(1) Unscrew lead-in cable retaining nut and unplug cable.
(2) Remove mast assembly mounting nut and mast assembly mounting screws, (Fig. 7).
(3) Lift off mast assembly.
(4) Position new or repaired mast assembly on panel.
(5) Install mounting nut and screw.
(6) Insert lead-in cable into mast assembly and tighten lead-in cable retaining nut.

RADIO REMOVAL (With Air Conditioning)

(1) Disconnect battery negative cable.
(2) Remove glove box door and glove box.
(3) Remove defroster duct.
(4) Remove radio bezel.
(5) Unplug antenna lead from radio.
(6) Remove two (2) front mount screws.
(7) Remove rear mount bolt (working through glove box opening).
(8) Push radio in to clear front positioning lugs, roll front up and pull toward instrument panel to clear rear mount bolt from support bracket.
(9) Turn radio face toward right side of vehicle, unplug power lead and disconnect antenna leads.
(10) The air conditioning vacuum actuators prevent removal through the glove box but radio may be removed through mount opening. Use care not to mark face.

SPEED CONTROL SYSTEM

INDEX

GENERAL INFORMATION

The speed control system (Fig. 8) is electrically actuated and vacuum operated. The turn signal lever on the steering column incorporates a CONTROL RING which when rotated, turns the system OFF, ON or to RESUME SPEED (Fig. 9). A SPEED SET button is located in the end of the lever. This device is designed to operate at speeds above approximately 30 M.P.H.

WARNING: The use of "Speed Control" is not recommended when driving conditions do not permit maintaining a constant speed, such as heavy traffic or on roads that are winding, icy, snow-covered or slippery.

TO ENGAGE:

Rotate control ring to the ON position, attain desired speed then momentarily depress and release SPEED SET button establishing speed memory and engaging system. Remove foot from accelerator. Speed will be maintained at this level. Turning the control ring from OFF to ON while the vehicle is in motion establishes memory without system engagement at that speed.

TO DISENGAGE:

Normal brake application or a soft tap on the brake pedal will disengage control unit without erasing speed memory. Fully rotating the control ring in the OFF direction or turning the ignition OFF also disengages the system and in addition erases the speed memory.

TO RESUME:

Momentarily rotate control ring fully in the RESUME direction. Vehicle will resume to the previously memorized speed.

TO VARY SPEED SETTING:

To increase speed, depress accelerator to desired speed and momentarily depress and release SPEED SET button. When speed control unit is engaged, tapping SPEED SET button may increase speed setting incrementally.

To decrease speed, tap brake pedal lightly, disengaging system. When desired speed has been obtained depress and release SPEED SET button. Decrease in speed can also be attained by holding set button depressed until desired speed is attained. Releasing the button engages the system at that speed.

TO ACCELERATE FOR PASSING:

Depress accelerator as needed, when passing is completed, release accelerator and vehicle will return to previous speed setting.

