DIAGNOSING A LOW, SPONGY OR DROPPING BRAKE PEDAL

Start Here

Check system for leaks visually. If problem is related to a hydraulic system, service has been performed, then bleed using manufacturer's procedures.

If system has open-face master, then pump pedal up and check for gusher when pedal is released quickly. If gusher is present, that circuit of hydraulic system has air. Bleded.

If problem is still present after above steps, then proceed with flowchart. This flowchart covers most vehicles and systems, but is not meant to be all inclusive. Use boxes next to each step to chart path taken. It is sometimes necessary to retest to ensure accurate results.

Perform Line Lock Test

Important: Follow these steps carefully to prevent damage to master cylinder seals.

1. Loosen brake line at master and have assistant push pedal down approximately 1/2 inch and hold in that position.
2. Install line locks on each brake hose in hydraulic system — use only approved type. If line locks are installed properly, tires will spin freely. If they will not spin or drag, repeat steps 1 and 2.
3. Have assistant continue to hold pressure on pedal while performing the steps below.

Condition 1

With the line locks installed, pedal is high and hard

Condition 2

With line locks installed, pedal is still low or spongy

Is vehicle equipped with PWM or RABIS ABS?

1. Remove brake lines from master cylinder.
2. Install plugs or dummy lines in master cylinder.
3. Bleed at each outlet fitting using single stroke method, making sure not to exceed 3/8 inch travel.
4. Loosen one outlet fitting and depress brake pedal 1 inch, tighten fitting.
5. Bleed at fitting. If pedal is high and hard, depress brake pedal one inch, tighten fitting.

Pedal is low and spongy

Pedal is high and hard

Pedal is low or spongy

Primary Circuit Good.

If pedal is high and hard at this time, the problem was probably a pocket of air that was removed during test procedure. Remove line locks at wheels and check pedal. If pedal is good, test drive vehicle. If still low, retest system.

Secondary Circuit Good.

If pedal is high and hard at this time, the problem was probably a pocket of air that was removed during test procedure. Reconnect line locks at wheels and check pedal. If pedal is still low, retest system.

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Component being tested is not source of problem.

1. Locate next component in system and repeat previous step.
2. Repeat this procedure until faulty component is isolated.

Component being tested is not source of pedal condition.

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Component being tested is cause of pedal condition.

1. Attempt to bleed component.
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Felt pedal is still depressed, remove line lock on rear brake

Pedal is still depressed, remove line lock on right rear brake

Pedal is low and spongy

Pedal is high and hard

Pedal is low or spongy

1. Connect primary line lock and master cylinder.
2. Bleed at fitting.
3. Open fitting and depress brake pedal one inch, tighten fitting.
4. Reconnect primary line and bleed at fitting. If pedal is high and hard, depress brake pedal one inch, tighten fitting.
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Final Step

Perform Line Lock Test

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