

These are the most common types of modulator configurations. Your vehicle may have a different type of arrangement. Testing procedures may vary from different manufacturers.

**ALWAYS REFER TO THE
VEHICLE
MANUFACTURERS SERVICE
MANUAL FOR SPECIFIC
PROCEDURES**

We are always here to help!

**For Customer Service call
1-800-247-4313**

Ask for the Allison Department



**!CAUTION!
PLEASE READ CAREFULLY!
TRANSMISSION
MODULATOR
TESTING**

Camerota Truck Parts strongly recommends the installation of a new modulator during installation of this unit.

Modulator failures are a leading cause of transmission failures.

AIR MODULATOR TEST

1. There should be no air pressure at the modulator with the engine idling and the throttle closed. When the throttle is depressed, the air pressure will either rise steadily or come on at about 60% throttle to at least 90 PSI or full air system pressure.
2. Manually check the modulator by using shop air to the inlet side of the modulator. There should not be any air leakage from the transmission side of the modulator.



CABLE MODULATOR TEST

1. Disconnect the cable to make sure it travels freely.
2. Adjust the clevis or rod on the cable until it aligns with the hole in the throttle linkage lever and the connecting pin can be inserted freely.
3. Then with the pin removed, rotate clevis or pin one additional turn counterclockwise for pull type or one turn clockwise for push type cable.
4. Reinstall clevis pin/rod end and operate cable checking for free movement and full throttle operation.



VACUUM MODULATOR TEST

1. Verify that the engine has good manifold vacuum (18'-21') at idle to the modulator.
2. When the throttle is opened the vacuum should drop to zero and then slowly rise back to normal with steady throttle opening.
3. Manually check the modulator using a vacuum pump.
4. Connect the vacuum pump to the modulator.
5. When pumped the plunger should pull in and the modulator should hold vacuum.



ELECTRIC MODULATOR TEST

1. Verify the power source from the vehicle. Some are directly fed from switch or relay others are controlled from the vehicle ECM. (Some ECM controlled units require vehicle speed to be 15MPH to operate.)
2. Turn on the ignition key and check voltage at the modulator, there should be zero volts.
3. Depress the throttle, there should be 10 volts or more at 60% throttle and should return to zero volts when throttle is released.
4. Manually check the modulator by removing the modulator from the transmission.
5. Plug vehicle harness to modulator.
6. Turn ignition key.
7. Depress throttle to full open position.
8. Modulator pin should extend fully.



Shift Lever / Cable Adjustment Procedure

For all Allison Transmission Models Including:

- 1000 Series
- 2000 Series
- 2400 Series
- AT500 Series
- MT600 Series
- HT / CLT 700 Series

CAUTION: Failure to follow this shift cable adjustment will cause fourth clutch failure.

1. Shift lever condition and routing must be checked to ensure proper operation.
2. Place both the shift selector and transmission selector shaft in the NEUTRAL position.
3. Attach the cable to the shift selector at the drivers position.
4. At the transmission end of the cable, push the cable to move the shift handle against the end of the shift selector Neutral gate. Note this position of the cable end (pivot) with respect to the hole in the shift lever. *Refer to Figure 1.*
5. Pull the cable to move the shift handle against the opposite end of the shift selector Neutral Gate. Note this position of the cable and (pivot) with respect to the hole in the shift lever. *Refer to Figure 2.*
6. Center the position of the cable at the midpoint of the travel determined in steps 4 and 5. *See Figure 3.*
7. Holding the cable at the position determined in step 6, rotate the pivot on the threaded section of the cable and until it is aligned with the hole in the shift lever. Secure properly. *See Figure 4.*
8. Once this attachment is made, move the selector through all the range positions at the driver's position. Verify that free-pin fit exists in each range position, and that the position of the shift lever is determined by the internal transmission detent - not by tension or compression on the shift cable. Special attention should be devoted to the free-pin fit in the NEUTRAL, lowest forward range ("1"), and if so equipped, the PARK position.

