Cummins® VT-903 Cummins® VT-350	---- 283711X* 283711X*	---- 286570X 286570X	101589X 101590X 101590X	---- ---- ----	---- ---- ----	---- ---- ----
	Series 60 Detroit Diesel® 0° Tilt Detroit Diesel® 0° Tilt Detroit Diesel® 45° Tilt	---- 276962X 285252X	286623X ① 286539X 286543X	106780X ① 289941X 101158X	107836X 108779X ----	107622X ① 107513X ----	107623X ① 107512X ----

① SERIES 60 COMPRESSORS MUST BE REPLACED WITH SERIES 60 COMPRESSORS ONLY. FAILURE TO DO SO WILL RESULT IN SEVERE COMPRESSOR DAMAGE.

* TOP DISCHARGE - CYLINDER HEAD

** TU-FLO 700 CYLINDER HEAD INCORPORATES BOTH SIDE & TOP DISCHARGE.

**DETROIT
DIESEL®
FLANGES**



0° TILT



45° TILT



75° TILT

QUALITY HEAVY DUTY PARTS

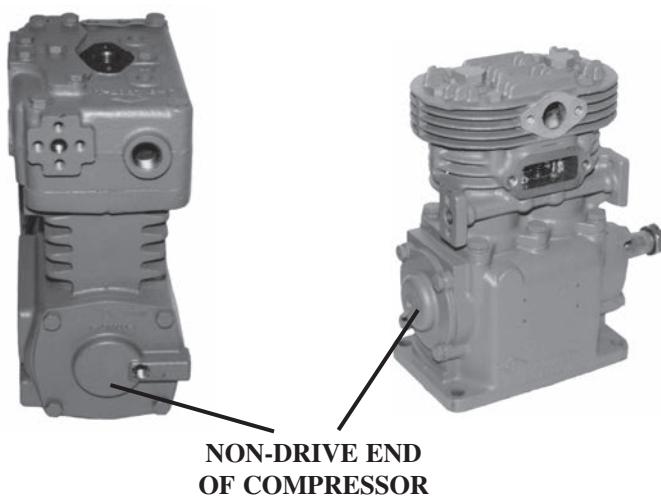
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BENDIX®- AIR COMPRESSORS

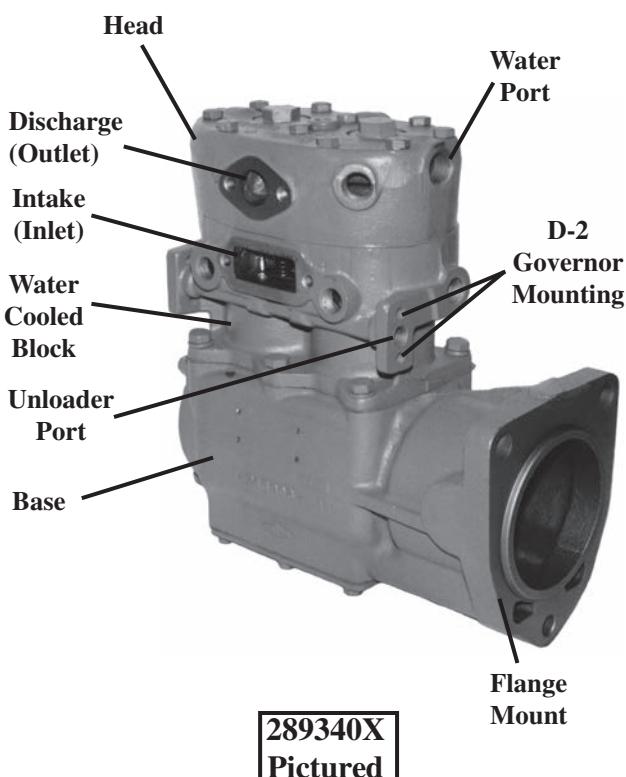
IDENTIFICATION OF BENDIX® AIR COMPRESSORS

IMPORTANT NOTICE

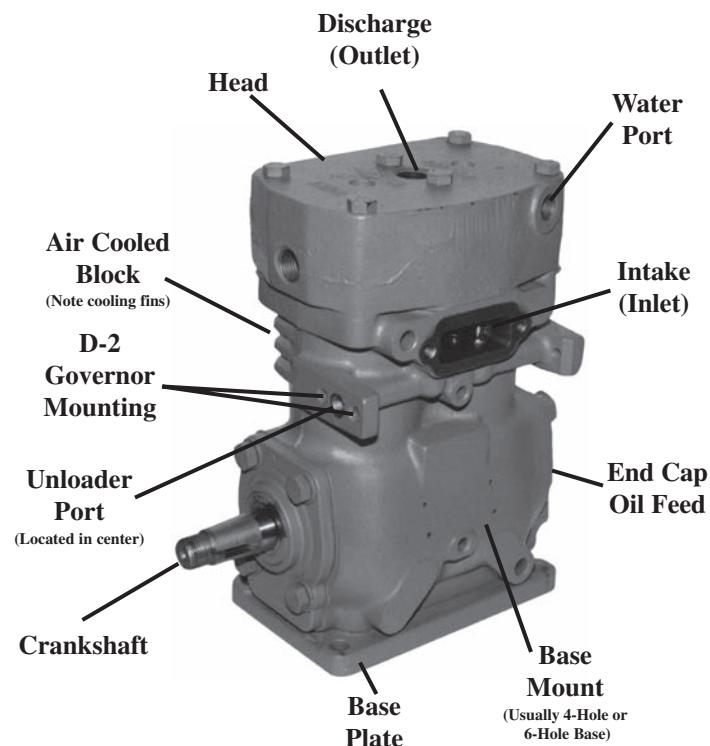
Identification and porting references on BENDIX® air compressors are looking at the “non-drive” end of the compressor. The crankshaft should be facing away.



IDENTIFICATION OF BENDIX® AIR COMPRESSOR COMPONENTS



FLANGE MOUNT
BENDIX® AIR COMPRESSOR



BASE MOUNT
BENDIX® AIR COMPRESSOR

BENDIX®- AIR COMPRESSORS

AIR COMPRESSOR IDENTIFICATION

HOW TO “READ” AN AIR COMPRESSOR:

1. Determine the original manufacturer of the unit.
 - a) Bendix®
 - b) Midland®
 - c) Cummins®
 - d) Clayton Dewandre®
 - e) other
2. Is the compressor a two or three piece design?
 - a) Does it have a block and head?
 - b) Does it have a block, head and a base?
3. Determine the type of mounting.
 - a) 4 hole base
 - b) 6 hole base
 - c) Flange
4. If the compressor is flange mounted, determine the type of engine it is mounted on.
 - a) Cummins® Diesel
 - b) Detroit Diesel®
 - c) Mack® Diesel
 - d) Caterpillar® Diesel
 - e) Ford® Gas or Diesel
 - f) International/Navistar® Gas or Diesel
 - g) other
5. With the DRIVE END FACING AWAY (or looking at the “non-drive” end) for Bendix® and the DRIVE END FACING TOWARDS YOU for Midland®, determine if the inlet and exhaust ports are to the left or right side.
6. If the unit is a Base Mount, is the base Drilled or Undrilled?
7. What size is the unit? How many cylinders?
If a Bendix® unit: Tu-Flo 300, 400, 500, 501, 550, 600, 700, 750, 1000.
If a Midland® unit: EL740, EL850, EL1300, EL1600, EL3200.
8. Is the unit all water cooled, all air cooled or a combination of both?
 - a) Does the compressor have cooling fins on one side or both sides (Bendix®)?
9. Where does the unit oil from?
 - a) end
 - b) base
10. Is the discharge either flange or threaded?
If flange, which side is it on?

BENDIX®- AIR COMPRESSORS

Air Compressor Kits:

Compressor Model	BX-2150	TU-FLO 400	TU-FLO 500	TU-FLO 501	TU-FLO 550	TU-FLO 600	TU-FLO 700	TU-FLO 750	TU-FLO 1000
Number of Cylinders	1	2	2	2	2	2	2	2	4
Field Maint. Kit	108848 109356(CAT)	229416	229417	287043	NA	229417	289998	NA	229417 (2 req'd)
Unloader Kit	108847	279614	279615	279615	107515	279615	279615	107515	279615 (2 req'd)
Gasket Set	NA	280511	280512	101558	NA	101559	101559	NA	NA
Cylinder Head Maint. Kit	NA	NA	NA	NA	107516	NA	NA	107516	NA

PISTON RING SETS: (3)=3-ring piston / (4)=4-ring piston / (5)=5-ring piston

Unless otherwise indicated, one piston ring set services the entire compressor.

Standard Size	104045	226721 (4) 289603 (3)	225514	286183 (3) 106105 (5)	107639	282525 (5)	282525	107639	288646
.010 O.S.	104046	226722 (4) 289604 (3)	225515	286184 (3) 106106 (5)	107640	282526 (5)	282526	107640	288647
.020 O.S.	104047	226723 (4) 289605 (3)	225516	286185 (3) 106107 (5)	107641	282527 (5)	282527	107641	288648
.030 O.S.	104048	226724 (4) 289606 (3)	225517	286186 (3) 106108 (3)	107642	282528 (5)	282528	107642	288649

PISTON AND WRIST PIN KITS: (3)=3-ring piston / (4)=4-ring piston / (5)=5-ring piston

A set contains one (1) piston, one (1) wrist pin and two (2) wrist pin buttons.

Standard Size	104049	289438	289928	289113 106109 (5)	NA	289891	289891	NA	289928
.010 O.S.	104050	289439	289929	289114 106110 (5)	NA	289892	289892	NA	289929
.020 O.S.	104051	289440	289930	289115 106111 (5)	NA	289893	289893	NA	289930
.030 O.S.	104052	289441	289931	289116 106112 (5)	NA	289894	289894	NA	289931

CONNECTING ROD INSERT KIT: (Services one (1) connecting rod).

(M) For Mack style compressors with power steering driven by the compressor crankshaft.

Standard Size	NA	282763	282767 287062(M)	286254 287058(M)	NA	282767 287062(M)	282767 287062(M)	NA	282751
.010 O.S.	NA	282764	282768 287063(M)	286255 287059(M)	NA	282768 287063(M)	282768 287063(M)	NA	282752
.020 O.S.	NA	282765	282769 287064(M)	286256 287060(M)	NA	282769 287064(M)	282769 287064(M)	NA	282753
.030 O.S.	NA	282766	282770 287065(M)	282770 287061(M)	NA	282770 287065(M)	282770 287065(M)	NA	282754

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 400
- * Drive: Pulley
- * Cooling: Air
- * Type of Discharge: Flange
- * Mounting: 4 Hole Base
- * Notes: 227406X Pictured

PLEASE NOTE:
We offer a large number of additional (but not pictured) Air Compressors. Please call our friendly Customer Service Staff for more information.

Base Mount Tu-Flo 400



PART NUMBER	INLET PORT	OUTLET PORT
227406X	Left	Left
227407X	Right	Right

- * Model: Tu-Flo 400
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: 6 Hole Base
- * Notes: Base Oil Option
227409X Pictured

Base Mount Tu-Flo 400



PART NUMBER	INLET PORT	OUTLET PORT
227409X	Left	Left
227410X	Right	Right

- * Model: Tu-Flo 400
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: 4 Hole Base
- * Notes: See Chart. 227400X Pictured

Base Mount Tu-Flo 400



PART NUMBER	INLET PORT	OUTLET PORT	NOTES
101242X	Left	Left	Rear Oil Inlet
227400X	Left	Left	Base Oil Inlet
227401X	Right	Right	Base Oil Inlet
227402X	Left	Left	Non-Oiler
227403X	Right	Right	Non-Oiler

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 400
- * Drive: Pulley
- * Cooling: Water
- * Type of
 - Discharge: Flange
- * Mounting: 4 Hole Base
- * Notes: **289688X Pictured.** Has base drain.
Both 289687X and 289688X use bottom plates.

Base Mount Tu-Flo 400



PART NUMBER	INLET PORT	OUTLET PORT	NOTES
101142X	Left	Left	
289687X	Right	Right	
289688X	Left	Left	Wide Base

- * Model: Tu-Flo 400
- * Drive: Pulley
- * Cooling: Air
- * Type of
 - Discharge: Flange
- * Mounting: Side Mount
- * Notes: **#279037X Pictured.** Has Rear Drain.
#283506X has Front Drain.

Side/Slant Mount Tu-Flo 400



PART NUMBER	INLET PORT	OUTLET PORT
279037X	Right	Right
283506X	Left	Left

- * Model: Tu-Flo 400
- * Drive: Pulley
- * Cooling: Water
- * Type of
 - Discharge: Threaded
- * Mounting: Slant Mount
- * Notes:

Side/Slant Mount Tu-Flo 400

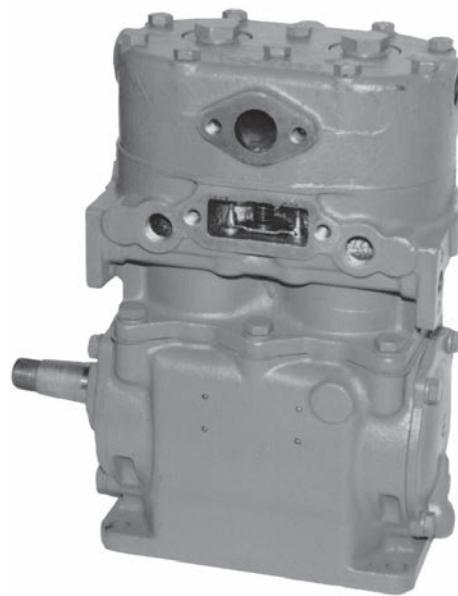


PART NUMBER	INLET PORT	OUTLET PORT
101246X	Right	Top
229077X	Left	Top

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 500/600
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Flange/Threaded
- * Mounting: 4 Hole Base
- * Notes: 227320X Pictured

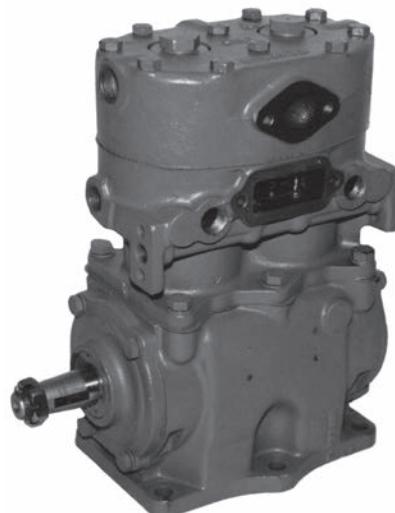
Base Mount Tu-Flo 500/600



PART NUMBER	MODEL	INLET PORT	OUTLET PORT	DISCHARGE	BASE OIL OPTION
227320X	TF500	Left	Left	Flange	Yes
227321X	TF500	Right	Right	Flange	No
227322X	TF500	Right	Right	Flange	Yes
227323X	TF500	Left	Left	Flange	No
280604X	TF600	Right	Right	Flange	Yes
282076X	TF500	Right	Top	Threaded	No
283690X	TF500	Left	Top	Threaded	Yes
284020X	TF500	Left	Top	Threaded	No

- * Model: Tu-Flo 500/600
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: 6 Hole Base
- * Notes: Base Oil Option. 227331X Pictured.

Base Mount Tu-Flo 500/600



PART NUMBER	MODEL	INLET PORT	OUTLET PORT
227331X	TF500	Left	Left
227332X	TF500	Right	Right
280610X	TF600	Left	Left
280611X	TF600	Right	Right

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 500
- * Drive: Pulley
- * Cooling: Air
- * Type of Discharge: Flange
- * Mounting: 4 Hole Base
- * Notes: 228141X Pictured

PLEASE NOTE:
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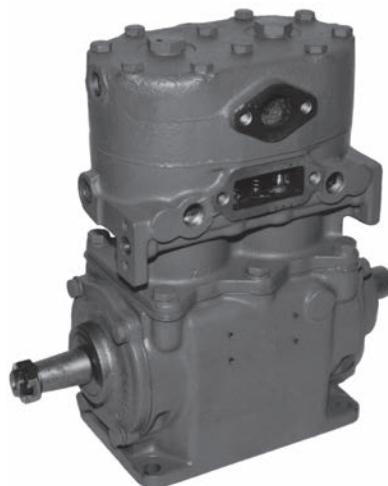
Base Mount Tu-Flo 500



PART NUMBER	INLET PORT	OUTLET PORT
228141X	Left	Left
276836X	Right	Right

- * Model: Tu-Flo 500
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: 4 Hole Base
- * Notes: Thru Drive. Base Oil Option.
228479X Pictured

Base Mount Tu-Flo 500

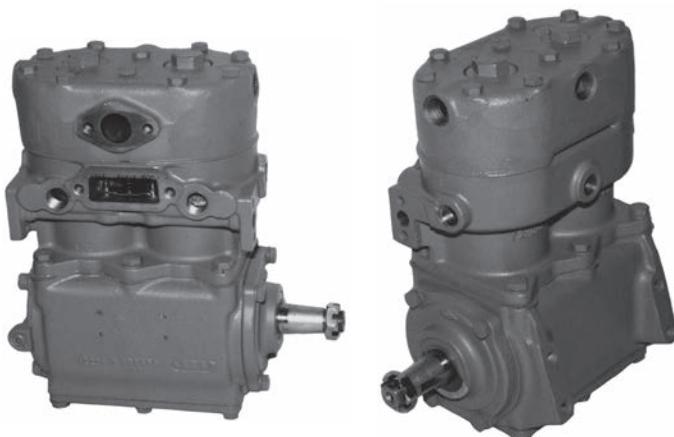


PART NUMBER	INLET PORT	OUTLET PORT
228479X	Left	Left

- * Model: Tu-Flo 500
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: Side Mount
- * Notes: #228366X Pictured (both views)
It is Ford® Rear Drain.

Both 283514X & 283585X are Ford® Front Drain.

Side/Slant Mount Tu-Flo 500



PART NUMBER	INLET PORT	OUTLET PORT
228366X	Right	Right
283514X	Left	Left
283585X	Right	Right

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 500
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Threaded
- * Mounting: Slant Mount
- * Notes: 229078X Pictured

Side/Slant Mount Tu-Flo 500



PART NUMBER	INLET PORT	OUTLET PORT
229078X	Left	Top
283513X	Right	Top

- * Model: Tu-Flo 501
- * Drive: Pulley
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Flange / Threaded(#286557X)
- * Mounting: Side Mount
- * Notes: 286557X Pictured

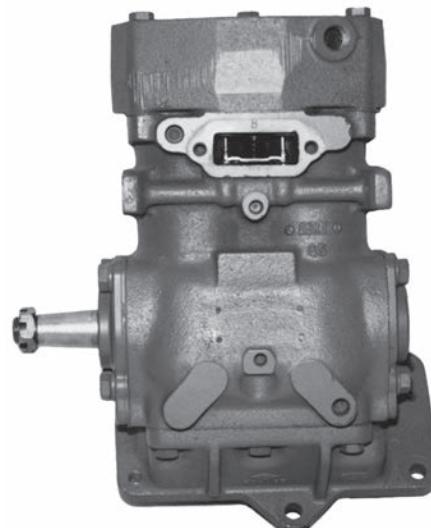
Side/Slant Mount Tu-Flo 501



PART NUMBER	INLET PORT	OUTLET PORT
286556X	Right	Right
286557X	Right	Top
286564X	Left	Left
286565X	Right	Right

- * Model: Tu-Flo 501
- * Drive: Pulley
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Threaded
- * Mounting: Slant Mount
- * Notes: Base Oil Option
286558X Pictured

Side/Slant Mount Tu-Flo 501

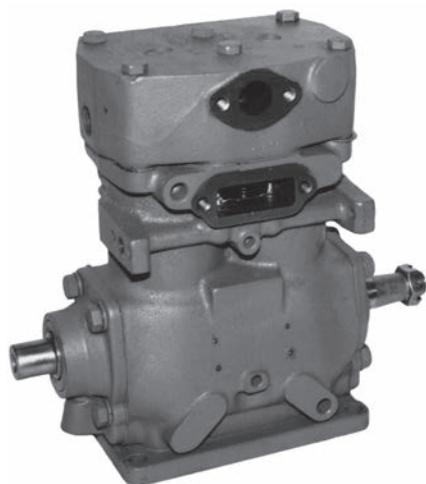


PART NUMBER	INLET PORT	OUTLET PORT
286558X	Right	Top
286561X	Left	Top

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 501
- * Drive: Pulley
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Flange / Threaded(#286532X)
- * Mounting: 4 Hole Base
- * Notes: Thru Drive, Base Oil Feed.
286533X Pictured

Base Mount Tu-Flo 501



PART NUMBER	INLET PORT	OUTLET PORT
286530X	Left	Left
286532X	Left	Top
286533X	Right	Right

- * Model: Tu-Flo 501
- * Drive: Pulley
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Flange/Threaded
- * Mounting: See base pictures.
- * Notes: **286528X Pictured**

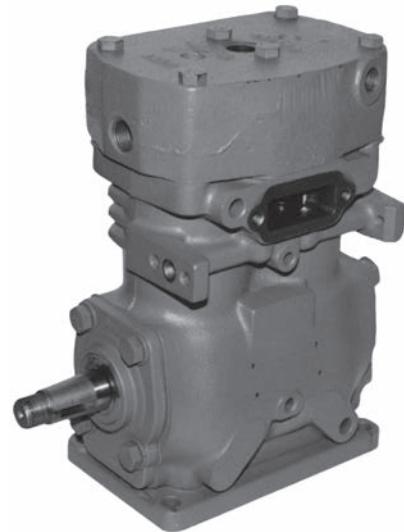
Base Mount Tu-Flo 501



Base Style A

Base Style B

PART NUMBER	INLET PORT	OUTLET PORT	BASE STYLE	DISCHARGE
102698X	Left	Left	Base A	Flange
286526X	Left	Left	Base A	Flange
286527X	Right	Right	Base A	Flange
286528X	Left	Top	Base A	Threaded
286529X	Right	Top	Base A	Threaded
286560X	Left	Top	Base A	Threaded
286567X	Right	Top	No Base	Threaded
286580X	Left	Left	No Base	Flange
286582X	Left	Top	Base A	Threaded
286586X	Left	Left	Base A	Flange
286591X	Right	Right	Base B	Flange
286592X	Right	Right	No Base	Flange
286595X	Right	Top	Base B	Threaded

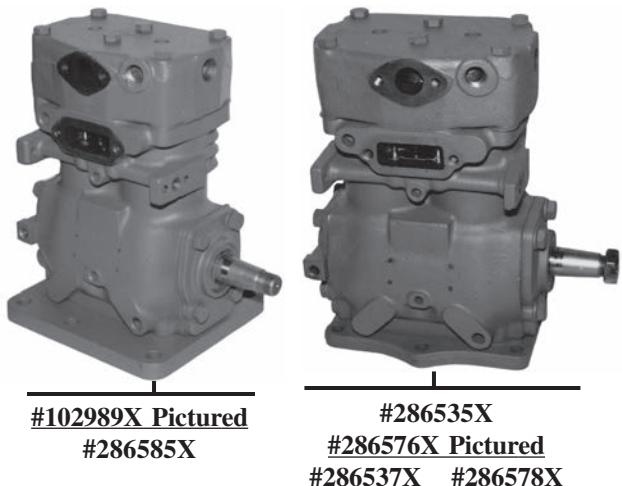


BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 501
- * Drive: Pulley
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Flange/Threaded
- * Mounting: 6 Hole Base
- * Notes:

Base Mount Tu-Flo 501

PART NUMBER	INLET PORT	OUTLET PORT	DISCHARGE
102989X	Right	Right	Flange
286535X	Right	Right	Flange
286537X	Left	Top	Threaded
286576X	Right	Right	Flange
286578X	Left	Left	Flange
286585X	Left	Left	Flange



- * Model: Tu-Flo 550
- * Drive: Pulley
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Flange
- * Mounting: 4 Hole Base
- * Notes: #107866X has a special 4-Hole Base for Ford® applications.
107866X Pictured

Base Mount Tu-Flo 550

PART NUMBER	INLET PORT	OUTLET PORT
107514X	Left	Left/Top
107866X	Right	Right/Top



- * Model: Tu-Flo 700
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: 4 Hole Base
- * Notes: **289350X Pictured**

PLEASE NOTE:
We offer a large number of additional (but not pictured) Air Compressors. Please call our friendly Customer Service Staff for more information.

Base Mount Tu-Flo 700

PART NUMBER	INLET PORT	OUTLET PORT
101256X	Right	Right
289350X	Left	Left



BENDIX®- AIR COMPRESSORS

- * **Model:** Tu-Flo 700
- * **Drive:** Pulley
- * **Cooling:** Water
- * **Type of**
- Discharge:** Flange
- * **Mounting:** 6 Hole Base
- * **Notes:** Rear and Base Oil Option.
289924X Pictured

Base Mount Tu-Flo 700



PART NUMBER	INLET PORT	OUTLET PORT
102213X	Left	Left
289924X	Right	Right

- * **Model:** Tu-Flo 1000
- * **Drive:** Pulley
- * **Cooling:** Water
- * **Type of**
- Discharge:** Flange
- * **Mounting:** Vertical Mounting
- * **Notes:** **229990X Pictured**

Base Mount Tu-Flo 1000



PART NUMBER	INLET PORT	OUTLET PORT
229990X	Middle	Middle

- * **Model:** BX-2150
- * **Drive:** Pulley
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of**
- Discharge:** Threaded
- * **Mounting:** 4 Hole Base
- * **Notes:** #104041X has a Low Profile Case.
104039X Pictured

Base Mount BX-2150



PART NUMBER	NEW STYLE HEAD PART NUMBER	INLET PORT	OUTLET PORT
104039X	106439X	Optional	Optional
104041X	107221X	Optional	Optional

BENDIX®- AIR COMPRESSORS

- * Model: BX-2150
- * Drive:
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge:
- * Mounting: Flange
- * Notes: 104042X Pictured

PLEASE NOTE:
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Flange Mount BX-2150



PART NUMBER	NEW STYLE HEAD PART NUMBER	INLET PORT	OUTLET PORT
104042X	107919X	Left	Optional

- * Model: Tu-Flo 501
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Threaded
- * Mounting: Flange
- * Notes: Spline Shaft, 22 Tooth
296594X Pictured

Flange Mount Tu-Flo 501 (Caterpillar® Application)



PART NUMBER	INLET PORT	OUTLET PORT
286594X	Left	Top

- * Model: Tu-Flo 700
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: Flange
- * Notes: 289336X Pictured

Flange Mount Tu-Flo 700 (Caterpillar® Application)



PART NUMBER	INLET PORT	OUTLET PORT
289336X	Left	Left

BENDIX®- AIR COMPRESSORS

* **Model:** Tu-Flo 500/600
 * **Drive:** Engine
 * **Cooling:** Water
 * **Type of**
Discharge: Flange
 * **Mounting:** Flange
 * **Notes:** Tapered Shaft
284310X Pictured

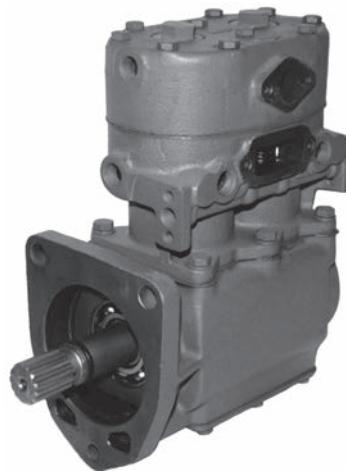
Flange Mount Tu-Flo 500/600
(Caterpillar® Application)



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
279995X	TF500	Left	Left
280556X	TF600	Left	Left
284310X	TF500	Right	Top

* **Model:** Tu-Flo 500
 * **Drive:** Engine
 * **Cooling:** Water
 * **Type of**
Discharge: Flange
 * **Mounting:** Flange
 * **Notes:** Spline Shaft
277731X Pictured

Flange Mount Tu-Flo 500
(Caterpillar® Application)



PART NUMBER	INLET PORT	OUTLET PORT
277730X	Right	Right
277731X	Left	Left

* **Model:** Tu-Flo 501
 * **Drive:** Engine
 * **Cooling:** Air(Block) / Water(Head)
 * **Type of**
Discharge: Threaded / Flange(#286550X)
 * **Mounting:** Flange
 * **Notes:** Tapered Shaft for all compressors listed. **103274X Pictured** (is 2-3° Tilt).

Flange Mount Tu-Flo 501
(Caterpillar® Application)



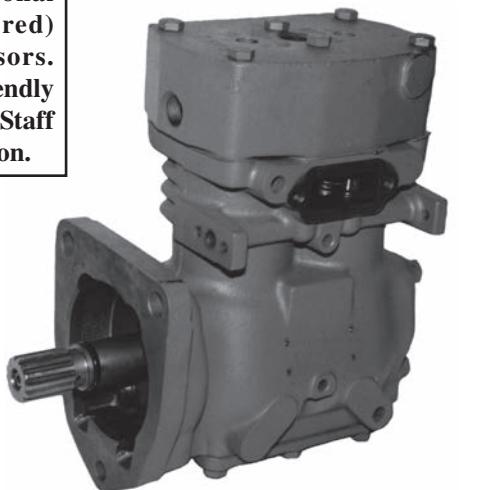
PART NUMBER	INLET PORT	OUTLET PORT
103274X	Left	Top
286550X	Left	Left
286551X	Right	Top
286552X	Left	Top
286566X	Right	Top

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 501
 - * Drive: Engine
 - * Cooling: Air(Block) / Water(Head)
 - * Type of Discharge: Threaded
 - * Mounting: Flange
 - * Notes: Spline Shaft, Rear Oil Inlet, Base Oil Drain.
- 286546X Pictured**

PLEASE NOTE:
We offer a large number of additional (but not pictured) Air Compressors. Please call our friendly Customer Service Staff for more information.

PART NUMBER	INLET PORT	OUTLET PORT
286546X	Left	Top



- * Model: Tu-Flo 550
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Optional
- * Mounting: Flange
- * Notes: #107509X has a tapered shaft & 2 1/2° Tilt. **109603X Pictured** (has a spline shaft & 22 Tooth.)

PART NUMBER	INLET PORT	OUTLET PORT
107509X	Left	Left/Top
109603X	Left	Left/Top

Flange Mount Tu-Flo 550
(Caterpillar® Application)



- * Model: Tu-Flo 700
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Optional
- * Mounting: Flange
- * Notes: **289349X Pictured**

PART NUMBER	INLET PORT	OUTLET PORT
103278X	Left	Left/Top
289349X	Left	Left/Top
289744X	Left	Left/Top

Flange Mount Tu-Flo 700
(Caterpillar® Application)



BENDIX®- AIR COMPRESSORS

- * **Model:** Tu-Flo 750
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of Discharge:** Optional
- * **Mounting:** Flange
- * **Notes:** **109604X Pictured** (has a spline shaft and 22 Tooth.) #107508X has a tapered shaft and 2 1/2° Tilt.

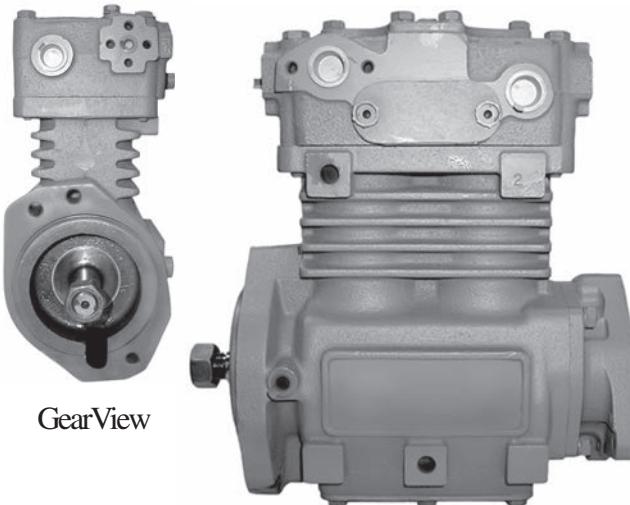
PART NUMBER	INLET PORT	OUTLET PORT
107508X	Left	Left/Top
109604X	Left	Left/Top

**Flange Mount Tu-Flo 750
(Caterpillar® Application)**



- * **Model:** Tu-Flo 550
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of Discharge:** Optional
- * **Mounting:** Flange
- * **Notes:** 107981 Drilled Vertically on flange
109088X Drilled Diagonally
109088X Pictured

**Flange Mount Tu-Flo 550
(Caterpillar® & Navistar® Application)**



PART NUMBER	INLET PORT	OUTLET PORT	APPLICATION
107981X	Left	Left/Top	Caterpillar® & Navistar®
109088X	Left	Left/Top	Caterpillar®

- * **Model:** Tu-Flo 550/750
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of Discharge:** Optional
- * **Mounting:** Flange
- * **Notes:** 0° Tilt. 60 Series, Thru-Drive
109429X Pictured

**Flange Mount Tu-Flo 550/750
(Detroit Diesel® Application)**



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
109429X	550	Right	Right/Top
109430X	750	Right	Right/Top



BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 500/600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Flange/Threaded
- * Mounting: Flange
- * Notes: Long Case. 228443X Pictured

Flange Mount Tu-Flo 500/600 (Cummins® Application)



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
228443X	TF500	Left	Left
229525X	TF500	Left	Top
276974X	TF500	Left	Left
280622X	TF600	Left	Left
280626X	TF600	Left	Top

- * Model: Tu-Flo 500/600
- * Drive: Engine
- * Cooling: Water / Air(#284959X)
- * Type of Discharge: Flange
- * Mounting: Flange
- * Notes: 284699X Pictured

PLEASE NOTE:
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Flange Mount Tu-Flo 500/600 (Cummins® Application)



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
284699X	TF500	Left	Left
284714X	TF600	Left	Left
284959X	TF500	Left	Left

- * Model: Tu-Flo 501
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Flange / Threaded(#286555X)
- * Mounting: Flange
- * Notes: #286618X is the new number for #286555X.
286618X Pictured

Flange Mount Tu-Flo 501 (Cummins® Application)



PART NUMBER	INLET PORT	OUTLET PORT
286554X	Left	Left
286618X	Left	Top

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 550/750
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of
 - Discharge: Optional
- * Mounting: Flange
- * Notes: 107506X Pictured

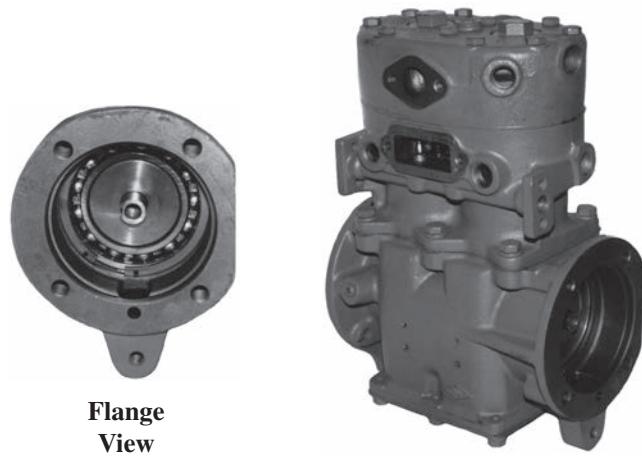
Flange Mount Tu-Flo 550/750 (Cummins® Application)



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
107506X	TF550	Left	Left/Top
107507X	TF750	Left	Left/Top

- * Model: Tu-Flo 700
- * Drive: Engine
- * Cooling: Water
- * Type of
 - Discharge: Optional
- * Mounting: Flange
- * Notes: Standard Flange
289339X Pictured

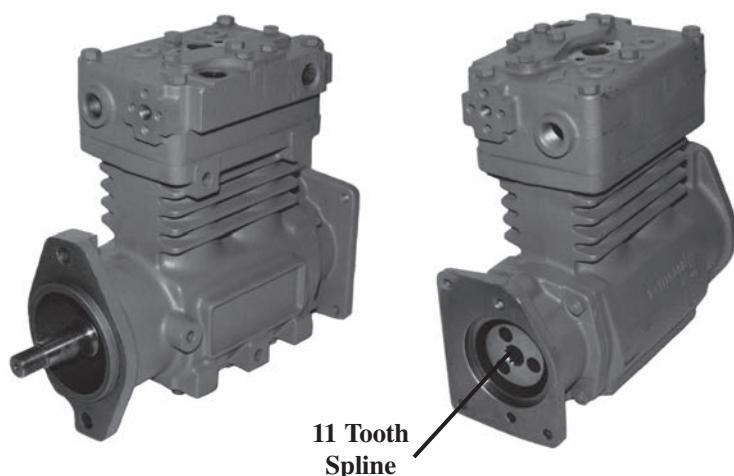
Flange Mount Tu-Flo 700 (Cummins® Application)



PART NUMBER	INLET PORT	OUTLET PORT
289339X	Left	Left

- * Model: Tu-Flo 550
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of
 - Discharge: Optional
- * Mounting: Flange
- * Notes: 108804X Pictured

Flange Mount Tu-Flo 550 (Cummins® Application)



PART NUMBER	INLET PORT	OUTLET PORT
108804X	Top	Right/Top

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 400
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Flange
- * Mounting: Flange
- * Notes: 0° Tilt

PLEASE NOTE:
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Flange Mount Tu-Flo 400 (Detroit Diesel® Application)



PART NUMBER	INLET PORT	OUTLET PORT
101143X	Right	Right
289444X	Left	Left

- * Model: Tu-Flo 500
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Flange/Threaded
- * Mounting: Flange
- * Notes: 0° Tilt

Flange Mount Tu-Flo 500 (Detroit Diesel® Application)



PART NUMBER	INLET PORT	OUTLET PORT	DISCHARGE
276961X	Left	Left	Flange
276962X	Right	Right	Flange
282928X	Right	Top	Threaded
283515X	Right	Right	Flange

- * Model: Tu-Flo 600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Flange/Threaded
- * Mounting: Flange
- * Notes: 0° Tilt

Flange Mount Tu-Flo 600 (Detroit Diesel® Application)



PART NUMBER	INLET PORT	OUTLET PORT	DISCHARGE
280570X	Right	Right	Flange
280609X	Left	Left	Flange
281677X	Left	Top	Threaded
282011X	Right	Top	Threaded

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 500/600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Threaded / Flange(#284106X)
- * Mounting: Flange
- * Notes: 45° Tilt, **284106X** Pictured

**Flange Mount Tu-Flo 500/600
(Detroit Diesel® Application)**



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
281042X	TF500	Left	Top
282013X	TF600	Left	Top
284106X	TF500	Left	Left
285252X	TF500	Right	Top

- * Model: Tu-Flo 500/600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Flange (#275777X)
Threaded (#280369X)
- * Mounting: Flange
- * Notes: 75° Tilt, **275777X** Pictured

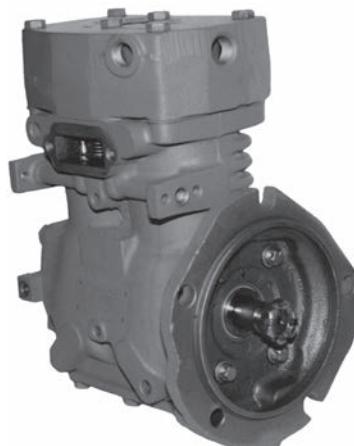
**Flange Mount Tu-Flo 500/600
(Detroit Diesel® Application)**



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
275777X	TF500	Right	Right
280369X	TF600	Right	Top

- * Model: Tu-Flo 501
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Threaded
- * Mounting: Flange
- * Notes: 45° Tilt, **286616X** Pictured

**Flange Mount Tu-Flo 501
(Detroit Diesel® Application)**



PART NUMBER	INLET PORT	OUTLET PORT
286542X	Left	Top
286616X	Right	Top

BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 501
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Threaded
- * Mounting: Flange
- * Notes: 0° Tilt.

Has press-on gear and Stud shaft.

286579X Pictured

PLEASE NOTE:
We offer a large number of additional (but not pictured) Air Compressors. Please call our friendly Customer Service Staff for more information.

Flange Mount Tu-Flo 501 (Detroit Diesel® Application)



PART NUMBER	INLET PORT	OUTLET PORT
286579X	Right	Top

- * Model: Tu-Flo 501
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Flange/Threaded
- * Mounting: Flange
- * Notes: **286540X Pictured** #286581X has Oil Port Reversed. #286623X is for 60 Series Only.

PART NUMBER	INLET PORT	OUTLET PORT	DISCHARGE
286538X	Left	Left	Flange
286539X	Right	Right	Flange
286541X	Right	Top	Threaded
286581X	Left	Top	Threaded
286615X	Left	Top	Threaded
286623X	Left	Left	Flange

Flange Mount Tu-Flo 501 (Detroit Diesel® Application)



- * Model: Tu-Flo 550
- * Drive: Engine
- * Cooling: Air(Block) / Water(Head)
- * Type of Discharge: Optional
- * Mounting: Flange
- * Notes: 0° Tilt. #107622X is for 60-Series, Thru-Drive.

107622X Pictured

PART NUMBER	INLET PORT	OUTLET PORT
107513X	Right	Right/Top
107622X	Left	Left/Top

Flange Mount Tu-Flo 550 (Detroit Diesel® Application)



BENDIX®- AIR COMPRESSORS

- * Model: Tu-Flo 700
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Optional
- * Mounting: Flange
- * Notes: 289342X Pictured

PLEASE NOTE:
We offer a large number of additional (but not pictured) Air Compressors. Please call our friendly Customer Service Staff for more information.

Flange Mount Tu-Flo 700 (Detroit Diesel® Application)



PART NUMBER	FLANGE TILT	INLET PORT	OUTLET PORT
101158X	45°	Right	Right/Top
101636X	52°	Right	Right/Top
289342X	45°	Left	Left/Top

- * Model: Tu-Flo 700
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Optional
- * Mounting: Flange
- * Notes: 75° Tilt, 289915X Pictured

Flange Mount Tu-Flo 700 (Detroit Diesel® Application)



PART NUMBER	INLET PORT	OUTLET PORT
289915X	Right	Top
289964X	Right	Right/Top

- * Model: Tu-Flo 700
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Optional
- * Mounting: Flange
- * Notes: 0° Tilt
#106780X is a Series 60 Compressor.
289925X Pictured

Flange Mount Tu-Flo 700 (Detroit Diesel® Application)



PART NUMBER	INLET PORT	OUTLET PORT
106780X	Left	Left/Top
289925X	Left	Left/Top
289941X	Right	Right/Top

BENDIX®- AIR COMPRESSORS

- * **Model:** Tu-Flo 750
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of Discharge:** Optional
- * **Mounting:** Flange
- * **Notes:** 0° Tilt. #107623X is for 60-Series, Thru-Drive.
107623X Pictured

PART NUMBER	INLET PORT	OUTLET PORT
107512X	Right	Right/Top
107623X	Left	Left/Top
107813X	Left	Left/Top

**Flange Mount Tu-Flo 750
(Detroit Diesel® Application)**



- * **Model:** Tu-Flo 1000
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of Discharge:** Flange
- * **Mounting:** Flange
- * **Notes:** 276777X Pictured

PART NUMBER	INLET PORT	OUTLET PORT
275725X	Middle	Middle
276777X	Middle	Middle

**Flange Mount Tu-Flo 1000
(Detroit Diesel® Application)**



- * **Model:** Tu-Flo 500/600
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of Discharge:** Flange
- * **Mounting:** Flange
- * **Notes:** Mack® Ext. Flange. #285108X is water cooled only. 282586X Pictured

PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
282586X	TF500	Right	Right
284662X	TF500	Right	Right
285108X	TF600	Right	Right

**Flange Mount Tu-Flo 500/600
(Mack® Application)**



BENDIX®- AIR COMPRESSORS

- * **Model:** Tu-Flo 500
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of**
- Discharge:** Flange
- * **Mounting:** Flange
- * **Notes:** Mack® Foxhead for Mack® V8 engines.

