

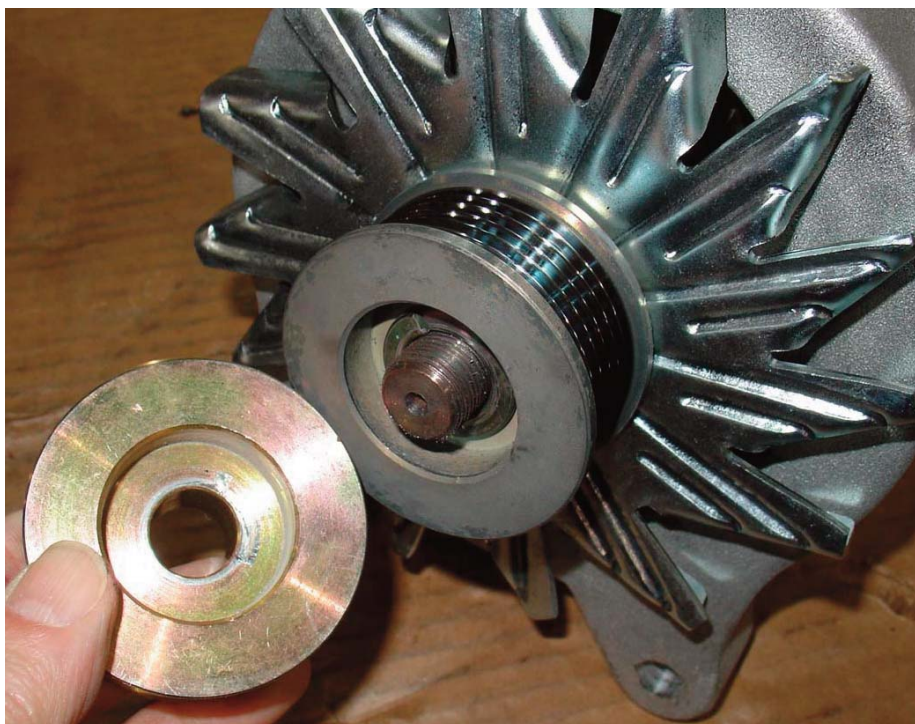


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Loose Drive Belts & Blue Pulleys

Is Your Charging System Not Putting Out As Much As It Used To?
 -Check The Drive Belt, Alternator Pulley, and Belt Tensioner-

In this case, the belt was causing so much heat that the plating was being cooked off of the drive pulley. Look at the difference in color between a regular pulley and the one with the loose belt. Note the blue color in the belt contact area. The heat had begun to transfer to the rotor shaft as it was also turning blue. The PennTex front bearing was able to take the heat only because of the superior quality of the bearing and the quality of the grease in the bearing. When the alternator was tested with a tight belt, even though it had been subjected to all this heat, the output was right where it should be. Check your belts and drive belt tensioner to see if your system output is being reduced by a loose belt. Don't wait too long...



Below are the 4-Step Test voltages. Because the voltages on Tests 3 & 4 are in proper proportion, it looks like a phase of the stator is out. The output is down because the belt is slipping and the system can't produce enough voltage.

Regulator Terminals	Test One	Test Two	Test Three	Test Four
Blue "F"	0	10.7	10.9	10.9
Orange "S"	0	.65	5.6	5.5
Red "A"	12	10.9	11.2	11.25
Brown "I"	0	2.3	10.3	10.3



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How Oil Leaks Can Affect a Charging System

Engine oil, power steering and hydraulic fluid leaks can decrease an alternator output to zero

Note the blue color on the inside of the alternator pulley on the top left. Some kind of fluid is getting on the drive pulley of these alternators causing the serpentine belt to slip. The pulley wants to stand still but friction from the belt makes it turn. Resistance against the belt increases as charging system demand increases. The heat comes from the pulley slipping against the belt. The pulley surface that the belt rides on turns almost black from heat. In some cases, the alternator gets saturated with oily fluid that gets in the brushes and slip rings. This is not good. After a clean-up the alternator on the right went back to charging, but heat and oil had already damaged it too much to make it any part of it useable in the field. Damage like this is classified as an external cause of alternator failure and in most cases is not covered under warranty.



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