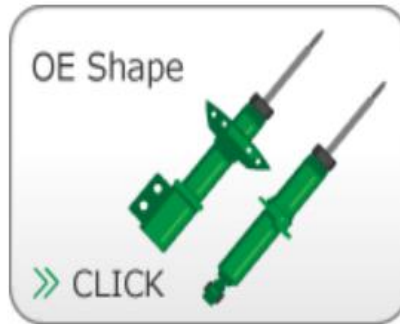


EnduraPro/EnduraPro Plus

Specifications



Only EnduraPro PLUS



EnduraPro/EnduraPro Plus

Target customers

- Prefer comfortable ride quality
- Keep OE Ride height and use standard springs
- Spend smaller costs
- Try damping force change system

Strength and Durability (1)

Fortified Installation Points

Example: Thickness comparison of front installation bracket for Honda Jazz/Fit GP5



OE

EnduraPro

For strut-type suspensions a thickness increase improves the strength and durability of the bracket attaching to the vehicle (steering knuckle) compared to OE shock absorbers. This higher rigidity of the knuckle's support also improves steering feel and makes the ride feel more stable. Please note that the thickness increase varies per vehicle model.

Strength and Durability (2)

Fortified Shell Case with Large Oil Capacity



The shell case, the key part of the shock absorber, is made of a high-strength material with tensile strength around 150% of the OE shell case. Weight increase is curbed by keeping the thickness of the cylinder wall the same. A bigger shell case diameter expands its oil capacity, for improved durability as well as a long-term stable damping force performance.

Example: Comparisons for the Honda Jazz/Fit (GP5)

Shell Case Tensile Strength

	OE	EnduraPro
Tensile Strength (Mpa)	340	510

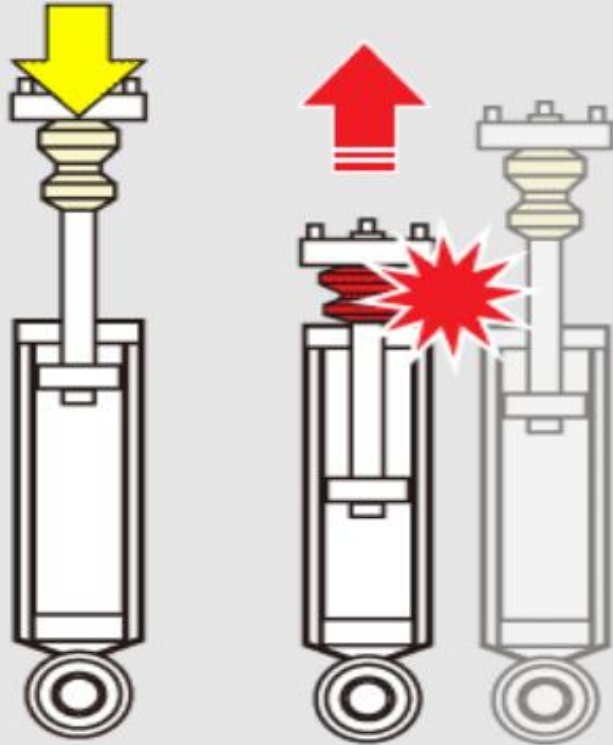
Shell Case Diameter

	OE	EnduraPro
Front Shock Absorbers	φ45	φ55
Rear Shock Absorbers	φ45	φ50.8

Please note: tensile strength and diameter of shell case vary per vehicle model.

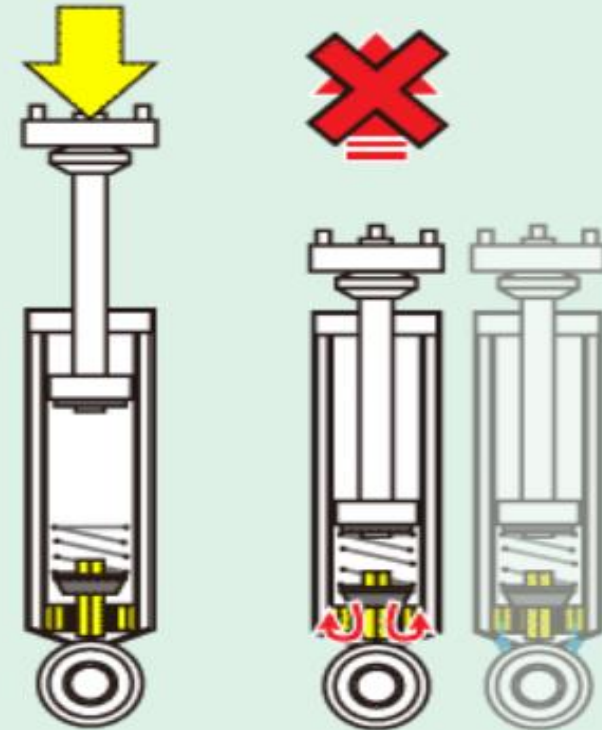
Hydraulic Bump Stopper (H.B.S.)-Structure

