

MECHMAN ALTERNATORS



www.Mechman.com

(888) MECHMAN
(865)-522-6166

HIGH OUTPUT ALTERNATORS

THINK ALL ALTERNATORS ARE THE SAME?

THINK AGAIN.

SINCE 1978, OUR STAFF HAS BEEN DESIGNING, BUILDING, AND TESTING HIGH PERFORMANCE ALTERNATORS FOR ALL TYPES OF VEHICLES. WE REMAIN FOCUSED ON MANUFACTURING THE MOST DURABLE AND BEST PERFORMING ALTERNATORS IN THE BUSINESS. MECHMAN ALTERNATORS HAVE EMERGED FROM YEARS OF FEEDBACK FROM CUSTOMERS FROM ALL TYPES OF RACING BACKGROUNDS. NO MATTER WHAT KIND OF VEHICLE YOU HAVE, THERE IS A PURPOSE-BUILT MECHMAN ALTERNATOR TO HELP YOU ACHIEVE YOUR GOALS. THINK ALL ALTERNATORS ARE THE SAME? THINK AGAIN



**DRAG RACE - AIR RIDE - ROAD RACE - DESERT RACE - ROCK CRAWLING
- STREET RODS - DIESEL PERFORMANCE - PRO TOURING - MUD BOGS -
CAR AUDIO - RESTO MODS - DRIFTING - SAND DRAGS - ENDURANCE
RACING - RALLY CROSS - FAN BOATS - SAND RAILS - HYDRAULICS**

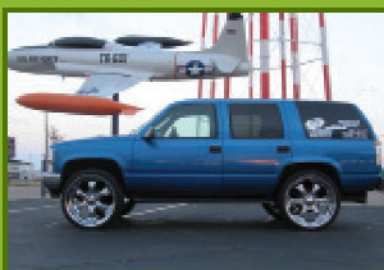




STEVE MEADE – Possibly the most internationally famous vehicle in the car audio industry is Steve Meade's Chevy Tahoe. Steve's installation is extremely clean, and extremely loud. Owner of the world renown www.steavemeadedesigns.com audio forum, Steve has shattered internet records for most views and most subscribers in the autos and vehicles category on Youtube. His Tahoe has been featured in Playboy magazine for an unbelievable video where a woman's glass eye popped out from the extreme sound pressure created by (4) 18" subwoofers. 30,000 watts of amplifier power is supplied by (4) MechMan 340+ amp alternators.



TOMMY MCKINNIE – A.K.A "the King Of Bass" hailing from Tampa, FL- is known world-wide for having one of the loudest and clearest sounding car stereos in the world. Powered by (3) 340 amp MechMan alternators coupled to a bank of (24) 16 volt XS power batteries, Tommy's windshield shattering vehicle is a crowd pleaser at every show. With over 40,000 watts going to (24) 12" Incriminator subwoofers and over (100) mid and high range speakers, the full range of music is produced to well over 160 decibels!! Since switching to MechMan alternators, Tommy has had **zero** alternator failures.



JONATHAN PRICE – Inspired by other heavy hitters in the car audio industry, Jonathan wanted to take his vehicle to the next level. Currently packed with an astounding (10) 18" PSI subwoofers, this Tahoe puts on a show wherever it goes. The entire interior of this vehicle is lined with mid and tweeters that are every bit as loud as the bass. Jonathan's popularity at shows and on youtube led him to form the www.down4sound.com audio forum where fellow bass-addicts can come together and share their experience. Jonathan has equipped his Tahoe with an unbelievable (5) 320+ amp MechMan 6 phase alternators running at 18.0 volts to create nearly 29 Kilowatts of eardrum shredding power!!



RUSTY FLOWERS – Owner of DC audio, (a manufacturer of high end Subwoofers and amplifiers) Rusty knows what it takes to power serious car audio. Located in Reno, NV, Rusty has been a hardcore SPL competitor for over 15 years. Since switching to MechMan alternators, Rusty says that his voltage is more stable, and the system is noticeably louder. Rusty has installed high output alternators in a number of his competition vehicles, but the most notable is his Chevy Astro fan packed full of DC audio power equipment. While admitting to 160+ decibel scores, many people in the industry speculate that this van is capable of much more... One MechMan 270 amp unit, and one 340 amp unit work together on this van to keep the bass pounding.



