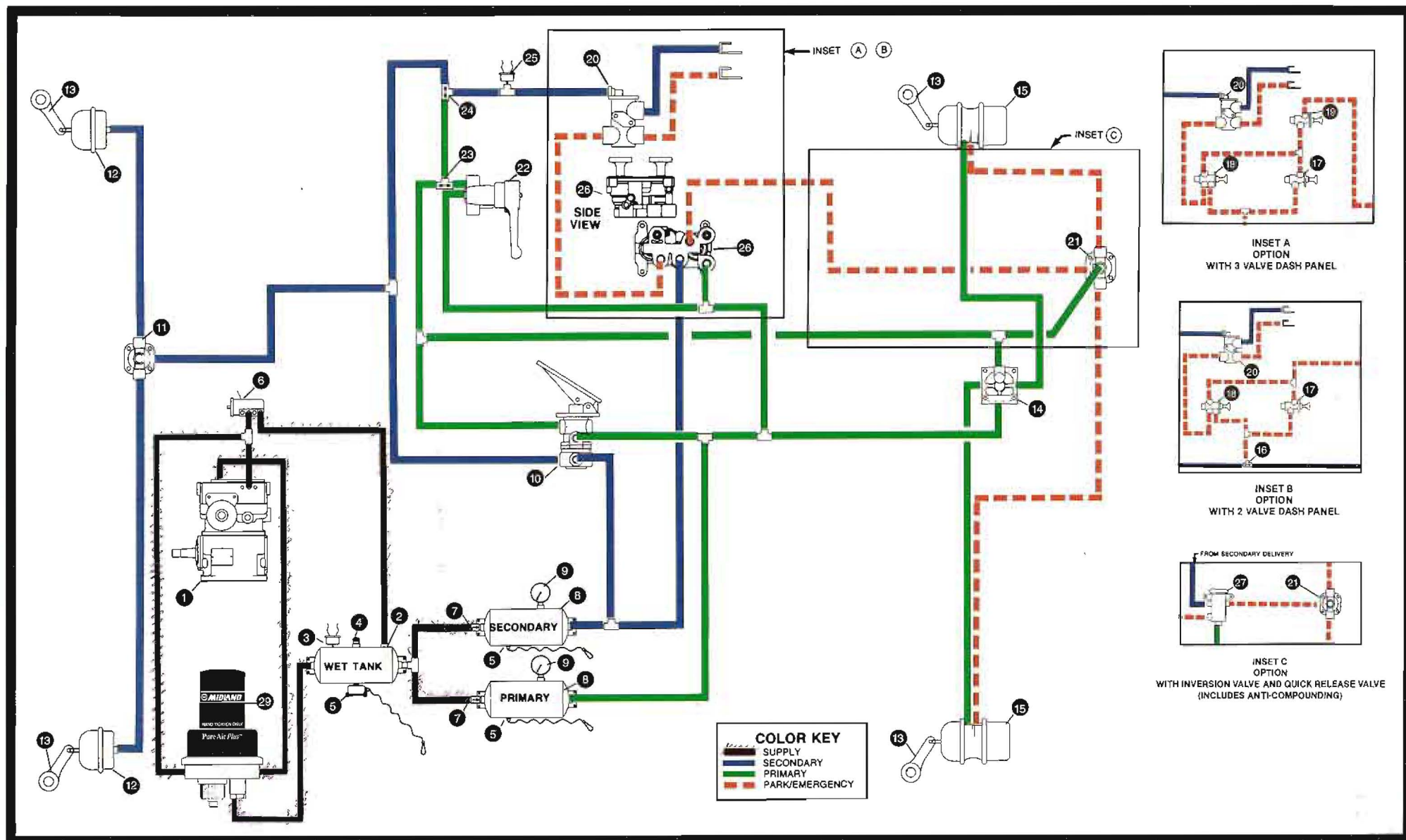




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TRUCK/TRACTOR TROUBLESHOOTING GUIDE



COMPLAINT

REMEDY

1 COMPRESSOR

PUMPS BEYOND 'CUT-OUT'

Check gauge
Check governor
Be certain it pressurizes unloader port when above 'cut-out'
Check unloader/plungers
Lube, kit or change head

WON'T PUMP 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 headassy

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, kit or exchange head

PUMPS EXCESSIVE OIL

Check oil return for restriction, kink or loop
Check for gasket sealant obstructing drain
Check for underride return line (1/2" min.)
Check for fitting restricting drain
Check intake vacuum (20 water maximum)
Check for excessive engine crankcase pressure (poor engine ventilation)
Check compressor ring wear
Exchange for service unit

2 WET TANK

EXCESS OIL ACCUMULATION

See #1 Complaint — Pumps excessive oil

EXCESS WATER ACCUMULATION

Drain daily
Install automatic drain on wet tank

DAMAGED

Replace

3 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 P.S.I.

