

11. LINKAGE

Linkage consists of three sections: accelerator, throttle and transmission (automatic or manual). All three linkages are inspected here, each gets one third of the points. NOTE: when inspecting manual transmissions, substitute the clutch linkage for the automatic transmission linkage.

The accelerator linkage controls both the throttle linkage and the transmission linkage. Sorting out which pieces belong in each section of the linkage is not always clearcut. All descriptions are from the driver's side.

Transmission Linkage: Consider as transmission linkage those parts which could be detached and still have the accelerator and throttle work properly (i.e. what would be removed for converting between automatic/manual transmissions).

Throttle Linkage: The separation between accelerator and throttle linkage occurs at a pivot point (bellcrank or lever) somewhere near the rear corner of the intake manifold (exact mounting location varies). This crank or lever should be considered part of the throttle linkage.

Accelerator Linkage: The remaining linkage from the crank or lever to the foot pedal is the accelerator linkage.



11A. THREE CARBURETORS 1953-55:

The interconnecting linkage between carburetors was formed out of a single, cadmium-plated strip of metal. The two-piece bolted linkages as shown in some GM photos were not intended for production; a few may appear on very early 53s.

Two sets of throttle linkages connect the three carburetors. Very early 1953 (about VIN 122 or 136) changed the carburetor linkage apparently with the change in carburetor throttle shaft length.

The first design connects adjoining carburetors with one piece of sheet metal shaped like a semicircle, and attached with hex-head screws to the cast iron coupling flanges. This linkage was painted black.

The second design was used thru 1955. It was made of tubular bar welded to flat end pieces made of sheet metal, and attached with recessed Allen-head screws to the stamped metal flanges. This linkage was cadmium plated.

1953 until VIN -0122 or -0136



Later



Accelerator linkages operated from two bellcranks, one on the firewall and one on the engine block. The return spring connects the two bellcranks. The block mounted crank connects all three rods (accelerator, transmission, and throttle). It is controlled by the crank on the firewall which is connected to the foot pedal.



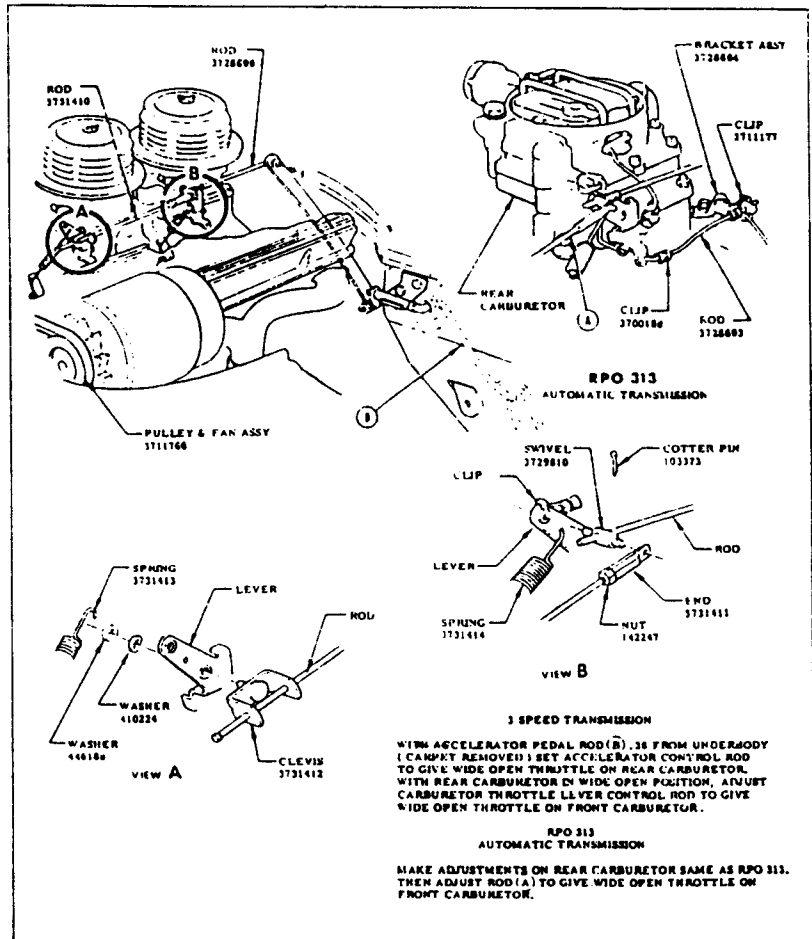
11B. TWO CARBURETORS 1956-57:

Accelerator: used the "flat" upper linkage. This portion, visible even on radio equipped cars, pokes up and forward from the rear of the block. In mid 57, a mounting hole was added for radio grounding strap. The flat lever was cadmium plated; original levers have "S" logo. The return spring is connected to a bracket on top of the thermostat housing.

Throttle: the bellcrank on the carburetor had a .25 inch hole without gromet or sleeve. Dual carbs are connected with delayed action linkage.

Transmission: powerglide engines use a bellcrank mounted to the left rear of the intake manifold.

LINKAGE
RPO 313
DUAL CARB
1956-57



11.B. TWO CARBURETORS 1958-61:

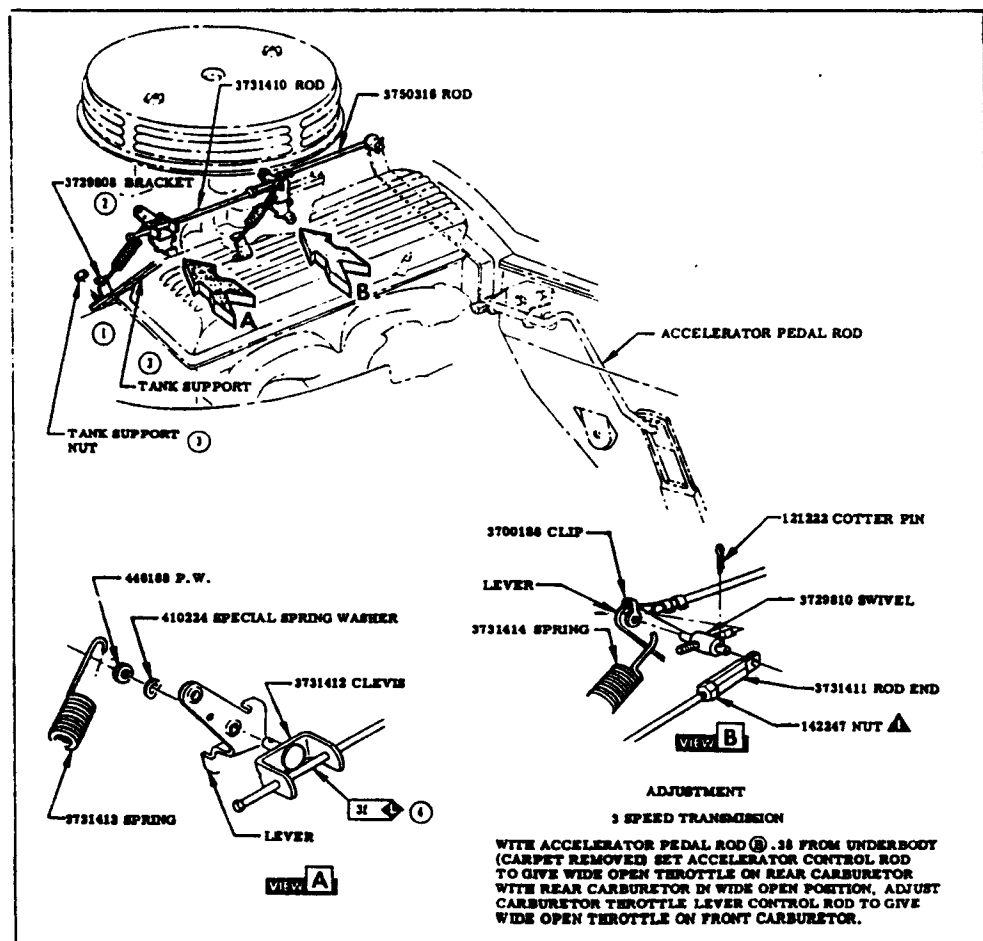
Accelerator: the foot pedal, mounting bracket, bushings, spring and all the small parts associated with accelerator linkage are the same on all 58-61 Vettes, except early 58 FI.

Throttle: linkage for the 2-carb is the progressive type, meaning the engine operates from the rear carb most of the time. At approximately half throttle, the linkage begins bringing the front carburetor into use. It opens at a faster rate so both carbs are wide open at full throttle.

Transmission: the lower link on the carburetor's lever is for the automatic transmission.

1959 clutch: the linkage was changed with the addition of a second setting, another hole in the linkage, which when utilized reduced the clutch pedal travel. The "fast clutch" adjustments are shown in Chevrolet Service News, January-February 1959, Corvette Servicing Guide, ST-12, Section 6R.

**LINKAGE
DUAL CARB
1958-61**



11C. ONE CARBURETOR 1955-62:

1955 until VIN -1356 or -1483:

Throttle: the driver side had an arm projecting up and away from the intake manifold. The arm had a stud on its end which mounted to the bellcrank. On later engines, the bellcrank was eliminated.

Accelerator: linkage, which is quite short, connects to the bellcrank's lower side. The upper side is attached to the firewall-mounted accelerator arm by a long connecting rod.

Transmission: the automatic transmission control rod is also connected to the lower bellcrank arm. This rod transmits throttle position to the transmission via another bellcrank mounted on the rear of the intake manifold.

1955 after VIN -1356 or -1483: eliminated the bellcrank.

1956-57:

Throttle: the bellcrank on the carburetor had a .5 inch hole with rubber grommet and plastic sleeve.

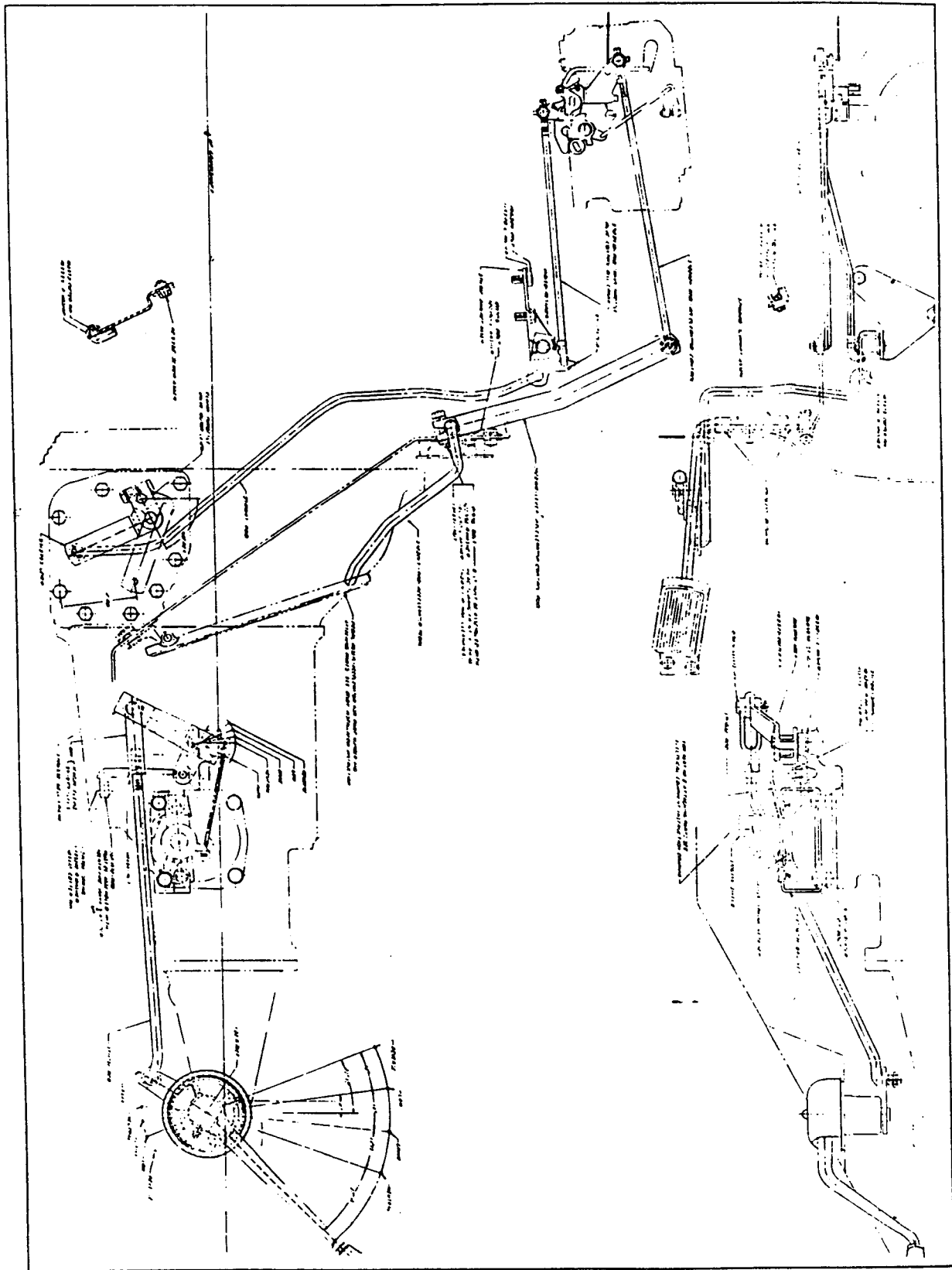
Accelerator: All 56-57 carbureted engines had the two-piece type linkage. The upper portion, visible even on radio equipped cars, pokes up and forward from the rear of the block. This piece is known as the "flat" linkage and was used on all Chevy passenger FIs. This upper lever arm is made of cadmium plated steel with "S" logo. In mid 57, a mounting hole was added near the top end for a radio grounding strap. The return spring is connected to a bracket on top of the thermostat housing.

