

+
MECHMAN
ALTERNATORS
-



WWW.MECHMAN.COM

(888) MECHMAN
(865) 522-6166

HIGH OUTPUT ALTERNATORS
COLOR BROCHURE V. 8.0

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.



**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**



MECHMAN vs. STANDARD GM

* S SERIES, AND ELITE SERIES ALTERNATORS FEATURE 6 PHASE TECHNOLOGY

THE 6 PHASE ADVANTAGE



**MECHMAN
STATORS**



**Standard GM
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**



**Standard GM
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 fix low voltage at engine idle RPM problems when using an underdrive crank pulley.

TWIN RECTIFIERS



**MECHMAN
RECTIFIERS**



**Standard GM
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, Mechman 6 phase 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!

ALTERNATORS

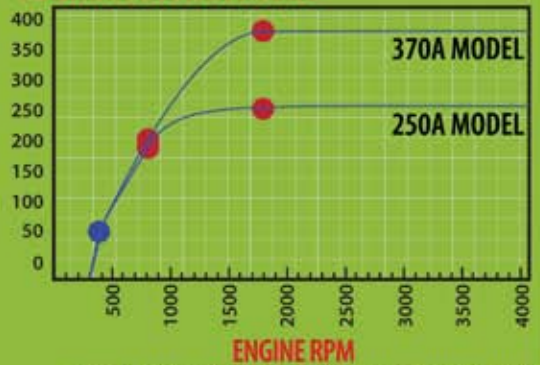


ELITE SERIES

The Elite series offers the highest possible amperage and durability available in a reasonably sized automotive alternator. 6 phase technology combined with massive twin rectifier plates make these alternators very durable for daily use. The 250 amp version comes with a high-RPM friendly pulley ratio great for racing applications. All Elite series alternators come with twin rectifier plates and 12 press fit diodes for excellent durability.

PART NUMBER: **B7864370B**

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 7" DIAMETER CRANK PULLEY



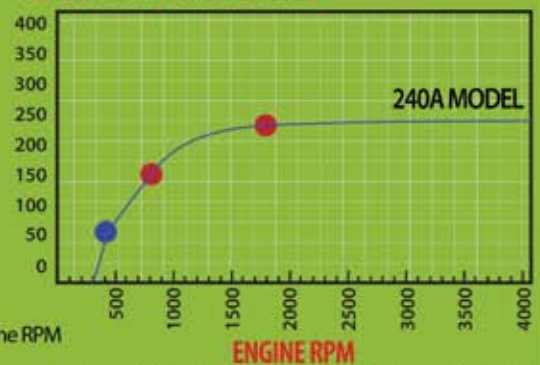
G SERIES

G series alternators offer great performance at a great price. One of our best selling alternators, these units feature a heavy duty rectifier plate with 6 oversize press fit diodes, while the 240 amp version works great for industrial, air ride, and car audio applications.

NOTE: Not recommend for racing use above 5,500 engine RPM

PART NUMBER: **8497240**

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 7" DIAMETER CRANK PULLEY

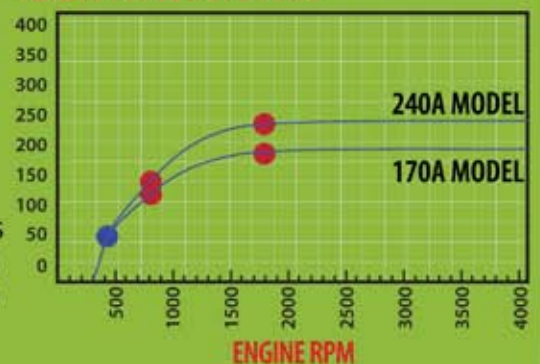


S SERIES

The S series of 6 phase alternators offers incredible output in a medium sized housing. Highly efficient, these units use less horsepower per amp than conventional alternators. 12 oversize diodes, twin solid copper rectifier plates and hairpin stators make these alternators incredibly durable. The 170 amp versions use a stock diameter pulley, making them a great choice for high RPM or racing applications and import applications in 170 or 240 amp configurations. The 170 amp model features a high RPM friendly pulley ratio while still maintaining good output at engine idle RPM.

PART NUMBER: **13341240**

ALTERNATOR OUTPUT IN AMPS



* ENGINE RPM SPECS ASSUME A 7" DIAMETER CRANK PULLEY

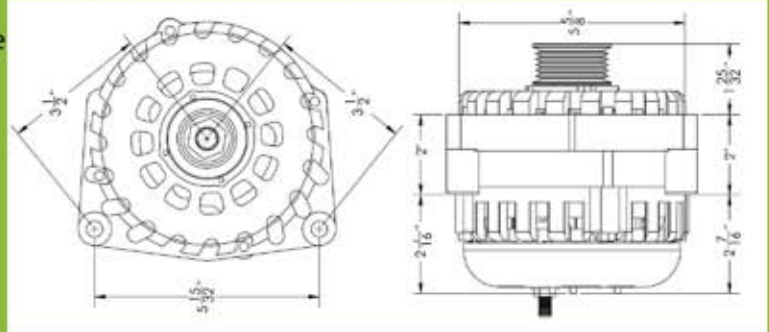
GM ALTERNATORS

ELITE SERIES 370 AMP 1996-2013 GM TRUCK / 1998-2002 F-BODY FITMENT



The Elite series billet housing alternator for late model GM truck / F-body fitment is available with two voltage regulator configurations. The B8206370B accepts the standard 1996-2004 4 pin GM alternator plug, and can easily be wired to work on engine swap applications. The B8302370B unit features the computer controlled 2 pin plug for 2005-2013 truck applications with stock wiring harnesses. These can be ordered in "one-wire" hookup for multiple alternator installations.

*Shown in black anodized finish



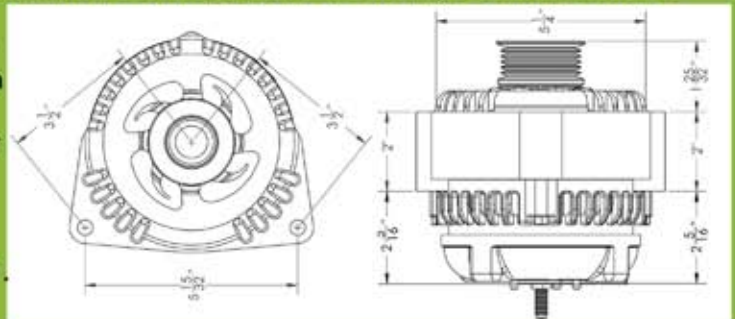
8206370B is for 4 pin plug 96-04 GM trucks
PART NUMBER: **B8302370B** is for 2 pin plug 05-12 GM trucks / **B14019370B** for years 13-17

S SERIES BILLET ALTERNATOR TO REPLACE 1996-2013 GM TRUCK / 1998-2002 F-BODY ALTERNATORS



The S series billet alternator for late model GM truck / F-body fitment provides the clean look of a striking billet front housing, in a 5.25 inch diameter housing. This unit comes with the standard 1996-2004 4 pin GM alternator plug, and can also be custom ordered with a simple one wire hookup with seamless metal rear cover. Either version can easily be wired to work on OEM or engine swap applications. The 170 amp version works great for high RPM racing or for OEM applications where the user wishes to keep the stock length belt. The 240A offers high output for customers limited on space.