Check dash gauge for accuracy
Replace switch or buzzer/light

4 SAFETY VALVE

POPS OFF EXCESSIVELY

Check system pressure
Valve operating properly in venting at 140/150 p.s.i.
Check governor/unloader

POPS OFF AT LESS THAN 140 P.S.I.

Replace

LEAKS

Replace

WON'T FUNCTION

Periodic Test
Remove and test above 150 p.s.i. with shop air
Replace if non-functional

5 DRAIN VALVES — MANUAL

LEAKS

Replace

DRAIN VALVES — AUTOMATIC

WON'T DRAIN

Repair or replace

WON'T DRAIN IN COLD WEATHER

Replace with heated unit

LEAKS — MALFUNCTIONS

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.

6 GOVERNOR

PLUTTERS

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.
Repair or replace

COMPLAINT

REMEDY

7 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 if test results are negative

8 PRIMARY AND SECONDARY RESERVOIR

EXCESS OIL/WATER

Drain as required
Check automatic drain valve on wet tank for proper operation. See #5

9 AIR GAUGE

INCORRECT READING

Calibrate, replace, or see your dealer

10 DUAL SYSTEM FOOT BRAKE VALVE

LEAKS AT EXHAUST WITH HAND VALVE APPLIED

Check
Double check valve #23 or #24
repair or replace

LEAKS AT EXHAUST WITH ALL BRAKES RELEASED

Check anti-siphon double check valve #20 or #27 for back flow.
CAUTION: BLOCK WHEELS
Repair or replace #20 or #27
Check foot valve for inlet valve leak
Repair or replace

LEAKS AT EXHAUST WITH FOOT BRAKE APPLIED

Foot valve defective
Repair or replace

11 QUICK RELEASE VALVE

LEAKS (WHEN USED IN SERVICE BRAKE SYSTEM)

Replace

LEAKS (WHEN USED IN SPRING BRAKE SYSTEM)

Replace

12 SERVICE BRAKE CHAMBER

LEAKS

Replace diaphragm (Set park brake)
Reset clamps
Adjust brakes

WITH SERVICE BRAKES APPLIED SYRKE IS AT OR BEYOND MAXIMUM LIMIT OF:

Type 9 1-3/8" Type 20 1-3/4"
Type 12 1-3/8" Type 24 1-3/4"
Type 16 1-3/4" Type 30 2"

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
Check for improper chamber or obstruction

13 SLACK ADJUSTER

SLEEVE WILL NOT DEPRESS

Clean and lubricate or replace with unit dimensionally same

ADJUSTING SHAFT WILL NOT TURN

Replace with unit dimensionally same

CRACKED HOUSING

Check springbrake anti-compound system
Check air chamber size
Replace if larger than original size
Check direction of travel for proper position of hex nut (shown under #12)
Hex nut must face away from chamber for uni-directional slack adjuster

WORN CLEVIS PIN BUSHING

Replace bushing

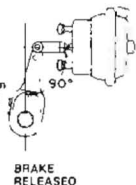
14 RELAY VALVE

LEAKS AT EXHAUST PORT WITH ALL BRAKES RELEASED

Check seal in springbrake for back-flow of spring hold-off pressure through service port to open exhaust on valve
Replace #15
Check inlet valve in relay valve for leak
If reservoir section of valve shows 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



BRAKE RELEASED

COMPLAINT

REMEDY

15 SPRING PARKING BRAKE (SERVICE ONLY SERVICE CHAMBER) SIDE OF SPRING BRAKE)/ 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 power spring
Replace entire unit or piggy-back emergency section

SLUGGISH PARK APPLICATION

Check for
Failed springbrake diaphragm
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 #14)

SERVICE CHAMBER MALFUNCTION

See #12

16 DOUBLE CHECK VALVE UNITES FRONT BRAKE AND REAR BRAKE RESERVOIRS TO FEED PARK CONTROL (INSET B OPTION WITH 2 VALVE DASH PANEL).

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

17 TRACTOR-TRAILER PARK CONTROL VALVE (YELLOW DIAMOND)

LEAKS AT EXHAUST PORT

Replace

PARK BRAKE WON'T RELEASE

Check for full system pressure delivery thru valve

PARK BRAKE WON'T APPLY

Replace if it will not release pressure

18 TRAILER CHARGE VALVE (RED OCTAGONAL)

LEAKS AT EXHAUST PORT

Replace

DRIVER MAY 'OVER-RIDE' AUTOMATIC TRAILER BRAKES WHEN TRACTOR AIR IS BELOW 20 P.S.I.