277122X Pictured

Flange Mount Tu-Flo 500 (Mack® Application)



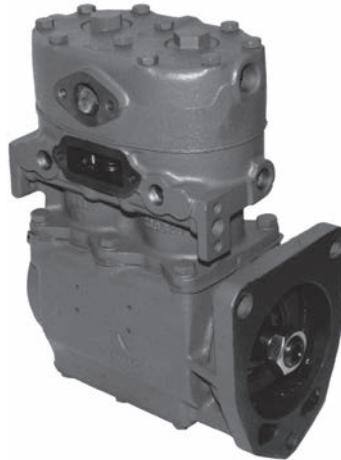
PART NUMBER	INLET PORT	OUTLET PORT
277122X	Left	Left

- * **Model:** Tu-Flo 500/600
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of**
- Discharge:** Flange / (#277901X has Threaded.)
- * **Mounting:** Flange
- * **Notes:** Short Case. #278604X has a water cooled head and an air cooled block. It is with angled ports. **227326X Pictured**

PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
227326X	TF500	Right	Right
277901X	TF500	Right	Top
278604X	TF500	Right	Right
280608X	TF600	Right	Right

- * **Model:** Tu-Flo 501
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of**
- Discharge:** Threaded(#286620X)
 Flange(#286544X)
- * **Mounting:** Ext. Flange
- * **Notes:** Equipped for power steering.
286620X Pictured

Flange Mount Tu-Flo 500/600 (Mack® Application)



Flange Mount Tu-Flo 501 (Mack® Application)



PART NUMBER	INLET PORT	OUTLET PORT
286544X	Right	Right
286620X	Right	Top

BENDIX®- AIR COMPRESSORS

- * **Model:** Tu-Flo 501
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of Discharge:** Threaded(#286621X)
Flange(#286574X)
- * **Mounting:** Flange
- * **Notes:** Mack® Foxhead for Mack® V8 engines.
286574X Pictured

**Flange Mount Tu-Flo 501
(Mack® Application)**



PART NUMBER	INLET PORT	OUTLET PORT
286574X	Left	Left
286621X	Left	Top

- * **Model:** Tu-Flo 700
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of Discharge:** Optional
- * **Mounting:** Flange
- * **Notes:** Ext. Flange.
Equipped for power steering.
289340X Pictured

**Flange Mount Tu-Flo 700
(Mack® Application)**



PART NUMBER	INLET PORT	OUTLET PORT
289340X	Right	Right/Top

- * **Model:** Tu-Flo 550/750
- * **Drive:** Engine
- * **Cooling:** Air(Block) / Water(Head)
- * **Type of Discharge:** Optional
- * **Mounting:** Flange
- * **Notes:** Ext. Flange.
Equipped for power steering.
107510X Pictured

PLEASE NOTE:
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**Flange Mount Tu-Flo 550/750
(Mack® Application)**



PART NUMBER	A/C MODEL	INLET PORT	OUTLET PORT
107510X	TF750	Right	Right/Top
107511X	TF550	Right	Right/Top

BENDIX®- AIR COMPRESSORS

* Model: Tu-Flo 700
 * Drive: Engine
 * Cooling: Water
 * Type of
 Discharge: Optional
 * Mounting: Flange
 * Notes: Mack® Foxhead for Mack® V8 engines.
289348X Pictured

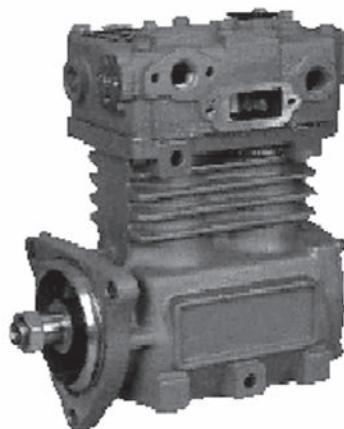
Flange Mount Tu-Flo 700 (Mack® Application)



PART NUMBER	INLET PORT	OUTLET PORT
289348X	Left	Left/Top

* Model: Tu-Flo 750
 * Drive: Engine
 * Cooling: Air(Block) / Water(Head)
 * Type of
 Discharge: Optional
 * Mounting: Flange
 * Notes: Mack® Foxhead for Mack® V8 engines.
107868X Pictured

Flange Mount Tu-Flo 750 (Mack® Application)



PART NUMBER	INLET PORT	OUTLET PORT
107869X	Left	Left/Top

* Model: Tu-Flo 501
 * Drive: Engine
 * Cooling: Air(Block) / Water(Head)
 * Type of
 Discharge: Threaded
 * Mounting: Flange
 * Notes: Base Drain
286563X Pictured

Flange Mount Tu-Flo 501 (Volvo-White® Application)



PART NUMBER	INLET PORT	OUTLET PORT
286563X	Right	Right

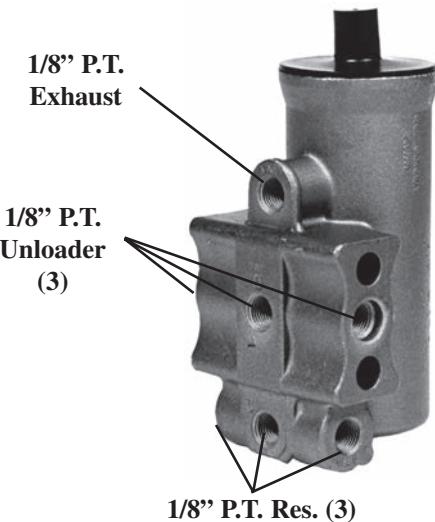
BENDIX®- AIR VALVES

* The D-2 governor operates in conjunction with the compressor unloading mechanism and controls system air pressure between a predetermined maximum and minimum pressure.
 * Adjustable piston type valve.

MAINTENANCE KIT: #276121 #280915 (High Temp)

PART NUMBER	PRESSURE RANGE	NOTES
275491X	100-120 PSI	----
275707X	105-125 PSI	----
284358X	105-125 PSI	High Temp

D-2 Governor



* The E-2 brake valve is a graduating directional control valve and is generally used to control all the service brakes on a vehicle.

- * Floor Mounted.
- * Treadle or Lever actuated.
- * Used in single circuit systems.

MAINTENANCE KIT: #276119

NOTE: Treadle and Mounting Plate Not Furnished.

PART NUMBER	A DELIVERY
229500X	(4)-3/8" PT
229501X	(4)-1/2" PT

* The E-3 brake valve is a graduating directional control valve and is generally used to control all the service brakes on a vehicle.

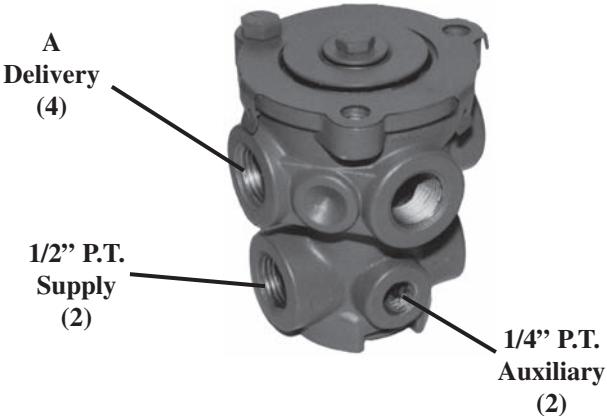
- * Floor Mounted.
- * Treadle or Lever actuated.
- * Used in single circuit systems.

MAINTENANCE KIT: #276119

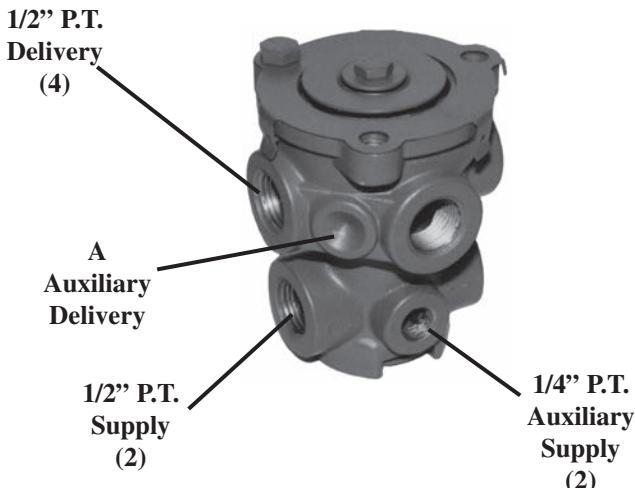
NOTE: Treadle and Mounting Plate Not Furnished.

PART NUMBER	A AUXILIARY
277863X	None
278998X	(1)-1/4" PT

E-2 Brake Valve



E-3 Brake Valve



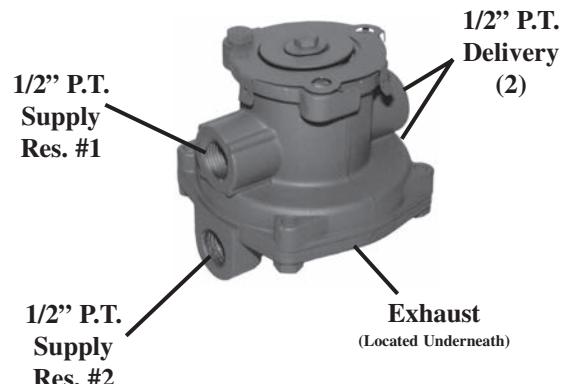
BENDIX®- AIR VALVES

- * The E-4 dual brake valve is a graduating directional control valve and is generally used to control all the service brakes on a vehicle.
- * Floor Mounted.
- * Treadle or Lever actuated.
- * Used in dual circuit systems.

NOTE: Pedal and Mounting Plate Not Furnished.

PART NUMBER	SUPPLY RES. #1	SUPPLY RES. #2	DELIVERY
279750X	(1)-1/2" PT	(1)-1/2" PT	(2)-1/2" PT

E-4 Dual Brake Valve



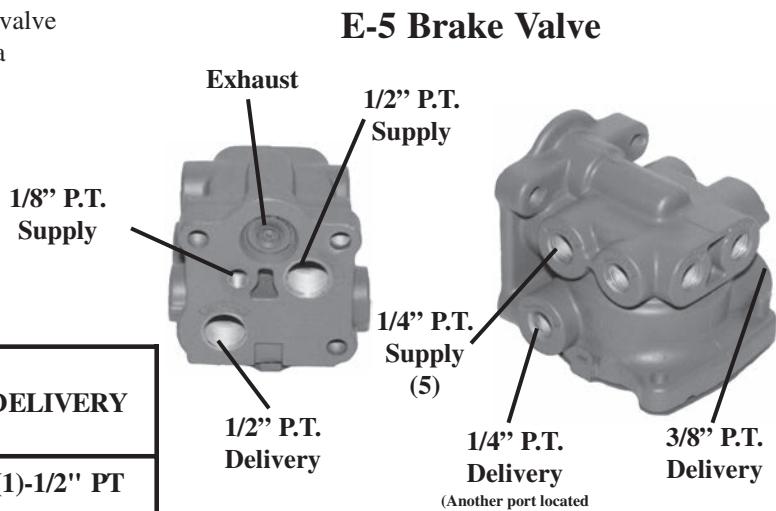
* The E-5 brake valve is a graduating directional control valve and is generally used to control all the service brakes on a vehicle.

- * Firewall Mounted.
- * Mounted in cab of truck.
- * Suspended pedal.
- * Used in single circuit systems.

MAINTENANCE KIT: #281084

NOTE: Pedal and Mounting Plate Not Furnished.

PART NUMBER	SUPPLY SIDE	SUPPLY BOTTOM	DELIVERY
279950X	(5)-1/4" PT	(1)-1/2" PT (1)-1/8" PT	(1)-1/2" PT (2)-1/4" PT (1)-3/8" PT



E-5 Brake Valve

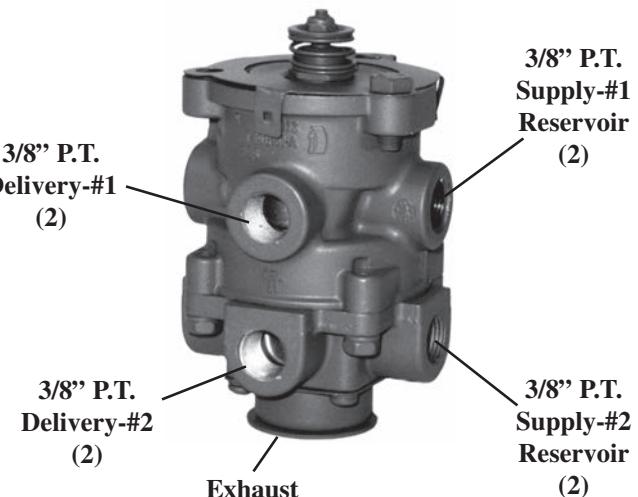
* The E-6 dual brake valve is a floor mounted treadle or lever operated type brake valve with two separate supply and delivery circuits for primary and secondary braking which provides graduated control for applying and releasing the vehicle brakes.

MAINTENANCE KIT: #287368

NOTE: Treadle and Mounting Plate Not Furnished.

PART NUMBER	SUPPLY	DELIVERY
286171X	(4)-3/8" PT	(4)-3/8" PT

E-6 Dual Brake Valve



BENDIX®- AIR VALVES

E-7 Dual Brake Valve

* The E-7 dual brake valve is a graduating, directional control valve. It is generally used to control the service brake of a vehicle.

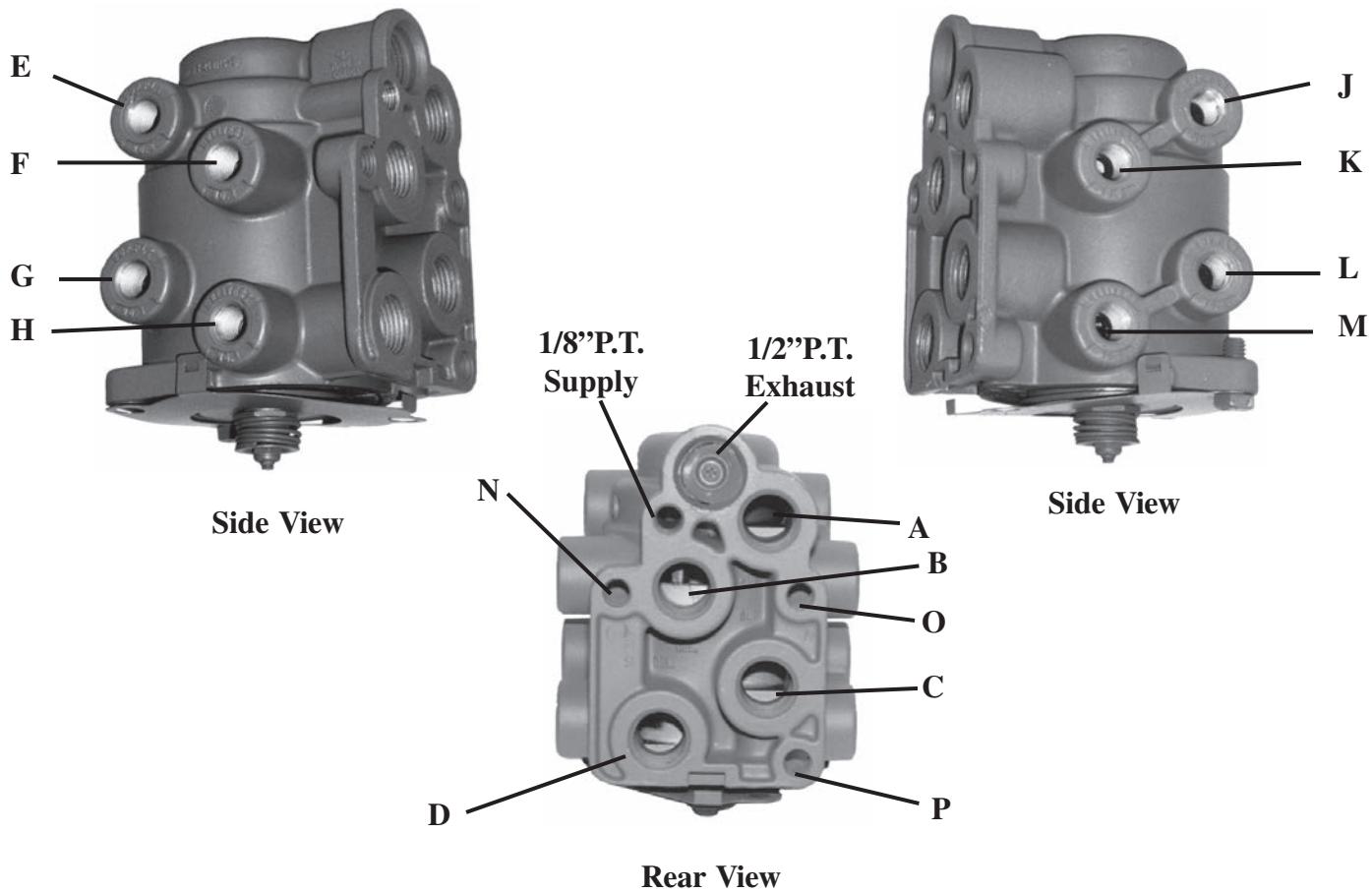
* It is used in dual or split air brake systems, and is actually two separate and independent valves in the housing operated by a single actuating mechanism.

* Dual Circuit Foot Valve.

* Floor mounted, treadle or lever operated.

NOTE: Pedal and Mounting Plate Not Furnished.

MAINTENANCE KIT: #289352



PART NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	O-RINGS	MOUNTING STUDS	STUD LENGTH
101818X	1/2	1/2	1/2	1/2	1/4	3/8	1/4	3/8	1/4	3/8	1/4	3/8	----	--	--
284760X	1/2	1/2	1/2	1/2	1/4	NA	1/4	NA	NA	NA	NA	NA	Yes	No	--
286773X	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	----	Yes	1-1/2"
286774X	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	----	--	--
286775X	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	----	Yes	3/4"
287411X	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	3/8	3/8	3/8	3/8	----	No	--
287564X	1/2	1/2	1/2	1/2	1/4	3/8	1/4	3/8	1/4	1/4	1/4	1/4	----	Yes	15/16"
288383X	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	----	No	--

BENDIX®- AIR VALVES

- * The E-10 dual brake valve is a graduating, directional control valve. It is primarily used on buses to control the service brakes.
- * Dual Circuit Foot Valve.
- * Floor Mounted, treadle operated.
- * Two separate supply and delivery circuits for primary and secondary braking.
- * Used in dual or split air brake systems.

MAINTENANCE KIT: #102100

NOTE: Treadle and Mounting Plate Not Furnished.

PART NUMBER	SUPPLY	DELIVERY
101100X	(4)-3/8" PT	(4)-3/8" PT

* The E-12 dual brake valve is a floor mounted treadle or lever operated type brake valve with two separate supply and delivery circuits for primary and secondary braking. This provides graduated control for applying and releasing the vehicle brakes.

NOTE: Treadle and Mounting Plate Not Furnished.

PART NUMBER	SUPPLY	DELIVERY
109977X	(4)-3/8" PT	(4)-3/8" PT

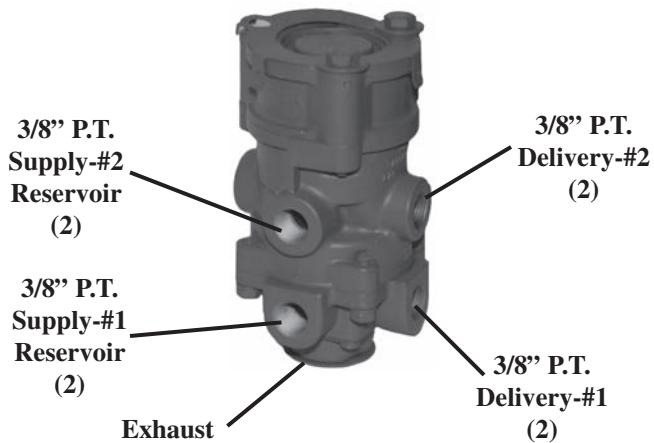
* The E-14 dual brake valve is a floor mounted treadle or lever operated type brake valve with two separate supply and delivery circuits for primary and secondary braking. This provides graduated control for applying and releasing the vehicle brakes.

NOTE: Pedal and Mounting Plate Not Furnished.

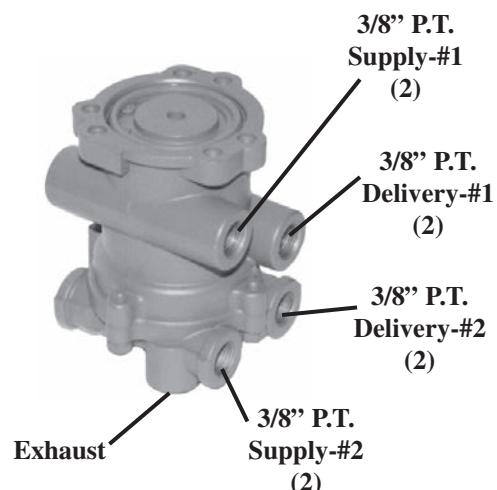
- * 065317X has the Exhaust Port Threaded.
- * 065395X is used with a Manifold.

PART NUMBER
109978X
065317X
065395X

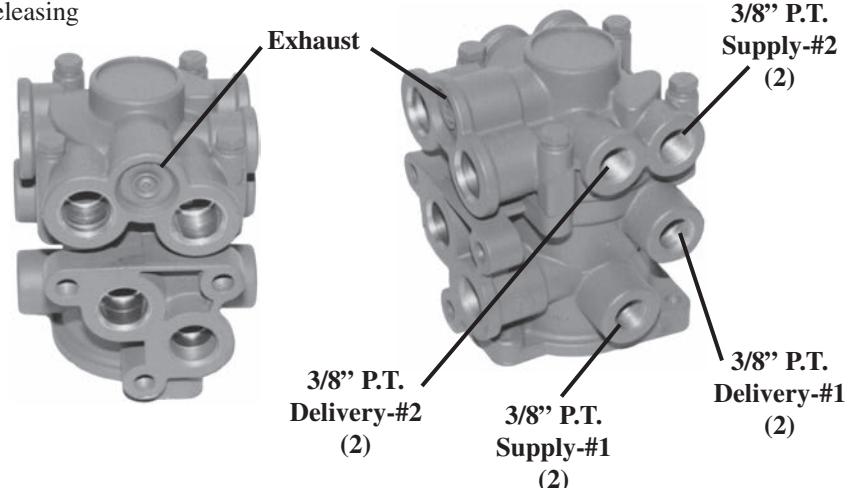
E-10 Dual Brake Valve



E-12 Dual Brake Valve



E-14 Dual Brake Valve



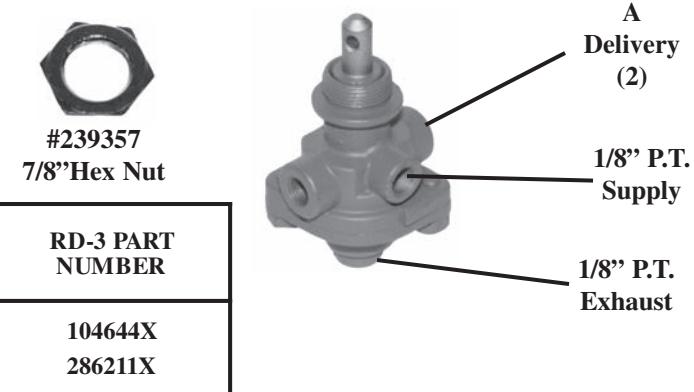
BENDIX®- AIR VALVES

* The PP-1 push-pull control valve is a pressure sensitive, manually operable, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.
 * Commonly used to control parking and emergency brakes.

NOTE: Button and Mounting Nut Not Furnished.

MAINTENANCE KIT: #281126

PART NUMBER	A DELIVERY	AUTOMATIC RELEASE PRESSURE
276566X	(2)-1/8"	20 PSI
276567X	(2)-1/8"	40 PSI
278450X	(2)-1/8"	----
281587X	(2)-1/8"	40 PSI
283828X	(2)-1/8"	60 PSI
287417X	(2)-1/4"	30 PSI
287600X	(2)-1/4"	40 PSI



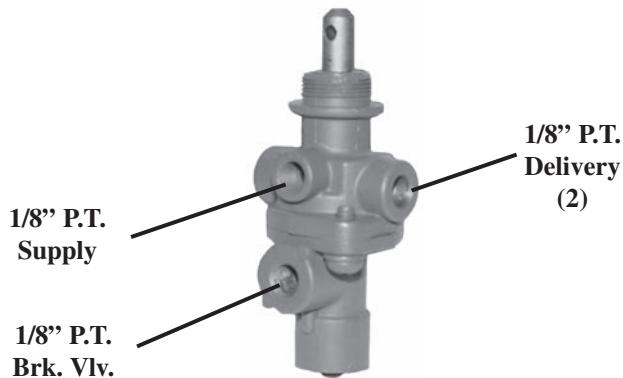
NOTE: #281587X (PP-1) is remote controlled.
 #104644X (RD-3) has a male 1/4"-28 threaded shaft.

* The PP-2 push-pull control valve is a pressure sensitive, manually operable, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.
 * Primarily designed for use with parking and emergency brakes and features an anti-compounding port which, when used, will prevent the application of service and parking brakes simultaneously.

NOTE: Button and Mounting Nut Not Furnished.

MAINTENANCE KIT: #281127

PART NUMBER	AUTOMATIC RELEASE PRESSURE
276462X	40 PSI



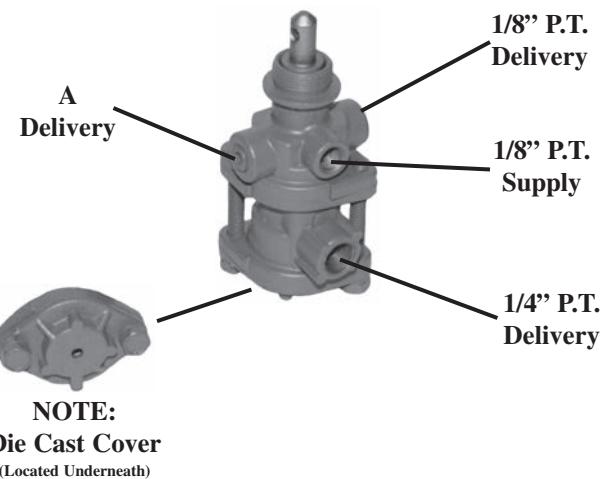
* The PP-3 push-pull control valve is a pressure sensitive, manually operable, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.
 * Primarily used with a two-line tractor protection valve.
 * Tripper exhaust at 30 PSI and charges above 50 PSI.
 * Plunger trips at 40 PSI and charges manually.

NOTE: Button and Mounting Nut Not Furnished.

MAINTENANCE KIT: #280857

PART NUMBER	A DELIVERY	SHAFT
279787X	Plugged	Female 1/4"-20 THD.
288746X	Plugged	----
289477X	(1)-1/8" PT	----
289512X	(1)-1/8" PT	Female 1/4"-20 THD.

PP-3 Push-Pull Control Valve (Automatic Tripper)



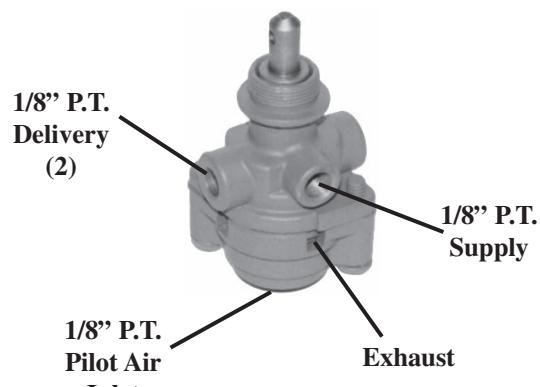
BENDIX®- AIR VALVES

- ** The PP-5 push-pull control valve is a pressure sensitive, manually operated, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.
- * Commonly used to control parking and emergency brakes.
- * Used in conjunction with vehicle torque converter systems, engine speed control systems and some parking brake systems.

NOTE: Button and Mounting Nut Not Furnished.

PART NUMBER	AUTOMATIC RELEASE PRESSURE
281946X	40 PSI
284744X	Manual

PP-5 Push-Pull Control Valve (W/Pilot Release)



- * The PP-7 push-pull control valve is a pressure sensitive, manually operated, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.
- * Features an air operated override control in its lower body. This provides an application of the trailer brakes when the emergency tractor braking system is applied.

NOTE: Button and Mounting Nut Not Furnished.

MAINTENANCE KIT: #287367

PART NUMBER	A THREADED EXHAUST
288239X	----
288241X	(1)-1/4" PT
288242X	----

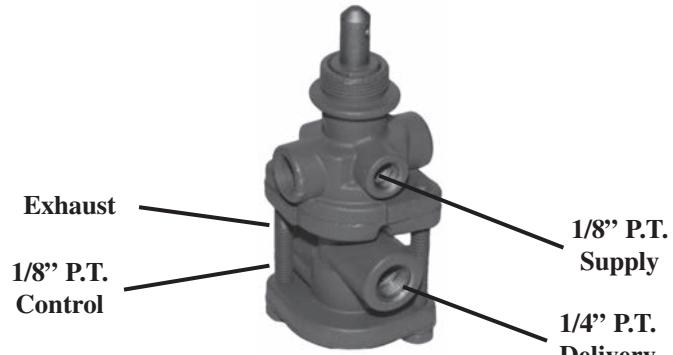
NOTE: #288242X is for remote controlled applications.

- * The PP-8 push-pull control valve is a manually operated, on-off control valve.
- * Unlike most other push pull control valves, it is non-automatic and will remain in the position it is manually placed in regardless of delivery or supply pressure.
- * Commonly used to control the tractor parking brakes only on "121" air brake systems.

NOTE: Button and Mounting Nut Not Furnished.

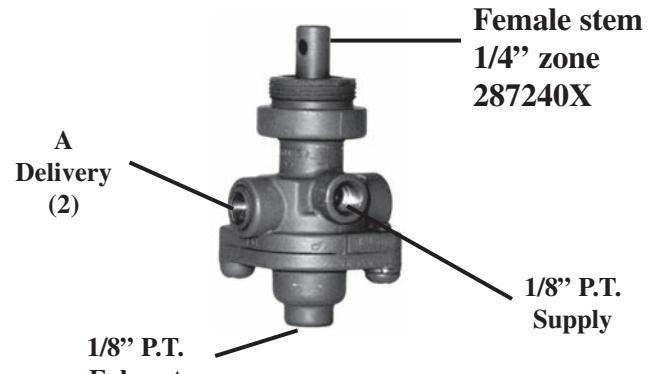
PART NUMBER	A DELIVERY
287238X	(2)-1/8" PT
287418X	(2)-1/4" PT

PP-7 Trailer Supply Valve



* Automatic release pressure 40 PSI.

PP-8 Push-Pull Control Valve (Non-Automatic)



BENDIX®- AIR VALVES

* The MV-2 valve (Manifold) is an integrated control assembly designed for control panel mounting in a truck-tractor.

* This non-metallic assembly consists of two push-pull valves and a dual circuit supply valve.

NOTE: Buttons and Mounting Hardware Not Furnished.

PART NUMBER
101437X

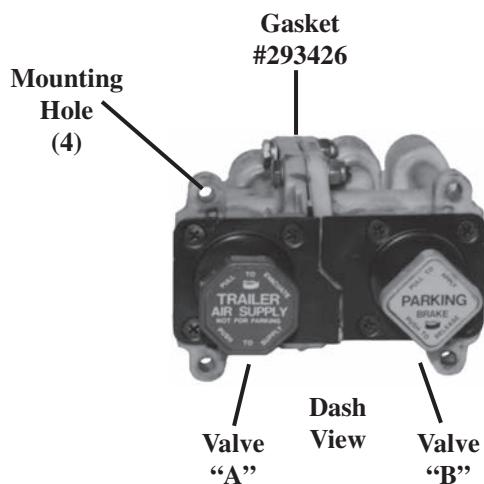


101569X
Spool Assembly
For Valve "A"



101570X
Spool Assembly
For Valve "B"

MV-2 Style Control Module



* The MV-3 valve (Manifold) is an integrated control assembly designed for control panel mounting in a truck-tractor.

* This non-metallic assembly consists of two push-pull valves and a dual circuit supply valve.

* The MV-3 is designed to supersede the MV-2 valve.

NOTE: Buttons and Mounting Hardware Not Furnished.

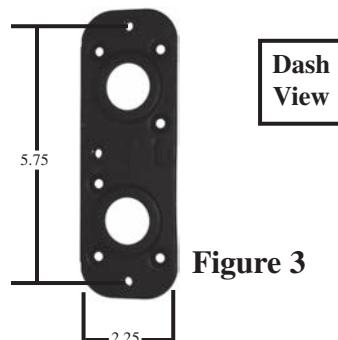
MAINTENANCE KIT: #107216



Figure 1

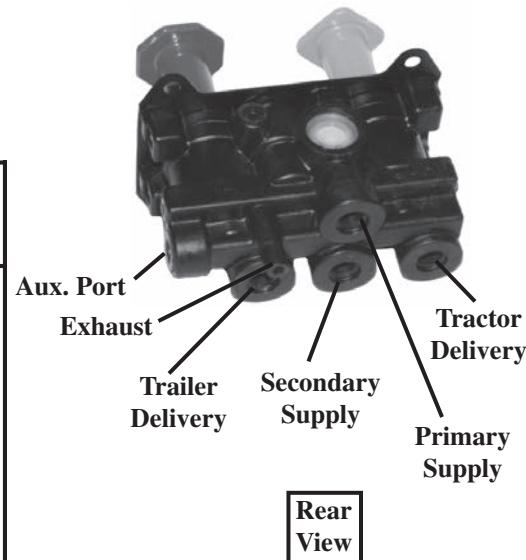
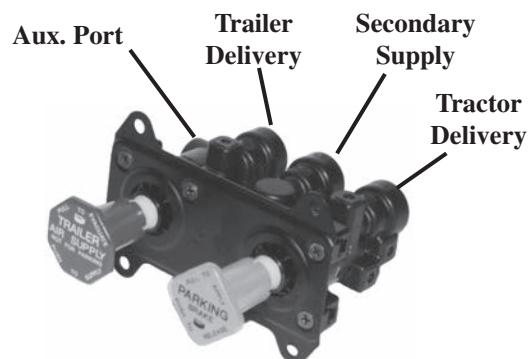


Figure 2



MV-3 Style Control Module

(Please refer to page 154 for additional MV-3 information.)



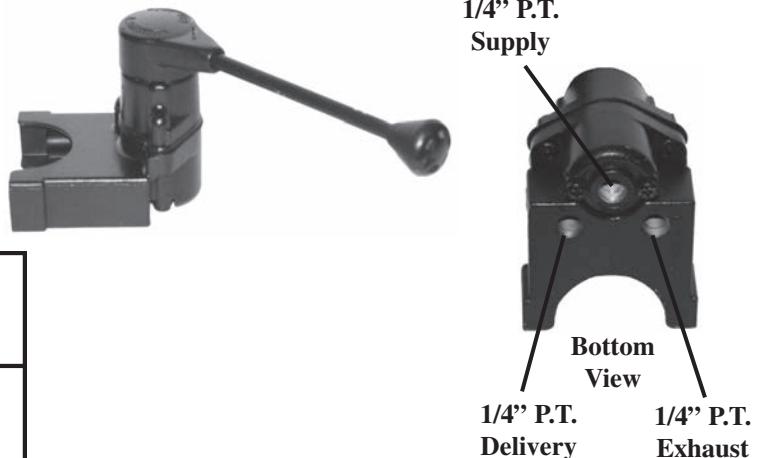
PART NUMBER	AUXILIARY PORT THD.	EXHAUST PORT THD.	CONFIG MTG. PLATE	MTG. HOLE DIA./THD.
065156X	----	----	FIG. 1	M6 X 1-6H
065157X	----	----	FIG. 1	.27 DIA.
065159X	----	----	FIG. 2	M6 X 1-6H
065160X	1/8 NPT	---	FIG. 1	.27 DIA.
065186X	----	1/8 NPT	FIG. 1	1/4-20
065187X	----	1/8 NPT	FIG. 1	1/4-20
065192X	----	----	FIG. 3	1/4-20
065208X	1/8 NPT	---	FIG. 1	M6 X 1-6H
065248X	----	----	FIG. 1	#10-24
065379X	----	1/8 NPT	FIG. 2	M6 X 1-6H

BENDIX®- AIR VALVES

- * The TC-2 trailer control valve is a hand operated modulating control valve.
- * Steering Column Mount.
- * Generally used on tractors to provide modulated control on trailer brakes only.

NOTE: Handle or Clamp Not Furnished.

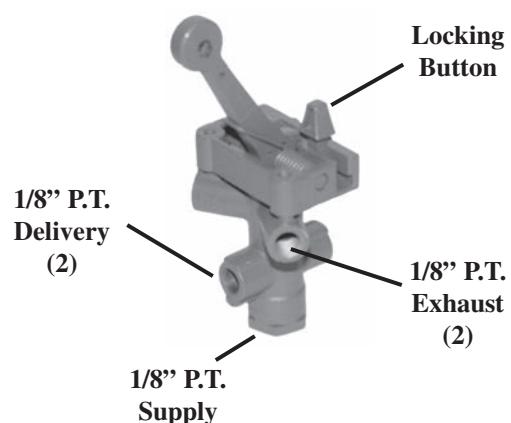
PART NUMBER	GRAD-RANGE PSI	STEERING COLUMN DIAMETER
106133X	5-70 PSI	----
109764X	5-80 PSI	----
276270X	5-80 PSI	1-3/4" TO 2-1/4"
276272X	5-80 PSI	---
277765X	5-80 PSI	---



- * The TC-4 control valve is generally used to modulate parking and emergency brakes.
- * The TC series brake valves are hand operated modulating control valves.

PART NUMBER	LOCKING BUTTON POSITION	DELIVERY PRESSURE
282368X	Left	80-100 PSI
282381X	Right	86-100 PSI

TC-4 Modulating Control Valve



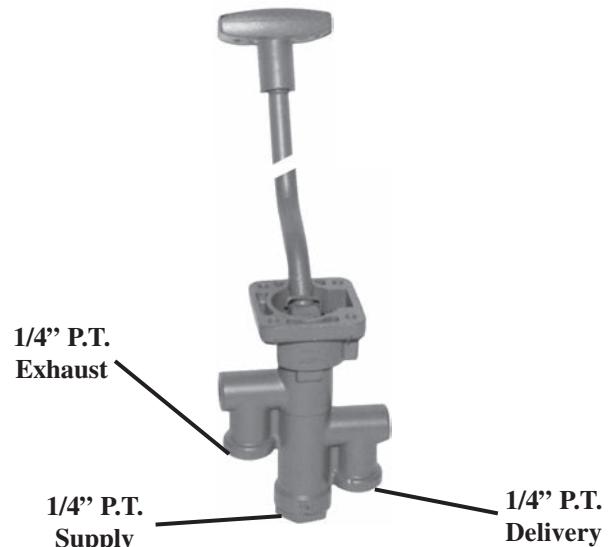
- * The TC-6 control brake valve is normally used to operate the trailer brakes independently of the tractor brakes.

NOTE: The TC-6 is not designed for use as a parking brake control and should never be used to hold the brakes applied with vehicle unattended.

NOTE: Mounting Plate Not Furnished.

PART NUMBER
101786X

TC-6 Tractor Control Valve



BENDIX®- AIR VALVES

- * The TC-7 trailer control brake valve is mounted either on the exterior or interior of the steering column.
- * It is normally used to operate the trailer brakes independently of the tractor brakes.

NOTE: The TC-7 is not designed for use as a parking brake control and should never be used to hold the brakes applied with vehicle unattended.

NOTE: Handle and Mounting Bracket Not Furnished.

MAINTENANCE KIT: #102145

PART NUMBER	HANDLE TRAVEL	REMARKS
101860X	71° CW	Positioning
102394X	71° CW	Self-Returning
102707X	50° CW	Positioning
108233X	50° CW	Self-Returning

- * The TW-1 valves are manually operated, non-modulating controls used extensively in the air brake system.
- * It is commonly used in conjunction with limiting and quick release and tractor protection valves.

NOTE: Buttons or Mounting Hardware Not Furnished.

PART NUMBER	NOTES
229608X	Cable Operated
229635X	Lever Operated

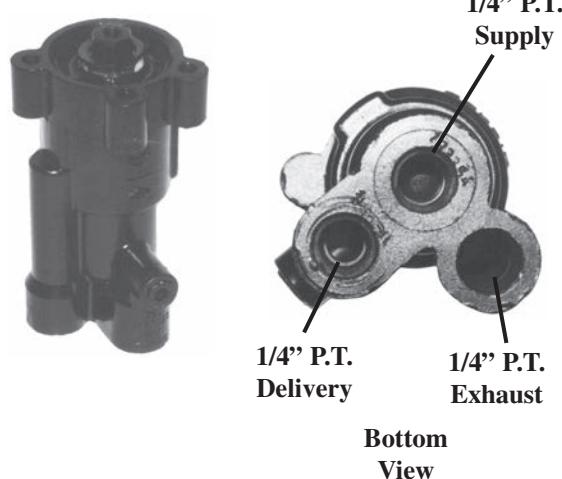
- * The TW-2/TH-3 is similar to the TW-1, TW-3 and TW-4 except that the two control valves are housed in a single body.
- * A single cammed control lever is used to control both of the internal valves.

NOTE: The TW-2 has two lever positions.

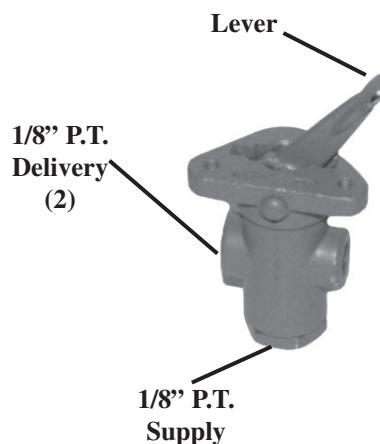
The TH-3 has three lever positions.

NOTE: Buttons and Mounting Hardware Not Furnished.

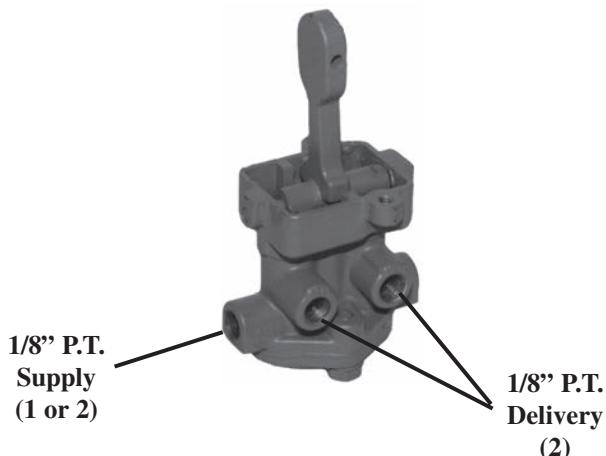
TC-7 Trailer Control Valve



TW-1 Control Valve



TW-2 / TH-3 Control Valve



PART NUMBER	VALVE	LEVER
280904X	TH-3	Centering
280905X	TW-2	Centering
281560X	TH-3	Positioning

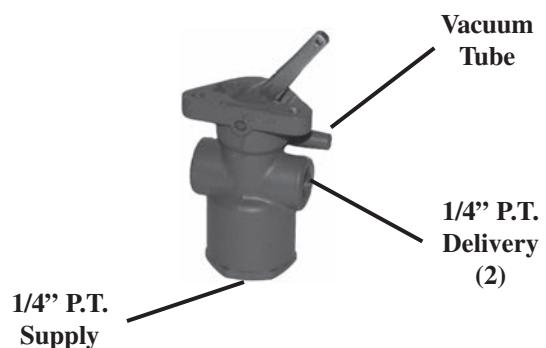
BENDIX®- AIR VALVES

- * The TW-3 control valves are manually operated, non-modulating controls used extensively in the air brake system.
- * The TW-3 is used in parking and emergency brake systems and has slightly greater capacity than the TW-1.

NOTE: Mounting Hardware Not Furnished.

PART NUMBER	VACUUM TUBE
225892X	Yes
283935X	No

TW-3 Control Valve

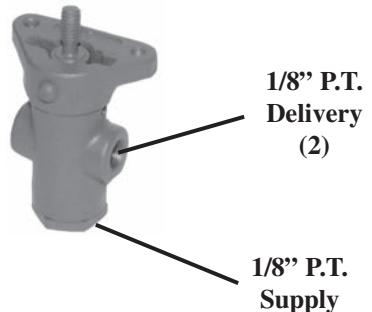


- * The TW-4 control valve is a manually operable, non-modulating control used extensively in the air brake system.
- * The TW-4 is commonly used in conjunction with air starter systems.

NOTE: Buttons and Mounting Hardware Not Furnished.

PART NUMBER
276635X

TW-4 Control Valve

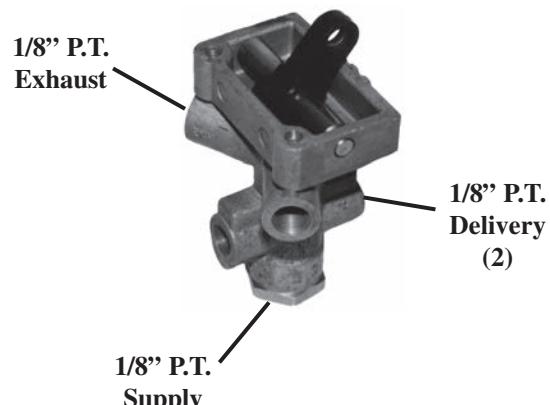


- * The TW-11 control valve is used in conjunction with the HR-1 Relay Valve

NOTE: Cable Not Furnished.

PART NUMBER	HANDLE
065316X	Remote
065356X	Lever

TW-11 Control Valve

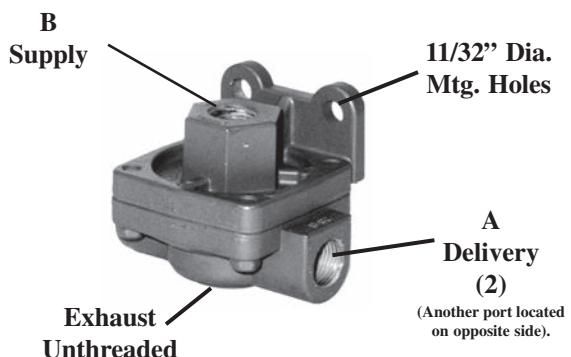


BENDIX®- AIR VALVES

- *The QR-1 is responsible for the rapid exhausting of air pressure, generally from brake chambers or spring brakes.
- * They decrease the brake release time due to their mounting location which is generally close to the brake chamber or spring brake they serve.

PART NUMBER	A DELIVERY	B SUPPLY	CRACK PRESSURE
102344X	(2)-3/8" PT	(1)-3/8" PT	10-16 PSI
229813X	(2)-1/4" PT	(1)-3/8" PT	1 PSI
229844X	(2)-1/4" PT	(1)-1/2" PT	1 PSI
229859X	(2)-3/8" PT	(1)-3/8" PT	1 PSI
229860X	(2)-3/8" PT	(1)-1/2" PT	1 PSI
278483X	(2)-3/8" PT	(1)-1/2" PT	5-8 PSI
281024X	(2)-1/4" PT	(1)-1/4" PT	1 PSI
288251X	(2)-3/8" PT	(1)-3/8" PT	1 PSI

QR-1 Quick Release Valve



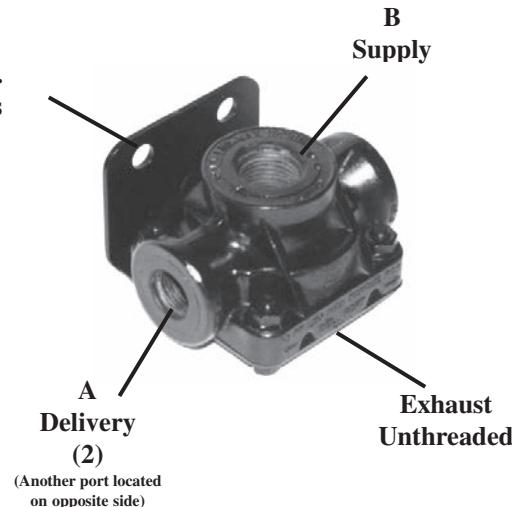
NOTE: #288251X has a 3/8" PT (Threaded) Exhaust Port.

- *The QR-N is responsible for the rapid exhausting of air pressure, generally from brake chambers or spring brakes.
- * They decrease the brake release time due to their mounting location which is generally close to the brake chamber or spring brake they serve.
- * Non-Metallic assembly.

