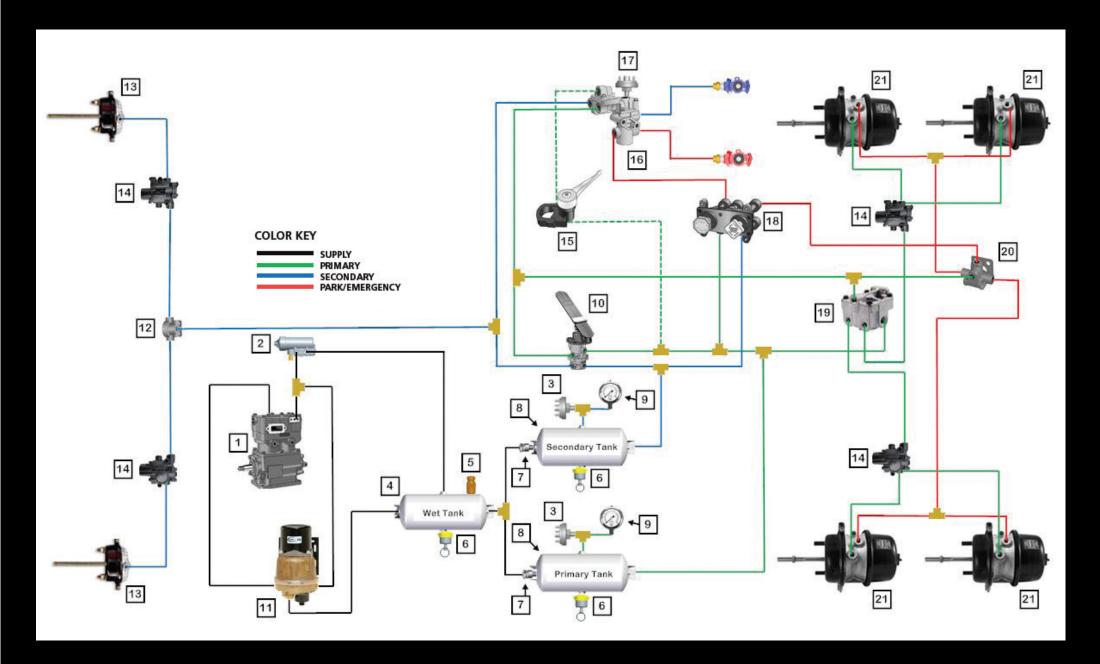


Tractor Troubleshooting Guide

To learn more about the expansive line of products from Haldex, please visit haldex.com

United States 816-891-2470 Canada 519-672-6722 Mexico 52-81-81569500



COMPLAINT/REMEDY

COMPRESSOR

- PUMPS BEYOND "CUT-OUT"
- Check gauge.
- Check governor
- Be certain it pressurizes unloader port when above "cut-out".
- Check unloader/plungers. Lube, repair or replace head.
- WON'T PLIMP AIR
- Check gauge.
- Check compressor drive
- Check inlet valves and plungers. If stuck, leak will be evident at intake when unloaded. Install unloader kit, head kit or head assembly
- SLOW PRESSURE BUILD-UP
- Check gauge.
- Check compressor drive.
- Check intake for restriction.
- Check discharge line for restriction
- Check unloader function. Lube or kit
- Check inlet and exhaust valves. Leak will be evident at intake when unloaded. Repair or replace head.
- PUMPS EXCESSIVE OIL
- Check oil return for restriction, kink or loop.
- Check for gasket sealant obstructing drain.
- Check for undersize return line (1/2" minimum)
- Check for fitting restricting drain.
- Check for intake vacuum (20" water maximum).
- Check for excessive engine crankcase pressure (poor engine ventilation).
- Check compressor ring wear. Exchange for service unit.

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- GOVFRNOR FLUTTERS
- Check gauge
- Check unloader line size (5/16" x 5' maximum).
- Check air actuated accessory. Is the air volume requirement greater than governor capacity?
- Check for plugged governor reservoir line.
- Repair, adjust or replace governor
- WON'T PASS AIR TO UNLOADER TO "CUT-OUT" COMPRESSOR
- Check governor reservoir line.
- Renair or renlace

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LOW PRESSURE INDICATOR SWITCH

- BUZZER OR LIGHT INOPERABLE.
- Check ground and wiring on switch and buzzer/light
- Replace switch or buzzer/light.
- WON'T OPERATE AT PRESSURES BELOW 60 PSI
- Check dash gauge for accuracy - Replace switch or buzzer/light.

