



IDIDIT COLUMN ELECTRA-STEER KIT 8051460

Full refund will NOT be granted to any kits that are damaged, scratched, or altered in any fashion.

ELECTRA-STEER



BEFORE YOU START PLEASE READ!

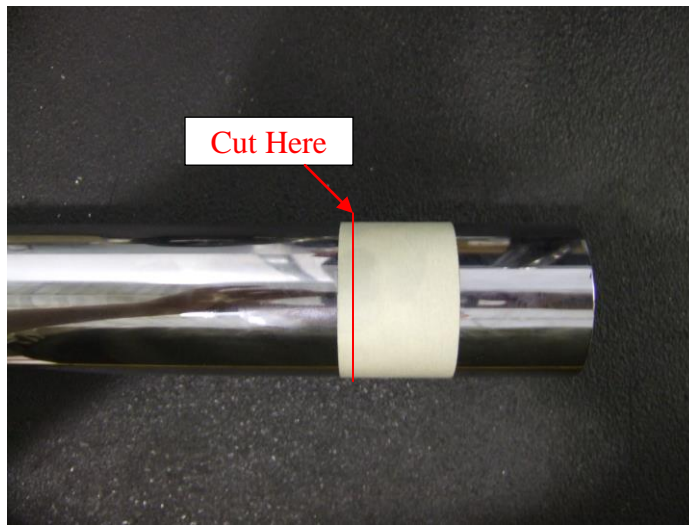
Designing steering systems requires an understanding of steering function and design. If you are inexperienced it is recommended that you seek professional help before beginning a steering project.

- The Unit is intended for normal highway use in vehicles not exceeding 2800 lbs (1200 kg).
- The column MUST be firmly anchored. All Torque required to steer the vehicle will be transferred through the column mounts.
- The unit CANNOT be mounted near a heat source, exposed to excessive moisture/water, or submerged under water.
- All Steering Shafts, Joints, U-Joints, and Connectors must be designed to withstand the full load of the steering system to which the electric motor is being installed.
- The Wiring, Module, and Motor must not be tampered with. Any modification to the Module or Motor will void any existing or implied warranties, if so offered.
- **FAILURE TO ADHERE TO THE ABOVE WARNINGS MAY RESULT IN SERIOUS INJURY OR DEATH. Maval Manufacturing and Unisteer Performance IS NOT RESPONSIBLE FOR IMPROPERLY INSTALLED ELECTRIC STEERING SYSTEMS.**

Installation Instructions for Electric Steering Column:

NOTICE: YOU MUST SECURE YOUR STEERING COLUMN AT FIREWALL AND DASHBOARD DROP. INJURY MAY RESULT FROM IMPROPER INSTALLATION

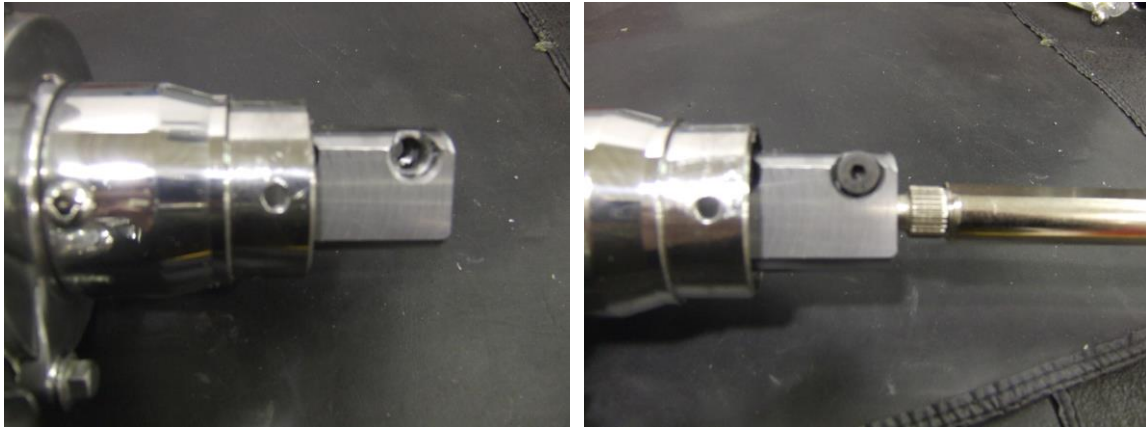
1. After removing your stock steering column assembly, you can install and mock up the location of your new column. To do this you must mount the upper part of the column with a steering drop of your choice {not included} mounted securely to the dash assembly.
2. You must also mount the lower part of the column tube securely at the firewall using a mount plate and clamp or similar part.
3. Once the mock up is complete and you're happy with the position of the column you can look to see where your final length on the column tube and shaft need to be.
4. After you know where you need to cut the shaft and tube. Place a piece of masking tape over the column tube to protect it and with a pipe cutter or similar tool cut the tube where you marked it.



