

## **Aurora HV70M High Performance Ignition Installation Instructions**

| <b>Model</b> | <b>Description</b>   |
|--------------|--|
| HV70M        | Universal application for 3 – 8 cylinder engines with distributor utilizing conventional points, O.E. electronic pickup and module, or aftermarket optical pickup distributors (including points conversion kits).<br><u>*Not for use with magnetic retractor pickup only, must have accompanying O.E. module.</u><br><b>**DO NOT connect to CD type ignition systems.</b> |

### **Parts List**

- 1 – HV70M Ignition unit
- 1 – universal harness
- 1 – 36" coil wire (assembled) with optional boot and terminal
- 1 – special "y" jumper wire for G.M. TBI applications
- 4 – self-drilling Phillips sheet metal screws
- 3 – red male 0.250" q-tab terminals
- 3 – red male fully insulated q-tab terminals
- 2 – red female 0.110" q-tab connectors
- 1 – red female 0.250" q-tab connector
- 2 – blue male q-tab connector taps
- 3 – red male q-tab connector taps
- 1 – 5/16" ring terminal
- 1 – 3/8" ring terminal
- 1 – 1/4" ring terminal
- 6 – tie wraps

### **Recommended Tools**

- Wire cutters
- Terminal crimpers
- Electrical tape- Drill with 1/8" drill bit
- #2 Phillips screwdriver or screwdriver bit (6" long recommended)
- Wrenches or sockets for battery connection (typically 5/16" or 8mm, 10mm, 1/2" or 13mm, 9/16" or 14mm)

# **Aurora HV70M Installation Instructions**

## **Important**

**Please read this instruction manual thoroughly before proceeding with the installation.**

**Installation is fairly straightforward but will require basic automotive skills. If after reading the following instructions you feel it necessary, please seek professional assistance to ensure proper installation.**

**Care should be exercised at all times working around any ignition system components while the engine is running or ignition turned "on", as the potential of electrical shock exists. For safety, it is strongly recommended that the vehicle's wheels be blocked, and the engine cool before proceeding with the installation.**

**For optimal system performance it is recommended the other ignition components such as distributor cap, rotor, spark plugs, and spark plug wires be inspected for wear and replaced as necessary. Aurora highly recommends the use of magnetic suppression spark plug wires for peak performance. Aurora manufactures high quality vehicle specific wire sets for this very purpose.**

**DO NOT USE Solid Core non-suppression ignition wires.**

**Aurora recommends the use of the same type of spark plugs that are recommended by your vehicle manufacturer i.e. standard, platinum, etc. The installation of the HV70M and Aurora spark plug wires will allow wider spark plug gaps of up to 0.060" to be used on standard style spark plugs (except turbocharged applications - max 0.040"). Wider spark plug gaps can enhance engine performance. Re-gapping of platinum spark plugs is not recommended however due to the more fragile center electrodes and chance of damage.**

# Aurora HV70M Installation Instructions

## **Step 1 – Mounting Location**

The HV70M may be mounted in any position (vertical, horizontal etc.). It is however recommended that a location be chosen with free airflow away from direct sources of high heat, such as above exhaust manifolds or directly mounted on the engine itself. The supplied 36" high efficiency coil lead allows for remote mounting away from hot and moving engine parts. The coil lead may be shortened after installation should it be required. As well, longer coil leads, up to 72", are available from your Aurora dealer to aid in difficult installations. Some consideration should be given to the routing of the coil lead in relation to distributor and HV70M mounting location. The coil lead must avoid moving engine parts, or surfaces that could cause abrasion. It is also strongly recommended that the coil lead avoid being bundled with any other wiring harnesses.

Suggested mounting locations are inner fenders or firewalls for pickup trucks and cars. Vans may find locations on firewalls or on the underside of the hood cowl (below windshield). Class "A" style motor homes can accommodate the unit out front on the cowl above the radiator support. Some G.M. powered chassis may find locations behind the distributor on the inside of the floor transition step of the engine cover. Care should be exercised that any under hood locations do not interfere with hood hinge operation or proper hood closure.

The supplied mounting screws are self-drilling and therefore can be driven directly with a #2 Phillips driver bit and a drill. As an option, a 1/8" pilot hole may be drilled and the screws installed with a #2 Phillips screwdriver.

## **Step 2 – Wiring Instructions**

To familiarize yourself with basic ignition system components, refer to figure 1. The connection points of the HV70M are illustrated in figure 2. Following the illustrations are some common application easy install tips. Feel free to use these tips or simply follow the following schematics.