Regular Shock Absorbers



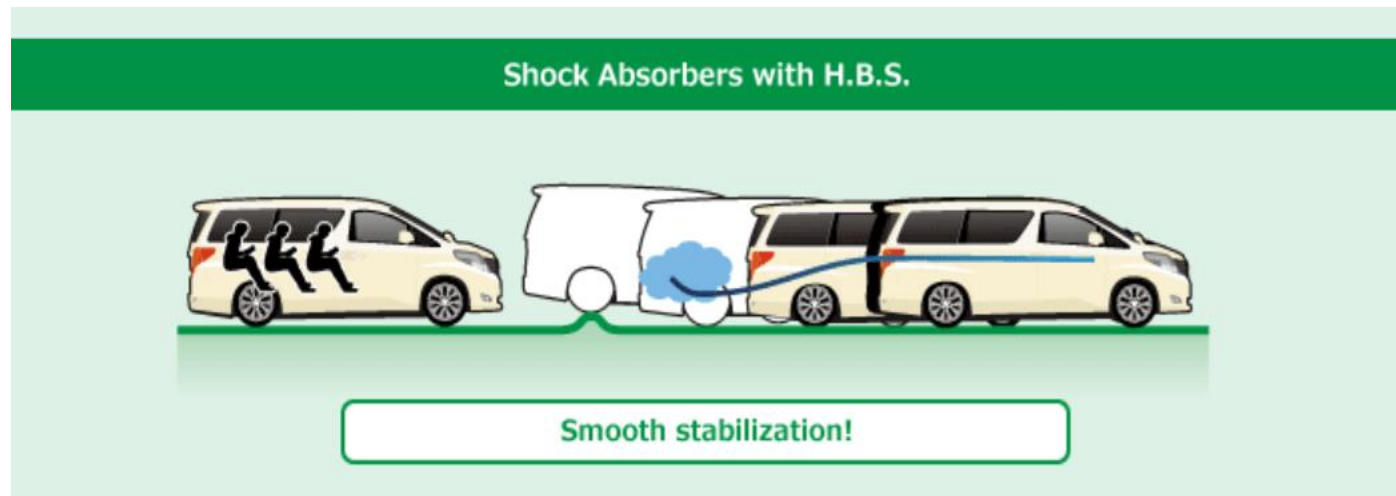
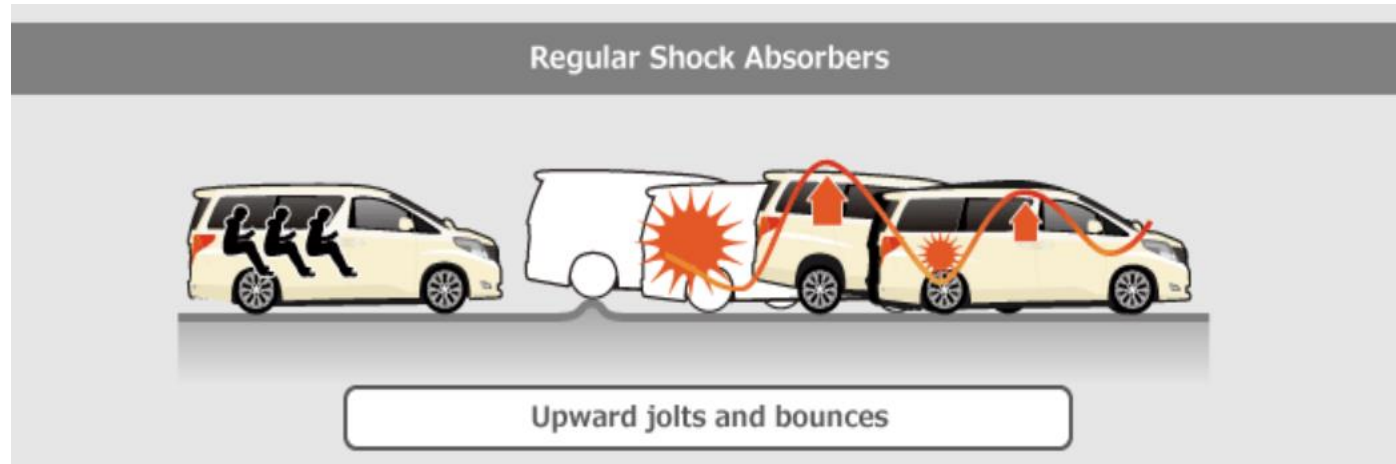
At full stroke bump rubber compression causes reverse repulsive force.