MAINTENANCE KIT: #104463

PART NUMBER	A DELIVERY	B SUPPLY	CRACK PRESSURE
065066X	(2)-3/8" PT	(1)-1/2" PT	1 PSI
065067X	(2)-3/8" PT	(1)-3/8" PT	1 PSI
065068X	(2)-3/8" PT	(1)-3/8" PT	5-8 PSI
065212X	(2)-3/8" PT	(1)-3/8" PT	1 PSI MAX
065214X	(2)-3/8" PT	(1)-3/8" PT	3 PSI

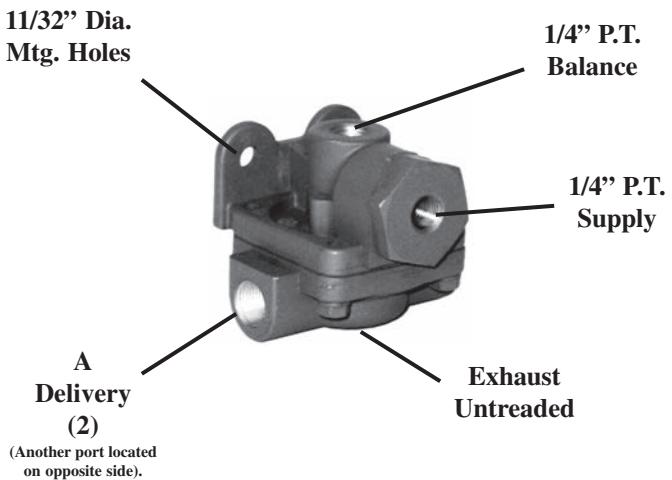
QR-N Quick Release Valve



- * The QR-1C is a dual function valve.
- * Its primary function is to serve the emergency side of a spring brake chamber as a quick release valve.
- * In addition, it functions as an anti-compounding device; the double check valve prevents a service and emergency brake application from occurring at the same time.
- * Supply and delivery differential is 1 PSI Max.

QR-1C Quick Release Valve

PART NUMBER	A DELIVERY
289182X	(2)-1/4" PT
289714X	(2)-3/8" PT



BENDIX®- AIR VALVES

*The LQ-2 limiting, quick release valve serves two functions: that of a limiting valve and a quick release valve.

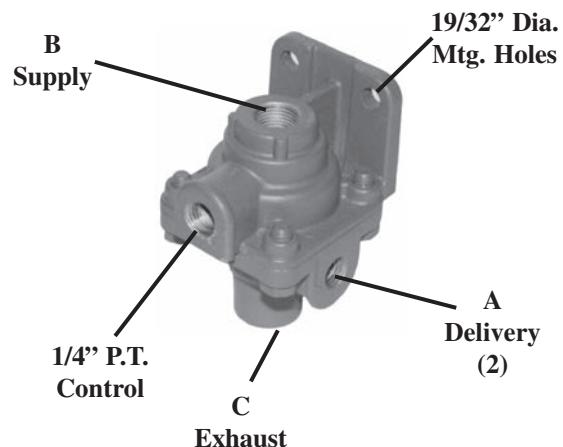
* Generally used on the front or steering axle of a vehicle, it is controlled by a TW-1 two-way control valve mounted on the dash panel in the cab.

* It will reduce front axle service applications by 50% when the TW-1 control is placed in the "slippery road condition". It will deliver full pressure when it is placed in the "dry road" position.

MAINTENANCE KIT: #282098

PART NUMBER	A DELIVERY	B SUPPLY	C EXHAUST
229505X	(2)-3/8" PT	(1)-3/8" PT	---
229507X	(2)-1/4" PT	(1)-1/2" PT	---
229509X	(2)-1/4" PT	(1)-3/8" PT	---
288417X	(2)-3/8" PT	(1)-3/8" PT	(1)-3/8" PT

LQ-2 Limiting and Quick Release Valve



* The LQ-4 is a front axle ratio valve usually found installed in the front axle service delivery line between the brake valve and the brake chambers.

* In normal use it automatically reduces application pressure to the front axle brakes. During severe brake applications, it allows full braking pressure to be delivered.

NOTE: #289145X is for Mack® applications. There is a spring visible through the Delivery Port.

MAINTENANCE KIT: #289500

PART NUMBER	NOMINAL HOLD OFF PRESSURE	NOMINAL EQUALIZING PRESSURE
101311X	20 PSI	70 PSI
289144X	4 PSI	60 PSI
289145X	10 PSI	65 PSI
289148X	10 PSI	65 PSI

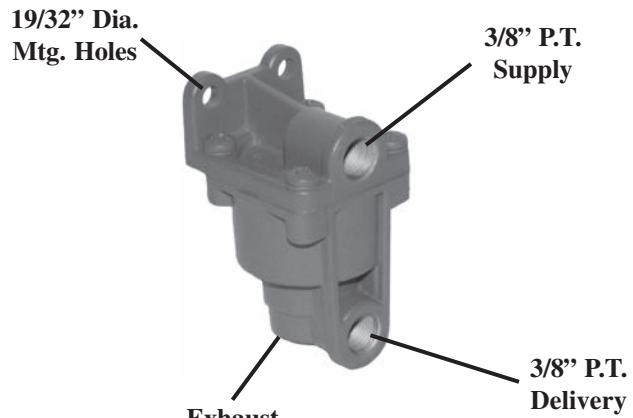
* The LQ-5 bobtail limiting valve is used on the front (steering) axle of tractor air brake systems to reduce brake application pressure during normal tractor-trailer operation.

* During Bobtail mode, tractor braking performance is improved because the LQ-5 delivers full brake pressure to the steering axle. The LQ-5 is designed for tractor systems only, and it replaces the existing front axle limiting valve.

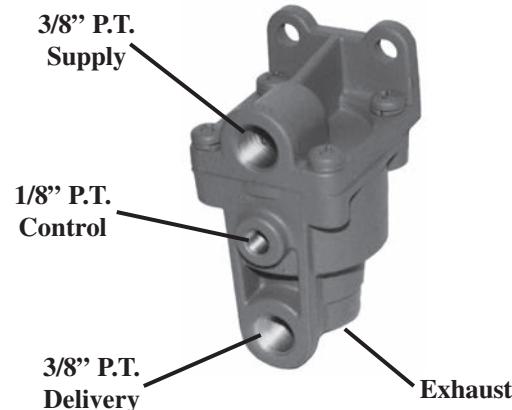
****IMPORTANT NOTE:** Do NOT replace the BP-1 Brake Proportioning Valve with the LQ-5. The LQ-5 will NOT function properly in the BP-1 system.

PART NUMBER
065154X

LQ-4 Front Axle Ratio Valve



LQ-5 Bobtail Limiting Valve



BENDIX®- AIR VALVES

* The **BP-1** brake proportioning valves are incorporated into the air systems to improve the controllability and reduce the stopping distance of bobtail operated tractors during braking.

IMPORTANT NOTE: The **BP-1** front & **BP-1** rear valves are similar in appearance but are NOT interchangeable.

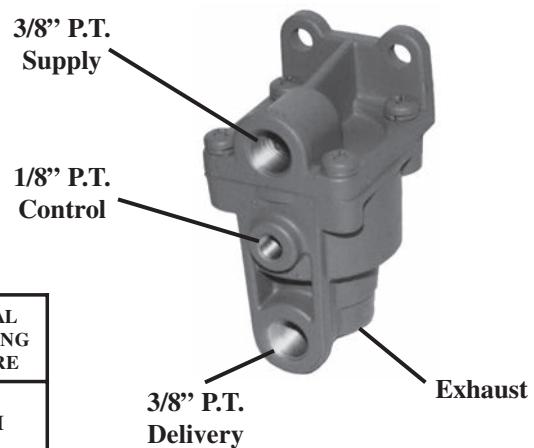
BP-1 FRONT

PART NUMBER	NOMINAL HOLD OFF PRESSURE	NOMINAL EQUALIZING PRESSURE
104598X	4 PSI	50 PSI

BP-1 REAR

PART NUMBER	NOMINAL INSHOT PRESSURE	NOMINAL EQUALIZING PRESSURE
106284X	8 PSI	105 PSI

BP-1 Air Brake Proportioning Valve



* The **BP-R1** automatically reduces application pressure to the front service brakes.

* It functions as a standard relay valve during tractor-trailer operation.

* In bobtail mode, it improves vehicle control and reduces stopping distance by proportioning air pressure to the lighter rear axle brakes.

* Preset "Hold-Off" pressure prevents the front brakes from operating until the "Hold-Off" pressure is reached.

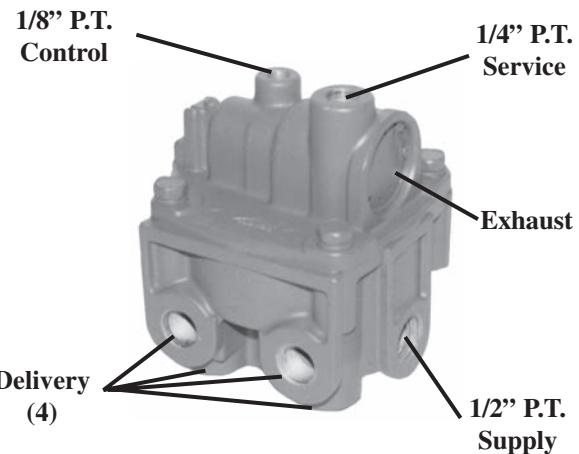
NOTE: Designed for tractors only.

PART NUMBER	CRACK PRESSURE
065145X	4.0 PSI
065146X	5.5 PSI

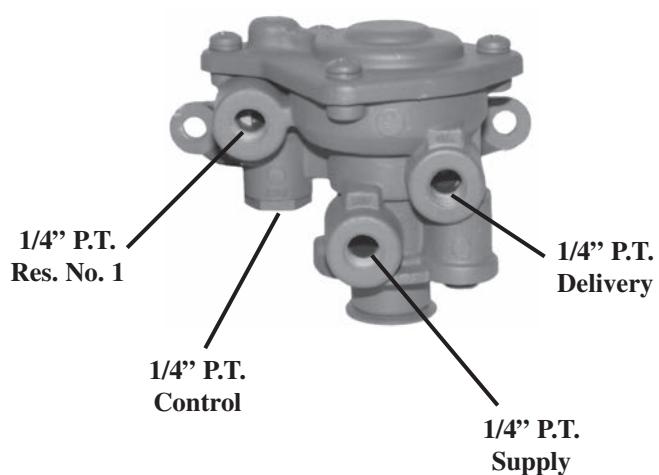
* The **SR-1** spring brake valve is commonly found on trucks with dual air brake systems.

* The function of the **SR-1** is to modulate the spring brakes through application of the foot brake valve in the event of loss of rear axle service brake pressure.

BP-R1 Bobtail Brake Proportioning Relay Valve



SR-1 Spring Brake Valve



PART NUMBER	RESERVOIR TRIP PRESS.
286364X	55 PSI
288063X	30 PSI

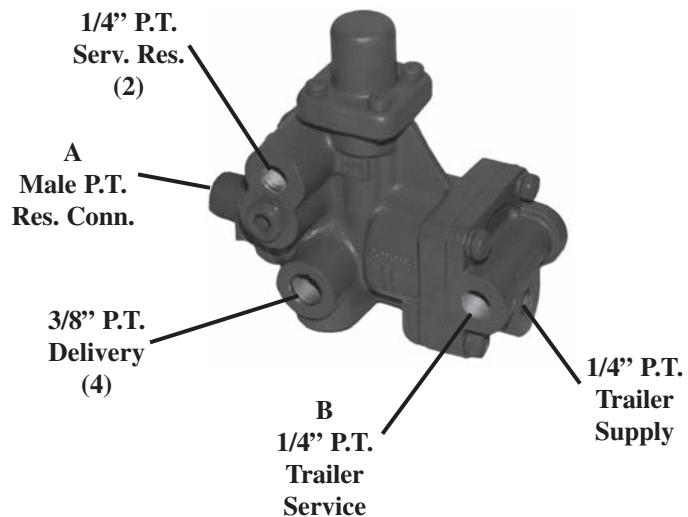
BENDIX®- AIR VALVES

- * The SR-2 trailer spring brake valve is responsible for controlling the application and release of the spring brakes both during emergency situations and normal parking.
- * It is generally installed in the required spring brake release reservoir.
- * It protects and isolates the spring brake reservoir, preventing automatic brake application in the event of trailer service system failure.

PART NUMBER	A RES. CONN.	B TRL. SERV.
102761X	(1)-3/4" PT	(1)-1/4" PT
103061X	(1)-1/2" PT	(1)-1/4" PT
287376X	(1)-3/4" PT	N/A

NOTE: #287376X does not have a trailer service port for anti-compounding.

SR-2 Trailer Spring Brake Valve



* The SR-4 trailer spring brake valve is similar to the SR-2 spring brake valve.

* The complete assembly consists of an SR-4 assembly, a pressure protection valve and a SC-1 single check valve.

* Assembly also includes a #286460 PR-3 valve.

IMPORTANT NOTE: Due to different operational characteristics, the **SR-4** **SHOULD NOT** be interchanged with the **SR-2** under any circumstances.

PART NUMBER	A RES. CONN.
101112X	(1)-3/4" PT
101622X	(1)-1/2" PT

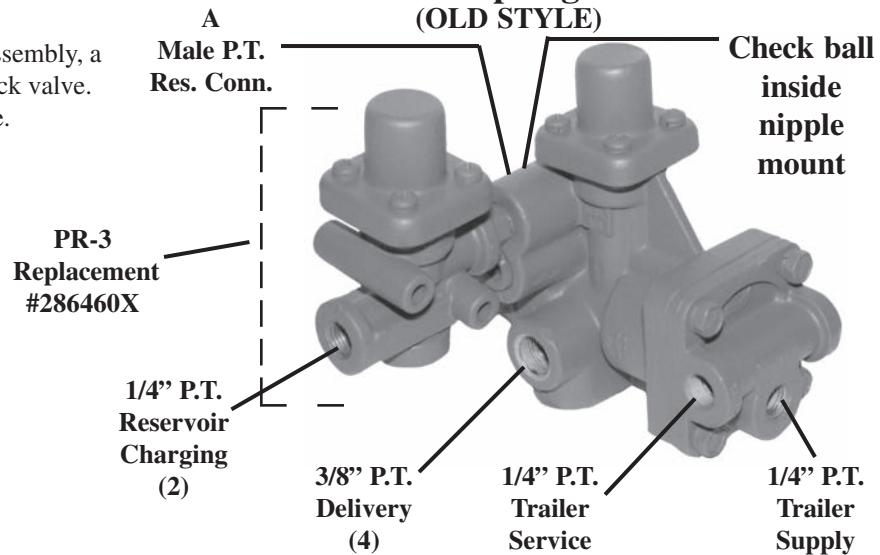
* The SR-4 trailer spring brake valve is similar to the SR-2 spring brake valve.

* The complete assembly consists of an SR-4 assembly, a pressure protection valve and a SC-1 single check valve.

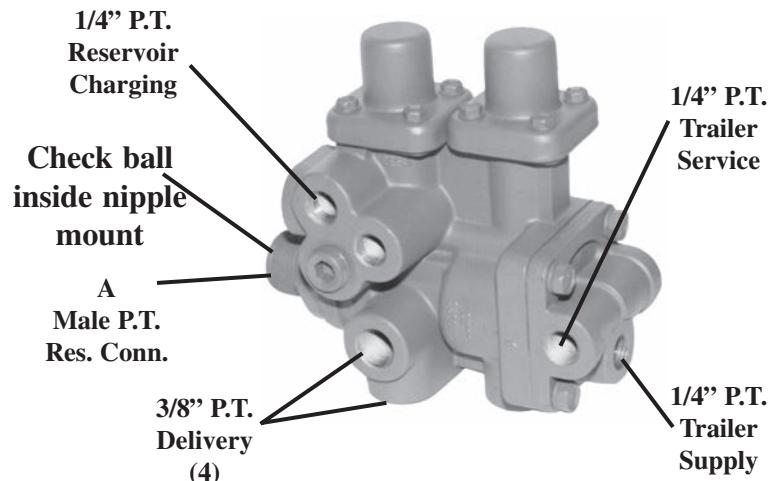
IMPORTANT NOTE: Due to different operational characteristics, the **SR-4** **SHOULD NOT** be interchanged with the **SR-2** under any circumstances.

PART NUMBER	A MALE PT
107539X	3/4" PT
108076X	1/2" PT

SR-4 Trailer Spring Brake Valve (OLD STYLE)



SR-4 Trailer Spring Brake Valve (NEW STYLE)



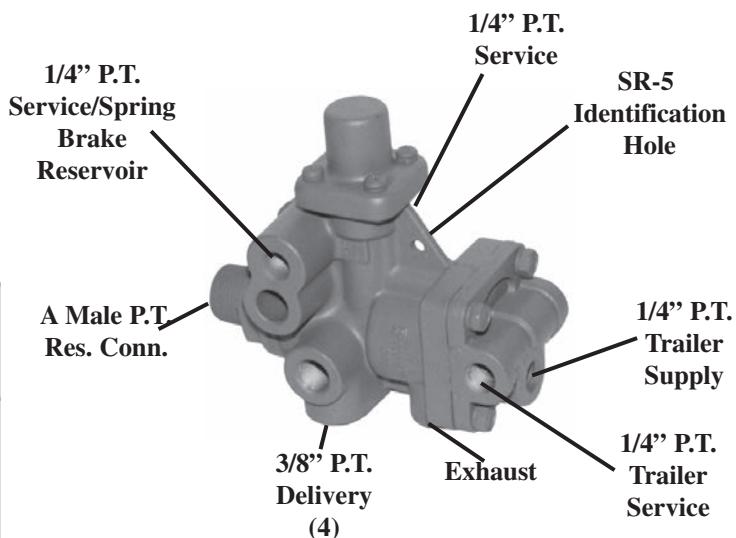
BENDIX®- AIR VALVES

* The SR-5 trailer spring brake valve is used on trailers with dual air brake systems.

* The valve permits the use of a single reservoir on the trailer.

PART NUMBER	A MALE PORT (RES. MTG)	ANTI-COMPOUNDING
109615X	3/4"	Yes
109616X	3/4"	No
109617X	1/2"	Yes
109618X	1/2"	No

SR-5 Trailer Spring Brake Valve

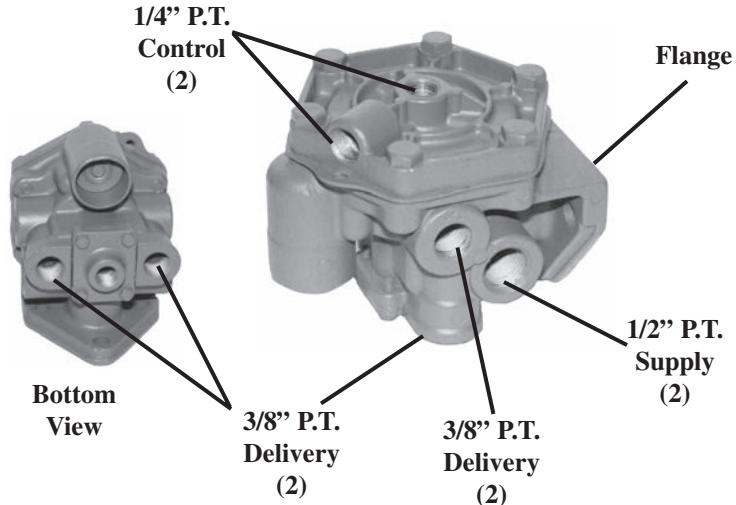


* The R-5 relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.

* The relay valve is used to balance the time of brake applications on heavy duty vehicles. They are especially needed where large volumes of air are required or long service lines cause the capacity of the brake valve to be exceeded.

PART NUMBER
229467X

R-5 Relay Valve



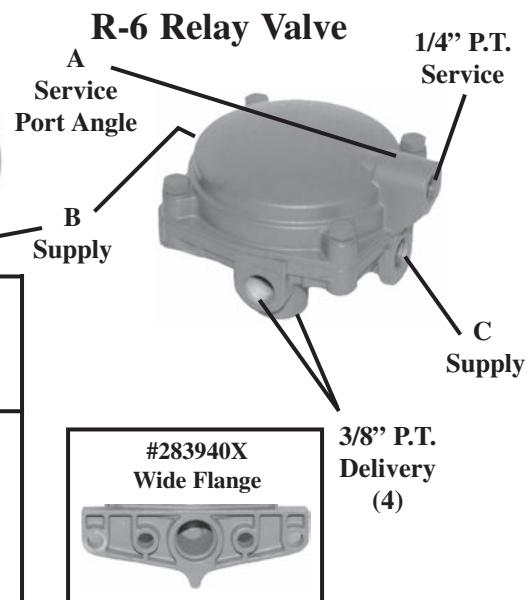
* The R-6 relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.

* The relay valve is used to balance the time of brake applications on heavy duty vehicles.

* Piston operated.

MAINTENANCE KIT: #280856

PART NUMBER	A SERVICE PORT ANGLE (DEGREES)	B SUPPLY	C SUPPLY	CRACK PRESSURE
279180X	180°	----	(1)-3/8" PT	2 PSI
279952X	180°	(1)-3/4" PT	(1)-3/8" PT	2 PSI
280243X	180°	----	(1)-3/8" PT	10 PSI
280375X	90°	----	(1)-1/2" PT	2 PSI
280651X	180°	(1)-3/4" PT	(1)-3/8" PT	2 PSI
283940X	270°	(1)-3/8" PT	(1)-3/8" PT	2 PSI

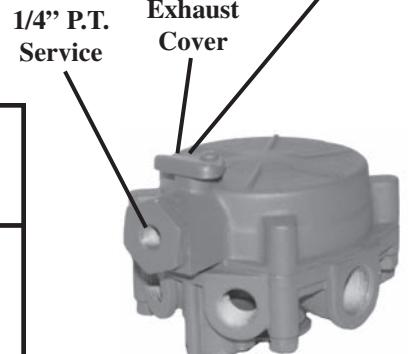


BENDIX®- AIR VALVES

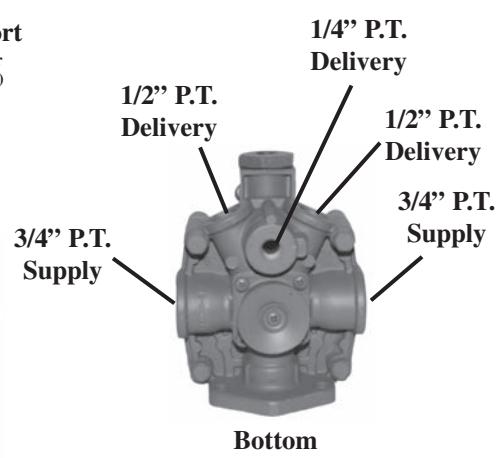
- * The **R-8** relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.
- * The relay valve is used to balance the time of brake applications on heavy duty vehicles.
- * Piston operated.

MAINTENANCE KIT: #287370

PART NUMBER	SERVICE PORT LOCATION (DEGREE)
286370X	90°
286371X	90°
287224X	270°
287260X	180°
288369X	180°



R-8 Relay Valve



NOTE: #286371X and #287260 have no exhaust cover.

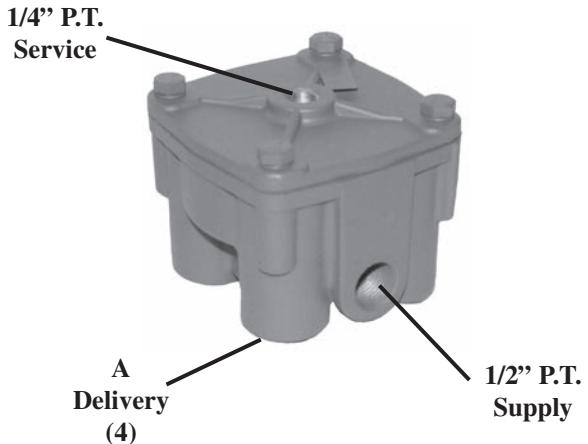
- * The **R-12** relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.

- * The relay valve is used to balance the time of brake applications on heavy duty vehicles.
- * Piston operated.
- * This version of the **R-12** has vertical delivery ports which are primarily used on trailers.

MAINTENANCE KIT: #102802

PART NUMBER	A DELIVERY	CRACK PRESSURE
065104X	(4)-3/8" PT	4 PSI
102626X	(4)-1/2" PT	4 PSI
103912X	(4)-1/2" PT	7.5 PSI
104561X	(4)-3/8" PT	5.5 PSI

R-12 Relay Valve (Vertical Delivery Ports)



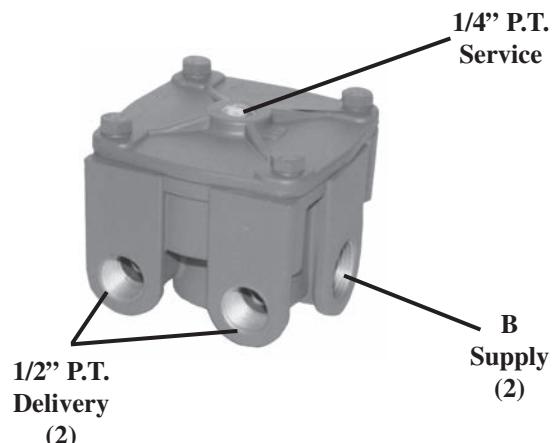
- * The **R-12H** relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.

- * The relay valve is used to balance the time of brake applications on heavy duty vehicles.
- * Piston operated.
- * The **R-12H** has horizontal delivery ports which are primarily used on truck/tractors.

MAINTENANCE KIT: #102802

PART NUMBER	B SUPPLY	CRACK PRESSURE
065125X	(2)-1/2" PT	5.5 PSI
103009X	(2)-3/4" PT	4 PSI
103195X	(2)-3/4" PT	10 PSI
104165X	(2)-3/4" PT	7.5 PSI

R-12H Relay Valve (Horizontal Delivery Ports)



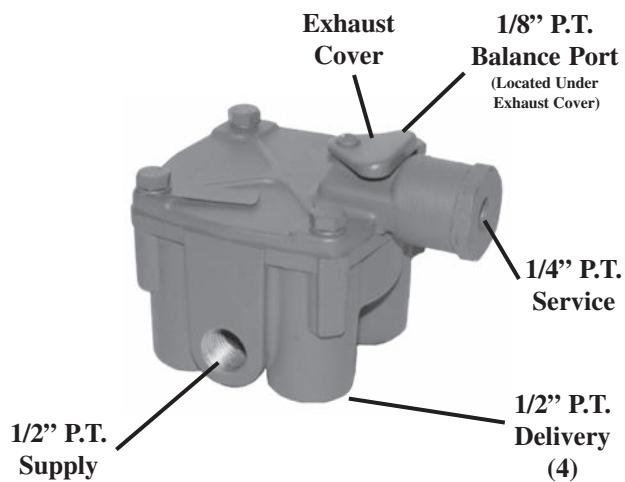
BENDIX®- AIR VALVES

- * The **R-14** relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.
- * The relay valve is used to balance the time of brake applications on heavy duty vehicles.
- * Piston operated.
- * The unique anti-compounding feature, located above the service port, permits the **R-14** to be used conveniently to control spring brakes as well as service brakes.

MAINTENANCE KIT: #102802

PART NUMBER	CRACK PRESSURE
103028X	4 PSI
103833X	7.5 PSI
106313X	5.5 PSI

R-14 Relay Valve (Vertical Delivery Ports)

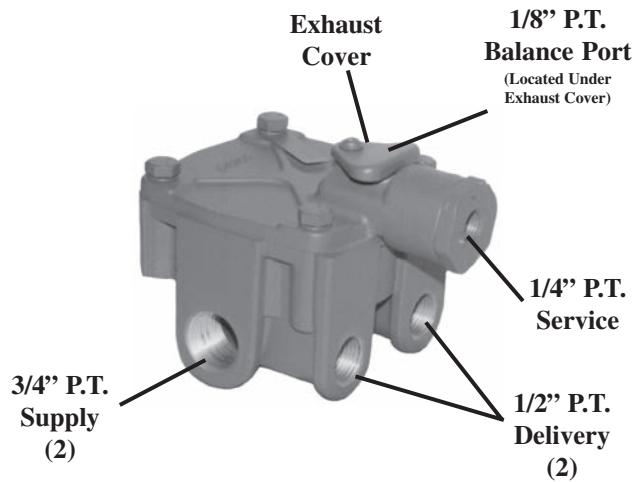


- * The **R-14** relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.
- * The relay valve is used to balance the time of brake applications on heavy duty vehicles.
- * Piston operated.
- * The unique anti-compounding feature, located above the service port, permits the **R-14** to be used conveniently to control spring brakes as well as service brakes.

MAINTENANCE KIT: #102802

PART NUMBER	CRACK PRESSURE
103010X	4 PSI
103139X	10 PSI
103294X	5.5 PSI
103835X	7.5 PSI
104345X	5.0 PSI

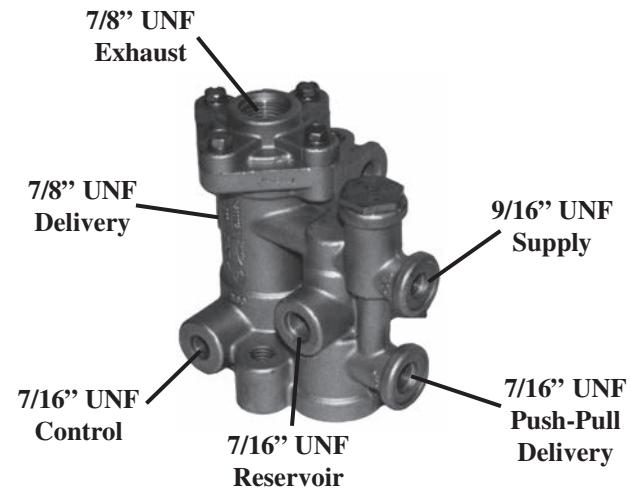
R-14H Relay Valve (Horizontal Delivery Ports)



BENDIX - HYDRAULIC Relay Valve HR-1 VALVE

- * The **HR-1** hydraulic relay valve is designed for use on hydraulic brake equipped trucks that incorporate a separate and independent spring actuated parking brake system.

PART NUMBER
065147X

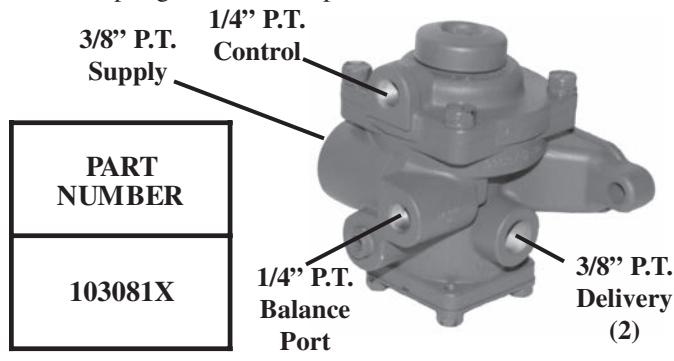


BENDIX®- AIR VALVES

R-7 Modulating Valve

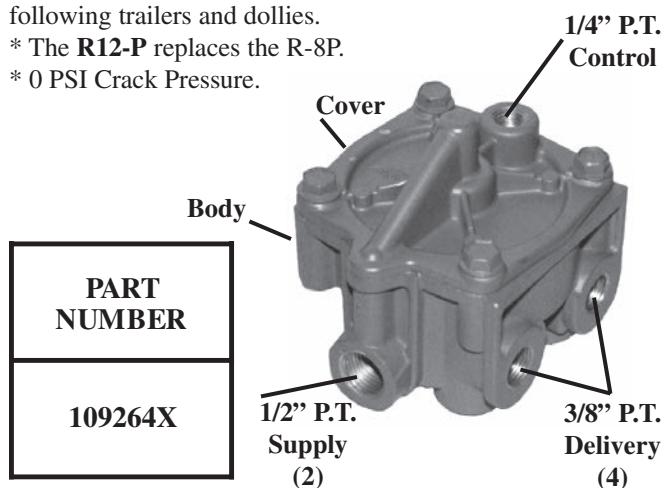
- * The R-7 valve modulates the spring brakes through application of the foot brake valve in the event of loss of rear axle service brake pressure.
- * Commonly found on trucks and buses with dual air brake systems.

NOTE: Spring brake release pressure is 95 PSI.



R-12P Pilot Relay Valve

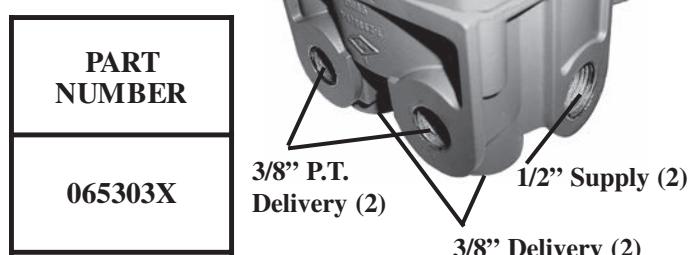
- * The R-12P pilot relay valve is designed to reinforce and equalize the control signal on long non-towing trailers, following trailers and dollies.
- * The R12-P replaces the R-8P.
- * 0 PSI Crack Pressure.



R-12 Multiport Relay Valve

- * The R-12 Multiport Relay Valve has two vertical supply ports and two vertical delivery ports.

Notes:
Crack Pressure is 4

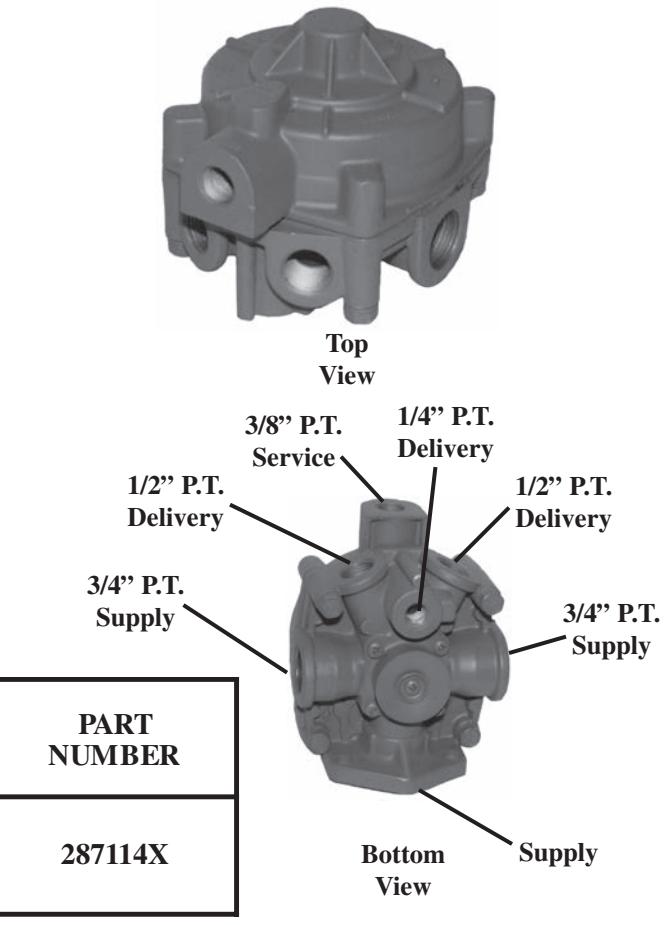


R-8P Pressure Equalizing Relay Valve

- * The R8-P pressure equalizing valve is a special purpose device designed specifically for use on semi-trailer converter dollies.

NOTE: Has a 0 p.s.i. differential between the service(control) and delivery ports while standard relay valves typically have a 2-4 p.s.i. differential.

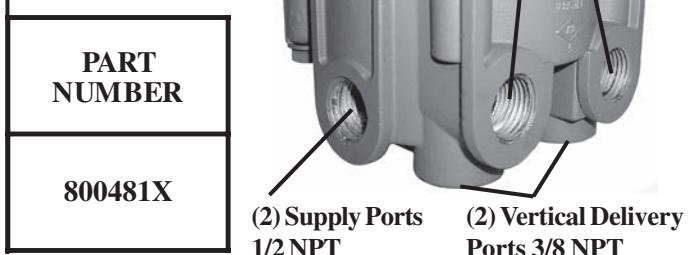
MAINTENANCE KIT: #103799



R12-DC Valve

- * The R12-DC Relay Valve, (during operation of the brake valve) supplies air to the relay valve control ports, primary and secondary.

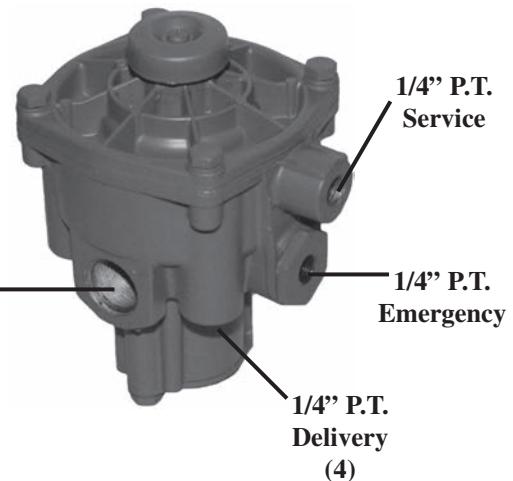
Notes:
Crack Pressure is 4



BENDIX®- AIR VALVES

- * The RE-4 relay emergency valve is generally used on pre- "121" trailers and in some special cases on off-the-road equipment.
- * It incorporates an emergency feature which will automatically apply the service brakes in the event that supply air pressure is lost.
- * Can be generally mounted either to the reservoir or remote from it.

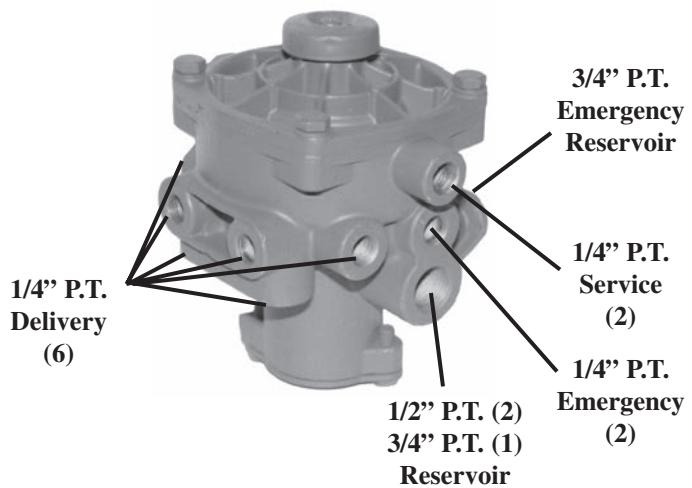
RE-4 Relay Emergency Valve



PART NUMBER
277446X

- * The RE-4 relay emergency valve is generally used on pre- "121" trailers and in some special cases on off-the-road equipment.
- * It incorporates an emergency feature which will automatically apply the service brakes in the event that supply air pressure is lost.
- * Can be generally mounted either to the reservoir or remote from it.

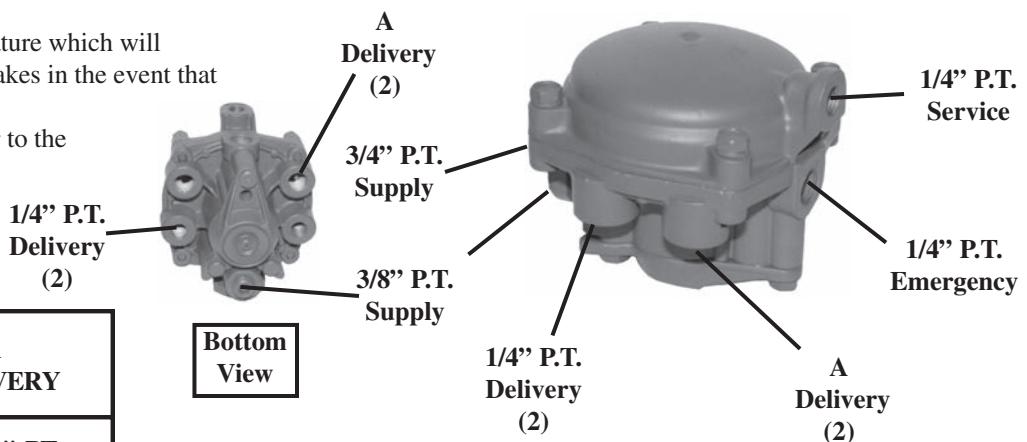
RE-4 Relay Emergency Valve



PART NUMBER
229434X

- * The RE-6 relay emergency valve is generally used on pre- "121" trailers and in some special cases on off-the-road equipment.
- * It incorporates an emergency feature which will automatically apply the service brakes in the event that supply air pressure is lost.
- * Can be generally mounted either to the reservoir or remote from it.

RE-6 Relay Emergency Valve



PART NUMBER	A DELIVERY
281860X	(2)-1/4" PT
281865X	(2)-3/8" PT

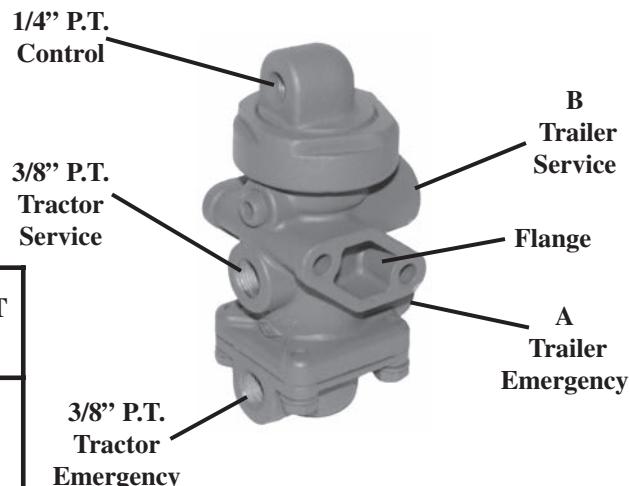
Bottom View

BENDIX®- AIR VALVES

- * The TP-2 tractor protection valve is generally found mounted on the rear of the tractor cab.
- * It is used in conjunction with a dash mounted control valve.
- * It provides a means of opening and closing the two air hoses (service and emergency) leading to the trailer.
- * Automatically closes in the event of a tractor trailer breakaway or reduction of tractor system air pressure.

PART NUMBER	A TRL. SERV.	B TRL. EMERG.	STOP LIGHT SWITCH
227661X	(1)-3/8" PT	(1)-3/8" PT	N/A
227672X	(1)-1/2" PT	(1)-1/2" PT	N/A
283090X	(1)-1/2" PT	(1)-1/2" PT	1/8" in Flange

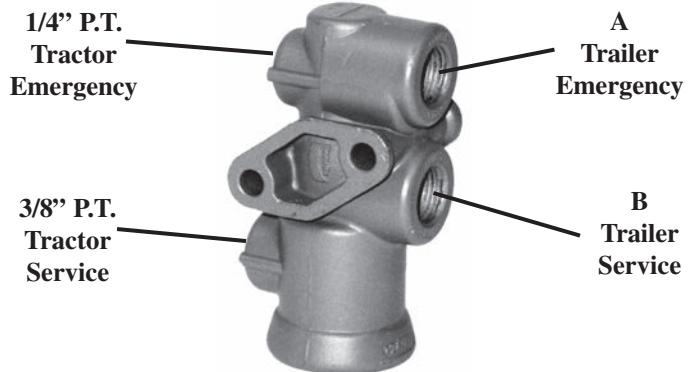
TP-2 Tractor Protection Valve



- * The TP-3 tractor protection valve is generally mounted on the rear of the tractor cab.
- * It is used in conjunction with a dash mounted control valve.
- * It provides a means of opening and closing the two air hoses (service and emergency) leading to the trailer.
- * Automatically closes in the event of a tractor trailer breakaway or reduction of tractor system air pressure.

PART NUMBER	A TRL. EMERGENCY	A TRL. SERVICE
279000X	(1)-1/2" PT	(1)-1/2" PT
279692X	(1)-3/8" PT	(1)-3/8" PT

TP-3 Tractor Protection Valve



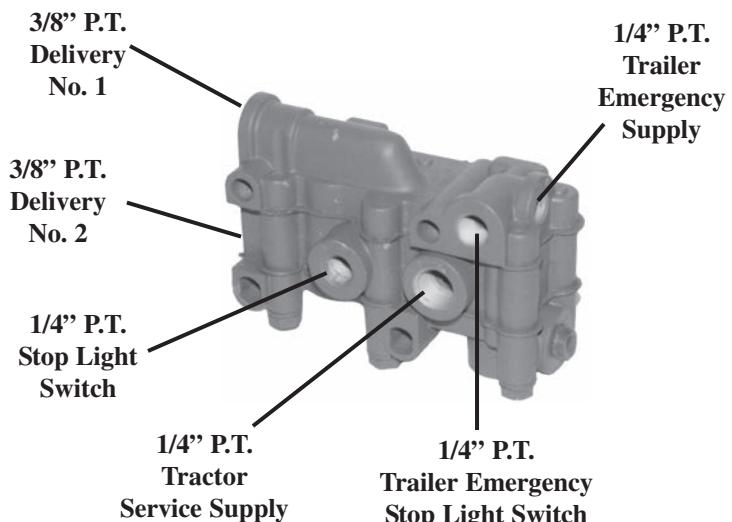
NOTE: TP-3 is used with PP-3 or PP-7 Valve.

- * The TP-4 (Formerly the WM-1) tractor protection valve (control valve manifold) is a proprietary valve used exclusively on Ford® "L" model tractors.
- * It is a combination of two double check valves and a tractor protection valve.
- * With this valve either of the two service brake circuits of the dual air system on the vehicle can be used to apply the trailer brakes.

MAINTENANCE KIT: #283863

PART NUMBER
288301X

TP-4 Tractor Protection Valve



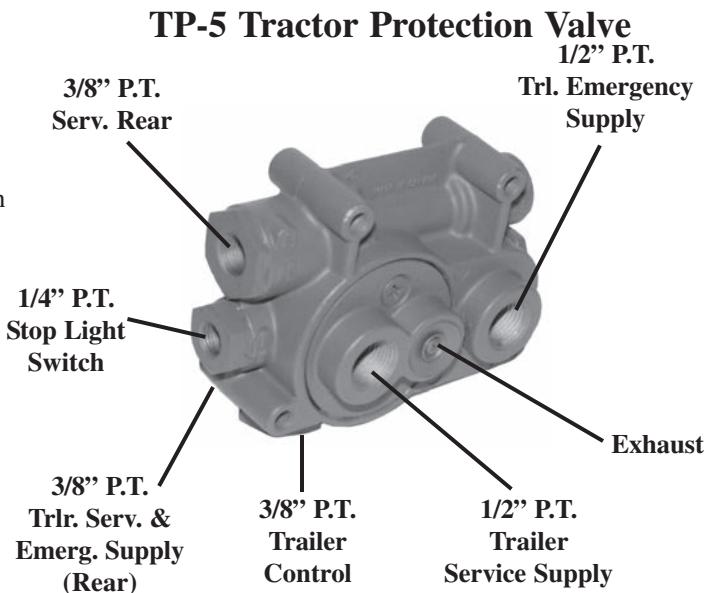
BENDIX®- AIR VALVES

- * The TP-5 (Formerly the VM-2) valve is a panel or cross member mounted unit designed to replace the tractor protection valve.
- * It has two double check valves and a quick release valve.
- * It may be used in conjunction with the VM-3 or independently.