### **HV70M wiring connections**

- Red wire** - **to battery '+' or similar direct power connection**
- Black wire** - **to battery '-' or good ground source**
- Blue wire** - **to ignition 'on' source**  
**(same as stock coil '+' side of vehicle harness)**
- Yellow wire** - **to points or stock ignition module output**  
**(same as stock coil '-' side of vehicle harness)**
- Green wire** - **to tachometer \*. If this is wire not to be used then insulate the end and tuck it back into the harness.**

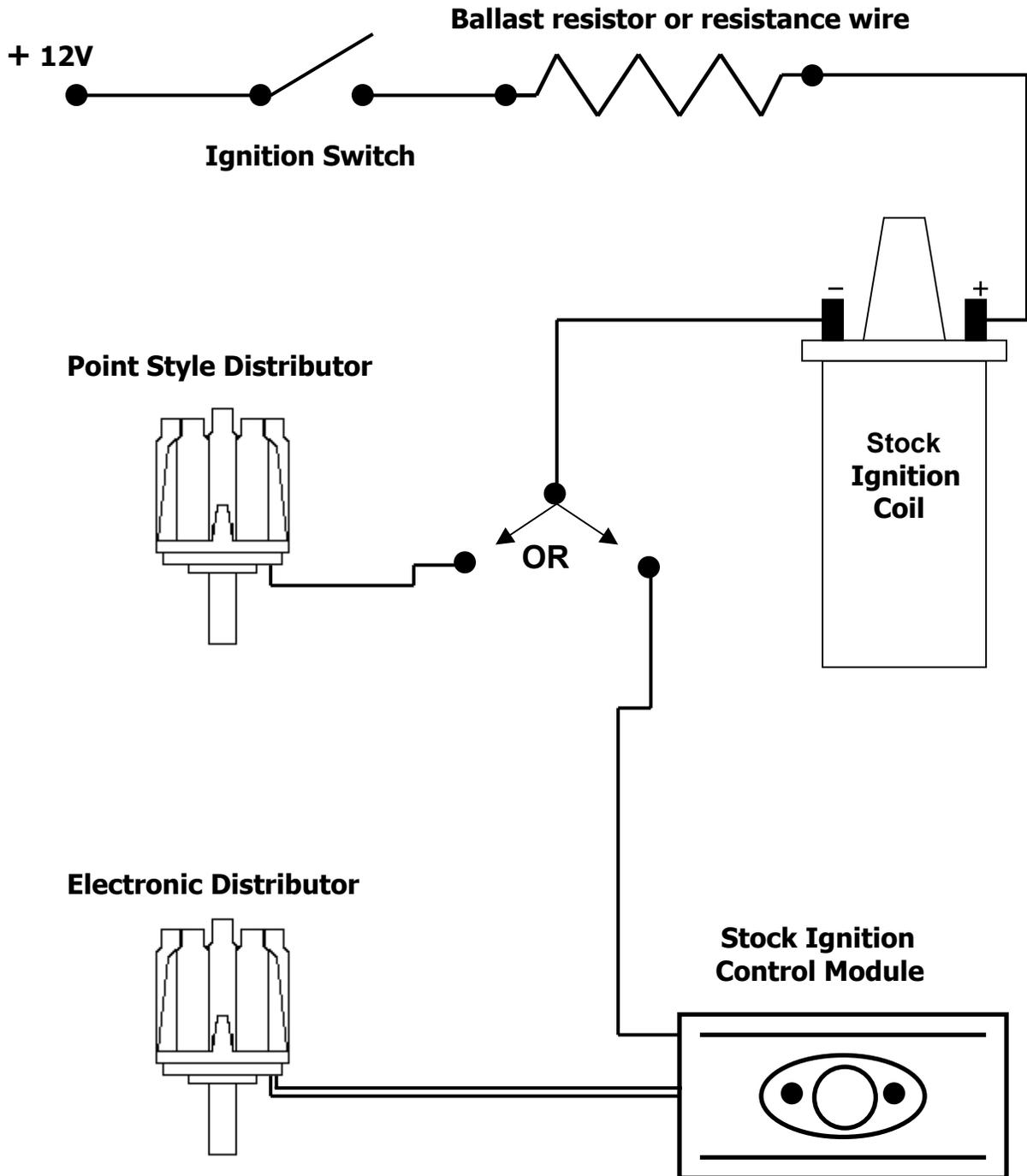
\* Factory installed tachometers may not require re-wiring.

- This wire can be used to trigger fuel pump circuits on some import vehicles.

