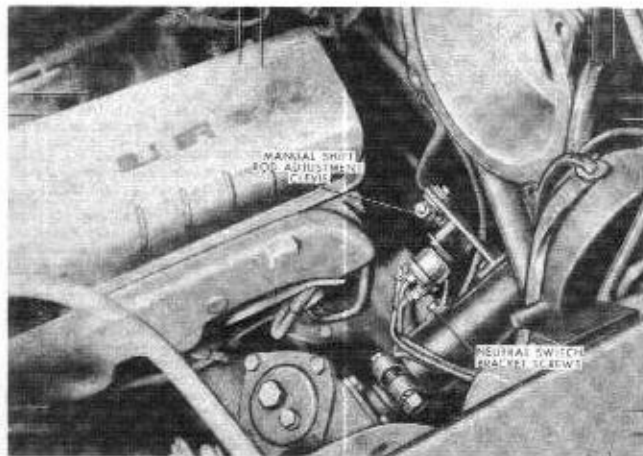


SECTION TWO—LINKAGE ADJUSTMENTS

A. Manual Linkage Adjustments

NOTE

This applies to all Fords, Mercurys, and Lincolns except the 1957 Mercury.

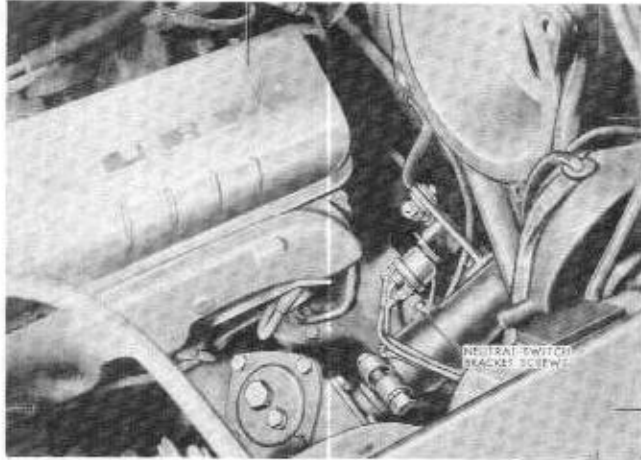


1. With the engine off disconnect the upper end of the manual shift rod from the steering column.

2. Set the selector lever in drive position.
3. Place the manual lever on the transmission in the drive detent, or the second position from the bottom.
4. Rotate the manual shift rod clevis to obtain the shortest length that will permit the clevis pin to enter the grommet in the selector lever.
5. Lengthen the rod by turning the clevis two additional turns counterclockwise.
6. Install the clevis pin, and lock the clevis in place with its locknut.
7. Check the pointer alignment for all positions of the selector lever.
8. Last, check the adjustment of the starter neutral switch (located on the steering column), as follows in B.

B. Starter Neutral Switch Adjustment

NOTE This switch has an adjustment of 7 degrees in either direction from the central neutral position.



1. Loosen the screws which attach the switch to the steering column.

NOTE On 1957 Mercurys the neutral switch is located under the dashboard.

2. Then, position the switch so that the starter circuit is closed when the selector is in neutral position.
3. Check the starter circuit with the selector in every position.

NOTE The starter circuit must be open in all positions except neutral.

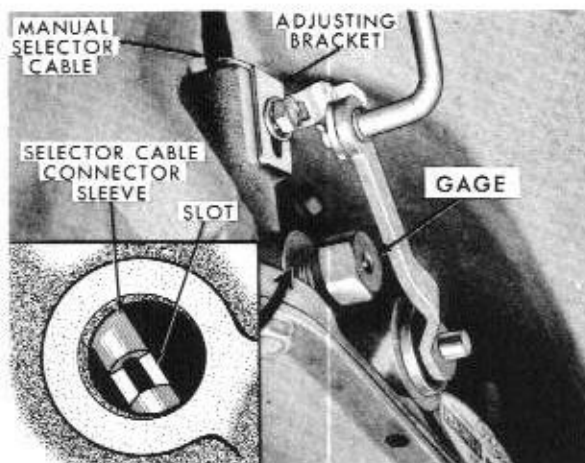
4. With the neutral switch properly positioned, tighten the attaching screws.

C. Manual Selector Cable Adjustment (1957 Mercury Only)

1. Raise the car, remove the splash shield, and remove the pipe plug from left side of transmission case.
2. Remove the park release control cable from lever and clamp.

NOTE The park release cable must not be connected to the adjusting bracket or park release lever while making the manual selector cable adjustment.

3. Loosen the control cable mounting bracket retaining screw and washer (leaving it finger tight).
4. Hold "D" button on transmission keyboard selector in the FULLY DEPRESSED position.
5. Move adjusting bracket downward to limit of travel.



6. Install the gaging tool in place of pipe plug in the transmission case as shown.
7. Pull upward on the selector cable and housing assembly until the pin in the gage seats in the locating slot of the selector cable connector sleeve.