NOTE: Use #289253X when a trailer Control (Hand Valve) such as the TC-2 is not installed.

MAINTENANCE KIT: #289061

PART NUMBER	NOTES
106941X	Mack® Version
288605X	----
289253X	----



* The VM-3 manifold valve serves as a control manifold providing a central location for air lines passing between the cab and engine compartment.

* The control function is accomplished with the double check valve and pressure protection valve housed inside the VM-3.

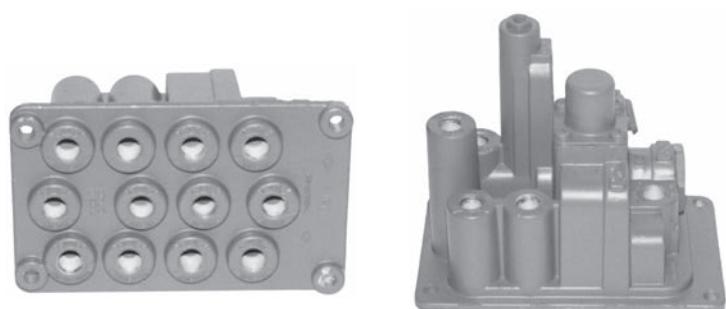
MAINTENANCE KIT: #289062

PART NUMBER
288645X

*The DV-2 drain valve ejects moisture and contaminants from the air system reservoir upon a slight reduction in reservoir pressure.

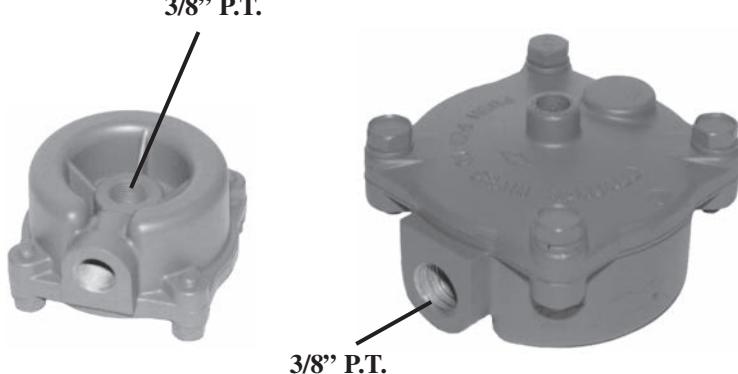
* Mounts to bottom drain port of the reservoir.

VM-3 Manifold Valve



Bottom View

DV-2 Automatic Reservoir Drain Valve



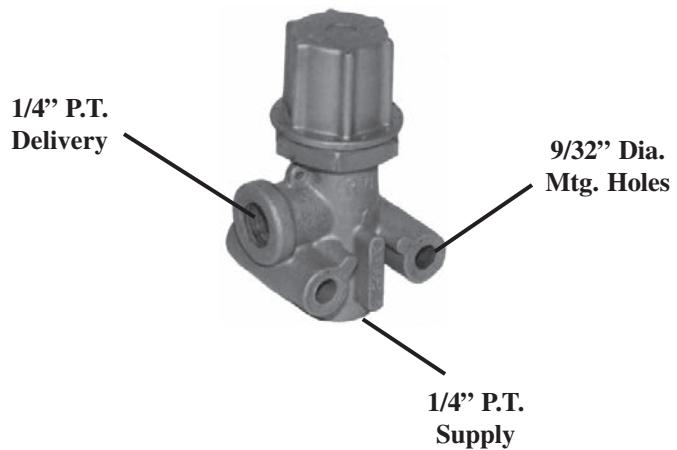
PART NUMBER	NOTES
281923X	Non-Heated
284412X	Heated

BENDIX®- AIR VALVES

* The RV-1 pressure reducing valve is used where a constant set air pressure lower than supply air pressure is required.

RV-1 Pressure Reducing Valve

PART NUMBER	NOMINAL DELIVERY PRESSURE
101135X	85 PSI
277144X	80 PSI
277214X	75 PSI
278426X	65 PSI

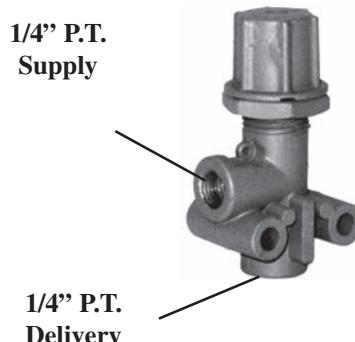


* The PR-2 pressure protection valve is a normally closed, pressure control valve which can be referred to as a non-exhausting sequence valve.

NOTE: The closing pressure of the PR-2 is externally adjustable.

PR-2 Pressure Protection Valve

PART NUMBER	NOMINAL CLOSING PRESSURE
277147X	65 PSI
277148X	85 PSI
277226X	60 PSI
277227X	75 PSI



* The PR-3/PR-4 pressure protection valve is a normally closed, pressure control valve which can be referred to as a non-exhausting sequence valve.

NOTE: 103976X is for use in aftercooler or air dryer installations where the compressor inlet is turbocharged.

The closing pressure of the PR-4 has a fixed setting.

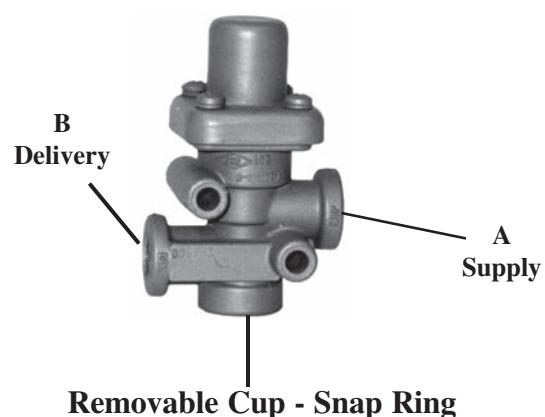
* #286460X is a PR-3.

** #103976X - Metal Valve & Seat.

PR-3 / PR-4 Pressure Protection Valve

PART NUMBER	A SUPPLY	B DELIVERY	NOMINAL CLOSING PRESSURE
103976X**	(1)-1/2" PT	(1)-1/2" PT	45 PSI
286460X*	(1)-1/4" PT	(1)-1/4" PT	60 PSI
286500X	(1)-1/4" PT	(1)-1/4" PT	85 PSI
288323X	(1)-1/4" PT	(1)-1/4" PT	70 PSI

* The PR-3 has a removable cap used only in conjunction with a SR-4.



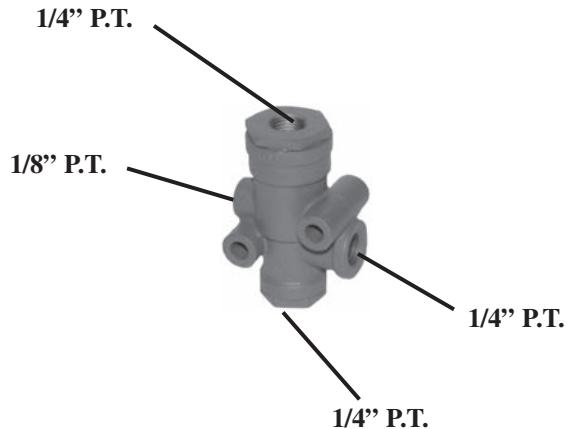
BENDIX®- AIR VALVES

- * The **SV-1** synchronizing valve is a pilot operated, non-graduating pneumatic control valve.
- * It is used to control air from a remote supply which is different than control air supply. They have definite opening and closing pressures and can be used to delay or sequence the action on other pneumatic devices.

NOTE: With common control and supply pressure, Inlet and Exhaust opening p.s.i. are shown on chart below.

PART NUMBER	INLET OPENING PSI	EXHAUST OPENING PSI
278825X	42 PSI	28 PSI
282472X	21 PSI	11 PSI
283700X	62 PSI	50 PSI

SV-1 Synchronizing Valve



- * The **TR-2** inversion valve is an air operated control valve.
- * It is normally open and is closed by using air pressure from another source.
- * The PR-2 is primarily used in emergency or parking brake systems and operate with air from a reservoir, isolated by a check valve, from the service brake system.

MAINTENANCE KIT: #281138

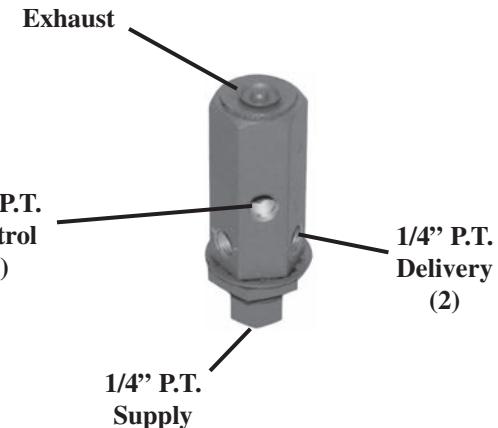
PART NUMBER
277340X

- * The **TR-3** inversion valve is an air operated control valve.
- * It is normally open and is closed by using air pressure from another source.
- * It is used primarily in emergency or parking brake systems.
- * Operates with air from a reservoir isolated by a check valve from the air brake system.

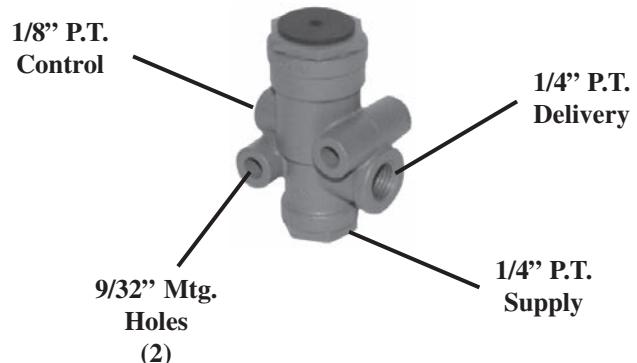
NOTE: With common control & supply pressure, inlet opens at "A" PSI descending pressure and exhaust opens at "B" PSI ascending pressure.

PART NUMBER	INLET OPENING PSI DESCENDING	EXHAUST OPENING PSI ASCENDING
101450X*	25 PSI	40 PSI
280758X	45 PSI	60 PSI
281318X	35 PSI	70 PSI
281459X	25 PSI	40 PSI
288586X	75 PSI	90 PSI

TR-2 Inversion Valve



TR-3 Inversion Valve



* NOTE: Part Number **101450X** is for Special Duty Bus Application.

BENDIX®- AIR VALVES

- * The SC-1 single check valve is a protection device which separates and protects reservoirs located ahead of the arrow stamped on its body.
- * The valve permits air to flow through it in only one direction as indicated by the arrow.
- * This valve is commonly used to protect service brake air pressure.

SC-1 Single Check Valve

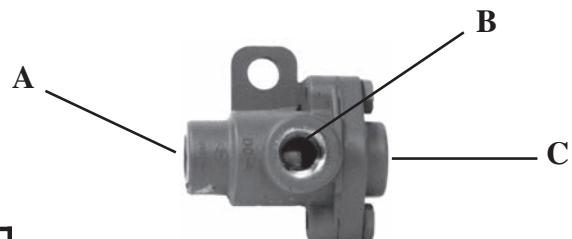


RUBBER SEAT

PART NUMBER	A THREAD	B THREAD
227870X	3/8" PT	3/8" PT
227871X	1/2" PT	1/2" PT
229603X	1/4" PT	1/4" PT

- * The DC-4 double check valve is used in the air brake system when a single function or component must be controlled by either of two valves.
- * The valve permits either, but not both control valves to operate the device connected to its outlet port.

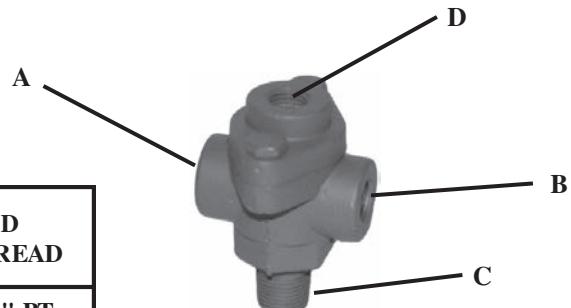
DC-4 Double Check Valve



PART NUMBER	A THREAD	B THREAD	C THREAD
278614X	3/8" PT	3/8" PT	3/8" PT
278615X	1/4" PT	1/4" PT	1/4" PT

- * The DC-4 double check valve is used in the air brake system when a single function or component must be controlled by either of two valves.
- * The valve permits either, but not both control valves to operate the device connected to its outlet port.

DC-4 Double Check Valve



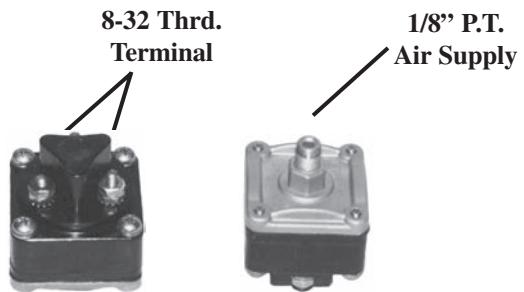
PART NUMBER	A THREAD	B THREAD	C THREAD	D THREAD
278595X	1/4" PT	1/4" PT	1/2" PT	1/4" PT
278596X	3/8" PT	3/8" PT	1/2" PT	1/4" PT
278597X	1/4" PT	1/4" PT	3/8" PT	1/4" PT
278598X	3/8" PT	3/8" PT	3/8" PT	1/4" PT
280809X	3/8" PT	3/8" PT	3/8" PT	3/8" PT

BENDIX®- AIR VALVES

- * The TE-1 trailer emergency stop light switch is an electra-pneumatic switch.
- * It lights the trailer stop lights if pressure in the tractor emergency line is reduced to approximately 60 p.s.i. for any reason.

NOTE: Circuit between terminals to be closed from 60 p.s.i. to 0 PSI.

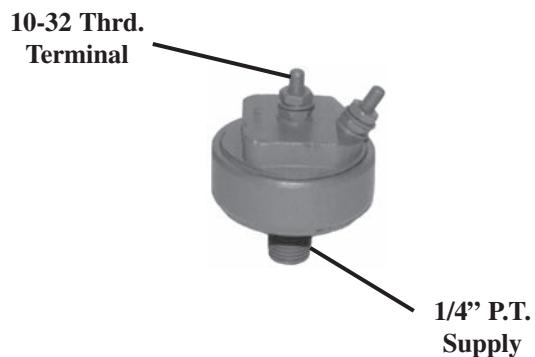
TE-1 Trailer Emergency Stop Light Switch



PART NUMBER
228477X

- * The SL-3 stop light switch is an electra-pneumatic switch.
- * It operates in conjunction with the vehicle stop lights and service brake valve.
- * The SL-3 completes an electrical circuit each time a brake application is made.

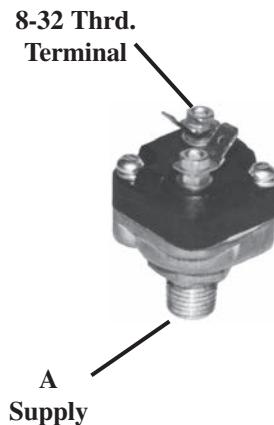
SL-3 Stop Light Switch



PART NUMBER
226262X

- * The SL-4 is an electra-pneumatic switch.
- * It operates in conjunction with the vehicle stop light and service brake valve.
- * The SL-4 completes an electrical circuit each time a brake application is made.

SL-4 Stop Light Switch



PART NUMBER	A PIPE THREAD
228600X	1/4" PT
228687X	3/8" PT
228688X*	1/4" PT

* #228688X has a clip connection terminal.

BENDIX®- AIR VALVES

* The LP-3 low pressure indicator is a pressure sensitive, electric-pneumatic switch that is designed to give an automatic warning to the vehicle operator in the event air pressure in the service brake system is below a safe minimum for normal operating conditions.

* Generally activates a dash mounted light and buzzer.

*NOTE: *#104246X has a push on terminal.

*#275083X has a cut-in pressure of 75 +/- 6 PSI.

SINGLE TERMINAL

PART NUMBER	CUT-OUT PRESSURE	A P.T.
104246X*	66 +/- 6 PSI	1/4" PT
279416X	60 +/- 6 PSI	1/4" PT
279472X	75 +/- 6 PSI	1/4" PT
280530X	70 +/- 6 PSI	1/4" PT
289397X	75 +/- 6 PSI	1/8" PT



LP-3 Low Pressure Indicator

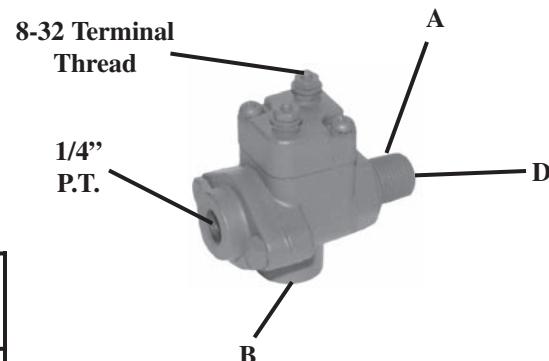
DOUBLE TERMINAL

PART NUMBER	CUT-OUT PRESSURE	A P.T.
228750X	60 +/- 6 PSI	1/4" PT
275083X*	See Note	1/4" PT
276599X	30 +/- 3 PSI	1/4" PT
277155X	50 +/- 5 PSI	1/4" PT
280743X	60 +/- 6 PSI	1/4" PT
284793X	80 +/- 6 PSI	1/4" PT
284833X	70 +/- 6 PSI	1/4" PT

* The DS-1 valve performs the function of a stop light switch and double check valve.

* It operates in conjunction with the brake valve or hand control valve by completing the stop light electrical circuit and by directing the flow of air pressure into a common outlet line from either of the two inlet lines.

PART NUMBER	A MALE	B FEMALE	D FEMALE
228050X	1/2" PT	1/4" PT	----
228165X	3/8" PT	1/4" PT	----
228520X	1/2" PT	3/8" PT	----
229493X	1/2" PT	1/4" PT	1/4" PT



DS-1 Double Check Valve and Stop Light Switch

* The ST-3 safety valve protects the air brake system against excessive pressure and should ideally be installed in the first or supply reservoir.

* Allows excessive air pressure to exhaust to the atmosphere.

ST-3 Safety Valve



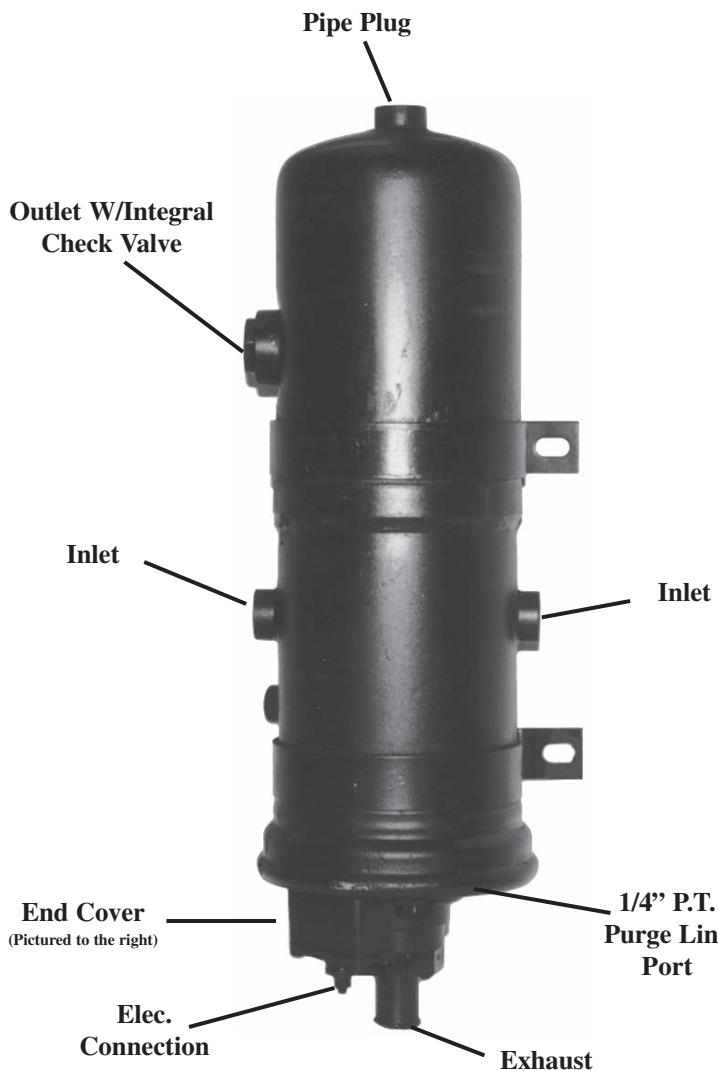
PART NUMBER	A P.T.	PRESSURE SETTING
284142X	1/4" PT	150 PSI
284143X	3/8" PT	150 PSI

BENDIX®- AIR VALVES

* The AD-2 air dryer is a desiccant type, inline filtration system that removes contaminants and provides dry air for the air brake system.

AD-2 AIR DRYERS & CARTRIDGES

AD-2 AIR DRYER

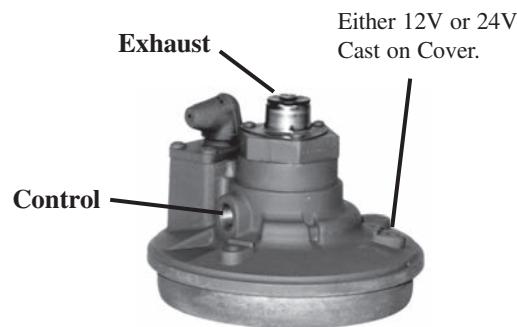


AD-2 AIR DRYER CARTRIDGE



#101900X

AD-2 AIR DRYER END COVER



SERVICE / MAINTENACE KITS

287053 Purge Valve Maintenance Kit

PART NUMBER	END COVER	INLET/OUTLET SIZE	DESCRIPTION
286934X	286875X	1/2" PT	12V D.C.-60W Heater
286936X	286876X	1/2" PT	24V D.C.-60W Heater
286960X	286875X	1" PT	12V D.C.-60W Heater Transit Coach
286961X	103253X	1" PT	24V D.C.-120W Heater Transit Coach

BENDIX®- AIR VALVES

* The AD-4 air dryer is a desiccant type, inline filtration system that removes contaminants and provides dry air for the air brake system.

AD-4 AIR DRYERS & CARTRIDGES

AD-4 AIR DRYER CARTRIDGE

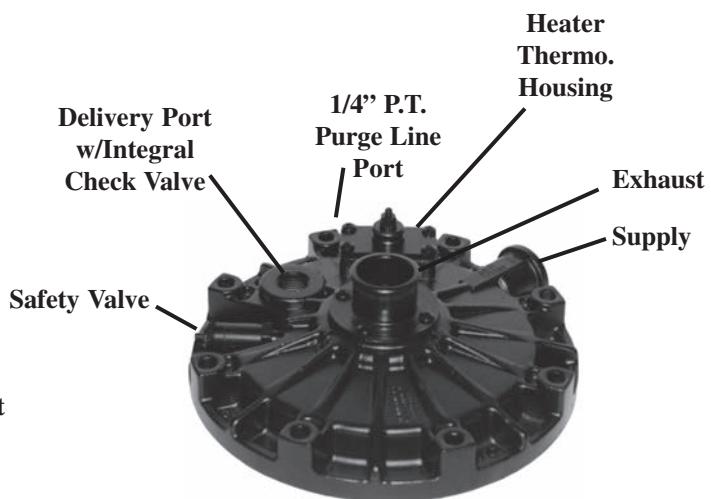


#104358X

AD-4 AIR DRYER



AD-4 AIR DRYER END COVER



SERVICE / MAINTENANCE KITS

103818	Purge Valve Maintenance Kit
103879	Seal Kit
103980	End Cover Maintenance Kit

PART NUMBER	END COVER	SUPPLY	DELIVERY	DESCRIPTION
065040X	065043X	(1)-3/4" PT	(1)-3/4" PT	24V D.C.-120W
065041X	065044X	(1)-1/2" PT	(1)-1/2" PT	12V D.C.-60W
065057X	065058X	(1)-3/4" PT	(1)-3/4" PT	12V D.C.-60W
065089X	065090X	(1)-3/4" PT	(1)-3/4" PT	24V D.C.-120W Transit Double Terminal
065102X	065103X	(1)-3/4" PT	(1)-3/4" PT	12V D.C.-60W Transit Double Terminal

BENDIX®- AIR VALVES

* The AD-9 air dryer is a desiccant type, inline filtration system that removes solid and vapor contaminants and provides dry air for the air brake system.

AD-9 AIR DRYERS & CARTRIDGES

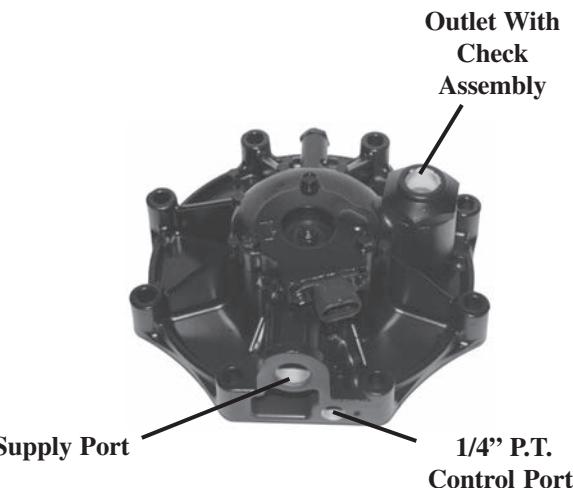
(Please refer to page 157 for additional information.)

AD-9 AIR DRYER CARTRIDGE

AD-9 AIR DRYER



AD-9 AIR DRYER END COVER



AD-9 AIR DRYER PURGE VALVE



#5004341X - 12 Volt
#5004342X - 24 Volt

SERVICE / MAINTENACE KITS

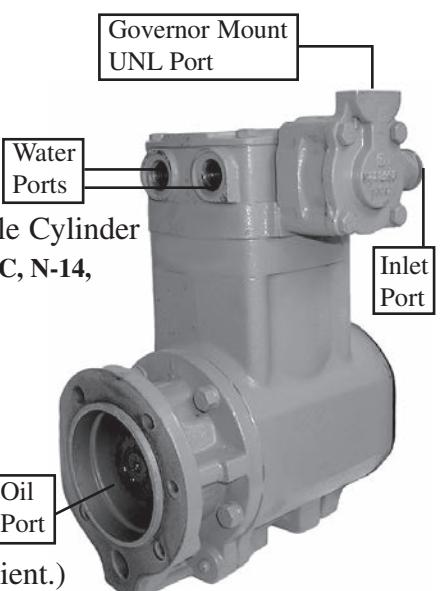
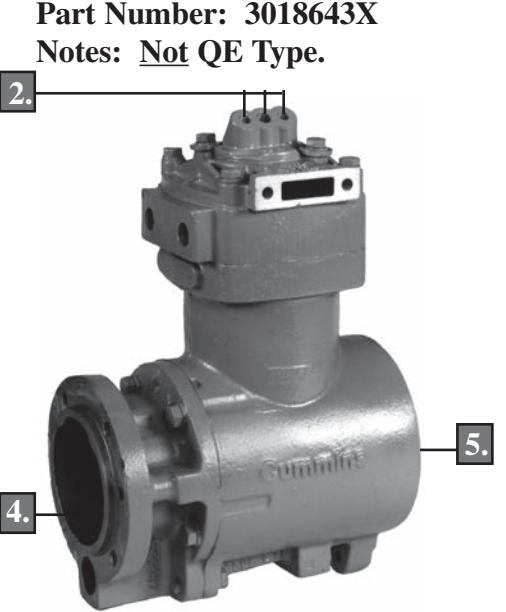
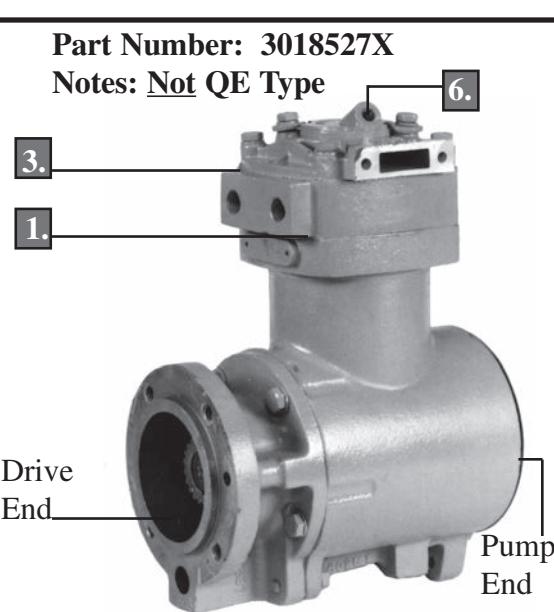
107798	Purge Valve Maintenance Kit
5004341X	12V Purge Valve
5004342X	24V Purge Valve
298948	Wiring Harness & Connector

PART NUMBER	END COVER	SUPPLY/DELIVERY PORT SIZE	HEATER VOLTAGE	NOTES
109685X	065231X	1/2" PT	12V	Old Number = 065225
109687X	065230X	3/4" PT	12V	----
109688X	065229X	3/4" PT	24V	Extended Purge
109689X	065654X	1/2" PT	12V	Soft Seat
109690X	065655X	3/4" PT	12V	Soft Seat
109691X	065653X	3/4" PT	24V	Soft Seat W/Extended Purge

CUMMINS® / HOLSET®- AIR COMPRESSORS

Crossover Information:

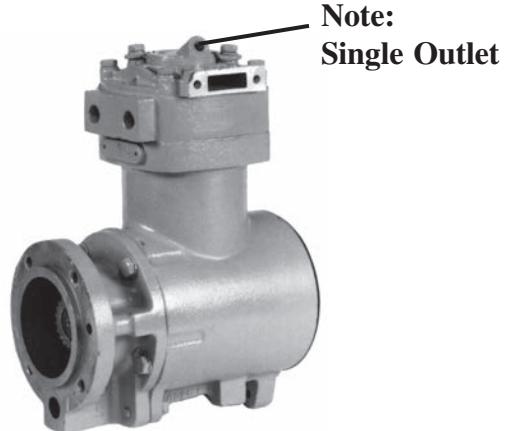
3018527X CROSSOVER NUMBERS				3018543X CROSSOVER NUMBERS			
AR7944	AR13140	3005840	3018527	AR8053	AR13135	AR40220	3018545
AR8311	AR13141	3010879	3018530	AR8161	AR13136	AR45211	3018551
AR8312	AR45603	3015034	3018531	AR8307	AR13139	3015630	3018553
AR13134	AR51688	3016082	3018541	AR8371	AR13142	3018534	3018555
			3018542	AR10650	AR13150	3018543	3024365
				AR11952	AR13160	3018544	*3047440 3049186
<i>SEE PAGE 155 FOR ADDITIONAL CUMMINS® / HOLSET® INFORMATION</i>				*3047440 L/1O Application			

<p>QE TYPE PART NUMBER: 3558072X</p> <ul style="list-style-type: none"> Model: Cummins® Single Cylinder Drive: Engines: NT, NTC, N-14, L-10 & M-11 Cooling: Water Type of Discharge: Threaded Mounting: Four Hole Cummins® Notes: QE, 296 (QE stands for Quiet Efficient.) 	<p>Part Number: 3018643X Notes: Not QE Type.</p> 	<p>Kits for Cummins® / Holset® Air Comp.</p> <table border="1"> <thead> <tr> <th>Part Number</th> <th>Description</th> <th>Location Reference #</th> </tr> </thead> <tbody> <tr> <td>AR12719</td> <td>Unloader Kit</td> <td></td> </tr> <tr> <td>154018</td> <td>Head Gasket</td> <td>1.</td> </tr> <tr> <td>3046298</td> <td>Unloader Body (Direct Mounting)</td> <td>2.</td> </tr> <tr> <td>3047159</td> <td>Cover Gasket</td> <td>3.</td> </tr> <tr> <td>3060538</td> <td>Flange Gasket (Drive End)</td> <td>4.</td> </tr> <tr> <td>3060539</td> <td>Flange Gasket (Fuel Pump End)</td> <td>5.</td> </tr> <tr> <td>3558624</td> <td>Unloader Body (Remote Mounting) ...</td> <td>6.</td> </tr> <tr> <td>3559568</td> <td>QE Unloader Kit</td> <td></td> </tr> <tr> <td>3559509</td> <td>Major Head Kit (With unloader on top, and Not QE Type.)</td> <td></td> </tr> <tr> <td>3559549</td> <td>QE Head Kit (For QE w/big unloader and block on the side. Unloader included in Kit.)</td> <td></td> </tr> </tbody> </table> 	Part Number	Description	Location Reference #	AR12719	Unloader Kit		154018	Head Gasket	1.	3046298	Unloader Body (Direct Mounting)	2.	3047159	Cover Gasket	3.	3060538	Flange Gasket (Drive End)	4.	3060539	Flange Gasket (Fuel Pump End)	5.	3558624	Unloader Body (Remote Mounting) ...	6.	3559568	QE Unloader Kit		3559509	Major Head Kit (With unloader on top, and Not QE Type.)		3559549	QE Head Kit (For QE w/big unloader and block on the side. Unloader included in Kit.)	
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CUMMINS® / HOLSET®- AIR COMPRESSORS

- * **Model:** Single Cylinder
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of**
 - Discharge:** Threaded
- * **Mounting:** Flange
- * **Notes:** For remote mount governor application.
- * **Unloader Kit:** #AR12719

Cummins® Flange Mount



PART NUMBER
3018527X

- * **Model:** Single Cylinder
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of**
 - Discharge:** Threaded
- * **Mounting:** Flange
- * **Notes:**
- * **Unloader Kit:** #AR12719

Cummins® Flange Mount



PART NUMBER
3018543X

- * **Model:** Holset®-Mack® Single Cylinder
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of**
 - Discharge:** Threaded
- * **Mounting:** Extended Flange Mount
- * **Notes:** Equipped for power steering.

Cummins® / Holset® Flange Mount (Mack® Applications)



PART NUMBER
3558000X

CUMMINS® / HOLSET®- AIR COMPRESSORS

- * Model: Single Cylinder
- * Drive: Gear
- * Cooling: Water
- * Type of Discharge: Threaded
- * Mounting: Flange
- * Notes:

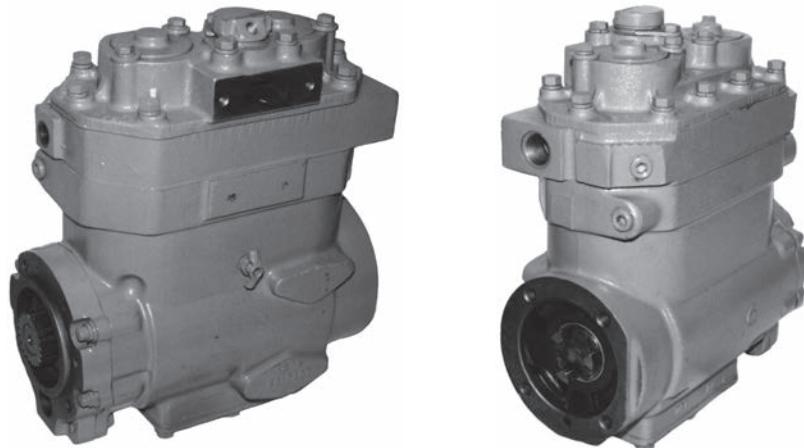
Cummins® / Holset® Flange Mount



PART NUMBER
3558006X

- * Model: Twin Cylinder
- * Drive: Gear
- * Cooling: Water
- * Type of Discharge: Threaded
- * Mounting: Flange
- * Notes:

Cummins® / Holset® Flange Mount



PART NUMBER
3048680X

* The Cummins® fuel solenoid is an electric shut-down valve and is held open while current is flowing through the solenoid.

* When current is not flowing, the valve will shut-down unless it is manually locked open.

Cummins® Fuel Solenoid



Manual Adjustment Screw

PART NUMBER	VOLTAGE
6997312X	12 Volt
6997324X	24 Volt

FULLER® - VALVES

* The Fuller® valve is used in conjunction with the shift block to shift the transmission of a vehicle from high to low range and vice-versa.
* OLD STYLE 7, 8, 9, 10 Speed.

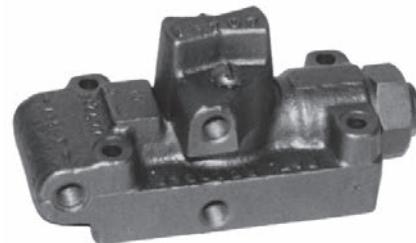
FULLER® Push Pull Valve



PART NUMBER
A3546X

* The Fuller® shift block is used to shift the transmission of a vehicle from high to low range and vice-versa.

FULLER® Shift Block



PART NUMBER
A4688X

* The Eaton®/Fuller® shift block is used to shift the transmission of a vehicle from high to low range and vice-versa.

EATON®/FULLER® Shift Block



PART NUMBER
A5000X

FULLER® - VALVES

- * Available in **NEW ONLY**.
- * The transmission range valve features a “rubberized” shift knob cover for driver comfort.
- * 1/16” NPT for all ports.
- * Includes upper and lower covers.
- * 13 Speed - Direct & Overdrive.

PART NUMBER
A4900
A6913

Fuller® Style Transmission Range Valve



- * Available in **NEW ONLY**.
- * The transmission range valve features a “rubberized” shift knob cover for driver comfort.
- * 1/16” NPT for all ports.
- * Includes upper and lower covers.
- * 7, 8, 9, 10 Speed - Direct & Overdrive.

PART NUMBER
A5010
A6909

Fuller® Style Transmission Range Valve



- * Available in **NEW ONLY**.
- * The transmission range valve features a “rubberized” shift knob cover for driver comfort.
- * 1/16” NPT for all ports.
- * Includes upper and lower covers.
- * 8LL, 15 Speed.
- * “Deep Reduction” Transmission.

PART NUMBER
A5015
A6915

Fuller® Style Transmission Range Valve



“Red”
Splitter
Knob

“Black”
Hi/Lo
Knob

“Blue”
Splitter
Knob

“Black”
Hi/Lo
Knob

FULLER® - VALVES

- * Available in **NEW ONLY**.
- * 1/4" NPT Inlet.
- * 1/8" NPT Outlet
- * Non-Adjustable Preset PSI at factory (58 to 62 PSI)

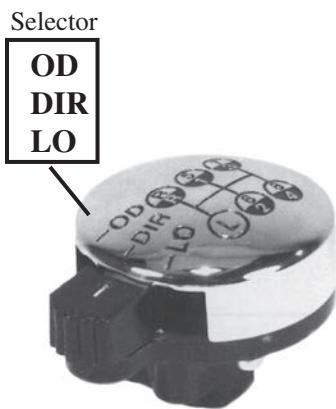
Fuller® Style Transmission Air Regulator



PART NUMBER
16743

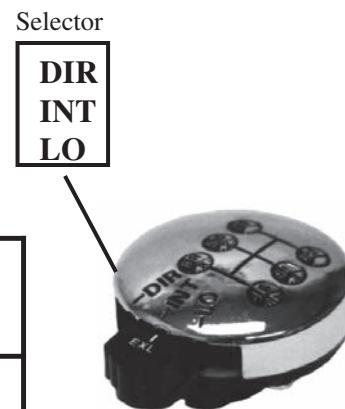
- * Available in **NEW ONLY**.
- * The transmission delector valve features a chrome plated cover.
- * 1/16" NPT for all ports.
- * This valve has a three (3) position selector.

Fuller® Style Transmission Selector Valves



OLD STYLE 13 Speed
(Does not use an A 3546X.)

PART NUMBER
A4487

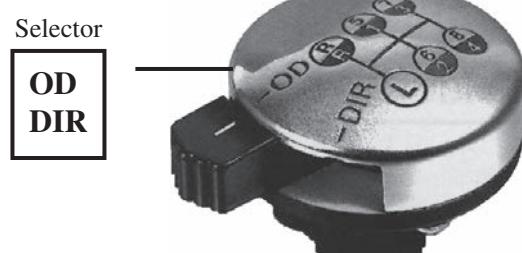


PART NUMBER
A4490

- * Available in **NEW ONLY**.
- * The transmission delector valve features a chrome plated cover.
- * 1/16" NPT for all ports.
- * This valve has a two (2) position selector.
- * OLD STYLE 13 Speed.
- * Must use an A3546X for Hi & Lo Range Shifts.

Fuller® Style Transmission Selector Valve

PART NUMBER
A4491



MIDLAND® - AIR COMPRESSORS

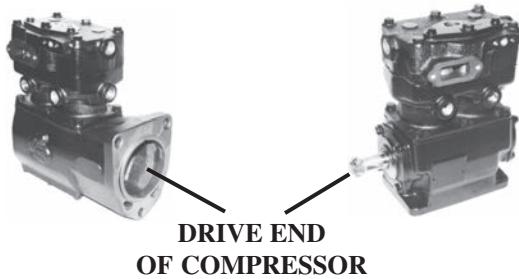
MIDLAND® AIR COMPRESSOR CROSSOVER

O.E.M. NUMBER	OUR REMAN NUMBER	O.E.M. NUMBER	OUR REMAN NUMBER	O.E.M. NUMBER	OUR REMAN NUMBER
N5060 Series	KN12200X	N5706E,H,L,N,R, T,Y,BD	KN12071X	N7011F,H	KN13111X
N5084 Series	KN7030X	N5706G,K,BC	KN12041X	N7012A,B	KN13120X
N5085 Series	KN7030X	N5706K,M,X,BB	KN12061X	N7014B	KN13140X
N5098, A	KN7000X	N5708,A,C,F,G,BA	KN12081X	N7015,A	KN13151X
N5098W,AW,CW, DW,EW	KN7030X	N5708B	KN12061X	N7016	KN13160X
N5120 Series	KN12050X	N5903,B,C,D,F,G, H,J,L,P,R,S,T,V,W,	KN12031X	N7202,A,D,C,H	KN16020X
N5137	KN12200X	Z,BA,BB,BD,BE,		N7204,A,B	KN16040X
N5212 Series	KN12190X	BF,BG,BJ,BK,BL,		N7205,D,E,F,H,J, M,N	KN16050X
N5125 Series	KN12131X	BM,BN		N7205A,B,C,G	KN16070X
N5217A,B,D,K,L, M,P,BB,BC,BH,BJ	KN12031X	N5903M,Y,BC,BH N5904,B,C,D,G,H, K,N,BA,BC,BD, BE,BF	KN12041X KN12101X	N7205T	KN16051X
N5217C,E,F,G,H, M,N,R,BA,BD,BE, BF,BG	KN12041X	N5904J,L,M,BB	KN12111X	N7206	KN16060X
N5222,A,B,C,D	KN12140X	N5908	KN12041X	N7208	KN16080X
N5224 Series	KN12160X			N7209	KN16090X
N5235 Series	KN12151X	N5909,C,D,H,BA	KN12171X	N7210,A,C,D,E	KN16100X
N5303,B,D,F,H,M, S,W,X	KN7040X	N5909A,J	KN12101X	N7211,A	KN16110X
N5303C,E,G,J,N,V	KN7050X	N6000,F,BB	KN12020X		
N5308A,C,D	KN7040X	N6000B,E,G,H,K,L,	KN12010X		
N5308,B	KN7050X	BA,BC,BD,BE			
N5309	KN7170X	N6300 Series	KN7030X	N7211E	KN16111X
N5309A	KN7180X	N6400 Series		N7212,A	KN16120X
N5310 Series	KN7041X	N6403 Series		N7216	KN16160X
N5408,A,B,D	KN7010X	N7002,C,F,G, M,X	KN13060X	N7225	KN16250X
N5502A,B,F	KN7070X	N7202,C,H	KN16020X	N7311,A	KN14110X
N5502,C,G,J	KN7060X	N7002A,L,V,W, AA,AC,AE,AG,AH,			
N5502H	KN7080X	AJ,AL,K,L,N,P,R,T		N7311AA,AB	KN14111X
N5504	KN7060X			N7502,B,J	KN85020X
N5504A	KN7080X	N7002Z	KN13022X	N7602,A,C,J	KN86020X
N5504B	KN7070X	N7004,A,B,C,D	KN13040X	NT7002AA,AB,AM,W	KN13020X
N5601,B,C,D,F,G, K,M,P,V	KN7010X	N7004F	KN13040X	NT7004B	KN13040X
N5601E,J,L,R,S,W	KN7020X	N7005,A,B,C,D,E, G,H,J,K,L,M,P,V, W,AC,AD	KN13050X	NT7005,ADAK	KN13053X
N5603,D	KN7010X	N7005AG	KN13051X	NT7005M	KN13051X
M5603A,C	KN7020X	N7005F,R	KN13070X	NT7010F,H	KN13100X
N5700,B,D,F,H,P	KN12031X	N7005AG	KN13051X	NT7011C	KN13111X
N5700C,E,G,J,N	KN12041X			NT7012B	KN13120X
N5700K,L	KN12061X	N7006,B,C	KN13060X		
		N7008	KN13080X		
N5702B	KN12031X	N7008A	KN13081X	NT7015B	KN13151X
N5706,A,F,J,P,S, V,W,BA	KN12031X	N7009,C,D,E,F,G	KN13090X	NT7020	KN13200X
		N7010,A,B,C,D,F,J,H	KN13100X	NT7022E	KN13220X
		N7011,A,B	KN13110X	NT7030,A	KN13300X
				NT7204,D,E	KN16040X
				NT7202F	KN16060X
				NT7205V	KN16051X
				NT7205Y	KN16053X
				NT7211B	KN16111X
				NT7220	KN16200X
				NT7305	KN14050X
				NT7523,B,C,D,E,F, G,J,K	KNT85230X
				NT7623,A,C,D,E,H	KNT86230X

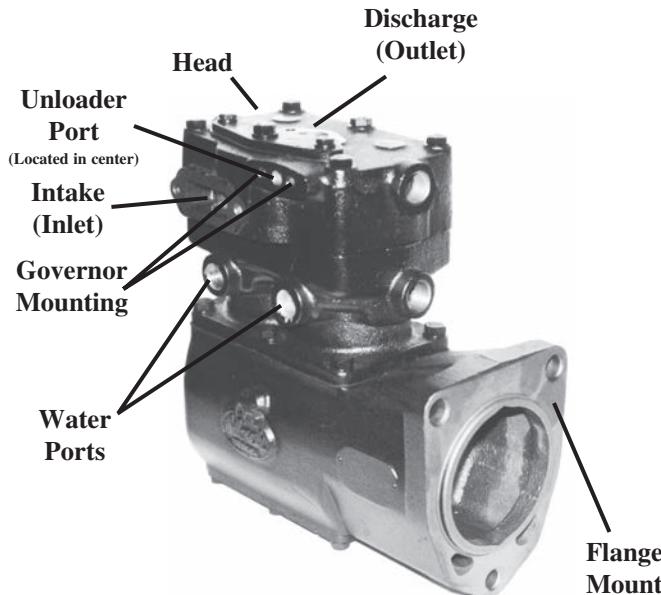
MIDLAND® - AIR COMPRESSORS

IMPORTANT NOTICE

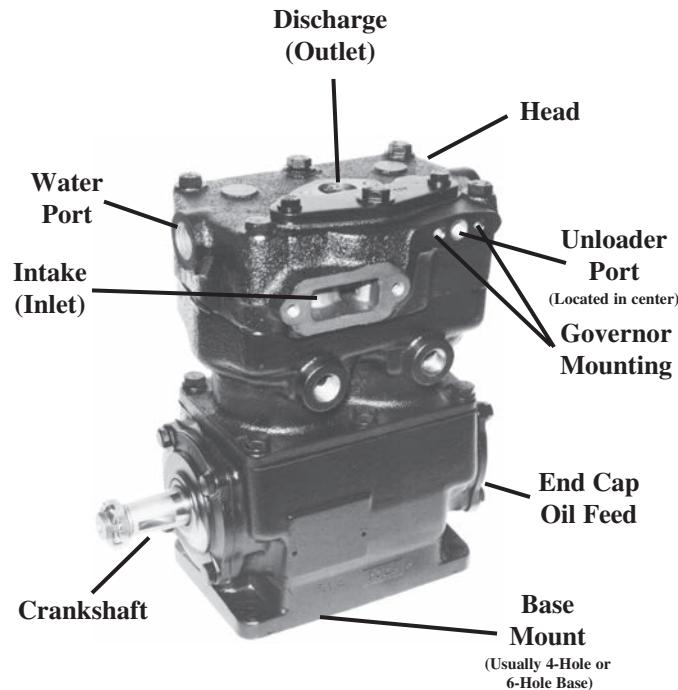
Identification and porting references on MIDLAND® air compressors are looking at the “drive” end of the compressor. The crankshaft should be facing towards you.