# Aurora HV70M Installation Instructions

## Figure 1

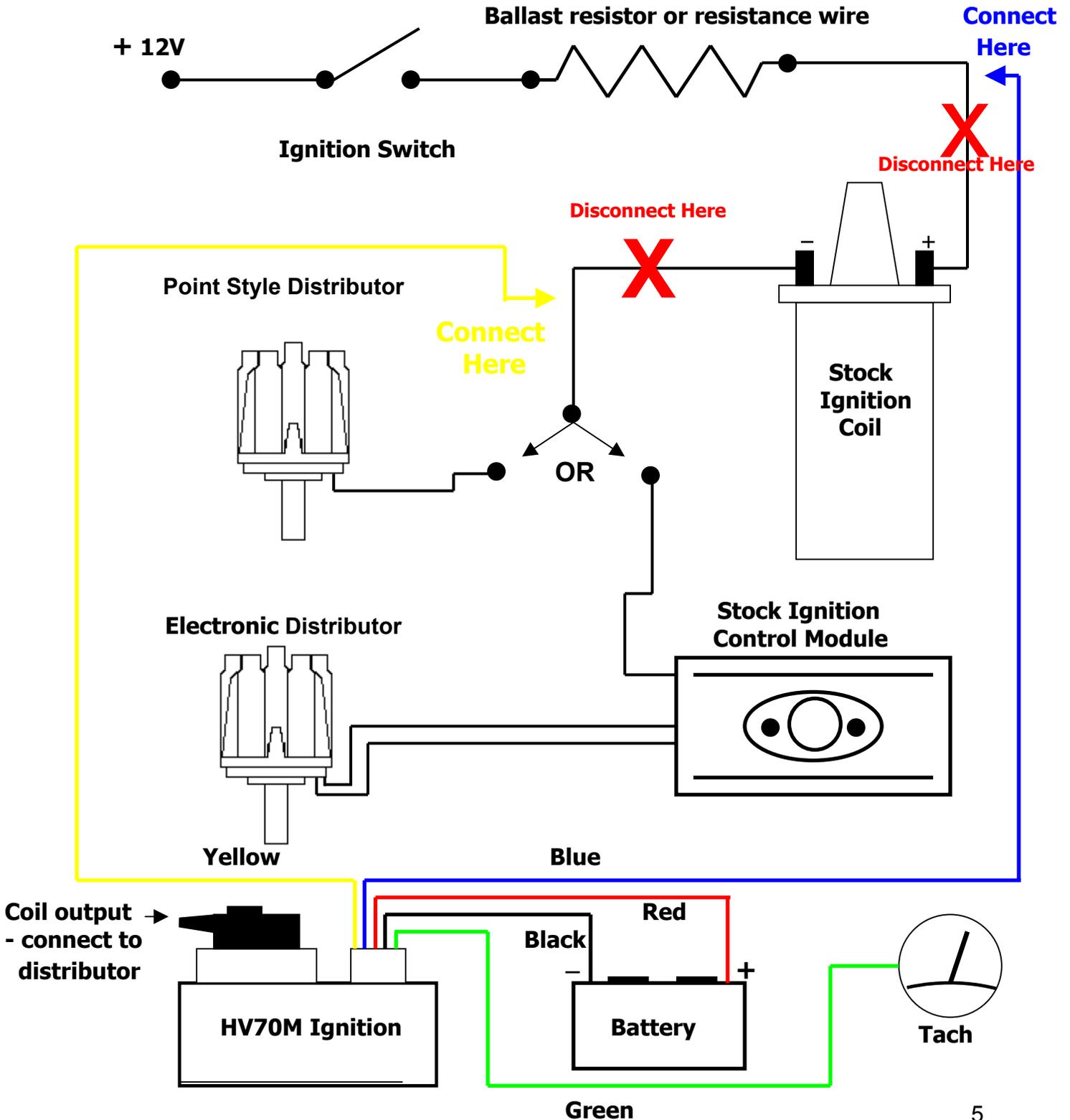
Ignition systems may vary in appearance but work in a similar manner. A basic ignition system is illustrated below showing key components.



# Aurora HV70M Installation Instructions

## Figure 2

HV70M Connection Points to a stock existing ignition system.



# Aurora HV70M Installation Instructions

## General Installation Procedures

- For safety it is recommended to disconnect the negative cable of the vehicle's battery before proceeding with the installation. (Note: This may result in the loss of programmed radio stations from your stereo, and require you to reset them once the battery is reconnected)
- Consider a mounting location for the HV70M ignition unit. This unit may be mounted in any position (horizontal, vertical, etc.) however choose a location that has free air flow and avoids extreme heat such as exhaust manifolds or direct engine mounting.
- Choose a route for the wire harness and coil lead that avoids sharp edges and very hot surfaces. The coil lead should not be bundled with any other wiring harnesses. Allow some slack in the wiring harness to allow for engine movement.
- Ensure the factory body ground wire, which runs from the negative side of the battery to a body panel such as inner fender or radiator support, is in place, and in good condition. Failure of this wire can result in poor performance or eventual ignition system damage.
- Check all wiring prior to re-connecting the battery, and starting the vehicle.

# Aurora HV70M Installation Instructions

## Easy Install Tips

### **Chevrolet Pickups and Vans 1974-1985 5.0L, 5.7L, 7.4L HEI Ignition – coil in cap**

**IMPORTANT:** This particular installation requires the Aurora AE4500 adapter cap for completion. This installation also requires the factory ignition control module to be G.M. original equipment. To check this, remove the distributor cap and look at the module located under the rotor. The “G.M.” logo should be visibly embossed into the plastic. Many aftermarket module brands will not offer proper performance.

