

# PennTex Industries



## GM Alternator Comparison

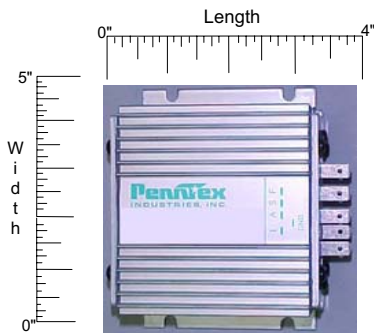
The PennTex PX-422V Charging System is a drop-in upgrade for the 2005-2009 GM C3500, C4500, and C5500 chassis equipped with a gas or diesel engine. Our system is externally regulated with a plug-in harness and is rated at 14V, 220-amps maximum output.



PennTex manufactures a larger positive rectifier assembly with six high temperature 60-amp press fit diodes. The PennTex rectifier will provide superior cooling by increased rectification and a larger heat sink area. It also features a 5/16-inch output post to handle larger electrical loads and cable connections.



The negative heat sink design on the PennTex alternator is incorporated into the rear frame. It uses six high temperature 60-amp press fit diodes, thus utilizing the entire frame for cooling. This design has more rectification and increased heat sink surface area for maximum cooling.



PennTex designs and manufactures external regulators with premium quality components and modern assembly techniques. Our regulators are housed in a specially designed aluminum extrusion for maximum cooling.

# A "Competitor"



The "competitors" model is a drop-in upgrade for the 2005-2009 GM C3500, C4500, and C5500 chassis equipped with a gas or diesel engine. This system is internally regulated and plugs into the OEM harness. It is rated at 14V, 240-amps maximum output. (Cold Rating)



A "competitor" uses an aftermarket replacement positive rectifier assembly with only 3 diodes that is designed for the 150-amp Delco style alternator. It uses the standard aftermarket 1/4-inch size output post.



A "competitor" uses an aftermarket replacement negative rectifier assembly with only 3 diodes that is designed for the 150-amp Delco style alternator.



A "competitor" uses an aftermarket replacement internal regulator assembly that is designed for the 150-amp Delco style alternator.

# PennTex Industries and A "Competitor" GM Alternator Comparison

PennTex uses NTN brand bearings that are internationally recognized for performance and reliability. Our bearings utilize high temperature polyacrylic seals and high temperature Kyodo Yushi grease for extended bearing service life, especially in high heat environments.



PennTex uses a high output, high quality rotor which is balanced using a dual plane balancer at our manufacturing plant in Texas. It features two large heavy-duty metal fans for maximum cooling and durability.

A "competitor" uses an aftermarket non-premium brand bearing that is advertised to have high temperature, polyacrylic seals and Kyodo Yushi grease.



A "competitor" uses an aftermarket replacement rotor that is designed for the 150-amp Delco style alternator. It is dual plane balanced and the cooling fans are the same as the OEM design. The front is metal and the rear is plastic.



The PennTex stator, manufactured at our Texas facility, uses a larger copper wire gauge. This increases current carrying capabilities and extends service life. Our wire is heavy rated by the manufacturer for high temperature and insulation thickness.



The stator of a "competitor" uses a smaller gauge wire to allow more winds to produce a top-end output. Air space between the stator windings is closed and may affect cooling.



PennTex uses a standard 2.3-inch diameter pulley which was increased from a 2.0-inch diameter in 2001. Our standard size pulley reduces the chance of belt slippage, a major issue if the belt tensioner is not in the factory range. This could lead to shortened belt life and overheating of bearings, particularly in some gas engine chassis at higher RPMs.



A "competitor" uses a 2.0-inch diameter pulley with their GM alternator replacement. The use of a smaller pulley on their alternators is standard. This will allow the alternator to turn faster at base idle to make up for any low-end deficit. Their advertising states 170-amps at idle with a curve chart that has the engine RPM @ 750. Today's engines idle at 600-625 RPM and the alternator output is considerably reduced even with the smaller pulley.

## PX-422V GM Series Overview

PennTex manufactures a large positive rectifier assembly with six high temperature 60-amp press fit diodes. The PennTex rectifier will provide superior cooling by increased rectification and a larger heat sink area. It also features a 5/16-inch output post to handle larger electrical loads and cable connections.

PennTex brush assemblies feature carbon copper brushes for maximum performance and brush life.

The negative heat sink design on the PennTex alternator is incorporated into the rear frame. It uses six high temperature 60-amp press fit diodes, thus utilizing the entire frame for cooling. This design has more rectification and increased heat sink surface area for maximum cooling.

PennTex designs and manufactures external regulators with premium quality components and modern assembly techniques. Our regulators are housed in a specially designed aluminum extrusion for maximum cooling.

The PennTex stator, manufactured at our Texas facility, uses a large copper wire gauge. This increases current carrying capabilities and extends the service life. Our wire is heavy rated by the manufacturer for high temperature and insulation thickness.

PennTex uses a high output, high quality rotor which is balanced using a dual plane balancer at our manufacturing plant in Texas. It features two large heavy-duty metal fans for maximum cooling and durability.

PennTex uses NTN brand bearings that are internationally recognized for performance and reliability. Our bearings utilize high temperature polyacrylic seals and high temperature Kyodo Yushi grease for extended bearing service life, especially in high heat environments.

**The PennTex PX-422V Charging System** is a drop-in 14V, 220-amp upgrade for the 2005-2007 GM C3500, C4500, and C5500 chassis equipped with a gas or diesel engine. Our system uses external regulation for better performance and easy system diagnostics. The regulator harness features high temperature loom and GXL wire and is designed for easy installation.



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