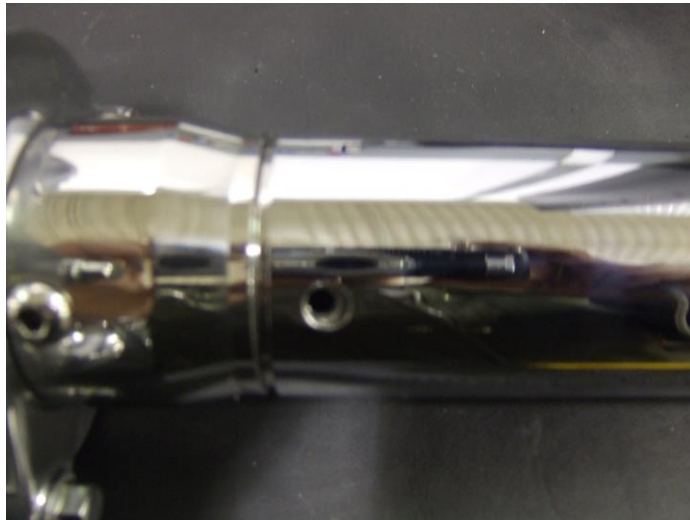
5. Once the tube is cut, you can now cut the final length on the shaft. NOTE: Make sure to leave enough of the shaft hanging out of the tube to capture a u-joint. Keep in mind the tube gets a plastic bearing installed in it to hold the shaft in place.
6. Once you have the shaft cut to length you will need to grind a notch in it for the u-joint bolt to go through. To do this, slip the u-joint over the shaft and make it flush with the inside of the joint. With a marker make a dot on the shaft where the bolt hole on the u-joint goes through.



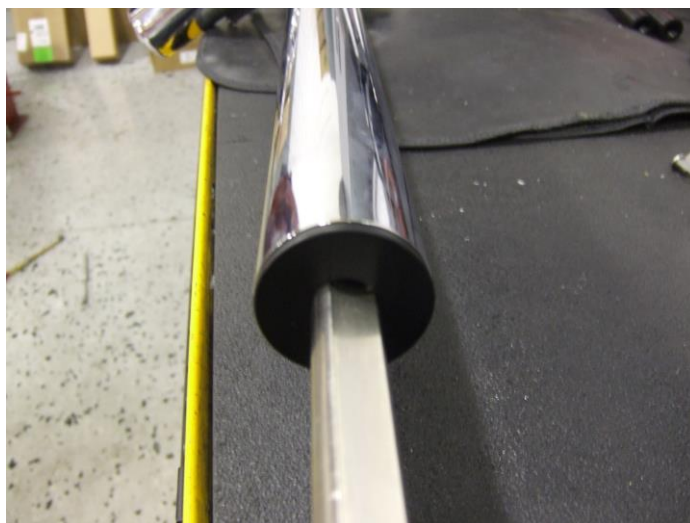
- Next remove the shaft and make the notch with a grinder wheel in the spot you marked earlier. Install the shaft into the lower coupler on the motor and tighten the pinch bolt to 30 ft lbs.