AM SINGH - Located in the United Kingdom, Am's van "project Mayhem" is known as one of Europe's loudest and best constructed audio demo vehicles. Astro Van's are hard to come by in England, so Am had to go through great lengths to build such a serious SPL vehicle. Because he wanted nothing but the best, he equipped his van with (3) MechMan 340+ amp alternators to keep his massive battery bank charged. Am is also known for his UK based European audio distribution company- www.bladeice.com

ALTERNATORS

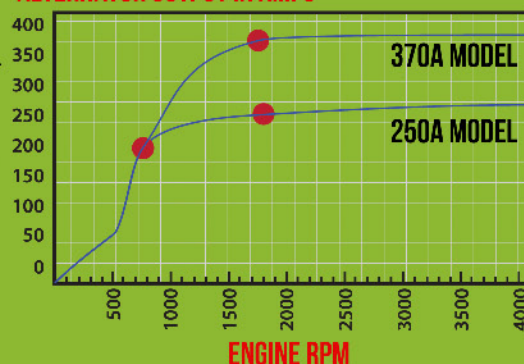


ELITE SERIES

ELITE SERIES

Newly redesigned for 2013, The Elite series offers the highest possible amperage and durability available in a large case alternator. 6 phase technology combined with massive twin rectifier assemblies and 12 diodes makes these alternators totally durable for daily use, while still maintaining 200+ amps at engine idle speeds. Some models are available with adjustable voltage, ask a sales rep for more details.

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 7" DIAMETER CRANK PULLEY

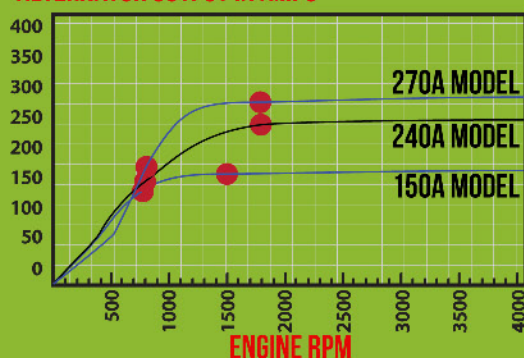


G SERIES

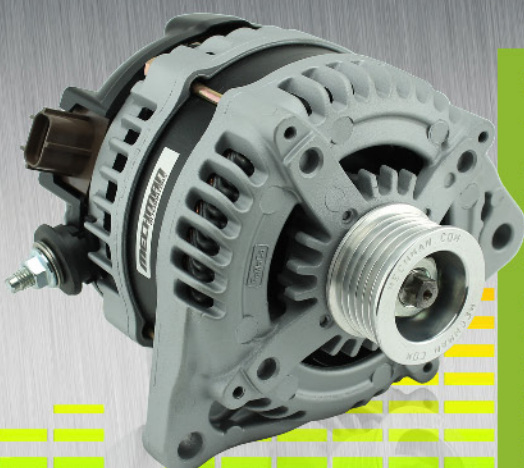
G SERIES

Based on late model large case GM or Ford alternator housings, the tried-and-true G series of alternators are our best sellers. Reasonably priced and very durable, these units feature solid copper custom rectifiers for great durability. Oversize press fit diodes and premium bearings ensure long life even in hot or abusive conditions. Available in 150, 240 or 270 amp configurations.