*Shown in one-wire chrome finish



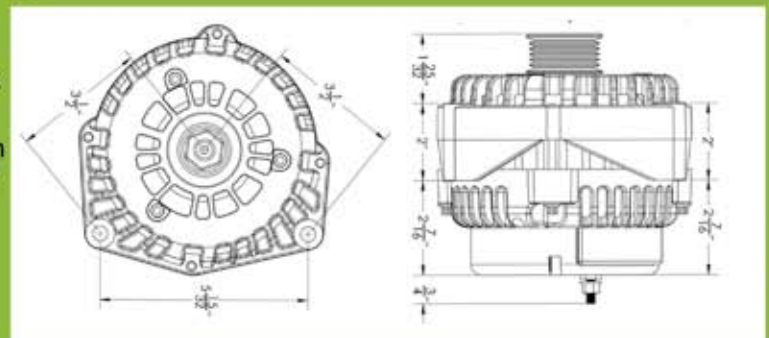
8206240C - 240A chrome with 96-04 4 pin oval plug
PART NUMBER: **B8302240C** - 240A chrome with 05-17 2 pin plug
B8237240C - 240A chrome with universal "one wire" hookup

G SERIES ALTERNATOR TO REPLACE 1996-2013 GM TRUCK ALTERNATORS



The G series alternator for late model GM truck fitment offers 240 amp output with 150 amps at idle at a great price! This unit features (6) large press fit diodes, a pure copper rectifier and oversized output stud. The 8206240 unit features the standard 96-04 GM 4 pin alternator plug for OEM or engine swap applications, while the 8302240 unit is for 05-13 OEM GM truck applications with the stock wiring harness. G series alternators work great on street applications operating in the 0-5,000 RPM engine speed range.

*Shown in natural finish



PART NUMBER: **8206240** - 240A with 96-04 4 pin oval plug | **8302240** - 240A with 05-13 2 pin plug

GM ALTERNATORS

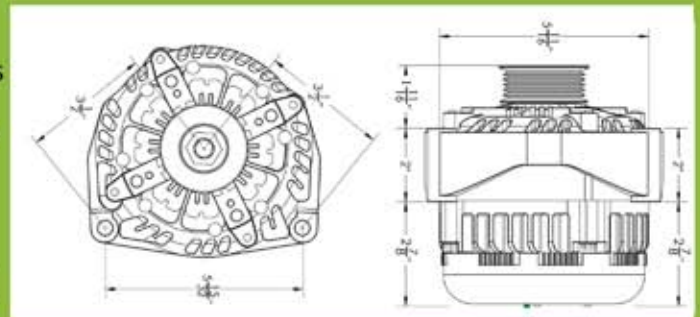
ELITE SERIES 250 AMP ALTERNATOR FOR 1996-2013 GM TRUCK / 1998-2002 F-BODY FITMENT



The Elite series 250 amp alternator for late model GM truck / F-body fitment is a great choice for customers wanting to retain the stock length belt. These units feature the same (12) press fit diodes and hairpin stator technology as the 370A Elite series alternators, but in a cost effective cast aluminum housing. The 8302250 unit features the computer controlled 2 pin plug for 2005-2013 truck applications with stock wiring harnesses, while the 8206250 units feature the standard 1996-2004 4 pin GM plug. These under-stressed 250 amp units work great as a reasonably priced high output alternator for high RPM and racing applications.

*Shown in natural finish

8206250 - 250A with 96-04 4 pin oval plug
 PART NUMBER: 8302250 - 250A with 05-12 2 pin plug
 14019250 - 250A with 13 - 17 2 pin plug



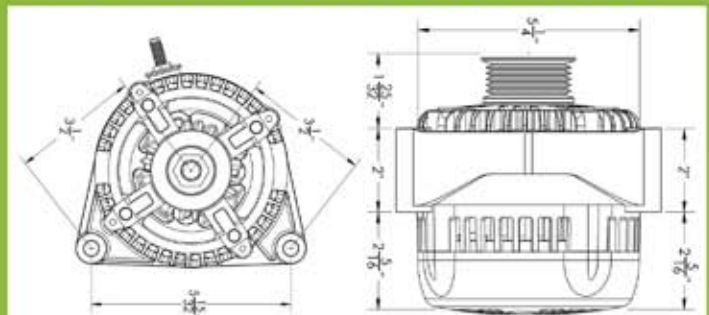
S SERIES "SIDE OUTPUT" "ONE-WIRE" ALTERNATOR TO REPLACE 1996-2013 GM TRUCK / 1998-2002 F-BODY ALTERNATORS



This S series alternator for late model GM truck / F-body fitment is a great choice for customers who need a smaller body alternator for LS engine swap applications, but still need better low-RPM output and better high RPM durability than traditional GM alternators can provide. These units feature massive twin solid copper rectifiers and hairpin stator technology in a great looking housing. This alternator features a simple "one-wire" hookup and side output battery post for increased cylinder head clearance.

NOTE: This unit does not have the ability to operate a "check battery" light.

PART NUMBER:
 8237170 - 170A one-wire natural finish
 8237240 - 240A one-wire natural finish



Machined finish available on Billet units only. Part numbers that start with the letter "B" will feature a Machined billet front housing. All other part numbers will come with a rough cast finish housing as the default finish.

BILLET FINISH OPTIONS



MACHINED FINISH



BLACK HARD ANODIZED



POLISHED FINISH



CHROMED FINISH

GM ALTERNATORS

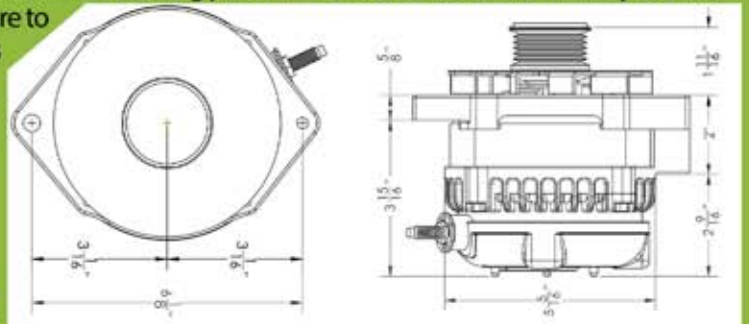
S SERIES REPLACEMENT FOR NARROW-MOUNT CS130



This S series 240 amp alternator fits several popular "street-rod" aftermarket billet accessory drives. These units mount with the "special" 6.15 inch center-to-center mounting pattern, and feature a side output stud so they will fit most popular aftermarket alternator brackets with the "narrower than standard GM" mounting pattern. These units come with an easy to install one wire regulator. Be sure to contact a MechMan sales associate for assistance with fitment if you are unsure which alternator you need to fit your aftermarket billet alternator bracket.