Transmission: powerglide engines used a bellcrank mounted to the rear of the intake manifold.

1957 4-speeds had the same "fast clutch" adjustment described for 1958-61.

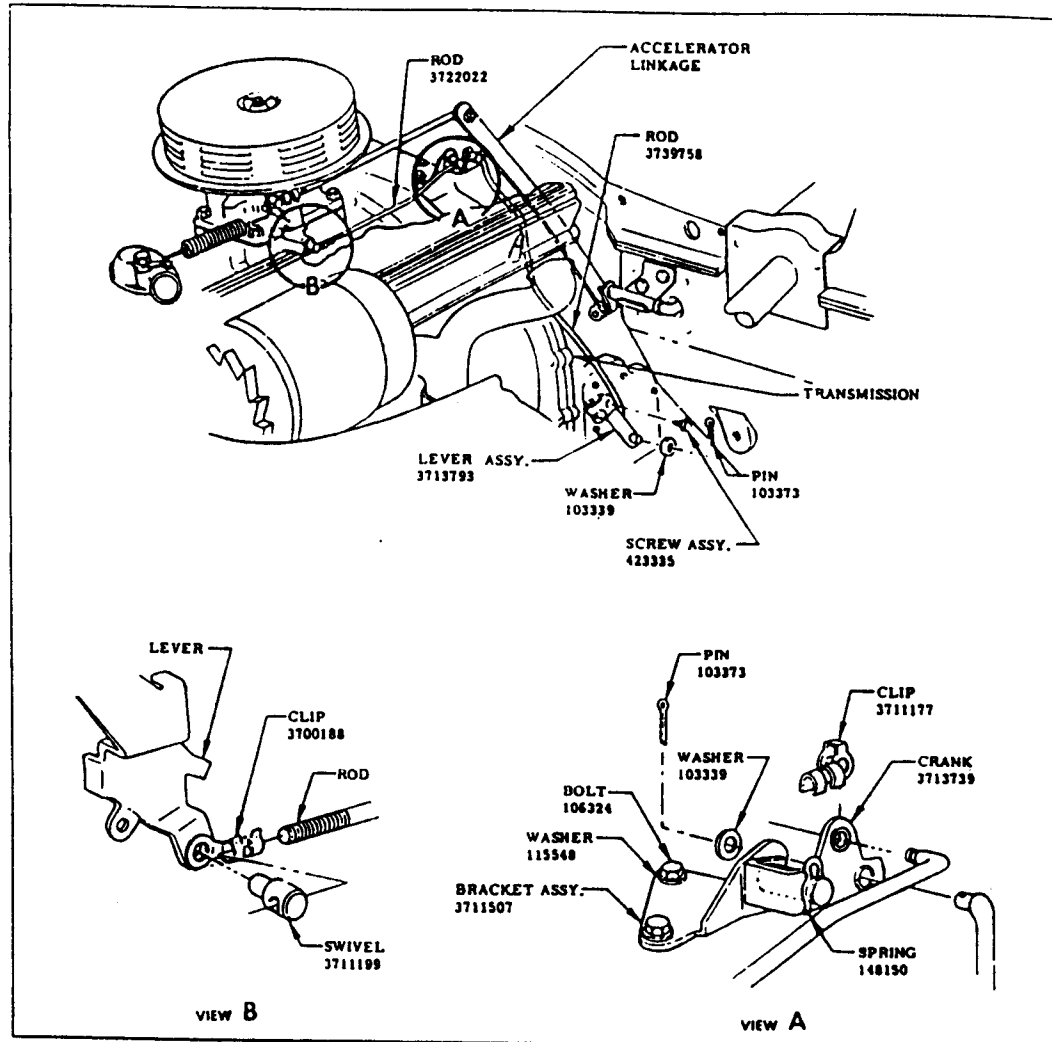


LINKAGE: ONE CARBURETOR AFTER VIN -1356 OR -1483



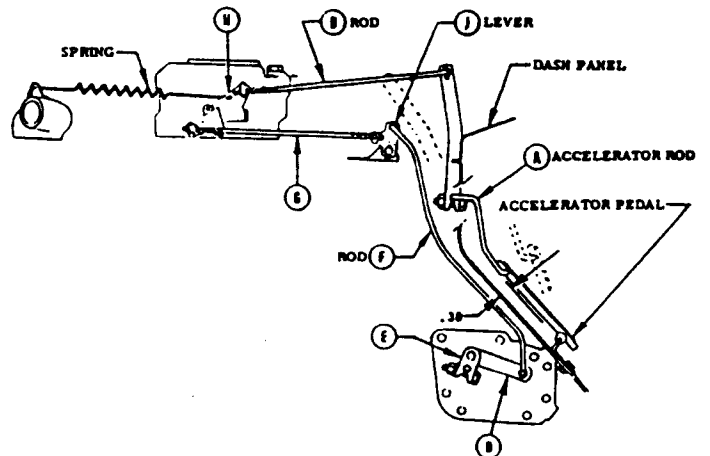
LINKAGE
ONE
CARB

1956-57



AUTOMATIC TRANSMISSION ADJUSTMENT

- 1 LOOSELY ASSEMBLE LEVER (D) TO CLAMP (E).
- 2 INSERT GAUGE BETWEEN TRANSMISSION LEFT HAND SIDE COVER LOWER REAR BOLT & LOWER HOLE IN LEVER (D) 2.88 DIMENSION BETWEEN BOLT & HOLE CENTERLINES WITH GAUGE IN PLACE, AND HOLDING CLAMP (E) COUNTER CLOCKWISE IN FULL DETENT POSITION, TIGHTEN LEVER (D) TO CLAMP (E) REMOVE GAUGE.
- 3 INSTALL ROD (F).
- 4 INSTALL ROD (G) IN LEVER (J). PLACE LEVER (H) IN WIDE OPEN POSITION & PULL ROD (F) UPWARD UNTIL IT IS STOPPED BY TRANSMISSION INTERNAL STOP. ADJUST SWIVEL IN ROD (G) FOR EASY ENTRANCE IN LEVER (H) BEFORE FIXING SWIVEL IN LEVER (H).
- 5 CHECK ADJUSTMENT BY PLACING LINKAGE IN IDLE POSITION, THEN RETURNING TO WIDE OPEN POSITION BY ROTATING LEVER (H) PUSH UPWARD ON LEVER (D) AND NOTE IF ROD DEFLECTS, MEANING TRANSMISSION IS NOT ON INTERNAL STOP. IF ROD DEFLECTS OR LEVER (D) WILL NOT REACH WIDE OPEN POSITION, REPEAT ADJUSTMENT 4.
- 6 WITH ACCELERATOR PEDAL DEPRESSED, PLACING LOWEST POINT ON ACCELERATOR ROD (A) .38 ABOVE TOE PANEL & LEVER (H) ROTATED TO WIDE OPEN POSITION, ADJUST SWIVEL IN ROD (B) FOR FREE ENTRY OF ROD (B) INTO LEVER (H) BEFORE FIXING ROD (B) TO LEVER (H) IN CARBURETOR.