IDENTIFICATION OF MIDLAND® AIR COMPRESSORS

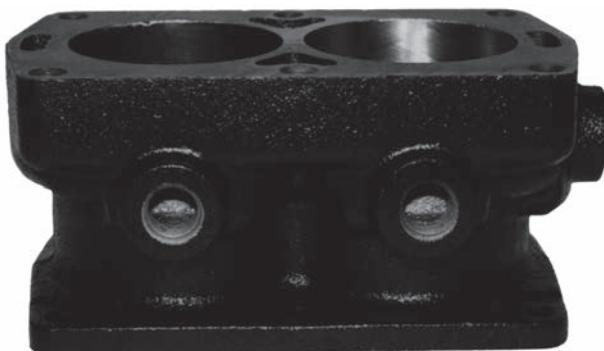


**FLANGE MOUNT
MIDLAND AIR COMPRESSOR**

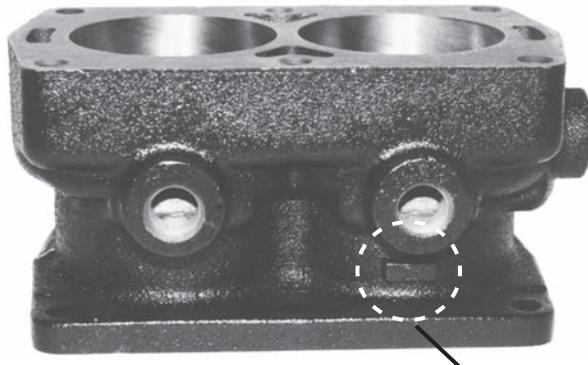


**BASE MOUNT
MIDLAND AIR COMPRESSOR**

IDENTIFICATION OF MIDLAND® EL1300 VS. EL1600



1300 BLOCK



**TABBED OR RAISED
SECTION ON BLOCK**

1600 BLOCK

MIDLAND® - AIR COMPRESSORS

Air Compressor Kits

Compressor Model	EL740	EL850	EL1300	EL1600
Number of Cylinders	2	1	2	2
Gasket and Seal Kit (Flange Mount)	RN26GT	RN26JH	RN26HA (Caterpillar®) RN26GX (Cummins®) RN26GY (Detroit®) RN26GZ (Mack®)	RN26HA (Caterpillar®) RN26GX (Cummins®) RN26GY (Detroit®) RN26GZ (Mack®)
Gasket and Seal Kit (Base Mount)	RN26GV	RN26JG	RN26GW	RN26GW
Piston Ring Set:				
Standard	RN26ER	RNT26JE	RN26ED	RN26ED
.020 Oversize	RN26ET	RNT26JF	RN26EE	RN26EE
Unloader Repair Kit	N/A	RNT26JB	RNT26A	RNT26A
Connecting Rod Bearing Assembly Kits:				
Standard	RN26A	RN26EG	RN26EG	RN26EG
.010 Undersize	RN26AL	RN26EH	RN26EH	RN26EH
.020 Undersize	RN26AM	RN26EJ	RN26EJ	RN26EJ

We Now Offer Holset® Air Compressors

(Please refer to page 155 for additional information.)

MIDLAND® - AIR COMPRESSORS

- * **Model:** EL740
- * **Drive:** Pulley/Belt
- * **Cooling:** Air
- * **Type of Discharge:** Threaded
- * **Mounting:** 4-Hole Base
- * **Notes:** End cap oil feed only.

KN7000X Pictured

Base Mount EL740



- * **Model:** EL740
- * **Drive:** Pulley/Belt
- * **Cooling:** Air
- * **Type of Discharge:** Flange
- * **Mounting:** 4-Hole Base
- * **Notes:** Base oil option.

KN7010 Pictured

Base Mount EL740



PART NUMBER	INLET PORT	OUTLET PORT
KN7010X	Right	Right
KN7020X	Left	Left

- * **Model:** EL740
- * **Drive:** Pulley/Belt
- * **Cooling:** Water(Head) / Air(Block)
- * **Type of Discharge:** Threaded
- * **Mounting:** 4-Hole Base
- * **Notes:** Base oil option.

KN7030X Pictured

Base Mount EL740



PART NUMBER	INLET PORT	OUTLET PORT
KN7030X	Right	Left

MIDLAND® - AIR COMPRESSORS

- * **Model:** EL740
 - * **Drive:** Pulley/Belt
 - * **Cooling:** Air(Block) / Water(Head)
 - * **Type of Discharge:** Flange
 - * **Mounting:** 4-Hole Base
 - * **Notes:** Non-Rotatable Head.
- KN7040X Pictured**

Base Mount EL740



PART NUMBER	INLET PORT	OUTLET PORT
KN7040X	Right	Right
KN7050X	Left	Left

- * **Model:** EL740
 - * **Drive:** Pulley/Belt
 - * **Cooling:** Air(Block) / Water(Head)
 - * **Type of Discharge:** Flange
 - * **Mounting:** 4-Hole Base
 - * **Notes:** Special bottom plate for Ford®.
- KN7041X Pictured**

Base Mount EL740



PART NUMBER	INLET PORT	OUTLET PORT
KN7041X	Left	Left

- * **Model:** EL740
 - * **Drive:** Pulley/Belt
 - * **Cooling:** Air(Block) / Water(Head)
 - * **Type of Discharge:** Flange
 - * **Mounting:** 6-Hole Base
 - * **Notes:** Base oil drain.
- KN7180X Pictured**

Base Mount EL740



PART NUMBER	INLET PORT	OUTLET PORT
KN7170X	Right	Right
KN7180X	Left	Left

MIDLAND® - AIR COMPRESSORS

*** Model:** EL850
*** Drive:** Belt/Pulley
*** Cooling:** Air
*** Type of Discharge:** Threaded
*** Mounting:** 4-Hole Base
*** Notes:**
 End Cap Oil Feed.
 Base Oil Drain.
 KN85020X Pictured

Base Mount EL850



PART NUMBER	INLET PORT	OUTLET PORT
KN85020X	Right	Top

*** Model:** EL850
*** Drive:** Belt/Pulley
*** Cooling:** Air(Block) / Water(Head)
*** Type of Discharge:** Threaded
*** Mounting:** 4-Hole Base
*** Notes:**
 End Cap Oil Feed.
 Base Oil Drain.
 KN86020X Pictured

Base Mount EL850



PART NUMBER	INLET PORT	OUTLET PORT
KN86020X	Right	Top

*** Model:** EL1300
*** Drive:** Pulley/Belt
*** Cooling:** Water
*** Type of Discharge:** Top/Flange
*** Mounting:** 4-Hole Base
*** Notes:** KN13022X has a special bottom plate for Ford® applications. End cap oil feed. KN13060X has base oil feed.

Special Bottom Plate
For Ford®
(For KN13022X)



KN13020X
Pictured

Base Mount EL1300

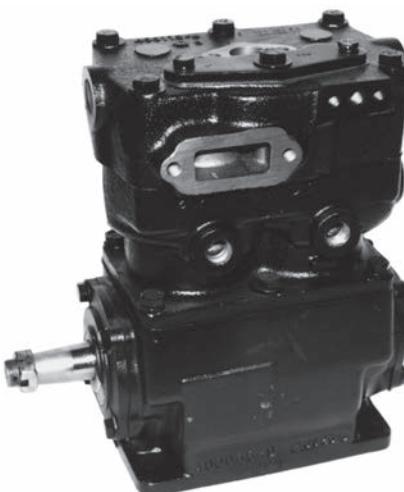


PART NUMBER	ROTATION HEAD	ROTATION BLOCK
KN13020X	Right	Right
KN13021X	Left	Left
KN13022X	Left	Right
KN13060X	Right	Right

MIDLAND® - AIR COMPRESSORS

- * Model: EL1600
- * Drive: Pulley
- * Cooling: Water
- * Type of Discharge: Top/Flange
- * Mounting: 4-Hole Base
- * Notes: KN16060 has base oil feed.
KN16020X Pictured

Base Mount EL1600



PART NUMBER	ROTATION HEAD	ROTATION BLOCK
KN16020X	Right	Right
KN16060X	Right	Right

- * Model: EL1300
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Top/Flange
- * Mounting: Flange
- * Notes: KN13081X block is rotated 180°. End cap oil feed. Flange oil drain. KN13170X & KN13200X have threaded flange. KN13080X Pictured

**Flange Mount EL1300
(Caterpillar® Application)**



PART NUMBER	CATERPILLAR® ENGINE	ROTATION HEAD	ROTATION BLOCK	SHAFT
KN13080X	1673-1674	Right	Right	Tapered
KN13081X	3406B	Right	Right	----
KN13170X	3406	Right	Right	Tapered
KN13200X	3406B	Right	Right	Tapered
KN13300X	3176	Right	Right	Splined

- * Model: EL1300/1600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Top/Flange
- * Mounting: Flange
- * Notes: For Caterpillar® 3406-B Engines. Flange mount, gear drive. End cap oil feed. Flange oil drain. Spline shaft. KN13120X Pictured

**Flange Mount EL1300/1600
(Caterpillar® Application)**



PART NUMBER	CATERPILLAR® ENGINE	ROTATION HEAD	ROTATION BLOCK
KN13120X	3406B	Right	Right
KN16120X	----	Right	Right

MIDLAND® - AIR COMPRESSORS

- * **Model:** EL1600
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of Discharge:** Top/Flange
- * **Mounting:** Flange
- * **Shaft:** Tapered shaft
- * **Notes:** KN16200X has threaded mounting holes.
KN16080X Pictured

**Flange Mount EL1600
(Caterpillar® Application)**



PART NUMBER	CATERPILLAR® ENGINE	ROTATION HEAD	ROTATION BLOCK
KN16080X	1673-1674	Right	Right
KN16200X	3406B	Right	Right

- * **Model:** EL1300
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of Discharge:** Top/Flange
- * **Mounting:** Flange
- * **Shaft:** Splined Shaft
- * **Notes:** For Caterpillar® 3306 Engines. Flange mount, gear drive. End cap oil feed. Flange oil drain.

**Flange Mount EL1300
(Caterpillar® Application)**



PART NUMBER	CATERPILLAR® ENGINE	ROTATION HEAD	ROTATION BLOCK
KN13151X	3306	Right	Right

- * **Model:** EL1300/1600
- * **Drive:** Engine
- * **Cooling:** Water
- * **Type of Discharge:** Top/Flange
- * **Mounting:** Flange
- * **Notes:** Double flange mount gear drive. Flange oil feed. Flange or bottom oil drain.

KN13040X Pictured

**Flange Mount EL1300/1600
(Cummins® Application)**



PART NUMBER	CUMMINS® ENGINE	ROTATION HEAD	ROTATION BLOCK
KN13040X	In-Line	Right	Right
KN16040X	In-Line	Right	Right

MIDLAND® - AIR COMPRESSORS

*** Model:** EL850
*** Drive:** Engine
*** Cooling:** Air (KNT85230X)
 Water (KNT86230X)

*** Type of Discharge:** Threaded
*** Mounting:**
*** Notes:** For Cummins® B-Series Engines.
 Flange mount, gear drive. Bottom oil drain.
 KN86230X Pictured

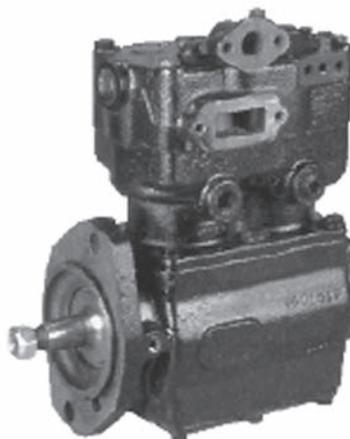
Flange Mount EL850
(Cummins® Application)



PART NUMBER	INLET PORT	OUTLET PORT
KN85230X	Right	Top
KN86230X	Right	Top

*** Model:** EL1300
*** Drive:** Engine
*** Cooling:** Water
*** Type of Discharge:** Top/Flange
*** Mounting:** Flange
*** Notes:** For Cummins® C-Series Engines. Flange mount, gear drive. Side oil feed. Flange oil drain.
 KN13220X Pictured

Flange Mount EL1300
(Cummins® Application)



PART NUMBER	CUMMINS® ENGINE	ROTATION HEAD	ROTATION BLOCK
KN13220X	C Series	Right	Right

*** Model:** EL740
*** Drive:** Engine
*** Cooling:** Air(Block) / Water(Head)
*** Type of Discharge:** Flange
*** Mounting:** Flange
*** Notes:** KN7080X Pictured

Flange Mount EL740
(Detroit Diesel® Application)



PART NUMBER	FLANGE TILT	INLET PORT	OUTLET PORT
KN7070X	0° Tilt	Right	Right
KN7080X	0° Tilt	Left	Left

MIDLAND® - AIR COMPRESSORS

*** Model:** EL1300
*** Drive:** Engine
*** Cooling:** Water
*** Type of**
Discharge: Top/Flange
*** Mounting:** Flange
*** Notes:** Flange mount, gear drive. End cap oil feed.
 Oil drain internal at flange. KN13051X is for 60-Series, Non-Thru-Drive.
KN13050X Pictured

Flange Mount EL1300 (Detroit Diesel® Application)



*** Model:** EL1300
*** Drive:** Engine
*** Cooling:** Water
*** Type of**
Discharge: Top/Flange
*** Mounting:** Flange
*** Notes:** Flange mount, gear drive. End cap oil feed.
 Flange oil drain.
KN13090X Pictured

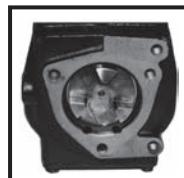
Flange Mount EL1300 (Detroit Diesel® Application)



*** Model:** EL1300/1600
*** Drive:** Engine
*** Cooling:** Water
*** Type of**
Discharge: Top/Flange
*** Mounting:** Flange
*** Notes:** Flange mount, gear drive. End cap oil feed.
 Oil drain internal at flange. 60-Series Thru-Drive.
KN13053X Pictured

Flange Mount EL1300/1600 (Detroit Diesel® Application)

PART NUMBER	FLANGE TILT	ROTATION HEAD	ROTATION BLOCK
KN13053X	0° Tilt	Right	Left
KN16053X	0° Tilt	Right	Left



MIDLAND® - AIR COMPRESSORS

- * Model: EL1600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Top/Flange
- * Mounting: Flange
- * Notes: Flange mount, gear drive. End cap oil feed. Oil drain internal at flange. KN16051X is for 60-Series, Non-Thru-Drive. **KN16050X Pictured**

**Flange Mount EL1600
(Detroit Diesel® Application)**



PART NUMBER	FLANGE TILT	ROTATION HEAD	ROTATION BLOCK
KN16050X	0° Tilt	Right	Right
KN16051X	0° Tilt	Right	Right
KN16070X	1° Tilt	Right	Left

- * Model: EL1600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Top/Flange
- * Mounting: Flange
- * Notes: End cap oil feed. Flange oil drain. **KN16090X Pictured**

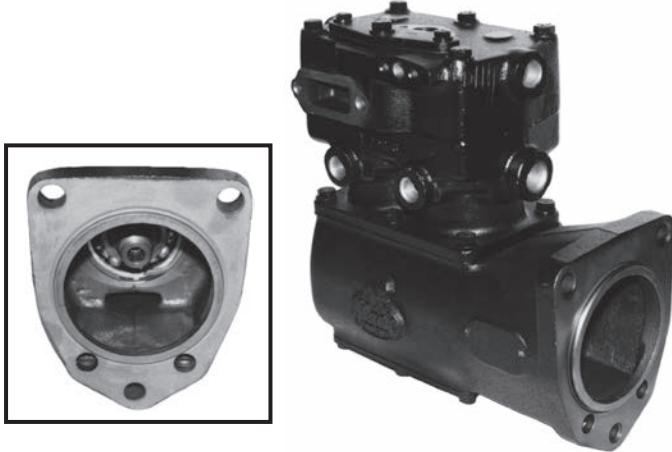
**Flange Mount EL1600
(Detroit Diesel® Application)**



PART NUMBER	FLANGE TILT	ROTATION HEAD	ROTATION BLOCK
KN16090X	41° Tilt	Right	Right
KN16100X	50° Tilt	Right	Right
KN16160X	45° Tilt	Right	Right
KN16250X	75° Tilt	Right	Right

- * Model: EL1300/1600
- * Drive: Engine
- * Cooling: Water
- * Type of Discharge: Top/Flange
- * Mounting: Flange
- * Notes: Flange mount, gear drive. Crankshaft end oil feed. Flange oil drain. **KN13110X Pictured**

**Flange Mount EL1300/1600
(Mack® Application)**

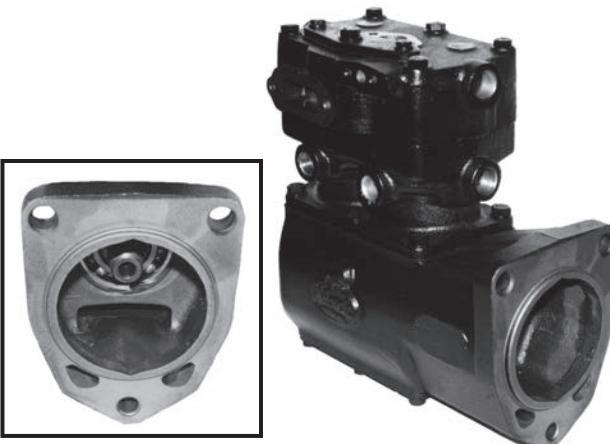


PART NUMBER	ROTATION HEAD	ROTATION BLOCK
KN13110X	Left	Left
KN16110X	Left	Left

MIDLAND® - AIR COMPRESSORS

- * **Model:** EL1300/1600
 - * **Drive:** Engine
 - * **Cooling:** Water
 - * **Type of Discharge:** Top/Flange
 - * **Mounting:** Flange
 - * **Notes:** Flange mount, gear drive. Crankshaft end oil feed. Flange oil drain. #13111/16111X are for power steering.
- KN13111X Pictured**

**Flange Mount EL1300/1600
(Mack® Application)**

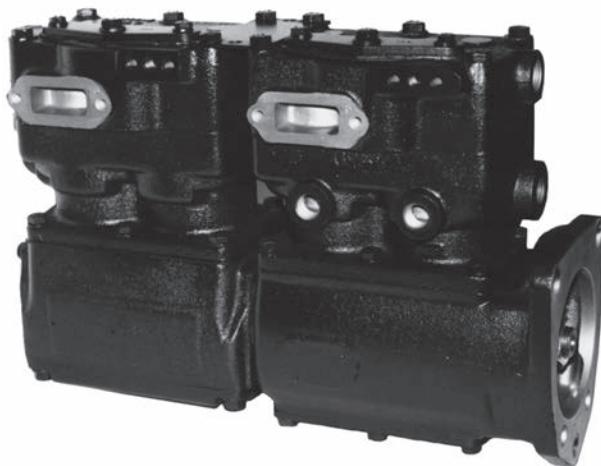


PART NUMBER	ROTATION HEAD	ROTATION BLOCK
KN13111X	Left	Left
KN16111X	Left	Left

- * **Model:** EL3200
 - * **Drive:** Engine
 - * **Cooling:** Water
 - * **Type of Discharge:** Flange
 - * **Mounting:** Flange
 - * **Notes:** For Mack® In-Line 6-Cylinder Engines.
- KN14110X Pictured**

Flange mount, gear drive. Crankshaft end oil feed. Flange and bottom oil drain.

**Flange Mount EL3200
(Mack® Application)**



PART NUMBER	MACK ENGINE	ROTATION HEAD	ROTATION BLOCK
KN14110X	In-Line	Left/Left	Left/Right
KN14111X	In-Line	Left/Left	Left/Right

MIDLAND® Head Assemblies

PART NUMBER	COOLING	COMPRESSOR APPLICATION
KNT17090X	Water	EL-1300/1600
KN17091X	Water(Rear)	EL-3200
KN17092X	Water(Front)	EL-3200



PART NUMBER	COOLING	COMPRESSOR APPLICATION
KN17300X	Air	EL-850
KN17400X	Water	EL-850



MIDLAND® - AIR VALVES

MIDLAND® AIR VALVE CROSSOVER

O.E.M. NUMBER	OUR REMAN NUMBER	O.E.M. NUMBER	OUR REMAN NUMBER	O.E.M. NUMBER	OUR REMAN NUMBER
AD83034	A83034X	N20949AA	KN34060X	N30162MA	KN34110X
AD83580	A83580X	N20949CF	KN34061X	N30162NB	KN34100X
AD87940	A87940X	N20950AA	KN28030X	N30300	KN34070X
AF85490	A85490X	N20952AC	KN32040X		
AF86472	A86472X	N20952AD	KN32041X		
AF86473	A86473X	N20954A	KN25060X		
AF86477	A86477X	N20960	KN20021X		
AF103600	A103600X	N20961	KN20025X		
N4301A	KN30100X	N20964	KN20035X		
N4301AA	KN30300X	N20966A	KN34030X		
N4301BA	KN30200X	N20966B	KN25080X		
N4301CB	KN30400X	N20966F	KN25090X		
N4304AB	KN28601X	N20966G	KN25110X		
N4304AC	KN28600X	N20966M	KN25100X		
N4305A	KN26020X	N30073FB	KN25120X		
N4305AA	KN26010X	N30073GA	KN34050X		
N4400	KN20615X	N30073GE	KN34071X		
N10044K	KN31070X	N30096F	KN28060X		
N13440DF	KN20041X	N30096L	KN28061X		
N13440DL	KN20001X	N30096N	KN28080X		
N13526AG	KN23010X	N30096P	KN28085X		
N13526AJ	KN23000X	N30096PA	KN28300X		
N13526BL	KN23060X	N30099LA	KN22150X		
N13526J	KN23040X	N30099LB	KN22150X		
N13526Z	KN23020X	N30100AD	KN28071X		
N14488AE	KN20010X	N30100AG	KN28140X		
N14488AK	KN20020X	N30100AR	KN28065X		
N14514AA	KN20900	N30103BB	KN20541X		
N14514AB	KN20901	N30103BL	KN20542X		
N15759DC	KN31000X	N30105B	KN20580X		
N15759DD	KN31010X	N30105C	KN20590X		
N15760G	KN20061X	N30105D	KN20581X		
N15791D	KN20080X	N30105F	KN20071X		
N15791F	KN20090X	N30106D	KN28132X		
N15791J	KN20110X	N30106F	KN28131X		
N15817F	KN31050X	N30107BC	KN20551X		
N15817K	KN31060X	N30107BD	KN20552X		
N15902A	KN31170X	N30108BC	KN28500X		
N15902B	KN31171X	N30108BK	KN28510X		
N20404BE	KN20700X	N30108BK	KN28520X		
N20837	KN22100X	N30108BH	KN28531X		
N20878A	KN24000X	N30110A	KN28550X		
N20928CH	KN20033X	N30161AH	KN20561X		
N20938CK	KN20031X	N30161AJ	KN20562X		

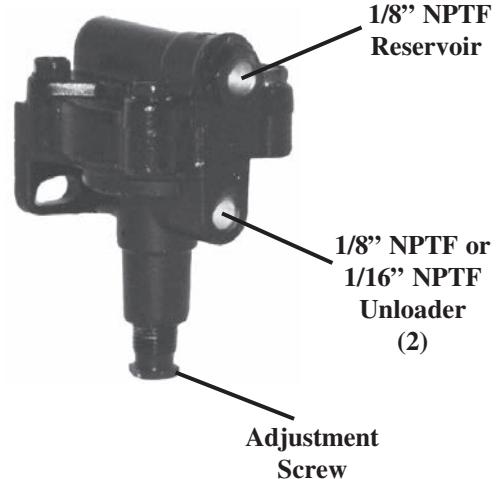
MIDLAND® - AIR VALVES

* The governor operates in conjunction with the compressor unloading mechanism and controls system air pressure between a predetermined maximum and minimum pressure.
* This particular governor is a diaphragm-type.

NOTE: 1/16" unloader ports are for direct compressor mounting. The 1/8" unloader ports are for remote governor mounting.

PART NUMBER
KN18511X

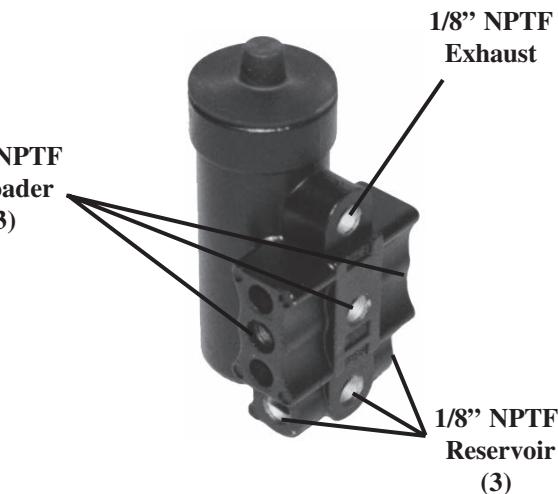
MIDLAND® Air Governor



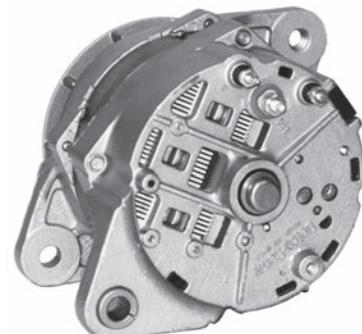
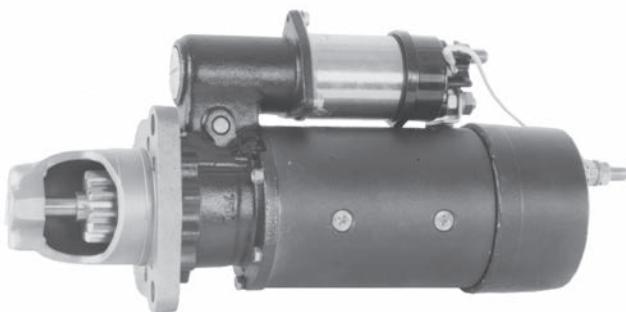
* The governor operates in conjunction with the compressor unloading mechanism and controls system air pressure between a predetermined maximum and minimum pressure.
* This particular governor is a piston-type.

PART NUMBER	RESERVOIR	CUT IN PRESSURE	NOTES
KN18530X	(3)-1/8-27 NPTF	105-110	---
KN18531X	(3)-1/4-18 NPTF	105-110	---
KN18534X	(3)-1/8-27 NPTF	95-100	HIGH TEMP

MIDLAND® Air Governor



WE ALSO OFFER A WIDE RANGE OF QUALITY HEAVY DUTY ELECTRICAL PRODUCTS.



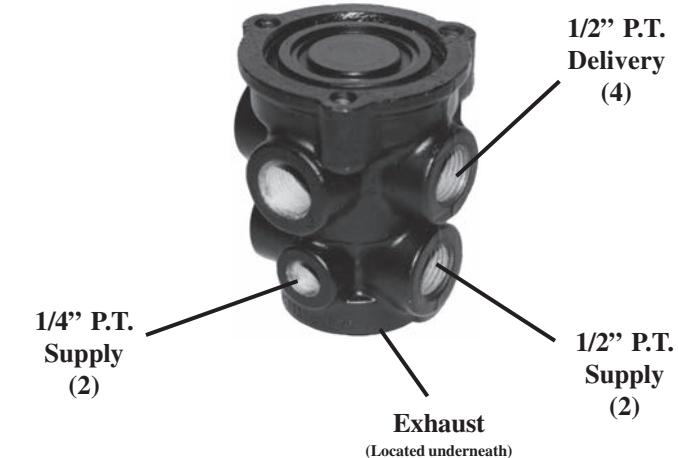
MIDLAND® - AIR VALVES

- * This valve is a single circuit foot valve.
- * It is used primarily on pre-FMVSS-121 vehicles.
- * The valve is a foot operated service brake control.
- * All supply and delivery ports are common.

NOTE: Studs Not Furnished.

PART NUMBER
KN22100X

MIDLAND® Single Circuit Foot Valve

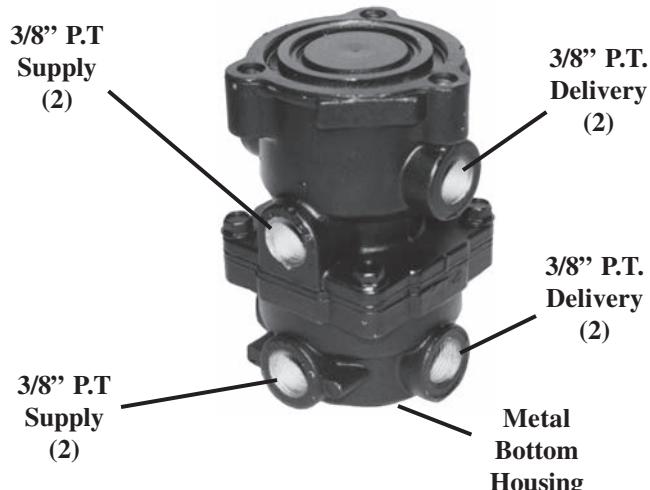


- * This valve is a dual circuit foot valve in which there are two separated, individual service brake circuits in a single housing.
- * Each circuit individually controls front and rear service brakes.
- * Meets FMVSS-121 requirements.

NOTE: Studs Not Furnished.

PART NUMBER
KN22140X

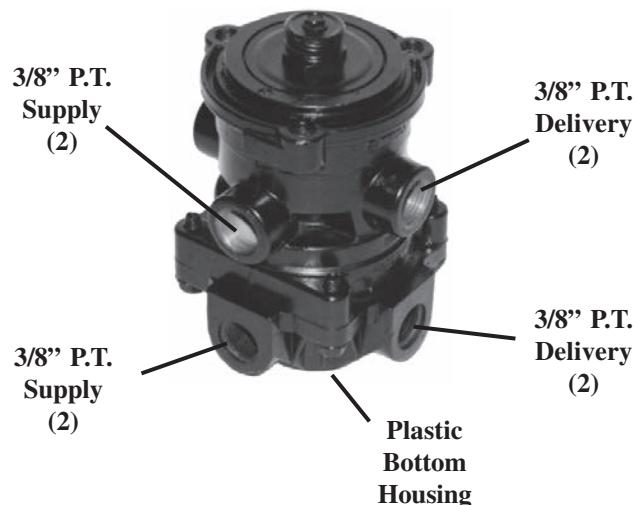
MIDLAND® Dual Circuit Foot Valve



- * This valve is a dual circuit foot valve in which there are two separated, individual service brake circuits in a single housing.
- * Each circuit individually controls front and rear service brakes.
- * Meets FMVSS-121 requirements.

PART NUMBER
KN22150X

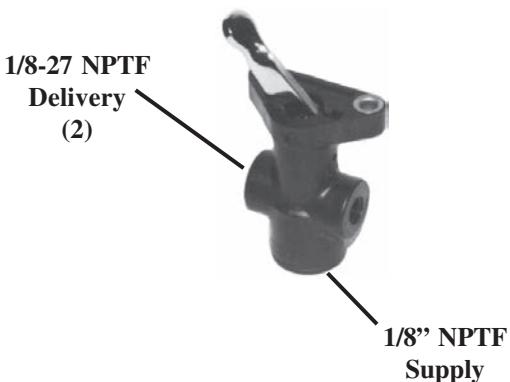
MIDLAND® Dual Circuit Foot Valve



MIDLAND® - AIR VALVES

- * This hand operated flipper-style valve is generally used for manual control of front wheel brake limiting and for inter-axle differential lock-out control.
- * It is usually for panel mounting.
- * It is an on-off, non-automatic two position valve.

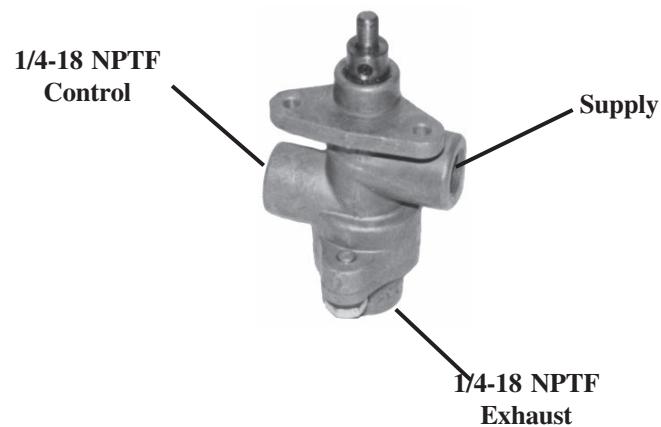
MIDLAND® Hand Operated Valve (Flipper Style)



PART NUMBER
KN20000X

- * These valves are automatic valves that “pop-out” and exhaust at 20-45 PSI.
- * The automatic actuation applies trailer brakes via the tractor protection valve, tractor spring brakes or both as plumbing dictates.
- * The KN20020X provides for mechanical control and remote or “bulkhead” mounting as opposed to the two-screw panel mount.

MIDLAND® Hand Operated Valve (Push-Pull Style)



PART NUMBER	SUPPLY
KN20010X	(1)-1/4-18 NPTF
KN20020X	(1)-1/8-18 NPTF

- * The KN20030X is an automatic or manual control valve generally used for tractor spring brake control. Automatically exhausts or “pops” at approximately 40 PSI, thus applying the spring brakes.
- * The KN20030AX has a low (approx. 10 PSI) “pop-out” pressure and should not be used interchangeably with the KN20030X.
- * Generally used for manual control of front wheel brake limiting and for inter-axle differential lock-out control.

MIDLAND® Hand Operated Valve (Push-Pull Style)



PART NUMBER	POP-OUT PRESSURE
KN20030X	25-35 PSI
KN20030AX	7-13 PSI

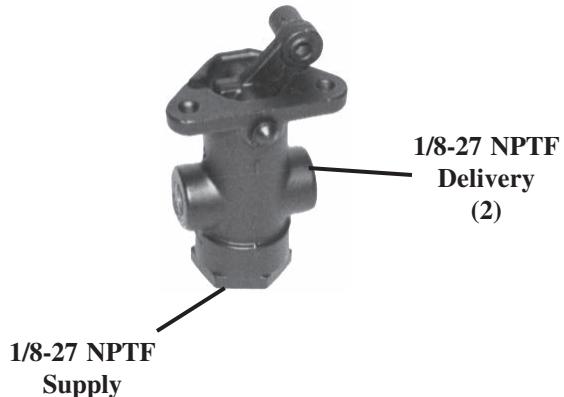
MIDLAND® - AIR VALVES

- * The hand operated, flipper-style valve offers manual two-position control with a cable attached.
- * Opposite cam rotations deliver pressure in opposite handle positions.

NOTE: Cable Not Furnished.
#KN20050X is a reverse cam valve.

PART NUMBER
KN20040X
KN20050X

MIDLAND® Hand Operated Valve (Flipper Style)

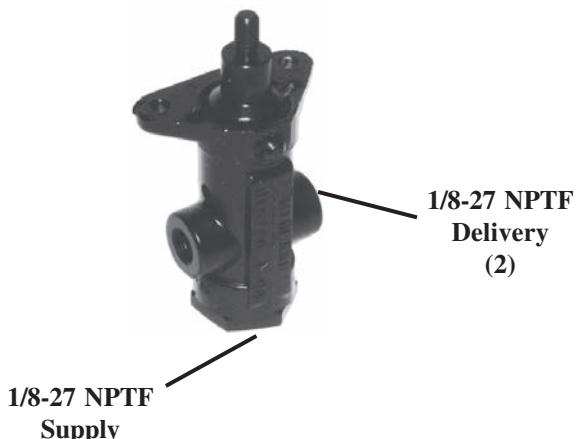


- * The push-pull, hand operated valve is a dead man type.
- * It applies pressure only when manually held in.

NOTE: Knobs or Mounting Plate Not Furnished.

PART NUMBER
KN20060X

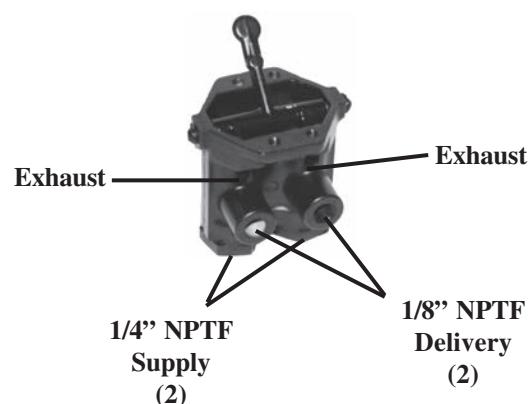
MIDLAND® Hand Operated Valve (Push-Pull Style)



- * The hand operated, double flipper-style valve provides directional air control to many different air circuits.
- * May be used for control of push-pull air cylinders or various other air operated devices.
- * Generally for panel mounting.

PART NUMBER	HANDLE POSITIONS	RELEASE DIRECTIONS
KN20080X	3 Position	Both Directions
KN20090X	3 Position	One Direction
KN20110X	2 Position	Both Directions

MIDLAND® Hand Operated Valve (Double Flipper Style)



MIDLAND® - AIR VALVES

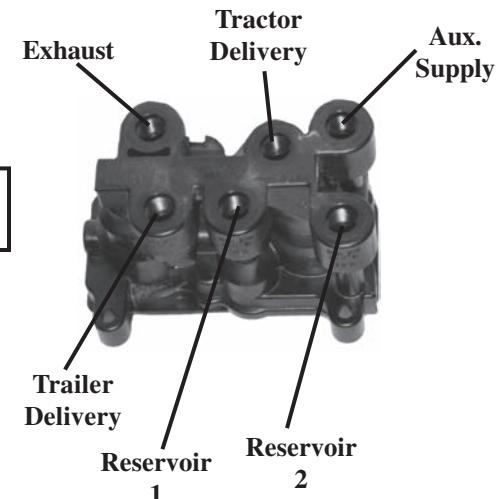
* The manifold dash module is an integrated control assembly designed for control panel mounting in a truck-tractor.

* This non-metallic assembly consists of two push-pull valves and a dual circuit supply valve.

NOTE: Knobs and Mounting Hardware Not Furnished.

MIDLAND® Manifold Dash Module

PART NUMBER
KN20615X



Dash View



* The Berg® hand control valve is a push-pull type valve.

* There is an automatic release for the protected tank.

NOTE: Knob or Mounting Hardware Not Furnished.

BERG® Hand Control Valve

PART NUMBER
12406X



* The Wagner® hand operated valve is a push-pull style valve.

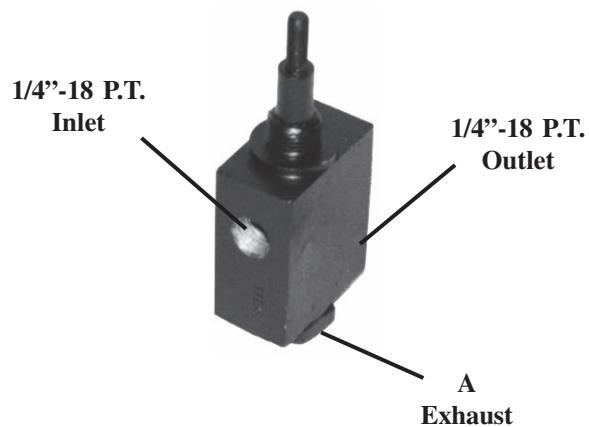
* It is generally for bulkhead mounting.

* Fits 5/8" Dashboard holes.

NOTE: Knob or Mounting Hardware Not Furnished.

WAGNER® Hand Operated Valve (Push-Pull Style)

PART NUMBER	A EXHAUST	NOTES
A83034X	Not Threaded	2-Way Valve
A83580X	(1)-1/4"-18 PT	3-Way Valve
A87940X	(1)-1/4"-18 PT	3-Way Valve



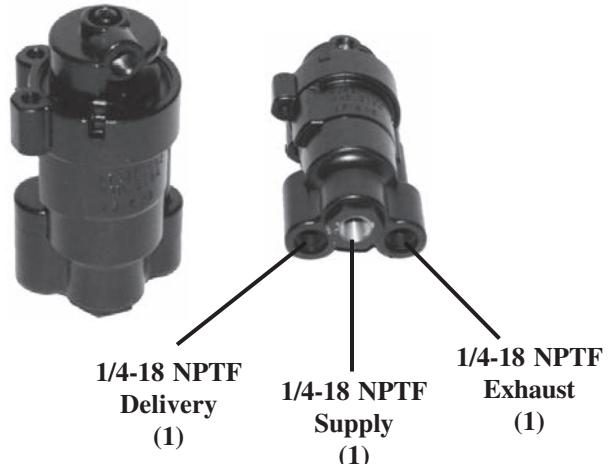
MIDLAND® - AIR VALVES

- * The trailer service brake control valve is a hand operated modulating control valve.
- * It is also called a trailer control hand valve.
- * Generally used on tractors to provide modulated control on trailer brakes only.
- * Base unit for In-Column mount.

NOTE: Knob and Handle Not Furnished.

PART NUMBER
KN20540X
KN20541X

MIDLAND® Trailer Service Brake Control Valve



- * The trailer service brake control valve is a hand operated modulating control valve.
- * It is also called a trailer control hand valve.
- * Generally used on tractors to provide modulated control on trailer brakes only.
- * Base unit. In-Column Mount.
- * KN20550X: Handle holds in applied position
- * KN20570X: Automatic Return.

NOTE: Handle and Knob Not Furnished.

PART NUMBER	NOTES
KN20550X	Handle Holds
KN20570X	Automatic Return

MIDLAND® Trailer Service Brake Control Valve



- * The KN20071X is a modulated emergency or spring brake control valve. It provides a "graduated" or "metered" pressure drop when applying spring brakes.
- * The KN20581X trailer service brake control valve is normally used to operate the trailer brakes independently of the tractor brakes.

NOTE: Handle and Knob Not Furnished.

PART NUMBER	MAXIMUM DELIVERY	NOTES
KN20071X	50 PSI	5" Lever & Handle
KN20581X	Sys. Pressure	5" Lever, No Knob
KN20590X	50 PSI	2" Lever, No Knob

MIDLAND® Trailer Brake Control Valve



MIDLAND® - AIR VALVES

*The quick release valve is responsible for the rapid exhausting of air pressure, generally from brake chambers or spring brakes.

* They decrease the brake release time due to their mounting location which is generally close to the brake chamber or spring brake they serve.

NOTE: The KN32020X has a die cast bottom cover and has high pressure differential compared to the low pressure differential in the KN32000X and KN32010X.

PART NUMBER	SUPPLY	DELIVERY
KN32000X	(1)-3/8" PT	(2)-1/4" PT
KN32010X	(1)-1/2" PT	(2)-3/8" PT
KN32020X	(1)-3/8" PT	(2)-1/4" PT

* The KN32030X limiting quick release and double check valve functions as a quick-release valve under normal driving conditions.

* When used with the KN20000X manual dash control valve, this dual purpose valve allows the vehicle operator, under hazardous driving conditions, to reduce air pressure delivered to the front axle brake chambers by 50%.

* It is commonly used in front axle brake systems as a dry-road, slippery road valve.

PART NUMBER
KN32030X

* The quick release and double check valve is used in spring brake control circuits to prevent compounding on trucks and tractors.

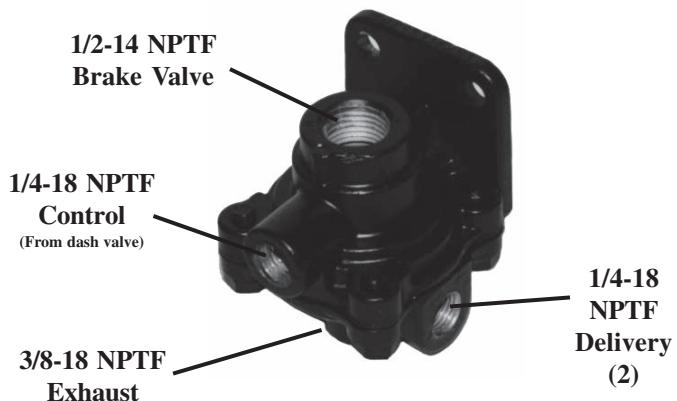
* This valve contains a quick release valve with a two-way check valve.

