

## Water Leaks — Cowl Top To Side Panel Joints

### 1965-66 Mustangs

Reports from the field indicate water leaks occur at the cowl top to cowl side flange joints due to inadequate sealing of the joints and that dealers remove the front fender to gain access to seal these areas. Investigation into this problem has shown that access to seal the joints can be obtained by removing the splash shields and that fender removal is not required.

To eliminate water leaks in this area on the 1966 Mustang, effective February 18, 1966, the length of the braze has been extended an additional  $\frac{3}{4}$ " in the area where sealer application is difficult, followed by complete application of sealer over the braze and the cowl top to cowl side panel weld flange.

Dealers encountering customer complaints relative to water leaks in this area should add liquid butyl (Part Number C5AZ-19554-A) or caulking cord (Part Number AB-19560-A) to the affected areas as outlined in the following procedure and accompanying sketches.

1. To gain access to the cowl top and cowl side panel weld flanges, remove the front wheel and splash shield. The splash shield is retained with five screws.
2. Apply liquid butyl or caulking cord along the flange areas sufficiently to seal any open seams. See illustration.
3. Check the plug buttons in this area and seat them if necessary. Cover the edges with liquid butyl to seal.
4. Water test vehicle to assure adequate sealer application.
5. Reinstall the splash shield and wheel.

## Ignition System Problem Diagnosis

### 1965-66 Mustangs

The percentage of replaced ignition system components which do not exhibit a defect indicates difficulty is being experienced in diagnosing ignition system problems. Trial and error replacement methods often result in repeat complaints, while a systematic procedure is not only quicker and more economical but insures owner satisfaction.

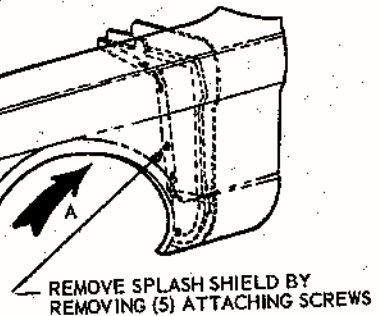
An ignition system problem can be quickly isolated to either the primary (low voltage) or secondary (high voltage) by observing the spark output of the coil. To do this, remove the coil high voltage wire from the distributor cap and hold the end approximately  $\frac{1}{4}$ " from

a ground while cranking the engine. The condition of the spark at this point in the ignition system separates a primary from a secondary ignition system problem. Based on a "bright hot spark" or a "weak or no spark" condition, the following diagnosis procedure will pinpoint the causal ignition system component. Specific circuit tests not included are listed in Section 9-1 of the appropriate maintenance manual.

### BRIGHT HOT SPARK

A bright hot spark indicates the primary (low voltage) circuit and ignition coil are functioning satisfactorily. Perform the following checks to locate a secondary (high voltage) circuit defect.

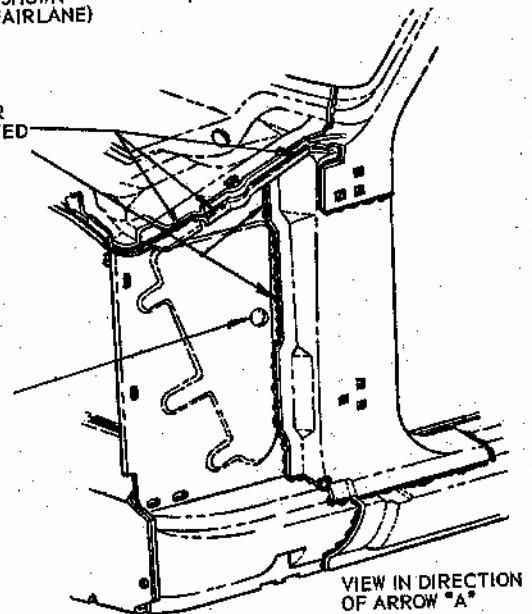
1. Distributor cap — check for electrical leakage (tracking), electrode erosion or a broken carbon button.
2. Rotor — check for visual defects or damage.



LEFT SIDE MUSTANG SHOWN —  
(TYPICAL FALCON, FAIRLANE)

APPLY LIQUID BUTYL (C5AZ-19554-A) OR  
CAULKING CORD (AB-19560-A) TO AFFECTED  
AREA

SEAT THE RUBBER PLUGS IF  
THEY ARE NOT SEATED AND APPLY  
LIQUID BUTYL (C5AZ-19554-A)



Illus. S1068-A — Water Leaks - Cowl Top to Cowl Side — 1965-66 Mustang and  
1966 Falcon, Fairlane — All Models — (Article 841)

3. Spark plug high tension wires — check for continuity/or high resistance with an ohmmeter (10,000 ohms per foot maximum).
4. Spark plugs — check for excessive gap, physical damage or various fouling conditions.