- EXCESS OIL ACCUMULATION
- See PUMPS EXCESSIVE OIL (Compressor Section #1).
- EXCESS WATER ACCUMULATION
- Drain daily. Install automatic drain on wet tank
- DAMAGED WET TANK
- Replace

SAFETY VALVE

- "POPS" OFF EXCESSIVELY. - Check system pressure.
- Valve operating properly in venting at 140/150 PSI
- "POPS" OFF AT LESS THAN 140 PSI
- LEAKS
- Replace
- WON'T FUNCTION
- Periodic Test: remove and test above 150 PSI with shop air
- Replace if non-functional

MANUAL DRAIN VALVES 6

■ LEAKS Replace

- **AUTOMATIC DRAIN VALVES**
 - WON'T DRAIN
 - Repair or replace
 - WON'T DRAIN IN COLD WEATHER Replace with heated unit.
 - LEAKS MALEUNCTIONS
 - Repair or replace.
 - Periodic Test: with system pressure stabilized (compressor unloaded) no leak evident at discharge port - make several foot brake applications to reduce wet tank pressure. Moisture should drain from discharge port.

COMPLAINT/REMEDY



SINGLE CHECK VALVE

- ALLOW BLEED BACK TO SUPPLY RESERVOIR
- Periodic Test: bleed supply reservoir and observe gauges. Check valves should maintain rear and front reservoir pressure
- Replace valve if results are negative.

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PRIMARY & SECONDARY RESERVOIR

- FXCESS OIL/WATER
- Drain as required
- Check automatic/manual drain valve #6 on wet tank for proper operation.



AIR GAUGE

- INCORRECT READING - Calibrate or replace

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DUAL SYSTEM FOOT BRAKE VALVE

- LEAKS AT EXHAUST WITH ALL BRAKES RELEASED
- Check anti-compound double check valve #20
- Check anti-compound double check valve #20 for back flow into service control line.
- CAUTION: CHOCK WHEELS.
- LEAKS AT EXHAUST WITH FOOT BRAKE APPLIED
- Foot valve defective. Repair or replace.
- LEAKS AT EXHAUST WITH ALL PARK BRAKES SET IN PARK POSITION AND FOOT BRAKE RELEASED
- Foot valve defective. Repair or replace.



AIR DRYFR

- AIR LEAKING CONSTANTLY FROM PURGE VALVE
- Purge valve seal damaged. Replace.
- Purge valve frozen.
- HEATER INOPERATIVE
- Blown fuse. Check fuse and replace with 8 -10 amp fuse.
- Broken wires or poor connections. Repair or replace wiring to heater.
- SLOW WET TANK BUILD-UP
- Filter and or desiccant plugged. Service air dryer.



QUICK RELEASE VALVE

- LEAKS WHEN SERVICE BRAKES ARE APPLIED
- Verify plumbing is correct. Possible supply and delivery hoses are reversed.
- Renair or replace

SERVICE BRAKE CHAMBER

- 13
- IFAKS
- Replace diaphragm. - Cage park brake.
- Reset clamps. Adjust brakes ■ WITH SERVICE BRAKES
- APPLIED STROKE IS AT OR BEYOND MAXIMUM LIMIT OF Type 9 1 3/8 1 3/8" - Type 12
- Type 16 1 3/4" 1 3/4" Type 20 1 3/4" - Type 24
- Type 30 ■ SLUGGISH APPLICATION OR RELEASE
- Check basic brake.
- Check for air line restriction/leak.
- Align linkage.
- Check chamber return spring.
- Adjust brakes. Angle should approach 90° on application.

Brake

Released

- Check for improper chamber or obstruction.

COMPLAINT/REMEDY

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ABS INLINE VALVES

BRAKES ALSO RELEASED

■ FOR COMPLETE TROUBLESHOOTING INFORMATION REFER TO MODAL POWER TK-2 INSTALLATION & SERVICE MANUAL AND/OR ABS DIAGNOSTIC TROUBLESHOOTING GUIDE @ haldex.com

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HAND CONTROL VALVE - TRAILER SERVICE BRAKES

- LEAKS AT EXHAUST PORT WHEN RELEASED AND FOOT VALVE IS APPLIED
- Check manifold style tractor protection valve #16. Replace if necessary ■ 1FAKS AT FXHAUST PORT WHEN RELEASED AND TRAILER PARKING
- Check anti-compound double check valve #20 for internal backflow into service control line, or trailer air system for backflow into tractor service control line.
- LEAKS AT EXHAUST PORT WHEN RELEASED OR APPLIED AND ALL PARKING BRAKES IN PARKED POSITION
- Hand control valve is defective. Repair or replace.



