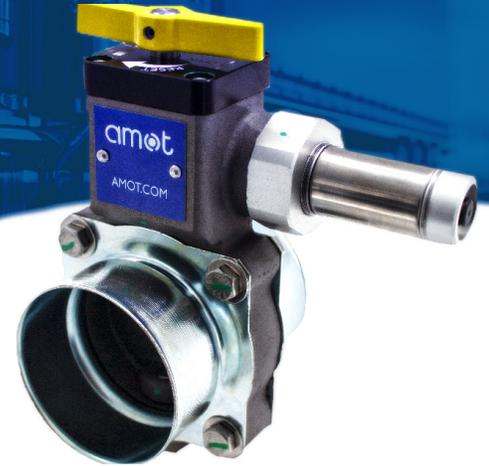




HOW TO CHOOSE THE RIGHT AIR INTAKE SHUTOFF SYSTEM

The Selection Guide



Selecting the right valve is the first step to ensuring that your diesel engine is well protected against becoming an ignition source should the engine overspeed. Since we offer a wide range of valves and systems from AMOT, Chalwyn, Roda Deaco, and RIGSAVER, we can narrow down the choices by knowing specific information about the application.

Use the filters on our product database to select a valve by application type or engine model. If you don't know the application or engine model, follow the steps below and select a valve using the intake piping diameter and activation source: RPM (automatic) or manual.

**Step
1**

Choose installation location and measure the air intake pipe diameter

**Step
2**

Choose automatic or manual actuation

**Step
3**

Consider the application

Step 1: Choose installation location and measure the air intake pipe diameter

Note: If you have a hose, use the inside dimension; if you have a pipe, use the outside dimension. If you have multiple intakes (i.e., V-style engines), you will need multiple valves.

A. Installation on Turbo-Charged Engines

The ideal location to install an air intake shutoff valve, **X**, is post turbo after the intercooler, as close to the intake manifold as possible (Fig 1). If possible, take the hose/pipe measurement here.

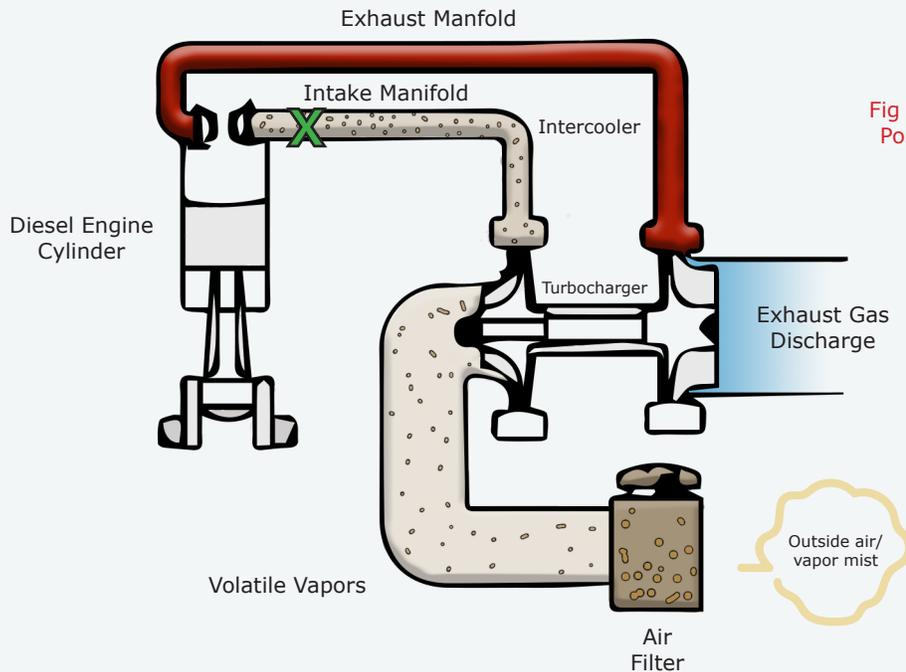


Fig 1: Post Turbo/
Post Intercooler

The second-best location to install an air intake shutoff valve, **X**, is post turbo before the intercooler. However, this is only for high-temperature tolerant valves (Fig 2).