PART NUMBER: **BP572240P**

*Shown in polished aluminum finish



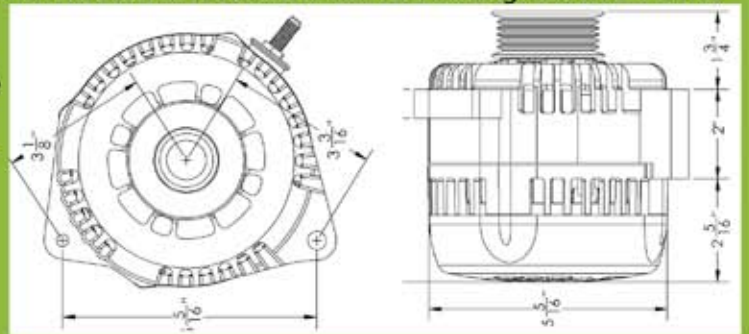
S SERIES ALTERNATOR TO REPLACE 1988-1995 GM TRUCK LEFT MOUNT CS130

The left mount CS130 replacement units feature S series internals in a handsome billet housing that bolts directly in place of OEM or aftermarket brackets designed to hold this bolt pattern of CS130 alternator. These alternators are more durable in high RPM racing applications, and also cool much better than standard CS130 based units. A self exciting "one wire" internal voltage regulator, clean aluminum rear cover and side output stud complete the clean look of these high performance retrofit alternators.

PART NUMBER:

B81657240C

*Shown in chrome finish

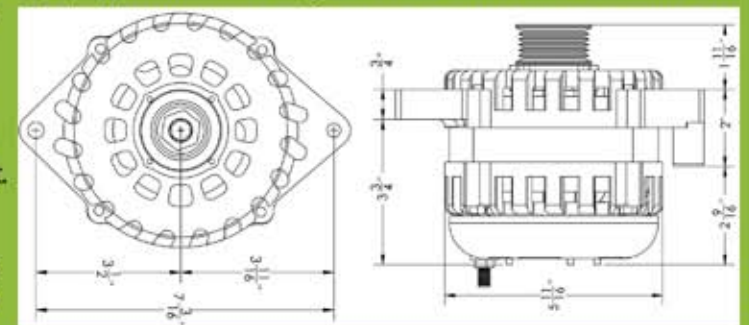


ELITE SERIES REPLACEMENT FOR 6 AND 12 O'CLOCK CS144



Featuring vastly superior large case hairpin internal components, these large case 6 phase alternators will outperform any conventional CS144 alternator. These billet units are a great upgrade for any vehicle originally equipped with the "straight mount" CS144 alternator. The 250 amp version comes with a 2.5 inch diameter pulley that works great for high RPM racing applications, or street cars that want to retain the stock length belt. The 370 amp version is great for power-hungry car audio applications and will require slightly shorter than stock length belt.

*Shown in black anodized finish



PART NUMBER: **B7864250M - 250A machined finish**
B7864370B - 370A black anodized finish

GM ALTERNATORS

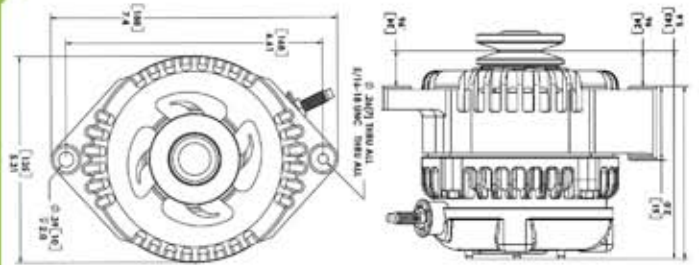
S SERIES REPLACEMENT FOR 1963-1985 GM 10DN, 10SI AND 12SI ALTERNATORS



The S series replacement for old-school GM alternators brings today's alternator technology to popular early GM vehicles. If you have low voltage at idle with your current GM alternator, the 170 amp unit is for you! NOTE: "Single V" drive belts start to slip at anything past about 100 amps worth of alternator load. As with any high output alternator being driven with a single V belt, the belt tension, belt wrap, and belt alignment needs to be perfect in order to prevent belt slip. 6 groove serpentine pulleys in various sizes are available separately for customers using this unit with a serpentine belt kit.

**PART NUMBER:
7127170P**

*Shown in polished finish



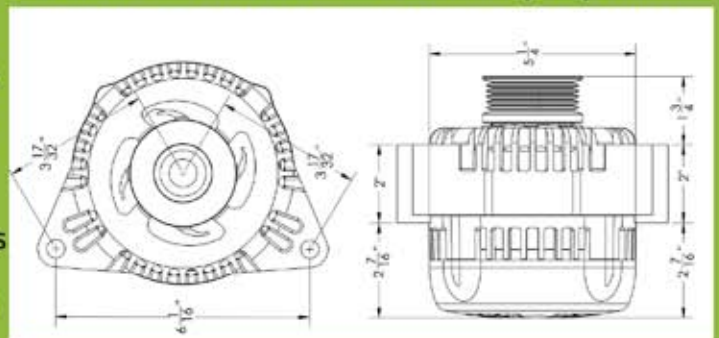
2005 - 2013 CORVETTE (EXCEPT ZR1)



The billet housing C6 Corvette units are a direct bolt in for '05-'13 Base model and Z06 Corvettes and produce much more low RPM output than the stock 145 amp Valeo alternator design.. These units feature a stock diameter billet aluminum pulley and side exit output stud for increased clearance.

As an option, these units can be ordered with a self exciting "one wire" internal voltage regulator for custom engine-swap applications on these year models..

*Shown in black anodized finish



PART NUMBER: B13969170B - 170A black finish / B13969170M - 170A machined finish
B13969170P - 170A polished finish / B13969170C - 170A chrome finish

NOTE: This alternator will also fit 1997-2004 Corvette brackets, but will require a secondary alternator plug to be installed in order for the alternator to function.

2014 - 2016 CORVETTE (EXCEPT ZR1) [COMING SOON]

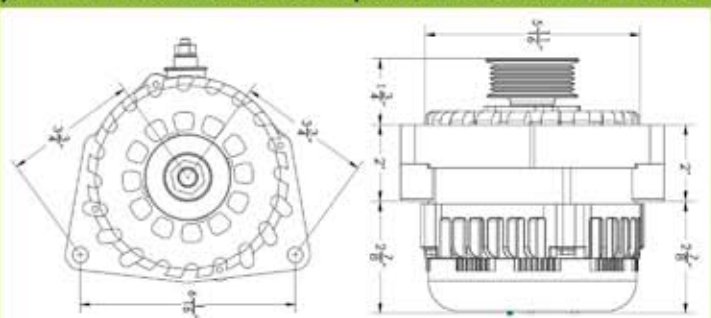


This Elite series 250 amp replacement for standard 2014-2016 Corvettes features vastly improved cooling and low RPM output as compared to the stock small case alternator. This unit features larger diodes and bigger heat sinks in an attractive billet aluminum housing for great durability, and will allow the vehicle to power more aftermarket electric accessories than the OEM small case alternator.

