4 wire

PRO TACH® TACHOMETER INSTALLATION INSTRUCTIONS

PRO TACH® V, 5" Memory Tachometer Part No. 680, and
PRO TACH® VI, 5" RPM Limiting Tachometer Part No. 681.

The PRO TACH® Tachometers may be installed on any **+12 volt** ignition on 4 cylinder, 6 cylinder (even fire only), and 8 cylinder applications.

SET CYLINDER SELECTOR ADJUSTMENT

1. Remove the three nuts that hold the shock mounts to the tach bracket and set the tach bracket aside.
2. Unscrew the three shock mounts from rear of the tach housing.
3. Gently pull the tach housing from the tach body. It may be necessary to push the four tach leads into the tach housing for enough slack to allow access to the rear of the tach body.
4. Move all three cylinder select switches to the "off" position. Switch #1 is 4 cyl., switch #2 is 6 cyl., switch #3 is 8 cyl. Choose the switch that matches the number of cylinders of the engine and move it to the "on" position. The other two switches remain in the "off" position.
5. Gently push the tach body into the tach housing. It may be necessary to pull the four tach leads through the tach housing to eliminate extra slack. Make sure these four wires are not pinched or cut.
6. Reinstall the three shock mounts (the side with the rubber surface goes toward the tach housing) on the rear of the tach housing. The tach bracket is not reinstalled at this time.

MOUNTING THE PRO TACH® TACHOMETER

Select a location to mount the tach that does not interfere with the normal operation of the vehicle. The tach mounting bracket may be clamped to a steering column or bolted to a flat surface. Hold the tach in that location and inspect it for obstructing such things as vision, turning the steering wheel, operating gear shifter or turn signals, blocking the view of other important instruments and warning signals.

MOUNT THE TACH BRACKET: Clamp the tach bracket to the steering column, or mark the holes (using the tach bracket as a template), drill the holes, and bolt the tach bracket to the flat surface.
Set the tach in place on the tach bracket with the tach face aligned in the desired position and install the three nuts that hold the shock absorbing mounts to the tach bracket.

NOTE: The PRO TACH® V and VI may also be mounted in a flat dash panel:
It may be mounted into a 4-1/4" diameter hole with at least 2-1/2" rear spacing. Repeat steps 1, 2, and 3 from "SET CYLINDER SELECTOR ADJUSTMENT (above)" and pull the four tach leads from the tach housing. Set the four tach leads and tach body into the hole in the dash panel. From behind the dash panel, feed the four tach leads through the tach housing until the tach housing rests against the dash panel. Reinstall the three shock mounts (the side with the rubber surface goes toward the tach housing) on the rear of the tach housing.
Also, the PRO TACH® V and VI may be mounted directly to the dash panel surface that has at least 1/2" rear spacing. Using the tach bracket as a template, drill three evenly spaced 3/16" holes (120° apart), and drill one 3/8" hole in the center. Make sure the edge of the 3/8" hole is not sharp to prevent cutting into the four tach leads (or use a grommet). Feed the four tach leads through the center hole. Set the tach's three shock mount studs through the three evenly spaced holes. Install the three nuts onto the three shock mount studs behind the dash panel.

ELECTRICAL WIRING

Route the four tach leads in such a manner that each does not come in contact with extreme heat, sharp objects, or moving devices such as fans, belts, linkages, etc. Connect the four leads as follows:

RED WIRE:
The RED WIRE is power/voltage for the tach. Connect it to a +12 volt source on the fuse box that turns "on" when the ignition is "on."

BLACK WIRE:
The BLACK WIRE is for ground. Connect it to any good ground such as the metal framework of the dash, engine block, or chassis.

WHITE WIRE:
The WHITE WIRE is power/voltage for the light inside the tach. It may be connected to a +12 volt source on the fuse box that turns "on" when the running lights and headlights are turned "on," or it may remain disconnected if the light inside is not needed.

GREEN WIRE:
The GREEN WIRE is the ignition sensing lead.

STANDARD POINT & ELECTRONIC IGNITION: Connect the GREEN WIRE to the negative (-) terminal on the coil. On ignitions equipped with a terminal that is marked "TACH, TACH OUTLET, or TACH TEST," connect the GREEN WIRE to this terminal.

HyFire® I, II, and III Ignition Controls: Connect the GREEN WIRE to the (-) terminal on the coil or terminal marked "COIL (-)" on the HyFire® Ignition Control.

HyFire® IA, and IIIA Ignition Controls: Connect the GREEN WIRE to the negative (-) terminal on the coil.

HyFire® IIA Ignition Controls: Connect the GREEN WIRE to the negative (-) terminal on the coil.

Delco HEI with coil mounted inside cap: Connect the GREEN WIRE to the terminal on distributor cap that is marked "TACH."

Ford and Delco HEI with external coil: Add the GREEN WIRE where the slice connection is made between the black wire from HyFire® harness and HyFire® adapter.

HyFire® IV, V, VII, X, or other aftermarket capacitive discharge ignition controls: Connect the GREEN WIRE to the "TACH" terminal of the ignition control.

