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TECH TIPS
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Air System Maintenance

Even a perfectly maintained and adjusted foundation brake will not function properly if the air system is contaminated. Oil contamination can lead to premature failure of vehicle systems that rely on clean air for proper operation (including the air brake, engine emissions and drivetrain systems). Many of these advanced technology systems require coalescing dryers/cartridges which have been OEM standard on most vehicles since 2010.

Maintaining a clean and dry air system is always important (as water in the system can result in costly repairs). As winter approaches and outside air temperatures drop, regular service intervals of the air system need to be continued.

Replacement Requirements

Component	When to Replace*	Why
Cartridge	Every two to three years for standard dessicant. Every one to two years for coalescing.	Preventative maintenance.
	When compressor is replaced.	Contaminated cartridge.
	Water in supply tank.	Saturated or contaminated cartridge, high duty cycle (wrong application of air dryer).
Bypass Valve (dryers with date codes earlier than 0894)	Valve leaking, inlet to outlet.	Cut O-ring, bad seat.
Heater Assembly	Water collecting in air dryer is freezing — electrical power to dryer is O.K.	Heater assembly not working (internal short or open circuit).
Outlet Check Valve	Air continues to flow from purge valve after purge cycle, but stops flowing when the compressor load cycle begins.	Valve is stuck in the open position, or not functioning properly.
	No pressure build-up in system, everything else is O.K.	Valve is stuck in closed position.

Component	When to Replace*	Why
Purge Valve	No purge cycle when compressor unloads — normal pressure at dryer control port 4 (governor port).	Valve is stuck in the closed position, or not functioning properly.
	Air flows from purge valve during compressor's load cycle — no pressure at dryer control port.	Valve is stuck in the open position, or not functioning properly.
Pressure Protection Valve	Pressure protection valves will not open (air dryer must be replaced).	Valves are stuck in closed position.
Turbo Cut-Off Valve	Air compressor stuck pumping, TCU remains open. System will build pressure until safety valve opens in system.	Signal line loss.
	Air flows from purge valve during compressor unload cycle after purge cycle, and flow is noticeably stronger at high engine RPM, especially under load.	Turbo cut-off valve leaking.
	No pressure build-up in system — high compressor discharge line pressure.	Valve stuck in closed position.
Regeneration Valve	Regeneration cycle continues after compressor begins, and secondary tank pressure drops 15 psi (103 kPa) or more.	Regeneration valve allowing too much air to come back into cartridge.
	Purge cycle is too short (five seconds or less) — pressure-controlled check valve is O.K., no leak in governor control line.	Regeneration valve not allowing enough air to come back into cartridge.
	Air dryer purges — but no regeneration, no check valve between air dryer and supply tank, and purge valve has not closed.	Regeneration valve not allowing any air to come back into cartridge.
Pressure-Controlled Check Valve	Regeneration cycle too short; may result in water in tank.	Valve checks (stops airflow) too high.

* Service intervals indicated are Meritor WABCO product, please consult your supplier for specific service recommendations.