

## **ALTERNATOR INSTALLATION INSTRUCTIONS**

Congratulations...you have just purchased one of the most innovative, quality engineered products on the market today. Please read these instructions carefully; there are a few things you need to prepare depending on your application. We want you to get the most from your new 89/90 series alternator.

### **STEP (1) Removing the old generator**

- 1)Remove both cables from the battery (negative first)
- 2)Disconnect and remove all the wires from the generator
- 3)Loosen generator belt; remove generator and mounting bracket from the engine. You are now ready to mount your new alternator to the engine.

### **STEP (2) Mounting the alternator to the engine**

**UB Series mounting bracket kits-- are** a universal alternator mounting bracket kit that can be assembled in a number of different ways, in order to accommodate most any non Ford / Chevy engine application. The important thing to remember when using a UB Bracket kit is that the drive pulley on the new alternator must be in line with the existing drive pulleys in order to prevent damage to the alternator and drive belt.

**DRIVE PULLEYS --** the pulley you requested when you placed your order... should already be installed on your alternator when it arrives. The WP Series pulleys do accept belt widths of (1/2) through (3/4) inches. The WP Series pulleys are designed so the narrower belts run down deep in the pulley groove. (This is why the center of the pulley is flat instead of "v" groove like a conventional pulley.) The modern drive belts with the "notched teeth" on the underside will run quieter in these applications.

**BELT TENSION –** An alternator is much more efficient than the generator it replaced, but does not require any additional belt tension. After you have the alternator mounted and have checked to be sure all of your pulleys line up...you are ready to tighten the alternator drive belt. About (1/2) of movement in the center of the belt is tight enough. If you tighten the belt to tight you will wear out the front bearing in the alternator before their time.

**WIRING YOUR ALTERNATOR --** Now you are ready to wire your alternator into the charging system. Begin by removing the (BATT) wire, from the old voltage regulator (or cutout) and connect it to the (10/32) stud on the back of the alternator. This will be the 10 gauge, wire that connects through the amp gauge in the dash.

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**Next...** Remove and tape (using electrical tape) the remaining wires (leftover from the old voltage regulator) back into the original wiring harness. (That way everything will be there in case the next generation wants to do a 100-point restoration) Finally... remove the old voltage regulator.

**POSITIVE GROUND** -- If your vehicle was originally positive ground (battery (+) cable connected to ground) you need to reverse the cables on the battery (-) battery cable will now go to ground. Positive cable will become the "hot" cable.

**Next...** reverse the two wires on the back of the amp gauge or in the case of Fords; reverse the loop of wire on the back of the gauge. This will make your amp gauge read correctly. (If you fail to reverse the wires on the amp gauge nothing bad will happen, your gauge will just read backwards...) The only exception is 1939-1940 Fords that use a Buss Bar type Amp Gauge. DO NOT change anything and this style of Amp gauge will work fine.

Now snap the **DA Plug**, into the top of the alternator. The red wire (with the ring terminal) attaches to the same (10/32) stud on the back of the alternator that you attached the (BATT) wire too. The yellow wire is called the "**EXCITER**" Wire and should connect to the (+) terminal of the ignition coil or the (I) terminal on the ignition switch.

**NOTE** -- In some applications it may be easier to connect the yellow wire to the (**S**) **terminal** on the starter solenoid or the **taillight side** of the **brake light switch** (this is the case with Model A Fords). **Any connection that turns off and on with the ignition key will work fine. Use only a 6-volt battery if you are installing a 6 - volt alternator. Do not use an 8 - volt battery.**

**BY THE WAY** -- In case you are wondering... the "exciter" wire is what turns the alternator on when you turn the ignition key. Alternators were not introduced until the early 1960's when most engines used in cars were V8's and had idle speeds of about 1200 rpm. Because most older engines idle between 400-800 rpms, you need to trick the alternator into thinking it is spinning fast enough to begin charging.

**THAT SHRINK-WRAPPED BUMP** -- in the DA Plug harness is what allows your engine to be turned off with the original ignition key. (No we are not cheap and didn't splice the wire there...) Because an alternator produces electrical current at

idle (where as a generator does not) if you were to turn off the key (with the alternator installed, and no DA Plug) the engine would still keep running, because there is still electrical current reaching the coil from the alternator.

**QUESTIONS -- If...** you have questions about your installation or still are not sure which wire goes where... please call and we will be glad to help you. Our phone number is **785 - 632 - 3450** our fax 785 - 632 - 6154 or e-mail <[fifthave@oz-online.net](mailto:fifthave@oz-online.net)>

***Thank You !***