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 7" DIAMETER CRANK PULLEY

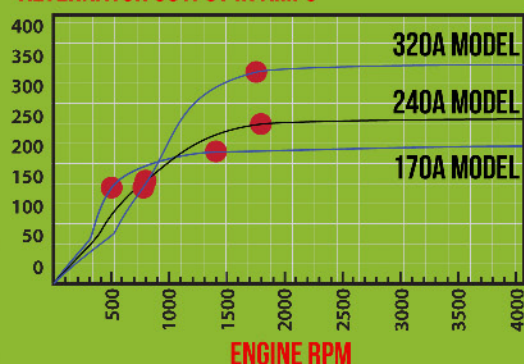


S SERIES

S SERIES

The S series of 6 phase alternators offers incredible output in a compact and durable package. Highly efficient, these units use less horsepower than conventional 3 phase alternators. 12 diodes, twin rectifier plates and outstanding airflow ensure long service life, even in severe conditions. These units are available for a broad range of domestic and import applications in 170, 240, or 320 amp configurations. The 240 amp model offers the best balance between peak output, and output at engine idle RPM.

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 7" DIAMETER CRANK PULLEY

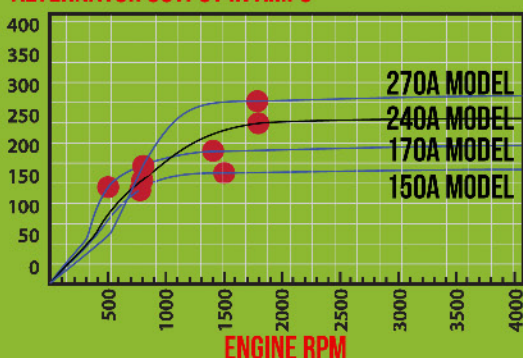


L SERIES

L SERIES

For select vehicles, an L series large case conversion kit is offered. These kits mount a G series alternator in place of the OEM alternator. With these retrofit kits, better cooling and durability than the OEM alternator design is obtained. L series kits include the necessary brackets, hardware and adapter harnesses. (when necessary) Available in 150, 170, 240 or 270 amp configurations, depending on application.

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 7" DIAMETER CRANK PULLEY

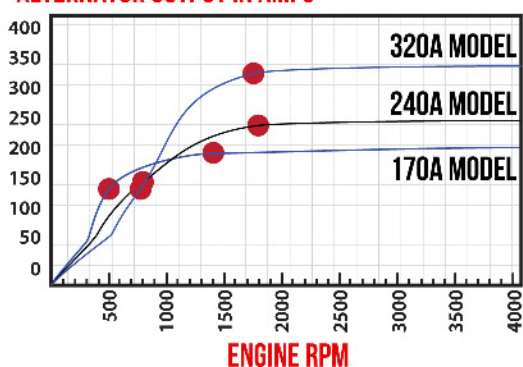


BILLET-TECH

BILLET-TECH

The new Billet-Tech series of alternators feature all of the same efficient internal components as the S series, but in an attractive Billet-Aluminum housing. These alternators are a great choice for high performance, racing, or show-car applications. Billet-Tech units are also available for most pre-1985 GM and Ford vehicles, who are looking for a direct bolt in high output alternator upgrade. Available finishes include black anodized, polished aluminum, and chrome plating. Best of all, this series of premium racing alternators features an industry exclusive 10 year performance guarantee! Visit www.billetalternator.com for more details.