- For safety it is recommended to disconnect the negative cable of the vehicle’s battery before proceeding with the installation. (Note: This may result in the loss of programmed radio stations from your stereo, and require you to reset them once the battery is reconnected)
- Mount the HV70M ignition unit. A recommended location for pickup trucks is on the passenger inner fender or the passenger side firewall. Depending on the options available for vans, consider areas such as the cowling under the windshield or firewall near the brake master cylinder. The kit is supplied with special self-drilling sheet metal screws.
- Locate the distributor at the back of the engine and unplug all harness wires plugged into the front of the distributor cap under the dust cover.
- Unscrew and remove the dust cover from the top of the distributor cap. Next unscrew and remove the stock ignition coil and ground strap. Ensure the carbon button and rubber washer remain in the distributor cap.
- Install the Aurora AE4500 cap adaptor onto the top of the distributor cap and hold down with the previously removed dust cover screws.
- Install the Aurora coil lead supplied with the ignition kit. Notice that one end of the lead has a short profile boot; this end connects onto the newly installed AE4500 cap adapter. The other end with the longer profile boot connects to the HV70M. Carefully route this coil lead away from sharp objects, or areas that will get substantially hot (such as exhaust manifolds or EGR tubes). It is also highly recommended to avoid bundling this lead with other wiring harnesses on the vehicle. You may however follow heater hoses if desired and attach with tie wraps (do not over tighten). Leave a little slack in the lead to allow for engine movement under load. A positive click should be heard or felt when installing this lead onto both the distributor and HV70M, (this will be the double spring lock terminal properly seating). A shorter coil lead may be order from your Aurora Dealer if necessary.
- Plug the universal harness into the HV70M ignition. Locate the auxiliary power terminal located on the driver’s side firewall (both pickups and vans). This connection point will supply power to the HV70M ignition (If your particular vehicle does not have this feature, separate the red Aurora harness wire and route toward the battery for later connection). Route the Aurora harness toward the distributor avoiding sharp edges and potentially hot areas such as exhaust manifolds or EGR tubes. Provide clearance away from very hot objects (as with the coil lead). However, do not route this harness next to the coil lead, although it may run next to other vehicle harnesses. Secure this harness as necessary with tie wraps.

- Separate the black, yellow, green, and blue wires from the Aurora harness for connection to the distributor harness wires previously removed. Strip the end of the blue wire and install the special jumper wire supplied with the AE4500 cap adapter. Strip the end of each of the black and yellow wires and crimp on a red male q-tab terminal to each wire. Locate the 3-wire connector previously unplugged from the distributor; this harness will contain a red, black and brown wire. Plug each of the following Aurora wires into the corresponding terminals of this 3 wire connector; black Aurora wire to black connector wire, yellow Aurora wire to brown connector wire, one side of special Aurora jumper to red connector wire.
- Locate the heavy gauge red wire previously unplugged for the distributor. Into this connector plug in the remaining wire from the special Aurora jumper wire.
- If a fifth wire was previously connected to the distributor for a tach signal (white in colour for factory applications), then strip the Aurora green wire and crimp on a red male q-tab terminal for connection to this tach wire.
- Secure the wiring of both the Aurora harness and stock coil connector harnesses together.
- Route the red Aurora harness wire over to the Auxiliary power terminal on the driver's side firewall. Install a 1/4" ring terminal to this red wire and connect to the auxiliary power terminal. If this auxiliary terminal is not present, then connect the red Aurora wire to positive side of the battery.
- You may now reconnect the battery "-" cable, then do a final visual inspection of wire routing to ensure all is secure.

**Important Note: Ensure the factory body ground wire, which runs from the negative side of the battery to a body panel such as inner fender or radiator support, is in place, and in good condition. Failure of this wire can result in poor performance or eventual ignition system damage.**

- The engine is ready to be started.

**Performance Tip: On these vehicles you may re-gap the standard type spark plugs up to 0.060". It is also highly recommended that your plug wires also be magnetic suppression type such as Aurora's Super Mag Plus premium wire line. Aurora recommends using the same type of spark plug as factory original. The use of platinum spark plugs should only be used if they were original equipment.**