Shock Absorbers with H.B.S.



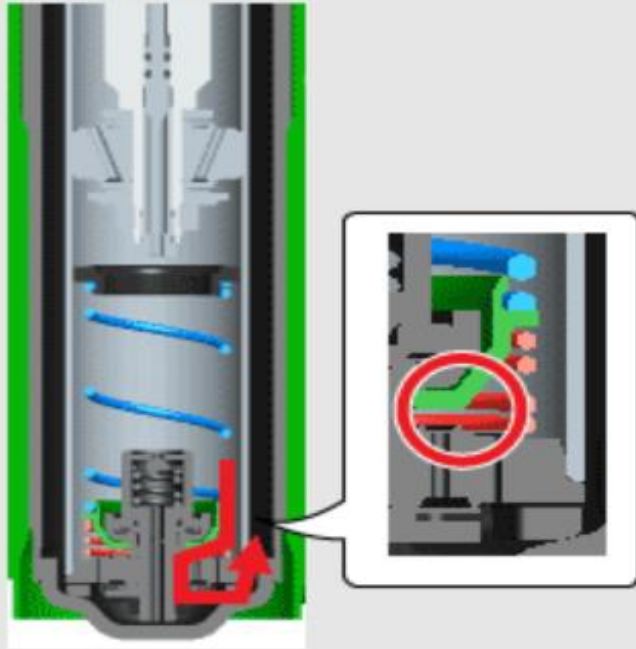
H.B.S. mechanism absorbs impact smoothly and converts accumulated power into thermal energy.

Hydraulic Bump Stopper (H.B.S.)-How it works



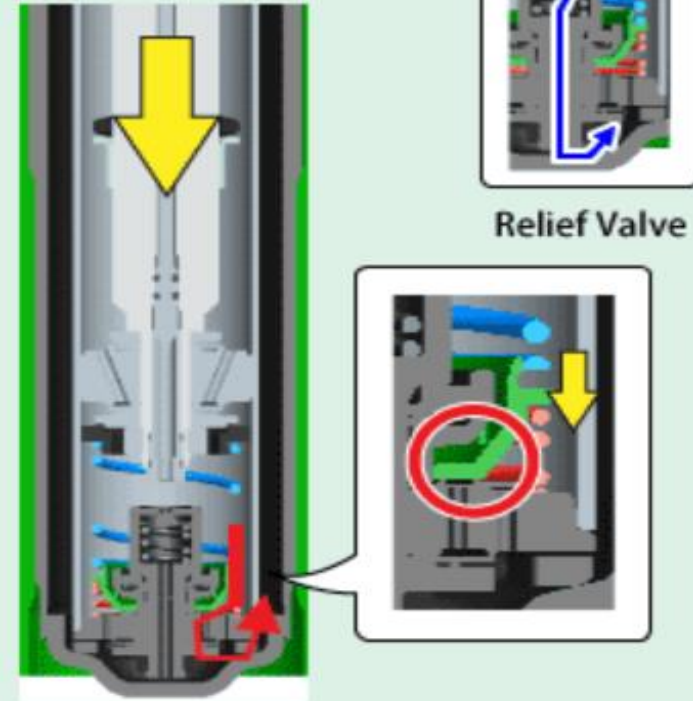
Hydraulic Bump Stopper (H.B.S.) - Mechanism

Inactive H.B.S.



Oil flows through ports;
friction from shim stack induces
normal damping force

H.B.S. Activated



H.B.S. near full compression:
narrowing of ports causes
high damping force.

Hydraulic Bump Stopper (H.B.S.) – what is it like?

*What is our TEIN H.B.S. system and how does it work? (3:33)

<https://www.youtube.com/watch?v=9BHzDDCjyls>

*H.B.S. system demonstration (0:22)

<https://www.youtube.com/watch?v=5lS9vfJOEeg>

This demo machine drops a 100 kgs of weight and shows how suspension absorb a shock. Please watch a glass on the weight and check that there was not any spills its contents because of the H.B.S. system