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 6" DIAMETER CRANK PULLEY

FINISH OPTIONS



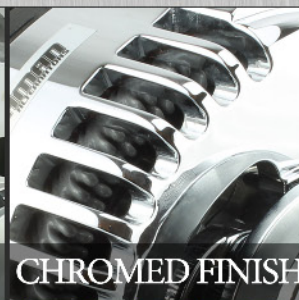
MACHINED FINISH



BLACK HARD ANODIZED



POLISHED FINISH



CHROMED FINISH

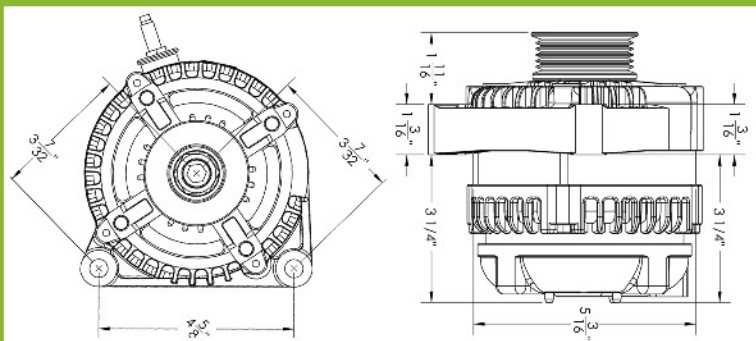
UNIVERSAL FIT ALTERNATORS



UP TO
**320
AMPS!**

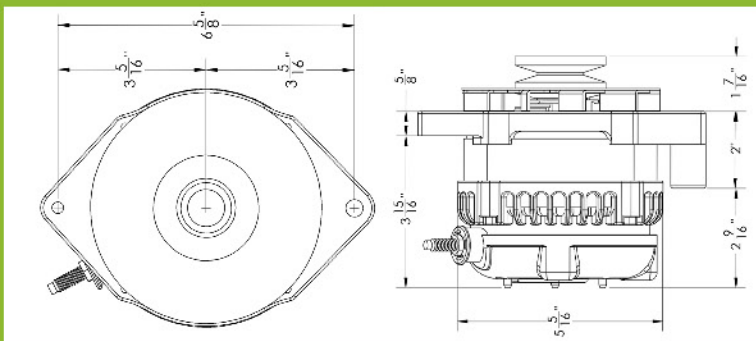
Compact Universal
6 phase alternator,
great for multiple
alternator installa-
tions. Available in
170, 240 and 320
amp.

PART NUMBER:
9050320



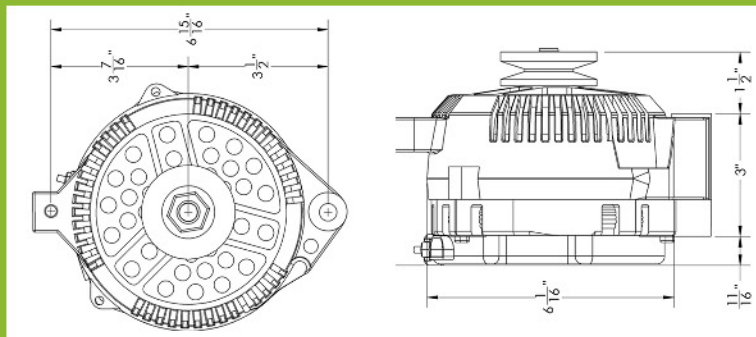
6 phase 240 amp
Alternator for
standard 1965-
1985 GM "one-
wire" applications

PART NUMBER:
B7294240C



Universal "Slim-
Fit" large case 240
amp alternator,
great for custom
or multiple
alternator
installations

PART NUMBER:
7771240



MECHMAN vs. THE OTHER GUYS

* S SERIES, ELITE SERIES, AND BILLET-TECH SERIES ALTERNATORS FEATURE 6 PHASE TECHNOLOGY

THE 6 PHASE ADVANTAGE



MECHMAN
STATORS

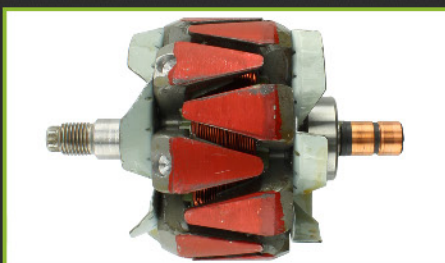


the **OTHER GUYS**
STATORS

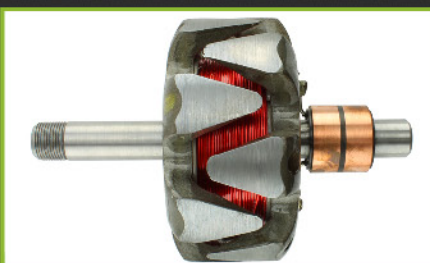
Select Mechman alternators employ cutting edge alternator technology not found in other aftermarket alternators. 6 phase hairpin stators make these alternators fundamentally more efficient than other aftermarket alternators. This new technology and increased efficiency equates to incredible output at extremely low engine RPM, less energy wasted in the form of heat, and more horsepower to the wheels. Also, because less heat is being generated, the internal components of Mechman alternators last longer.