# Aurora HV70M Installation Instructions

## Easy Install Tips

### **Chevrolet Pickups and Vans 1987-1995 4.3L, 5.0L, 5.7L, 7.4L**

- For safety it is recommended to disconnect the negative cable of the vehicle's battery before proceeding with the installation. (Note: This may result in the loss of programmed radio stations from your stereo, and require you to reset them once the battery is reconnected)
- Mount the HV70M ignition unit. A recommended location for pickup trucks is on the passenger inner fender between the air box and battery. Depending on the options available for vans, consider areas such as the cowl under the windshield. The kit is supplied with special self-drilling sheet metal screws. Due to the curve of the inner fender, it may only be possible to use 3 screws to fasten the unit. This mounting is fine as long as the unit is secure.
- Remove the air cleaner from the top of the throttle body and set it off to the side. It is suggested to place a rag over the top of the throttle body to keep out contaminants or other objects.
- Locate the distributor at the back of the engine; remove the stock coil lead that runs from the distributor's center terminal to the stock ignition coil (retain this lead in the event you ever wish to return the vehicle to stock condition).
- Install the Aurora coil lead supplied with the ignition kit. Notice that one end of the lead has a short profile boot, this end goes onto the distributor (center terminal). The other end with the longer profile boot attaches to the HV70M. Carefully route this coil lead away from sharp objects, or areas that will get substantially hot (such as exhaust manifolds or EGR tubes). It is also highly recommended to avoid bundling this lead with other wiring harnesses on the vehicle. You may however follow heater hoses if desired and attach with tie wraps (do not over tighten). Leave a little slack in the lead to allow for engine movement under load. A positive click should be heard or felt when installing this lead onto both the distributor and HV70M (this will be the double spring lock terminal properly seating).
- Plug the universal harness into the HV70M ignition. On the passenger side firewall you will see a large "T" shaped plastic cover held in place with 3 plastic quick nuts. Route the Aurora harness toward this cover preparing for entry into the bottom along side the large existing vehicle harness at that same point. Removal of this cover will reveal a terminal strip, all of these terminals are live battery "+". Remove the red wire from the split loom on the Aurora harness and attach a ring terminal suited to the stud size (typically 5/16"). Remove the nut from one of the terminal block's studs and mount the red wire's ring terminal. Replace the nut and tighten being careful not to over-tighten and damage the plastic terminal block. Next locate the ground stud, or bolt, on the right side of the terminal block (as you are looking at it). This is commonly used for the under-hood light connection. Attach a ring terminal to the black Aurora harness wire and mount the terminal onto this ground point. You are now ready to replace the "T" shaped cover. Bring the Aurora Harness along side the main harnesses and replace the terminal block cover. Proper positioning will allow the Aurora harness to both enter and exit the bottom of this cover for a neat job. Re-install the 3 plastic quick nuts by pushing them back into the studs.

- Route the balance (yellow, blue, and green wires plus loom) of the Aurora harness toward the stock ignition coil. Provide clearance away from very hot objects (as with the coil lead). However, do not route this harness next to the coil lead, although it may run next to other vehicle harnesses. Secure this harness as necessary with tie wraps.
- Separate the yellow, green, and blue wires from the harness for connection to the stock ignition coil harness and secure them with a tie wrap. Be careful to avoid any throttle linkages as they are near this area.
- Locate the 2-piece stock coil connector (black and gray), and unplug it from the top of the stock coil. The stock coil may remain in its location should you wish to transfer your Aurora HV70M to a new vehicle.
- In the HV70M parts bag, pull out the 2 pink female quick connect terminals as well as the special blue "Y" shaped jumper wire.
- Strip the insulation and crimp one of the pink female quick connect terminals to each of the yellow and blue wires (the wires may be shortened first if desired).
- Strip the insulation and crimp the special jumper wire to the remaining blue Aurora harness wire. Again this wire may be shortened first if desired.
- Looking at the stock coil connector, locate the 2 pink wires. Attach one side of the special jumper wire in turn to each of the corresponding terminals.
- Finally locate the remaining 2 wires from the stock coil connector; these will both be white in color. Notice that one of the white wires is thinner than the other and also runs to the base of the distributor. Plug the yellow Aurora wire onto the corresponding terminal of this thinner white wire. The final connection is made to the larger size white wire on the stock coil connector, which should receive the green Aurora Wire.
- Secure the wiring of both the Aurora harness and stock coil connector harness together. Again be careful that it does not interfere with the throttle linkage.
- The air cleaner may now be re-installed paying careful attention not to pinch the injector wiring harness. To ease reinstallation, pay attention to the hot air intake tube alignment before setting the air cleaner fully down.
- You may now reconnect the battery "-" cable, then do a final visual inspection of wire routing to ensure all is secure.

**Important Note: Ensure the factory body ground wire, which runs from the negative side of the battery to a body panel such as inner fender or radiator support, is in place, and in good condition. Failure of this wire can result in poor performance or eventual ignition system damage.**

- The engine is ready to be started.

