DIAGNOSIS AND TESTING

Vacuum Release Parking Brake

Tools Required:

- Rotunda Vacuum Tester 021-00014

Look closely at the operation of the brake linkage as the brake pedal is depressed. Then, check the operation of the brake linkage when the manual release lever is activated. These checks will indicate whether the manual parking brake control linkage is operating properly or requires service or adjustment. Adjustment may be necessary if the parking brake is unable to prevent moderate vehicle movement. Perform tests of the parking brake system and controls after making sure the linkage and manual controls operate properly.

When testing a parking brake vacuum release system, a minimum of 34 kPa (10 in-Hg) should be available at all points where vacuum is applied. This can be checked with a gauge such as Rotunda Vacuum Tester 021-00014 or equivalent.

Failure to maintain 34 kPa (10 in-Hg) during vacuum system tests could be caused by a loose hose connection, resulting in a vacuum leak. When checking for vacuum between two points, trace the hose along its entire routing to ensure it is not crossed with another hose or connected to the wrong connection.

All of the vacuum parking brake control checks are to be performed with the engine running at idle speed.

To detect any leaks in the parking brake vacuum hoses or to find disconnected or improperly connected hoses, listen for a hissing sound along the hose routing.

CAUTION: Do not apply air pressure to the vacuum system under any circumstances because the actuator diaphragm in the parking brake vacuum motor may be damaged.

1. Start engine and run it at idle speed. With the transaxle shift control in NEUTRAL, depress parking brake pedal to apply parking brake. Move transaxle shift control to D range, and observe the parking brake sector to determine if sector returns to its zero travel position when parking brake releases. If parking brake releases, parking vacuum control is working properly.

   NOTE: The parking brake vacuum release does not operate with transaxle in REVERSE.
2. If parking brake does not release, test for vacuum at vacuum line which is connected to the parking brake release vacuum motor. This can be accomplished by removing hoses from each component and attaching it to vacuum gauge. Vacuum will be available at vacuum motor only when transaxle selector is in D range. Connect two distributor tester vacuum hose adapters together with a coupling as a connector attaching the gauge. A minimum of 34 kPa (10 in-Hg) is required to actuate parking brake vacuum motor. If minimum reading is not present when performing this check, determine the damaged component and replace.

Operation Test

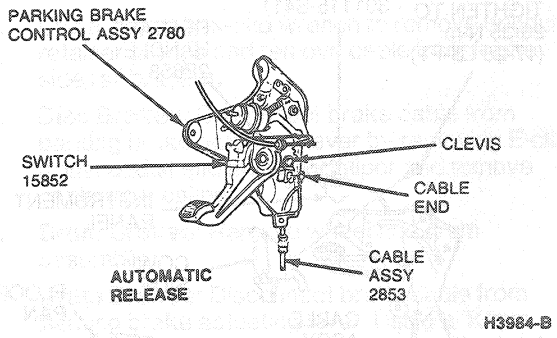
Check operation of the parking brake with vehicle on a hoist and parking brake fully released. Refer to Section 00-02. If there is any slack in the cables or if rear brakes drag when wheels are turned, adjust as required.

REMOVAL AND INSTALLATION

Control Assembly

Removal

1. Fully release parking brake.
2. Raise vehicle. Refer to Section 00-02.
3. Remove all tension from rear cables by backing off adjusting nut from equalizer or adjuster.
4. Lower vehicle.
5. Disconnect vacuum hose from vacuum release motor, if so equipped.
6. Disconnect release cable from parking brake control release arm and remove release cable grommet from parking brake control.
7. Disconnect wiring connector from parking brake warning indicator switch.
8. Remove cable end from clevis at brake control.



9. Remove push pin from cowl side trim panel.
10. Remove conduit retainer from control assembly using a 13mm box-end wrench to depress retaining prongs.
11. Remove three bolts and one push pin retaining control assembly to cowl side panel.
12. Remove control assembly from vehicle.

Installation

1. Position control assembly in vehicle.
2. Fit cable assembly through its mounting hole, and press pronged retainer in place. Ensure prongs are securely locked in place. Connect the cable end fitting to clevis at control assembly.
3. Install retaining bolts and push pin to cowl side bracket. Tighten screws to 23-35 N·m (17-26 lb-ft).