- Next install the column tube onto the lower collar of the motor and secure it to the motor using the supplied hardware.



- Next install the plastic bushing in the lower part of the column tube. To do this push the bushing over the shaft and into the tube and tap it down by evenly walking around the edge with a small hammer. Once it's seated you can drill a 1/8" hole through the column tube and just slightly into the plastic bushing. You can secure it with the supplied roll pin by tapping it into place.



- Connect the rest of your joints and shafts you need to adapt to your application. Remember to make sure you have secured your column to the firewall and your dash. Improper installation will cause failure and possible damage. Make sure all hardware is installed and torqued to spec.

WIRING YOUR ELECTRA-STEER KIT:

1. The heavy red wire needs to go to a constant positive 12 volts. We normally go to the battery but any constant source will work.

Note: The 30 amp slow blow fuse needs to be installed in line with this wire to prevent damage or fire.

***Failure to do so may result in a short circuit or malfunction.**

2. The heavy black wire needs to go to a constant ground. Again we prefer the battery but a good and clean ground is fine.

****It is strongly suggested that all connections made be soldered & taped to insure integrity. Shrink tube is also supplied to seal your connections.***

3. The white wire gets a single spade connector put on it and is used for diagnostic purposes, so it needs to stay in an accessible spot.
4. The purple or brown wire gets a single spade connector put on it and is used for diagnostic purposes and also needs to stay in an accessible spot.

Note: The White & Purple or Brown wires are used for trouble code reading and clearing. They need to be located in an accessible place. They do not get connected to anything.

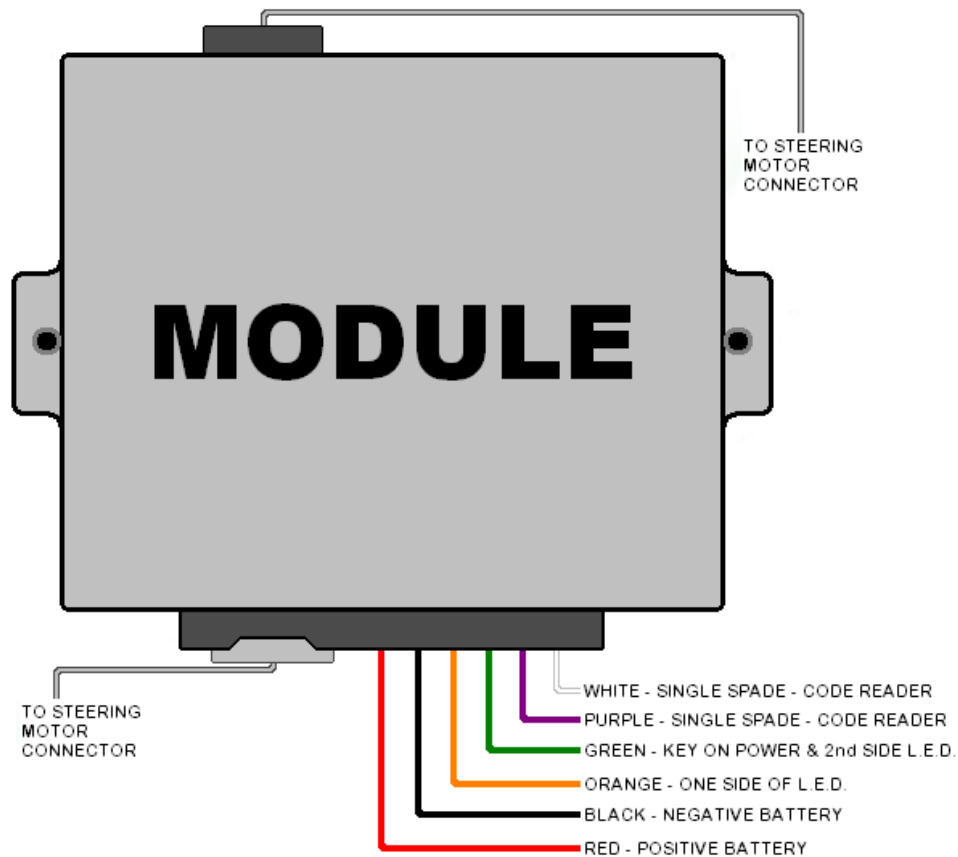
5. The orange wire goes to one side of the LED light.
6. The yellow and blue wire is not used for this application. It may be trimmed back and taped into the harness.
7. The green wire is connected to a key on power source usually we use the ignition switch lead. The other side of the LED also goes to this wire and may be spliced in anywhere in this wire.