**Performance Tip: On these vehicles you may re-gap the standard type spark plugs up to 0.060". It is also highly recommended that your plug wires also be magnetic suppression type such as Aurora's Super Mag Plus premium wire line. Aurora recommends using the same type of spark plug as factory original. The use of platinum spark plugs should only be used if they were original equipment.**

# Aurora HV70M Installation Instructions

## Easy Install Tips

### **Chevrolet Pickups and Vans 1996-2004 4.3L, 5.0L, 5.7L, 7.4L**

- For safety it is recommended to disconnect the negative cable of the vehicle's battery before proceeding with the installation. (Note: This may result in the loss of programmed radio stations from your stereo, and require you to reset them once the battery is reconnected)
- Mount the HV70M ignition unit. A recommended location for pickup trucks is on the passenger inner fender between the air box and radiator reservoir (located on the passenger firewall). If using this location, position the HV70M unit so it does not interfere with the air box release clips. Depending on the options available for vans, consider areas such as the cowl under the windshield. The kit is supplied with special self-drilling sheet metal screws. Due to the curve of the inner fender, it may only be possible to use 3 screws to fasten the unit. This mounting is fine as long as the unit is secure.
- Locate the distributor at the back of the engine. Remove the stock coil lead that runs from the distributor to the stock ignition coil (retain this lead in the event you ever wish to return the vehicle to stock condition).
- For this application, it will be necessary to change one end of the supplied coil lead with the "Vortec boot and terminal kit" which is supplied in the kit. Follow the instructions included in the kit to prepare the coil lead. Install the modified end of the Aurora coil lead to the distributor, and the other end to the HV70M. Carefully route this coil lead away from sharp objects, or areas that will get substantially hot (such as exhaust manifolds or EGR tubes). It is also highly recommended to avoid bundling this lead with other wiring harnesses on the vehicle. You may however follow heater hoses if desired and attach with tie wraps (do not over tighten). Leave a little slack in the lead to allow for engine movement under load. A positive click should be heard or felt when installing this lead onto the HV70M, and 2 or 3 clicks for the distributor end. A slight pinching action on the distributor boot will help exhaust any trapped air as the boot is installed.
- Plug the universal harness into the HV70M and route the harness toward the stock ignition coil. Provide clearance away from very hot objects (as with the coil lead). However, do not route this harness next to the coil lead, although it may run next to other vehicle harnesses. Secure this harness as necessary with tie wraps.
- Separate the yellow, green, and blue wires from the harness for connection to the stock ignition coil harness and secure them with a tie wrap.
- Locate the stock coil connector and unplug it from the top of the stock coil. The connector will have 3 wires extending from it, a pink, a white, and a white/black stripe. Be careful not to remove the stock control module harness as it is in the same area (however the colours will be different). The stock coil may remain should you wish to transfer your Aurora HV70M to a new vehicle.
- In the HV70M parts bag, pull out the 3 red female q-tab connector taps and 3 red male fully insulated q-tab terminals.

- Install one of each of the 3 red female q-tab connector taps to each of the pink, white, and white/black stripe wires.
- Trim to length and strip each of the yellow, blue, and green Aurora wires. Crimp one of each of the 3 red male fully insulated q-tab terminals to each of these wires. After the crimps are complete, inspect the front of the terminal to ensure the inner tab is centered in the insulation sleeve.
- Plug the blue Aurora wire into the red tap connector located on the stock pink wire. Plug the green Aurora wire into the red tap connector located on the stock white wire. Plug the yellow Aurora wire into the red tap connector located on the stock white/black striped wire.
- Secure the wiring of both the Aurora harness and stock coil connector harness together.
- Route the remaining red and black Aurora harness wires toward the auxiliary fuse box on the driver's inner fender.
- On the auxiliary fuse box locate the "Aux" stud on the side of the box. Strip the red wire and crimp on a ring terminal matching the stud's size (typically 5/16"). Remove the nut from the "Aux" stud and mount the red wire's ring terminal, re-install the nut and tighten.
- Locate a ground stud or bolt on the firewall. Strip the black wire, crimp on a ring terminal, and install.
- You may now reconnect the battery "-" cable, then do a final visual inspection of wire routing to ensure all is secure.

**Important Note: Ensure the factory body ground wire, which runs from the negative side of the battery to a body panel such as inner fender or radiator support, is in place, and in good condition. Failure of this wire can result in poor performance or eventual ignition system damage.**

- The engine is ready to be started.

**Performance Tip: On these vehicles you may re-gap the standard type spark plugs up to 0.060". It is also highly recommended that your plug wires also be magnetic suppression type such as Aurora's Super Mag Plus premium wire line. Aurora recommends using the same type of spark plug as factory original. The use of platinum spark plugs should only be used if they were original equipment.**

