

Instruction Manual



Installation Instructions for: Crank Angle Sensor replacement for EMS P/N 30-6600

**89-94 Nissan 240SX S13 KA24DE
91-94 Nissan Sentra B13 GA16DE
90-94 Nissan Pulsar GTi-R N14 SR20DET
91-93 Nissan NX B13 GA16DE
93-94 Nissan Altima U13 KA24DE
89-95 Nissan Bluebird U13 SR20DET
91-93 Infiniti G20 P10 SR20DE**



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Instruction Part Number: 10-6600-A supplement
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****Cam / Crank Angle Sensor: AEM trigger disc MUST be used**

Discrepancies have been observed in the OEM cam/crank angle trigger discs between model years and/or trim levels; to avoid confusion the Series 2 EMS does not support the OEM Nissan trigger pattern. A replacement trigger disc is now included with every Nissan EMS and must be installed before attempting to start the engine. The following installation was performed on a stock Nissan S13 240SX so your installation may require more or less removal of parts, but the procedure for the CAS disc change should be identical.

Tools/parts required:

- Replacement trigger disc for Nissan GA/KA/SR cam angle sensor (AEM P/N 35-8760, supplied with 30-6600, 30-6601, 30-6602, 30-6610, 30-6611, 30-6620, and 30-6623 EMS)
- 8mm and 10mm socket with ratchet and extension
- 10mm combination wrench
- Medium pry bar
- ¼" flat screwdriver
- No. 2 Phillips screwdriver
- No. 1 Phillips screwdriver
- Red threadlocker

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Instructions with photos on the following pages:

Remove the MAF sensor assembly as shown in figure 1. The arrow points to a mount that may or may not be present on your vehicle which was removed using a 10mm combination wrench and 10mm socket. The hose clamp is removed with the ¼" flat screwdriver.



Figure 1: MAF assembly removal

Figure 2 shows the location of the CAS sensor (inside the distributor assembly).



Figure 2: Location of CAS sensor (underneath distributor cap)

Remove the plastic cover as shown in figure 3.



Figure 3: Plastic wire cover removed

Remove the back part of the outer plastic cover on the distributor and remove the distributor cap as shown in figure 4.

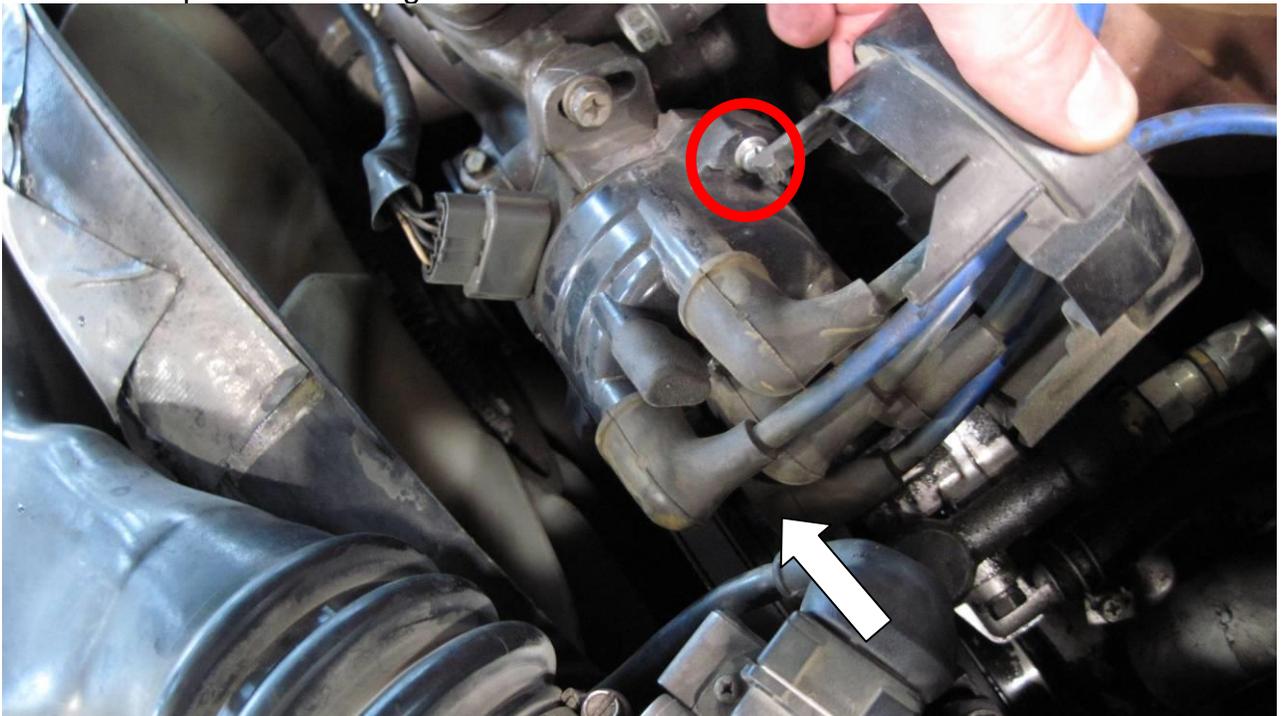


Figure 4: Plastic wire cover removed and distributor cap removed

Remove the distributor rotor with carefully with the pry bar as shown in figure 5, taking note of how the rotor was oriented on the shaft. (The photo shows a different distributor that has the same type of rotor installation)