- 7 CHECK ADJUSTMENT BY RELEASING, THEN DEPRESSING ACCELERATOR PEDAL, CHECK LEVER (H) FOR WIDE OPEN POSITION. IF LEVER (H) WILL NOT REACH WIDE OPEN POSITION, REPEAT STEP 6.



11C. ONE CARBURETOR 1955-62 (continued):

1958-62:

Accelerator: the foot pedal, mounting bracket, bushings, spring and all the small parts associated with accelerator linkage are the same on all 58-62 Vettes.

Transmission: the lower link on the carburetor's lever is for the automatic transmission.

1959 clutch: linkage was changed with the addition of a second setting, another hole in the linkage, which reduced the clutch pedal travel. The "fast clutch" adjustments are shown in Chevrolet Service News, January-February 1959, Corvette Servicing Guide, ST-12, Section 6R.

1962 throttle: Small carb (base engines) had the return spring connected to the carburetor linkage in the rear and in front to a bracket on the oil filler tube.

After AIM 12-19-61, the front was retained by a metal L-bracket (PN 3729808) with a small hole in one end for the spring and a large hole in the other. The large hole held the bolt that retains the cooling water outlet to the intake manifold.

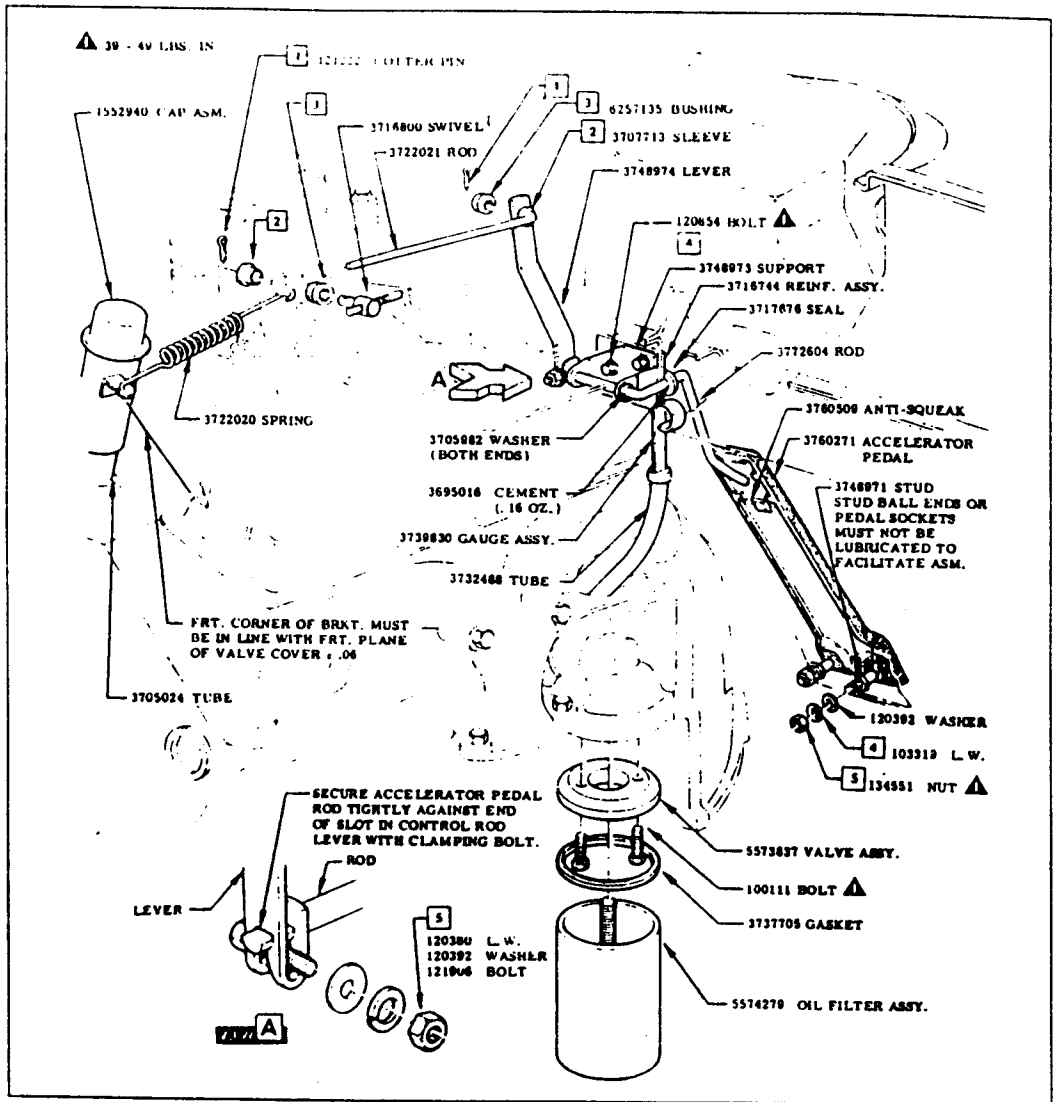
On AIM 3-7-62, a third bracket (PN 3824300) was introduced, but probably did not appear until after 4-29-62 when VIN -7767 was assembled. It had an unusual shape because it was inserted under, and retained by, the two left-front intake manifold bolts and it had to clear a reinforcing ridge.

