## **DID YOU KNOW?** HYDROBUSHING

ADVICE FOR THE PROFESSIONAL DYK22-10



## The main role of a bush is to absorb the various forces applied to the control arm. It achieves this through its elasticity:

- The rubber in the bushing becomes twisted or deformed under the forces created by shock absorber movement e.g., when a vehicle is cornering or driving over bumps or potholes
- The rubber in the bushing is compressed due to vehicle weight displacement under braking and acceleration forces

## Through its damping properties, the bush must also be able reduce the magnitude of force transferred to the chassis from wheel vibrations resulting from:

- Brake judder caused by irregularities on brake disc (e.g. lateral run-out, disc thickness variation, surface roughness)
- Transfer of vibrations from rough or irregular road surfaces or the similar effects of some tyre surface designs e.g. snow or off-road tyres

1

0.5

## Standard Bush Hydro Bush



The main weakness of rubber is its limitation to dampen oscillations of **high amplitude** and **low frequency**. Typically, these are also the main type vibrations that a control arm bush must attenuate.

To address this weakness which is inherent to standard 'rubber-to-metal' bushes, hydroelastic bushings have been developed (these are also known as 'hydro bushes'). These bushes offer outstanding fluid damping performance for high amplitude and low frequencies.









In addition to enhanced dampening properties, hydro bushes also limit the deterioration of other vehicle steering and suspension system components. **To ensure continued driver comfort** 

and safety, MOOG provides hydro bushes whenever this is the original design technology deployed by the vehicle manufacturer.



For additional technical support visit www.garagegurus.tech/en-eu



