

Air Entrapment Test

A low pedal, bottoming pedal, or a pedal that feels spongy may indicate the presence of air trapped in the hydraulic system.



CAUTION: This test may cause brake fluid bubbling or spraying out of the master cylinder. Cover the master cylinder reservoirs with clear plastic wrap or another suitable cover to keep brake fluid off the paint.

- Check and add brake fluid as required.
- Replace the cover loosely.
- Pump the brake pedal rapidly twenty (20) times then keep the pedal held down.
- Remove the cover.
- Release the pedal quickly.

A geyser or a squirt in either reservoir indicates that air has been trapped in the system. Pumping the brakes compresses the air; when the brake is released, the compressed air pushes the brake fluid back through the lines, causing the fluid to squirt. The remedy for this condition is to bleed the affected system(s). If the squirt only occurs in one reservoir, the other system does not need to be bled.

Another possible cause of the squirt or geyser is an out-of-adjustment condition on the rear brake. If the pedal is low, check the adjustment of the rear brakes.

Master Cylinder Fluid Bypass Test (Internal Leak Test)

If no sign of external leakage exists, but the brake warning lamp comes ON while the brakes are being applied, the master cylinder may be bypassing fluid (losing pressure internally). Perform the following test to determine if brake fluid is bypassing the master cylinder piston cups:

- Check the brake fluid level in the reservoirs and add fluid if necessary. The reservoir should be at least half full.
- Observe the reservoir while a helper slowly pushes the brake pedal all the way down and then releases it.
- Push the pedal all the way down one stroke and release it.
- If the level of fluid in the reservoir rises slightly while the pedal is being applied and falls when the pedal is released, the brake fluid is bypassing the pistons. The fluid level rising in one reservoir and falling in the other as the brake pedal is applied can also indicate that fluid is bypassing the piston cups.
- As a further check, hold the pedal down firmly for about one minute. If the pedal drops and no external leakage exists, the brake fluid is bypassing the master cylinder piston cups.

The master cylinder should be replaced if it is bypassing fluid internally.