Note: Be sure to leave the orange wire and the green wire long enough to go through a hole in the dash where you want the light located.

8. Make sure your connections are good and your hardware is tightened to spec and there is no binding in your steering linkage.
9. Drill a ½ inch hole where you want the LED to be. Run your orange and green wires through the hole and wire in your light. After your connection is made simply push the LED into the hole until it snaps in place.
10. Install your steering wheel & be sure your wheels are straight and that you install your steering wheel straight.
11. When you are done, you can turn the ignition key to the on position. The LED will light for about 5 seconds. This is a normal function. When the light goes out your steering should work. Verify that nothing is binding and there is no trouble light. Each time the key is cycled the LED will light for the 5 seconds, this is a prove out, and is normal.

The ELECTRA-STEER unit is designed to “shut down” if it becomes overheated reverting the vehicles manual steering capabilities.

If the unit ceases operation after extensive use or in an extreme environment it will automatically resume its normal function once it has cooled.



In some cases the purple wire maybe substituted for a brown wire!!

The Electra-Steer Power Steering Assist Unit is intended to be used in accordance with all safety recommendations of the original manufacturer of the vehicle as specified in the Owners Manual. This product is intended for normal operation of the vehicle as specified by the original manufacturer. Maval Manufacturing Inc. and Unisteer Performance Products recommend that this product should not be used in extreme environmental conditions or in competitive activities. Maval Manufacturing Inc. and Unisteer Performance Products do not accept liability for any malfunction, damage, or injury incurred as a result of use of this product in extreme environmental conditions or in competitive activities.

Electra Steer Diagnosis Trouble Code Reading and Code Clearing

1. Verify that your trouble code light is on steady.
2. Next, take your purple or brown wire and connect it to a good clean ground. You will have to make sure it is a solid ground to get the LED to blink or flicker and you may have to use a jumper wire to extend the wire's length. Once you see the LED flicker or blink wait for LED to start blinking a code.
3. The light will flash in a sequence like 1 and then 123. This code flash would be interpreted as a code 13. The code will repeat itself 3 times and then go to the next code if there is one in the system. You need to wait until all the codes are read and recorded.
4. Once you know what the codes are you can use this chart to tell where or what the problem may be.
5. Once you have determined what the problem is and make the necessary repairs, you can proceed to clear the codes by running a jumper wire from the white wire with the single spade connector on it to a good ground.
6. Verify the ignition is off. Place the white wire to ground. Turn key on, wait 5 seconds and the light should go out. When the light goes out turn off ignition and remove jumper wire. Once all repairs are made turn ignition on and see that light proves out normally. This is all there is to it.

Trouble Code	Problem	Diagnosis
41-42-43-44-45-51	Electric motor Malfunction	Replace Motor Assembly
11-13-14-15	Torque Sensor	Replace Motor Assembly
52-54-55	ECU Malfunction	Change Computer
22	No Engine Input	Change Computer
21-23-24	No Speed Signal	Change Computer
12	Wiring or Electrical	Verify 12 volts at green wire. Verify good ground. Soldier all connections. Check for bad connections or broken wires.

We welcome your suggestions & comments to make this or any of our installations better! If you have any questions/problems regarding this product please contact us at:

UNISTEER *Performance Products*

1555 Enterprise Parkway

Twinsburg OH 44087

800-338-9080

WWW.UNISTEER.COM

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