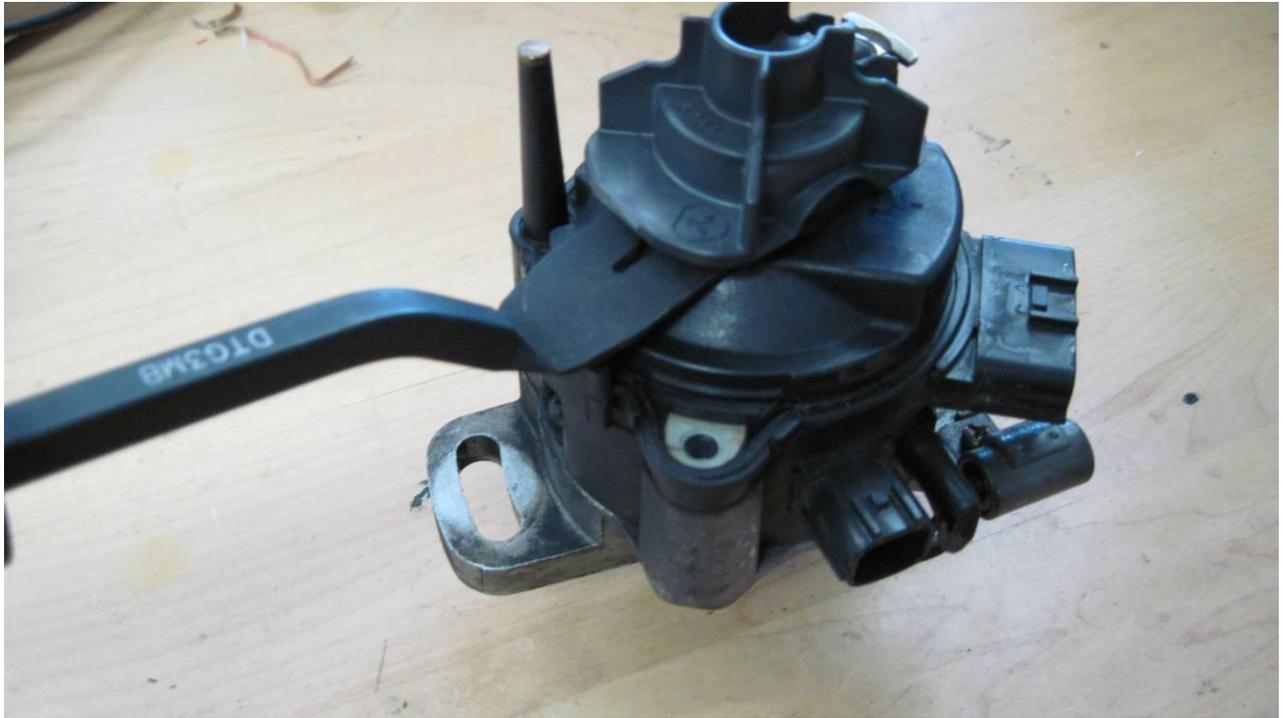


Figure 5: Distributor rotor removed with pry bar

Remove the internal plastic cover shown in figure 6.



Figure 6: Internal plastic cover to be removed

Remove the internal CAS disc cover shown in figure 7 with a #2 Phillips screwdriver.

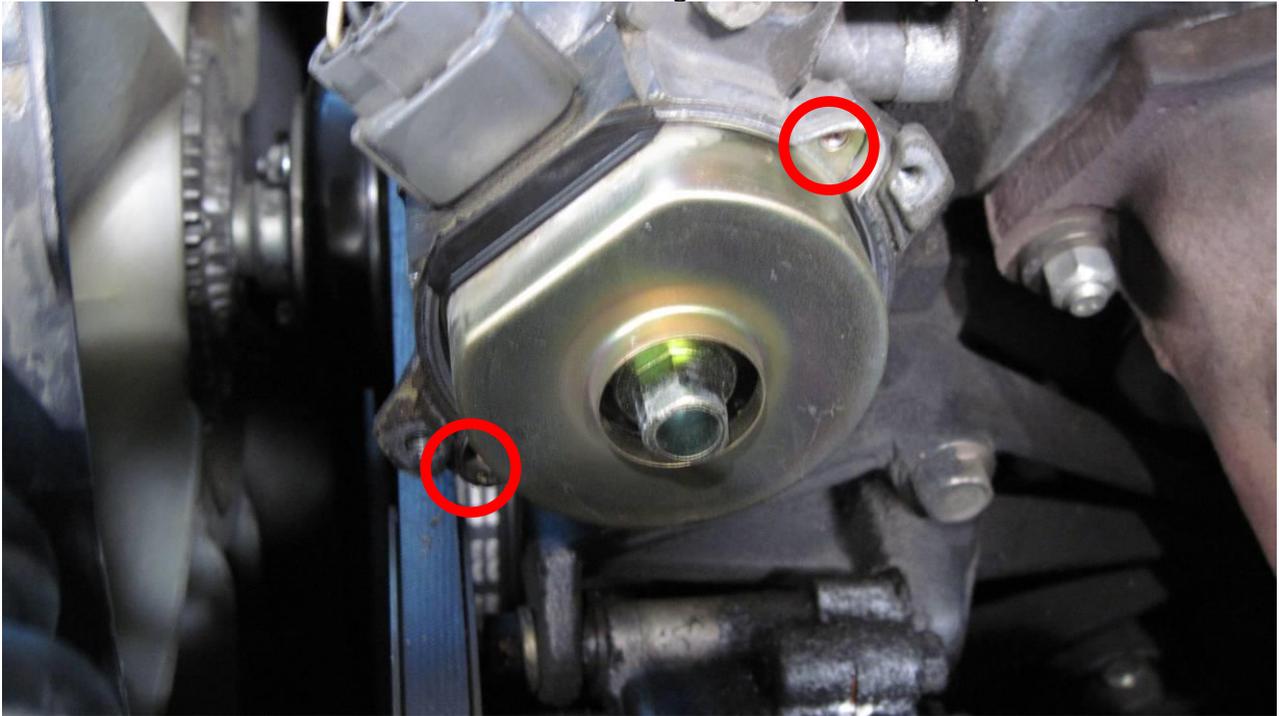


Figure 7: Removal of internal CAS disc cover

Remove the screw holding the CAS disc and collar as shown in figure 8 with the #2 Phillips screwdriver (Make sure screwdriver is firmly planted since this screw will be very tight).

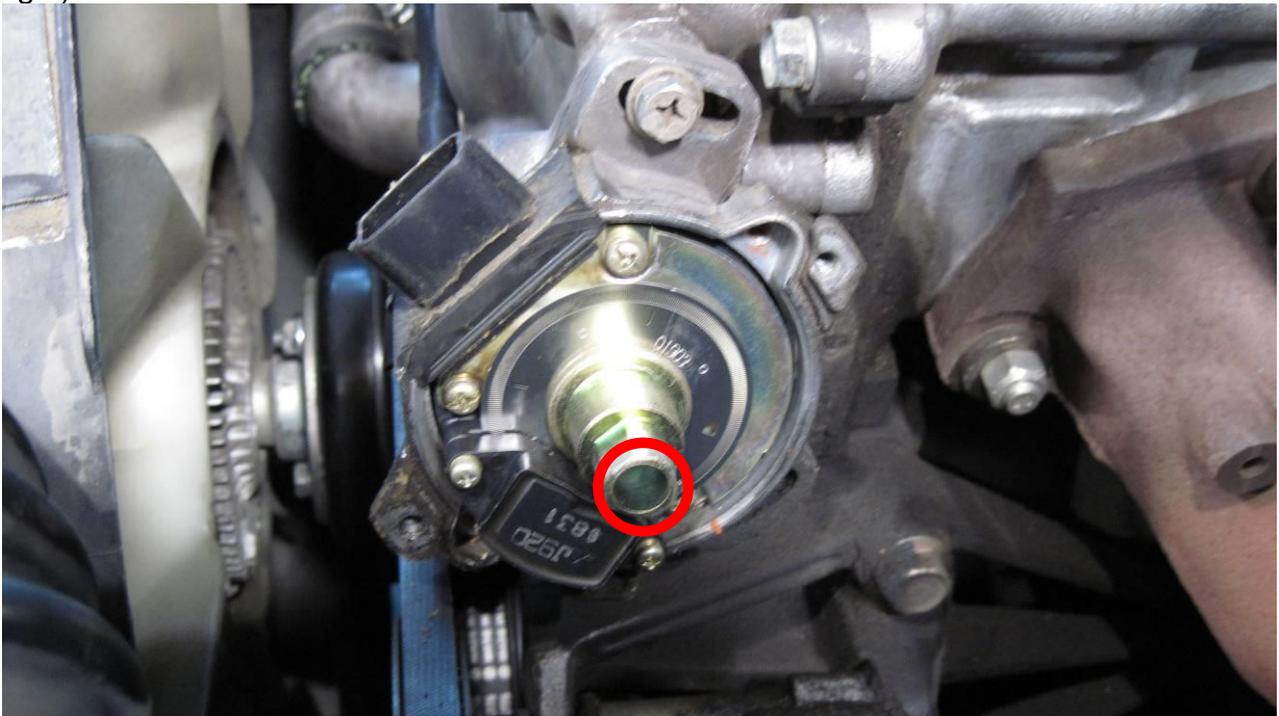


Figure 8: Original CAS disc removal

Figure 9 shows the original CAS disc with the collar that holds it in place removed. The original disc can be removed now. For future use, the original disc should be marked UP to remember what the original orientation of the disc is.