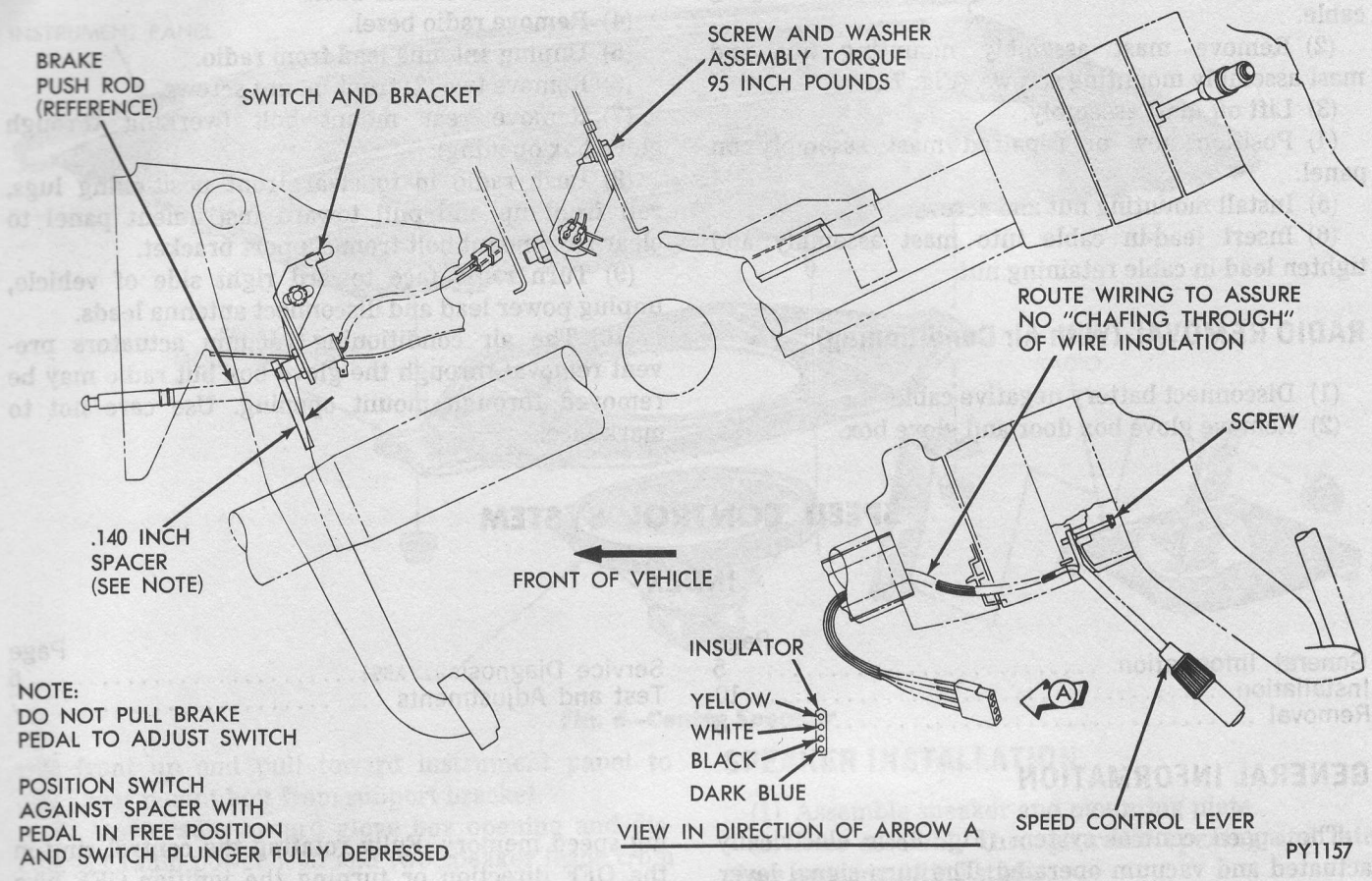

Fig. 8—Speed Control System

SERVICE DIAGNOSIS

Condition	Possible Cause	Correction
NO SPEED CONTROL WHEN BUTTON IS PRESSED.	(a) Control ring in OFF position.	(a) Turn ring to ON position.
	(b) Fuse blown.	(b) Replace fuse.
	(c) Vacuum leak.	(c) Check vacuum lines.
	(d) Speed control throttle cable disconnected.	(d) Connect and adjust control cable. See "Tests and Adjustments".
	(e) Improper stop lamp and speed control switch adjustment.	(e) Adjust stop lamp and speed control switch. See "Tests and Adjustments".
	(f) Faulty electrical circuit.	(f) See "Electrical Tests".
NO RESUME WHEN CONTROL RING IS ROTATED	(a) Insufficient rotation of control ring.	(a) Rotate ring fully toward "Resume".
	(b) Faulty electrical circuit.	(b) See "Electrical Tests".
NO SYSTEM DISENGAGEMENT WHEN BRAKE PEDAL IS DEPRESSED	(a) Speed control throttle cable kinked or damaged.	(a) Repair or replace cable.
	(b) Improper adjustment of stop lamp and speed control switch.	(b) Adjust switch. See "Tests and adjustments".
	(c) Faulty electrical circuit.	(c) See "Electrical Tests".
SPEED CONTROL ENGAGES WITHOUT ACTUATING THE SWITCH	(a) Faulty electrical circuit.	(a) See "Electrical Tests".
	(b) Faulty holding coil valve in servo unit.	(b) Replace Servo Unit.
CARBURETOR DOES NOT RETURN TO NORMAL IDLE	(a) Speed control throttle cable kinked or damaged.	(a) Repair or replace cable.
	(b) Speed control throttle cable maladjusted.	(b) Adjust speed control throttle cable. See "Tests and Adjustments".
	(c) Standard throttle linkage faulty.	(c) Repair or replace linkage.