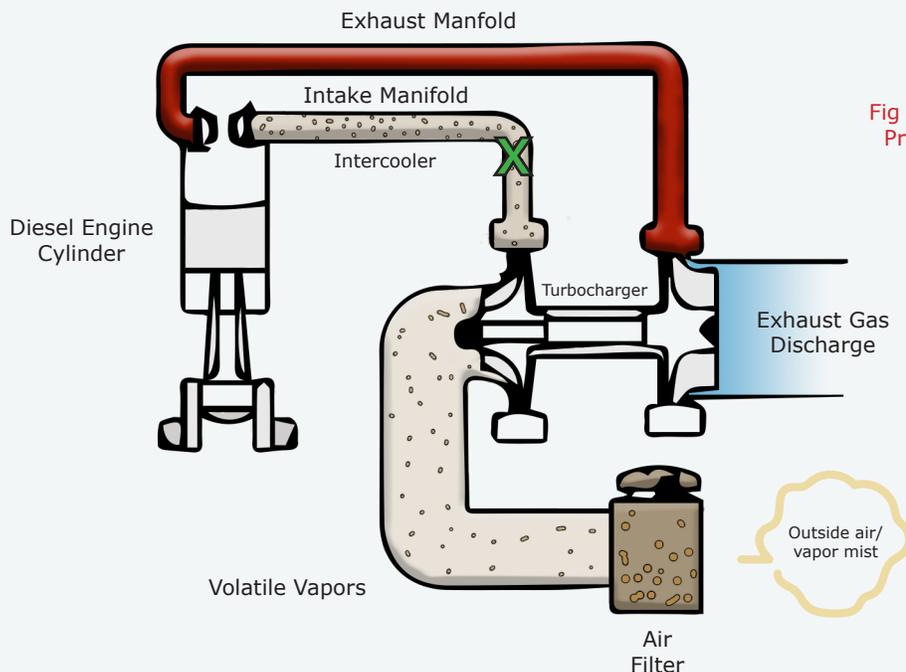


Fig 2: Post Turbo/
Pre-Intercooler

If it is not possible to install the valve in either of these locations, the next best option is pre-turbo after the air filter, **X**, (Fig 3). **Caution: Never mount air intake shutoff valves before the air filter.**

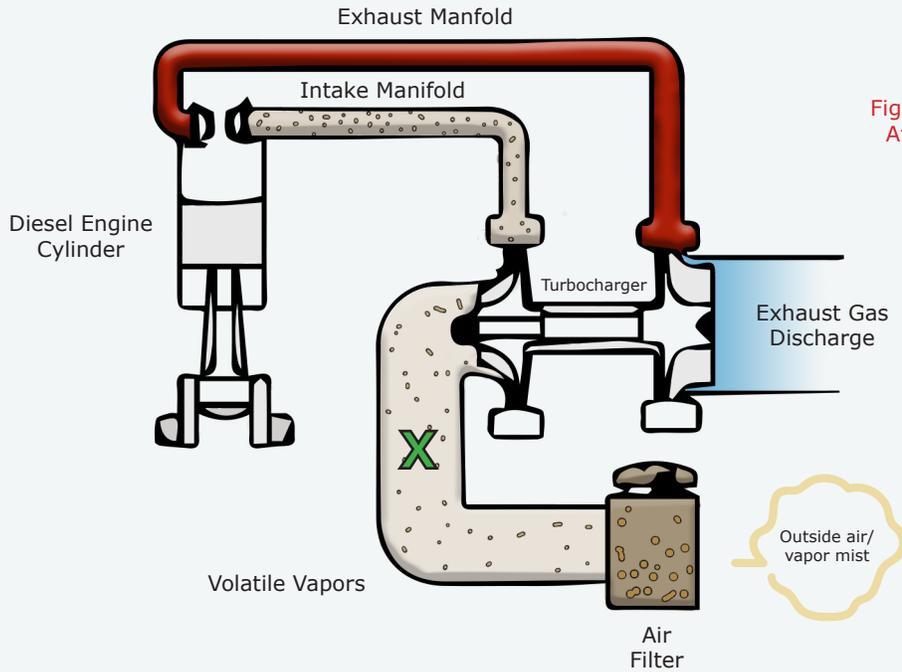


Fig 3: Pre-Turbo/
After Air Filter

B. Installation on Naturally Aspirated Engines

On Naturally Aspirated Engines, the valve should be installed as close to the engine air intake as possible.