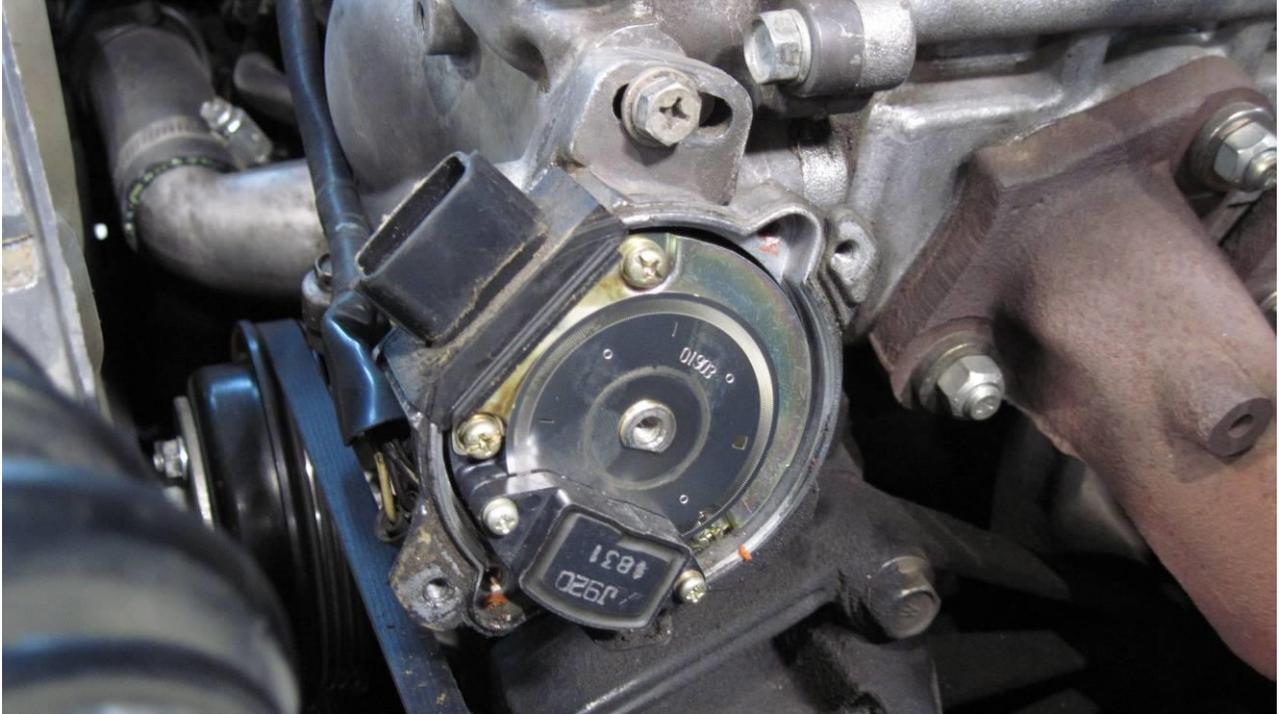


Figure 9: Original CAS disc with collar removed

The new AEM trigger disc is installed as shown in figure 10, orientation up or down is not important, only the D-shaped mounting on the shaft.

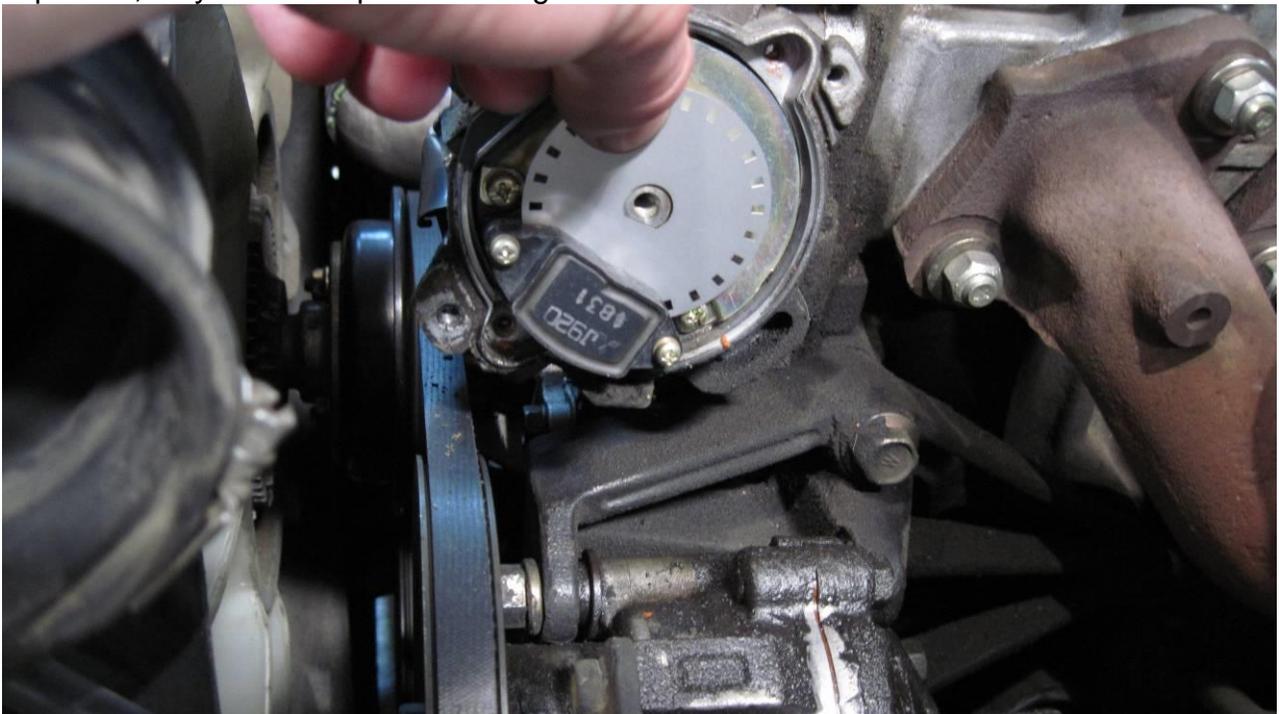


Figure 10: AEM CAS trigger disc installed

The collar and screw can be reinstalled as shown in figure 11.