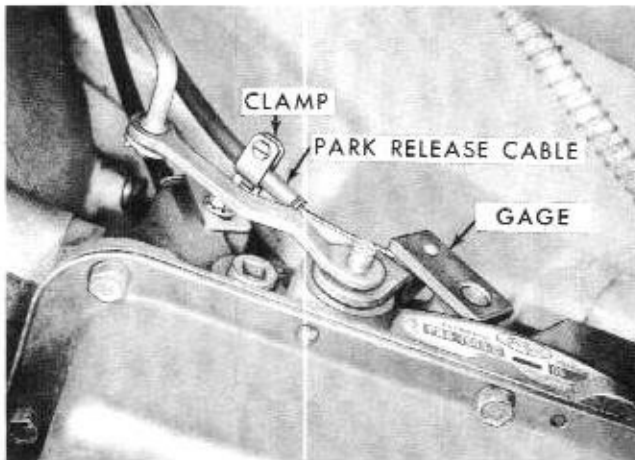
8. Leaving the tool in place, torque the control cable mounting screw 18-22 foot-pounds.
9. Remove the tool, and replace the pipe plug in transmission case.
10. Check for correct keyboard control operation of the keyboard buttons before proceeding with the park cable adjustment.

D. Park Cable Adjustment (1957 Mercury Only)

A correct park release cable adjustment cannot be obtained until proper selector cable adjustment is completed.

1. Install the park cable on the pin of the park release lever and install the clamp and screw on the adjusting bracket.

2. Fully depress the park bar on keyboard selector.



3. Install the gage over the torsion lever support pin in transmission case and the pin on the park release lever.

4. Remove cable slack by pulling cable housing toward rear of car.
5. Holding cable in this position, tighten the cable clamp screw.
6. Remove the gage.
7. Install the washer and retaining pin in the park release lever pin.
8. Check operation of keyboard buttons and park bar.

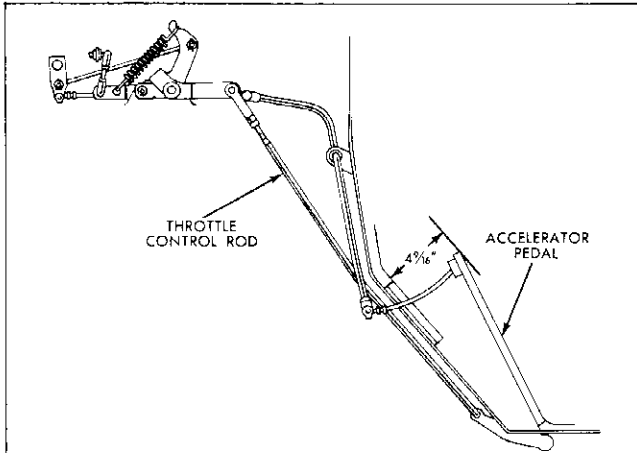
NOTE If the park pawl does not fully engage when the park bar is pushed into the ON position, it may be necessary to move the park release cable housing an additional 1/8 inch toward the rear of the car. This condition may exist on a few cars with the earlier 1957 production transmissions, numbers PBA-7000-G and PAN-7000-L.

E. Throttle Linkage Adjustments

There are so many variations in throttle linkage hook-ups that it is impossible to provide specific procedures for all the cars using the transmission covered in this book. However, similarities do exist in the basic procedures which follow.

Though linkage hook-ups, and therefore procedures vary, the objective of throttle linkage adjustment does not. That objective is to adjust the linkage so that there will be a proper relationship between carburetor throttle openings and the movement of the transmission throttle lever. If the linkage is correctly adjusted -- the carburetor and transmission will combine to provide smooth shifting at proper speeds. If it is not, slippage, bunched shifts, and rough shifting occur.

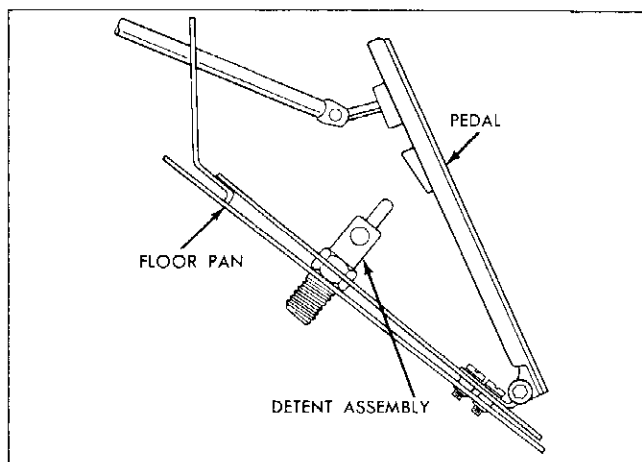
F. Typical Throttle Linkage Adjustment for the Ford-6