This is especially beneficial on turbocharged and/or endurance racing vehicles with high engine compartment temperatures. All Mechman 6 phase alternators feature soldered stator and rectifier connections, with epoxy re-enforced stator connections, reducing the chance of vibration failures.

HIGH POLE COUNT ROTORS



MECHMAN
ROTORS



the **OTHER GUYS**
ROTORS

6 phase units are built exclusively with precision balanced low-mass rotors that allow them to operate safely at shaft speeds of 20,000+ rpm. This high RPM capability, combined with excellent output at idle, gives the user a much broader operating RPM range, and more flexibility in the size of the crankshaft pulley used. A properly selected Mechman alternator can even fix low voltage

caused by using small diameter, or "underdriven" pulley ratios.

TWIN RECTIFIERS



MECHMAN
RECTIFIERS



the **OTHER GUYS**
RECTIFIERS

As a final precaution, 6 phase alternators are constructed with twin high efficiency cooling fans, and twin internal rectifier plates. While other high performance alternators have only one rectifier with 6 diodes, Billet-Tech units boast 12 press fit diodes with 300% more surface area to dissipate heat.

These considerations to cooling airflow and heat dissipation make Mechman high performance

alternators the most durable aftermarket alternators you can buy. If you are experiencing pre-mature alternator failure, intermittent electrical accessory problems, or low voltage at any engine RPM, a Mechman 6 phase alternator is the answer!

BATTERY CHARGERS & CABLE KITS

15 AMP 3 STAGE RACING BATTERY CHARGER/MAINTAINER



FEATURES INCLUDE:

- ❖ 3 STAGE CHARGING
- ❖ COMPUTER CONTROLLED, TOTALLY AUTOMATIC
- ❖ NO CONFUSING METERS, SWITCHES OR SETTINGS, JUST PLUG IN AND GO
- ❖ AUTOMATICALLY ENTERS FLOAT MODE OR "TRICKLE" CHARGING WHEN BATTERY IS CHARGED
- ❖ SIMPLE LED INDICATOR TO INDICATE WHEN BATTERY IS CHARGED
- ❖ AVAILABLE FOR 12 VOLT OR 16 VOLT BATTERIES SAFE FOR ALL BATTERIES, INCLUDING AGM OR "GEL" TYPE BATTERIES.
- ❖ ONE YEAR WARRANTY

25 AMP "QUICK CHARGE" RACING BATTERY CHARGER/MAINTAINER



FEATURES INCLUDE:

- ❖ 3 STAGE CHARGING
- ❖ COMPUTER CONTROLLED, TOTALLY AUTOMATIC
- ❖ NO CONFUSING METERS, SWITCHES OR SETTINGS, JUST PLUG IN AND GO
- ❖ AUTOMATICALLY ENTERS FLOAT MODE OR "TRICKLE" CHARGING WHEN BATTERY IS CHARGED
- ❖ SIMPLE LED INDICATOR TO INDICATE WHEN BATTERY IS CHARGED
- ❖ AVAILABLE FOR 12, 14 OR 16 VOLT BATTERIES SAFE FOR ALL BATTERIES, INCLUDING AGM OR "GEL" TYPE BATTERIES.
- ❖ ONE YEAR WARRANTY