NOTE: This alternator will not fit ZR1 models

*Shown in natural finish

PART NUMBER: B11794250 - 250A natural finish
B11794250 - 250A black finish



FORD ALTERNATORS

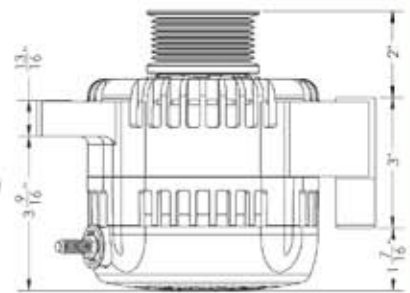
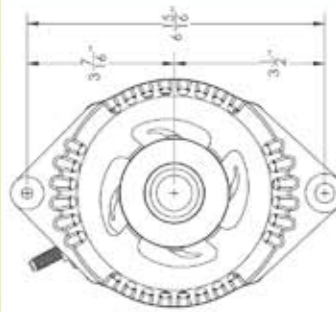
2003-2004 MUSTANG COBRA

'03 - '04 Cobras have been plagued with alternator problems since they first were released. Our 6 phase racing alternator fixes the low voltage and durability problems associated with the stock 110 amp small case alternator that comes on these vehicles. Available in 170A or 240A configurations, these units are equipped w/ an OEM diameter 2.6" 8 groove pulley.

NOTE: Aftermarket alternator pulleys will not fit this alternator.

PART NUMBER:

B8304170B - 170A black finish
B8304240B - 240A black finish



*Shown in black anodized finish

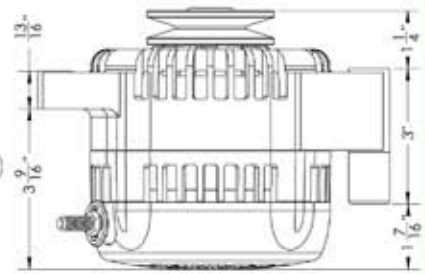
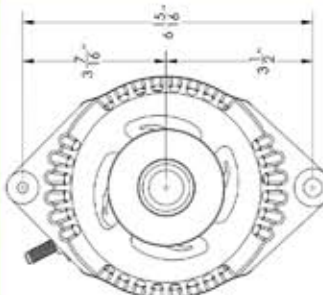
MOST 1965 THROUGH 1985 FORD VEHICLES

The early model Ford 6 phase billet racing alternator offers a massive improvement in output at idle and durability over any other early Ford alternator on the market. This unit can easily be installed on most early Ford models except Ford FE engines. These units crank out 120 amps at idle, perfect for solving low voltage at idle problems, and are a snap to install on any wiring harness with a simple one wire hookup.

*Shown in chrome finish

PART NUMBER:

B7058170C - 170A chrome finish



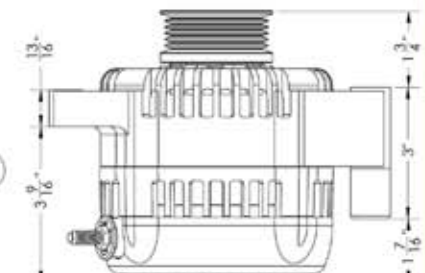
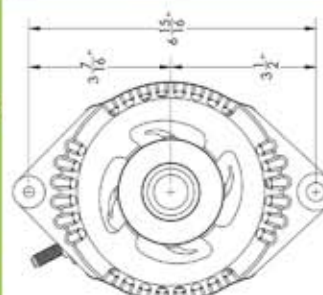
1985-1995 FORD MUSTANG V8

The late model Ford 6 phase racing units are great for full-effort Ford powered street cars using a serpentine drive setup. These alternators can tolerate massive RPM, and come equipped with a 2.6" drive pulley. The 170 amp version works best for Ford engines equipped with an under drive crankshaft pulley. The 240A version is great for applications with large audio systems and stock crank pulleys.

PART NUMBER:

B7771170P
B7771240P

*Shown in polished finish



MARINE ALTERNATORS

MechMan marine alternators are certified to meet or exceed SAE J1171, ISO 8846, and USCG Title 33 standards for ignition protection. Marine units are hard black anodized, then grey enamel coated to provide the best possible corrosion resistance.

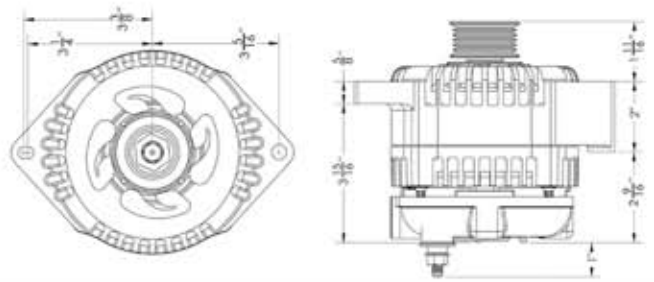
11SI REPLACEMENT



This alternator features 6-phase hairpin stator technology in a custom machined housing that bolts directly in place of the antiquated 11SI alternator design. Don't be fooled by cheap "re-winds" advertising using 150-200 amps in the original 11SI housing! Our 11SI upgrade has (12) press fit diodes instead of the (6) small diodes used in a standard 11SI. This alternator also has twin solid copper rectifier plates with 200%+ more surface area to dissipate heat, as compared to the 11SI aluminum rectifier design.

A Hairpin stator allows this unit to crank out MUCH more low RPM output- with over 140A at engine idle RPM! This alternator includes a simple single wire plug that can be connected to the ignition switched 12V+ wire on the original alternator plug.

PART NUMBER: **M20827170**



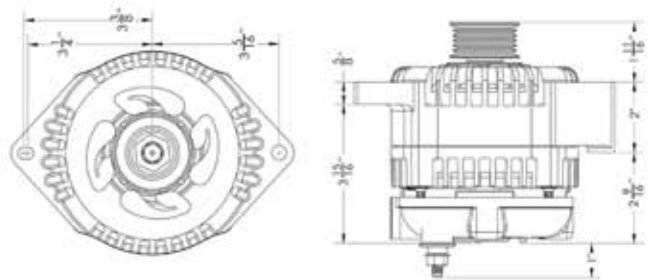
10DN / 10SI / 12SI REPLACEMENT



6-phase hairpin stator technology allows this alternator to make much better low RPM output (120+ amps at idle) than is possible in the popular 10DN, 10SI, and 12SI alternator housings. Be wary of other alternator companies advertising 150-200 amps in the original style housing. This unit features (12) press fit diodes instead of the (6) small diodes used in the old-school original marine alternators. Twin solid copper rectifier plates with 200%+ more surface area to dissipate heat ensure long service life in abusive audio installations.

