

Upgrade for Existing Altronic V Units

Altronic V^{NG} Ignition System

Small Engines, 2-6 Cylinders

Form AV-NG U 01-21

altronic
HOERBIGER Engine Division



Existing Altronic V units can be upgraded to the new Altronic V^{NG} design by ordering the update kit from Altronic. The required kit part number is simply the existing unit part number less the characters after the “-” denoting flange details, with the characters –NG–KT added as a suffix.

For example: The update kit for a 6A34-A unit would be 6A34-NG-KT. For a 4A24-AW unit the update kit would be a 4A24-NG-KT. In the case of an upgrade kit purchased with a core credit for the return of the old board, -R is added to the upgrade kit part number. In this case, the update kit for a 6A34-A unit would be 6A34-NG-R-KT.

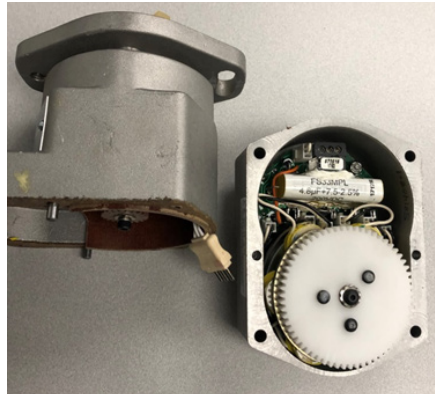
The kit contains the required components—PCB assembly, magnet rotor, gear trigger assembly and hardware to complete the upgrade process. This process requires only standard hand tools typically used for Altronic V service. After upgrading the unit should be tested on a test stand for proper operation before returning it to service.

The upgrade kits are cross referenced to their applicable Altronic V part numbers in the table below:

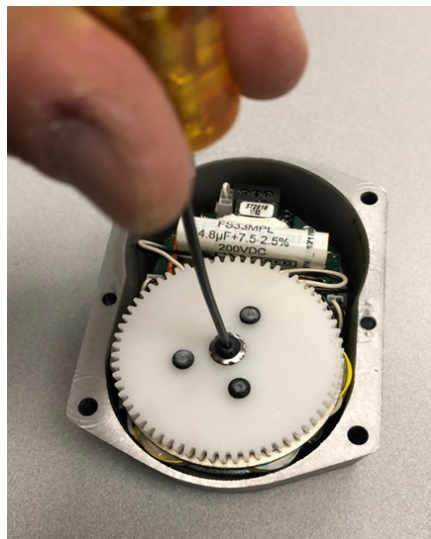
Altronic V	Altronic V ^{NG} Upgrade Kit	Altronic V ^{NG} Kit with Core Credit
2A14	2A14-NG-KT	2A14-NG-R-KT
3A14	3A14-NG-KT	3A14-NG-R-KT
3A64	3A64-NG-KT	3A64-NG-R-KT
4A24	4A24-NG-KT	4A24-NG-R-KT
4A34	4A34-NG-KT	4A34-NG-R-KT
5A24	5A24-NG-KT	5A24-NG-R-KT
6A24	6A24-NG-KT	6A24-NG-R-KT
6A34	6A34-NG-KT	6A34-NG-R-KT



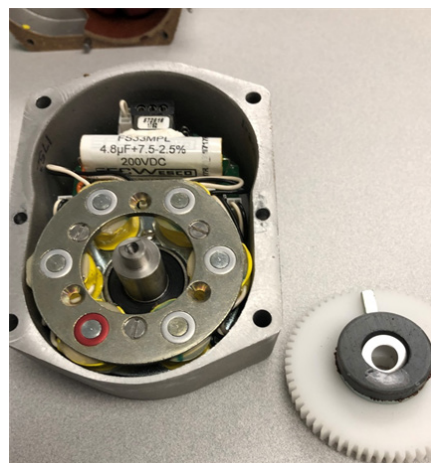
Dis-assembled unit.



Remove hardware holding the driven gear/magnet arm assembly. Pull driven gear/magnet-arm assembly, from the driven shaft.



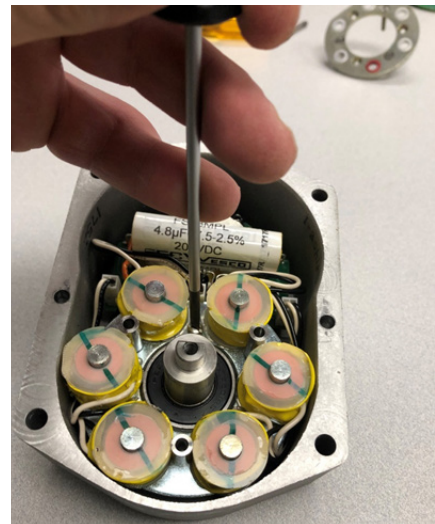
Remove three screws holding the top plate of the pickup coil assembly. Then pull the top plate assembly off.