Large carb (RPO 396 or 583) had a new and peculiar accelerator spring (PN 3759030) and spring bracket (PN 3799780). In late 1962, a new bracket (PN 3824300) was introduced. See prior paragraph.

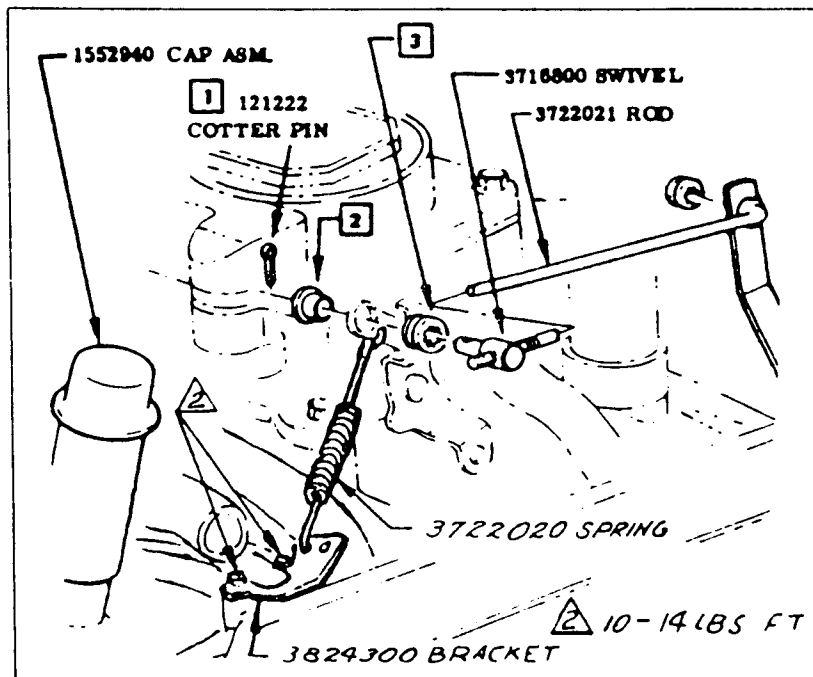


LINKAGE
ONE CARB
MANUAL
TRANS

1958-62
UNTIL AIM
12-19-61

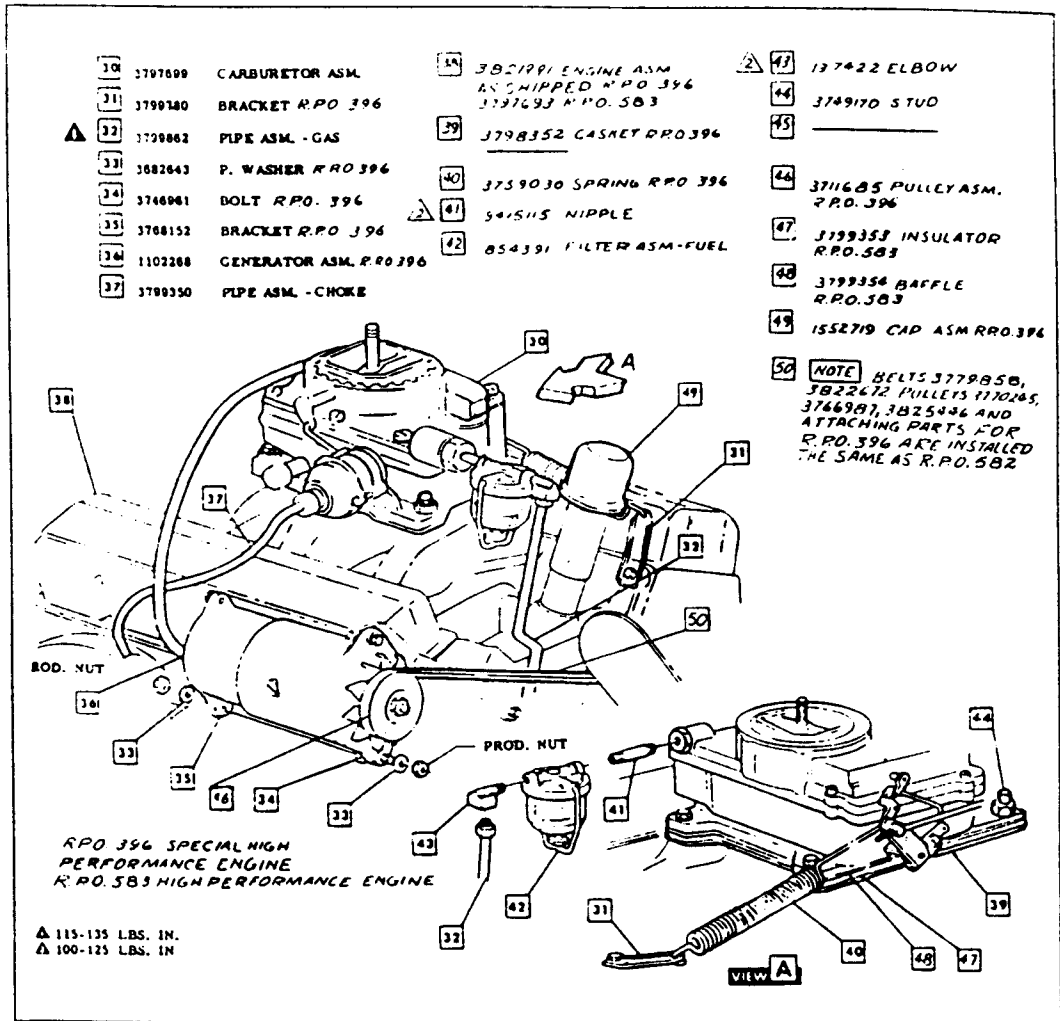


1962
AFTER AIM
12-19-61



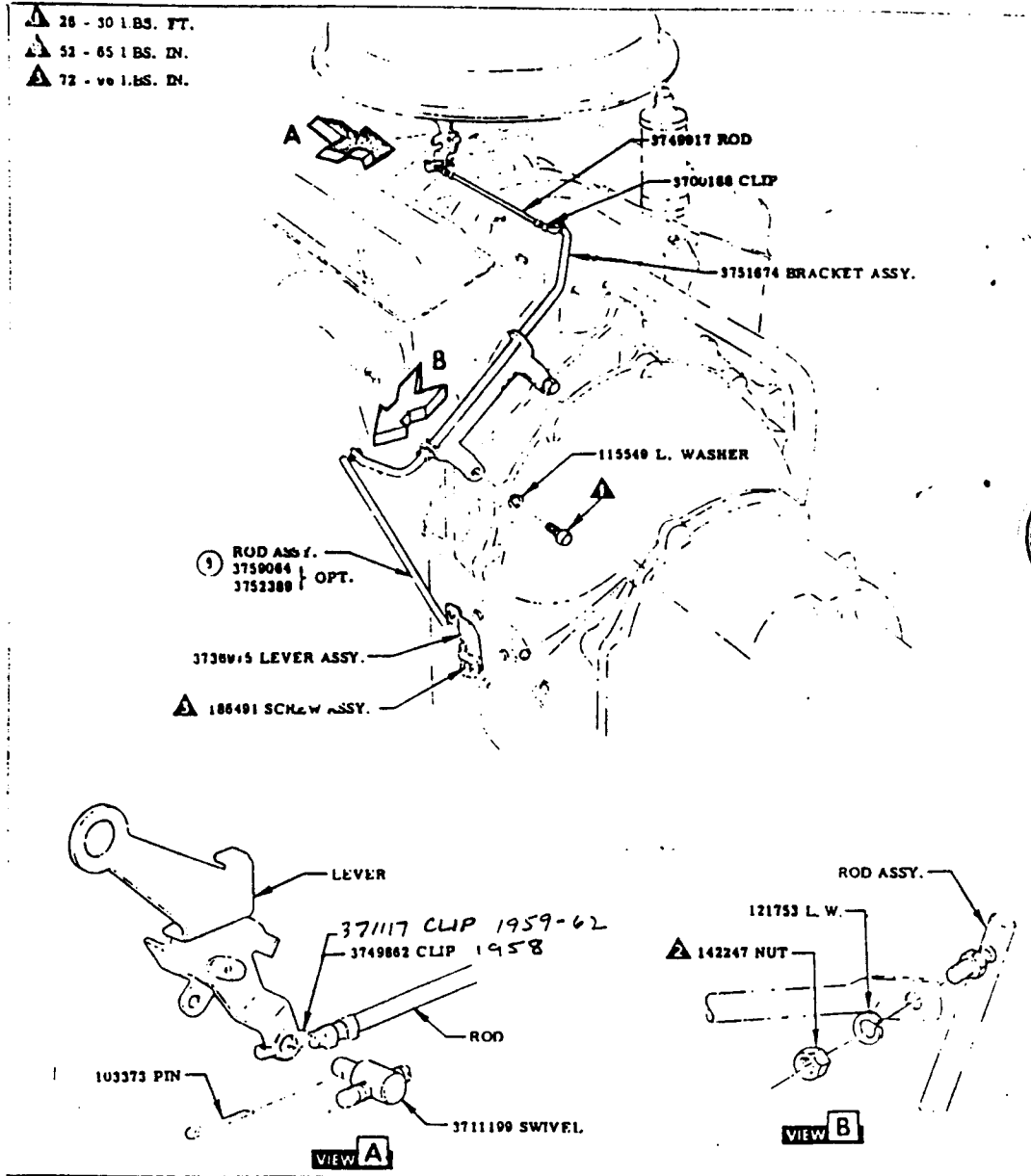
LINKAGE
ONE CARB
MANUAL
TRANS

1962
LARGE
CARB



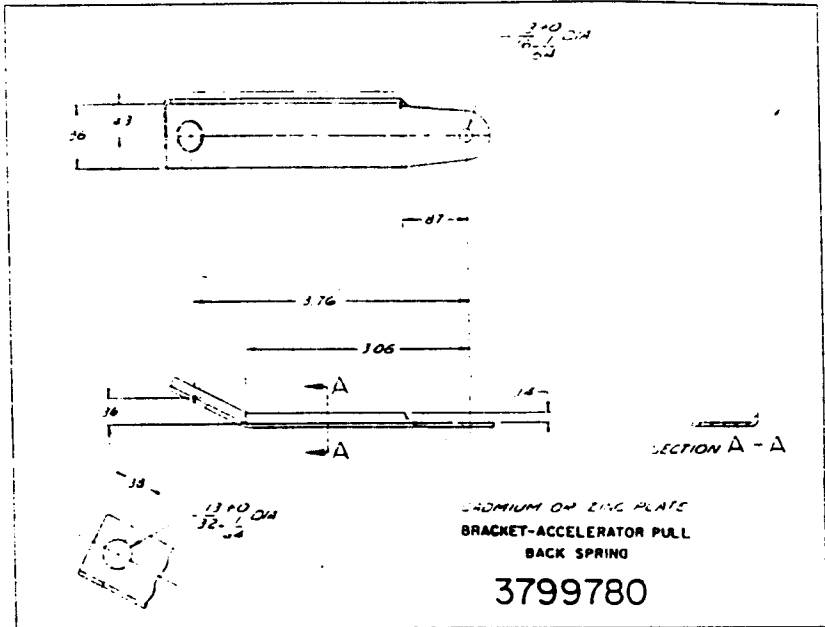
LINKAGE
ONE CARB
POWERGLIDE

1958-62

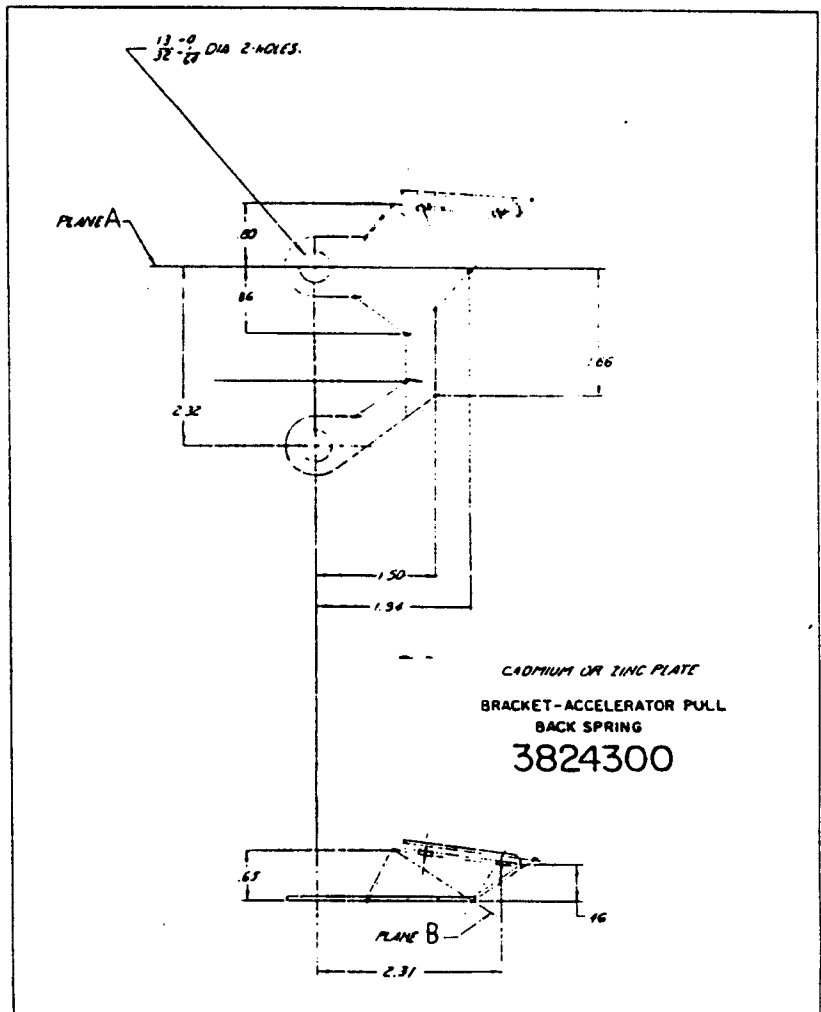


LINKAGE 1962
SPRING BRACKETS

UNTIL AIM 3-7-62
ALL LARGE CARB