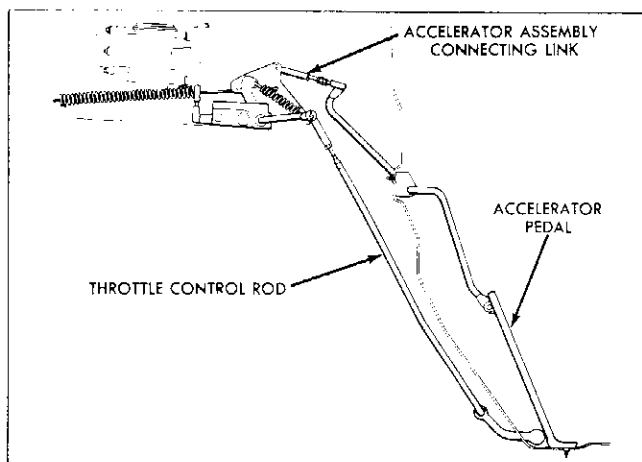
1. With the engine not running, remove the cotter pin and clevis pin from the upper end of the throttle control rod. Pull upward, firmly but gently, on the throttle control rod to hold the throttle lever on the transmission against its internal stop.
2. Loosen the clevis locknut. Then, rotate the throttle rod clevis until the clevis pin enters the holes in the clevis and the accelerator assembly shaft. Next, lengthen the throttle control rod by rotating the clevis 2-1/2 turns counter-clockwise. Then, connect the throttle control rod to the accelerator assembly shaft with the clevis pin and cotter pin.
3. Check the throttle linkage and relieve any binding condition. Then, road test the car.
4. If band or clutch slippage shows up, lengthen the throttle control rod 3 or 3-1/2 turns of the clevis. Do not exceed this. If band or clutch slippage is not eliminated after this . . . make a pressure check, as covered in Chapter II.
5. During the road testing . . . check for kickdown action. If there is no kickdown, correct it as follows:
 - (a) Disconnect the accelerator connecting link from the cross shaft lever.
 - (b) Adjust the accelerator pedal height by turning the threaded trunion on the accelerator connecting link until the top surface of the accelerator pedal is the specified height from the floor pan. Pedal height for various models is listed in Table 5.
 - (b) Last, connect the accelerator connecting link to the cross shaft lever.

TABLE 5 -- ACCELERATOR PEDAL CLEARANCES

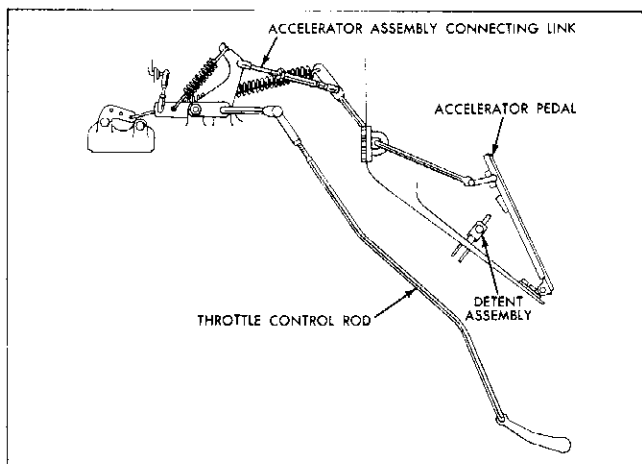
	1952-53	1954	1955-56	1957
Ford-6 Cars	4-5/16"	4-5/16"	4-9/16"	3-1/8"
Ford-6 Trucks (except Parcel Delivery)			2-5/8" ('56 models only)	2-3/4"



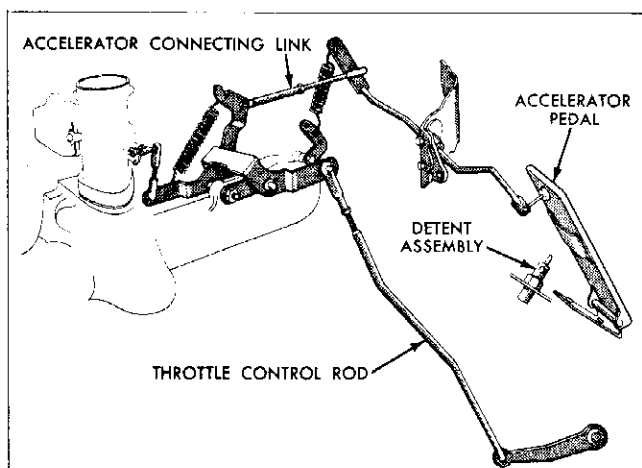
NOTE On Ford-6 trucks, the accelerator pedal should just touch the detent stem when the carburetor hits its wide open stop. On Parcel Delivery trucks, this is the only pedal height specification. Throttle linkage for various Ford-6 cars and trucks are shown below.