Top plate removed



Remove three screws and lock washers. Then pull the entire pickup plate assembly off bearing.

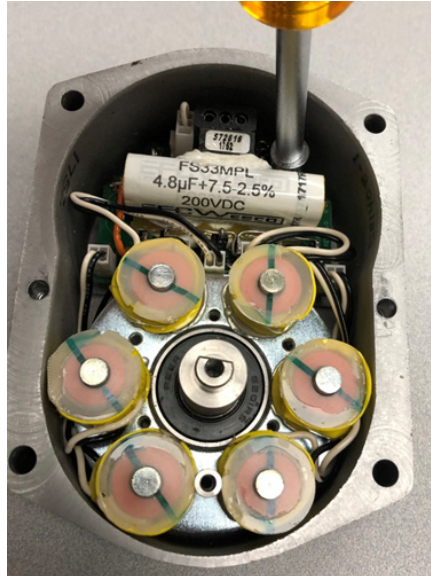


Location of pickup assembly mounting screws.



Use a small screwdriver to pull the circuit board receptacle levers away from the 2-lead housing of the pickup coil connectors; then unplug the pickup connectors from the circuit board

Remove four screws, the zener diode nut and washer, screw, washer and nut. The circuit board and pickup coil assembly can then be removed from the cover. Return the PCB and pickup coil assembly to Altronic for update credit.



Backcover is now empty and ready to install the hole plug and new PCB assembly.



Hole plug screw assembly installed in the location of old Zener.

Use Loctite 571 or equivalent on screw threads for vibration resistance.



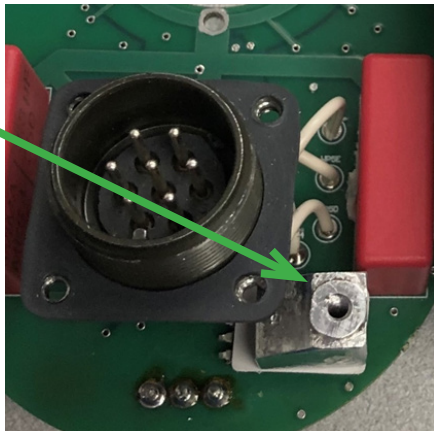
View of new Altronic V^{NG} circuit board assembly, ready for installation.



Fasten circuit board assembly to casting using hardware provided, only three screws will align with the tapped holes in machined back cover.



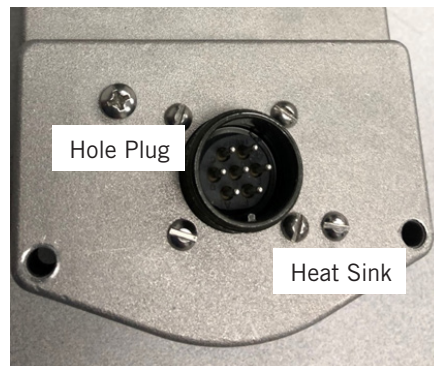
Heat sink assembly.



From outside of unit install connector mounting screws and heatsink mounting screw.



From outside of unit install connector mounting screws and heatsink mounting screw.



Install new magnet trigger gear assembly onto driven shaft. Update of backcover assembly is now complete.



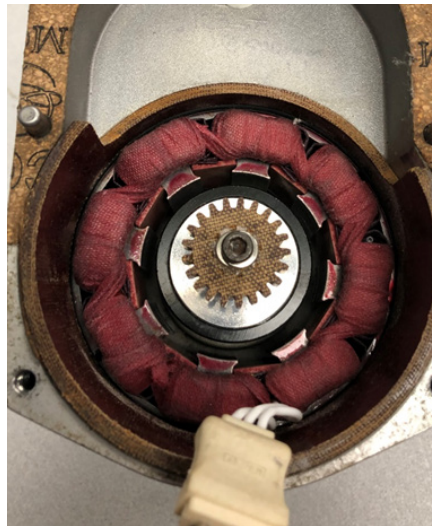
Alternator update is done next. The existing magnet Rotor assembly will be replaced with a new, more powerful, rare earth magnet assembly.