Step 2: Choose automatic or manual actuation

The type of actuation you choose will be influenced by your individual needs and regulatory requirements. Automatic systems are activated by the engine RPM and are available in electric, pneumatic, air flow, hydraulic, or a combination of actuation methods. Manual systems operate using a toggle switch or pull cable. Please check your application requirements or local regulations to see if these are allowed on the site.

Recommendations:

Diesel engine runaway has been proven by independent tests to occur in as little as 3-12 seconds. Therefore, AMOT recommends an electric automatic system as the most reliable method to stop diesel engine runaway. Manual systems depend on human intervention, and in emergency situations, our instinct is to distance ourselves from danger. This makes manual systems subject to human error and less effective in protecting lives and preventing the catastrophic consequences of a runaway engine. Generally, electric valves are recommended in high vibration applications.

Step 3: Consider the application

AMOT has an extensive range of valves designed for engines of all sizes and different operating conditions. Below are recommended AMOT products for some of the most common applications:

Automotive/Light Duty Trucks

Common Makes/Models	Common Engines	Recommended Products	Activation Method	Benefits
Ford F250, F350, F450	Powerstroke 6.7L	ThrottleStop Overspeed System,	12 V electric	<p>These products are designed specifically for ease of installation within the tight spaces of modern light duty trucks and vans.</p> <ul style="list-style-type: none"> • Engine specific kits make installation quick and simple • Compact and lightweight • Accessory packages available to complete the system
GMC Sierra 2500, 3500	Duramax 6.6L	Compact Butterfly Valve,	12 V electric	
Chevy Silverado 2500, 3500	Duramax 6.6L			
Dodge Ram 1500, 2500, 3500, 4500, 5500	Cummins 6.7L			
Toyota Hilux	Eco-Diesel 3.0L			
Mitsubishi L200				
Nissan Navarra				
Ford Ranger & Transit				
Isuzu D Max				
Mercedes Sprinter				

Heavy Duty Trucks

Common Makes	Common Engines	Recommended Products	Activation Method	Benefits
Peterbilt	Cummins ISX15	ThrottleStop Overspeed System,	12 V electric	<ul style="list-style-type: none"> • Meet international regulations that require air shutoff valves on vehicles that transport hazardous materials
Kenworth	Paccar MX Series 11, 13			
International Trucks	Paccar PX Series 9, 8	XT Butterfly Valve,	12 V electric or Pneumatic	
Freightliner Trucks	CAT C15			
Western Star	Maxxforce Series 9, 11, 13	RS Swing Gate Valve	12 V electric or Pneumatic	
Volvo	Detroit DD13, DD15, DD16			
Mack				
Mercedes Benz				
DAF				
Scania				
MAN				

Exploration & Production Equipment

Common Equipment	Common Engines	Recommended Products	Activation Method	Benefits
Well servicing equipment	Cummins QSK50 Cummins QSK38 Cummins QSK23	7000 Series Swing Gate	24V electric	<p>These products are designed for high horsepower, heavy duty engines and harsh operating environments.</p> <ul style="list-style-type: none"> • High vibration resistant • IP Rated - Sealed from environment • Tolerates extreme temperatures • Corrosion resistant • Fits a wide range of pipe sizes
Pressure pumps	Cummins QSK19 Cummins QSK30	XT/XTB Butterfly Valve	24V electric	
Fracturing blenders	MTU 4000	RIGSAVER Swing Gate	24V electric	
Coil tubing units	MTU 2000			
Offshore production engines	Caterpillar C18 Caterpillar C15 Caterpillar C13			
	Cummins QSM 11			
	Cummins QSL 9			
	Detroit Series			
	DD 13, DD15, DD16			

Mobile and Rental Equipment

Common Equipment	Recommended Products	Activation Method	Benefits
Portable welders	XT/XTB Butterfly Valve	12 V electric	<ul style="list-style-type: none"> • Designed to fit small engines • Compact and lightweight for tight spaces
Light towers			
Fork lifts	Compact Butterfly Valve	12V electric	
Boom lifts			
Telehandlers	RS Swing Gate Valve	12V electric	
Pumps			
Air compressors			
Portable generators			