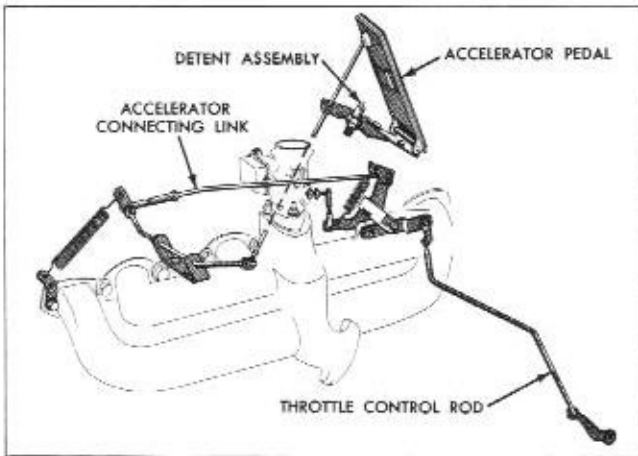
1. Throttle linkage for 1957 Ford 6-cylinder cars.



2. Throttle linkage for 1955 Ford-6 trucks.

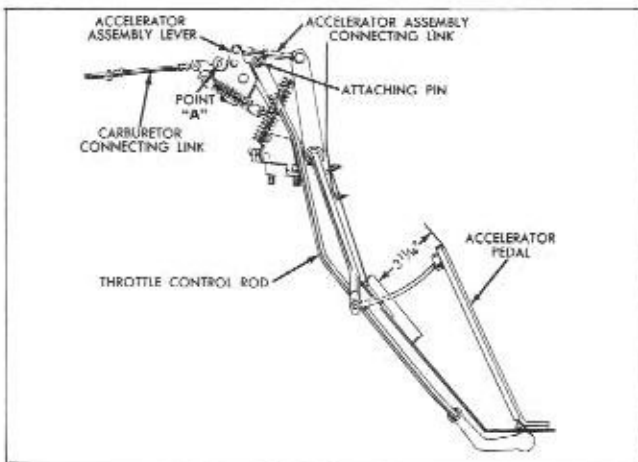


3. Throttle linkage for 1956 6-cylinder trucks (except Parcel Delivery).

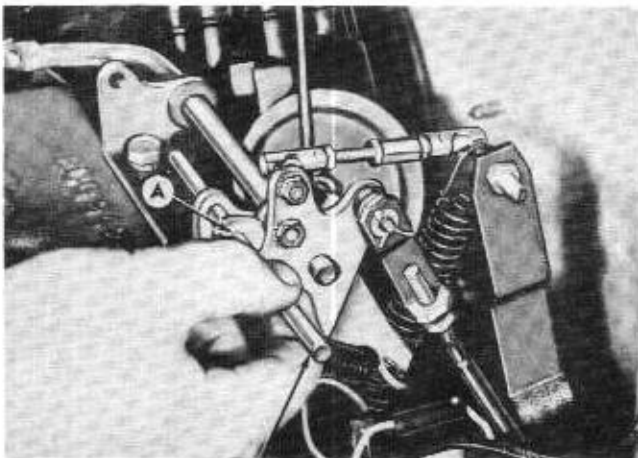


4. Throttle linkage for 1956 Parcel Delivery trucks.

G. Typical Throttle Linkage Adjustment for the Ford V-8 (1955-56 cars with 2-barrel carburetors)



1. Disconnect the throttle control rod from the accelerator assembly.



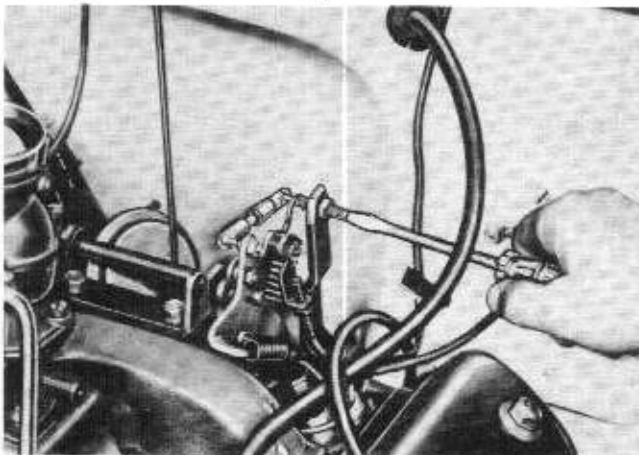
2. Then insert a locking pin through the bracket and linkage holes (point "A").

3. Adjust the length of the carburetor connecting link to close the carburetor against its stop.
4. Then adjust the length of the accelerator assembly connecting link to obtain a pedal height of 3-11/16 inches. (See Table 6.)