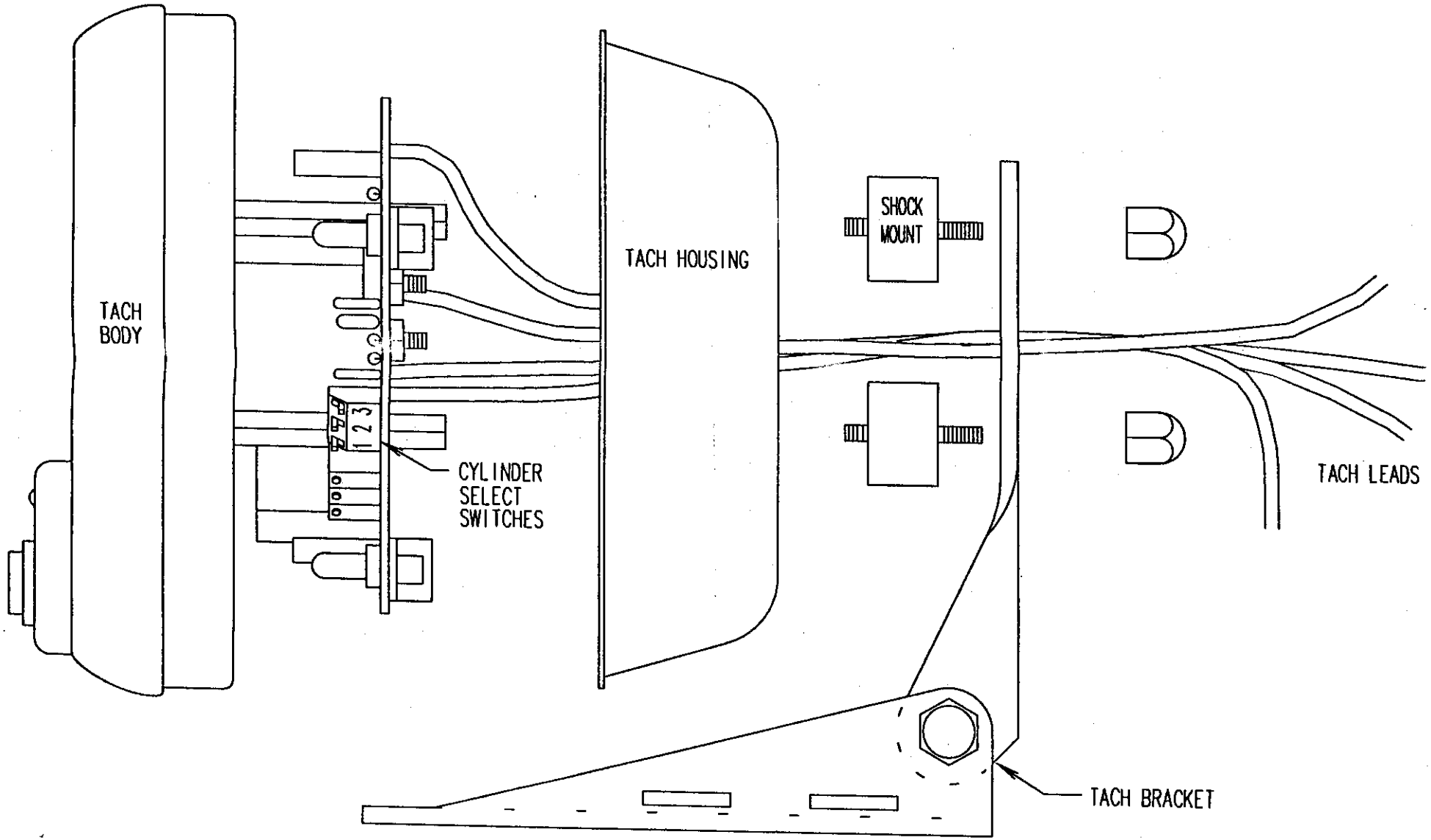
ALL other aftermarket inductive storage ignition controls: Connect the GREEN WIRE to the trigger wire or trigger terminal of the ignition control.

NOTE - PRO TACH® VI: The proportional controller that limits top end rpm will not function. Turn the LIMIT RPM knob gently clockwise slightly past 11,000 to prevent the RPM limiter from interfering with the tach's other functions.

SPECIAL FUNCTIONS

PRO TACH® VI:
The front panel control enables the driver to select a desired rpm at which time a bright indicator light flashes as the engine reaches this rpm. This feature can also be used as a signal to indicate when to shift, or an overspeed warning while cruising. The front panel control also enables the driver to select the desired rpm at which to limit engine rpm. The proportional controller limits top end rpm by power reduction, not sudden engine cutout, by removing selected ignition pulses. This technique prevents harmful fuel buildup.
NOTE: The proportional controller that limits top end rpm will not function on ignitions equipped with a capacitive discharge ignition control. Turn the LIMIT RPM knob gently clockwise slightly past 11,000 to prevent the RPM limiter from interfering with the tach's other functions.