Condition	Possible Cause	Correction
EXCESSIVE SPEEDOMETER NEEDLE WAIVER OR ERRATIC SERVO LOCK-IN PERFORMANCE	(a) Speedometer cable loose at speedometer head, transmission or speed control servo.	(a) Tighten cable ferrule nuts or properly seat ferrule at speedometer head.
	(b) Speedometer upper or lower cable kinked or damaged.	(b) Align cables to avoid sharp bends or replace cable assembly or core, as required.
SPEED SETTING AFTER LOCK-IN, TOO HIGH OR TOO LOW.	(a) Improper adjustment of speed control throttle cable.	(a) Adjust speed control throttle cable.
	(b) Vacuum leak.	(b) Check all vacuum hose connections.
	(c) Improper speed control servo lock-in adjustment.	(c) See "Servo Lock-in Screw Adjustment".
UNIT DISENGAGES ON ROUGH ROAD.	(a) Improper adjustment of stop lamp and speed control.	(a) Adjust as necessary. See "Tests and Adjustments".
RESUME SPEED IS POSSIBLE BELOW 20 M.P.H.	(a) Faulty low speed inhibit switch in servo unit.	(a) Replace servo unit.
	(b) Faulty electrical circuit.	(b) See "Electrical Tests".
SPEED CONTROL ENGAGES WHEN ENGINE IS STARTED, OR DOES NOT DISENGAGE WHEN BRAKE PEDAL IS DEPRESSED.	(a) Faulty electrical circuit.	(a) See "Electrical Tests".

SERVICE PROCEDURES

TESTS AND ADJUSTMENTS

Servo Lock-in Screw Adjustment

The Lock-in Screw Adjustment (Fig. 10) controls the accuracy of the speed control unit. When the SPEED-SET button is depressed and released at speeds above approximately 30 M.P.H.; the speed control system is activated, the system "locks in" and should hold the vehicle at virtually the same speed at which it is traveling.

IMPORTANT: Lock-in accuracy will be affected by:

(a) Poor engine performance (need for tune-up etc.).

(b) Power to weight ratio (loaded gross weight of car; trailering).

(c) Incorrect Free Play in throttle control cable, (See "Throttle Control Cable Adjustment").

This screw should never be adjusted indiscriminately. Need for adjustment can be determined only after accurate diagnosis of the Speed Control System operation.

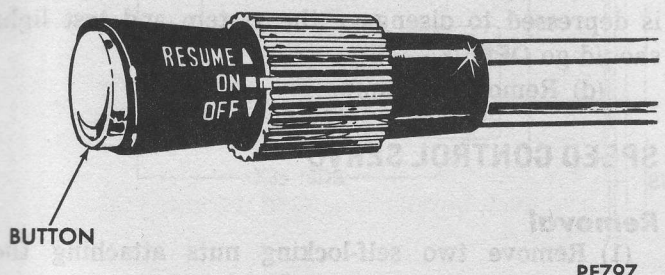

Fig. 9—Speed Control Switch

After steps (a), (b) and (c) have been considered and speed "sags" (drops) more than 2 to 3 M.P.H. when speed control is activated, the lock-in adjusting screw should be turned counter-clockwise (approximately 1/4 turn per one M.P.H. correction required). If "Pull-up" (speed increase) of more than 2 to 3 M.P.H. occurs, the lock-in adjusting screw should be turned clockwise approximately 1/4 turn per one M.P.H. correction required. If the screw is loose, stake side of servo housing and adjacent to screw to INSURE a snug fit.

CAUTION: This adjustment must not exceed two turns in either direction or damage to unit may occur.

Speed Control Throttle Cable Adjustment

Optimum servo performance is obtained with a given amount of free play in the throttle control cable. To obtain proper free play, insert a 1/16 inch diame-

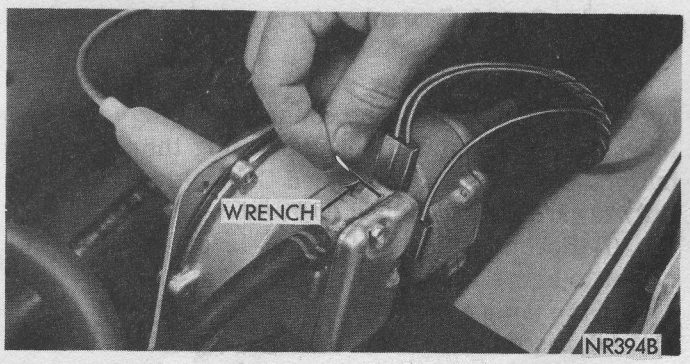

Fig. 10—Lock-in Screw Adjustment

ter pin between forward end of slot in cable end and carburetor linkage pin. Or, use hair pin clip removed from carburetor linkage pin as a gauge (Fig. 11).