TABLE 6 -- ACCELERATOR PEDAL CLEARANCES

	1954	1955	1956	1957
Ford V-8 with 2-barrel carb. with 4-barrel carb.	3-3/16"	3-11/16" 3-9/16"	3-11/16" 3-9/16"	3-1/8" 3-1/8"
Thunderbird		4-1/4"	4-1/4"	4-7/8"
Ford-8 trucks (except Parcel Delivery)			2-5/8"	2-3/4"

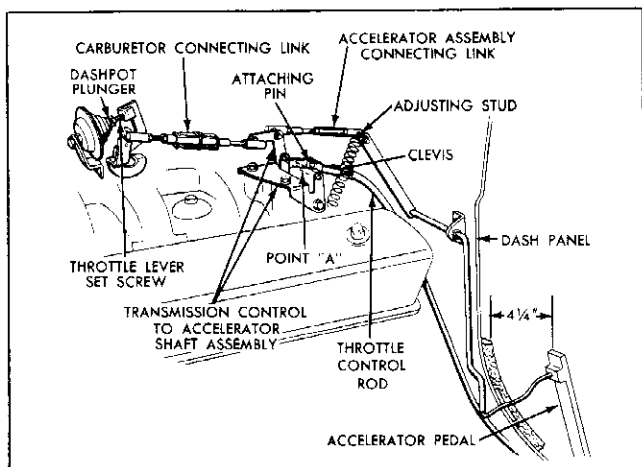
5. Check the alignment at this point by sliding the gauge pin in and out of the bracket and linkage holes. It should move freely without any binding. Then, remove the pin.
6. Now, pull the upper end of the throttle control rod upward, firmly but gently, to hold the transmission throttle lever against its internal stop.
7. Then, rotate the clevis until it freely fits the pin on the accelerator assembly lever.
8. Next, lengthen the throttle control rod by turning the clevis 2-1/2 turns counterclockwise.
9. Then, connect the throttle control rod to the accelerator assembly lever, holding the clevis in alignment to prevent binding, and tighten the locknut.
10. Check the throttle linkage, and relieve any binding. Then road test the car.
11. If band or clutch slippage is evident, increase the length of the throttle rod 3 or 3-1/2 turns. If slippage is not eliminated, it will be necessary to make a pressure check, covered in Chapter II.



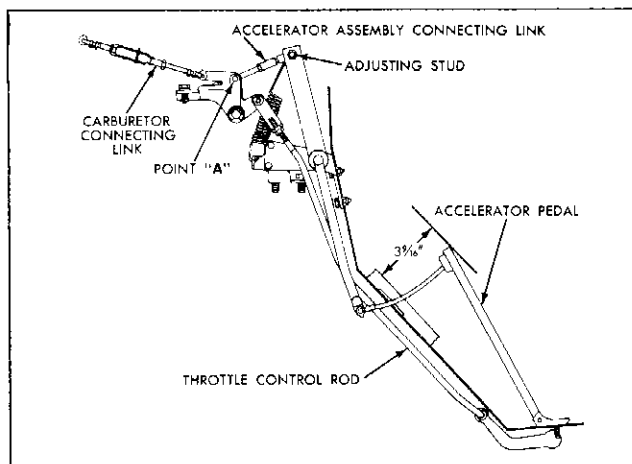
12. Next, check the alignment of the accelerator assembly lever connecting link. The link must be parallel to the centerline of the engine. If the connecting link is misaligned, loosen the adjustment screw locknut. Then, turn the adjustment screw until correct alignment is obtained, and tighten the locknut.

NOTE

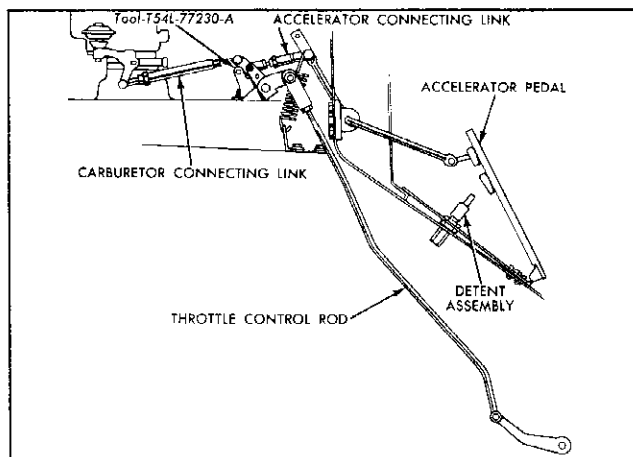
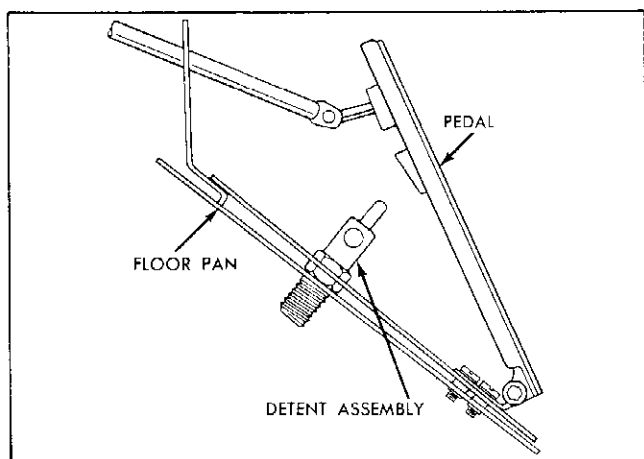
For various Ford V-8 models, different gages are required to locate and hold proper linkage positions. The applications are shown in the appendix. The gages serve the same purpose as the pin. Various linkages are shown below for various models. Procedures for all are similar.