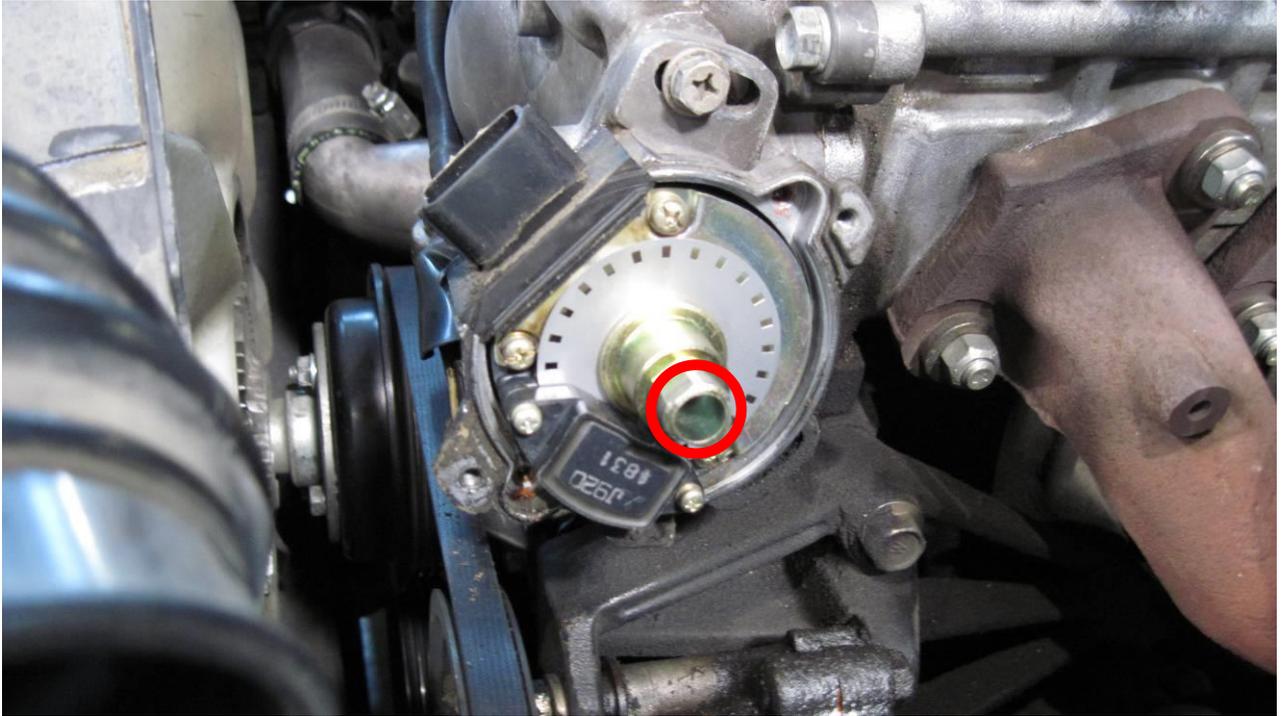


Figure 11: Trigger disc and collar reinstalled

The internal CAS disc cover can be reinstalled with two screws that held it in place as shown in figure 12.

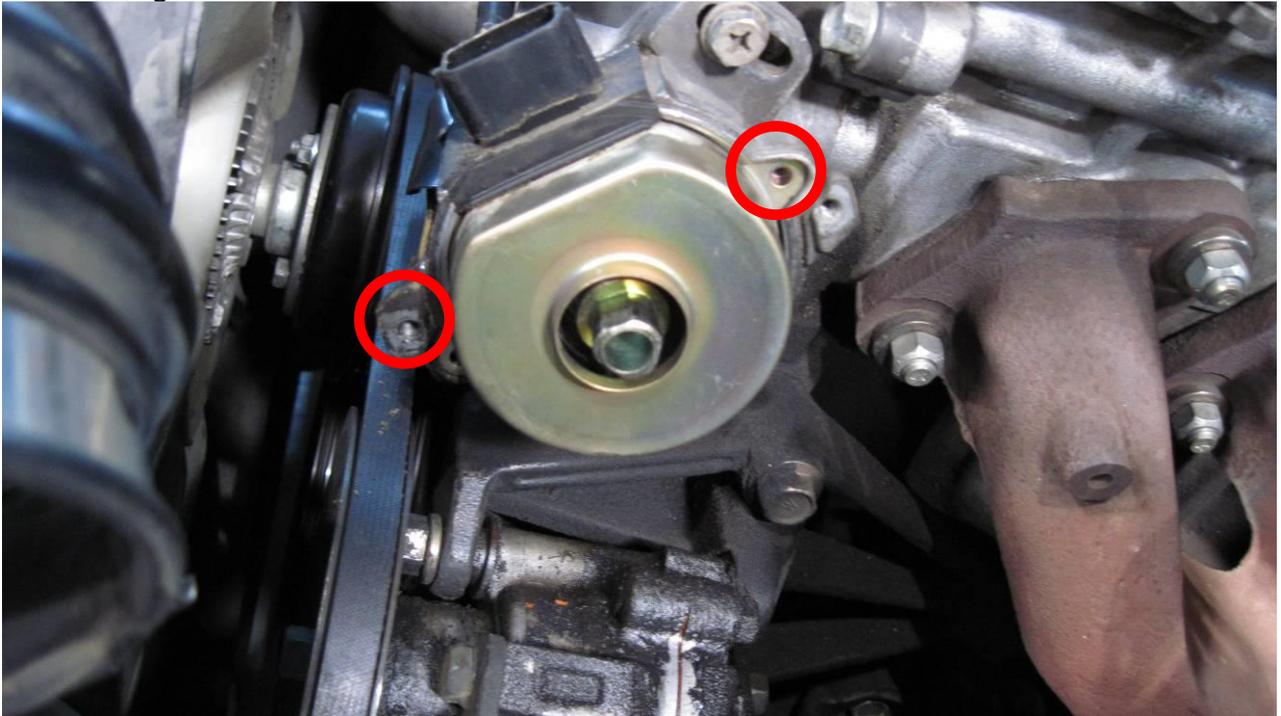


Figure 12: Trigger disc cover reinstalled

The internal plastic cover is reinstalled as shown in figure 13.



Figure 13: Internal plastic cover reinstalled

Reassemble the rest of the items in the reverse order of disassembly.

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Crank Angle Sensor replacement for EMS P/N

30-6601, 30-6602, 30-6620, and 30-6623

1991-1993 S13 180SX & Silvia SR20DET, 1994-1997 S14 180SX & Silvia SR20DET, 1998 S14 Silvia SR20DET, 1993-1998 S13 200SX SR20DET, and 1999-2003 Skyline GTR RB26DETT



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****Cam / Crank Angle Sensor: AEM trigger disc MUST be used**

Discrepancies have been observed in the OEM cam/crank angle trigger discs between model years and/or trim levels; to avoid confusion the Series 2 EMS does not support the OEM Nissan trigger pattern. A replacement trigger disc is now included with every Nissan EMS and must be installed before attempting to start the engine. The following installation was performed on a modified Nissan S13 240SX with an SR20DET swap so your installation may require more or less removal of parts, but the procedure for the CAS disc change should be identical.