* The double check valve prevents simultaneous application of the emergency side of the spring brake also known as anti-compounding.

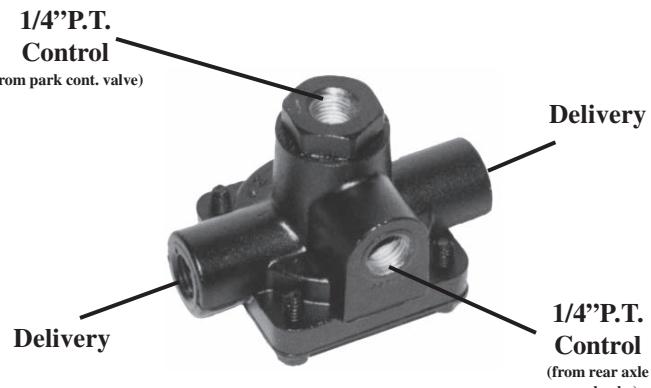
MIDLAND® Quick Release Valve



MIDLAND® Limiting Quick Release and Double Check Valve



MIDLAND® Quick Release and Double Check Valve



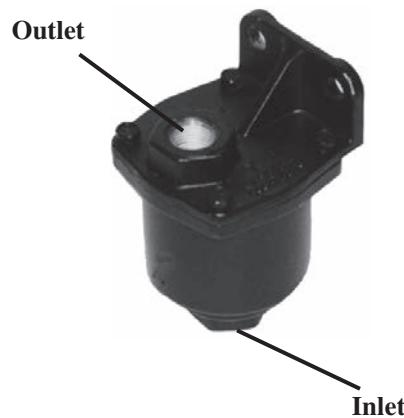
PART NUMBER	DELIVERY
KN32040X	(2)-1/4"-18 NPTF
KN32041X	(2)-3/8"-18 NPTF

MIDLAND® - AIR VALVES

- * The front axle limiting valve is for use in front axle brake systems.
- * This valve automatically reduces output to 50% of input when input is 40 psi or less.
- * It delivers full output when input is 60 psi or more.

PART NUMBER	INLET	OUTLET
A80150X	(1)-3/8-18 NPTF	(1)-3/8-18 NPTF
A83517X	(1)-1/4-18 NPTF	(1)-1/4-18 NPTF

MIDLAND® Front Axle Limiting Valve

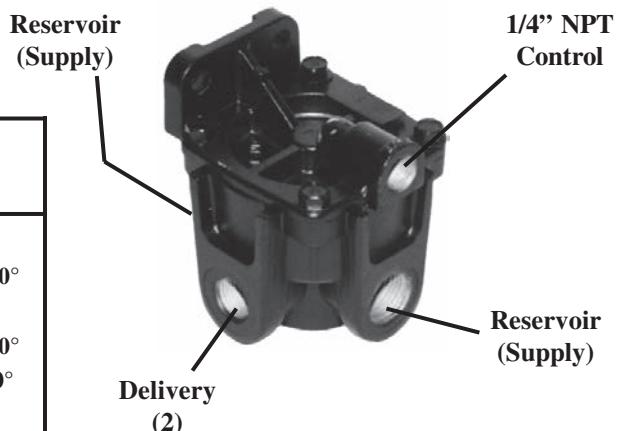


- * The RG-2 relay valve is a fast, low cracking pressure straight relay for tractor, trailer and truck applications.
- * It is used to apply and release service brakes on the tractor or the trailer.

NOTE: The picture illustrates 90° control port position.

PART NUMBER	SUPPLY	DELIVERY	NOTES
KN28500X	(2)-3/8" PT	(2)-3/8" PT	----
KN28510X	(1)-3/8" PT	(2)-3/8" PT	Control Position 90°
	(1)-1/2" PT	----	----
KN28520X	(2)-1/2" PT	(2)-1/2" PT	Control Position 90°
KN28531X	(1)-3/8" PT	(2)-3/8" PT	Control Position 0°
	(1)-1/2" PT	----	

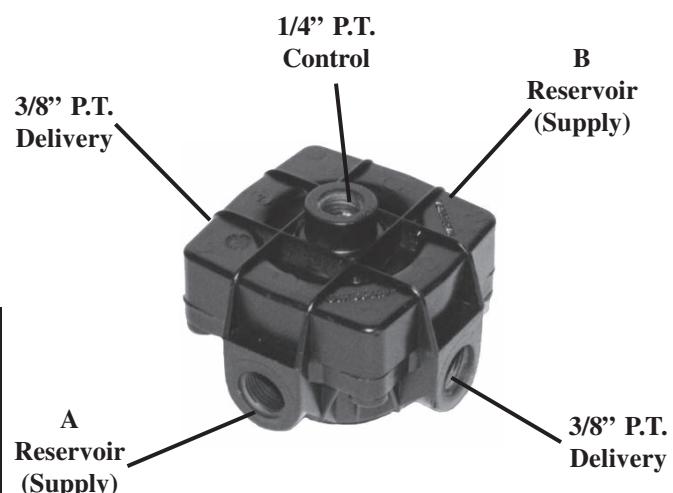
MIDLAND® RG-2 Relay Valve



- * The RG-5 relay valve is used on 2 tank, 3 valve trailer systems and tractor applications.
- * The valve is a non-metallic assembly.
- * The crack pressure is 5.4 PSI.

MIDLAND® RG-5 Relay Valve

PART NUMBER	A RESERVOIR	B RESERVOIR
KN28550X	(1)-1/2" PT Plugged	Plugged (1)-3/8" PT
KN28551X		



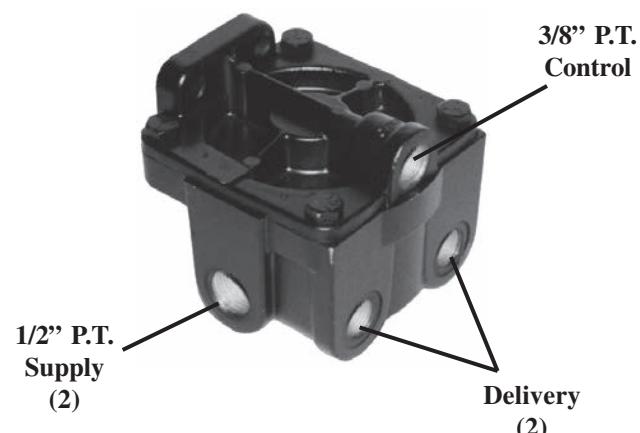
MIDLAND® - AIR VALVES

- * The relay valve is used to apply and release service brakes on the tractor or the trailer.
- * It also functions to speed the application and release of air-operated brakes.
- * It has 2 ports for delivery.

NOTE: The KN28060X has a low pressure differential.

PART NUMBER	DELIVERY	CRACK PRESSURE
KN28060X	(2)-3/8" PT	4.6+/- 1.5 PSI
KN28061X	(2)-1/2" PT	4.6+/- 1.5 PSI
KN28132X	(2)-1/2" PT	7.0+/- 1.5 PSI

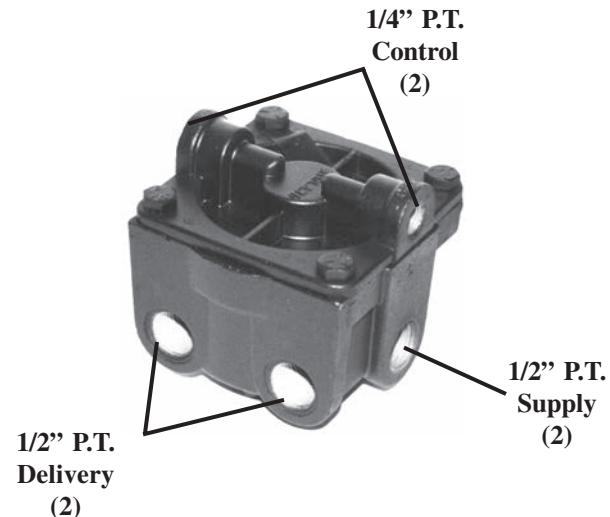
MIDLAND® Relay Valve



- * The relay valve is used to apply and release service brakes on the tractor or the trailer.
- * It also functions to speed the application and release of air-operated brakes.
- * It has 2 ports for delivery.

PART NUMBER
KN28065X

MIDLAND® Relay Valve



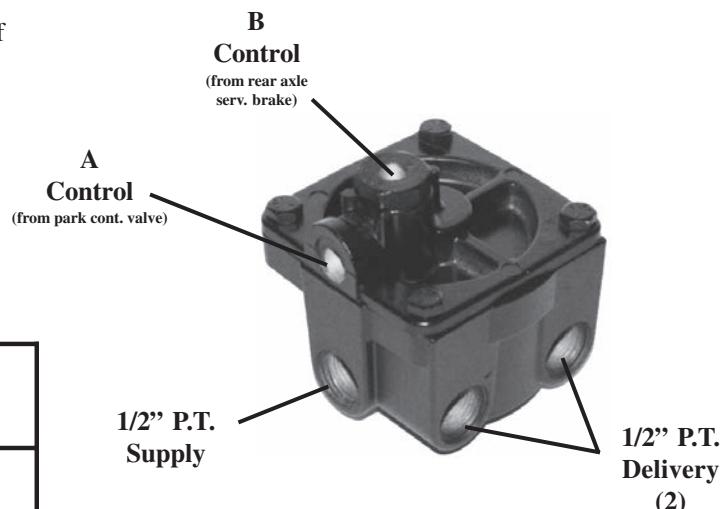
- * The relay valve is used to apply and release service brakes on the tractor or the trailer.
- * It also functions to speed the application and release of air-operated brakes.
- * It has 2 ports for delivery.

NOTE: KN28071X and KN28140X has one side of supply ports plugged.

**KN28071X is with anti-compounding.
KN28140X is without anti-compounding.**

PART NUMBER	A CONTROL	B CONTROL
KN28071X	(1)-1/4" PT	1/8" PT
KN28140X	(1)-1/4" PT	Not Drilled

MIDLAND® Relay Valve

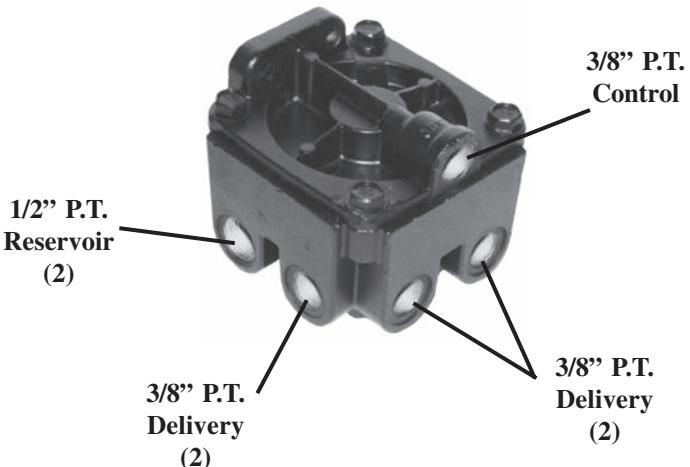


MIDLAND® - AIR VALVES

- * The relay valve is used to apply and release service brakes on the tractor or the trailer.
- * It also functions to speed the application and release of air-operated brakes.
- * It has 4 ports for delivery.

NOTE: KN28080X has a 7 PSI crack pressure.
KN28085X has a 4 PSI crack pressure.

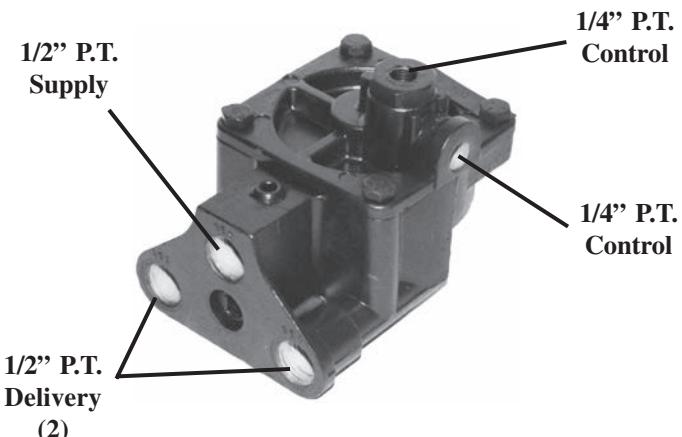
PART NUMBER
KN28080X
KN28085X



- * The relay valve is used to apply and release service brakes on the tractor or the trailer.
- * It has 2 ports for delivery.
- * The crack pressure is 4.0 +/- 1 PSI.

NOTE: KN28130X is without anti-compounding.

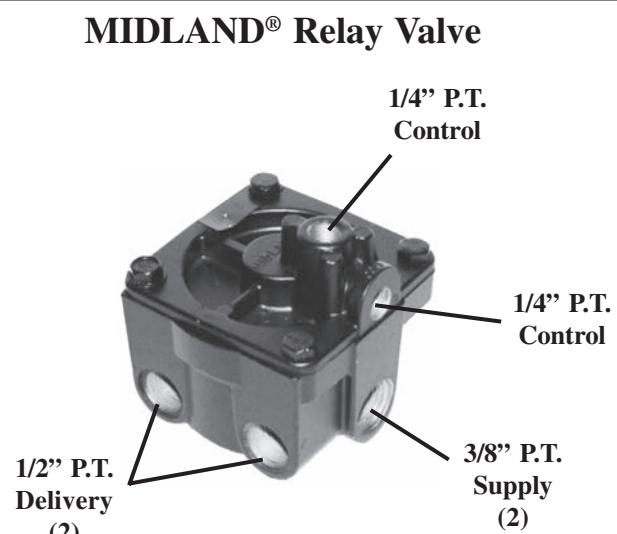
PART NUMBER
KN28130X



- * The relay valve is used to apply and release service brakes on the tractor or the trailer.
- * It has 2 ports for delivery.
- * The crack pressure is 4.0 +/- 1 PSI.

NOTE: KN18131X is without anti-compounding.

PART NUMBER
KN18131X



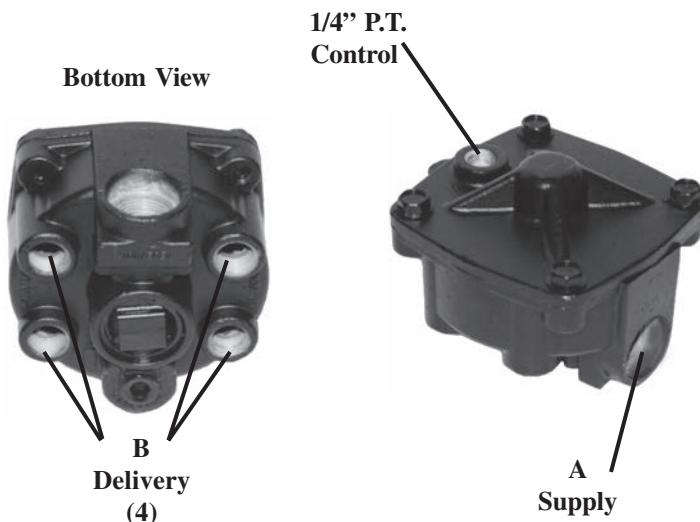
MIDLAND® - AIR VALVES

- * The RF relay valve is used to apply and release service brakes on tractor or trailer.
- * It has a low differential - high capacity.
- * Meets or exceeds FMVSS-121 requirements.
- * The auxiliary port on A103600X may be used for air suspensions or other accessories requiring reservoir air.
- * These valves have 4 ports for delivery.
- * The crack pressure is 4.5 +/- 1 PSI.

NOTE: Mounting Brackets Not Furnished.

PART NUMBER	A SUPPLY	B DELIVERY
A86472X	(1)-3/4" PT	(4)-1/2" PT
A86473X	(1)-1/2" PT	(4)-1/2" PT
A86477X	(1)-3/4" PT	(4)-1/2" PT
A103600X	(1)-3/4" PT	(4)-3/8" PT

Midland® RF Relay Valve

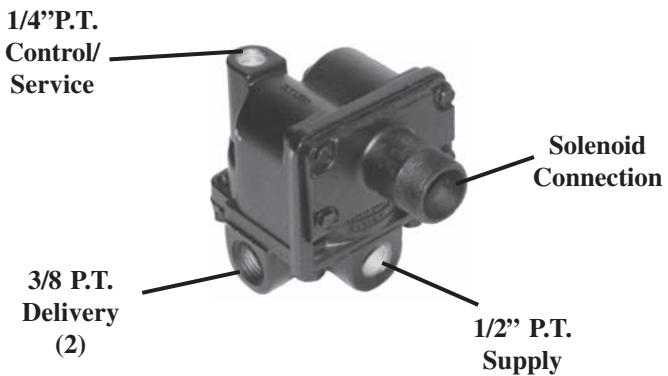


- * The RS relay valve is used to apply and release service brakes on trailers.
- * Provides both normal braking control and skid control operation as required by FMVSS-121.
- * It has 2 ports for delivery.

NOTE: Mounting Brackets Not Furnished.

PART NUMBER
A80070X

Midland® Modulator Valve Type RS

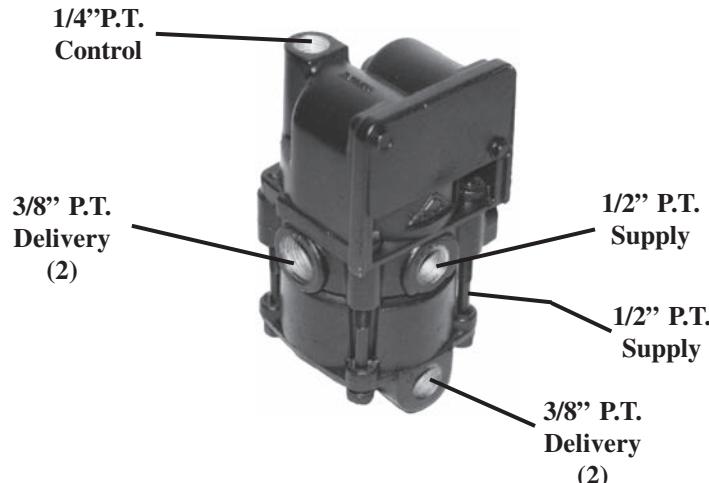


- * The RG-4 tandem relay valve provides axle by axle protection on tandem axle trailers.
- * It has four ports for delivery.
- * Each section has one supply and two delivery ports.
- * The crack pressure is 5.0 PSI.
- * Usually desired for tank mount.

NOTE: #A85493X has mounting holes for frame mount.
Mounting Hardware Not Furnished.

PART NUMBER
A85490X
A85493X

Midland® RG-4 Tandem Relay Valve

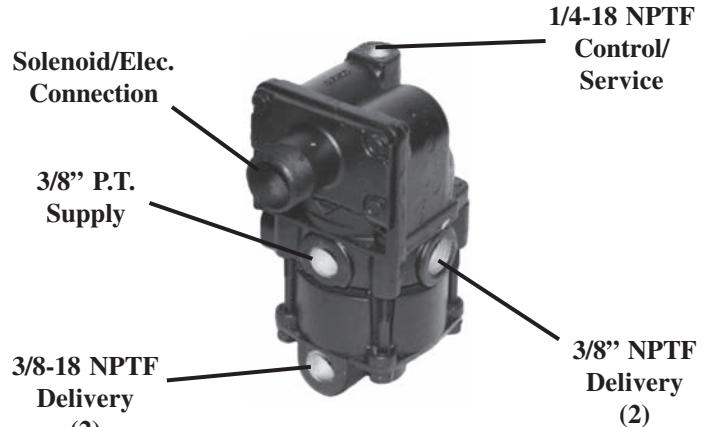


MIDLAND® - AIR VALVES

- * The RS-2 tandem modulator valve provides both normal braking control and skid control operation as required by FMVSS-121 for both axles of a tandem trailer brake system.
- * Importantly, this valve provides for normal service braking operation of either axle should a service system failure of the other axle occur.
- * It has four ports for delivery.

PART NUMBER
A97600X

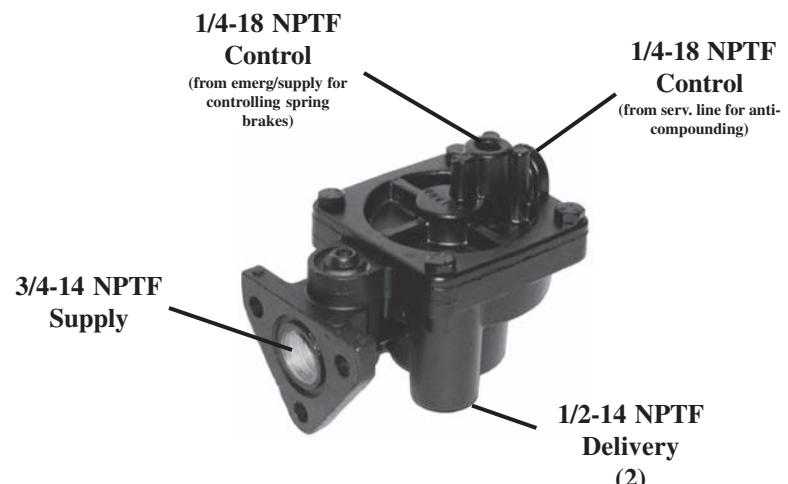
Midland® RS-2 Tandem Modulator Valve



- * The trailer spring brake control valve is designed for single axle trailer spring brake control, and incorporates an anti-compound, double-check valve.
- * This valve is generally reservoir mounted.

PART NUMBER
KN28150X

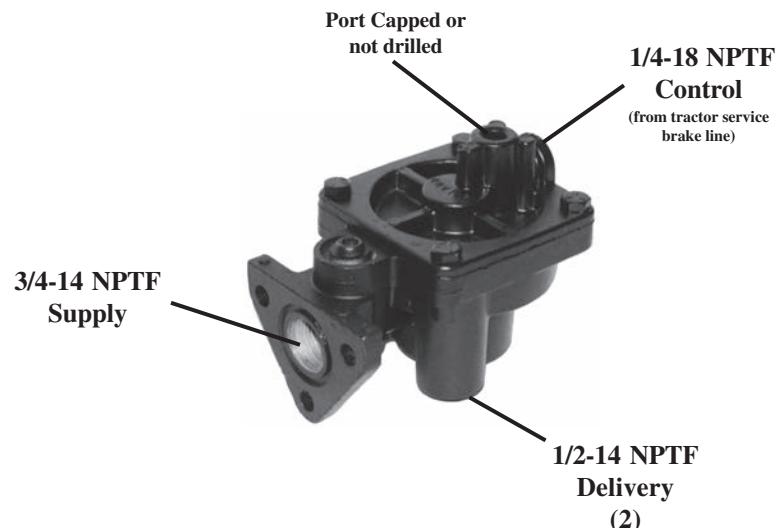
MIDLAND® Trailer Spring Brake Control Valve



- * The trailer service brake relay valve is a straight relay valve.
- * It is designed for nipple or pad mounting to reservoirs on trailers.
- * Also suitable for Canadian "121" and "Tandem Control" slave relay applications involving wheel lock control on one axle only.

PART NUMBER
KN28160X

MIDLAND® Trailer Service Relay Valve

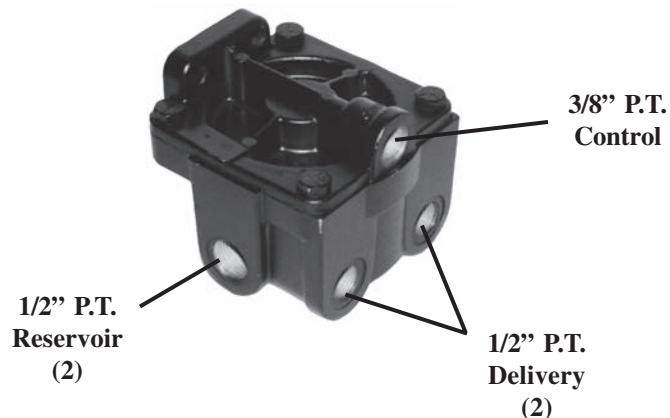


MIDLAND® - AIR VALVES

- * The FAB valve is used on converter dollies and long wheel base towing tractors to speed the tractor control signal to the rear trailer(s) service brakes.
- * It is also called a speed-up or fast air relay.
- * This valve has two ports for delivery.
- * The crack pressure is 0 PSI.
- * The differential is 0 PSI.

PART NUMBER
KN28300X

MIDLAND® FAB Valve (Fast Air & Balancing Relay Valve)



* The relay emergency valve acts in unison with the driver controlled tractor brake valve during normal service brake operations. It acts independently in an emergency air loss breakaway or when the trailer is parked.

Suitable for pre-121 trailers, converter dollies or exempt trailers.

* The crack pressure is 4.5 +/- 1 PSI.

* KN30100X has an automatic bleed down feature.

MIDLAND® Emergency Relay Valve



PART NUMBER	A SERVICE	B EMERGENCY	C DELIVERY	AUXILIARY RESERVOIR	D RESERVOIR	NOTES
KN30100X	(1)-1/4" PT	(1)-1/4" PT	(4)-1/4" PT	Plugged	(1)-3/4" PT	Automatic Bleed Down
KN30200X	(1)-3/8" PT	(1)-3/8" PT	(4)-3/8" PT	(1)-1/2" PT	Plugged	W/Nipple
KN30300X	(1)-1/4" PT	(1)-1/4" PT	(4)-1/4" PT	Plugged	(1)-3/4" PT	W/Nipple
KN30400X	(1)-1/4" PT	(1)-1/4" PT	(4)-3/8" PT	Plugged	(1)-3/4" PTF	W/Female Nipple

**WE OFFER MANY QUALITY
HEAVY DUTY WATER
PUMPS FOR A WIDE RANGE
OF APPLICATIONS.
NEW AND REMAN UNITS
AVAILABLE.**



MIDLAND® - AIR VALVES

- * The relay valve is primarily used on long wheel base vehicles to apply and release rear axle(s) service or parking brakes.
- * The relay valve is used to balance the time of brake applications on heavy duty vehicles.

Midland® Relay Valve



PART NUMBER
12345X

- * The multi-function valve is generally used on pre-”121” trailers and in some special cases on off-the-road equipment.
- * This valve incorporates an emergency feature which will automatically apply the service brakes in the event that supply air pressure is lost.

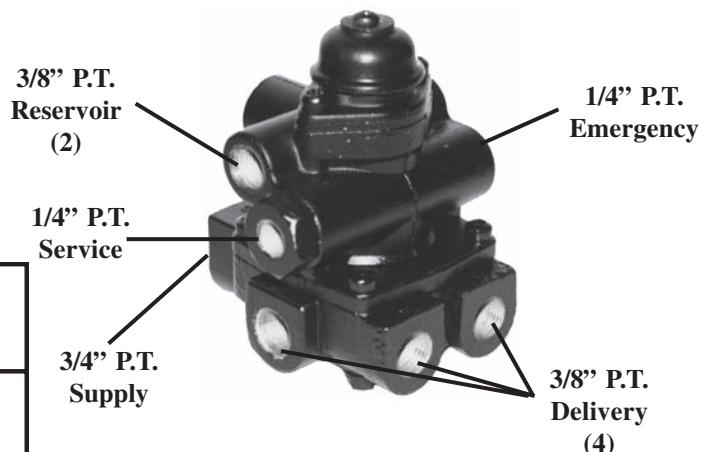
Midland® Multi-Function Valve



PART NUMBER
12352X

- * The TASK valve meets FMVSS-121 requirements and is used on trailers to control both parking and emergency brake functions.
- * It controls reservoir charging and applies emergency (parking) brakes upon loss of trailer supply (emergency) line pressure.

**Midland® TASK
Trailer Spring Brake Valve**



PART NUMBER	SERVICE INLET	NOTES
12360X	(1)-1/4" PT	W/ Anti-Compounding
12361X	----	W/O Anti-Compounding

MIDLAND® - AIR VALVES

- * The RT trailer spring brake valves are used on trailers to control both parking and emergency brake functions.
- * This valve controls reservoir charging.
- * It also meets FMVSS-121 requirements.
- * Importantly, the valve applies the emergency (parking) brakes upon loss of trailer supply (emergency) line pressure.



With Anti-
Compounding

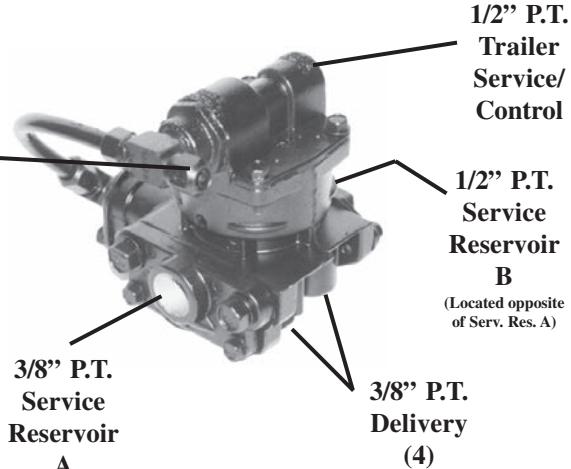


Without Anti-
Compounding

PART NUMBER	C SUPPLY	NOTES
A88802X	(1)-3/8" PT	W/ Anti-Compounding
A88812X	(1)-1/4" PT	W/O Anti-Compounding

C
Trailer Supply/
Emergency

Midland® RT Trailer Spring Brake Valve



- * The RT-2 trailer spring brake valve is used on trailers to control both parking and emergency brake functions.
- * It meets FMVSS-121 requirements.
- * The valve also controls reservoir charging.
- * Importantly, the valve applies the emergency (parking) brakes upon loss of trailer supply (emergency) line pressure.
- * It has four ports for delivery.

PART NUMBER
A98730X
A99370X

- * The RT-4 trailer spring brake valve is used on trailers to control both parking and emergency brake functions.
- * It meets FMVSS-121 requirements.
- * The valve also controls reservoir charging.
- * Importantly, the valve applies the emergency (parking) brakes upon loss of trailer supply (emergency) line pressure.
- * It has four ports for delivery.

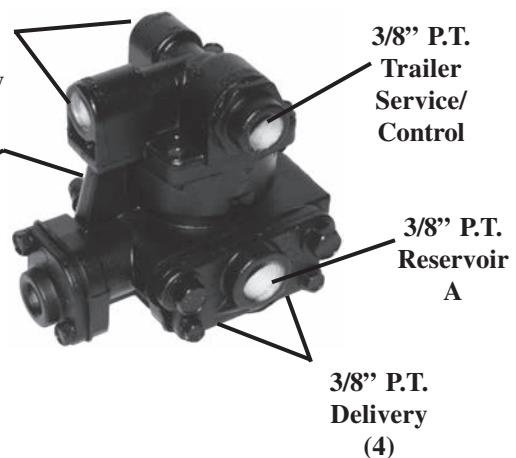
OLD NUMBER: A104001

PART NUMBER	NOTES
KN26000X	Pictured to Right
KN26010X	Cover Rotated 180°

3/8" P.T.
Supply/
Trailer
Emergency
(2)

1/2" P.T.
Reservoir
B
(Opposite
Reservoir A)

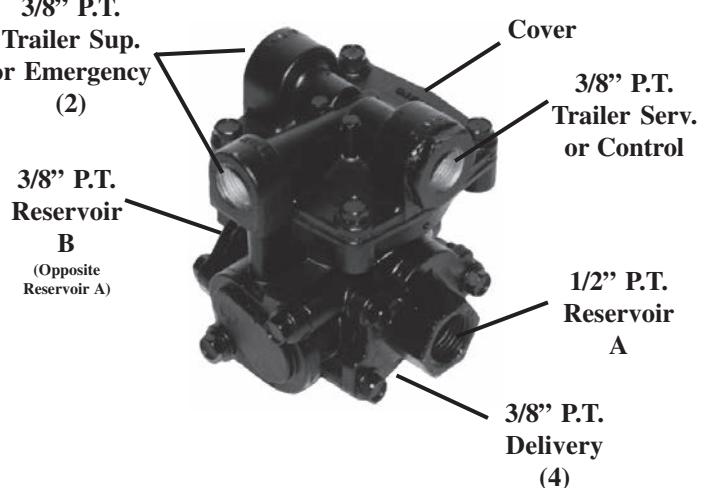
Midland® RT-2 Trailer Spring Brake Valve



3/8" P.T.
Trailer Sup.
or Emergency
(2)

3/8" P.T.
Reservoir
B
(Opposite
Reservoir A)

Midland® RT-4 Trailer Spring Brake Valve



MIDLAND® - AIR VALVES

* The FF-2 full function valve is designed to fill your trailer system reservoir while simultaneously filling the spring brakes (thereby releasing your parking brakes) to assure you have service brake capability when you are ready to drive the vehicle away.

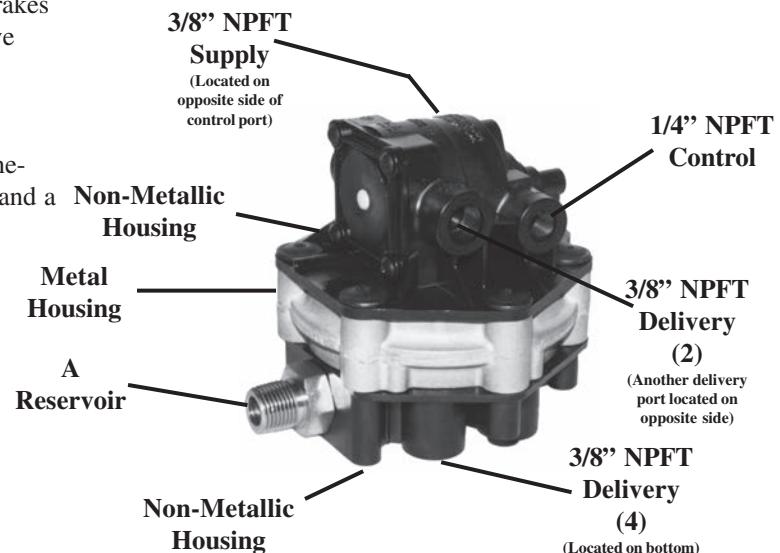
* It can be used with single or twin air tanks.

* The valve combines a pressure protection valve, two one-way check valves, spring brake valve with quick release and a four port relay valve.

* The crack pressure is 3 PSI.

PART NUMBER	A RESERVOIR
KN28600X	(1)-3/4" NPFT
KN28601X	(1)-1/2" NPFT

MIDLAND® FF-2 Full Function Valve

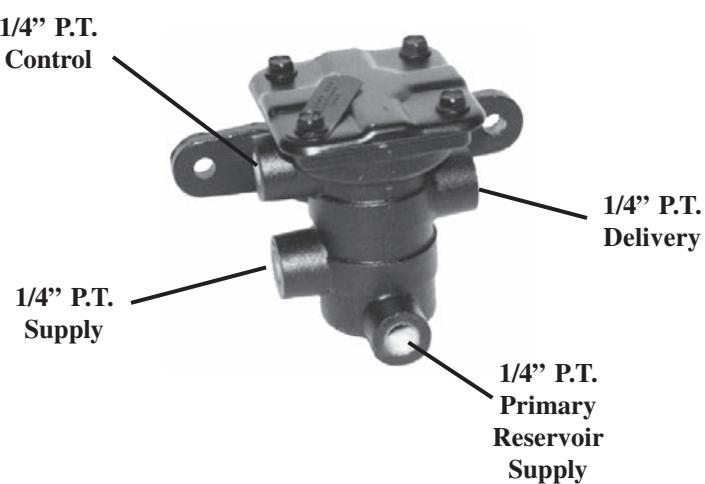


* The inversion valve is used with spring brake equipped trucks or tractors.

* This valve allows modulated control of the spring brakes in case of primary system air failure.

PART NUMBER
KN28030X

MIDLAND® Inversion Valve



* The tractor protection valve protects the tractor air brake system under trailer breakaway conditions and when major leakage has occurred in the tractor or trailer.

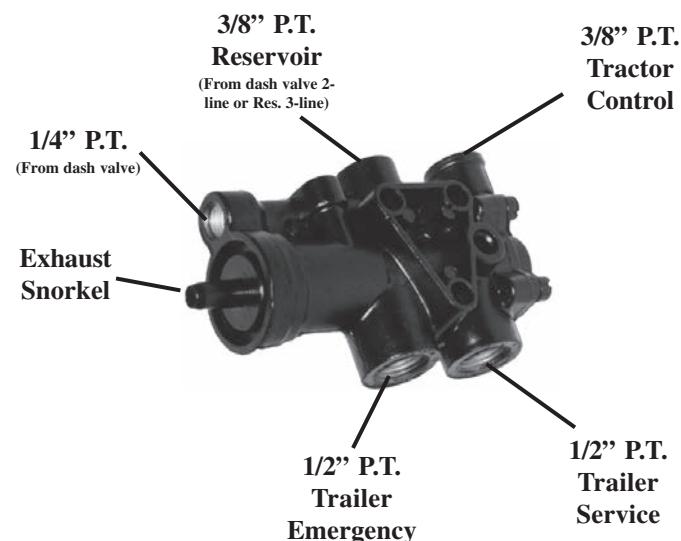
* It is also used to shut off trailer service and supply lines before disconnecting the tractor from the trailer.

* The valve is a three-line automatic tractor protection valve with quick release.

* This particular valve with exhaust snorkel minimizes in-cab noise by exhausting the trailer lines outside the cab.

PART NUMBER
KN34050X

MIDLAND® Tractor Protection Valve



MIDLAND® - AIR VALVES

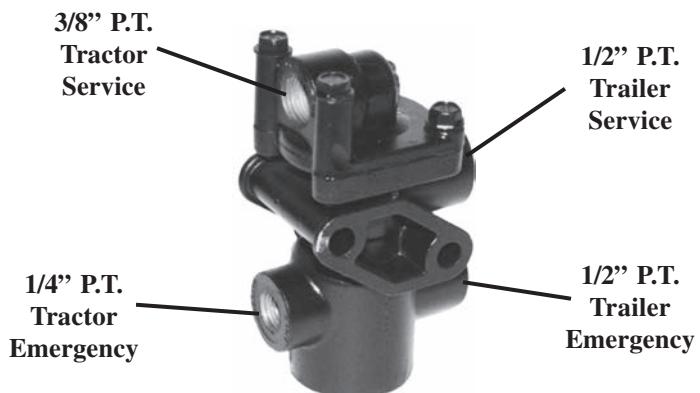
- * The Midland® tractor protection valve protects the tractor air brake system under trailer breakaway conditions and when major leakage has occurred in the tractor or trailer.
- * It is also used to shut off trailer service and supply lines before disconnecting the tractor from the trailer.
- * This valve is a two-line, non-automatic style valve.
- * It has a built-in quick release.

NOTE: Must be used with a pressure sensing dash control valve.

* This valve will not allow trailer brake compounding.

PART NUMBER
KN34060X

MIDLAND® Tractor Protection Valve

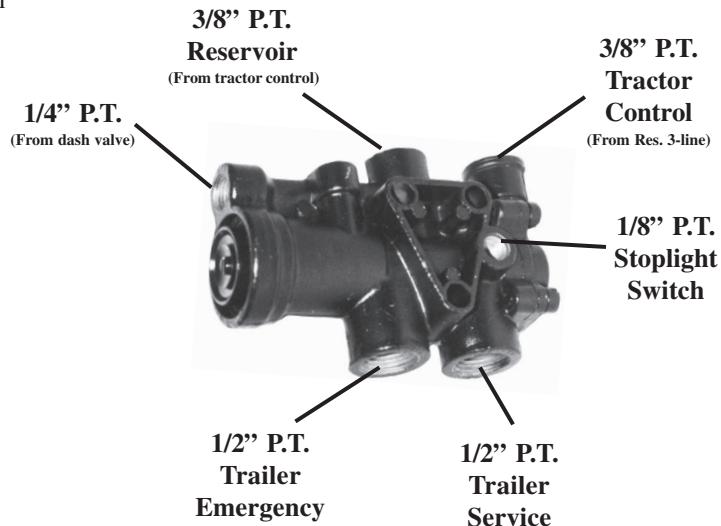


- * The Midland® tractor protection valve protects the tractor air brake system under trailer breakaway conditions and when major leakage has occurred in the tractor or trailer.
- * It is also used to shut off trailer service and supply lines before disconnecting the tractor from the trailer.
- * This valve is a three-line automatic style valve.
- * It has a built-in quick release.

NOTE: Without exhaust snorkel.

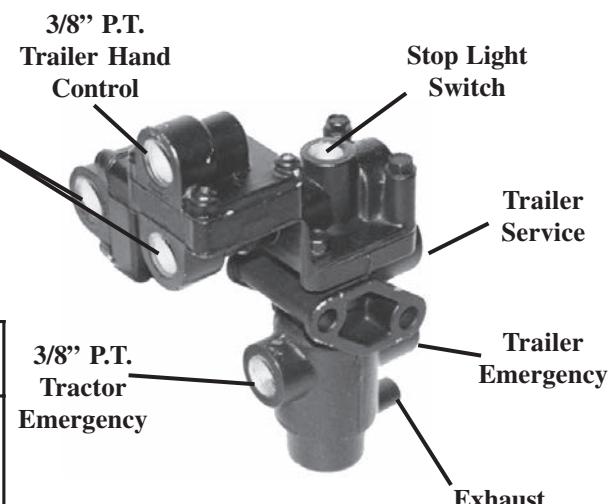
PART NUMBER
KN34070X

MIDLAND® Tractor Protection Valve



- * The Midland® tractor protection valve protects the tractor air brake system under trailer breakaway conditions and when major leakage has occurred in the tractor or trailer.
- * It is also used to shut off trailer service and supply lines before disconnecting the tractor from the trailer.
- * This valve is a manifold-style, two-line valve.
- * It has a built-in quick release.
- * Includes a tractor protection, two double check valves, stop-light switch port and built-in quick release inclusive in one valve.

MIDLAND® Tractor Protection Valve



PART NUMBER	TRAILER SERVICE	TRAILER EMERGENCY	STOPLIGHT SWITCH
KN34080X	(1)-3/8" PT	(1)-3/8" PT	(1)-1/4" PT (1)-1/8" PT-Plugged
KN34090X	(1)-1/2" PT	(1)-1/2" PT	(1)-1/4" PT (1)-1/8" PT-Plugged
KN34100X	(1)-3/8" PT	(1)-3/8" PT	1/4" PT
KN34110X	(1)-1/2" PT	(1)-3/8" PT	1/4" PT

MIDLAND® - AIR VALVES

- * The one-way check valve is used wherever pressures must be isolated and not allowed to back feed.
- * A popular use is to protect dry tanks from wet tank failure, pre FMVSS-121.
- * This check valve can be used on truck, tractors and trailers.

MIDLAND® One-Way Check Valve

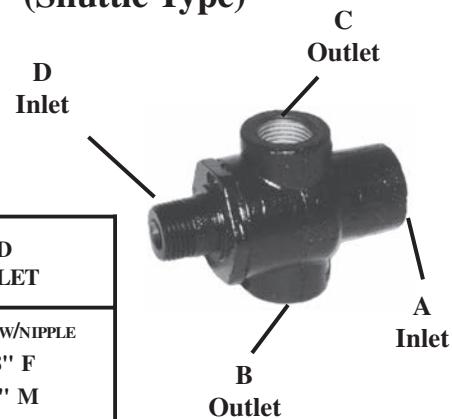


PART NUMBER	PORt (MALE)	PORT (FEMALE)
KN23000X	1/2" PT	1/2" PT
KN23010X	3/8" PT	3/8" PT
KN23020X	1/2" PT	1/2" PT
KN23040X	3/4" PT	3/4" PT
KN23060X	1/2" PT	1/2" PT

* The Midland® one-way check valve is typically used when two inlets must become one outlet.

* This valve is for horizontal mounting only.

MIDLAND® One-Way Check Valve (Shuttle Type)



PART NUMBER	A INLET	B OUTLET	C OUTLET	D INLET
KN25080X	3/8" F	3/8" F	1/4" F REDUCER	3/8" M W/NIPPLE
KN25090X	3/8" F	3/8" F	1/4" F REDUCER	3/8" F
KN25100X	3/8" F	3/8" F	3/8" F	1/2" M
KN25110X	3/8" F	3/8" F	3/8" F	3/8" F
KN25120X	1/4" F	1/4" F	1/4" F	1/4" F

F=Female M=Male

* The Midland® two-way check valve is not position sensitive, and it may be mounted in any position.

* It generally can be used in place of ball or shuttle types.

* Improves FMVSS-121 systems.

* This valve is used when two inputs must become one output.

MIDLAND® Two-Way Check Valve (Diaphragm Type)



PART NUMBER
KN25060X

MIDLAND® - AIR VALVES

We Also
Offer
New and
Remanufactured
Springbrakes and
Components



*The Midland® drain valve ejects moisture and contaminants from the air system reservoir upon a slight reduction in reservoir pressure.

* Mounts to bottom drain port of the reservoir.

MIDLAND® Drain Valve

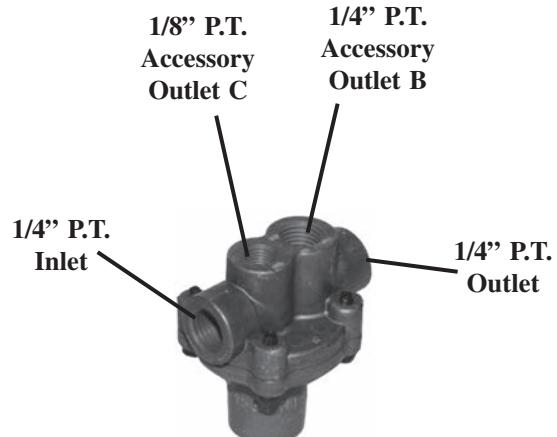


PART NUMBER	NOTES
KN24000X	Automatic, Non-Heated
KN24001X	Automatic, Heated

* The Midland® pressure protection valve is used to protect the air brake system from accessory failure.

* It is non-adjustable.

MIDLAND® Pressure Protection Valve



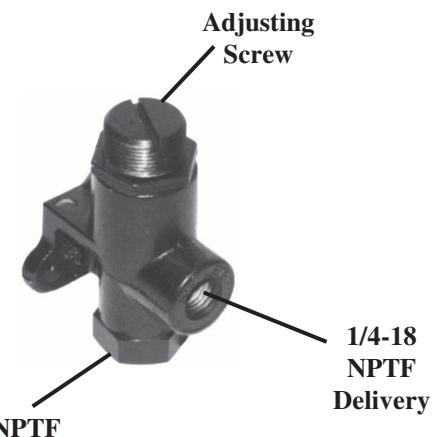
NOTE: KN31010X Accessory outlets B & C are not drilled.