Replace if T.P. system is automatic and 2-line
Repair or replace #20 if T.P. system is automatic and 3-line

WON'T APPLY TRAILER IMMEDIATELY WHEN 'PULLED'

Replace if won't exhaust
Repair or replace #20 or #19 if #18 is functional

19 TRACTOR ONLY PARK VALVE (BLUE ROUND)

LEAKS AT EXHAUST PORT

Repair or replace

20 TWO-LINE TRACTOR PROTECTION VALVE (NON-AUTOMATIC TYPE)

WILL NOT RESPOND TO TRAILER CHARGE VALVE

Repair or replace

SUPPLY LINE TO TRAILER WITH SLOW BLEED DOWN DOES NOT SHUT OFF TRACTOR AIR AND VENT BETWEEN 45 AND 20 P.S.I.

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 THRU HAND OR FOOT VALVE) OR TRAILER SUPPLY

Repair or replace

21 QUICK RELEASE & DOUBLE CHECK VALVE COMBINATION

FOOT VALVE EXHAUST LEAK

Check double check valve portion for feed-back to foot valve
Repair or replace

LEAKS WITH ALL BRAKES RELEASED

Repair or replace

22 HAND CONTROL VALVE-TRACTOR SERVICE BRAKES

LEAKS AT EXHAUST PORT WHEN RELEASED AND FOOT VALVE IS APPLIED

Check #23 or #24

LEAKS AT EXHAUST PORT WHEN IN APPLIED OR RELEASE POSITION

Repair or replace

23 DOUBLE CHECK VALVE SEPARATES TRAILER HAND VALVE PRESSURE FROM REAR FOOT BRAKE PRESSURE FOR DELIVERY TO TRAILER

FOOT VALVE EXHAUST PORT LEAKS WHEN HAND VALVE IS APPLIED

Replace

HAND VALVE EXHAUST PORT LEAKS WHEN FOOT VALVE IS APPLIED

Replace

COMPLAINT

REMEDY

24 DOUBLE CHECK VALVE SEPARATES FRONT AXLE FOOT BRAKE PRESSURE FROM REAR AXLE FOOT BRAKE PRESSURE AND/OR TRAILER HAND VALVE PRESSURE FOR DELIVERY TO TRAILER

LEAKS THRU FOOT VALVE EXHAUST WITH HAND VALVE APPLIED

Replace #23 or #24

PERIODIC TEST

Alternately loosen each inlet line and apply pressure to other
If leak is detected — replace

25 STOP LIGHT SWITCH

LEAKS

Replace

FAILS TO SIGNAL A GOOD BULB THRU SOUND WIRING AT 3-5 P.S.I.

Replace

26 DOUBLE DASH VALVE WITH BUILT-IN 2-WAY CHECK. (RED OCTAGON) TRAILER CHARGE. (YELLOW DIAMOND) TRACTOR PARK.

PARK BRAKE WON'T RELEASE

Check for full system pressure delivery thru valve

PARK BRAKE WON'T APPLY

Repair or Replace if it will not release pressure

LEAKS AT EXHAUST PORT

Repair or Replace

DRIVER MAY 'OVER-RIDE' AUTOMATIC TRAILER BRAKES WHEN TRACTOR AIR IS BELOW 20 P.S.I.

Replace if T.P. System is automatic and 2-line. Repair or Replace if T.P. valve is automatic and 3-line

WON'T APPLY TRAILER IMMEDIATELY WHEN 'PULLED'

Replace if it won't exhaust. Repair or Replace #20 if #25 is functional

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.

27 INVERSION RELAY VALVE WITH THE LOSS OF REAR SERVICE SUPPLY, APPLICATION OF SPRING BRAKE BY USING THE EMERGENCY SECTION SHOULD BE AVAILABLE ALONG WITH FRONT SERVICE BRAKE BY APPLYING FOOT VALVE

PERIODICALLY TEST BY BLEEDING REAR SERVICE SUPPLY AND OBSERVING FRONT BRAKE AND REAR SPRING BRAKE APPLICATION UPON DEPRESSING FOOT PEDAL

Periodically test by bleeding rear service supply and observing front brake and rear spring brake application upon depressing foot pedal

LEAKS

Repair or replace.

28 BARRIER WHEEL OIL SEALS*

OIL LEAK

Check for proper glazing of the sealing lip
Check serrations on O.D. and I.D. to see that sealing surfaces are dry. If wet, this could denote the leakage path.
Check area between positioning pads. If wet, suspect seal leak
Check seal for damage to seal during installation
Check hub bore and spindle surfaces for imperfections or irregularities
Check to be sure that proper seal has been installed for the particular axle application

29 AIR DRYER

AIR LEAKING CONSTANTLY FROM PURGE VALVE

Purge valve seal damaged. Replace purge valve seal #RN60F
Purge valve frozen.
Inspect heater (see heater problems). Remove purge tube and push valve shut

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 dryer

*Barrier Oil Seals not shown in schematic