AFTER AIM 3-7-62
ALL SMALL CARB +
LARGE CARB WITH
HI-LIFT CAM



11D. FUEL INJECTION 1957-62

1957:

Accelerator: the round lever is unique to the 57 FI. It is 3/8 inch diameter steel rod, bent and flattened on the output end, painted semi-gloss black.

Transmission: powerglide engines use a cross-shaft lever assembly bolted on the flywheel housing.

1958 until AIM 6-27-58:

Accelerator: the uppermost piece of the FI linkage (PN 3752767) is different than carbureted linkage (PN 3748974), but both versions were "flat" type. FI engines switched to the carb linkage on AIM 6-27-58.

The most unusual feature of the FI linkage was that the return spring was too short. An extension (PN 3752486) was about an inch long and allowed the spring to connect to the proper bracket without stretching. The extension was painted black and connected to the rear of the spring on manual transmissions. On automatic transmissions, it connected to the front of the spring and through one end of a swivel.

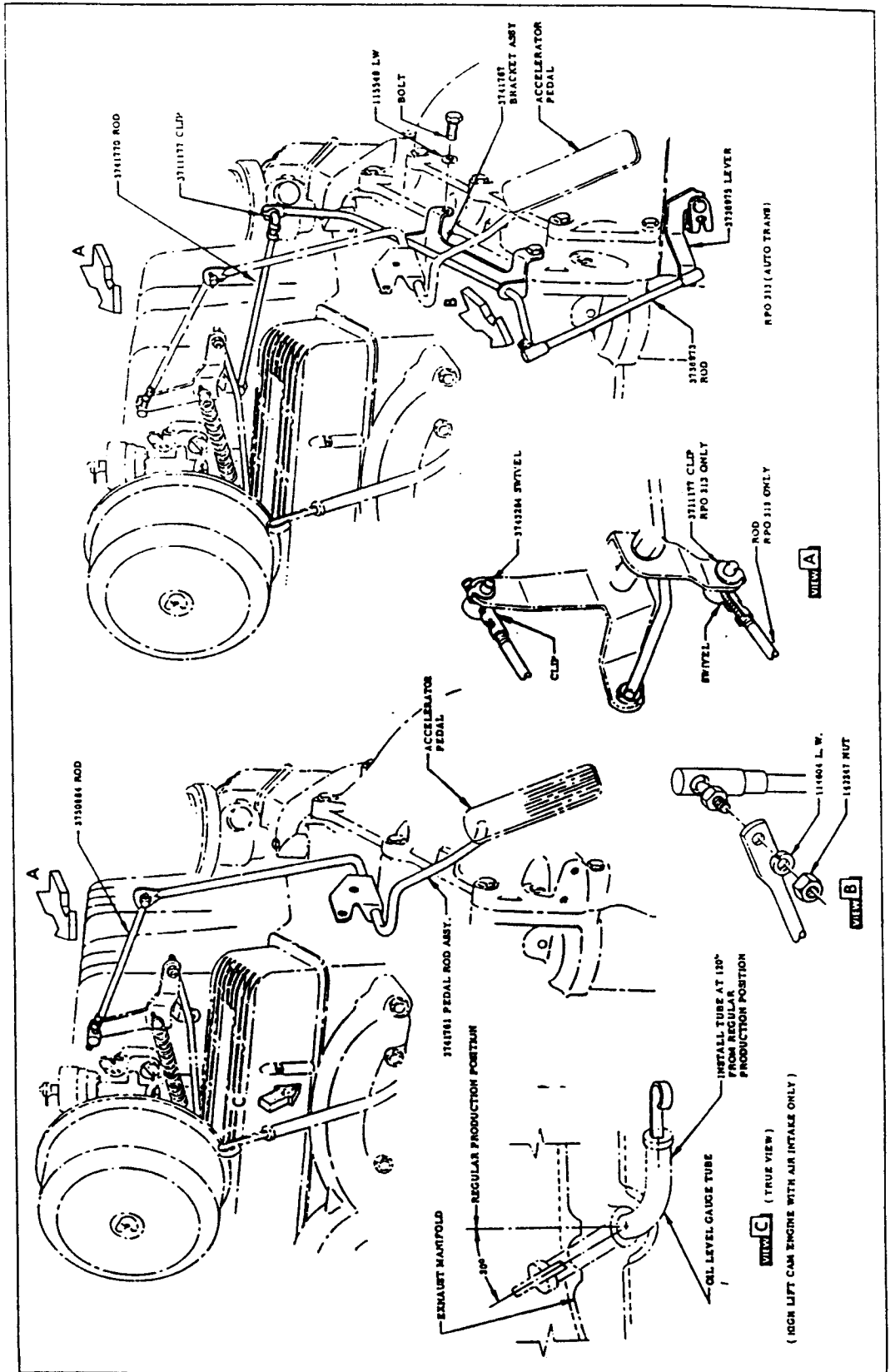
After AIM 6-27-58 thru 1962:

Accelerator: the foot pedal, mounting bracket, bushings, spring and all the small parts associated with accelerator linkage are the same on all engines. This includes FI and carbureted engines, both manual and automatic transmissions.

