

AD-275-2P

1. ALTERNATOR DESCRIPTION

The supplied alternator is a high-output, severe-duty charging system specifically engineered for the GM Vortec family of engines. This system consists of a 275 Amp alternator and internal regulator. The alternator produces a maximum of 275 amps and will produce a minimum of 160 amps continually at low idle speeds and maximum output above 1800 engine RPM. The alternator has a maximum efficiency in excess of 60 percent. The rectifier is mounted onboard the alternator and consists of 6, 75 Amp press-fit diodes. The brush holder assembly and slip ring are environmentally protected and the bearings are heavy-duty, oversized premium bearings. The alternator housings are precision-machined cast aluminum and all components are of OEM or Mil-spec quality with all major components being carefully chosen for maximum performance and reliability.

2. TECHNOLOGY

This new charging system features an advanced proprietary stator winding of a new design that maximizes efficiency of the winding coupled with very low coil resistance. This gives the alternator maximum low speed output, as well as reduction of magnetic pulsation with the stator windings built in cancel circuit to minimize electrical noise. The internal regulator is an advanced multifunction digital regulator that completely integrates into the vehicles PCM through the OEM wiring harness to retain all vehicle specific functions such as internal temperature compensation, lamp terminal monitoring, load response control, and alternator load factor.



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3. Alternator Mounting

The alternator is specially designed to mount directly in the OEM mounting location with no modification. All electrical connections shall be in the original locations. The alternator features a custom machined drive pulley that is 5% smaller than the OEM diameter for increased output at idle speeds and retains OEM belt length. The pulley is precision CNC 6061T6 aluminum and is .002 hard anodized coating for wear resistance and durability.

4. Alternator Performance and Vehicle Demand

The OEM alternator is rated at 145 amps with 85 amps at idle. Engine idle is ~550 RPM without the A/C on and ~600 RPM with the A/C running. The supplied alternator makes 180 amps at normal engine idle, and ~190 amps with the A/C on at fast idle. The vehicle needs a maximum of 130 amps to supply existing electrical loads with all accessories on leaving little room for additional accessories. The supplied alternator will supply an additional 110 amps of available output at low idle, and 90 amps additional at high idle, and up to 130 amps additional at highway speeds.

| Engine speeds | Vehicle demand | OEM remaining output with all OEM loads on | Upgraded alternator remaining output with all OEM loads on |
|----------------|----------------|--|--|
| 550 RPM idle | 70 Amps | 0 Amps | 110 Amps |
| 600 RPM AC on | 100 Amps | 5 Amps | 90 Amps |
| Normal driving | 100 Amps | 5 Amps | 130 Amps |

5. Alternator Durability

The supplied charging system is manufactured to the highest quality standards, and is manufactured wholly in the USA, of USA made or sourced components and are of the highest quality. All parts are carefully chosen and used for their durability, dependability, and proven performance in the field.

AD-275-2P

Part # AD-275-2P

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|----------------------|--------------------------------------|
| Description | High output alternator |
| Availability | In Stock |
| Volts | 14 |
| Amps @ engine idle | 180 |
| Amps @ fast idle | 190 |
| Amps maximum | 275 |
| Mounting type | Direct fit to OEM Mounting |
| Rotation | Clockwise |
| Housing Material | A305 aluminum |
| Housing Finish | Natural aluminum |
| Positive output stud | 8MMx1.25 Copper |
| Negative | Case Ground |
| Insulated ground | NO |
| Regulator sensing | Internal |
| Excitation | Vehicle OEM |
| Regulation | Internal |
| Regulator type | OEM |
| Rotor Shaft Diameter | 17mm |
| Pulley | 6061 aluminum alloy hard anodized 6K |
| Rectifier | Internal 7x 75 Amp press fit |
| Weight | 16lbs |

AD-275SP-2P