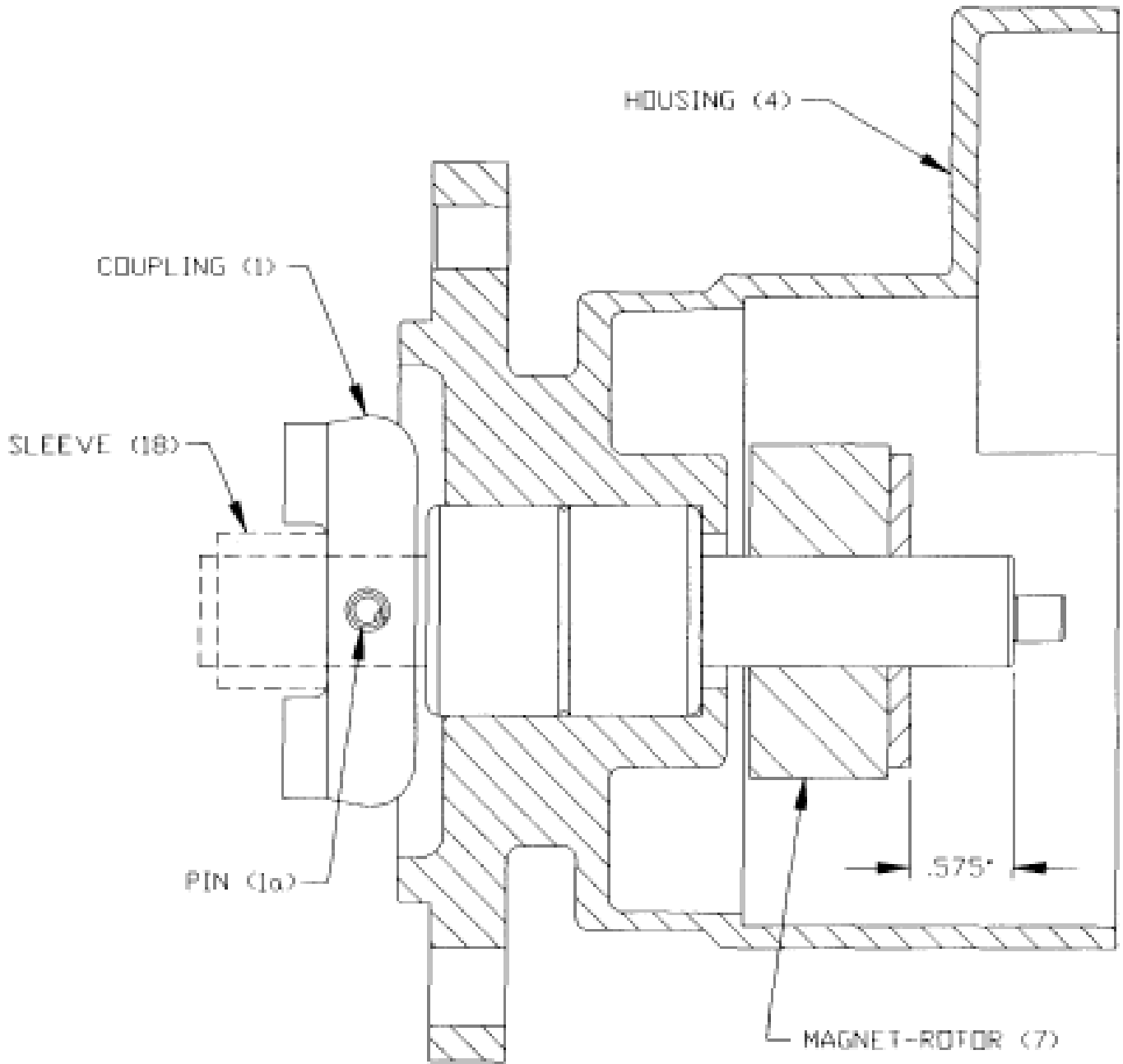
Warning: The new rotor assembly should not be used with older backcover design. Excessive power dissipation will damage older Altronic V circuit board design.

View of old alternator shaft/rotor assembly before replacement of rotor, remove shaft rotor assembly per Altronic V service manual procedure.



Press bearing-shaft into housing (4) until it bottoms against shoulder. Housing should be supported behind the internal shoulder with tool no. 506101-B. Push on the outer race of the bearing using tool 506101-A.





Set the back cover assembly with the timing mark aligned to the middle of the space between the CCW or CW markings on the back cover of the older unit as was previously required for the application.

Set the alternator coupling angle as shown in the chart below. Mate the back cover to the alternator keeping the alignment of the back cover timing mark and alternator coupling as set. Secure the back cover to the alternator keeping the alignment of the back cover timing mark to the alternator with original hardware.



UNIT NO.	COUPLING ANGLE	
	CCW	CW
2A14-A, GV	0°	70°
2A14-AW, GVW	-	70°
2A14-D	-	0°
2A14-GV	-	70°
3A14-A, GV	0°	70°
3A14-D	-	0°
3A64-A, GV	0°	70°
3A64-AM	-	45°
3A64-AW, GVW	-	70°
4A24-A, GV	0°	70°
4A24-AW, GVW	-	70°
4A24-D	-	0°
4A34-A	0°	-
4A34-GVW	-	70°
5A24-GV	0°	-
6A24-D	-	0°
6A24-GV	0°	-
6A34-A, GV	0°	70°
6A34-AM	-	45°
6A34-AW, GVW	-	70°
6A34-GVC	-	70°