This alternator includes a simple single wire plug that can be connected to the ignition switched 12V+ wire on the original alternator plug for easy installation.

PART NUMBER: **M7127170**

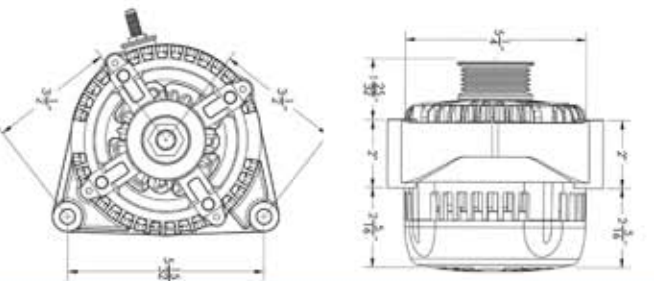


GM LS TRUCK ENGINE BOLT PATTERN REPLACEMENT



This 170 amp high output marine alternator fits many late model GM LS / Gen III / Gen IV and Gen V marine engines that use the standard GM truck bolt pattern to mount the alternator. Instead of the original 3 phase design, these alternators feature 6 phase hairpin stator internals housed in a custom housing that bolts directly in place of the original 3 phase alternator. A simple one wire pigtail is included for easy installation on boats that have a different style plug.

PART NUMBER:
M8237170



IMPORT ALTERNATORS

1988-1995 HONDA CIVIC 1.5L/1.6L



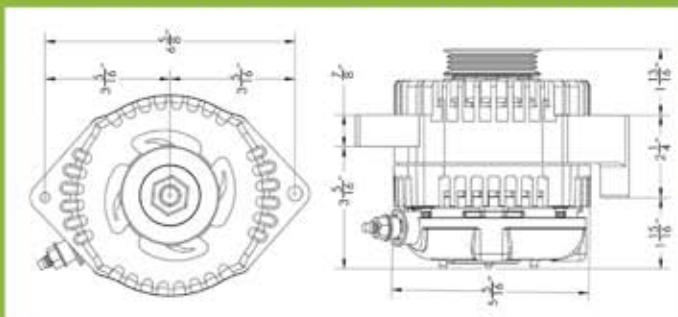
The S series alternator for 1988-1995 Honda Civic packages superior 6-phase internals in a custom housing that bolts directly in place of the OEM 3 phase Honda alternator design. The 170 amp version works great for street/race applications that need more amperage but still see high RPM engine speeds, while the 240 amp version is designed for power hungry air-ride and car audio installations.

NOTE: The 240 amp model will require a shorter than stock length belt to be installed upon installation.

*Shown in machined finish

PART NUMBER:

14989240 - 240A / 14989170 - 170A fits 88-91
13509240 - 240A / 13509170 - 170A fits 92-95



2006-2011 HONDA CIVIC 1.8L

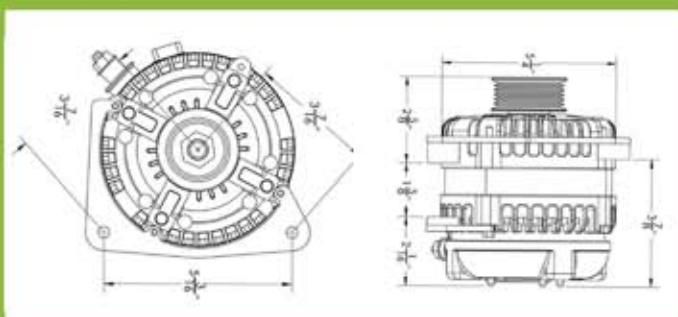


The MechMan 6 phase alternator upgrade for 2006-2011 1.8L Honda Civic is a direct bolt-in replacement for the antiquated OEM design alternator. Featuring twin rectifiers, 12 huge diodes, and hairpin stator technology, this alternator offers a great upgrade in alternator amperage output, in an easy to install package.

NOTE: The 240 amp version will require a shorter than stock length belt to be installed upon installation.

*Shown in natural finish

PART NUMBER: 11176240 - 240A



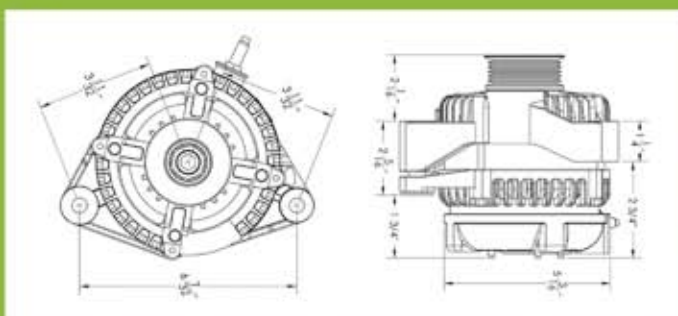
1993-1998 TOYOTA SUPRA



This 6 phase MechMan racing alternator directly replaces the original 3 phase Toyota alternator on most 1JZ and 2JZ engines. Twin rectifiers, premium bearings, and a high pole-count rotor make this alternator more durable at high RPM than the original alternator, while also making significantly more amperage.

NOTE: Please be sure to consult with a sales rep. to purchase the corrected diameter alternator pulley for your RPM range if the engine has been modified.

PART NUMBER:
13546170 - 170A natural finish



IMPORT ALTERNATORS

1999-2007 VOLKSWAGEN – VARIOUS MODELS

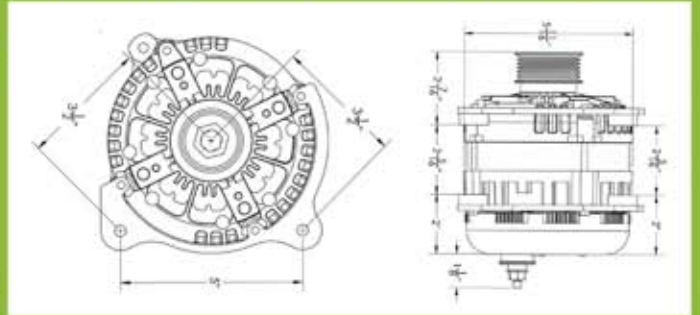


The MechMan Elite series alternators for VW applications offer updated 6 phase technology in a package that bolts directly in place of the OEM 3 phase alternator. These alternators crank out massive output at idle, and use the stock length belt. Vehicles that came originally equipped with a 6 rib belt can achieve 370 amps, while we limit the 5 rib belt applications to 250 amps to prevent excessive belt slip. All MechMan VW high output alternators are suitable for daily use.