With choke in full open position and carburetor at curb idle, pull back on cable (toward dash panel) without moving carburetor linkage until all free play is removed. Tighten cable clamp bolt to 45 inch-pounds and remove 1/16 inch diameter pin or install hair pin clip if removed.

Stop Lamp and Speed Control Switch Adjustment

Refer to Figure 8, for proper switch adjustment as follows:

1. Loosen switch bracket.
2. Insert proper spacer gauge between brake push rod and switch with pedal in free position.
3. Push switch bracket assembly toward brake push rod until plunger is fully depressed and switch body contacts spacer.
4. Retighten switch bracket bolt to 100 inch pounds.
5. Remove spacer.

Electrical Tests:

Refer to "Speed Control Wiring Diagram" (Fig. 12).

It is suggested that the electrical tests be made in the following sequence:

(1) **Check accessory fuse for continuity.**

(2) **Speed control switch (turn signal lever) test:**

(a) Disconnect the four wire electrical connector at the steering column.

(b) Connect a twelve volt positive source to the black wire terminal in the speed control harness connector (male).

(c) With the Speed Control rotary switch in the **ON** position, attach one lead of a test lamp to the connector yellow wire, other lead to a good ground; test lamp should light and should go off when the "Speed Set" button is depressed.

(d) Move the test lamp lead to the connector blue wire; test lamp should light and should go off when the Speed Control rotary switch is turned to the **OFF** position.

(e) With the rotary switch in the **ON** position, move test lamp lead to the connector white wire; test lamp should light by either depressing the Speed Set button or by rotating the Speed Control rotary switch fully toward the "Resume" position.

(f) Reconnect speed control lever harness connector to harness connector.

(3) **Stop lamp and speed control switch test:**

(a) Disconnect the double connector at the switch pigtail and connect a twelve volt source to either terminal and connect a test lamp from other

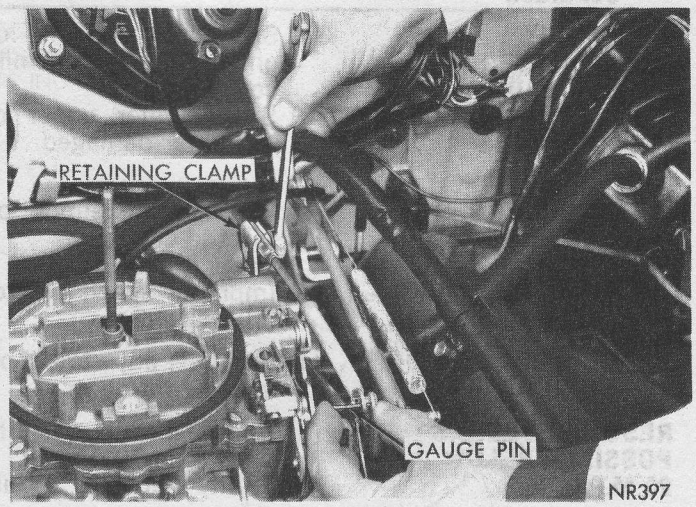

Fig. 11—Servo Throttle Cable Adjustment

terminal to a good ground: test lamp should light when brake pedal is in the normal position and should go off when the brake pedal is depressed to a maximum of approximately one half inch after proper adjustment as outlined under "Stop Lamp and Speed Control Switch Adjustment."

(b) Remove test lamp and reconnect pigtail connector to harness connector.

(4) **Servo unit tests:**

(a) **Locking coil test.** Turn ignition switch to the **Accessory** or **ON** position and rotate the speed control rotary switch to the **ON** position.

(b) Momentarily disconnecting and connecting the double connector at the servo terminals should produce a clicking sound in the servo. Replace the servo if no clicking sound is heard.

(c) **Holding coil and Low Speed switch test.** Without removing either connector at servo, place a test lamp probe to the white wire terminal of servo, other probe to a good ground. Block front wheels; raise rear wheels and drive rear wheels to 35 miles per hour; with speed control lever rotary switch in the **ON** position and ignition switch in the **ON** position, depress and release "Speed Set" button. The speed should increase above 35 miles per hour and the test lamp should remain **ON** until the brake pedal is depressed to disengage the system and test light should go **OFF.**

(d) Remove test lamp.

