Floating piston

SKF offers an integrated sealing module for the pressure reservoir of two-wheeler shock absorbers, providing low friction for a better riding feeling and reduced nitrogen permeation for a longer suspension life.

Available applications

Motorcycle rear suspension (on-road and off-road), mountain-bikes, snowmobiles and ATV (All Terrain Vehicle/Quad).

Current solutions consist of multiple parts, i.e. a piston with a rubber O-ring and friction strip or alternatively a rubber bladder. The floating piston by SKF replaces these conventional solutions with one integrated unit which combines the benefits of current solutions while limiting the disadvantages.

The design features are:

- Integrated unit with metal stamping and specifically developed HNBR or NBR rubber compound
- External sealing lips with reduced friction provide virtually no stick and slip effects
- Central membrane function to compensate for small amplitude vibrations without the need for the piston to move
- Good gas and oil separation due to special compound characteristics and lip design

The floating piston by SKF is a unique integrated sealing module with the following benefits:

- More stable operation as the reduced membrane surface allows less nitrogen permeation than a bladder solution
- Improved reliability as the special sealing lip design reduces oil leakage
- Better ride control and improved comfort through reduced friction and rubber membrane
- Increased sensitivity for shock absorber tuning at the manufacturer as there is less need to compensate for stick-slip and gas permeation over time
- Higher rider confidence as the rear wheel has more ground contact
- Simplified installation and logistics because of one part instead of three
- Excellent dynamic sealing to avoid gas leakage

skf.com/sealsbikes

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For further information, please contact:
seals.bikes@skf.com