1/0 GAUGE HYPERFLEX BATTERY RELOCATION CABLE KIT

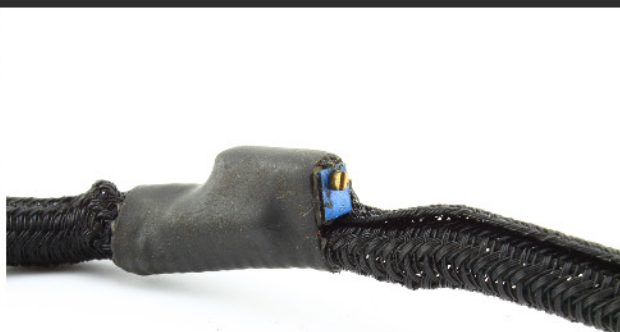


*Available in
3 different colors

- ❖ ULTRA FLEXIBLE SOFT TOUCH JACKET FOR EASY ROUTING
- ❖ 4,700+ ULTRA FINE STRANDS FOR LOW RESISTANCE AND EXCELLENT FLEXIBILITY
- ❖ TRUE 1/0 GAUGE DIAMETER CABLE- 250 AMP RATED
- ❖ BOTH CABLES COME WITH PURE COPPER RING TERMINALS ALREADY INSTALLED ON EACH END
- ❖ (6) ADDITIONAL PURE COPPER CABLE ENDS AND (6) WATERPROOF HEAT SHRINK SEALING TUBES INCLUDED
- ❖ (12) CABLE CLAMPS AND (12) SELF TAPING SCREWS INCLUDED FOR EASY INSTALLATION
- ❖ (4) FEET OF GROUND CABLE INCLUDED, ENOUGH TO UPGRADE ENGINE-TO-CHASSIS GROUND AS WELL

ADJUSTABLE VOLTAGE PRODUCTS

AVBM



**AVBMs are not compatible with one wire or self exciting alternators*

CHOOSE RECTANGULAR OR OVAL PLUG WHEN ORDERING



GM Oval



GM Rectangular

- ❖ QUICK AND EASY WAY TO CHANGE THE CHARGING VOLTAGE OF ANY STANDARD OR AFTERMARKET 4 PIN GM ALTERNATOR.
- ❖ AVAILABLE FOR RECTANGULAR 4 PIN (CS SERIES) AND OVAL 4 PIN (CSD AND AD SERIES) GM ALTERNATORS
- ❖ ADJUST THE CHARGING VOLTAGE OF THE ALTERNATOR BY THE SIMPLE TURN OF A DIAL
- ❖ ADJUSTMENT DIAL LOCATED 2 INCHES FROM THE ALTERNATOR PLUG
- ❖ INCREASE THE CHARGING VOLTAGE OF A STANDARD 12 VOLT ALTERNATOR IN ORDER TO PROPERLY CHARGE A 16 VOLT RACING BATTERY!

AVBM II

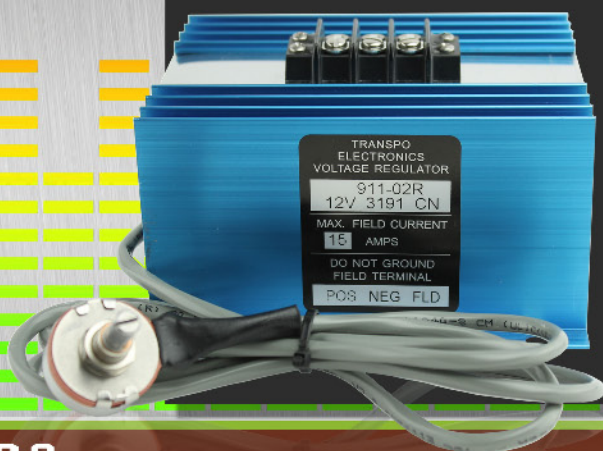
CHOOSE RECTANGULAR OR OVAL PLUG WHEN ORDERING



**AVBMs are not compatible with one wire or self exciting alternators*

- ❖ QUICK AND EASY WAY TO CHANGE THE CHARGING VOLTAGE OF ANY STANDARD OR AFTERMARKET 4 PIN GM ALTERNATOR.
- ❖ AVAILABLE FOR RECTANGULAR 4 PIN (CS SERIES) AND OVAL 4 PIN (CSD AND AD SERIES) GM ALTERNATORS
- ❖ DASH MOUNTED VOLTMETER AND ADJUSTMENT DIAL FOR ON-THE-FLY ADJUSTMENTS INSIDE THE VEHICLE
- ❖ GREATLY IMPROVED ELECTRICAL COMPONENT EFFICIENCY, NO MORE LAZY 13 VOLT CHARGING VOLTAGE
- ❖ INCREASE THE CHARGING VOLTAGE OF A STANDARD 12 VOLT ALTERNATOR IN ORDER TO PROPERLY CHARGE A 16 VOLT RACING BATTERY!

