

B & C Specialty Products Inc

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INSTALLATION INSTRUCTIONS for SD20, BC410 and BC425 ALTERNATORS

The following are installation instructions common to all B&C Specialty Products spline drive alternators designed to be mounted on AND20000 compatible (vacuum pump) accessory drive pads. These instructions must be followed to achieve the greatest safety and reliability from the alternator.

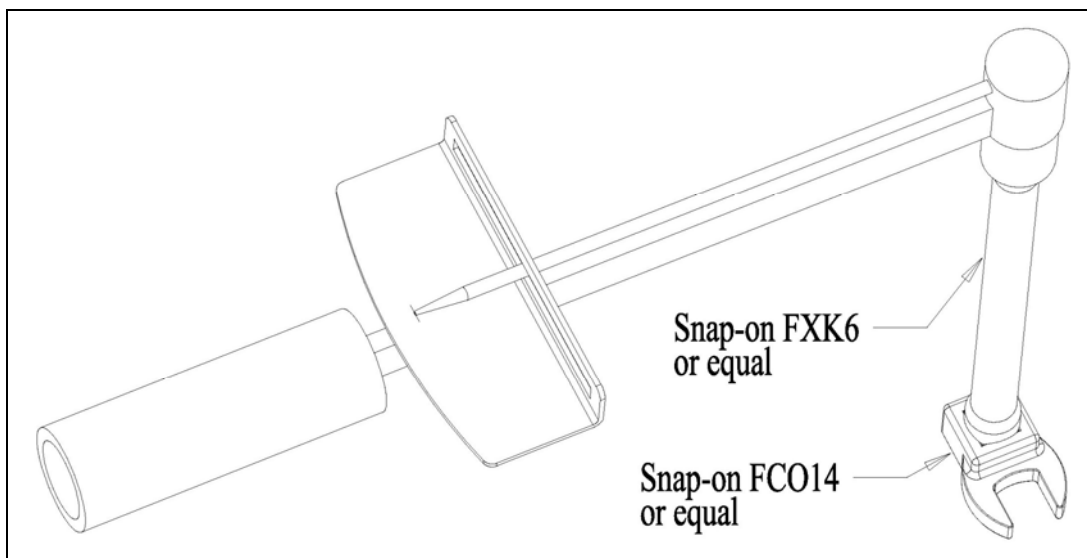
Mounting

The AND20000 accessory drive pad provides a pressure oil port on the pad surface for any accessory using pressure oil such as wet type vacuum pumps. Although these alternators do not use the supplied oil, it is important to use the proper gasket, sealer and fastener torque for installation of an alternator on this pad. Too little torque will allow oil leaks and compromise security of alternator mounting, while too great a torque may overstress the alternator mounting flanges causing deformation and possible oil leaks or cracked mounting flanges.

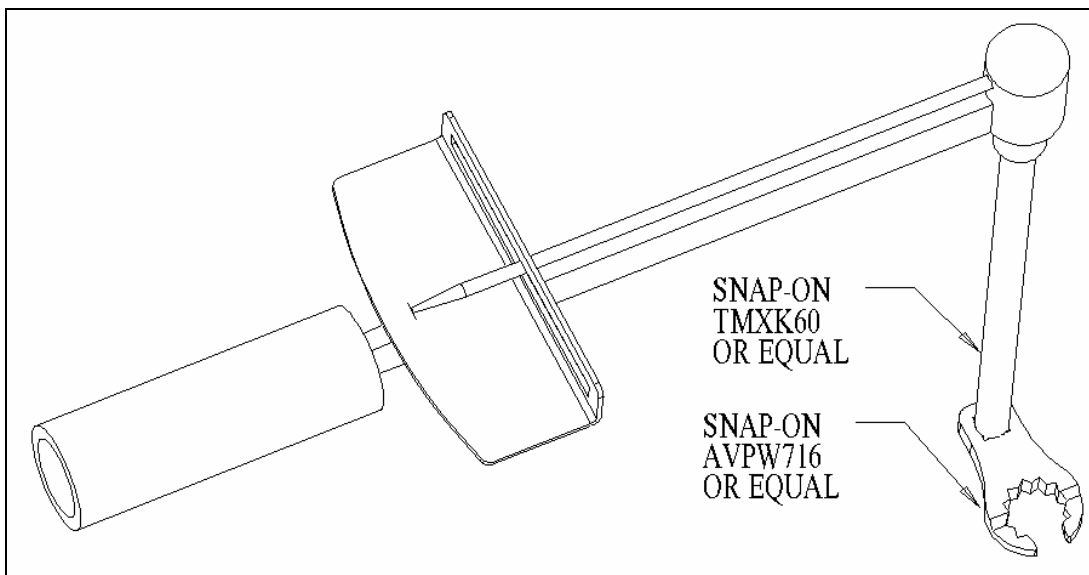
Be sure to use a new, approved gasket for the installation. Use an AS3491-01, MS9134-01 or equivalent. Be sure that the mating surfaces are free of old gasket material and otherwise clean and dry. We recommend a thin coating of Permatex, Hylomar HPF or Loctite 518 gasket sealer on both sides of the gasket. Install the gasket and alternator on the pad studs.