Tools/parts required:

- Replacement trigger disc for Nissan RB/VG/VE cam angle sensor (AEM P/N 35-8760, supplied with 30-6601, 30-6602, and 30-6620 EMS)
- 8mm socket with ratchet
- ¼" flat screwdriver
- No. 1 Phillips screwdriver
- Red threadlocker

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Instructions (figures on the following pages):

1. Figures 1 & 2 show the location of the CAS sensor disc cover
2. Figure 3 shows the removal of the vacuum line that goes to the blow-off valve for this custom vehicle
3. Using the 8mm socket, the intake tube with blow-off valve are removed. Figures 4 & 5 show the removal of the intake tube which makes for easy access to the CAS disc cover for this custom vehicle.
4. Figure 6 shows the uncovered CAS disc cover and figure 7 shows the CAS disc cover being removed with the No. 1 Phillips screwdriver.
5. Figure 8 shows the uncovered CAS disc which is removed with the ¼" flat screwdriver as shown in figure 9. Before complete removal, be sure to mark to original disc to ensure correct installation if required. Figure 10 shows the screw removed, figure 11 shows the washer removed, and figure 12 shows the original CAS disc removed.
6. Carefully install the provided AEM CAS disc as shown in figure 13 and 14. When replacing screw that holds CAS disc, apply threadlocker to it.
7. Reassemble all items in the reverse order of disassembly.



