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DIESEL ENGINE POSITIVE AIR SHUTOFF VALVE

You may have seen the optional 'positive air shutoff valve' for diesel engine equipped machines on one of your Skyjack models. This valve is a device that cuts the air supply to the engine to ensure the engine RPM's do not over speed when it is being operated in a fuel charged atmosphere (some models also cut the power to the fuel pump). There are work site situations, such as mining, where the atmosphere can possibly contain natural gas, leaking propane, or other gases that a diesel engine can use as fuel. Since diesel engines do not require a spark to run, any gaseous fuel drawn into the combustion chamber along with the intake air can be ignited and allow the engine RPM's to climb – potentially destroying the engine. The positive air shutoff blocks the intake air from reaching the combustion chamber, preventing this problem from occurring.

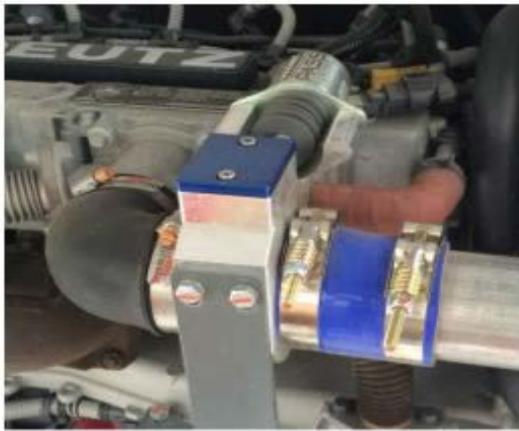


Figure 1

The valve is located in the air intake tube just past the air filter. (See Figure 1). It has an external solenoid on an aluminum body that houses a throttle plate. Under the solenoid is a manual reset knob that is used to reset the system once it has been tripped. The solenoid is controlled by a rev controller that shuts the valve once the RPM's exceed a preset point.

Regular maintenance is important to make sure the valve operates every time. Keep the valve clean and moving freely, and keep debris etc. from the mechanical portion that operates the valve. Check wiring for damage or corroded terminals. Inspect the solenoid boot for cracks or tears and replace if necessary. Push the solenoid in and check the valve for smooth operation. Inspect the wiring at the rev controller for loose or corroded terminals.

For component and switch location information, testing instructions and frequency, please consult the correct operating manual for the serial number of the unit you are working on.

Anytime you have a question regarding your Skyjack product, please contact Skyjack Product Support at 1-800-275-9522 or email to service@skyjack.com.