Use aviation grade fasteners. There should be a flat washer, lock washer and full frame (not a thin frame or jamb type) nut on each mounting stud.

One of the mounting nuts in particular may be difficult to access on some installations. We recommend tools as shown in the drawing(s) below for assuring the proper torque on all mounting nuts. Notice that the axis of the "crow's foot" portion of the assembly is at 90° to the beam of the torque wrench. This is done to make sure that the actual torque applied is very close to the value displayed on the torque wrench. The crow's foot may be in either 90° position but must not be aligned with the torque wrench in either the outward or inward direction.



A tool specifically designed for use on aircraft vacuum pumps (or similar devices) may also be used. One such item, introduced by Snap-On in April 2007, is shown in the drawing that follows.



The type of torque wrench is optional as long as accuracy can be verified. Use a crossing torque pattern and torque the mounting nuts to 20 In-Lbs. Again use a crossing torque pattern and torque the nuts to 60 - 70 In-Lbs.

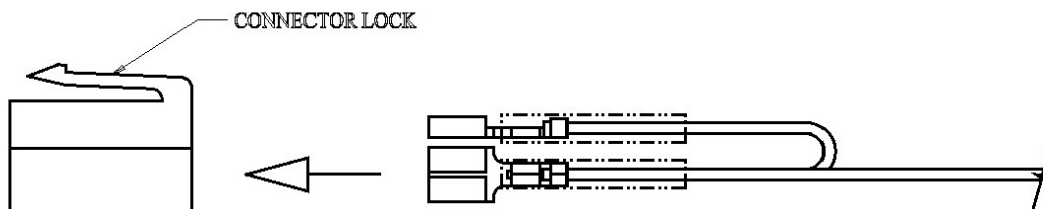
Wiring

Install the Field plug on the harness. Refer to the diagram below for the correct terminal locations. Even though only one field connection is required, it is recommended both terminals be installed in the connector body to help stabilize the connector under high vibration conditions. It is further recommended that the two terminals be jumped together for a redundant field connection. This may be accomplished by crimping a short (2 to 3") jumper along with the field wire from the regulator in one of the terminals. Place a short length of heat shrink tubing over the wires before crimping. Install a second short piece of shrink tube over the free end of the jumper. The other end of the jumper is then crimped in the second terminal. Solder both terminals and then shrink the tubing over the wires and the crimped area of the terminals. Install the terminals in the slots in the connector body. Check to see that the terminals have locked into the connector body. Install the connector on the alternator and be sure the connector locks into the alternator receptacle.



CONNECTED TOGETHER INTERNALLY
TO ONE END OF THE FIELD WINDING

Alternator Rear View



Harness Fabrication

Install the large gage wire from the Battery Master Contactor on the copper post labeled "B". Torque the "B" Lead nut to 50 In-Lbs.