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## **STC IMPROVEMENTS**

*The new STC series of axles have been improved both from a structural standpoint as well as from a hydraulic standpoint to guarantee better operating precision and long lasting reliability over time.*

**The thickness of the walls of all the cylinders has been increased from 5 to 7.5 mm, obtaining the following results:**

- **better resistance to peaks of pressure (more than 50%)**
- **less strain in the high stress areas**
- **less sensitivity to geometric distortions near of the welding zones**

**A very high grade of internal finishing of the cylinders has been achieved, ensuring:**

- **practically no ovalization inside the cylinder**
- **maximum efficiency of the seals**
- **maximum durability of the seals**
- **better cylinder performance, resulting from less friction**

**Both the adduction and the airbleed manifolds were completely redesigned in order to:**

- **reduce the welded areas to a minimum (the airbleeds are directly machined on the cylinder)**
- **optimize the position and dimension of airbleeds to improve the exhaust operation**
- **ensure maximum efficiency and durability of the seals**

**An innovative shrinkage fit system for the piston has been introduced to ensure**

- **maximum precision of the alignment of the shafts and seals**
- **smooth sliding of the seal pack**
- **maximum durability of the seals with perfect efficiency**

**The bore of the steering cylinders has been increased from 60 to 70 mm, with the following advantages:**

- **the perfect compensation of the volumes between the system feeding and steering cylinders**
- **increased power steering when the vehicle has very large tires**
- **reduced reaction on the tractor, improving drivability**
- **better working conditions of the system without peaks of pressure**

## **IN BRIEF**

The functional geometry of the steering axle has been improved by increasing the cylinder lever arm to obtain smoother system operations with a reduction of the operating pressure without penalizing the maneuverability, still obtaining a steering angle of 12°, compatible with CE requirements.

The new configuration also reduces the stress on the connecting bar, improving safety, in particular in cases of operations on rough grounds with hard shocks on the tires, ensuring longer durability (life) of the mechanical parts.



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