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

WARNING:
This installation is not for the tuning novice nor the PC illiterate! Use this system with EXTREME caution! The AEM EMS System allows for total flexibility in engine tuning. Misuse of this product can destroy your engine! If you are not well versed in engine dynamics and the tuning of management systems or are not PC literate, please do not attempt the installation. Refer the installation to a AEM trained tuning shop or call 800-423-0046 for technical assistance. You should also visit the AEM EMS Tech Forum at http://www.aempower.com

NOTE: AEM holds no responsibility for any engine damage that results from the misuse of this product!

This product is legal in California for racing vehicles only and should never be used on public highways.
**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

**WARNING:**
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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.

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

Remove the internal plastic cover shown in figure 6.

![Figure 6: Internal plastic cover to be removed](image)
Remove the internal CAS disc cover shown in figure 7 with a #2 Phillips screwdriver.

![Figure 7: Removal of internal CAS disc cover](image)

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](image)
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](image)

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](image)
The collar and screw can be reinstalled as shown in figure 11.

![Figure 11: Trigger disc and collar reinstalled](image)

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](image)
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.
Installation Instructions for:
Crank Angle Sensor replacement for EMS P/N 30-6601, 30-6602, 30-6620, and 30-6623

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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 3: Removal of vacuum line from blow-off valve

Figure 4: Removal of intake tube
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 13: Installation of AEM CAS disc

Figure 14: AEM CAS disc installed
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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 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](image)

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](image)
Remove the internal cover over the CAS disc as shown in figure 3.

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

![Figure 5: Original CAS screw and collar removed](image)

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](image)
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](image)

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](image)