Triton® White Paper

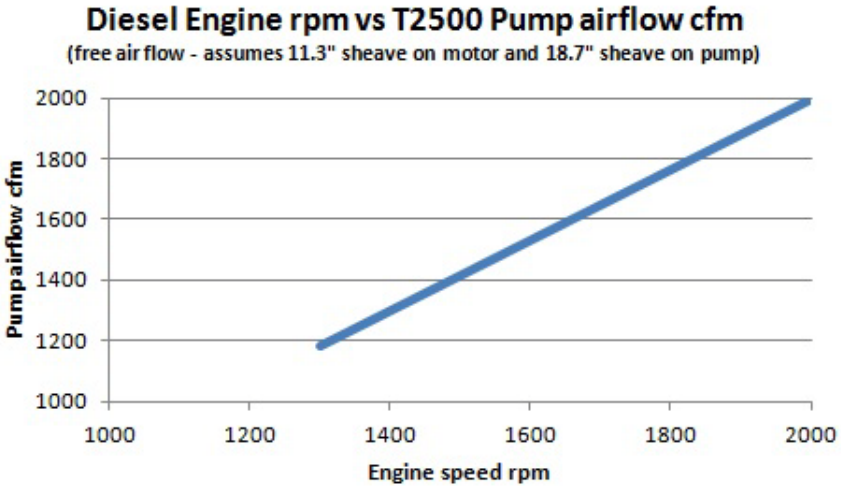
Diesel Engine Speed (rpms) vs T2500 Pump Airflow (cfm)

Occasionally a customer would like to slow down the cfm of the pump. This can be accomplished on diesel-driven units by slowing the speed of the diesel motor (turning down the rpms).

In round terms, for Triton T2500 systems, there is almost a 1:1 correspondence between the diesel engine rpms and the pump airflow in cfm. This assumes "free air flow" and not the reduced amount of airflow under vacuum. Within the range shown here, the level of vacuum (in "Hg) will not drop.

Triton installs a larger pulley (or "sheave") on the pump than on the motor. Therefore the pump turns slower than the motor. We know the relationship between the rpms of the pump and the cfm of the pump. In this whitepaper, we are describing the relationship between the rpms of the motor and the airflow of the pump.

Here is a chart of engine rpms vs pump cfm for our most common T2500 setup:



For other sheave sizes, measure the diameter of the pump sheave and the diameter of the engine sheave. Divide the motor sheave diameter by the pump sheave diameter. In this example, divide 11.3 by 18.7, and you result in 60%. The pump will turn 60% as fast as the motor. Consult the Pump Performance Curve (available separately) to determine airflow at the given pump rpm. That chart would show that at e.g., 1000 rpm on the pump, the pump puts out 1584 cfm. Please contact Triton for more information.

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