91102R EXTERNAL VOLTAGE REGULATOR



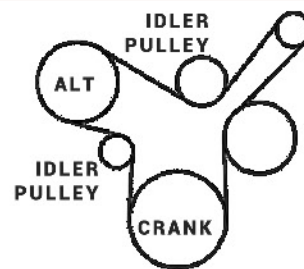
THE 91102R EXTERNAL ADJUSTABLE VOLTAGE REGULATOR IS ANOTHER PRODUCT THAT ALLOWS EASY ADJUSTMENT OF CHARGING VOLTAGE. ANY MECHMAN ALTERNATOR CAN BE SPECIAL ORDERED TO BE COMPATIBLE WITH THE 91102R EXTERNAL VOLTAGE REGULATOR. (ADDITIONAL CHARGES APPLY) THIS OPTION ALLOWS THE USER TO SET THEIR CHARGING VOLTAGE ANYWHERE FROM 13.5 TO 20.0 VOLTS, AND IS COMPATIBLE WITH 12 VOLT, 14 VOLT, OR 16 VOLT FLOODED OR AGM BATTERIES. THE ADJUSTMENT DIAL CAN BE MOUNTED INSIDE THE VEHICLE, OR UNDER THE HOOD FOR EASY ACCESS. INSTALLATION IS SIMPLE WITH ONLY THREE WIRES TO CONNECT. THE 91102R IS ALSO COMPATIBLE WITH STANDARD EARLY MODEL 10DN GM, 1G FORD AND EARLY MOPAR SINGLE OR DUAL FIELD EXTERNALLY REGULATED OEM ALTERNATORS.

TECHNICAL INFORMATION

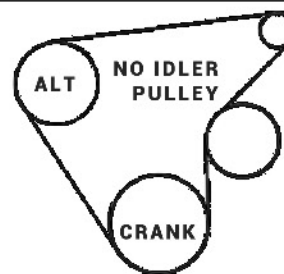
BELT SLIP

One of the most common problems effecting custom built vehicles is belt slip. As add on electrical accessories increase the amount of current required from the alternator, the strain against the alternator drive belt is also increased. While many people think that a higher output alternator will solve their charging problems, a higher output alternator may make the problem worse if the drive belt is not up to the task of turning the alternator while under load. Alternators driven by a single V belt will commonly begin to slip the drive belt on the alternator pulley if the alternator is capable of producing more than 150 amps or so. 4 groove serpentine belt driven alternators may also experience belt slip when pushed beyond 150 amps of output. Depending on how much of the circumference of the alternator pulley the drive belt contacts, and how tight the belt is, belt slip may occur at lower or higher amperage levels.

If more than 150 amps of alternator output is required on a single V belt or 4 groove serpentine belt application, a backside idler may need to be installed. Double V belt or 6+ rib serpentine belt driven alternators will generally not slip below 250 amps worth of load, depending on belt wrap. If belt slip becomes an issue on any application, a free spinning backside idler pulley may be mounted next to the alternator pulley to force the alternator drive belt to wrap further around the alternator pulley, increasing contact surface area, and drive belt tension at the same time. Eliminating belt slip is absolutely critical to proper charging system performance, ask a Billet-Tech associate for more details.