MANIFOLD STYLE TRACTOR PROTECTION VALVE WITH BUILT-IN DOUBLE CHECK VALVE

- WILL NOT RESPOND TO TRAILER CHARGE VALVE
- Defective valve. Repair or replace.
- SUPPLY LINE TO TRAILER WITH SLOW BLEED-DOWN DOES NOT SHUT OFF TRACTOR AIR AND VENT BETWEEN 45 PSI AND 20 PSI
- Check trailer charge valve #18, as it should "pop" to let T.P. valve vent trailer supply. Repair or replace.
- LEAKS AT EXHAUST PORT OR TRACTOR SERVICE (BACK THROUGH HAND OR FOOT VALVE) OR TRAILER SUPPLY - Defective valve, Repair or replace,
- FOOT VALVE EXHAUST PORT LEAKS WHEN HAND VALVE IS APPLIED
- HAND VALVE EXHAUST PORT LEAKS WHEN FOOT VALVE IS APPLIED Replace. ■ PERIODIC TEST: ALTERNATELY LOOSEN EACH INLET LINE AND APPLY PRESSURE TO OTHER. IF LEAK IS DETECTED, REPLACE.



- LOW PRESSURE INDICATOR SWITCH
 - BUZZER OR LIGHT INOPERABLE - Check ground and wiring on switch and buzzer/light
 - Replace switch or buzzer/light.
 - WON'T OPERATE AT PRESSURES RELOW 60 PSI - Check dash gauge for accuracy Replace switch or buzzer/light
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MANIFOLD DASH VALVE WITH BUILT-IN TWO-WAY CHECK (RED OCTAGON) TRAILER CHARGE (YELLOW DIAMOND) TRACTOR PARK

- PARK BRAKE WON'T RELEASE
- Check for full system pressure delivery through valve. ■ PARK RRAKE WON'T APPLY
- Repair or replace. If it will not release pressure.
- LEAKS AT EXHAUST PORT IN PARK POSITION SERVICE BRAKES APPLIED
- Check anti-compound double check valve #20.
- LEAKS AT EXHAUST PORT IN PARK POSITION SERVICE RRAKES RELEASED - Renair or renlace
- WON'T APPLY TRAILER IMMEDIATELY WHEN "PULLED" Replace, if it won't exhaust, Repair or replace anti-compound double check valve #20 if air dryer #11 is functioning properly.
- REAR TANK BLEED-DOWN ALSO BLEEDS FRONT TANK OR VICE VERSA
- Periodic Test: Pressure should remain in one tank after the other is drained. Replace, if inoperative

COMPLAINT/REMEDY

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RELAY VALVE

- LEAKS AT EXHAUST PORT WITH ALL BRAKES RELEASED Check seal in spring brake for back flow of spring "hold-off" pressure through service port to open exhaust on valve. Replace #21 Spring Parking Brake.
- Check reservoir port for evidence of contamination, check supply lines for rusty fittings or carbon deposits. Repair or replace.
- LEAKS AT EXHAUST PORT WITH SERVICE BRAKES APPLIED
- Exhaust valve not seating properly. Repair or replace.



OUICK RELEASE AND DOUBLE CHECK VALVE COMBINATION

- FOOT VALVE EXHAUST LEAK PARK BRAKES RELEASE YELLOW DASH CONTROL VALVE EXHAUST LEAK IN PARK POSITION AND SERVICE BRAKES APPLIED
- Check anti-compound double check valve portion for feedback to foot or dash control valve. Repair or replace.



SPRING PARKING BRAKE (SERVICE ONLY SERVICE CHAMBER SIDE OF SPRING BRAKF)

- PARK BRAKE DRAGS OR WON'T RELEASE
- Check for: Improper adjustment restriction or broken line. Diaphragm failure. System pressure too low. Improper manual release. Broken return spring (spring side). Quick release of relay malfunction. Broken
- nower spring. - Replace entire unit or piggy-back emergency section

■ SERVICE CHAMBER MALFUNCTION

See service brake chamber #13.

- SLUGGISH PARK APPLICATION Check for: Diaphragm failure, Improper manual release, Broken power spring.
- LEAKS WHEN PRESSURIZED FOR PARK BRAKE RELEASE Check for: Ruptured spring side diaphragm. Push rod seal leakage (may be evident at relay valve #19).

NOTE: FOR FURTHER TECHNICAL ASSISTANCE CONTACT YOUR HALDEX DISTRIBUTOR, YOUR HALDEX SALES REPRESENTATIVE OR CALL (800) 643-2374 AND CHOOSE OPTION 2 TO SPEAK WITH A TECHNICAL ADVISOR.



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