MIDLAND® - AIR VALVES

- * The Midland® air regulating valve is used in air systems where reduced levels are required.
- * It is for auxiliary systems only.
- * Pressure settings are based on 100 PSI supply.
- * It is designed for constant supply not on-off applications.
- * A popular use is with air cylinders on bus door operators.

MIDLAND® Air Regulating Valve

PART NUMBER	PRESSURE SETTING
KN31050X	45 PSI
KN31060X	65 PSI

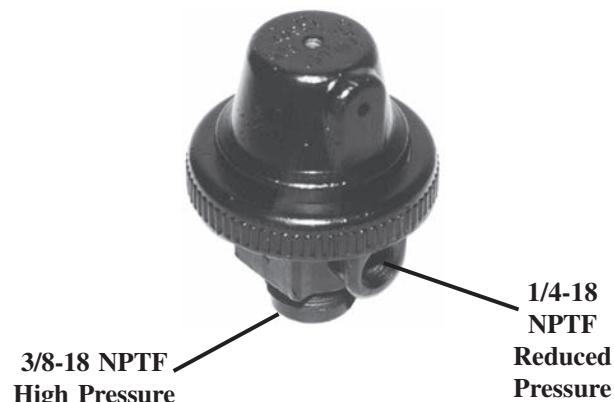


- * The Midland® air regulating valve is used wherever a reduced pressure is required.

* It normally is used with air assisted transmissions.

MIDLAND® Air Regulating Valve

PART NUMBER	PRESSURE SETTING
KN31080X	60 PSI



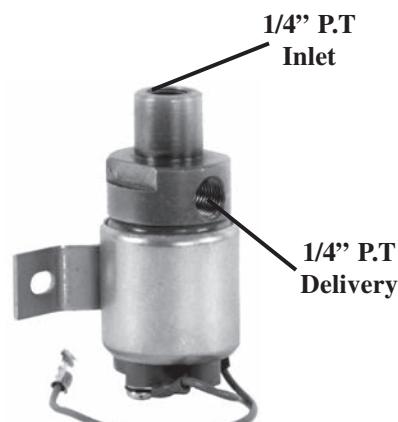
- * The Midland® air solenoid valve is most commonly known as an axle valve or three-way ball check valve (normally closed) and is actuated by either 12 volt coil or 24 volt coil.

* It is used to operate the shift mechanism of a two-speed axle.

* Available in new only.

MIDLAND® Style Solenoid Air Valve

PART NUMBER	NOTES
KN68230	12 VOLT
KN68237	24 VOLT



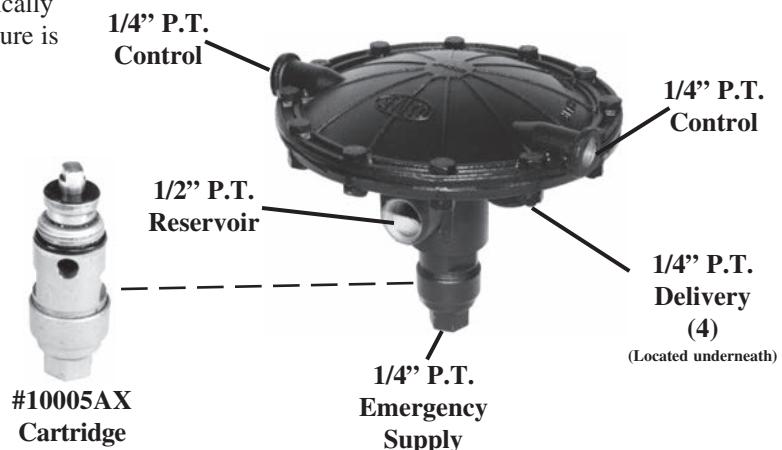
SEALCO® - AIR VALVES

* The relay emergency valve is generally used on pre- "121" trailers and in some special cases it is used for off-the-road equipment.

* Incorporates an emergency feature which will automatically apply the service brakes in the event that supply air pressure is lost.

REPAIR KIT: #10005AX (Pictured)

PART NUMBER	CRACK PRESSURE
A1000SX	1.5 PSI



* RATIO FEATURE: Considered a benefit in hard stop situations. Ratio refers to the relationship between the control air pressure to the valve and the delivered air pressure from the valve to the service brake chambers.

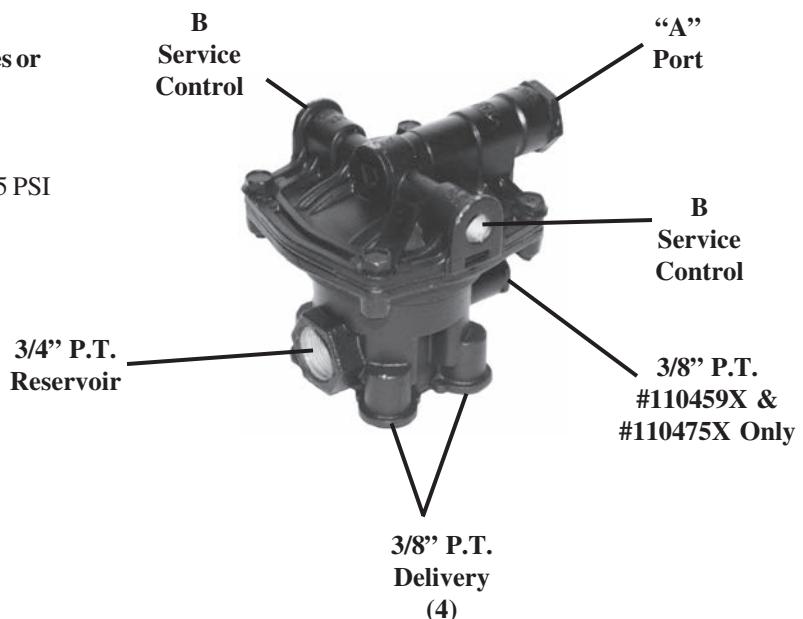
Ratio Valves are not recommended on converter dollies or trailer turntable axles.

110459X has 8.5 PSI Crack Pressure.

NOTE: #110459X is the same as #110475X but has a 8.5 PSI crack pressure.

Relay Emergency Valve

CHARGING Relay Emergency Valve



PART NUMBER	A EMERGENCY SUPPLY	B SERVICE CONTROL	RATIO FEATURE	CRACK PRESSURE
110200X	(1)-1/4" PT	(2)-1/4" PT	Yes	4.5 PSI
110205X	(1)-3/8" PT	(2)-3/8" PT	Yes	4.5 PSI
110459X	(1)-3/8" PT	(2)-3/8" PT	No	8.5 PSI
110460X	(1)-1/4" PT	(2)-1/4" PT	No	4.5 PSI
110470X	(1)-3/8" PT	(2)-3/8" PT	No	4.5 PSI
110475X	(1)-3/8" PT	(2)-3/8" PT	No	4.5 PSI

SEALCO® - AIR VALVES

- * The relay emergency valve is generally used on pre- "121" trailers and in some special cases it is used for off-the-road equipment.
- * Incorporates an emergency feature which will automatically apply the service brakes in the event that supply air pressure is lost.
- * Commonly used on converter dollies, turntable axles and air lift axles with service brake chambers.

PART NUMBER	CRACK PRESSURE
110338X	4.5 PSI

* RATIO FEATURE: Considered a benefit in hard stop situations. Ratio refers to the relationship between the control air pressure to the valve and the delivered air pressure from the valve to the service brake chambers.

Ratio Valves are not recommended on converter dollies or trailer turntable axles.

NOTE: #110600X is the same as #110139X except the supply port is capped.

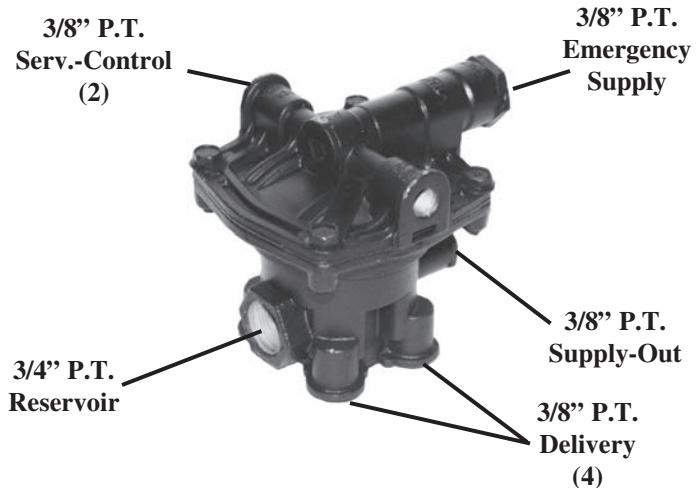
PART NUMBER	RATIO FEATURE	CRACK PRESSURE
110139X	Yes	4.5 PSI
110450X	No	4.5 PSI
110584X	Yes	5.5 PSI
110575X	Yes	8.5 PSI
110600X	Yes	4.5 PSI

* The spring brake control valve is generally responsible for controlling the application and release of the spring brakes both during emergency situations and normal parking.

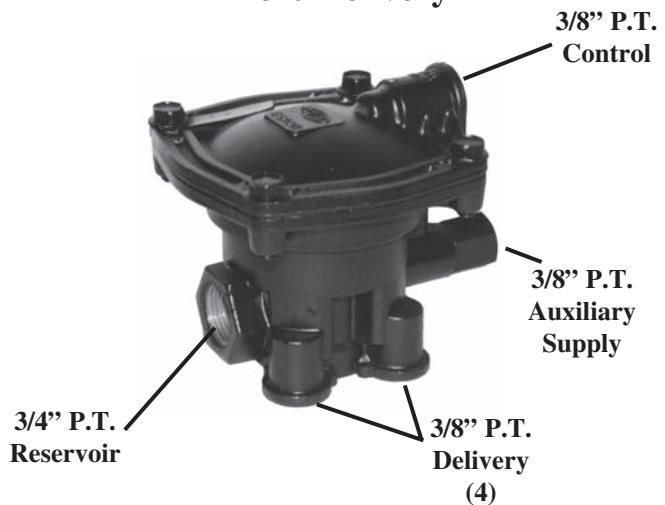
* It protects and isolates the spring brake reservoir, preventing automatic brake application in the event of trailer service system failure.

PART NUMBER
110148X

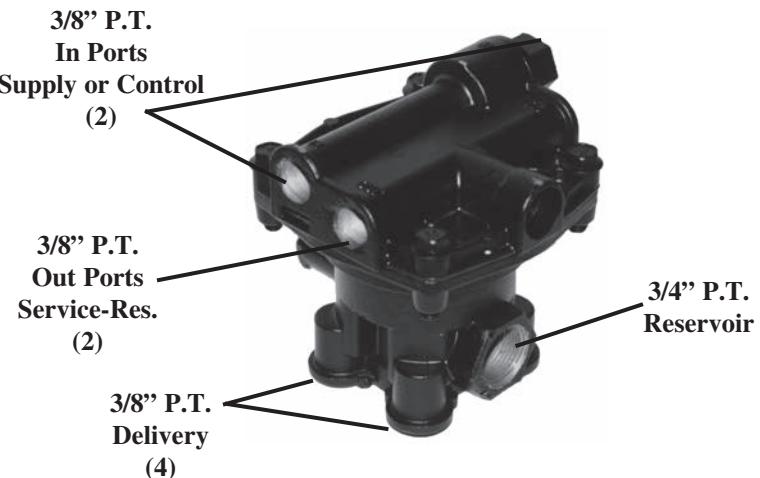
NON-CHARGING Relay Emergency Valve



Service Relay Valve 4-Port Delivery



Spring Brake Control Valve Protected Reservoir System - Early Version

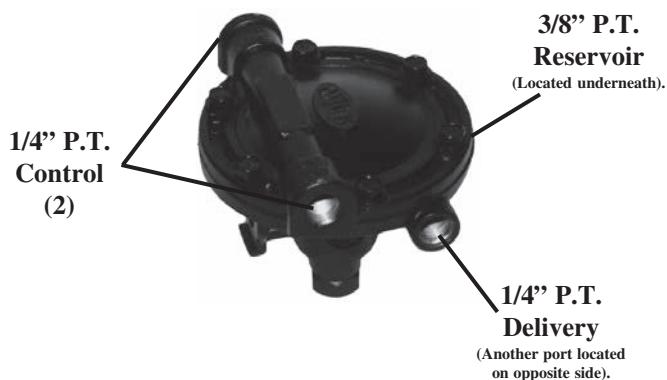


SEALCO® - AIR VALVES

* The mini-valve is an early version control line valve used primarily on dollies. Improves application and release of brakes on dollies and rearmost trailer axles in double and triple trailer combinations.

PART NUMBER	CRACK PRESSURE
3100X	2.5 PSI

Mini-Valve



* The service relay valve is commonly used as a tractor and straight truck relay valve.

Service Relay Valve 2-Port Delivery

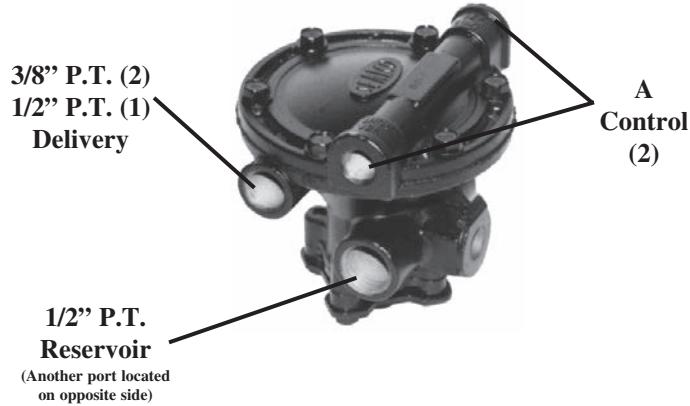
PART NUMBER	CRACK PRESSURE
110197X	4.0 PSI



* The service relay valve is commonly used as a tractor and straight truck relay valve.

Service Relay Valve 3-Port Delivery

PART NUMBER	A CONTROL	CRACK PRESSURE
9125X	(2)-1/4" PT	5.5 PSI
110207X	(2)-3/8" PT	5.5 PSI
110228X	(2)-3/8" PT	5.5 PSI



SEALCO® - AIR VALVES

* The control line valve is primarily used on dollies and turntable axles on pull, transfer and train type trailers.

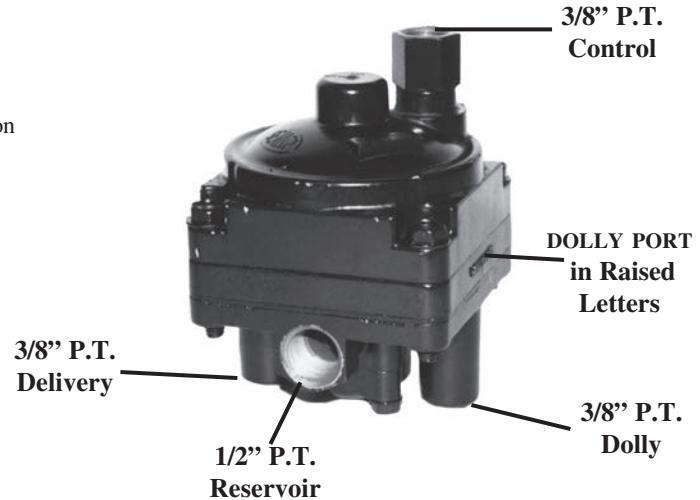
* Some benefits include:

- 1) A balanced control line signal for uniform braking of multi-axle combination vehicles.
- 2) Prevents premature braking of the steerable axle(s) in combination vehicles for maximum lateral stability while stopping.
- 3) Improves the release of service brakes in the tractor-trailer combination eliminating trailer brake drag complaints.

NOTE: Bracket or Mounting Hardware Not Furnished.
Can be nipple mounted.

PART NUMBER	CRACK PRESSURE
110690X	0 PSI

Control Line Valve



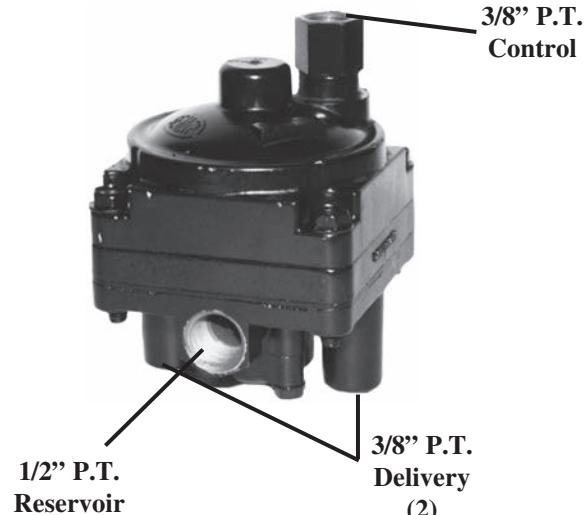
* The control line valve is primarily used on trailers designed to tow another trailer and long wheel base sliding tandems. Benefits include:

- 1) A balanced control line signal for uniform braking of multi-axle combination vehicles.
- 2) Improves application timing of service brakes in rearmost axles of long wheel base tractor-trailer combinations.
- 3) Improves the release of service brakes in the tractor-trailer combination eliminating trailer brake drag complaints.

NOTE: Bracket or Mounting Hardware Not Furnished.
Can be nipple mounted.

PART NUMBER	CRACK PRESSURE
110790X	0 PSI

Control Line Valve



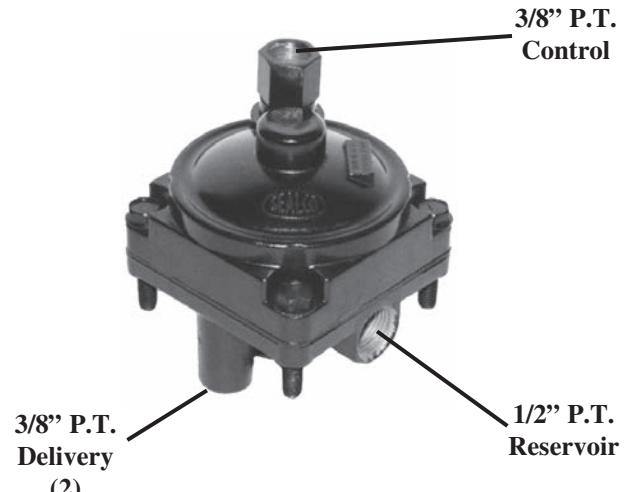
* The control line valve is primarily used on trailers designed to tow another trailer and long wheel base sliding tandems for improved application and release timing.

* For frame mounting.

NOTE: Bracket or Mounting Hardware Not Furnished.
Also called a LOV-2F.

PART NUMBER	CRACK PRESSURE
110365X	1.5 PSI

Control Line Valve



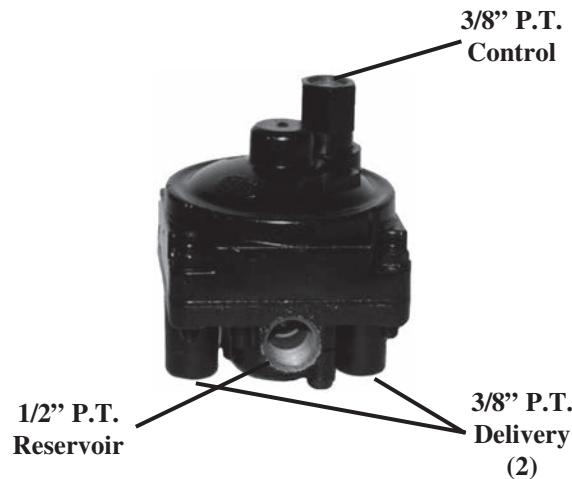
SEALCO® - AIR VALVES

- * The service relay valves are used primarily for single axle trailer service brakes or axle by axle trailer brake designs.
- * Generally for nipple mounting.

NOTE: Bracket or Mounting Hardware Not Furnished.
#110360X also called a LOV-2.

PART NUMBER	CRACK PRESSURE
110360X	1.5 PSI
110410X	4.0 PSI

Service Relay Valve 2-Port Delivery

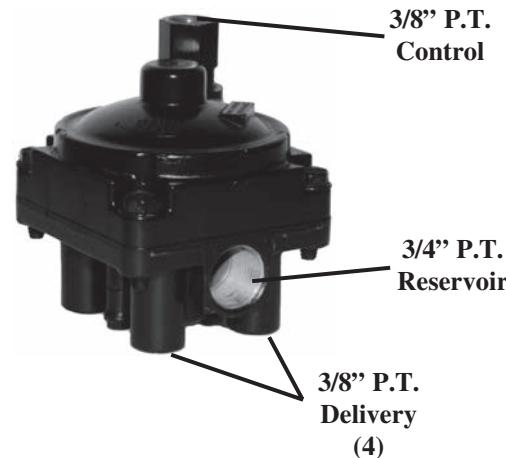


- * The service relay valves are used primarily for tandem axle trailer service brakes with four (4) brake chambers.
- * Generally for nipple mounting.

NOTE: Bracket or Mounting Hardware Not Furnished.
#110380X also called a LOV-4.

PART NUMBER	CRACK PRESSURE
110380X	1.5 PSI
110415X	4.0 PSI

Service Relay Valve 4-Port Delivery

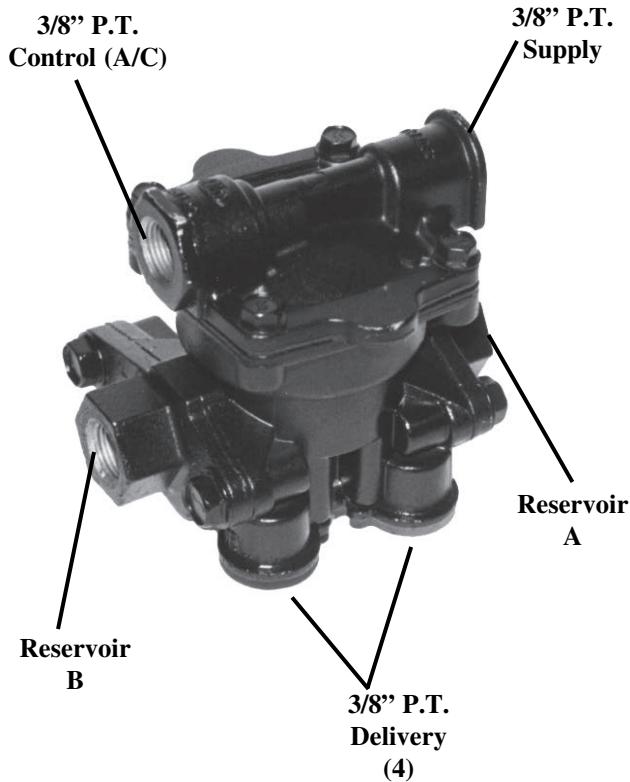


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VACUUM PUMPS.**

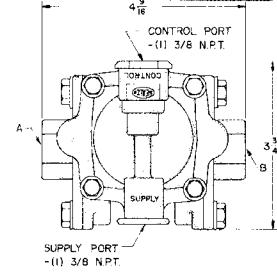
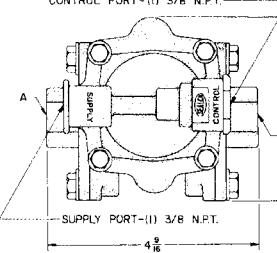
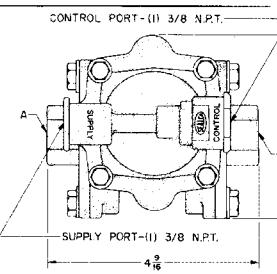
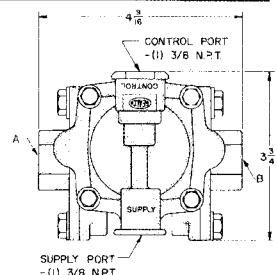
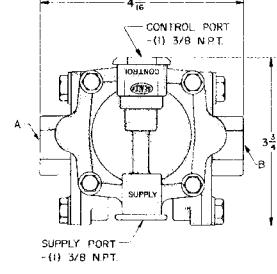


SEALCO® - AIR VALVES



- * The spring brake control valve is generally responsible for controlling the application and release of the spring brakes both during emergency situations and normal parking.
- * It protects and isolates the spring brake reservoir, preventing automatic brake application in the event of trailer service system failure.

Spring Brake Control Valve Protected Reservoir System

Our Number	PORT SIZE
110170X	
110171X	
110191X	
110310X	
110315X	

SEALCO® - AIR VALVES

- * The tractor protection valve is generally found mounted on the rear of the tractor cab.
- * It is used in conjunction with a dash mounted control valve.
- * It provides a means of opening and closing the two air hoses (service and emergency) leading to the trailer.
- * Automatically closes in the event of a tractor trailer breakaway or reduction of tractor system air pressure.

PART NUMBER
7700X

* The spring brake control valve is designed for use with a single reservoir on a typical single or tandem axle trailer application.

PART NUMBER	NOTES
110500X	----
110505X	Delivery "B" Plugged
110510X	Delivery "A" Plugged

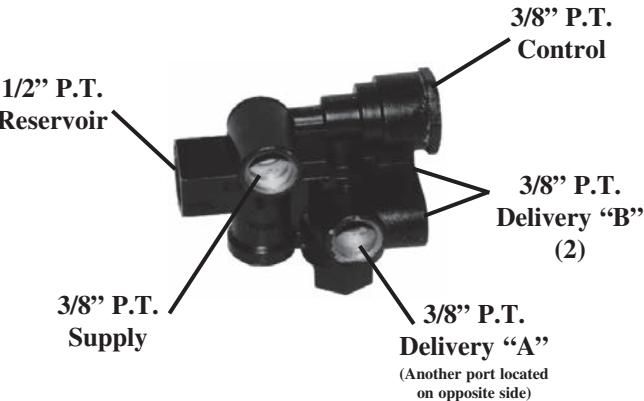
* The spring brake exhaust valve is designed to facilitate a rapid exhausting of air from the spring brakes.

PART NUMBER	INLET PORT	OUTLET PORT
7800X	(1)-1/4" PT	(2)-1/4" PT
780210X	(1)-3/8" PT	(2)-3/8" PT

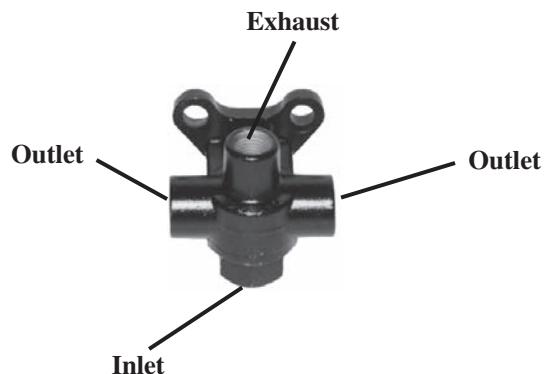
Breakaway Valve/ Tractor Protection Valve



Spring Brake Control Valve Spring Brake Priority System



Spring Brake Exhaust Valve



SEALCO® - AIR VALVES

*The quick release valve is responsible for the rapid exhausting of air pressure, generally from brake chambers or spring brakes.

* This valve decreases the brake release time due to their mounting location which is generally close to the brake chamber or spring brake they serve.

Quick Release Valve



PART NUMBER	A INLET	B OUTLET	C OUTLET	EXHAUST	CRACK PRESSURE
2000B-3/8X	(1)-3/8" PT	(1)-1/4" PT	(1)-1/4" PT	----	4-5 PSI
2000B-1/2X	(1)-1/2" PT	(1)-3/8" PT	(1)-3/8" PT	----	4-5 PSI
2000C-3/8X	(1)-3/8" PT	(1)-1/4" PT	(1)-1/4" PT	----	8-10 PSI
2000C-1/2X	(1)-1/2" PT	(1)-3/8" PT	(1)-3/8" PT	----	8-10 PSI
2000D-3/8X	(1)-3/8" PT	(1)-1/4" PT	(1)-1/4" PT	----	0-1 PSI
2000D-1/2X	(1)-1/2" PT	(1)-3/8" PT	(1)-3/8" PT	----	0-1 PSI
2000D-1/4X	(1)-1/4" PT	(1)-1/4" PT	(1)-1/4" PT	----	0-1 PSI
200000X	(1)-1/4" PT	(1)-1/4" PT	(1)-1/4" PT	----	0-1 PSI
200001X	(1)-3/8" PT	(1)-3/8" PT	(1)-3/8" PT	1/2	0-1 PSI
200002X	(1)-1/2" PT	(1)-3/8" PT	(1)-3/8" PT	1/2	0-1 PSI
200003X	(1)-3/8" PT	(1)-1/4" PT	(1)-1/4" PT	1/2	0-1 PSI
200004X	(1)-1/4" PT	(1)-1/4" PT	(1)-1/4" PT	1/2	0-1 PSI

* The pressure protection valve is a normally closed pressure sensitive control valve that is used to protect or isolate a reservoir.

Pressure Protection Valve



PART NUMBER	INLET PORT	OUTLET PORT	OPEN PSI	CLOSE PSI
140200X	(1)-3/8" PT	(1)-3/8" PT	60 PSI	50 PSI
140270X	(1)-3/8" PT	(1)-3/8" PT	70 PSI	60 PSI
140280X	(1)-3/8" PT	(1)-3/8" PT	80 PSI	70 PSI
140290X	(1)-3/8" PT	(1)-3/8" PT	90 PSI	80 PSI
140300X	(1)-1/4" PT	(1)-1/4" PT	60 PSI	50 PSI
140370X	(1)-1/4" PT	(1)-1/4" PT	70 PSI	60 PSI
140380X	(1)-1/4" PT	(1)-1/4" PT	80 PSI	70 PSI
140390X	(1)-1/4" PT	(1)-1/4" PT	90 PSI	80 PSI

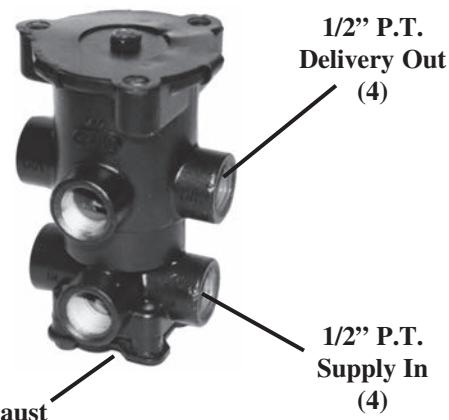
SEALCO® - AIR VALVES

- * The single circuit foot valve is a graduating directional control valve and is generally used to control all the service brakes on a vehicle.
- * Floor Mounted.
- * Treadle or Lever actuated.
- * Used in single circuit systems.

NOTE: Treadle Assembly and Mounting Plate Not Furnished.

PART NUMBER
6125X

Foot Valve Single Circuit

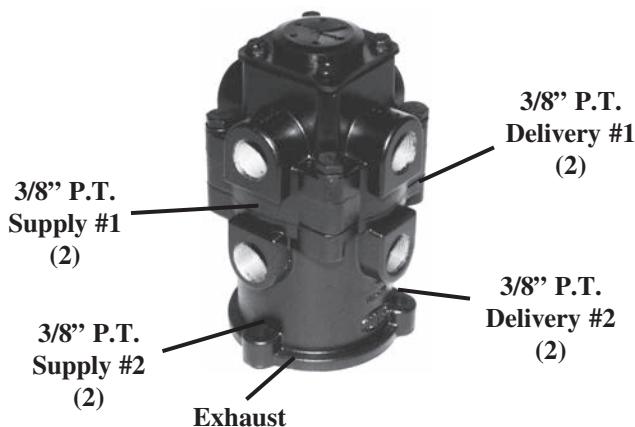


- * The dual circuit foot valve is a floor mounted treadle or lever operated type brake valve with two separate supply and delivery circuits for primary and secondary braking which provides graduated control for applying and releasing the vehicle brakes.

NOTE: Treadle Assembly and Mounting Plate Not Furnished.

PART NUMBER
110400X

Foot Valve Dual Circuit

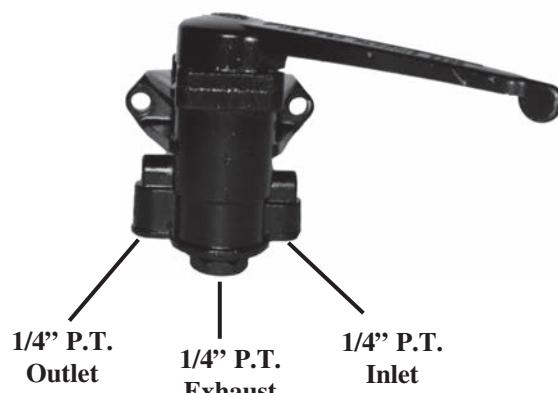


- * The hand valve is a hand operated modulating control valve.
- * It is also called a Trailer Control Hand Valve.
- * Steering Column Mount.
- * Generally used on tractors to provide modulated control on trailer brakes only.

NOTE: Handle Not Furnished.

PART NUMBER
59001X

Hand Valve



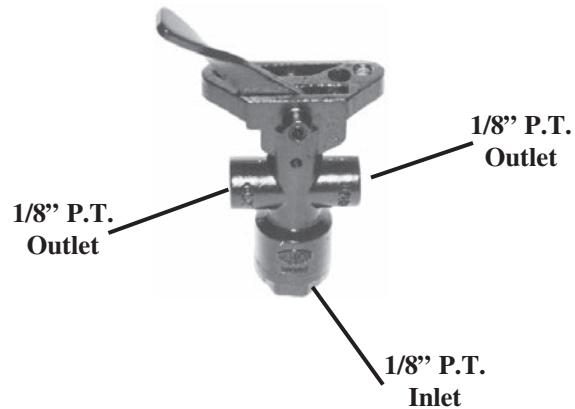
SEALCO® - AIR VALVES

* The lever control valves are manually operated, non-modulating controls used extensively in the air brake system.

NOTE: Mounting Plate Not Furnished.

PART NUMBER
21600X

Lever Control Valve



* The push-pull hand control valve is a pressure sensitive, manually operable, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.

* Commonly used to control parking and emergency brakes.

NOTE: Button and/or Mounting Nut Not Furnished.

PART NUMBER	MOUNTING THREADS	NOTES
17600B2X	(2)-#10-24 THRD.	2-Hole Mounting

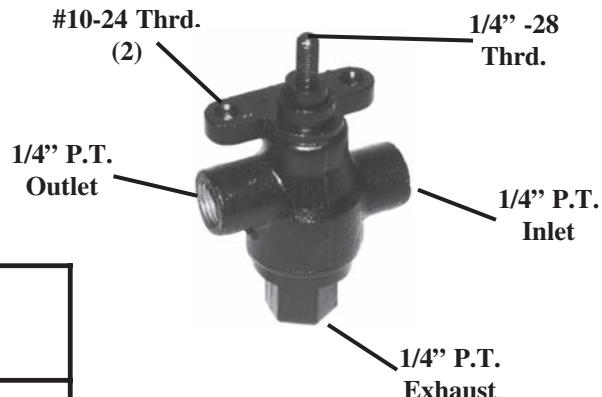
* The hand control valve is a dash mounted push and hold control valve.

* Commonly used for starter controls, emergency release and differential lock-outs.

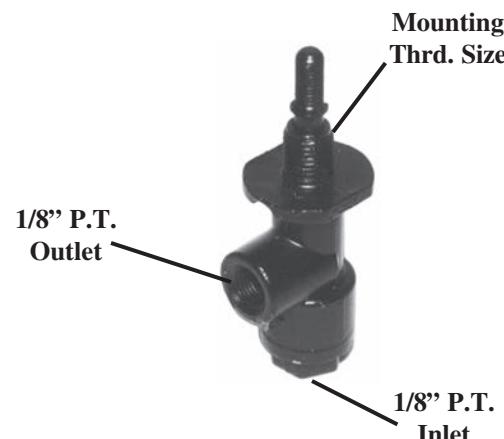
NOTE: Button and/or Mounting Plate Not Furnished.

PART NUMBER	MOUNTING THREAD SIZE
3450X	7/8"
340250X	1/2"
342501X	7/16"

Hand Control Valves Push-Pull



Hand Control Valve Dead Man Valve & Air Starter Systems



SEALCO® - AIR VALVES

- * The pull-push hand control valve is a pressure sensitive, manually operable, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.
- * Commonly used to control parking and emergency brakes.

NOTE: Button and Name Plate Not Furnished.

PART NUMBER	SHUT-OFF PSI
99600-2X	30 +/-5 PSI

- * The push-pull hand control valve is a pressure sensitive, manually operable, on-off control which will automatically return to the exhaust position when manual force is removed and supply air pressure is below a required minimum.
- * Commonly used to control parking and emergency brakes.
- * Single hole mounting.

NOTE: Button and Mounting Nut Not Furnished.

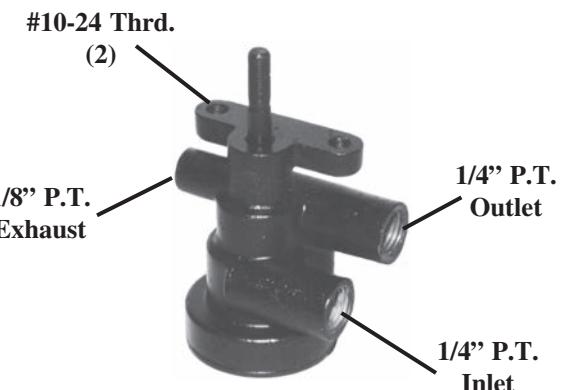
PART NUMBER
A25600-2X

- * The regulatory valve is adjustable from 5 to 85 PSI.

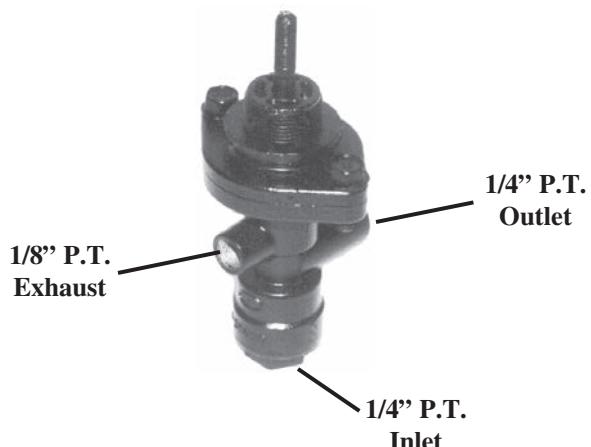
NOTE: Rotary Knob Not Furnished.

PART NUMBER	PRESSURE SETTING
9400X 940000X	5-6 PSI to 85 PSI Max 0 PSI to Reservoir Pressure

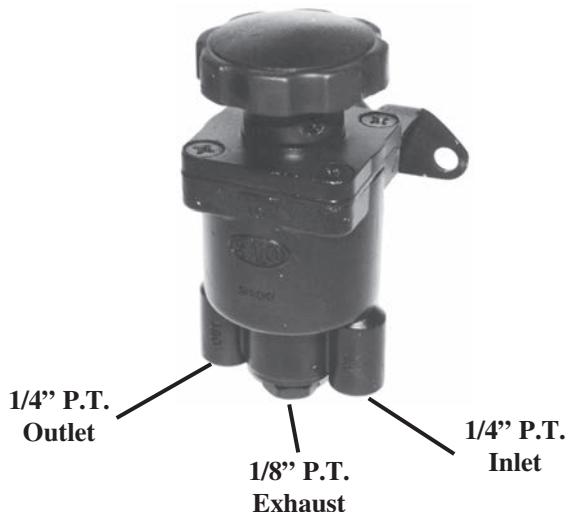
Hand Control Valve Pull-Push w/Automatic Shut-Off



Hand Control Valve Push-Pull



Pressure Control Valve



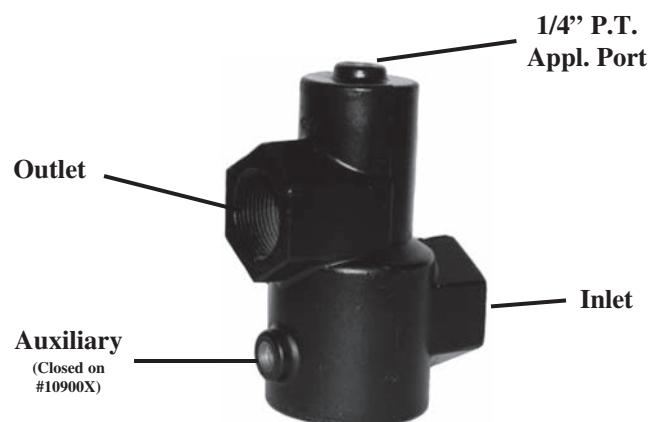
SEALCO® - AIR VALVES

* Air Starter Valve

Note: #11900X and #14900X have mounting holes.
#10900X has the auxiliary port closed.

Air Starter Valve

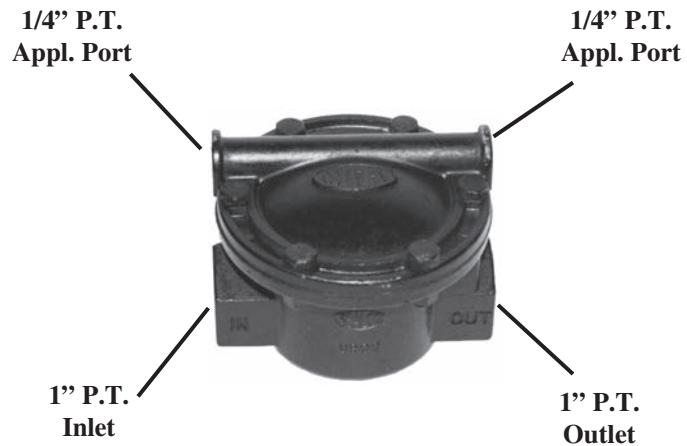
PART NUMBER	INLET PORT	OUTLET PORT
10900X	(1)-1 1/2" PT	(1)-1 1/2" PT
11900X	(1)-1 1/2" PT	(1)-1 1/2" PT
14900X	(1)-1 1/4" PT	(1)-1 1/4" PT



* Air Starter Valve

Air Starter Valve

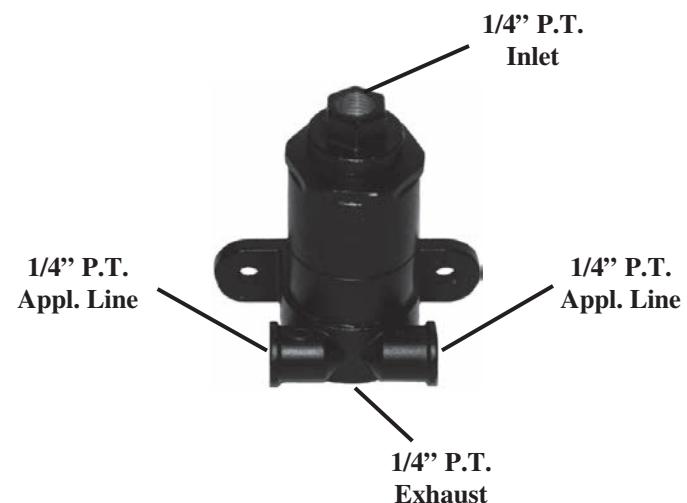
PART NUMBER
6900X



* The sludge remover valve keeps the compressed air system dry and clean by automatically expelling accumulated moisture from the reservoir.

Sludge Remover Valve

PART NUMBER
6300X



WILLIAMS®- AIR VALVES

NOTE:

We offer a complete line of
NEW and REMANUFACTURED
WILLIAMS CONTROLS, Inc. products.

Please refer to
your price sheet or call for the items that
are not pictured in this section of the catalog.

* Available in NEW and REMANUFACTURED.

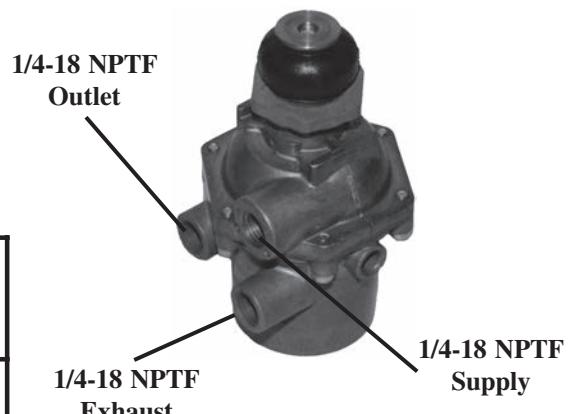
* The WM-90 three-way valves are general purpose pushrod actuated regulators.

* They are used as subassemblies in many other Williams products.

* They are available in a variety of output ranges.

NOTE: WM-90DX (#116697) is designed with special fail-safe features and comply with FMVSS-124 requirements.

WM-90 Series
3-Way Regulating Valves



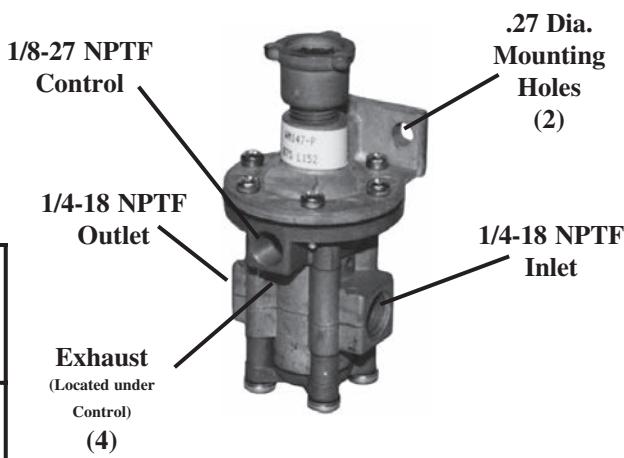
NEW PART NUMBER	WM NUMBER	ADJUSTABLE OUTPUT RANGE	MAXIMUM OUTPUT
111300	WM-90D	0-60 PSI	60 PSI
116697	WM-90DX	0-60/70 PSI	70 PSI

* Normally open WM-147 relays are installed in control circuits that can provide sufficient control pressures for closing the valves.

* Frequently used as reversing relays for two-speed axles.

NOTE: The required control pressure signal differs with each model model in the WM-147 series.