*Shown in machined finish

PART NUMBER:

13852370 – Various VW cars w/ 6 rib belt – 370A
11460250 – Various VW cars w/ 5 rib belt – 250A



CABLE ACCESSORIES

4 GAUGE ALTERNATOR CHARGE CABLE WITH ENDS



PART #: 4GA6R

4 GAUGE ALTERNATOR CHARGE CABLE WITH ENDS. ONE END COMES PRE CRIMPED ONTO THE CABLE, WHILE THE OTHER END IS LEFT UNCRIMPED SO THE USER CAN CUT THE CABLE TO LENGTH, AND TERMINATE THE OTHER END. CABLE CONSTRUCTION IS 100% PURE COPPER OFC WITH PREMIUM HYPER-FLEX JACKET FOR GREAT LOOKS, GREAT CONDUCTIVITY, AND UN-MATCHED FLEXIBILITY. PERFECT FOR ALTERNATORS UP TO 200 AMPS.

ANL FUSES



MECHMAN ANL FUSES ARE OF THE HIGHEST QUALITY, AND FEATURE CLEARLY LABELED AMPERAGE RATINGS, AND AN EASY-CHECK WINDOW TO SEE IF THE FUSE IS BLOWN.

AVAILABLE PART NUMBERS:

150A PART# ANL150 | 200A PART# ANL250
250A PART# ANL250 | 300A PART# ANL300

SAE BATTERY POST TERMINALS



PART #: XD6006

THE HEAVY DUTY BATTERY POST CLAMP TERMINALS GIVE THE INSTALLER FLEXIBILITY ON CABLE CONNECTIONS AT THE BATTERY. THESE HANDY TERMINALS HAVE (2) SET SCREW TYPE 8 GAUGE INPUTS, AS WELL AS ONE 8MM BOLT TO ACCEPT LARGER CABLE(S) WITH RING TERMINAL. SOLD IN PAIRS WITH (1) POSITIVE TERMINAL, AND (1) NEGATIVE TERMINAL.



ANL FUSE HOLDER

PART #: ANL2

MECHMAN ANL FUSE HOLDERS FEATURE SET-SCREW INPUT AND OUTPUT TERMINALS TO MAKE INSTALLATION A SNAP. THEY ALSO FEATURE FROSTED GREY ABS PROTECTIVE COVERS THAT ARE MUCH MORE RESISTANT TO CRACKING THAN STANDARD ACRYLIC ANL FUSE HOLDERS.

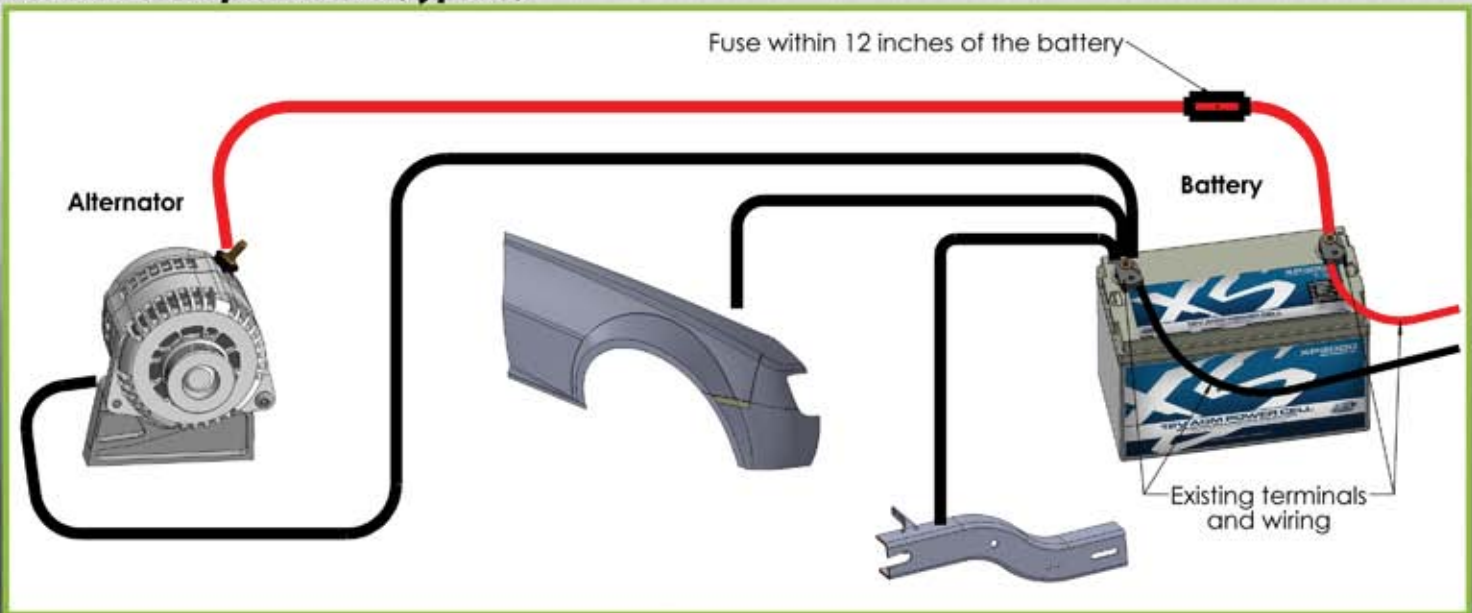
GROUNDING IS CRITICAL!

Frame/body connections: Clean all metal surface of any paint or rust with a wire brush or die grinder. Use a conductive corrosion inhibitor available at any electrical parts supply house.