PRO TACH® V:
The front panel control has a wide rocker switch and two lights. Select recall to view the highest rpm the engine ran by pushing the bottom of the rocker switch in. A yellow light flashes indicating that the recall memory circuit has been activated. This recall memory circuit will last for several hours even after power is turned off, or until the erase circuit is activated. Select erase to erase recall memory by pushing the top of the rocker switch in. A red light flashes telling you that erase circuit has been activated.


TACH
BODY
TACH HOUSING
SHOCK
MOUNT
CYLINDER
SELECT
SWITCHES
1 2 3
TACH LEADS
TACH BRACKET

Installation Instructions

5 WIRE

STANDARD AND ELECTRONIC IGNITION

MALLORY'S R.P.M. LIMITING TACH is a three function system:

1) It is a tachometer which reads to 11 thousand RPM with 2% full scale accuracy.

2) It provides an adjustable shift point indication. The desired shift RPM is set with the front panel control, and when this RPM is reached a bright light comes "ON." The shift light is sufficiently bright so that one need not be looking at the tach to make accurately timed shifts. The light may also be used for an overspeed warning.

3) It is an RPM limiter. The maximum safe RPM is set with the front panel adjustment. When this RPM is reached, the ignition is interrupted to prevent over-revving and destruction of the engine. The spark is interrupted in a "proportional control" manner by removing first one of many ignition pulses and increasing the removal of spark firings as the RPM limit is approached. Thus, the RPM is limited by reducing power rather than "shutting off" the engine. This prevents harmful fuel build-up with its accompanying backfiring.

The tachometer can be rotated 360 degrees within the outer housing, allowing the instrument to be mounted in any position.

MALLORY'S R.P.M. LIMITING TACH is very easily installed on any negative ground, eight cylinder automobile. (For 4 and 6 cylinder cars, a 4 or 6 cylinder model is available.)

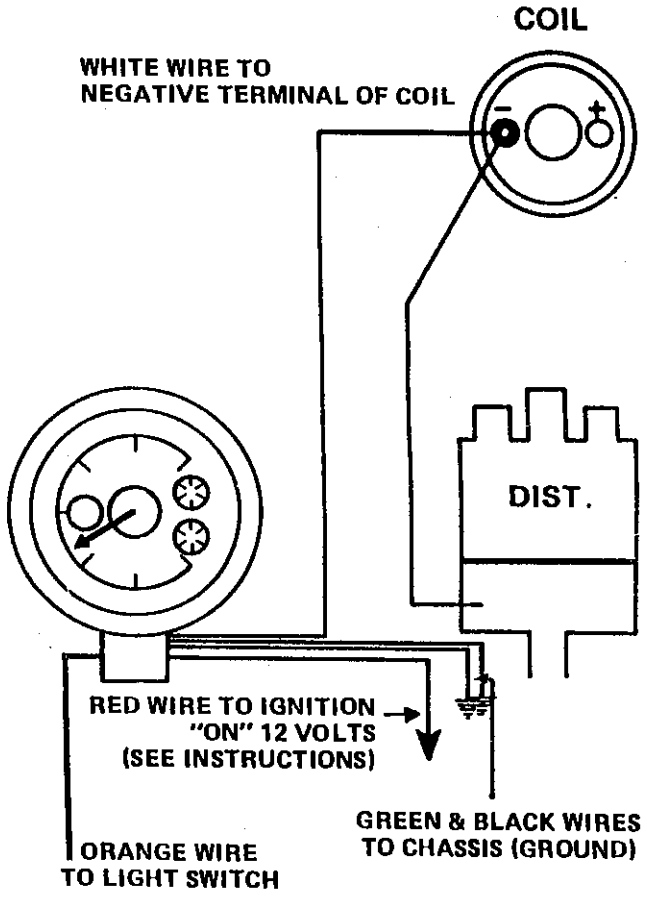
The "WHITE" wire is the ignition sense and disable lead. This wire goes to the points which are easily accessed at the wire connecting the points and the coil. Loosen the nut on the coil which attaches the wire going to the points. Insert the "WHITE" wire and retighten nut. On electronic ignitions the white wire is connected to the negative side of the coil or to the tach hook-up.

The "GREEN" and "BLACK" wires are the ground leads. They may be attached to any convenient grounded screw under the dash panel.

Power is applied to the unit through the "RED" wire. This wire should be attached to a point in the electrical system that is switched "ON" by the ignition switch. This is easily done at the fuse box. (The wires that go to the radio or instruments are the best.)

The "ORANGE" wire is connected to the instrument lamp terminal of the light switch.

WARNING: MALLORY'S R.P.M. LIMITING TACH is not recommended for use with multiple-spark ignition systems.



APPLICATIONS

No. 657 for 8 cyl. Standard and Electronic Ignition
No. 658 for 6 cyl. Standard and Electronic Ignition
No. 659 for 4 cyl. Standard and Electronic Ignition

Mallory IGNITION

NOTE: NUMBERS ON SHIFT AND LIMIT DIAL ARE FOR REFERENCE ONLY. ACCURATE SETTING OF SHIFT LIGHT AND LIMIT RPM SHOULD BE DONE IN CONJUNCTION WITH TACHOMETER READING.

FORM 40923

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