Power Tips:

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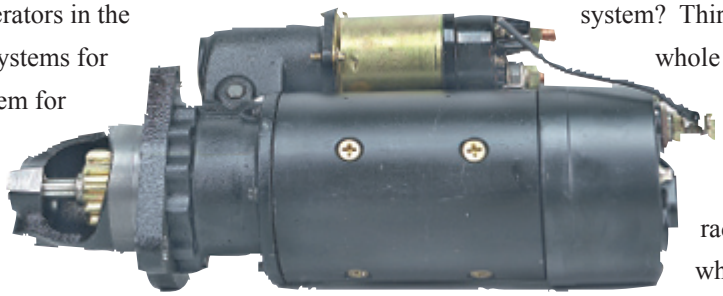
Subject: alternators & Starters

In today's world the trucking industry has gone through many changes that have had a substantial effect on the components that make up the electrical system on power units. The demands on trucks to haul more weight, increase the driver's comfort, increase safety and improve air quality have all impacted the performance of the electrical system. More weight has necessitated bigger engines with more complex computer controls. In order to retain driver's manufacturers have included niceties such as microwave ovens and refrigerators in the sleepers as well as qualcomm systems for communication. The ABS system for brakes that includes traction control and future anti roll capabilities increase demand and reliability of the electrical system. Finally the environmental factors that affect the electrical system are harsher than ever with higher heat under the hood and more aerodynamic fairings reducing airflow over electrical components to help keep them cool. The first area to be aware of when replacing either a starter or alternator is the mechanical aspect of the installation. Questions like, are you setting the belt tension correctly? Is the tensioner worn out? Are the bolts used to mount the alternator or starter in good shape? Are the pulley's worn beyond their specifications? Is the ring gear on the flywheel in good shape or is it chipped? What about the Alternator bracket, is it cracked or broken? Are the wires routed to prevent chafing, damage, and excessive heat? Finally, are any of these the reason for the failure of the unit being replaced? If so how do you correct it to prevent another failure? Second, have you done an electrical analysis of the system before replacing the alternator or starter? It could be that another part of the electrical system causes the failure and simply replacing the component will cause it to fail as well. Are the batteries in good shape? Examine the cables are they corroded externally or internally, run a "voltage drop test" on the wiring to make sure that it's in good shape. Are the terminals on the batteries, the accessories (alt/starter) wiring corroded? Is the load on the electrical system greater than the alternator can supply? Are there any shorts in the system? Third, check the system as a whole are there any components drawing too much from the system such as auxiliary lights, heaters, radio equipments etc. Fourth, what environment are the components in? Is the alternator/starter too close to the exhaust? Is it below a leaking water manifold? Is the unit exposed to road debris and dirt?



Once you've done all of the diagnosis and have determined the correct action, be sure to replace the unit with the appropriate part. Do not use a lower amperage alternator or a less powerful starter simply because it's cheaper, it will cost your customer in the long run. Be sure to replace like for like. If the vehicle has "overcrank" protection on the starter it's there for a reason, don't simply bypass it. Power Products supplies the components and parts to help you maintain your customer's vehicles in top form. Our electrical components meet the stringent OEM quality standards that you require. Contact your Account manager with any questions.