WM-147 Series
Normally Open Relay Valve



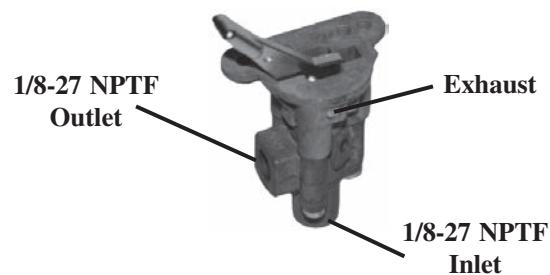
NEW PART NUMBER	WM NUMBER	CONTROL PRESSURE TO CLOSE	CONTROL PRESSURE TO REOPEN
111531	WM-147FX	30-50 PSI	15-30 PSI
111542	WM-147PX	10-30 PSI	5-10 PSI

WILLIAMS® - AIR VALVES

- * The WM-219C4 consists of a two position, three-way toggle valve.
- * It includes a heavy duty metal control lever.
- * It is designed for panel mounting.
- * Commonly used to control air pressure-operated relay valves, cylinders, PTO's and fifth wheels.

WM-219 Series Three-Way, Two Position Toggle Valve

NEW PART NUMBER	WM NUMBER
111817	WM-219C4X

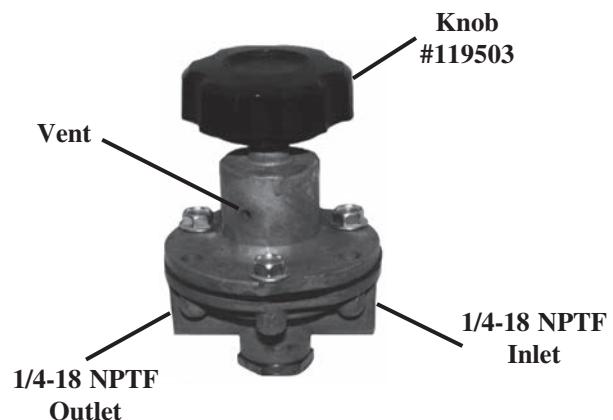


- * The WM-279 series valves are self-releiving pressure regulators that are available with either a hex screw or knob for output adjustment.
- * The operator regulates the output level by manually changing the position of the knob.

NOTE: Knob #119503 is included with #111949.

NEW PART NUMBER	WM NUMBER	ADJUSTABLE OUTPUT RANGE	MAXIMUM OUTPUT
111949	WM-279RX	0-80/85 PSI	85 PSI

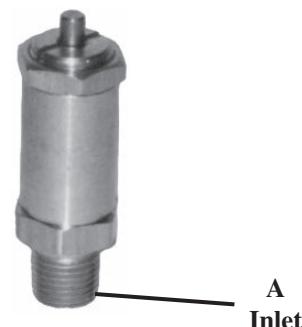
WM-279 Series Self-Relieving Pressure Regulator



- * Available in NEW ONLY.
- * The WM-342 is an adjustable air pressure relief valve.
- * It is used primarily in conjunction with air tanks in industrial and vehicular applications.
- * In the event of a governor failure, the relief valve exhausts excess system pressure and restricts pressure in the tank to a predetermined operating level.

WM-342 Series Adjustable Safety Valve

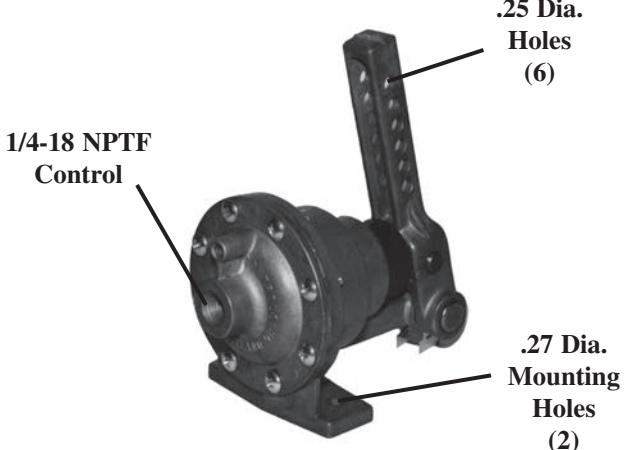
NEW PART NUMBER	A INLET
112405 WM-342A	3/8-18 NPTF
112407 WM-342B	1/4-18 NPTF



WILLIAMS®- AIR VALVES

* The WM-388U1C1D is a general purpose throttle cylinder. *
It features levers with multiple holes for easy connection to a variety of throttle linkages.

WM-388 Series Air Throttle Cylinder

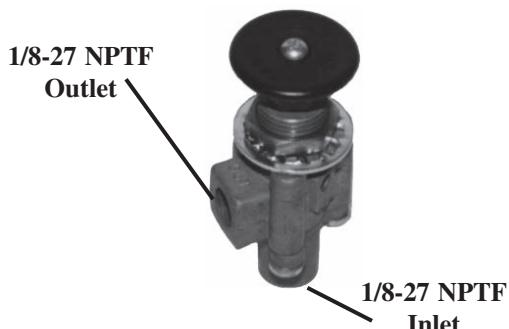


NEW PART NUMBER	WM NUMBER	PRESSURE RANGE
117888	WM-388U1C1DX	0-30/35 PSI

- * The WM-397J control valve is a manually operated, three-way pneumatic valve that is actuated by a push button.
- * It is designed for control panel or console mounting.
- * This valve has three operating positions-APPLY, EXHAUST and HOLD.
- * Commonly used in air seat systems.

NOTE: Mounting Plate Not Furnished.

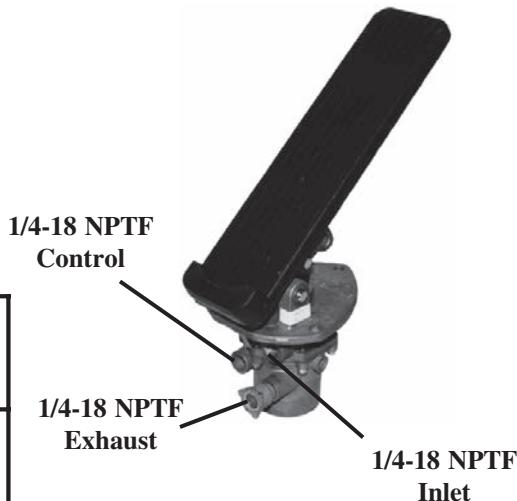
WM-397 Series 3-Way Holding Valve



NEW PART NUMBER	WM NUMBER
100708	WM-397JX

- * The WM-453M series pneumatic accelerator pedal is a three-way pressure regulator designed for on-highway throttle control applications.
- * It is used to remotely control engine mounted throttle cylinders.

WM-453 Series Air Throttle Pedals



NEW PART NUMBER	WM NUMBER	REGULATED OUTPUT RANGE	MAXIMUM OUTPUT
116731	WM-453MX	0-60/70 PSI	70 PSI

WILLIAMS® - AIR VALVES

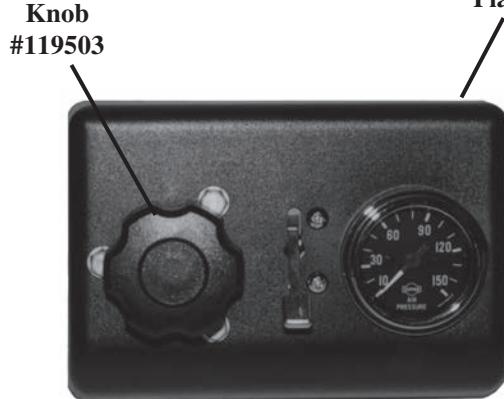
*Available in NEW ONLY.

* The WM-459L regulator panel is a complete pre-plumbed unit designed for easy installation in industrial and vehicular applications.

* Each panel is comprised of an illuminated gauge, a WM219C3 toggle valve and a self-releasing, knob-actuated WM279 series pressure regulator.

NEW PART NUMBER	ADJUSTABLE OUTPUT RANGE	MAXIMUM OUTPUT
113129 WM-459L	0-80/85 PSI	85 PSI

WM 459-Series Regulator Panel



#104738
Plastic Panel

Knob
#119503



WM279R
Regulator
#111949

WM219C3
Toggle Valve
#111816

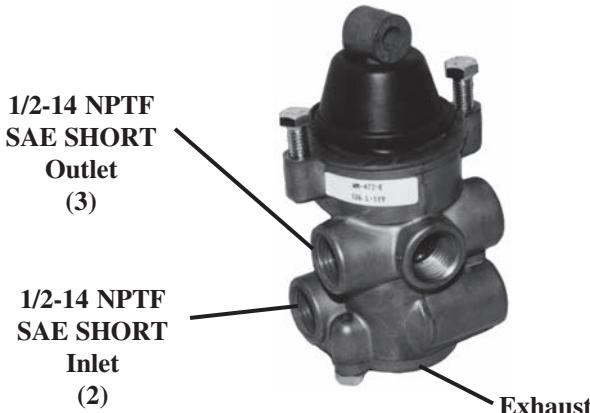
Gage
#104710

* The WM472E treadle valve is a three-way, compensating pressure regulator.

NOTE: The WM-472E is a valve subassembly without the mounting bracket or pedal.

NEW PART NUMBER	WM NUMBER
113224	WM-472EX

WM-472 Series Treadle Valve



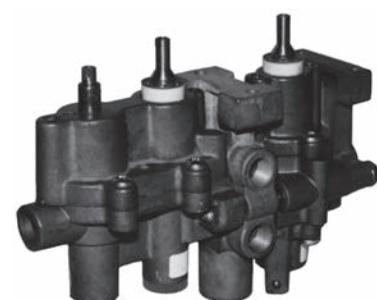
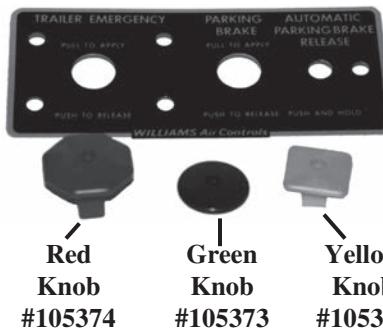
* The WM498 manifold panel comprises a variety of push button, rocker, toggle and knob actuated valves.

NOTE: Manifold panel (#106704) is supplied with dash plate (#106706) and knobs.

NEW PART NUMBER	WM NUMBER
106704	WM-498-108X

WM-498 Series Multiple Valve Manifold Panel Asembly

Plate
#106706



WILLIAMS®- AIR VALVES

- * The WM-606C2C is a three-way regulating valve designed for column mounting.
- * It is commonly used to provide hand control of vehicular spring brakes.

NOTE: Gage is Not Furnished.

NEW PART NUMBER	WM NUMBER	OUTPUT RANGE	MAXIMUM OUTPUT
113730	WM-606C2CX	0-120 PSI	Tank

*The WM674A is a dual function valve used to control spring brakes under normal and emergency conditions.

* It consists of two manually operated three-way valves housed in a common body.

NOTE: Knobs Furnished with Assembly.
Mounting Plate is Not Furnished.

NEW PART NUMBER	WM NUMBER
106841	WM-674AX

* Available in **NEW ONLY**.

* The WM778A is a normally closed pressure protection valve often used when an auxiliary system is supplied off a primary system.

* This valve will protect primary system air pressure by reclosing automatically at a nominal 70 PSI.

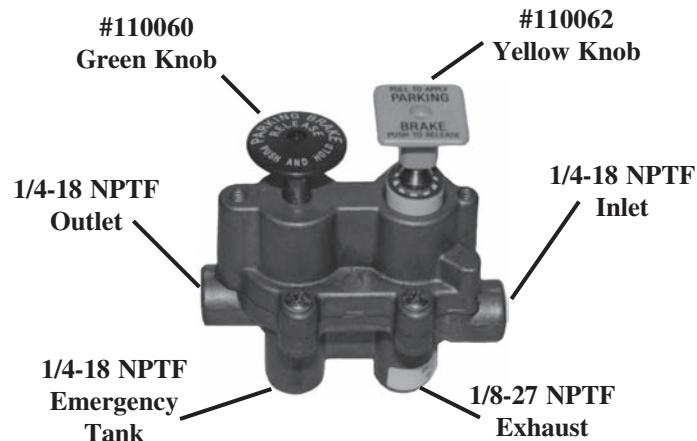
NOTE: Without filter.

NEW PART NUMBER
118181 WM-778A

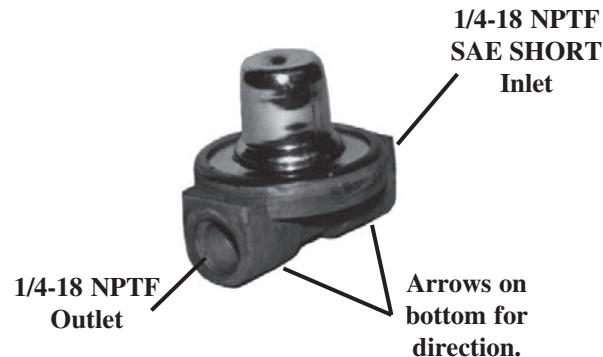
WM-606 Series Column-Mounted Regulating Valve



WM-674 Series Dual Function Parking Brake Control



WM-778 Series Pressure Protection Valve

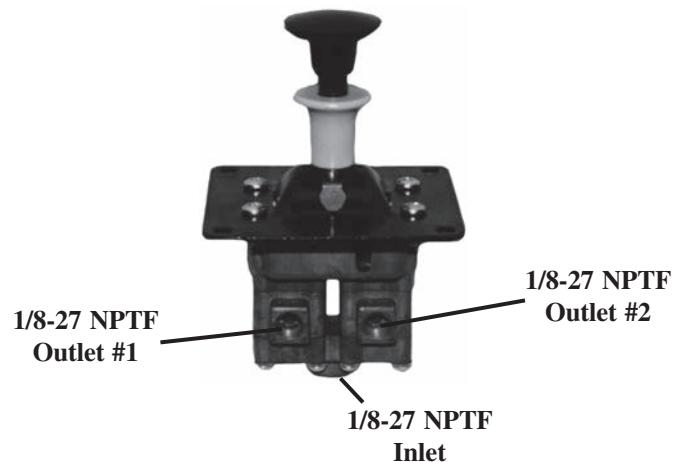


WILLIAMS® - AIR VALVES

- * The WM783A is composed of a non-compensating four-way control valve with three functional positions.
- * The WM783A models are equipped with a spring-loaded lockout safety device which locks the control lever in each of the three positions to prevent unintentional movement.

NEW PART NUMBER	WM NUMBER
118317	WM-783AX

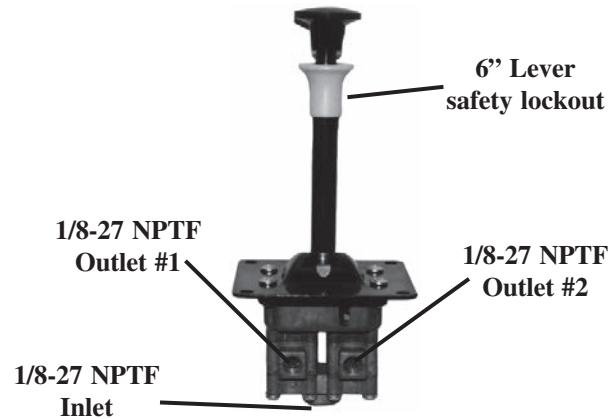
WM-783 Series Three position, Four-Way Control Valve



- * The WM784A is composed of a non-compensating, four-way control valve with three functional positions.
- * This valve is actuated by control levers which spring return to the neutral position when they are not manually held in an applied position.
- * WM784 models are equipped with a spring-loaded lockout safety device that locks the control lever in the neutral position to prevent unintentional movement.

NEW PART NUMBER	WM NUMBER
118318	WM-784AX

WM-784 Series Three Position Spring Return Four-Way Control Valve



MISCELLANEOUS - VALVES

SLOAN® Valve

* The Sloan® valve is a tractor trailer park valve with a two-way check valve.

* The two-way check valve allows either primary or secondary air supply to operate spring brakes on tractor and/or trailer combinations.

PART NUMBER
1070MKX



MIDLAND® Style Leveling Valve

Available in New Only.



PART NUMBER
KN27000

* The Neway® leveling valve is a height control valve that is used to control the air pressure in the air springs for varying loads.

* Also available in new.

PART NUMBER
90054007X

* Available in NEW ONLY.

* This height and control valve responds instantly to correct air spring pressure and re-levels the chassis to desired ride height.

* Weather, corrosion and impact resistant thermoplastic body.
* Virtually maintenance-free.

NOTE: #B005 includes the #B011 linkage and mounting hardware.

NEWAY® Leveling Valve



RIDEWELL® Height and Leveling Control Valve



PART NUMBER	NOTES
B005	Complete Kit
B011	Linkage Only

MISCELLANEOUS - VALVES

* Available in NEW ONLY.

Rockwell®/WABCO® Style
Air Dryer Cartridge



PART NUMBER
R950011

* Clayton Dewandre® governor.

Clayton Dewandre® Governor

PART NUMBER
2P7809X



- * Model: Single Cylinder
- * Drive: Spline Drive
- * Cooling: Water
- * Type of Discharge: Threaded
- * Mounting: Flange
- * Notes:

Clayton Dewandre® Air Compressor

PART NUMBER
2P8711X



MV-3 STYLE CONTROL MODULE (New)

(Information continued from page 72.)

To Replace Part #	Order Service Part #	Mounting Hole	(Truck Manuf.)
065156	800515	M6 x 1-6H	(Mack)
065186	800519	1/4-20	
065208	800584	M6 x 1-6H	(Mack)
065248	800523	#10-24	(Ptrblt.)
065305	800525	.275"	
106981	800584	M6 x 1-6H	(Mack)
107215	800525	.275"	
107218	800515	M6 x 1-6H	(Mack)
107220	800519	1/4-20	
107753	800523	#10-24	(Ptrblt.)
131061	065725	#10-24	
131062	065725	#10-24	
800036	800036	1/4-20	
800039	800039	M5 x 8.0-6H	
800145	800530	1/4-20	
800259	800259	1/4-20	(FrInr.)
800260	800260	M5 x 8.0-6H	(Kenw.)
800353	800353	#10-24	
800515	800515	M6 x 1-6H	(Mack)
800519	800519	1/4-20	(Ptrblt.)
800522	800522	M6 x 1-6H	
800523	800523	#10-24	
800525	800525	.365"	
800528	800528	#10-24	
800530	800530	1/4-20	
5000286	800519	1/4-20	
5000378	800036	1/4-20	
5000379	800036	1/4-20	
5000428	800039	M5 x 8.0-6H	
5000429	800036	M5 x 8.0-6H	
5001302	065725	#10-24	
5002197	800530	1/4-20	
5002205	800515	M6 x 1-6H	(Mack)
5002714	800260	M5 x 8.0-6H	(Kenw.)
5002716	800259	1/4-20	(FrInr.)
5002737	800039	M5 x 8.0-6H	
5002738	800039	M5 x 8.0-6H	
5003585	800259	1/4-20	(FrInr.)
5003682	800353	#10-24	(Ptrblt.)
5005051	800515	M6 x 1-6H	(Mack)
5005052	800515	M6 x 1-6H	(Mack)
5005057	800519	1/4-20	(Vlv.)
5005058	800519	1/4-20	(Wst.Str.)
5005062	800523	#10-24	(Ptrblt.)
5005064	800525	.275"	(Kenw.)
5005069	800530	1/4-20	
5005068	800529	1/4-20	(FrInr.)
5005646	800584	M6 x 1-6H	

To Replace Part #	Order Service Part #	Mounting Hole
800482	800531	.285"
800531	800531	.285"
5004587	800531	.285"
5005070	800531	.285"

To Replace Part #	Order Service Part #	Mounting Hole	(Truck Manuf.)
065159	800517	M6 x 1-6H	(Kenw.)
065379	800517	M6 x 1-6H	(Kenw.)
107214	800517	M6 x 1-6H	(Kenw.)
108825	800517	M6 x 1-6H	(Kenw.)
800517	800517	M6 x 1-6H	(Kenw.)
800553	800553	#10-24	
5005055	800517	M6 x 1-6H	(Kenw.)
5005644	800517	M6 x 1-6H	(Kenw.)

**NOTE:
NUMBERS
IN BOLD
INDICATE
PUSH-TO-CONNECT.**

To Replace Part #	Order Service Part #	Mounting Hole
800087	800259	.200"
800529	800259	.200"
5000815	800259	.200"
5000819	800259	.200"
5005068	800259	.200"

To Replace Part #	Order Service Part #	Mounting Hole	(Truck Manuf.)
800445	800445	.270"	
5004463	800445	.270"	(Mack)

800501	800532	1/4-20	
800532	800532	1/4-20	
5004543	800532	1/4-20	
5005071	800532	1/4-20	(String.)

065157	800516	.275"	
065160	800518	.275"	
065187	800573	1/4-20	(FrInr.)
065523	065523	.275"	
106331	800516	.275"	
106992	800516	.275"	
107212	800518	.275"	
107433	800573	1/4-20	
108155	800516	.275"	
109391	065523	.275"	
109392	065523	.275"	
109865	800516	.275"	
109935	065523	.275"	
109985	800516	.275"	
800082	800520	1/4-20	(Nvstr.)
800257	800257	.275"	
800516	800516	.275"	
800518	800518	.275"	
800520	800520	1/4-20	(Nvstr.)
800526	800526	1/4-20	
800573	800573	1/4-20	(FrInr.)
5000628	800516	.275"	
5000884	800520	1/4-20	(Nvstr.)
5000893	800520	1/4-20	(Nvstr.)
5002715	800257	.275"	(Nvstr.)
5004872	800257	.275"	(Ptrblt.)
5005053	800516	.275"	
5005054	800516	.275"	
5005056	800518	.275"	
5005059	800573	1/4-20	(FrInr.)
5005067	800520	1/4-20	(Nvstr.)

065192	800521	1/4-20	(Ford)
065304	800545	1/4-20	
065496	800527	M6 x 1-6H	(Ford)
065725	065725	M6 x 1-6H	
107467	800521	1/4-20	(Ford)
108279	800545	1/4-20	
109325	800527	M6 x 1-6H	(Ford)
800258	800258	M6 x 1-6H	(Ford)
800521	800521	1/4-20	
800527	800527	M6 x 1-6H	(Ford)
800545	800545	1/4-20	
5002695	800258	M6 x 1-6H	(Ford)
5004732	800545	1/4-20	
5005060	800521	1/4-20	(Ford)
5005063	800545	1/4-20	(Ford)
5005066	800527	M6 x 1-6H	(Ford)

CUMMINS® & HOLSET® Air Compressors

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
3558022X 3558027X 3558042X 3558043X 3558044X	AIR COMPRESSOR CUMMINS / HOLSET, 2 CLY. CUMMINS AIR COMPRESSOR CUMMINS AIR COMPRESSOR CUMMINS AIR COMPRESSOR	3558144X 3558151X 3558153X 3558159X 3558167X	CUMMINS QE AIR COMP. QE AIR COMPRESSOR CUMMINS QE 1 CYL. AIR COMP. CUMMINS AIR COMPRESSOR QE AIR COMPRESSOR
3558045X 3558049X 3558013X 3558050X 3558051X	CUMMINS 1 CYL. AIR COMP. CUMMINS QE AIR COMP. AIR COMPRESSOR CUMMINS AIR COMPRESSOR CUMMINS QE AIR COMP.	3558186X 3558189X 3558206X 3558208X 3558211X	CUMMINS QE AIR COMPRESSOR QE AIR COMPRESSOR QE AIR COMPRESSOR CUMMINS QE AIR COMP. CUMMINS QE AIR COMP.
3558052X 3558060X 3558068X 3558072X 3558074X	QE AIR COMPRESSOR CUMMINS AIR COMPRESSOR CUMMINS QE AIR COMP. CUMMINS QE AIR COMP. CUMMINS QE AIR COMP.	3558212X AR13161X AR73659X AR73808X 3558048X	QE AIR COMPRESSOR VT903 AIR COMPRESSOR CUMMINS AIR COMPRESSOR AIR COMPRESSOR AIR COMPRESSOR
3558077X 3558094X 3558095X 3558096X 3558097X	CUMMINS QE AIR COMP. CUMMINS QE AIR COMP. HOLSET QE AIR COMP. CUMMINS QE AIR COMP. CUMMINS QE AIR COMP.	3018527X 3018543X 3045615X 3047440X 3048680X	AIR COMPRESSOR AIR COMPRESSOR AIR COMPRESSOR L-10 CUMMINS AIR COMP. AIR COMPRESSOR
3558098X 3558107X 3558113X 3558122X 3558131X	CUMMINS QE AIR COMP. CUMMINS AIR COMPRESSOR CUMMINS QE AIR COMP. CUMMINS QE AIR COMP. CUMMINS QE AIR COMP.	3049186X 3558000X 3558005X 3558006X 3558020X	AIR COMPRESSOR AIR COMPRESSOR CUMMINS AIR COMP. AIR COMPRESSOR CUMMINS AIR COMP.

**Additional Air
Compressor Numbers Are Available!
Please Call Our Friendly Customer Service
Staff For Information.**

PART NUMBER	DESCRIPTION
3558021X	AIR COMPRESSOR
3558001X	HOLSET AIR COMPRESSOR
3558002X	HOLSET AIR COMPRESSOR
3558038X	HOLSET / CUMMINS AIR COMP.
3558082X	HOLSET / CUMMINS AIR COMP.

Rotochambers

SERVICE REPLACEMENT LESS YOKE	TYPE	ROD LENGTH EXT.	STUD DIA.	STUD LENGTH	OVERALL DIAMETER
229814X	9	13"	7/16"	1-1/4"	4-3/4"
229815X	12	11"	7/16"	1-1/4"	5-9/32"
229816X	16	7-7/8"	1/2"	1-3/8"	5-7/8"
229817X	20	6-7/8"	5/8"	1-9/16"	6-13/32"
229818X	24	5-13/16"	5/8"	1-9/16"	6-15/16"
229819X	30	9-1/16"	5/8"	1-9/16"	7-17/32"
229820X	36	8-1/16"	5/8"	1-9/16"	8-15/32"
229821X	50	10-15/16"	3/4"	1-13/16"	9-13/32"

NEW VALVES & PRODUCTS

BENDIX® Style Valves & Components

NEW PART NUMBER	DESCRIPTION Note: Bendix®Style Components & Products	NOTES	DESCRIPTION
065145	BPR-1 VALVE		
065146	BPR-1 VALVE		
065157	MV-3 VALVE		
065224	AD- 9 AIR DRYER		
065225	AD-9 AIR DRYER		
065437	SR-4 TRAILER VALVE		
065476	R12P PILOT RELAY VLV		
065643	PP-DC DASH VALVE		
065661	PP-DC CONTROL VALVE		
065706	TP3-DC TRAC PROT VLV		
101112	SR-4 TRAILER VALVE		
101437	MV-2 DASH CONT VLV		
101557	MV-2 CHECK ASSEMBLY		
101622	SR-4 TRAILER VALVE		
101786	TC-6 BRAKE VALVE		
101818	E-7 FOOT VALVE		
102027	MV-2 CONTROL VAVLE		
102626	R-12 RELAY VALVE		
102761	SR-2 TRAILER VALVE		
103009	R-12H RELAY VALVE		
103010	R-14 RELAY VALVE		
103028	R-14 RELAY VALVE		
103061	SR-2 TRAILER VALVE		
103081	R-7 MODULATING VLV		
109107	SR-2 VALVE		
227870	SC-1 CHECK VALVE		
227871	SC-1 CHECK VALVE		
228520	DS-1 SWITCH		
228600	SL-4 SWITCH		
228750	LP-3 SWITCH		
229501	E-2 BRAKE VALVE		
229507	LQ-2 VALVE		
229509	LQ-2 VALVE		
229635	TW-1 VALVE		
229813	QR VALVE		
229844	QR-1 VALVE		
229859	QR-1 VALVE		
229860	QR-1 VALVE		
275083	LP-3 SWITCH		
275491	D-2 GOVERNOR		
276270	TC-2 BRAKE VALVE		
276566	PP-1 VALVE		
276567	PP-1 DASH VALVE		
276635	TW-4 CONTROL VALVE		
277144	RV-1 REDUCING VALVE		
277147	PR-2 PRES REG VALVE		
277148	PR-2 PRES REG VALVE		
277226	PRESSURE REG VALVE		
277863	E-3 BRAKE VALVE		
278427	RV-1 REDUCING VALVE		
278450	PP-1 DASH VALVE		
278483	QR-1 VALVE		
278598	DC-4 DOUBLE CHK VL		
278614	DOUBLE CHECK VALVE		
278615	DOUBLE CHECK VALVE		
278825	SV-1 VALVE		
279000	TP-3 PROT VALVE		
279180	RELAY VALVE		
279416	LP-3 LOW PRES VALVE		
279716	RV-1 PRES REDUC VLV		
279950	E-5 BRAKE VALVE		
279952	R-6 RELAY VALVE		
280758	TR-3 INVERSION VALVE		
280809	DC-4 DBL CHECK VALVE		
281459	TR-3 INVERSION VALVE		

NEW VALVES & PRODUCTS

BENDIX® Style Valves & Components Cont.

NEW PART NUMBER	DESCRIPTION Note: Bendix® Style Valves & Components
281865	RELAY EMERG VALVE
281946	PP-5 VALVE
283940	R-6 RELAY VALVE
284142	ST-3 POP OFF VALVE
284143	ST-3 SAFETY VALVE
284358	D-2 GOVERNOR
284760	E-7 DUAL FOOT VALVE
285849	SAFETY VALVE
286171	E-6 FOOT VALVE
286364	SR-1 VALVE
286370	R-8 RELAY VALVE
286404	SL-5 STOP LIGHT SWITCH
286500	PR-4 PRES PROT VALVE
287114	R-8P PILOT RELAY VALVE
287376	SR-2 TRALIER S/B VALVE
288004	LP-3 SWITCH
288239	PP-7 VALVE
288241	PP-7 VALVE
288251	QR-1 VALVE
288605	TP-5 TRAC PROT VALVE
288746	PP-3 DASH CONT VAVLE
288781	R-8 RELAY VALVE
289144	LQ-4 VALVE
289145	LQ-4 VALVE
289182	QR-1C QUICK RELEASE
289714	QR-1C QUICK RELEASE
800034	PPDC CONTROL VALVE
800063	QRN- 2 VALVE
800064	QRN-2 VAVLE
800142	PPDC CONTROL VALVE
800257	MV-3 DASH CONT VALVE
800258	MV-3 DASH CONT VAVLE
800259	MV-3 DASH CONT VALVE
800332	QR-L INLINE QUICK/REL
800405	12V PURGE ASSEMBLY
800445	MV-3 DASH CONT VALVE
800515	MV-3 DASH CONT VAVLE
800516	MV-3 DASH CONT VALVE
800517	MV-3 DASH CONT VAVLE
800518	MV-3 DASH CONT VALVE
800519	MV-3 DASH CONT VALVE
800520	MV-3 DASH CONT VAVLE
800521	MV-3 DASH CONT VALVE
800522	MV-3 DASH CONT VAVLE
800523	MV-3 DASH CONT VALVE
800529	MV-3 DASH CONT VALVE
800530	MV-3 DASH CONT VAVLE
800560	R-14 RELAY VALVE
800573	MV-3 DASH CONT VALVE
800629	E-8P DUAL BRAKE VLV
800630	E-8P DUAL BRAKE VLV
800632	E-10P DUAL BRK VLV
800636	R-12 DURA-DRAIN
065206	R-12 MULTIPORT RELAY
065303	R-12 RELAY VALVE
102802	R-14 MAINTENANCE KIT
109578	12V HEATER KIT AD-9
109994	AD-SP CARTRIDGE
229505	LQ-2 VALVE
229603	SC-3 CHECK VALVE
276462	PP-2 DASH VALVE
277132	AIR OIL ACCUMULATOR
278998	E-3 BRAKE VALVE
281923	DV-2 VALVE
284412	DV-2 VLV W/ HEATER

NOTES	DESCRIPTION

BENDIX® Style SLACK ADJUSTERS

NEW PART NUMBER	DESCRIPTION
065164	ASA-5 AUTO S A
065167	ASA-5 AUTO S A
065169	ASA-5 AUTO S A
065170	ASA-5 AUTO S A
065172	ASA-5 AUTO S A
065174	ASA-5 AUTO S A
065175	ASA-5 AUTO S A
065177	ASA-5 AUTO S A
065178	ASA-5 AUTO S A

GLADHANDS

NEW PART NUMBER	DESCRIPTION
B12006	SERVICE GLADHAND
B12008	EMERG GLADHAND
B120099	GLAD GRIP 2 PACK
B12010	UNIVERSAL G/H
B12012	RUBBER G/H SEAL
B120161	BLUE POLY G/H SEAL
B120162	RED POLY G/H SEAL
B120163	BLACK POLY G/H SEAL
B12410	UNIVERSAL CAST G/H
B12412	SERVICE CAST G/H
B12414	EMERG CAST G/H
B12820	DRAIN VLV 60" CABLE

NEW VALVES & PRODUCTS

CUMMINS® Style

NEW PART NUMBER	DESCRIPTION Cummins® Style
6997312 6997324	12V FUEL SOLENOID 24V FUEL SOLENOID
NOTES	DESCRIPTION

MIDLAND® Style

NEW PART NUMBER	DESCRIPTION Midland® Style
13241	LOW AIR SWITCH
13250	SERV STOP/L SWIT
13255	TRL EME STOP/L SW
12352	RELAY EMERG VALVE
KN18537	GOVERNOR
KN20001	DASH VALVE
KN20031	DASH VALVE
KN20033	DASH VALVE
KN20110	DASH VALVE
KN20541	HAND CONT VALVE
KN20551	HAND CONT VALVE
KN20552	HAND CONT VALVE
KN20561	HAND CONT VALVE
KN20580	HAND CONT VALVE
KN20590	HAND CONT VALVE
KN20601	DASH CONT VALVE
KN20606	DASH CONT VALVE
KN20607	DASH CONT VALVE
KN20612	DASH CONT VALVE
KN20615	DASH CONT VALVE
KN22501	DUAL FOOT VALVE
KN23040	ONE WAY CHK VLV
KN26000	RT-4 VALVE
KN26010	RT-4 VALVE
KN26020	RT-4 TRL VALVE
KN27000	LEVELING VALVE
KN28030	INVERSION VALVE
KN28060	RELAY VALVE
KN28061	RELAY VALVE
KN28065	RELAY VALVE
KN28071	RELAY VALVE
KN28080	RELAY VALVE
KN28130	RELAY VALVE
KN28131	RELAY VALVE
KN28300	RELAY VALVE
KN28500	RG-2 RELAY VALVE
KN28510	RG-2 RELAY VALVE
KN28520	RG-2 RELAY VALVE
KN28600	FF-2 VALVE
KN28601	FF-2 VALVE
KN28602	FF-2 VALVE
KN28603	FF-2 VALVE
KN30400	RELAY EMER VALVE
KN31000	PRESS PROT VALVE
KN31010	PRESS PROT VALVE
KN31171	PRESS PROT VALVE
KN31200	PRESS PROT VALVE
KN32005	QUICK REL VALVE
KN32011	QUICK REL VALVE
KN34050	TRAC PROT VALVE
KN68230	SOLENOID VALVE
KN 68237	SOL AIR VALVE 24V

CHICAGO RAWHIDE® Style

NEW PART NUMBER	DESCRIPTION Chicago Rawhide® Style
1 6 4 3	CR HUBCAP
NOTES	DESCRIPTION

FULLER® Style

NEW PART NUMBER	DESCRIPTION Fuller® Style
A 6909 A 3546 A 4487 A 4490 A 4491 A 4900 A 5000 A 5010 A 5015 A 6913	TRANS RANGE VALVE VALVE SELECTOR VALVE SELECTOR VALVE SELECTOR VALVE TRANS RANGE VALVE SHIFT VALVE TRANS RANGE VALVE TRANS RANGE VALVE TRANS RANGE VALVE
NOTES	DESCRIPTION

NEW VALVES & PRODUCTS

NOTES

NEWAY® Style

NEW PART NUMBER	DESCRIPTION Neway® Style
90044162	SHOCK ABSORBER
90054007	LEVELING VALVE
90054074	ELEC SOLENOID VALVE
90054075	ELEC SOLENOID VALVE
90054079	PILOT VALVE

RIDEWELL®

NEW PART NUMBER	DESCRIPTION
B005	HEIGHT CONT VLV
B011	LINKAGE KIT

SEALCO® Style Cont.

New Part Number	DESCRIPTION SEALCO® Style Valves
2000 1/2	1-WAY CHK VLV
2550	LINE FILTER
3450	AIR START CONT
3800	HOLD & RELEASE
7800	HOLD & RELEASE
9400	PRESS CONT VLV
16743	REGULATOR VLV
110130	VALVE
110139	RELAY VALVE
110143	PLUG ASSEMBLY
110170	SPR BRK CON VLV
110171	SPR BRK CON VLV
110197	SERV RELAY VLV
110263	PUSH CONT VALVE
110310	SPR BRK CON VLV
110338	RELAY EMER VLV
110376	EMER CONT VALVE
110380	LOV-4 RELAY VLV
110400	DUAL CIR FT VLV
110410	2 PT RELAY VAVLE
110412	RELAY VALVE
110415	RELAY VALVE
110470	RELAY EMER VLV
110500	SPR BRK CON VLV
110510	SPR BRK CON VLV
110542	SPRING BRK VLV
110570	RELAY VALVE
110580	CONT LINE VALVE
110700	SPR BRK CON VLV
110800	SPR BRK CON VLV
140200	PRESS PROT VLV
140270	PRESS PROT VLV
140280	PRESS PROT VLV
140290	PRESS PROT VLV
10005A	CARTRIDGE
17600B	EMER RELAY VLV
22001/2	1-WAY CHECK VLV
22001/4	1-WAY CHECK VLV
22003/4	1-WAY CHECK VLV
200001	QUICK RELEASE VALVE

SLOAN® Style

NEW PART NUMBER	DESCRIPTION Sloan® Style
1000	FLIPSWITCH

AIR DRYERS, CARTRIDGES & KITS

<u>NEW PART NUMBER</u>	<u>DESCRIPTION</u>	<u>Part Number</u>	<u>AD-IP Descriptions</u>
109484	AD-IP Style Del Chk Valve Kit	109477X 5000709X	AD-IP Air Dryer AD-IP Drop In Air Dryer
109495	AD-IP Style Heater & Thermostat		
5003547	AD-IP Style Purge Kit	109493X	AD-IP Cartridge

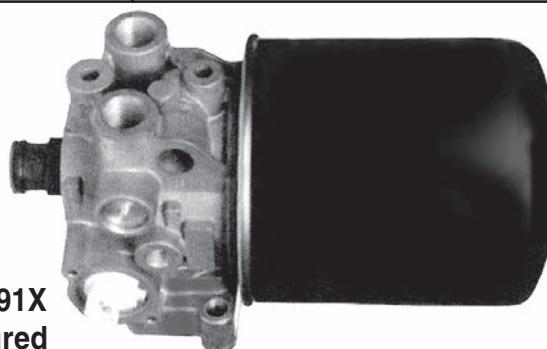
<u>PART #</u>	<u>NOTES</u>



5000709X
Pictured

<u>NEW PART NUMBER</u>	<u>DESCRIPTION</u>	<u>Part Number</u>	<u>AD-SP Descriptions</u>
109993	AD-SP Style Turbo Cutoff Kit	109991X	AD-SP Air Dryer
109995	AD-SP Style Purge Valve Kit	109992X	AD-SP 24V Air Dryer
5008414	AD-SP Style Cartridge Kit	800973X	AD-SP Drop In Air Dryer

<u>PART #</u>	<u>NOTES</u>



109991X
Pictured

<u>NEW PART NUMBER</u>	<u>DESCRIPTION</u>	<u>Part Number</u>	<u>Descriptions</u>
R950011	Cartridge	R955205X	Wabco Air Dryer
R950014	Kit		
R955205	w/pc Check Valve		
R955205WO	w/No Check Valve		
R955206	24V w/pc Check Valve		
R955206WO	24V w/No Check Valve		

<u>PART #</u>	<u>NOTES</u>



R955205X
Pictured

AIR DRYERS, CARTRIDGES & KITS

<u>NEW PART NUMBER</u>	<u>DESCRIPTION</u>	<u>Part Number</u>	<u>AD-2 Descriptions</u>
287053	AD-2 Style Purge Valve Maint. Kit	286934X 286936X 286960X 286961X	AD-2 Air Dryer 12V AD-2 Air Dryer 24V AD-2 Air Dryer 12V HeaterTransit Coach AD-2 Air Dryer 24V Heater Transit Coach
		286875X 286876X 103253X	AD-2 End Cover AD-2 End Cover AD-2 End Cover
		101900X	AD-2 Cartridge
<u>NEW PART NUMBER</u>	<u>DESCRIPTION</u>	<u>Part Number</u>	<u>AD-4 Descriptions</u>
104358	AD-4 Style Cartridge	065040X	AD-4 Air Dryer 24V
103818	AD-4 Style Purge Valve Maint. Kit	065041X	AD-4 Air Dryer 12V
103879	AD-4 Style Seal Kit	065057X	AD-4 Air Dryer 12V
103980	AD-4 Style End Cover	065152X 065089X 065102X	AD-4 Air Dryer AD-4 Air Dryer 24V Transit Dbl Terminal AD-4 Air Dryer 12V Transit Dbl Terminal
		065043X 065044X 065058X 065090X 065103X	AD-4 End Cover AD-4 End Cover AD-4 End Cover AD-4 End Cover AD-4 End Cover
		104358X	AD-4 Cartridge
<u>NEW PART NUMBER</u>	<u>DESCRIPTION</u>	<u>Part Number</u>	<u>AD-9 Descriptions</u>
107695	AD-9 Style Mounting Bracket Kit	065224X	AD-9 Air Dryer
107796	AD-9 Style Cartridge	065225X	AD-9 Air Dryer
107798	AD-9 Style Maintenance Kit	065226X	AD-9 Air Dryer
107799	AD-9 Style Chk Vlv Kit 3/4	065227X	AD-9 Air Dryer
107800	AD-9 Style Chk Vlv Kit 1/2	065228X	AD-9 Air Dryer 24V
298948	AD-9 Style Connector & Wiring Harness	065243X	AD-9 Air Dryer Transit
5004338	AD-9 Style 24V Purge Kit	065406X	AD-9 Air Dryer
5004381	AD-9 Style Prg. 24V, 100Watt	065478X	AD-9 Air Dryer
5005037	AD-9 Style Manitenance Kit	065499X	AD-9 Air Dryer
5005893	AD-9 Style Maintenance Kit Soft Seat	065647X	AD-9 Drop-In Dryer
065225	AD-9 Style Air Dryer	109685HX	AD-9 Air Dryer w/ Harness
		109685X	AD-9 Air Dryer 12V
		109687X	AD-9 Air Dryer 12V
		109688X	AD-9 Air Dryer 24 V
		109689X	AD-9 Air Dryer 12V
		109690X	AD-9 Air Dryer 12V
		109691X	AD-9 Air Dryer 24V
		5009378X	AD-9 Air Dryer
		065229X	AD-9 End Cover
		065230X	AD-9 End Cover
		065231X	AD-9 End Cover
		065647ECX	AD-9 Drop In End Cover
		065653X	AD-9 End Cover
		065654X	AD-9 End Cover
		065655X	AD-9 End Cover
		107794X	AD-9 Cartridge

QUALITY REMANUFACTURED CALIPERS

3.38" BENDIX SINGLE PISTON

55098X RH (Pictured)



55099X LH

APPLICATION

NAVISTAR

NAVISTAR

55199X RH (Pictured)



55200X LH

GMC/CHEVROLET

GMS/CHEVROLET

2.60" BENDIX TWIN PISTON

55245X 1ST DESIGN (Pictured)



NAVISTAR

55314X 2ND DESIGN (Pictured)



NAVISTAR

2.88" BENDIX TWIN PISTONS

55250X



(Pictured)

NAVISTAR/GMC/CHEV

2.50" DAYTON WALTHER TWIN PISTON

55251X

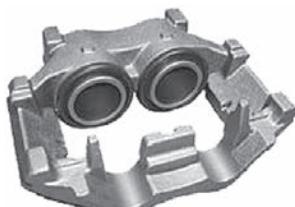


(Pictured)

FORD/GMC/CHEV

2.88" DAYTON WALTHER TWIN PISTON

55252X

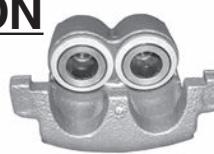


(Pictured)

FORD/GMC/CHEV

2.88" BENDIX TWIN PISTON

55656X



(Pictured)

NAVISTAR MODELS
WITH AIR SUSPENSION

LUCAS SYSTEM

PARK CYLINDER ASSEMBLY

201179X 1 3/4" LH

201180X 1 3/4" RH (Pictured)



ADJUSTER CYLINDER ASSEMBLY

201183X 1 3/4" LH (Pictured)

201184X 1 3/4" RH



BACKING PLATE ASSEMBLY

5" SHOES

203252X 1 3/4" LH

203251X 1 3/4" RH (Pictured)



6 & 7" SHOES

203262X 1 3/4" LH (Pictured)

203261X 1 3/4" RH



MAXI BRAKE H SERIES

KSH101AX * (Pictured)

KSH202CX **

*Two bleeder ports and one large port

** One large port



VALVES

065147X HR-1 (Pictured)

065316X TW-11

065356X TW-11



FAN CLUTCHES

HORTON®



590009X



591001X



591024X



790007X

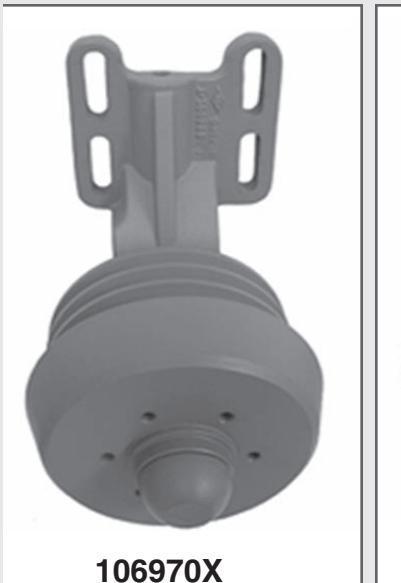


791009X



791019X

BENDIX®



106970X



104750X

KYSOR®



68501X

**HORTON® BENDIX® & KYSOR® FAN CLUTCHES
ARE AVAILABLE.**

**Please call our Customer Service
Department for more information!**