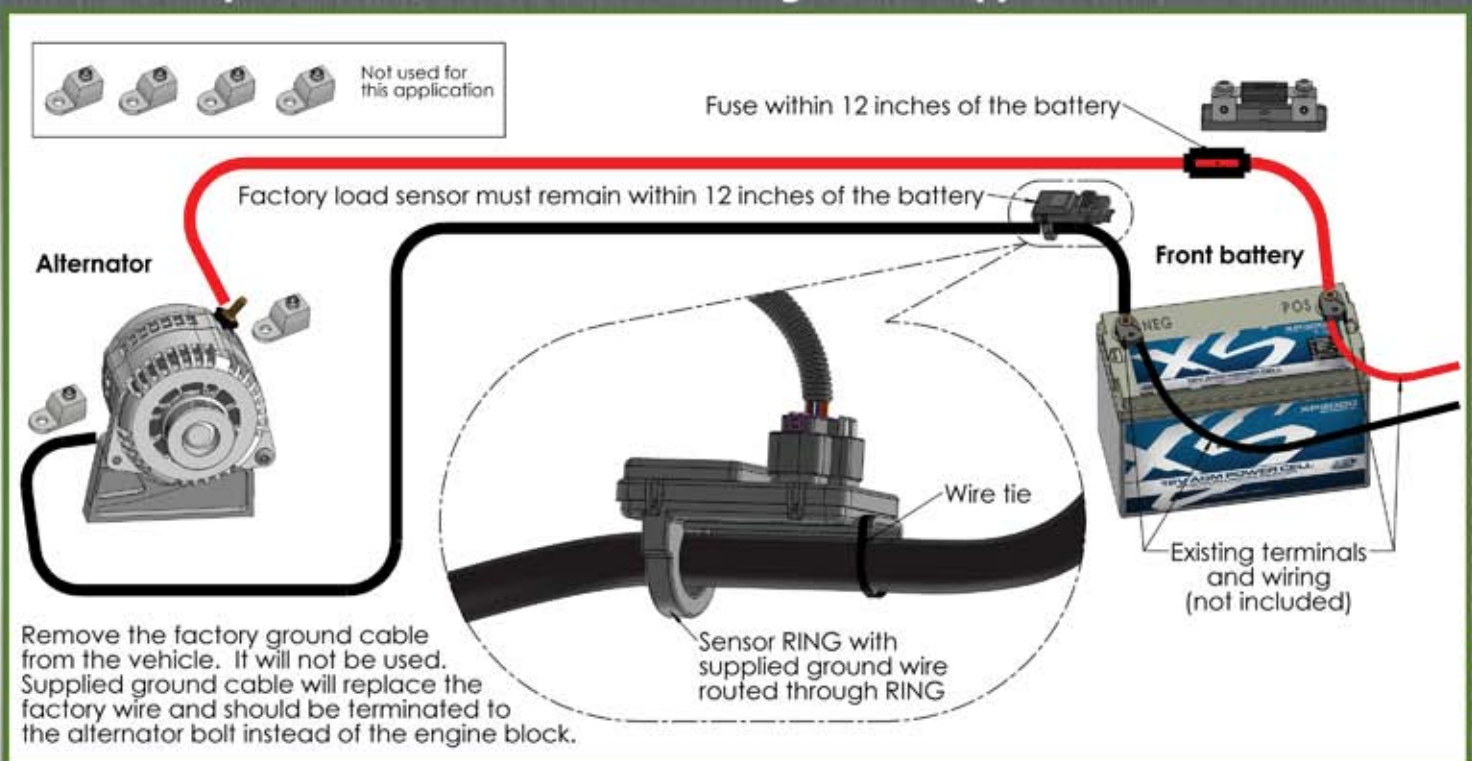
Uni-body frame warning (grounding): Many newer vehicles do not have full frames. Because of seams and adhesive attached body components, additional steps may be required. Choose a location on the sub-frame with a double metal wall. If current issues are observed, move ground connections to different frame components.

GM trucks - 2005 through current applications: To prevent interference with the factory battery monitoring system, ONLY add a ground cable from the battery to the alternator. No body or frame grounds should be added. (See option TWO below)

Installation option ONE (typical)



Installation option TWO (GM Truck - 2005 through current applications)



CABLE KITS

250 AMP CCA ALTERNATOR CABLE INSTALLATION KIT



- ❖ 10 FEET OF BLACK TRUE ZERO GAUGE ULTRA FLEXIBLE GROUND CABLE, 4,700+ STRAND CCA CONSTRUCTION
- ❖ 7 FEET OF RED TRUE ZERO GAUGE ULTRA FLEXIBLE POSITIVE CABLE, 4,700+ STRAND CCA CONSTRUCTION
- ❖ ANL FUSE HOLDER
- ❖ 250 AMP ANL FUSE
- ❖ (8) HEAVY DUTY SET-SCREW TYPE "NO CRIMP" CABLE ENDS WITH 5/16" DIAMETER HOLE
- ❖ WATERPROOF HEAT SHRINK SEALING TUBES & WIRE TIES

400 AMP ULTRA FLEXIBLE PURE COPPER ALTERNATOR CABLE INSTALLATION KIT



- ❖ 10 FEET OF BLACK OFC ZERO GAUGE ULTRA FLEXIBLE GROUND CABLE
- ❖ 7 FEET OF RED OFC ZERO GAUGE ULTRA FLEXIBLE POSITIVE CABLE
- ❖ CABLE IS 5285 STRAND **PURE COPPER** CONSTRUCTION WITH HYPERFLEX FROSTED JACKET
- ❖ ANL FUSE HOLDER
- ❖ 400 AMP ANL FUSE
- ❖ (8) HEAVY DUTY SET-SCREW TYPE "NO CRIMP" CABLE ENDS WITH 5/16" DIAMETER HOLE
- ❖ (8) 2" HEAT SHRINK SEALING TUBES, (12) ZIP TIES

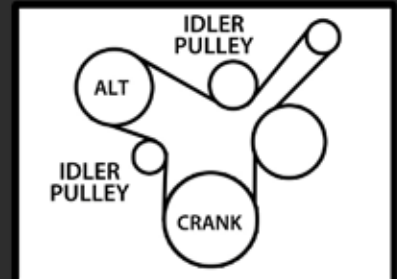
2 GAUGE ULTRA FLEXIBLE PURE COPPER BATTERY RELOCATION KIT



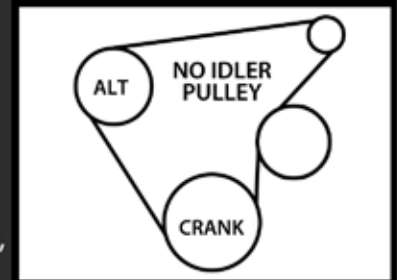
- ❖ 100% PURE COPPER 2 GAUGE BATTERY RELOCATION KIT
- ❖ 20 FEET OF ULTRA-FLEXIBLE FINE STRAND BATTERY CABLE
- ❖ 8 FEET OF BLACK GROUND CABLE
- ❖ PURE COPPER CABLE ENDS
- ❖ INSULATED CABLE CLAMPS, SELF TAPING SCREWS AND SEALING HEAT SHRINK TUBES ARE INCLUDED
- ❖ PERFECT FOR RELOCATING OR ADDING A SECOND BATTERY TO ANY VEHICLE.