### WEAK OR NO SPARK

A weak or no spark condition indicates a primary (low voltage) circuit problem which can be isolated by the following checks:

1. Ignition points — replace ignition points if:
  - ★ Metal transfer exceeds the specified point gap setting; for example, if the amount of metal transfer exceeds 0.017 inches on an eight cylinder unit.
  - ★ Contact parts such as the rubbing block, tungsten contact discs, moveable arm or stationary bracket are physically damaged or worn.

The Mustang Times/March

★ The moveable arm is sticking or binding at the pivot post.

★ The points are electrically shorted at the pivot point.

★ The voltage drop across the point contacts exceeds .25 volts or an approved commercial tester indicates "high resistance."

(Note: If ignition points are prematurely burnt or eroded, also check primary resistance wire circuit per the next step).

★ Check the voltage drop between the accessory terminal on the ignition switch and the primary (positive) coil terminal with the ignition turned on. Replace the wire if the voltage reading is below 4.5 or above 6.6 volts. If the voltage drop reading is below specifications, coil output should be checked as outlined in Step 4.

2. Condenser — replace the condenser only if:

★ It is "shorted" when checked with an ohmmeter.

★ It has over 1 ohm series resistance at room temperature.

★ It exhibits physical damage.

★ It is found defective on an approved commercial tester.

3. Coil to distributor high voltage wire — resistance as checked by an ohmmeter should not exceed 1,000 ohms per inch.

4. Coil — check coil output on an oscilloscope or approved coil tester.

5. Primary wiring circuit — check the primary (low voltage) circuit between the battery and coil for excessive resistance or an open or intermittent condition as outlined in Section 9-1 of the maintenance manual to insure complete correction.

If this procedure does not reveal a defective component, check related systems for defects which could have similar problem symptoms.

## Heater Core Leak Causes Diagnosed

—1970 Mustang

Heater core leaks in 1970 Mustangs with standard heaters can be incorrectly diagnosed by assuming that any fluid found on the passenger side front floor carpeting is engine coolant.

1. Water on the front floor carpet may be caused by water leaks through the upper cowl panel and can be interpreted as heater core leaks if the fluid is not carefully checked for evidence of anti-freeze solution. Water test the cowl panel and seal any area leaking water.

2. Check to see that the heater hose clamps on the core tubes are tight if the fluid is engine coolant. After tightening the clamps, wipe all fluid from the case and back

plate and recheck for leaks.

3. On units built prior to December 19, 1969, the dripping fluid can be processing oil drippings from the metal back plate of the heater case. Wipe off all the oil and check for core leaks. The processing oil was removed from production December 19, 1969.

## Air Vent Control Binding And/Or Noisy —1971 Mustang

Excessive operating efforts on the Mustang right and left air vent controls is caused primarily by improper operation of the detent clip on the side of the cowl air vent ducts.

The detent clip, when improperly assembled to the cowl air door pivot shaft, will scrape on the outer wall of the duct. This condition can be corrected by installing a new detent clip.

## Carburetor Stalling Or Stumbling During Cold Weather Operation —'70 Mustang (351-2V C Engines)

In the event of stalling or stumbling during the first few (usually less than three) miles of operation on the 1970 Mustang with 351-2V "C" engines, the following carburetor changes should be made:

✓ Reset the choke bimetal cap from 1 notch rich to 3 notches rich.

✓ Reset the fuel level from 13/16" (.810) to 3/4" (.750), wet level.

✓ Change the accelerator pump rod position from the No. 3 hole to the No. 4 hole (top hole) in the accelerator pump overtravel level. (During the summer months this may require resetting back to the No. 3 hole to avoid hesitation when the engine is hot).

✓ Turn idle adjusting screws in (clockwise or leaner) 1/4 turn.

## Excessive Air Leakage In Left Hand Vent Duct

1974 Mustang

Excessive air leakage through the left hand vent duct in the 1974 Mustang may be caused by deformation of the vinyl lip of the damper door. When this condition exists, the vent duct assembly (Part No. D4ZZ-6001935-A) must be replaced.

1. Remove the instrument panel pad. See Group 45, Volume 4, 1974 Car Shop Manual.

2. Disconnect the vent control from the instrument panel (1 screw.)

3. Remove the left register air duct (2 screws) with reference to the 1974 Car Shop Manual — Figure 7, pages 36-01-9.

4. Remove the two vent duct-to-cowl top panel mounting screws, and remove the duct assembly.

5. Remove the control cable from the door crank arm (1 screw.)

6. Install D4ZZ-6001935-A vent duct assembly by reversing the above procedure.


7. Adjust vent control cable at slotted flag on cable near vent door crank arm. Provide 1/8" clearance between knob and face of mounting bracket when door is in fully closed position.

## Window Operating Effort Difficult

High window operating effort on 1971 Mustangs during the last inch of travel is required to insure a good seal to prevent wind noise and water leaks. Any adjustment attempts to reduce this high effort could result in wind noise and water leaks, therefore, no changes should be made unless a mechanical deficiency is found.

Information for "The Troubleshooter" is taken from Ford Motor Company Technical Service Bulletins issued to dealer service departments

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