System Saver Twin Cartridge Air Dryers

**Date Code**
First 2 Digits = Build Week
Last 2 Digits = Build Year

**Manufacturing Location Code**
Part Number
- 1696
- WABCO

**Heater**
- 432 413 923 2 – 12 volt
- 432 413 924 2 – 24 volt

**Coalescing Cartridge**
- 432 801 240 2

**Pressure Relief Valve**
- 2206-0-1226

**Outlet Check Valve**
- 432 470 922 2

**Orifice Kit**
- 432 472 2 – 0.8 mm
- 432 472 2 – 1.0 mm
- 432 472 2 – 1.3 mm

**O-Ring/Diaphragm Kit**
- 432 470 923 2
- 432 470 921 2

**Purge Valve**
- Washer oriented with flange pointed down as shown.
- 432 439 921 2

**Solenoid and Armature Assembly**
- Four bolts required. Re-use bolts and bracket.
- 432 431 924 2
- 432 431 933 2 – 24 volt
- 432 431 938 2 – 12 volt
- 432 431 936 2 (Solenoid Hardware)
DATE CODE INFORMATION

Part Number

Manufacturing
Location Code

PRESSURE RELIEF VALVE

Line for dryer build dates of 1/06 or earlier. Date codes from 1/08 have an integral pressure relief valve at the back of the dryer.

2308-0/1228

OUTLET CHECK VALVE

432 425 2

DESICCANT CARTRIDGE

432 425 932 2

432 425 933 2

432 425 934 2

432 425 935 2

432 425 936 2

432 425 937 2

432 425 938 2

432 425 939 2

ORIFICE KIT

ORIFICE

432 431 940 2 – 0.8 mm

432 431 927 2 – 1.0 mm

432 431 924 2 – 1.5 mm

432 431 932 2 (Seals and springs)

432 431 931 2 (Seals and springs)

432 431 928 2

432 431 924 2 – 24 VOLT

432 431 923 2 – 12 VOLT

432 431 926 2

LEFT PISTON

SOLUTION

POSSIBLE CAUSE

CONDITION

Diagnosis:

No power to the dryer heater.

Withoperatingvoltageappliedtotheheatercircuitpin"Y"and"Z",

Multifacetedtypeofcauseneeded.

Solenoidnotclickingfordurationof30-60seconds.

Withoperatingvoltageappliedtothecircuitofsolenoidpin"Y"and"Z",noseataptivecauseneeded.

Solenoidtoclickevery50-60seconds.

Atsystemairpressureover80psi,listenforthesolenoidclickingfor1-2seconds.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Solenoidclickingfordurationof30-60seconds.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.

Ampullarytestingforthepresenceofairinthecircuit.

Checktheaircompressortoport4ofthedryer.
For troubleshooting, see sidewalks on PP-97100 for further product details. Contact your distributor or the WABCO Customer Care Center at 855-228-3203.

SOLUTIONS

Possible Cause

Condition

The purge valve seal may be damaged or out of position.

The purge valve may be contaminated.

The governor may be malfunctioning.

Air dryer not cycling between cartridges due to low air pressure

Leaking at the air compressor unloader(s).

Multiple air system leaks, such as compressor discharge line, air dryer, reservoirs, brake and suspension valves.

No air pressure build-up by excessive cycling of the compressor.

Air leak at turbo cut-off valve.

Governor malfunctioning or unloader line leak.

Desiccant not getting correct regeneration.

Incorrect replacement cartridge used.

Desiccant contaminated with oil.

Air compressor malfunctioning.

Turbo cut-off valve leaking.

Governor has less than 16 psi range or leaking at the check valve.

Outlet check valve not sealing.

The problem can be the governor. Replace leaking O-ring/gaskets.

The purge valve seal may be damaged or out of position.

The purge valve may be contaminated.

The governor may be malfunctioning.

Air dryer is freezing (water in system tanks).

Water in system tanks, dryer and/or compressor out okay.

No air pressure build-up by excessive cycling of the compressor.

Air dryer purges too frequently as every 15 seconds, accompanied often as every 15 seconds, accompanied by excessive cycling of the compressor.

Air dryer solenoid sticking or failing.

Air compressor not providing correct pressure (1-inch diameter bubbles in 3 seconds).

Check the air compressor to dryer port 4 line for leaks. Repair or replace line.

Inspect compressor for oil passage per manufacturer's instructions. Replace as needed.

Inspect compressor for oil passage per manufacturer's instructions. Replace as needed.

Inspect compressor for oil passage per manufacturer's instructions. Replace as needed.

