



## GENERAL MOTORS CRUISE MASTER (Cont.)

### ELECTRICAL TEST - "RESUME" SYSTEM

1) Check all fuses and connections. Adjust brake release valve and switch. Disconnect switch harness 3-wire connector at lower end of steering column. Check switch continuity using continuity chart.

#### "RESUME" SWITCH CONTINUITY CHART

| Button    | Slider | Continuity           |
|-----------|--------|----------------------|
| Released  | OFF    | None                 |
| Released  | ON     | Blu/Brn              |
| Released  | RESUME | Blu/Blk/Brn          |
| Half In   | ON     | Blu/Brn              |
| Full In   | ON     | Blu/Blk              |
| Releasing | ON     | Brn/Blk<br>& Blu/Brn |

2) Disconnect electrical connector at resume valve. With transducer well grounded, connect an ohmmeter between ground and Brown/White wire in main wire harness. Resistance should read 27-31 ohms.

3) Disconnect main wiring harness from transducer. Connect ohmmeter between Dk. Green wire at transducer and Gray/Black wire at resume solenoid. Resistance should be 21-25 ohms. If not, check brake switch operation. If brake switch is okay, repair or replace harness as required.

4) Check for continuity between resume valve ground wire and ground. Repair if no continuity. Reconnect electrical connector at resume valve. With harness disconnected from transducer, connect battery voltage to Dk. Green wire. Resume valve should pull in. If not, replace valve.

5) Check transducer by measuring resistance from Dk. Green wire to ground. Resistance should be 5.3-6.3 ohms. Apply battery voltage to transducer hold terminal. Transducer solenoid should engage, and release upon removal of battery voltage. If not, replace solenoid.

### SERVO & VACUUM

To determine the condition of the diaphragm, remove hose from the servo unit and apply 14 inches of vacuum to the tube opening and hold for one minute. The vacuum should not leak down more than five inches in one minute. If leakage is detected, replace servo. To utilize the engine as a vacuum source, proceed as follows:

1) Disconnect servo bead chain and hose from servo unit, connect engine vacuum directly to the servo fitting.

2) Note position of servo diaphragm. Start engine and note that diaphragm pulls in. Clamp off engine vacuum supply line and check for leakage.

### VACUUM BRAKE SWITCH

The Cruise Master vacuum operated release brake switch and connecting hoses can be checked with the aid of a vacuum pump.

### ADJUSTMENTS

**NOTE** — The components of this system are designed to be replaced should they become inoperative. However, the following adjustments may be made to correct speed drop or increase, or misalignment of brake switch.

### BRAKE AND VACUUM SWITCHES

With pedal fully depressed, push switches into holder until fully seated. Pull pedal back to move switches to proper position. Depress and pull pedal to stop once more to ensure switches are seated in proper adjusted position.

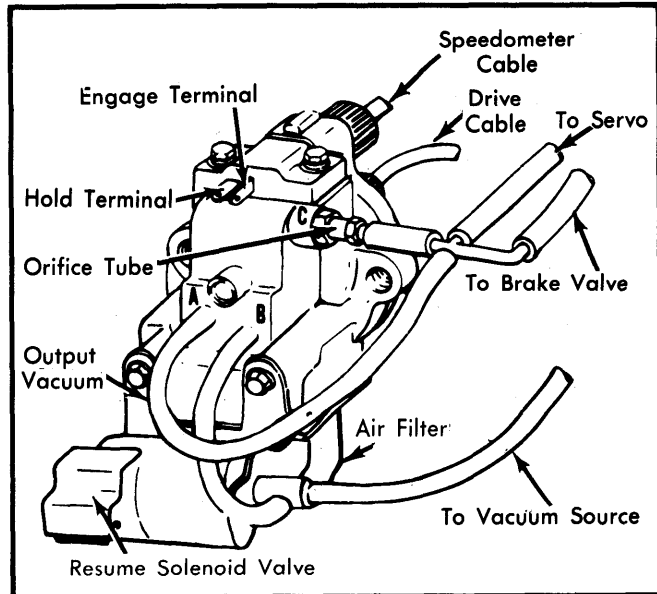


Fig. 2 Cruise Master Transducer

### ENGAGEMENT SWITCH

The engagement switch can only be serviced by replacement.

### SERVO UNIT

Servo-throttle linkage adjustment is made by bead chain, turnbuckle type link, cable-jam nut or holes in the servo rod-power unit link. Engine must be hot, idle speed properly adjusted, throttle closed and ignition OFF prior to adjustment.

**Bead Chain** — Check bead chain slack by un-snapping swivel from ball stud and holding chain tight at ball stud. Center of swivel should extend  $\frac{1}{8}$ " beyond center of ball stud. Adjust slack, if necessary, by removing retainer from swivel and chain assembly and position chain into a cavity that will allow a slight amount of slack in chain. Install retainer over swivel and chain assembly.

**Link** — Adjust servo link by turning on rod to obtain 0.5 - 1.0 mm (.02" - .04") clearance. Replace link and link retainer.

**Cable Jam Nut** — Install second ball of bead chain into pocket on servo cable. Adjust cable jamb nuts until servo chain has a slight amount of slack. Tighten jamb nuts and pull servo rubber boot over washer on chain.

**Servo Link-Rod Hole** — Remove retainer clip from servo rod. Select a hole in rod or servo tab that will provide slight clearance between clip and servo bushing when clip is installed.

## GENERAL MOTORS CRUISE MASTER (Cont.)

**CAUTION** — Do not stretch cable to make holes and rod align. This will prevent engine from returning to idle.

### TRANSDUCER

1) Before any adjustment is made to transducer, inspect all vacuum hoses for damage. All hoses should be properly connected, not kinked or pinched, and no leaks should be detected. Check, and if necessary, adjust electric and vacuum brake release switches (as previously outlined). Check, and if necessary, adjust servo bead chain (as previously outlined).

2) If cruising speed is lower than the engagement speed, loosen the orifice tube locknut and turn outward slightly. If cruising speed is higher than engagement speed, turn tube inward. Each  $\frac{1}{4}$  turn will alter engagement speed 1 mpn. Tighten locknut and test at 55 mph.

**CAUTION** — Do not attempt to remove orifice tube. Once removed, it cannot be installed.

### REMOVAL & INSTALLATION

#### SWITCH

**Removal (All Models)** — 1) Disconnect battery ground cable. Remove lower instrument panel trim panel and disconnect switch harness connector.

2) Place shift lever in "L" position and turn signal in right turn position. On tilt column models, place column in full up position. Connect a 24" piece of wire to connector and wrap it with tape.

3) Pull turn signal lever straight out of column. Pull engagement lever and harness out of column and disconnect follower wire. Leave follower wire in column to guide new harness back in.

**Installation (All Models)** — To install, reverse removal procedure, using follower wire to guide harness in column.

### TRANSDUCER

**Removal (All Models)** — Disconnect battery ground cable. Disconnect speedometer cables at transducer. Disconnect vacuum and wiring harness from transducer. Remove transducer-to-bracket mounting screws, and remove transducer.

**Installation (All Models)** — To install, reverse removal procedure.