Figure 1: Location of CAS



Figure 2: Location of CAS



Figure 5: Removal of intake tube



Figure 6: CAS cover

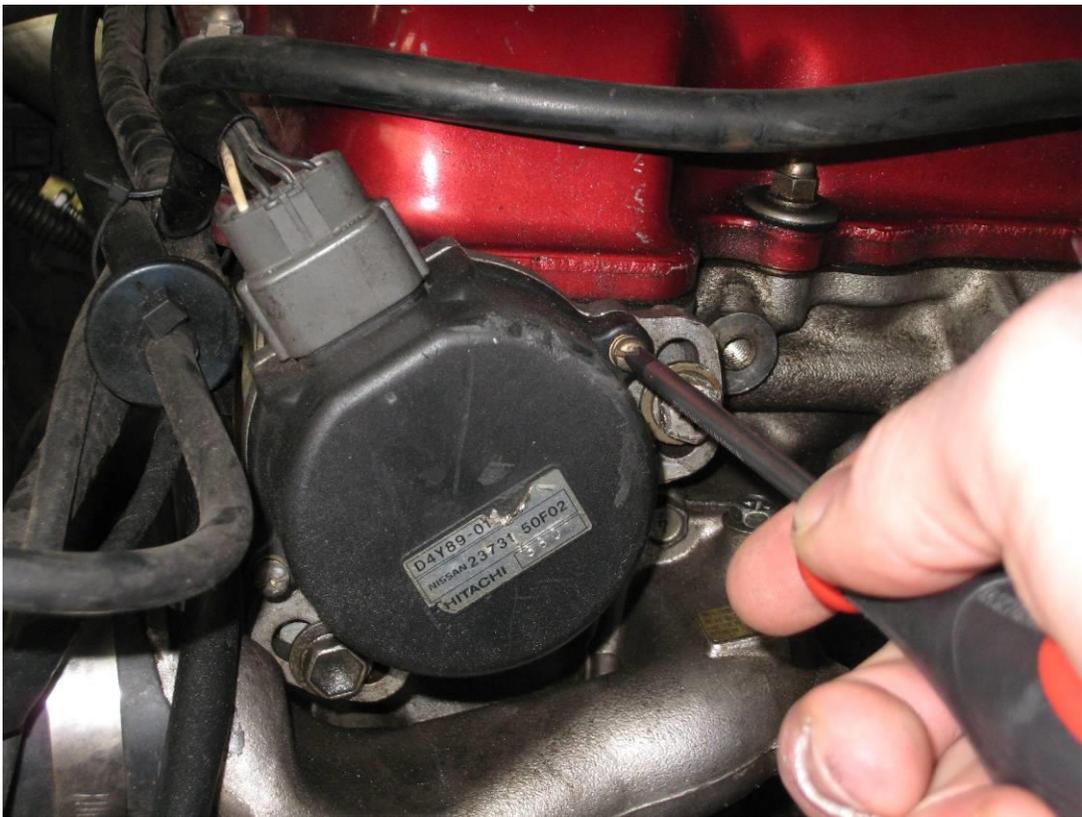


Figure 7: Removal of CAS cover

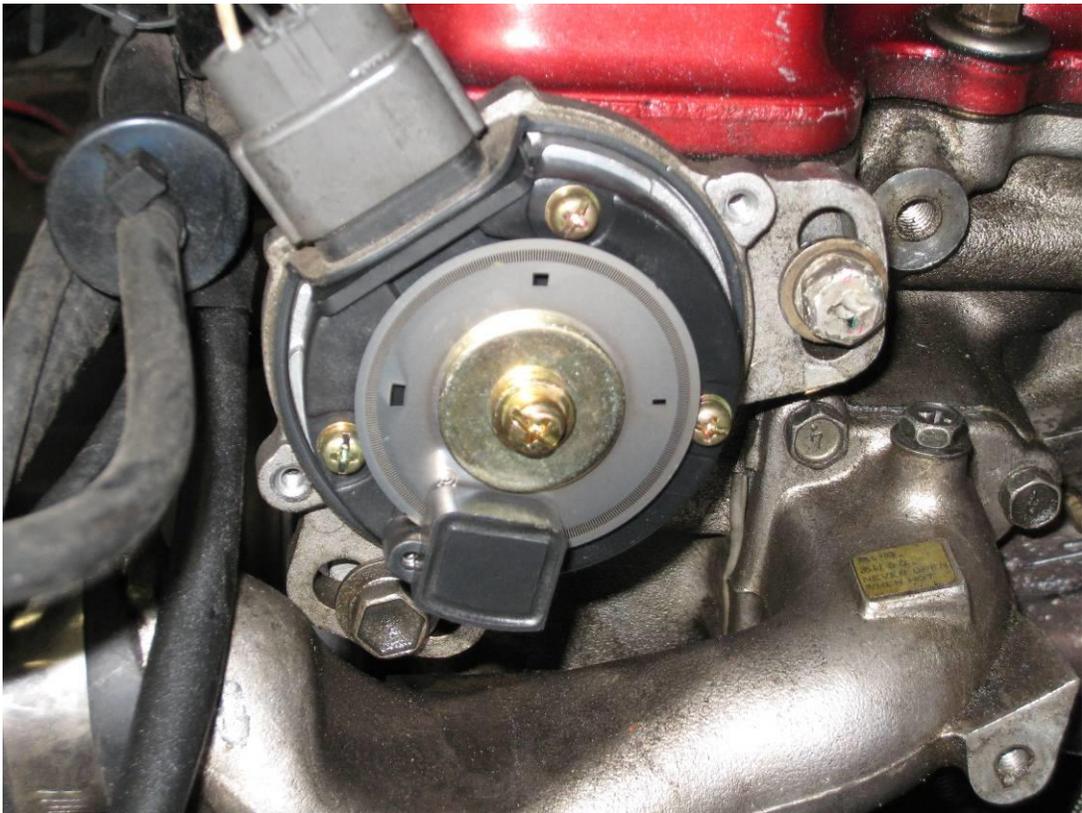


Figure 8: Cover removed

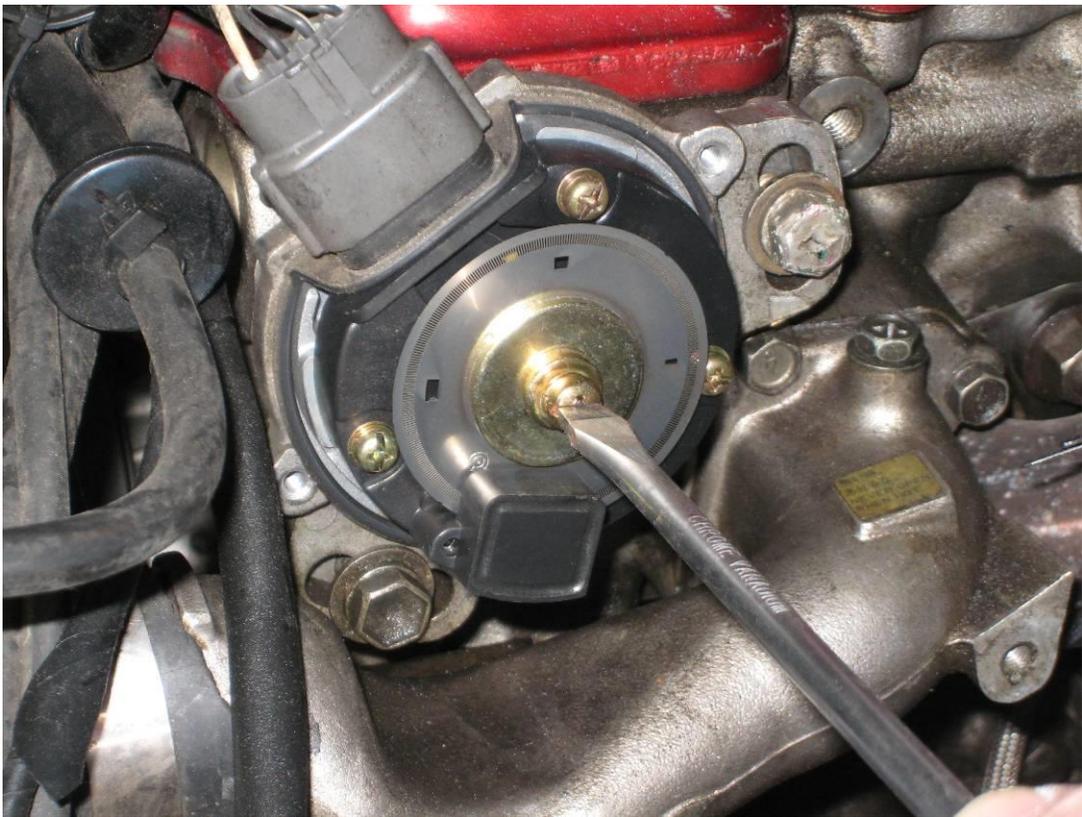


Figure 9: Removal of original CAS disc



Figure 10: Original CAS screw removed

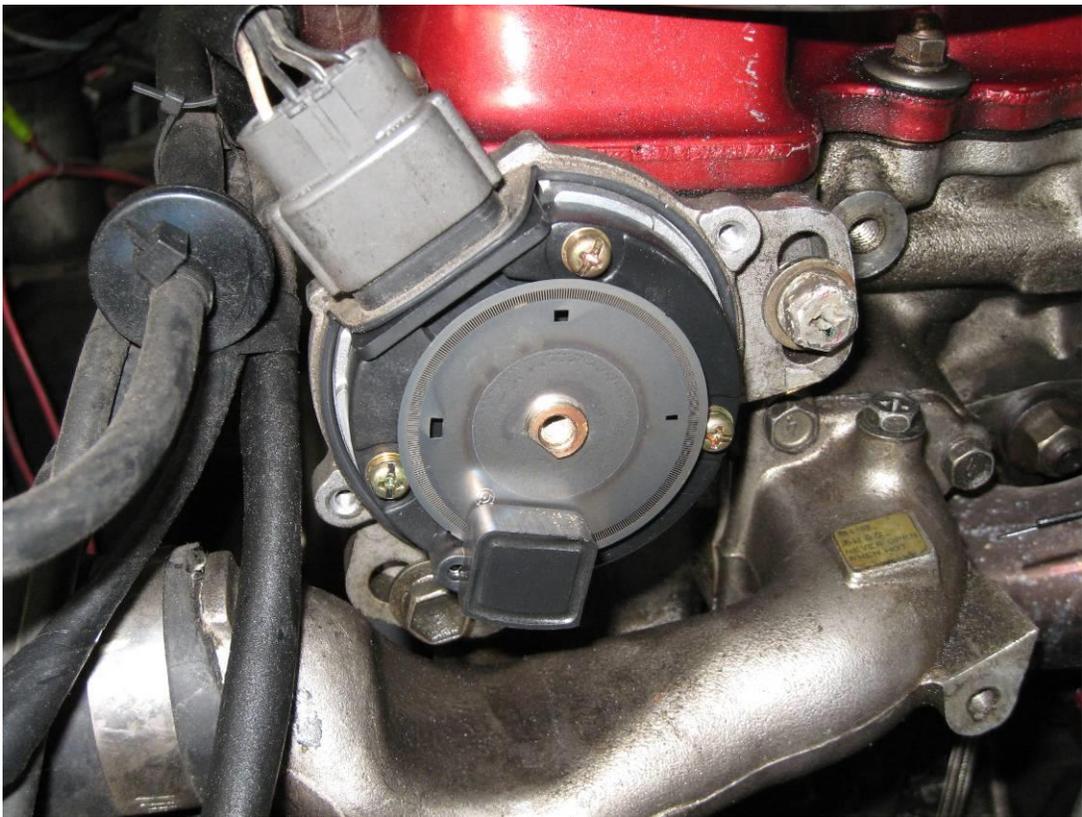


Figure 11: Washer removed



Figure 12: Original CAS disc removed



Figure 13: Installation of AEM CAS disc

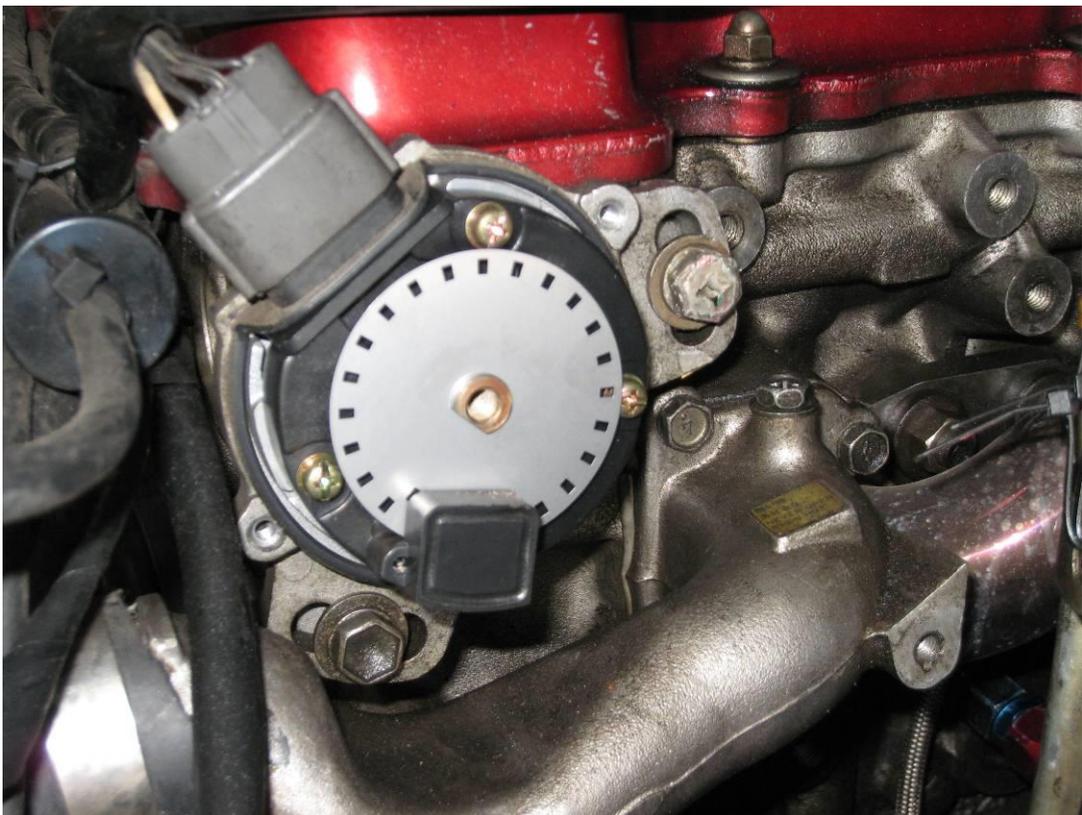


Figure 14: AEM CAS disc installed

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***Installation Instructions 10-6610-A supplement for:
Crank Angle Sensor replacement for EMS P/N 30-6610/6611
95 Nissan 240SX S14 KA24DE
95- 97 Nissan Sentra B14 SR20DE & GA16DE
95- 96 Nissan Altima U13 KA24DE
94- 96 Infiniti G20 P10 SR20DE***



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Instructions with photos on the following pages:

