

Air Assisted Power Steering



-  ***Firm Feel of the Road***
-  ***Cuts Costs on Maintenance***
-  ***Saves Fuel***

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Installation kits fit most new and used trucks.



AIR-O-MATIC
POWER STEERING

A Division of Maradyne Corporation

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Air-Assisted Steering:

A Proven Idea for more than 50 years

Heavy-duty trucks and buses use compressed air not only for braking, but also for suspensions, starters, fifth wheels, seats, horns and windshield wipers. So it's only natural to use this plentiful energy source to provide power assist for steering. Air-O-Matic has been doing just that since the early 1950's, and today is installed on over 200,000 vehicles.

A choice in power steering.

Most people are familiar with hydraulic power steering, since it is the only practical system for automobiles and light trucks. But for heavy-duty fleet managers concerned with fuel economy, maintenance savings and operator efficiency, Air-O-Matic is a sensible alternative to hydraulic systems.

Two systems in one.

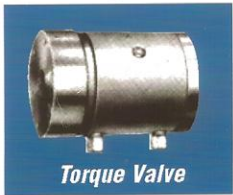
Air-O-Matic is actually air-assisted manual steering, activated only when it is needed. Unlike the hydraulic system with its constantly running pump, Air-O-Matic goes into operation only when the truck is making turns that require more than 10 lbs. of pull on the steering wheel. At all other times, the truck is a manually-steered vehicle.

No Unscheduled Downtime.

With hydraulic steering, something as simple as a broken belt or blown seal can put a truck out of commission for hours. But Air-O-Matic keeps trucks and buses on the job since manual steering is always available as a backup. Any work needed on the power steering can wait until the next scheduled maintenance.

How it Works

The heart of the Air-O-Matic system is the torque valve. This is connected to the drag link to form an assembly that replaces the vehicle's original drag link. This sealed, precision mechanism is designed to extend or compress in response to forces exerted when the steering wheel is turned. When this movement exceeds .04" in either direction (equivalent to about 10 lbs. of rim pull on the wheel), the torque valve meters air to the power cylinder. The cylinder is anchored to the frame and applies force to the tie rod to assist in making the turn.

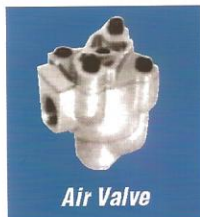


Torque Valve



Power Cylinder

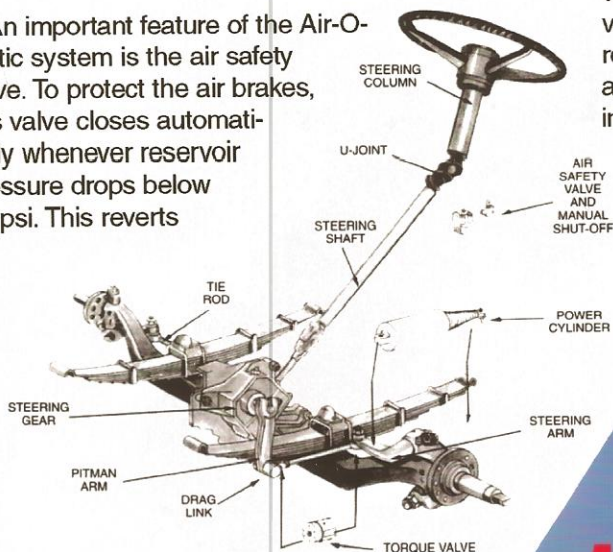
the vehicle to manual steering until adequate pressure is restored and the valve reopens. There is also a manual shut-off valve which can be used to deactivate the system in the event of damage or air leaks.



Air Valve

The Air-O-Matic system can come as a complete installation kit. Included is the torque valve, power cylinder, air safety valve, manual shut-off valve, and bracketry, all the required hose and fittings and complete installation instructions.

An important feature of the Air-O-Matic system is the air safety valve. To protect the air brakes, this valve closes automatically whenever reservoir pressure drops below 65 psi. This reverts



Lower Maintenance Costs

The only required maintenance is periodic lubrication of the cylinder, a simple procedure that falls right in with normal chassis lube procedures.

Hydraulic steering, because it operates continuously, tends to cover up steering problems, particularly in their beginning stages. With Air-O-Matic, drivers can detect these problems and have them corrected before they can cause abnormal wear to tires or turn in to major repairs.

Unlike hydraulic steering, Air-O-Matic will function with the engine off. There is no difficulty controlling the truck if the engine stalls while in motion. With most hydraulically steered trucks, it is next to impossible to turn the wheel if the engine stalls, let alone get the vehicle safely off the road.



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