# Aurora HV70M Installation Instructions

## Easy Install Tips

### Dodge Pickups and Vans 1970- 2005 3.9L, 5.2L, 5.9L

- For safety it is recommended to disconnect the negative cable of the vehicle's battery before proceeding with the installation. (Note: This may result in the loss of programmed radio stations from your stereo, and require you to reset them once the battery is reconnected)
- Mount the HV70M ignition unit. A recommended location for pickup trucks is on the passenger inner fender. Depending on the options available for vans, consider areas such as the cowl under the windshield. The kit is supplied with special self-drilling sheet metal screws. Due to the curve of the inner fender, it may only be possible to use 3 screws to fasten the unit. This mounting is fine as long as the unit is secure.
- Locate the distributor at the back of the engine. Remove the stock coil lead that runs from the distributor's center terminal to the stock ignition coil (retain this lead in the event you ever wish to return the vehicle to stock condition).
- Install the Aurora coil lead supplied with the ignition kit. Notice that one end of the lead has a short profile boot; this end goes onto the distributor (center terminal). The other end with the longer profile boot attaches to the HV70M. Note: if you have the early style distributor with the female cap, please install the "conventional boot and terminal kit" supplied in the ignition kit. Carefully route this coil lead away from sharp objects, or areas that will get substantially hot (such as exhaust manifolds or EGR tubes). It is also highly recommended to avoid bundling this lead with other wiring harnesses on the vehicle. You may however follow heater hoses if desired and attach with tie wraps (do not over tighten). Leave a little slack in the lead to allow for engine movement under load. A positive click should be heard or felt when installing this lead onto both the distributor and HV70M (this will be the double spring lock terminal properly seating).
- Plug the universal harness into the HV70M ignition. For vehicles with the stock ignition coil mounted on the firewall, separate the red and black wires and temporarily place to the side. Route the remaining 3 wires and loom over to the stock ignition coil. For vehicles with the stock ignition coil on the front passenger side of the engine, route the whole harness toward the stock ignition coil. Secure the harness along the way while providing clearance away from very hot objects (as with the coil lead). However, do not route this harness next to the coil lead, although it may run next to other vehicle harnesses. Secure this harness as necessary with tie wraps.
- If the vehicle is equipped with an aftermarket tachometer, the green wire from the tachometer may need to be disconnected from its present location and connected to the Aurora green wire. The installation kit has q-tab connectors for this purpose. If this wire is not needed, insulate and tuck back into the loom. If the stock coil is located on the firewall, remove each wire(s) from the coil terminals while marking their polarity (coil is marked with "+" and "-") Connect the blue Aurora wire to the wire(s) taken from the positive side of the stock coil. Connect the yellow Aurora wire to the wire(s) taken from the negative side of the stock coil. Insulate any exposed connections and secure the wiring with tie wraps. For vehicles with the stock coil located on the front passenger side of the engine, unplug the 2-wire connector from the bottom of the stock coil. Install a red female q-tab connector tap on each of the gray and green/orange stripe wires from the stock coil harness.

- Trim to length and strip each of the yellow, and blue Aurora wires. Crimp one of each of the red male fully insulated q-tab terminals to each of these wires. After the crimps are complete, inspect the front of the terminal to ensure the inner tab is centered in the insulation sleeve.
- Plug the blue Aurora wire into the red tap connector located on the stock green/orange striped wire. Plug the yellow Aurora wire into the red tap connector located on the stock gray wire.
- Secure the wiring of both the Aurora harness and stock coil connector harness together.
- Route the remaining red and black Aurora harness wires toward either the alternator or battery for final power connection. For convenience, power connection may be made at the back of the alternator as long as the vehicle is equipped with a battery isolator, commonly used in RV applications. If battery isolator equipped, power connections must be made at the starting battery only. If applicable, the red Aurora harness wire may be connected to the output power stud on the back of the alternator using a ring terminal supplied in the kit. The black Aurora harness wire may then be connected to the ground stud (or other good ground) on the alternator with another supplied ring terminal. If battery connection is necessary, connect the red Aurora wire to battery "+" with a ring terminal, and the black Aurora wire to battery "-" or good ground.
- You may now reconnect the battery "-" cable, then do a final visual inspection of wire routing to ensure all is secure.

**Important Note: Ensure the factory body ground wire, which runs from the negative side of the battery to a body panel such as inner fender or radiator support, is in place, and in good condition. Failure of this wire can result in poor performance or eventual ignition system damage.**

- The engine is ready to be started.

**Performance Tip: On these vehicles you may re-gap the standard type spark plugs up to 0.060". It is also highly recommended that your plug wires also be magnetic suppression type such as Aurora's Super Mag Plus premium wire line. Aurora recommends using the same type of spark plug as factory original. The use of platinum spark plugs should only be used if they were original equipment.**

