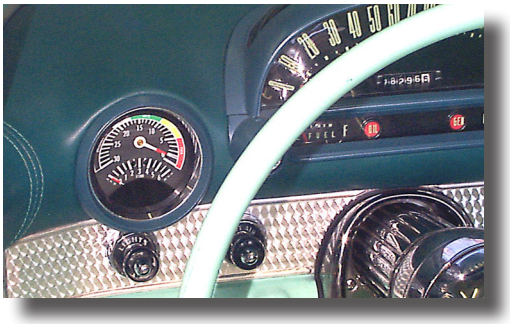
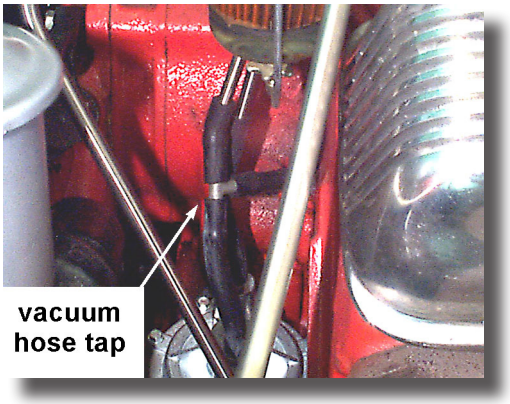
Thank you for purchasing our tachometer/vacuum gauge. This kit has been designed for easy installation to replace the original tachometer in 1955 or 1956 Ford Thunderbirds. This kit provides an alternative to costly tach drive distributors or repairs to original mechanical tachometers. Additionally the vacuum gauge can be valuable in diagnosing a variety of problems. At the end of these directions are some notes to help you understand vacuum readings. Questions or problems, please call our technical assistance line at 740/622-9700.



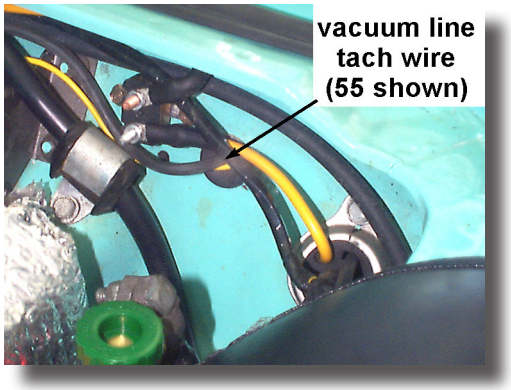
This kit contains:
Tach & vacuum gauge unit with twin light kits installed
Retainer bracket with two brass knurled nuts
4 pieces 1/8"X1/8" all aluminum rivets (3 used)
Female wire terminal for lighting connection
Y adapter fitting for vacuum tubing
Vacuum tubing
Tach wire that runs from coil to gauge unit
Zip ties
Installation directions



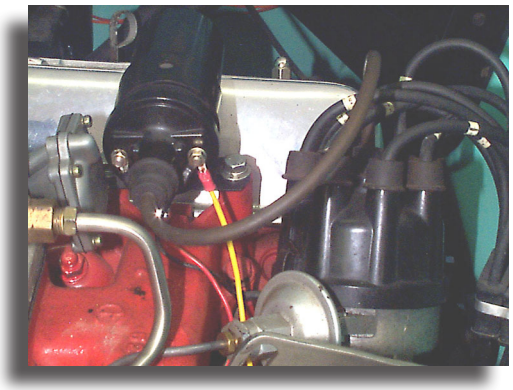
1. Disconnect battery.

2. Remove original tach by removing the two retaining nuts (3/8" wrench) and retainer bracket. Tach assembly can now be pulled out from the front of the dash. Remove light socket form back of tach.

3. Remove original tach cable assembly to ensure that loose cable does not short on any electrical circuits.



4. Remove vacuum line from outside port of fuel pump. (port closest to driver inner fender apron.) Remove rubber hose from vacuum line. Cut a ½" section from the center of the rubber hose. Install Y fitting into the rubber hose where you removed the ½" section. Reinstall ¼" rubber vacuum line and ¼" steel vacuum line. Install new 1/16" rubber vacuum line on the Y fitting. Route this vacuum line along with the two steel vacuum lines. Use zip ties to secure the new vacuum line to the steel lines where appropriate. Make sure that the new vacuum line does not touch any hot parts like the exhaust manifold or exhaust manifold heat shields. Continue to route the new vacuum line up behind the hood release bar and over the starter solenoid and through the tach cable grommet on firewall.



5. Install the tach hot wire to the coil on the same terminal the distributor wire is connected. Route the tach wire through the firewall via the tach cable grommet with the vacuum line.

6. Remove the three screws retaining the tach bezel to tach. Remove the original tach and face from the bezel. Open up the three holes in the tach bezel with a 1/8" drill bit. Insert new gauge assembly from the rear of the tach bezel. Install a 1/8" all aluminum rivet in each hole. Note these rivets will not actually go into any part of the new gauge assembly. They will simply act as a stop to keep the new gauge in the tach bezel. The gauge assembly will be loose in the tach bezel until the final rivet is installed. Make sure that gauge assembly is not crooked or upside down in the bezel before installing the final rivet.

7. Cut the light socket from the wire that was installed on the original tach. Install the female terminal on the end of this wire.

8. Through the hole in the dash, hook up the light wire and the tach wire coming from the coil. On 12 volt cars the tach wire connects to the #2 terminal. On 6v positive ground cars, the tach wire is attached to the #5 terminal. Install the vacuum hose the gauge.

9. Install the gauge/bezel assembly in the dash from the front and install the retainer bracket. Be sure to install the gauge ground terminal and also the original gauge ground terminal under one of the brass nuts.

10. Reconnect battery. Start engine and check gauge operation and check to ensure there are no vacuum leaks.

Understanding vacuum gauge readings

Condition	Observation	Indication
Idle	Reading steady between 17 and 21	Normal
Rapid open and close throttle	Wide swing in reading 25 to 2	Normal – rings & valves OK
Idle	Steady but low reading	Poor rings or oil
Rapid open and close throttle	Wide swing in reading going to *zero*	Poor rings or oil
Idle	Hand drops occasionally 4 divisions	Sticky valve
Idle	Hand drops regularly several divisions	Burnt valve
Idle	Hand drops 2 or more divisions when valve should be closed	Leaky Valve
Idle	Fast vibration between 14 and 19	Loose valve guides
High RPM	Hand varies from 10 to 22 and has wider variation as RPM Increases	Weak valve springs
Idle	Hand reads steady from 8 to 15	Late valve timing
Idle	Hand reads steady from 14 to 17	Late ignition timing
Idle	hand floats slowly between 14 and 16	Plug gap too small or points not synchronized (dual)
Idle	hand reads below 5	leaky intake or carb gasket
Idle	hand floats regularly between 5 and 19	leaky head gasket between cylinders
Idle	High reading at first. Breaks to zero and builds back to 16	Choked muffler
Idle	Hand floats slowly between 13 and 17	Carb out of adjustment