1955 Thunderbird throttle linkage.

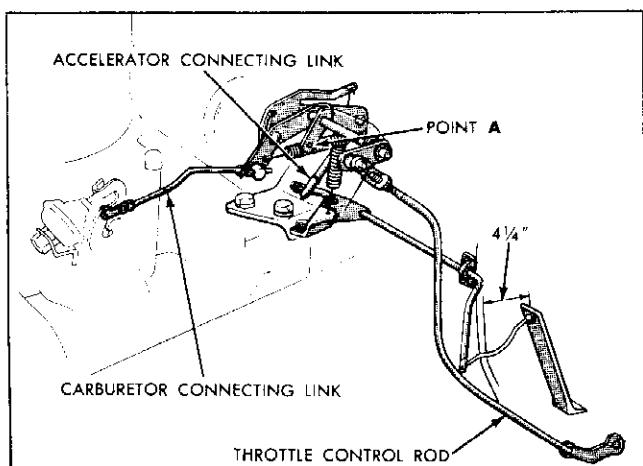


1955 Police Interceptor and Special 8-cylinder engine throttle linkage.

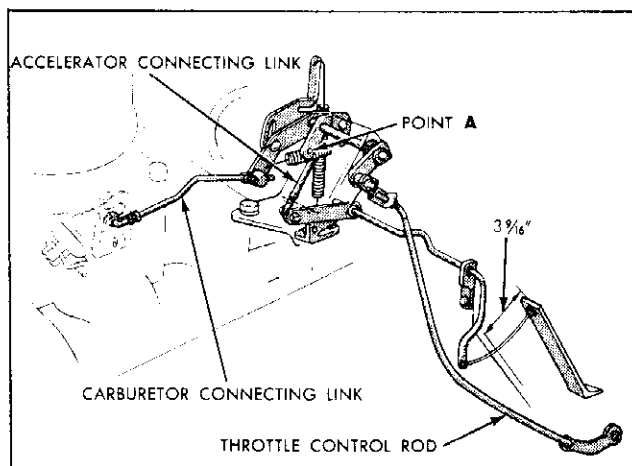


1955 8-cylinder truck throttle linkage.

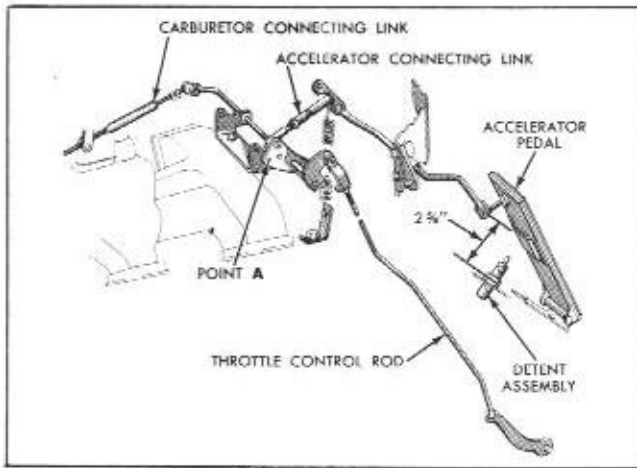
NOTE On 1955 8-cylinder trucks, accelerator pedal height is adjusted so that the pedal just touches the detent stem when the carburetor lever hits its wide open stop.



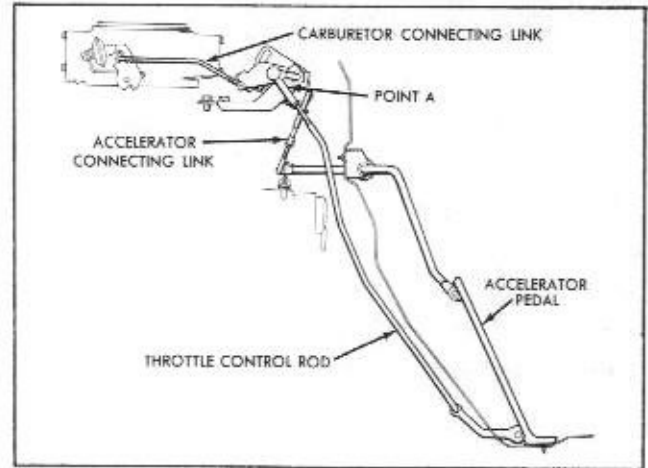
1956 Thunderbird throttle linkage.