# Aurora HV70M Installation Instructions

## Easy Install Tips

### Ford Pickups and Vans 1970-2004 4.9L, 5.0L, 5.8L, 7.5L

- For safety it is recommended to disconnect the negative cable of the vehicle's battery before proceeding with the installation. (Note: This may result in the loss of programmed radio stations from your stereo, and require you to reset them once the battery is reconnected)
- Mount the HV70M ignition unit. A recommended location for pickup trucks is on the passenger inner fender. Depending on the options available for vans, consider areas such as the cowl under the windshield. The kit is supplied with special self-drilling sheet metal screws.
- Locate the distributor at the front (or on side for the 4.9L) of the engine. Remove the stock coil lead that runs from the distributor's center terminal to the stock ignition coil (retain this lead in the event you ever wish to return the vehicle to stock condition).
- Install the Aurora coil lead supplied with the ignition kit. Notice that one end of the lead has a short profile boot; this end goes onto the distributor (center terminal). The other end with the longer profile boot attaches to the HV70M. Note: if you have the early style distributor with the female cap, please install the "conventional boot and terminal kit" supplied in the ignition kit. Carefully route this coil lead away from sharp objects, or areas that will get substantially hot (such as exhaust manifolds or EGR tubes). It is also highly recommended to avoid bundling this lead with other wiring harnesses on the vehicle. You may however follow heater hoses if desired and attach with tie wraps (do not over tighten). Leave a little slack in the lead to allow for engine movement under load. A positive click should be heard or felt when installing this lead onto both the distributor and HV70M (this will be the double spring lock terminal properly seating).
- Plug the universal harness into the HV70M ignition. Separate the red and black wires and temporarily place off to the side. Route the remaining 3 wires and loom over to the stock ignition coil.
- If your stock coil is the conventional round style, remove the stock harness by removing the large half round connector. Locate the printing on this connector that says "TACH", this is the negative side of the coil, while the remaining lead is the positive side. Install a blue female q-tab connector tap on each of these wires. Trim to length and strip each of the yellow, and blue Aurora wires. Crimp one of each of the red male fully insulated q-tab terminals to each of these wires. After the crimps are complete, inspect the front of the terminal to ensure the inner tab is centered in the insulation sleeve. Plug the yellow Aurora wire into the blue female q-tab connector tap on the negative stock harness wire. Plug the blue Aurora wire into the blue female q-tab connector tap on the positive stock harness wire.
- If your stock coil is the rectangular epoxy filled coil, remove the rectangular 2-wire connector that is located opposite the stock coil tower. Trim to length and strip each of the yellow, and blue Aurora wires. Crimp a red male non-insulated q-tab terminal to each of these wires. Depending on the chassis, color codes for the stock coil connector may be different. The easiest way to determine polarity is to face the front of the connector (end that plugs into stock coil) with the locking tab facing up. The left-hand terminal is positive and the blue Aurora harness wire plugs into this point. The right-hand terminal is the negative side and the yellow Aurora harness wire plugs into this point. Note: If the polarity is incorrect, the vehicle will not start, and no damage will occur to the HV70M, to correct, simply reverse the blue and yellow wires.

- If the vehicle is equipped with an aftermarket tachometer, the green wire from the tachometer may need to be disconnected from its present location and connected to the Aurora green wire. The installation kit has q-tab connectors for this purpose. If this wire is not needed, insulate and tuck back into the loom.
- Secure the wiring of both the Aurora harness and stock coil connector harness together.
- Route the remaining red and black Aurora harness wires toward the starter solenoid (located on the passenger fender near the battery). It is preferred to connect to the starter solenoid, which will avoid the possibility of connection problems from battery terminal corrosion.
- Cut the red Aurora harness wire to length, strip and crimp on a 3/8" ring terminal. Cut the black Aurora harness wire to length, strip and crimp on a 1/4" ring terminal.
- Remove the nut from the "battery side" of the starter solenoid and install the red Aurora wire's ring terminal. Ensure that all other factory wires from this terminal are in place prior to replacing the nut. Do not over tighten or solenoid damage may occur. Remove one of the 3 mounting screws from the solenoid, and secure the black Aurora wire's ring terminal to this point. Ensure this mounting screw tightens up securely otherwise choose another one.
- You may now reconnect the battery "-" cable, then do a final visual inspection of wire routing to ensure all is secure.

**Important Note: Ensure the factory body ground wire, which runs from the negative side of the battery to a body panel such as inner fender or radiator support, is in place, and in good condition. Failure of this wire can result in poor performance or eventual ignition system damage.**

- The engine is ready to be started.

**Performance Tip: On these vehicles you may re-gap the standard type spark plugs up to 0.060". It is also highly recommended that your plug wires also be magnetic suppression type such as Aurora's Super Mag Plus premium wire line. Aurora recommends using the same type of spark plug as factory original. The use of platinum spark plugs should only be used if they were original equipment.**

# Warranty

Aurora warrants its HV70M series ignition systems against defects in materials and workmanship for a period of one year from date of purchase. During this period, and upon evaluation, the unit will be repaired or replaced at the sole discretion of Aurora Electronics Ltd. This warranty does not cover consequential damages, installation/removal charges, or shipping costs. This warranty will become void if the unit has been altered, incorrectly installed, physically damaged, or abused.

For technical assistance:

Call 604-855-7705

Fax 604-850-3839

Email [support@auroraelectronics.com](mailto:support@auroraelectronics.com)