Remove the distributor cap with the #1 Phillips screwdriver as shown in figure 1 by removing the two screws holding it in place (Note: these instructions were performed with the distributor removed, but it is not necessary)



Figure 1: Distributor cap removal

Remove the distributor rotor with carefully with the pry bar as shown in figure 2, taking note of how the rotor was oriented on the shaft.

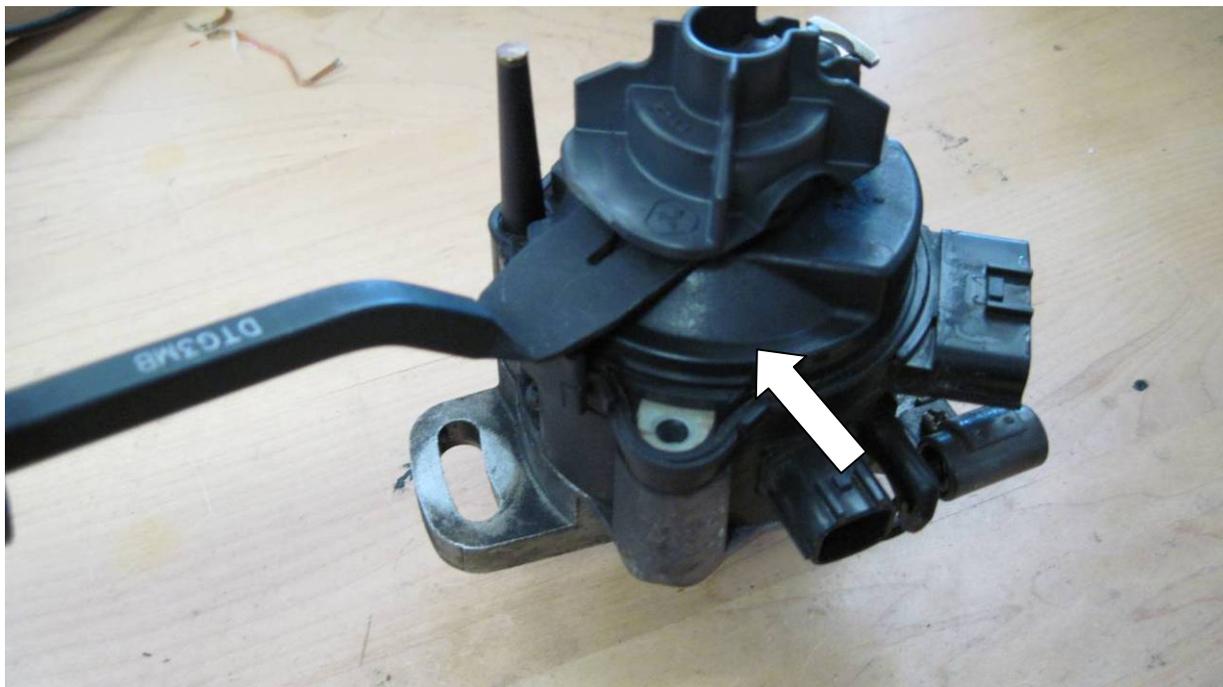


Figure 2: Distributor rotor removed with pry bar

Remove the internal cover over the CAS disc as shown in figure 3.



Figure 3: Removal of internal cover over CAS disc

Remove the screw holding the CAS disc and collar as shown in figure 4 with the #2 Phillips screwdriver (Make sure screwdriver is firmly planted since this screw will be very tight).



Figure 4: Removal of screw holding on CAS disc

When collar and screw are removed, the assembly will look like figure 5.



Figure 5: Original CAS screw and collar removed

Install the AEM CAS disc as shown below in figure 6, with the D-shaped shaft aligned as shown.