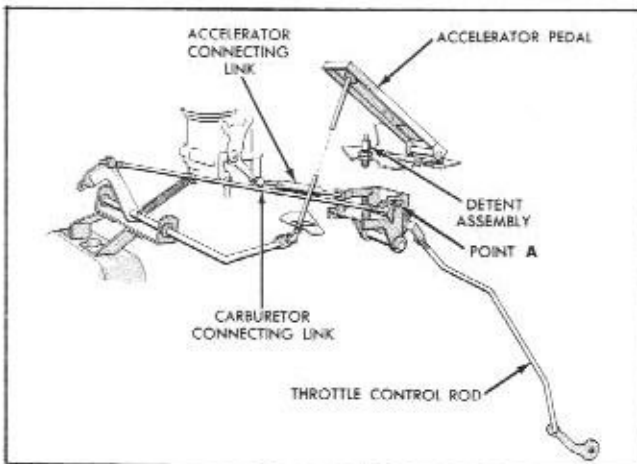
Throttle linkage for 1956 V-8 Fords with 4-barrel carburetors.



Throttle linkage for 1956 Ford 8-cylinder trucks.



Throttle linkage for 1957 V-8 Ford car with 4-barrel carburetor.

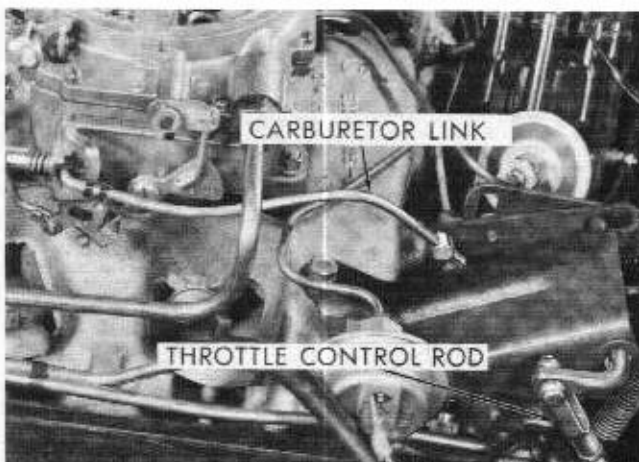


Throttle linkage for 1957 Ford 8-cylinder Parcel Delivery truck.

NOTE On this model, the only accelerator pedal height specification is to adjust the pedal so that it just touches the detent stem when the carburetor lever hits its wide open stop.

H. Typical Throttle Linkage Adjustments for Mercury and Lincoln

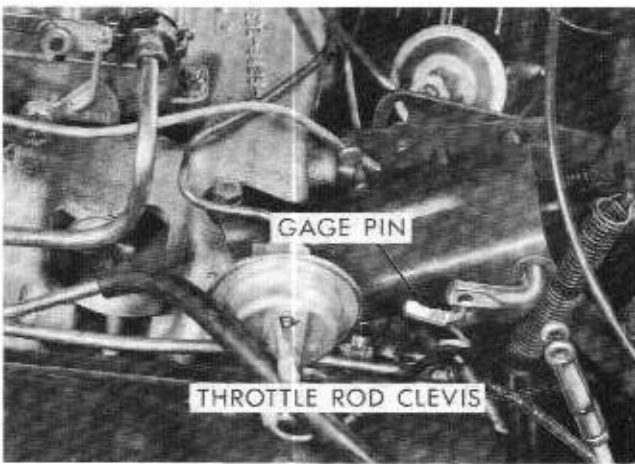
NOTE The procedures covered here apply basically to all Mercurys from 1954 on.



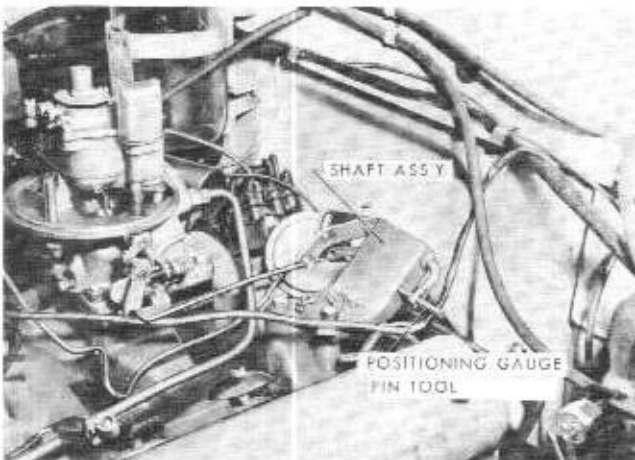
1. Disconnect the rear end of the carburetor link.

NOTE On 1954, '55, and '56 Mercurys disconnect the link at the carburetor.

2. Disconnect the clevis on the upper end of the throttle control rod.



3. Insert the gage pin through the bracket, and into the link arm.
4. With the engine at operating temperature, and running at low idle, turn the trunnion on the carburetor link so that the trunnion pin enters the hole in the arm. Secure the link, and remove the gage.

