



Tech Support: (760) 244-2049

Alternator Do's and Don'ts

Do's

- 1 **Do** use heavy duty copper charge cable connecting the alternator to the battery. Mechman recommends 2 gauge minimum for the 150 amp alternators, 1/0 gauge for the 200 amp and 250 amp alternators.
- 2 **Do** use the proper size ring terminals for the gauge wire that is recommended and the studs of the alternators. For example, if the alternator stud is 1/4" then a 1/4" ring terminal is used or if the alternator stud is 5/16" then a 5/16" ring terminal is used. The objective is to obtain the largest amount of contact to produce the least amount of resistance to current flow. Various ring size connectors for the above cable sizes can be sourced through your local car audio and welding shops.
- 3 It is best to install a new belt at the time of installing the new alternator. New belts have better gripping ability and the high output alternator needs better gripping to reduce or prevent slippage. Mechman recommends "Gates Green Stripe" belts when available. With "V" belt applications, it is likely that the belt will need to be tensioned tighter than normal to prevent slippage. With high millage serpentine belt applications, it maybe necessary to replace the spring tensioner if slippage occurs.
- 4 **Do** re-tighten all bolts after installation. Many problems may be eliminated if the bolts are re-tightened after the installation as to insure the proper belt tension and alternator seating.
- 5 **Do** charge all the batteries prior to starting the vehicle after the alternator installation is complete. If a vehicle has been setting for a long period of time, say two to three weeks, the batteries may have discharged somewhat. This condition could cause the alternator to overheat at startup. A discharged 800 cold cranking amp battery requires approximately 140 amps of charge for several munities until it reaches normal voltage, which means that the alternator would more than likely run at 100% duty cycle until the battery is brought to full charge, which could result in the alternator failing.

Don'ts

- 1 **DO NOT OPERATE THE ALTERNATOR UNDER LOADS THAT COULD EXCEED THE OUTPUT AT ANY GIVEN RPM. THIS IS EXPECIALLY TURE AT ILDE RPM'S, DOING SO COULD CAUSE THE ALTERNATOR TO OVERHEAT, BURN AND START A FIRE. THIS SITUATION WILL DEFINITELY VOID THE WARRANTY.**
- 2 **Do not** attempt to install the alternator without first disconnecting the cables from the battery. Disconnect the ground cable first and then the positive cable. When the installation is complete, connect the positive cable first and then connect the ground cable. Shorting out the battery cables can cause fires and explosions and will frequently destroy the alternator, wiring, battery and other related components. Any alternator that has arcing marks on the case will **NOT BE COVERED UNDER THE WARRANTY.**
- 3 If you should totally discharge the battery(s), from failing to shut off an accessory, do not attempt to use all the power loads in the vehicle after starting. It maybe necessary to disconnect other batteries in the vehicle if this happens(See DO"S #5 above).
- 4 **Do not** use cables that are too small for the high current accessories such as stereo amplifiers and AC inverters. The smaller cabling can inhibit the operation of the accessories and may cause damage to the alternator as the result of using the smaller cables.
- 5 **Do not** use ring terminals that have the hole to large for the terminal studs on the alternator. This is mentioned in both sections for a reason. We have seen many alternators that have been damaged or destroyed by inadequate connections. 150 amps is a lot of current and requires good copper connectors with plenty of contact surface area. Mechman has seen 4 gauge cable used. What results is a completely fused cable because it was insufficient causing poor conductivity.