WITH IDLER PULLEY



WITHOUT IDLER PULLEY

PULLEY RATIO



SEAN WHITLEY'S
FARM TRUCK

Often times, people think that the highest output alternator available is the "best" choice for their vehicle. Depending on crankshaft pulley diameter, engine idle speed, and maximum engine RPM, a lower peak alternator output curve might provide better output at engine idle RPM. Generally speaking, the higher the peak output an alternator achieves, the faster it must be spun to begin producing output. This is why Mechman 170 amp alternators have a much lower turn on speed than 320 amp Mechman units. In order to determine your vehicle's current pulley ratio, simply divide the diameter of your crankshaft pulley by the diameter of your alternator pulley. For example: a 6 inch crankshaft pulley coupled with a 2 inch alternator pulley yields a 3:1 pulley ratio. (6 divided by 2 equals 3:1) To ensure that you are not over speeding the alternator, simply divide the maximum safe operating RPM of the alternator (Mechman alternators have a safe maximum RPM of 20,000) by the maximum RPM that the engine will see. For example: 20,000 max alternator RPM / 6,000 max engine RPM = 3.33:1 safe maximum pulley ratio. Running the maximum pulley ratio that does not over speed the alternator will yield the highest engine idle speed output possible for a given alternator. Running lower pulley ratios will conserve horsepower, but may cause the alternator to be below it's turn on speed at engine idle speeds. Several different alternator pulley diameters are available, contact the Billet-Tech help line for assistance in determining the best output curve and pulley ratio for your application.

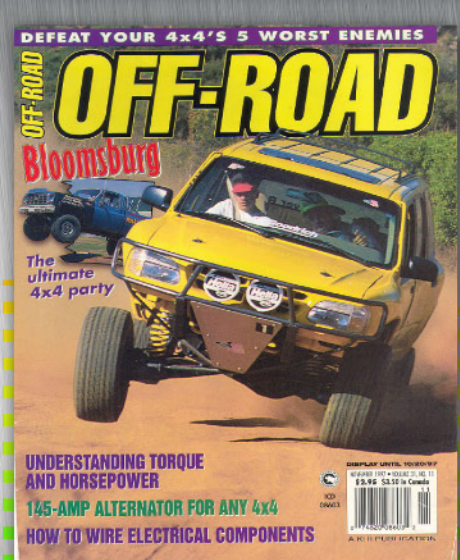
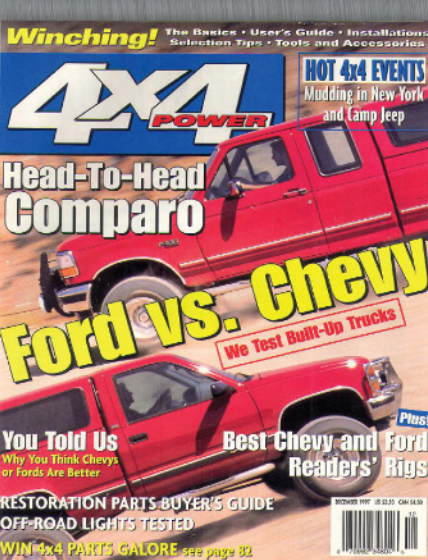
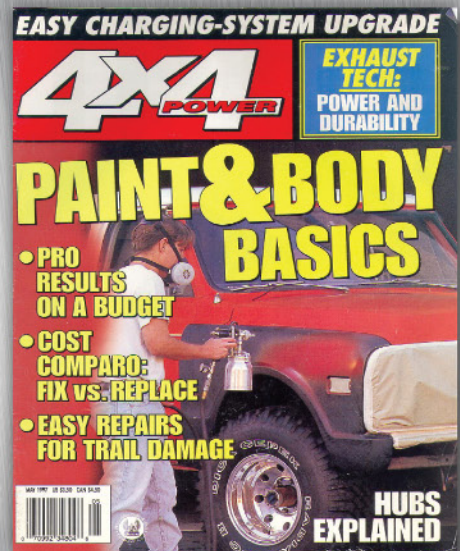
CABLING

Using the properly sized alternator charge cables is absolutely necessary for proper charging system performance. Using alternator charge or ground cables that are too small for the amount of current that the alternator produces may restrict alternator current flow, and in extreme cases, could cause a fire. It is perfectly acceptable to leave smaller OEM charge and ground cables in place, as long as properly sized supplemental cables are added for positive and ground connections, running directly from the alternator housing to the positive and negative terminals of the battery. Mechman alternator cable upgrade kits (sold separately) can be installed in minutes, and will guarantee safe and effective charging system operation. 2 Gauge or 1/0 gauge cable kits are available, see www.Mechman.com for more details.

MATT YOUNG'S
MUSTANG



MECHMAN QUALITY, SINCE 1978



P.11

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/MECHMAN2



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