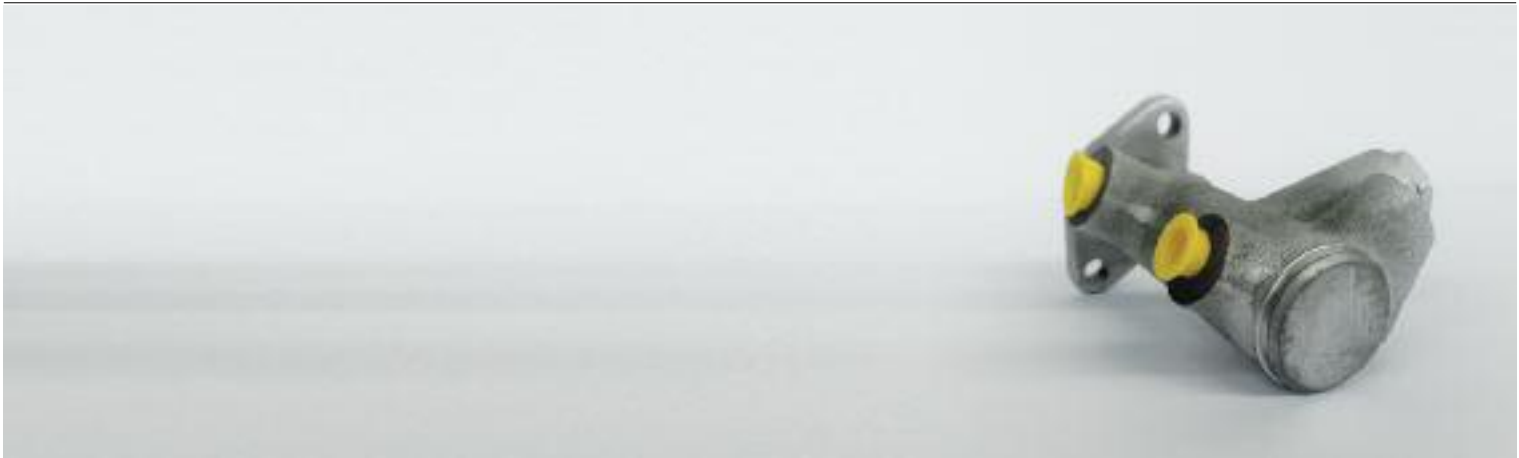




Spare Parts | Manufacturing | Reconditioning



Manufacturing

Product Information

Issue: Brake cylinders
Date 08/2009

As it might already be known to you by previous news reports, during launching our company on market we ran on parallel a shift-over to new supplier structures in the sector hydraulic brake components. The newly introduced hydraulic brake cylinders as well as brake actuating units have been expertly produced by German located suppliers, and in on-going production we and our suppliers aim to work in close co-operation to have an even further effect on high product quality which is certainly one of the first listed demands by customers. Thanks to the newly adjusted supplier improvements: a much further step to operating safety of products and long life guarantee is done.

Castings as well as single components including sealings, pistons, springs, balls, filler discs, piston rods and sealing rings are one hundred per cent crafted by production facilities in Germany and go through competently guided processes of manufacturing. This certainly comes equipped with broad-based expertise and long-term knowledge of the local manufacturers and we expect to gain further precision work and continuous high quality-standard for our products, which, as we see it, can only be achieved by production Made in Germany.

Investing a great amount of euros for over a hundred of specific tools in building up improvements for wheel brake cylinders, brake master cylinders, clutch cylinders, actuation cylinders, brake calipers and brake actuating units, we are now prepared for fabricating brake cylinders on a daily basis.

After running through every particular producing process the finished parts undergo a thorough examination. Not until finishing proofs of function, leakage and dimensional accuracy on applied test stands, the final products are not going to be released. In fact, all hydraulic components, indicated by casting number and inspection stamp, can be easily identified on the after-market and be retraced for any requests or defect detections. Hopefully such efforts will pay off soon in avoiding any further assembly bugs as they happen in the beginning and will prevent us for instance from upcoming product recalls.

In order to give you a helping guideline to ensure correct function of the security-relevant spare parts and also to differ between quality products and faulty import goods, we put up an enclosed checklist containing typical characteristics of quality. For any further information and additional article list including all newly improved brake hydraulic components please contact our team directly. With the best of intentions we have enlarged our product portfolio to please customers interests and last but not least, we appreciate all your given confidence and your further co-operation.

Cast housing free of shrinkage cavities

Sufficient assembly fluid to provide full function of sealing components

Lip seals in good condition (neither porosity, nor cracked spots) according required standards of sealing lips

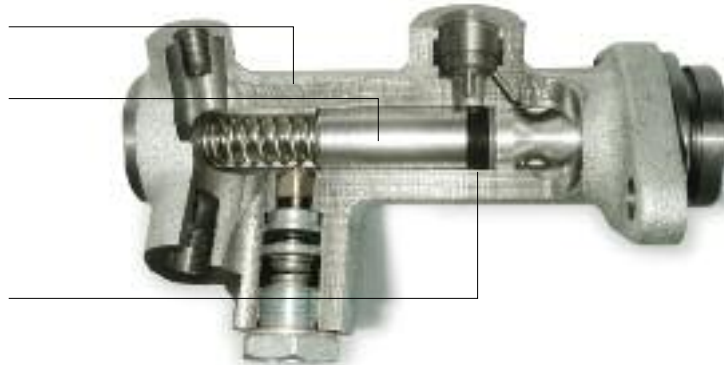


fig. master cylinder

Carried out permissible tolerances (referring to any dimension, no movable back and forth in cylinder bores, accurate running surface)

Interlock of sintered material (to provide proper handling of brake while opening and closing)

Even surface / total thickness (lesser fading, pedal-vibration, lesser sudden blocking of brake as well)

Accuracy of brake actuator balls
Ball return areas in conformity with one another



fig. brake actuating unit

Secure fitting of traction unit, studs of suitable material (characteristics for actuation units different type)

Manufacturing

Checklist

Issue: Brake cylinders
Date 08/2009

Hydraulic brake components in various design and versions

- Wheel brake cylinders
- Brake master cylinders
- Clutch cylinders
- Actuation cylinders
- Brake actuating units
- Brake calipers