SPEED CONTROL SERVO

Removal

(1) Remove two self-locking nuts attaching the servo cable cover to servo housing. Pull cover away from servo to expose cable retaining clip (Fig. 13)

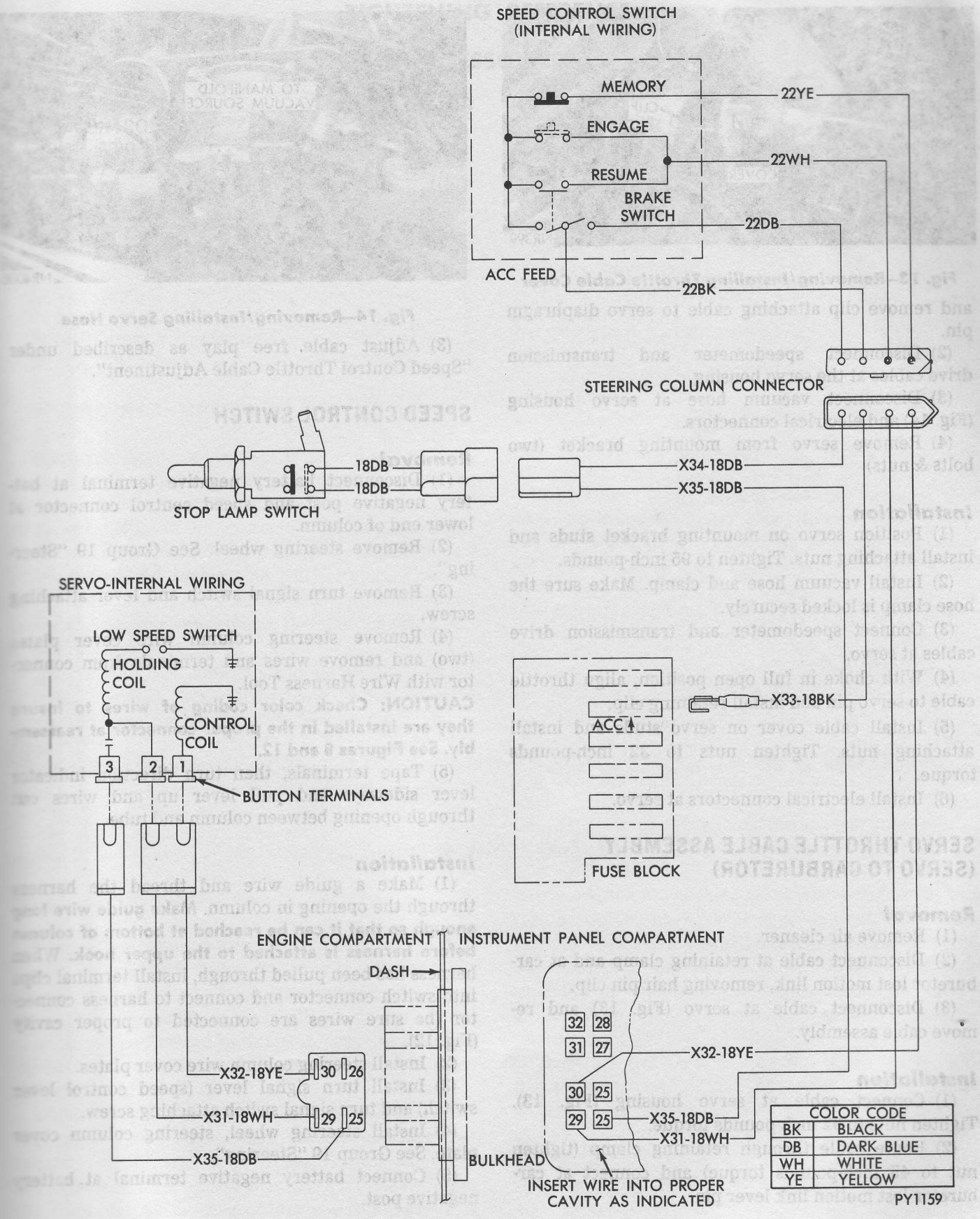

Fig. 12—Speed Control Wiring Diagram

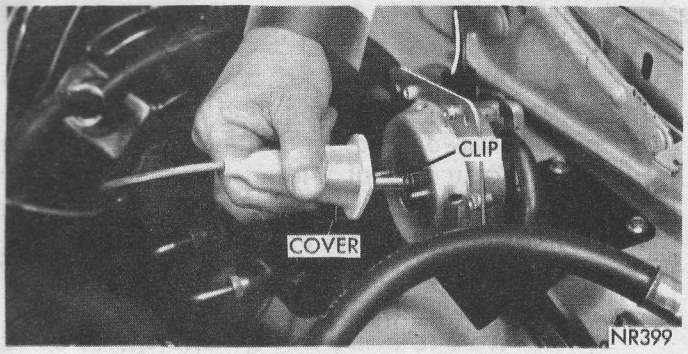

Fig. 13—Removing/Installing Throttle Cable Cover

and remove clip attaching cable to servo diaphragm pin.

