JURID®
QUALITY IS IN THE DETAILS

TECHNICAL TIPS
N°8: LOSS OF BRAKING EFFICIENCY

SPONGY PEDAL FEEL

Spongy pedal feel is the experience where upon depressing the brake pedal, the brake is slow to respond, and the pedal feels spongy – softer than it should be, with excessive force required to decelerate the vehicle and excessive stroke of the pedal.

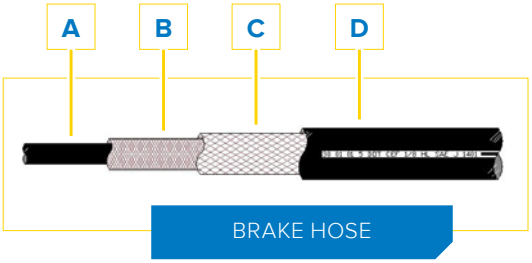
WHAT CAUSES SPONGY PEDAL FEEL AND HOW CAN YOU FIX IT?

Faulty brake hoses can cause brake fluid leaks, or ballooning of the hose itself which in turn means a poor brake pedal response.

1. AGING

During the life of a brake hose, it is subjected to different working conditions that could cause performance degradation or aging.

The brake hose is composed of 3 elements: a cover made of vulcanized rubber, a synthetic fibre reinforcement braid, and a vulcanized rubber inner tube.



A Inner rubber tube
B First reinforcement braid
C Second reinforcement braid
D Hose cover

The aging process can act differently on different parts of the hose.

- The cover is affected by contact with external agents such as liquids, gases and heat radiation. Weather aging too has an impact, especially during cold winters when salt is spread on the road in large quantities.
- The fibre reinforcement can be affected by thermal degradation (or heat damage).
- The inner tube can be affected by both thermal degradation and contact degradation due to the chemical aggressiveness of the brake fluid.

Heat and chemical attack on any of the elements of the brake hose will result in cracking or splitting, which in turn means restricted fluid flow and poor brake response.

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2. FAULTY FITMENT

During installation it is easy to damage the hose through a variety of actions:

- Twisting

- Forced bending of the hose

- Contact of the exterior of the hose with fluid, mineral oil or grease
- Incorrect torque value
- The metal fitting should be tightened to a torque value of between 13 and 20 Nm. Damage or leaks can be the result if the torque is too high or low.
- Ensure when fitting a hose that there is no contact with steering or braking parts.
- While it can appear free with the vehicle on the lift, lowering the vehicle to the ground can alter the sus-pension position. Always conduct a secondary check on hose placement once the vehicle has been fully lowered. Turn the steering wheel to the lock position (left and right sides) to ensure no contact occurs.

HOW TO AVOID FAULTY BRAKE HOSES

1. AGING

- Checks of flexible brake hoses should be a standard procedure for any roadworthy. Brake hoses are an inexpensive component, but can have a serious impact on safety for any driver.
- To ensure the maximum efficiency of the brake system and guarantee the essential safety and reliability, flexible brake hoses should be checked at regular intervals for chafing, cuts, general deterioration and leakage.
- Some vehicle manufacturers recommend replacing hoses after 50,000 km or at least every 5 years, however hoses should be checked during every service.

2. FITMENT

- Ensure that during fitment brake hoses are not bent or twisted.
- Ensure correct tightening torque is applied during fitment.
- Ensure there is no contact between hoses and suspension components once vehicle has been lowered.

3. CHOOSE ONLY GOOD QUALITY BRAKE HOSES WHICH SHOULD SHOW THE FOLLOWING QUALITIES:

- High resistance to the atmospheric conditions
- High resistance to sudden temperature changes
- Good flexibility and dynamic resistance
- High compatibility with the brake fluids used in the applications concerned
- Low moisture permeability
- Low volumetric expansion under pressure

We offer a comprehensive range of quality brake hoses.

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