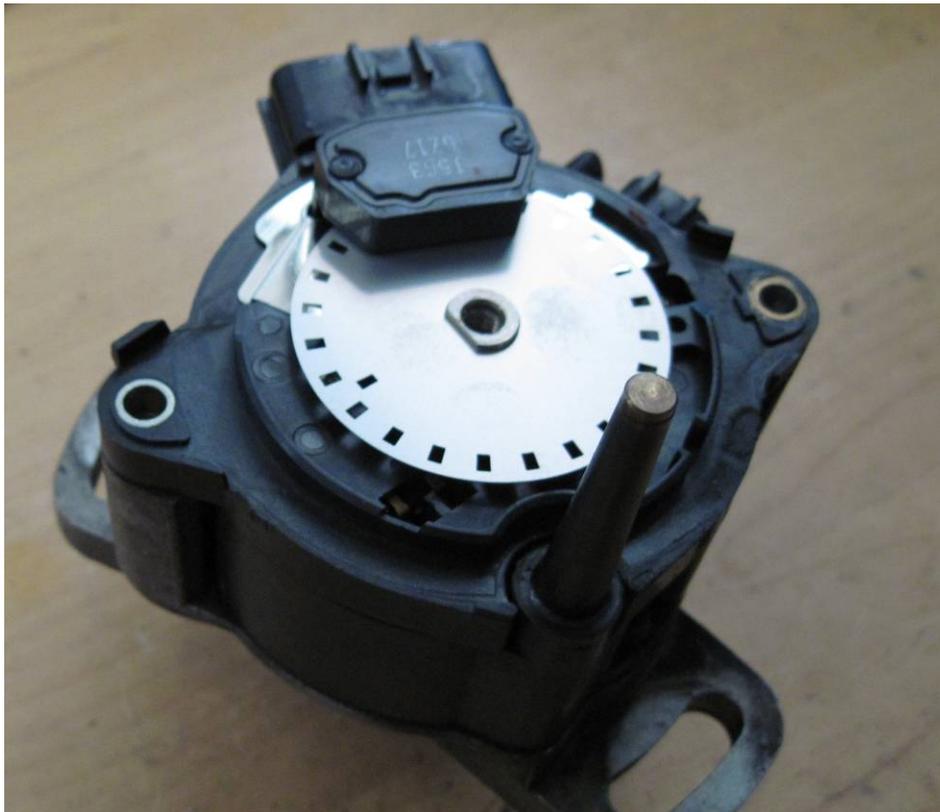


Figure 6: AEM CAS disc installed

Reinstall the screw that holds the CAS disc with some red threadlocker with the #2 Phillips screwdriver as shown in figure 7.

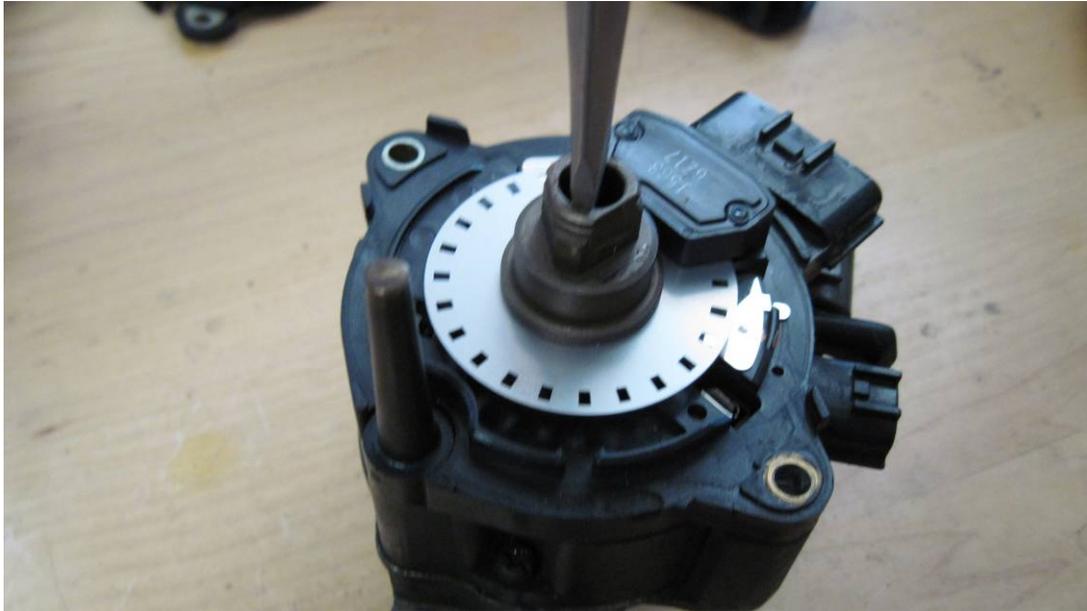


Figure 7: Screw and collar to hold CAS reinstalled with red threadlocker

Reassemble the rest of the items in the reverse order of disassembly.

Also note that the base calibrations were created with the distributor mounted in the central adjustment position (two screws shown below) on our test vehicle. See figure 8 below:

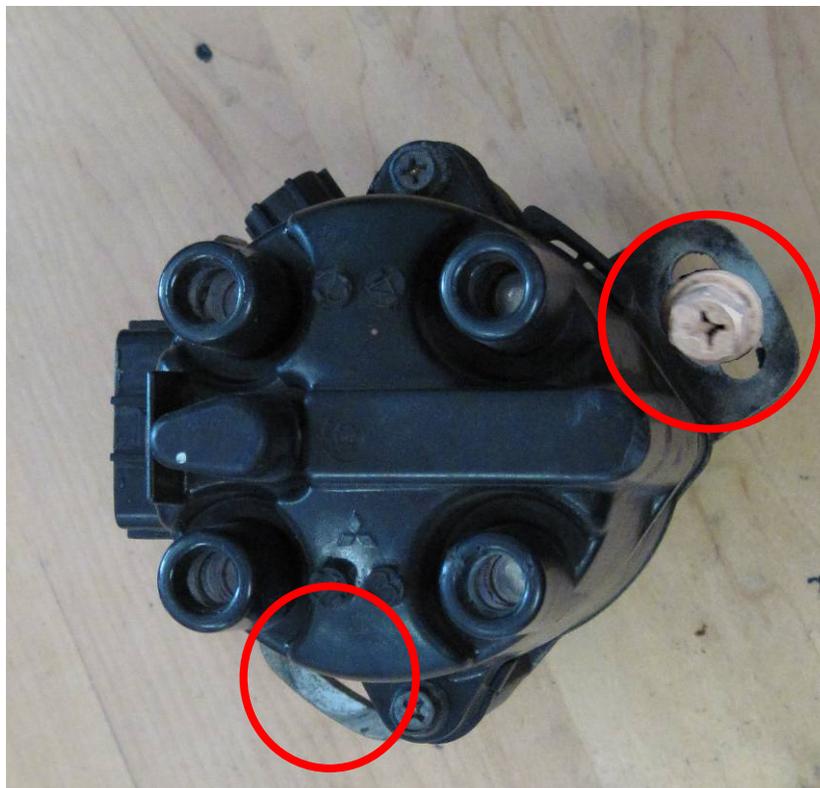


Figure 8: Adjustment screws set to central position