(2) Disconnect speedometer and transmission drive cables at the servo housing.

(3) Disconnect vacuum hose at servo housing (Fig. 14) and electrical connectors.

(4) Remove servo from mounting bracket (two bolts & nuts).

Installation

(1) Position servo on mounting bracket studs and install attaching nuts. Tighten to 95 inch-pounds.

(2) Install vacuum hose and clamp. Make sure the hose clamp is locked securely.

(3) Connect speedometer and transmission drive cables at servo.

(4) With choke in full open position, align throttle cable to servo pin and install retaining clip.

(5) Install cable cover on servo studs and install attaching nuts. Tighten nuts to 32 inch-pounds torque.

(6) Install electrical connectors at servo.

SERVO THROTTLE CABLE ASSEMBLY (SERVO TO CARBURETOR)

Removal

(1) Remove air cleaner.

(2) Disconnect cable at retaining clamp and at carburetor lost motion link, removing hair pin clip.

(3) Disconnect cable at servo (Fig. 13) and remove cable assembly.

Installation

(1) Connect cable at servo housing (Fig. 13). Tighten nuts to 32 inch-pounds torque.

(2) Route cable through retaining clamp (tighten nut to 45 inch-pounds torque) and connect at carburetor lost motion link lever pin.

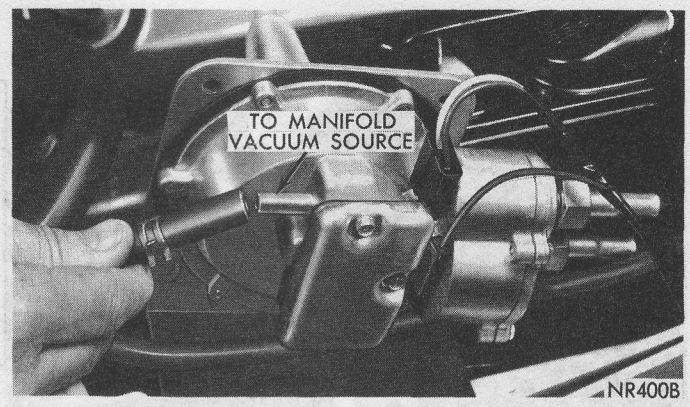

Fig. 14—Removing/Installing Servo Hose

(3) Adjust cable free play as described under "Speed Control Throttle Cable Adjustment".

SPEED CONTROL SWITCH

Removal

(1) Disconnect battery negative terminal at battery negative post and speed control connector at lower end of column.

(2) Remove steering wheel. See Group 19 "Steering".

(3) Remove turn signal switch and lever attaching screw.

(4) Remove steering column wire cover plates (two) and remove wires and terminals from connector with Wire Harness Tool.

CAUTION: Check color coding of wires to insure they are installed in the proper connector at reassembly. See Figures 8 and 12.

(5) Tape terminals, then turn direction indicator lever sideways and pull lever up and wires out through opening between column and tube.

Installation

(1) Make a guide wire and thread the harness through the opening in column. **Make guide wire long enough so that it can be reached at bottom of column before harness is attached to the upper hook.** When harness has been pulled through, install terminal clips into switch connector and connect to harness connector (be sure wires are connected to proper cavity (Fig. 12).

(2) Install steering column wire cover plates.

(3) Install turn signal lever (speed control lever switch) and turn signal switch attaching screw.

(4) Install steering wheel, steering column cover plate. See Group 19 "Steering".

(5) Connect battery negative terminal at battery negative post.

TIGHTENING REFERENCE

ACCESSORIES

	Pounds (Inch)
SPEED CONTROL	
Cable Clamp Bolt	45
Cable Cover Nuts	32
Cable Retaining Clamp Nut	45
Servo Mounting Bracket Nuts	95
Switch Bracket Bolt	100