



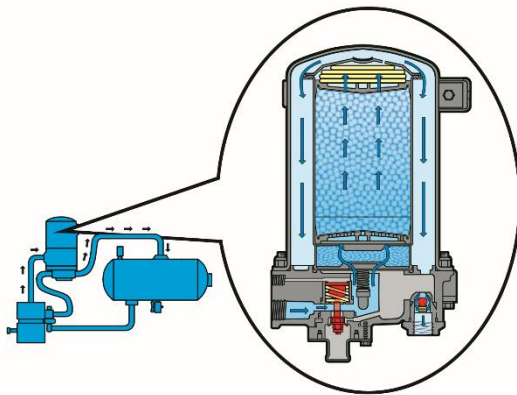
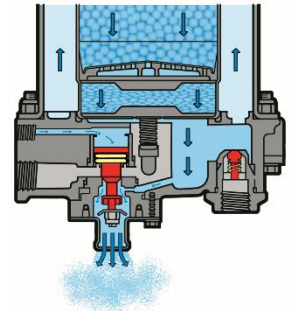
Air Dryers

What are they?

Air dryers remove contamination from the air pressure being delivered by the compressor. The air dryer integrated system, or AD-IS, combines the governor, air dryer, safety valve and supply tank into one system. It uses a combination of pressure protection valves to protect the service circuits. This system collects and removes contaminants in solid, liquid and vapour form before they enter the brake system.

How do they work?

Older air dryers were an after-cooler type arrangement where the air passed through a canister that cooled the warm air from the compressor very quickly. Contamination from the cooled air would collect in the sump of the air dryer which was then purged at the end of the pumping cycle. These older air dryers have cooling fins on their sides.



Modern dryers use desiccant which absorbs moisture as it passes by. This absorbed moisture is blown off of the desiccant as it is purged (back-flushed). Most air dryers manage their own purge air, but some have a separate air tank strictly for purge purposes that is not part of the air brake system. Other dryers use a bit of the supply tank air pressure to purge the desiccant.

Air dryers eliminate the need for daily manual draining of the air tanks. It is still recommended to pull drain lanyards regularly to confirm the dryer is working properly.

How do they apply to my driving?

Air brake antifreeze is methyl-alcohol with a lubricant added to prevent rubber components in the valves from drying out. Some vehicles depend on air brake antifreeze to keep them running in the winter. Some manufacturers do not recommend using air brake antifreeze, while others outfit their vehicles with inline alcohol injector kits at the factory. Pure alcohol can damage the air dryer desiccant so avoid adding alcohol ahead of that component. For example, do not add alcohol into the pressure line from the air compressor because that alcohol will go directly into the dryer.

Some trailers flow the emergency and service air lines through small desiccant dryers. Alcohol would damage these dryers. These trailers typically have a decal fitted to the front of the trailer warning against alcohol use.