1959 Corvette Service News: 1959 Powerglide Production Variations

Subject: 1959 Powerglide Production Variations

Model and Year: 1959 Models **Source:** Chevrolet Service News

Page Number: NA

Date: November 1958 - Volume 30 - Issue 11

There are five different Powerglide transmissions used in 1959. They are used as follows:

- 1. 6 cylinder Passenger Car
- 2. V-8 Passenger Car Regular
- 3. Corvette
- 4. V-8 Passenger Car Special with 250 hp-Fuel Injection
- 5. Special Option

The regular transmissions used on the 6-cylinder and 8-cylinder models differ in the size of the booster valves and sleeves, and the throttle valve spring. As in past models, the 6 and 8 cylinder models are different converter housings.

NOTE: Booster valve identification for 1958-59 Powerglide Transmission is shown in Figure 2. Similar illustration on page 36 of TOP 59 S & M-1 - "1959 Advance Service Information" booklet, is in error and should be corrected as indicated in Figure 2.

| | O. D. OF LARGEST LAND | PROJECTION ON LARGEST END | |
|--|--------------------------|------------------------------------|--|
| 1958 V8 (1st Design) | .471".559" | YES | |
| 1958 V8 (2nd Design) | .471".551" | NO | |
| 1959 V8 | .646" | NO | |
| 1958 L-6 | .529" | YES | |
| 1959 L-6 | .562" | NO | |
| SERVO COVER LOCA 1958 (all L-6 and first design 1 All 1959 and 2nd design 1958 | V8) Straig | ht tube type t inward on booste | |

Fig. 2-Powerglide Booster Valve Identification

The Corvette transmissions have a special converter assembly with 33 bolts holding the converter housing and cover together. In addition, a special governor is used which has lighter small weights to create a higher shift pattern. A longer output shaft is used, and there is no oil cooler valve or piping for transmission oil cooling.

The V-8 passenger car transmission for use with the 250 hp regular camshaft 283 cu. in. V-8 engine carries a Corvette converter and governor. it has a red plastic patent plate on the right side of the converter housing, where the other transmissions have a blue plate. Otherwise, this transmission is the same as

the one used with the regular V-8 engines.

The special option transmission is available only with the 348 cu. in. engine equipped with a Carter AFB carburetor, 11:1 compression ratio and special camshaft using solid valve lifters. This unit has a special 5 plate clutch assembly. The plates are serviced as a package. The other clutch parts are serviced the same way as the regular model. This special transmission also has the 33 bolt Corvette converter and special governor, built to give a maximum shift point of 5400 engine R.P.M. Otherwise, this transmission is the same as the regular V-8 model.

1959 POWERGLIDE HYDRAULIC PRESSURES

The only hydraulic pressure changes in the 1959 Powerglide as compared to 1958 are in the Reverse Range checks. Therefore, the following chart may be used for 1958 or 1959 models.

| Range | Test Point | Engine Speed | Vehicle Speed | Manifold Vacuum | Test Pressure V-8 | Test Pressure 6-Cyl. | |
|--------------------------|------------------------|-----------------|--------------------------------------|--------------------------------------|--|----------------------------|--|
| Drive Low Servo Apply | | Idle | | 16" | 60-70 | 55-65 | |
| Drive | Low Servo Apply | | 20-25 MPH | 20" or more (coasting) | 47-53 | 47-53 | |
| Low | Low Servo Apply | 1600 RPM | | | 114-127 | 70-80 | |
| Reverse 1959 only | Reverse Servo Apply | Idle | | | 80-115 | 80-115 | |
| Reverse 1959 only | Reverse Servo Apply | 1250 RPM | | Vac. Modulator Hose. Disconnected | 240-260 | 170-190 | |
| Reverse 1958 only | Reverse Servo Apply | 1250 RPM | | | 215-245 (with 2nd design pressure regulator) | 167-191 | |
| Drive | Throttle Valve | | | | 0-63 | 0-50 | |
| Drive | Governor | | 0 to Full Throttle Shift Point | | 0-84 | 0-68 | |

| | 1959 POWERGLIDE SHIFT POINTS | | | | | | | Special Option | | |
|--------------------|------------------------------|-----------------------|----------------|-------------------|----------------|--------------------|-------|----------------|----------------------|--------------------------|
| Throttle Position | Six Cy Upshift | linders* Downshift | 283 Upshift | V-8* Downshift | 348 Upshift | V-8** Downshift | Corv | ette | W/348 Po and 3.55 | lice Engine Rear Axle |
| Closed Throttle | 12-15 | 10-13 | 12-15 | 10-13 | 13-16 | 11-14 | 12-15 | 10-14 | 14-18 | 12-15 |
| Detent Touch | 27-44 | 13-17 | 37-50 | 13-17 | 40-55 | 14-19 | 36-52 | 13-17 | 44-60 | 15-20 |
| Thru Detent | 44-49 | 41-48 | 50-56 | 47-53 | 55-61 | 51-58 | 54-60 | 50-58 | 60-66 | 56-63 |
| **Used with 3.08 R | ear Axle | *Used | d with 3.36 | Rear Axle | | | | | | |

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