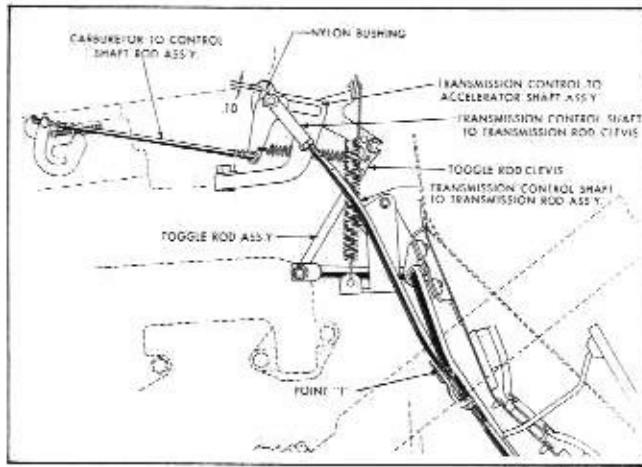


NOTE On 1954, '55, and '56 models the gage pin goes through the control shaft and bracket, and the length of the carburetor link is adjusted so that the front end of the link will enter the hole in the carburetor arm.



5. Next, while holding the carburetor throttle closed, pull the throttle control rod upward firmly and gently to hold the throttle lever against its internal stop. Rotate the clevis until the clevis pin will freely enter the clevis and control shaft.
6. Then, lengthen the rod by turning the clevis 2-1/2 turns counterclockwise. Connect the throttle rod, secure it with a cotter pin, and tighten the locknut.

NOTE If band or clutch slip is still indicated, the throttle rod may be lengthened up to 3-1/2 turns . . . but never more than that. If this fails, a pressure check must be made.



NOTE The procedures for adjusting Lincoln throttle linkage are the same as for Mercury. The forced (kickdown) downshift, however, is adjustable. With the ignition off, and accelerator pedal depressed, adjust the length of the toggle rod assembly so that the nylon bushing has a clearance of .10-inch from the top of the slot in the accelerator shaft assembly.

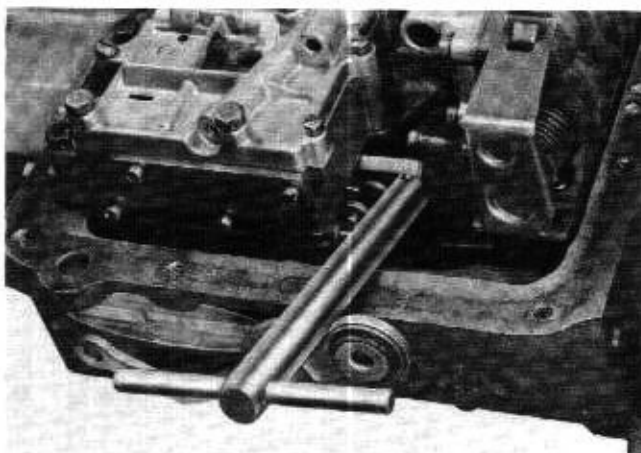
NOTE On 1951, '52, and '53 Mercurys, the basic methods of adjustment apply. However, different linkage locating gages are used to position the linkage properly. See the tool application chart in the appendix.

1. Throttle Linkage Adjustment — Made with Tachometer and Pressure Gage

This method of adjusting throttle linkage employs engine speed and transmission hydraulic pressure readings as guides to the extent of adjustment. Its principal values (in comparison with other methods), are that it is easier to "tailor" the linkage, and that instrument readings provide a more precise way of checking out certain conditions. This method is generally used when conventional linkage adjustment does not provide a satisfactory job.

1. Install a tachometer.

CAUTION Be sure engine idle and the anti-stall dashpot are adjusted to specifications.



2. Install the pressure gage.
3. Adjust the manual and throttle linkage as described, and temporarily connect the throttle control rod to the control shaft.
4. At this time, observe the fluid pressure at engine idle speed. If the pressure is above or below specifications (see Table 4, page 59) make the following corrections:
 - (a) Drain and remove the bottom oil pan.
 - (b) If idle pressure is above specifications, bend the throttle lever internal stop counterclockwise away from the valve body - using the bending tool shown.

- (c) If idle pressure is below specifications, or is erratic, trouble is indicated within the transmission, and normal diagnosis procedures should be followed to locate the trouble.
 - (d) Install bottom oil pan with new gasket, and bring fluid level to full mark.
5. Set the brakes securely, and increase the engine speed to 1,000 RPM in drive, using the accelerator pedal. Note the reading on the pressure gage. If the pressure is below specifications (see Table 4, page 59), lengthen the throttle control rod by turning the clevis counterclockwise 1/2 turn at a time, until the proper pressure is reached. If the pressure is high, shorten the throttle control rod by turning the clevis clockwise 1/2 turn at a time until proper pressure is reached.



- CAUTION** These checks must be made quickly, the selector returned to neutral position, and the throttle closed after each check to avoid overheating the transmission.
6. Reinstall clevis pin and cotter key, and tighten clevis locknut on the throttle control rod.