Remove the air line from port 4 of the dryer. If purge valve stops leaking, repair/replace purge valve. If ice on the governor, replace as needed.

With ignition on, check for voltage at the solenoid connector pins “Y” and “Z”. Replace solenoid if not clicking with power applied.

At system air pressure above 80 psi with the ignition on, listen for the dryer solenoid to click every 50-60 seconds. Replace solenoid if not clicking with power applied.

Repair or replace as needed. If compressor or dryer pressure relief valves are restricted and test the pressure relief valve.

Remove turbo cut-off valve. If you see heat damage, correct the over temperature problem. Replace damaged governor and unloader line as required.

If the primary and secondary tanks reach 145 psi without a purge, verify the pressure relief valve is working and restrict the air compressor output. Check the air system tanks for oil contamination and replace the dryer.

If the primary and secondary tanks are not losing pressure, find leaks and repair or replace as needed.

One possible source may be a malfunctioning governor. Replace as needed.

Another possible source is the turbo cut-off valve. Inspect and replace as needed.

If the purge valve seal is compromised, repair/replace purge valve. If ice on the governor, replace as needed.

If pressure build-up is in excess of 145 psi, inspect governor and unloader line for leaks. Inspect the governor for air restriction or leaks. Replace the governor and unloader line as needed.

At system air pressure above 80 psi with the ignition on, listen for dryer solenoid clicking for cartridge regeneration. Replace solenoid as needed.

Check the air compressor to dryer port 4 line for leaks. Repair or replace line.

If purge valve normal when air system starts to build air pressure, find and repair the source of the unloader line pressure.

Repair or replace as needed. If compressor or dryer pressure relief valves are restricted and test the pressure relief valve.

If the primary and secondary tanks reach 145 psi without a purge, verify the pressure relief valve is working and restrict the air compressor output. Check the air system tanks for oil contamination and replace the dryer.

If primary and secondary air tanks are losing pressure, find the leaks and repair or replace as needed.

If purge valve stops leaking, repair/replace purge valve. If ice on the governor, replace as needed.

With ignition on, check for voltage at the solenoid connector pins “Y” and “Z”. Replace solenoid if not clicking with power applied.

At system air pressure above 80 psi with the ignition on, listen for the dryer solenoid to click every 50-60 seconds. Replace solenoid if not clicking with power applied.

If purge valve normal when air system starts to build air pressure, find and repair the source of the unloader line pressure.

Repair or replace as needed. If compressor or dryer pressure relief valves are restricted and test the pressure relief valve.

If the primary and secondary tanks reach 145 psi without a purge, verify the pressure relief valve is working and restrict the air compressor output. Check the air system tanks for oil contamination and replace the dryer.

If primary and secondary air tanks are losing pressure, find the leaks and repair or replace as needed.

If purge valve stops leaking, repair/replace purge valve. If ice on the governor, replace as needed.

With ignition on, check for voltage at the solenoid connector pins “Y” and “Z”. Replace solenoid if not clicking with power applied.

At system air pressure above 80 psi with the ignition on, listen for dryer solenoid to click every 50-60 seconds. Replace solenoid if not clicking with power applied.

If purge valve normal when air system starts to build air pressure, find and repair the source of the unloader line pressure.

Repair or replace as needed. If compressor or dryer pressure relief valves are restricted and test the pressure relief valve.

If the primary and secondary tanks reach 145 psi without a purge, verify the pressure relief valve is working and restrict the air compressor output. Check the air system tanks for oil contamination and replace the dryer.

If primary and secondary air tanks are losing pressure, find the leaks and repair or replace as needed.

If purge valve stops leaking, repair/replace purge valve. If ice on the governor, replace as needed.

With ignition on, check for voltage at the solenoid connector pins “Y” and “Z”. Replace solenoid if not clicking with power applied.

At system air pressure above 80 psi with the ignition on, listen for the dryer solenoid to click every 50-60 seconds. Replace solenoid if not clicking with power applied.

If purge valve normal when air system starts to build air pressure, find and repair the source of the unloader line pressure.

Repair or replace as needed. If compressor or dryer pressure relief valves are restricted and test the pressure relief valve.

If the primary and secondary tanks reach 145 psi without a purge, verify the pressure relief valve is working and restrict the air compressor output. Check the air system tanks for oil contamination and replace the dryer.

If primary and secondary air tanks are losing pressure, find the leaks and repair or replace as needed.

If purge valve stops leaking, repair/replace purge valve. If ice on the governor, replace as needed.

With ignition on, check for voltage at the solenoid connector pins “Y” and “Z”. Replace solenoid if not clicking with power applied.