Clutch: In 1959 the linkage was changed with the addition of a second setting, another hole in the linkage, which when utilized reduced the clutch pedal travel. The "fast clutch" adjustments are shown in Chevrolet Service News, January-February 1959, Corvette Servicing Guide, ST-12, Section 6R.

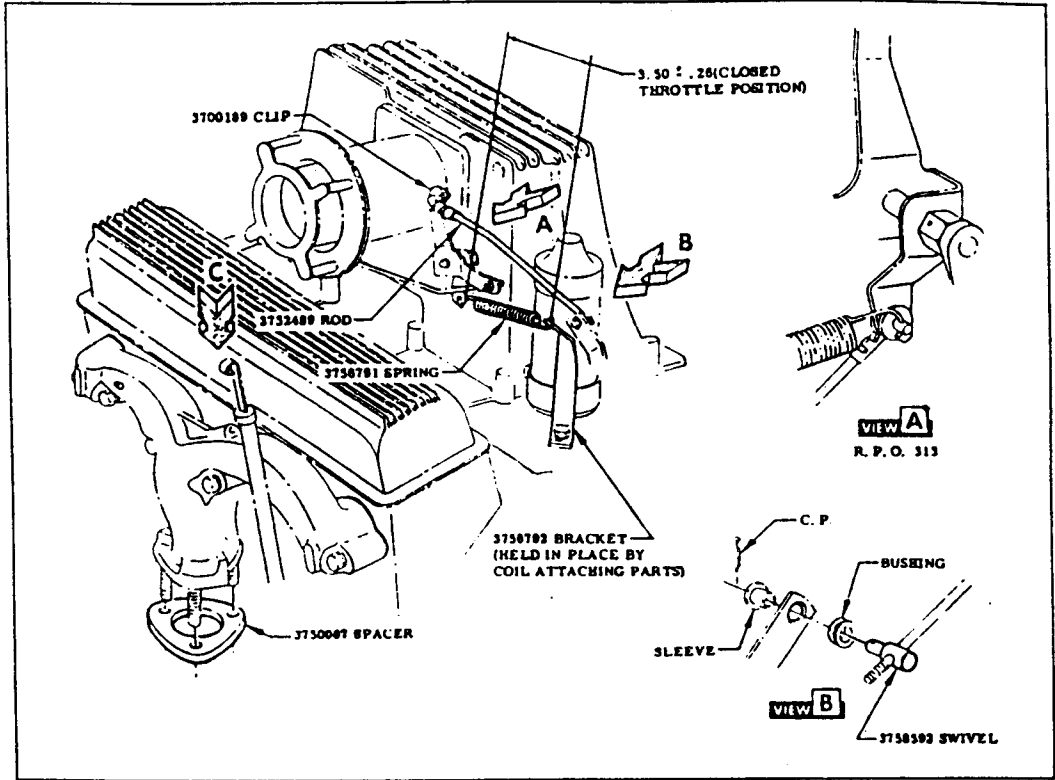


LINKAGE
1957 FI

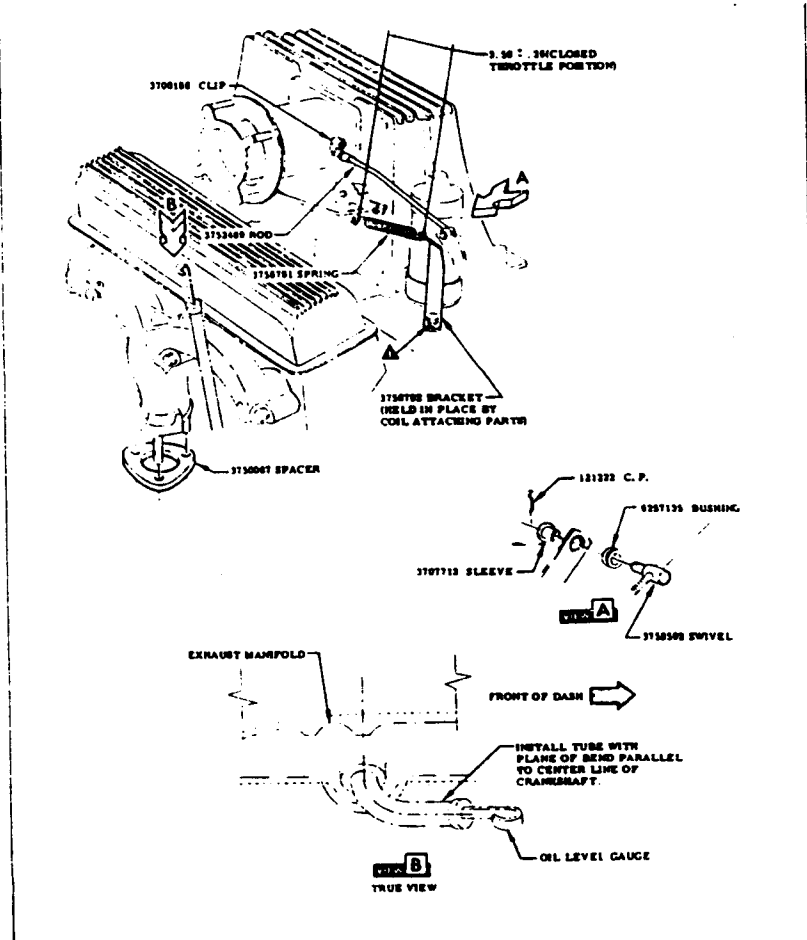


FI
MANUAL
LINKAGE

1959



1961-62



11E. LINKAGE REFERENCES:

Adams: 1953-55 pages 48, 50, 55-60
 1956-57 pages 127, 161, 165-6, 182-5
 1958-60 pages 233, 235-6, 273, 275, 281-4, 288-90
 1961-62 pages 332, 334, 364-8, 378, 383

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 RPO 469 Sheet 2.00
 RPO 579 Sheet 2.00
 1958-60 Sect 6 Sheet 7.00, 9.00 & 10.00
 RPO 313 Sheet 5.00 & 6.00
 RPO 469 Sheet 2.00
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 Sect 313 Sheet 4.00 & 5.00
 Sect 396/583 Sheet 1.00
 Sect 582 Sheet 5.00

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 1957 pg 46
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 1961 pg 59 & 71
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