TECHNICAL INFORMATION

- ★ Belt slip can be a problem when using a high output alternator, as a higher output alternator requires more effort to spin than a lower amperage alternator when the alternator is under a load.
- ★ Pulley to belt alignment is critical! If for any reason the alternator pulley is not aligned perfectly with the other pulleys on the engine, the belt will slip badly. A straight edge can be used on the face of the pulleys after the alternator is installed to guarantee good belt alignment
- ★ Belt tension is critical! V belt applications should have no more than 3/8 inch belt deflection after the alternator has been installed.
- ★ Serpentine belt applications should be using a belt with a length that places the spring belt tensioner in the CENTER of it's travel. If the spring tensioner is too far outside of it's operating range in EITHER direction, the belt will slip badly.
- ★ Vehicles with poor belt "wrap" (see photo) will be more prone to belt slip than vehicles that have better belt "wrap" around the alternator pulley. If necessary, it is possible for the installer to fabricate brackets to mount an additional free spinning idler pulley to ride on the back of belt and "force" the belt to "wrap" around the alternator pulley further, increasing belt contact area on the alternator pulley to reduce the amount of belt slip. Take a look at your vehicle's belt drive system to determine how much the belt contacts the alternator pulley before ordering a high output alternator.
- ★ Bigger is not always better! When purchasing a high output alternator, take into consideration: 1) the width of the belt the vehicle is using, 2) the diameter of the crankshaft pulley, and 3) the operating RPM of the engine. Lower amperage alternators will not slip the belt as badly as a higher amperage unit, and often times can utilize a larger diameter alternator pulley than it's higher amperage version. (higher output units have to be spun faster in order to begin charging) Larger pulleys allow for better belt grip, but will often times not allow the alternator to charge properly at engine idle RPM on higher amperage units. Smaller pulleys can result in 4:1 or higher pulley ratios, that can easily over spin an alternator at higher engine RPM's. As a general rule, 170 amp S series and 250 amp Elite series units are the best choice for high RPM racing applications.
- ★ Single V belt and 4 rib serpentine belts will start to slip at about 150 amps worth of load. For minimal belt slip, 240 – 370 amp alternators should not be driven by anything narrower than a 6 rib serpentine or dual-V belt drive setup. Ask a sales associate what pulley ratio is ideal for your application.
- ★ Calculate your pulley ratio! Divide the diameter of your crankshaft pulley by the diameter of the alternator pulley. For example: A 6 inch crank pulley with a 2 inch alternator pulley will yield a 3:1 pulley ratio. (6 divided by 2 = 3) This means that the alternator will be spinning 3 times faster than the engine RPM. If your vehicle has a 3:1 pulley ratio, that means the alternator will be spinning 18,000 RPM at 6,000 RPM engine speed! G series alternators are recommended to not exceed 18,000 RPM shaft speed, while S series and Elite series alternators are safe to 20,000 RPM shaft speed.
- ★ Cabling is critical! It is ABSOLUTELY IMPERITIVE that a properly sized positive AND ground cable be run directly from the alternator to the terminals of the battery. Do not ground the alternator to the body, frame, engine, or anywhere else! (All MechMan alternators come with detailed instructions) In most applications, the OEM charge cable and ground cable are too small for a higher amperage alternator and can easily damage the alternator, or in extreme cases cause a fire.
- ★ Cable end fit is critical! Improperly crimped, or oversized ring terminals on your charge and ground cables can easily damage the alternator. The size of the hole in the ring terminals you use MUST fit the diameter of the stud or bolt that they go on PERFECTLY. If the hole in the cable end is oversized, it will reduce the amount of surface area of contact at that connection point. This high resistance connection will burn off a lot of amperage in the form of heat, and in extreme cases can even melt the cable end or stud.

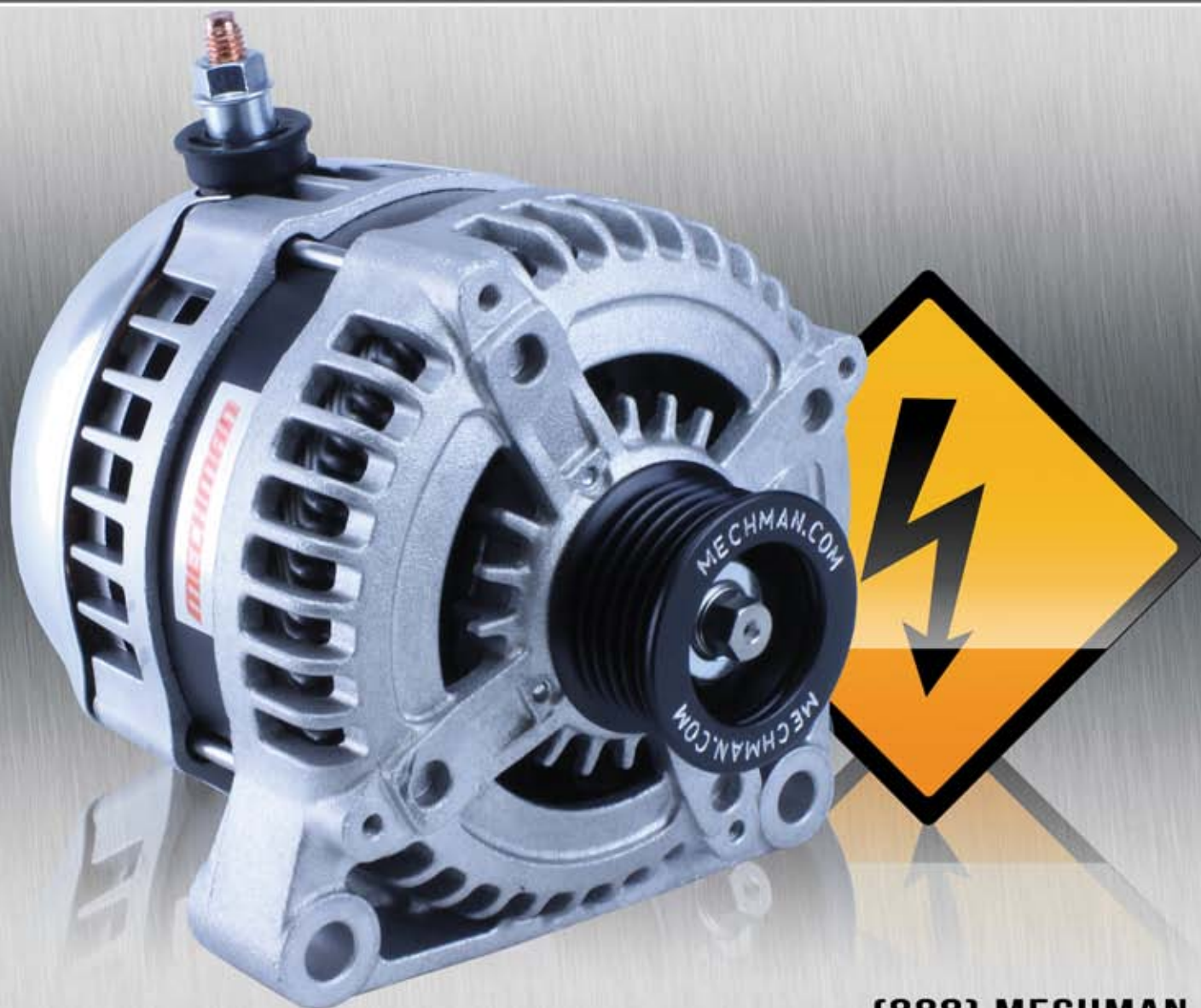


GOOD BELT WRAP



POOR BELT WRAP

MECHMAN ALTERNATORS
2849 JOHN DEERE DR.
SUITE 201
KNOXVILLE, TN 37917



WWW.MECHMAN.COM

(888) MECHMAN
(865) 522-6166

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