



New series of STJ commanded steering axles

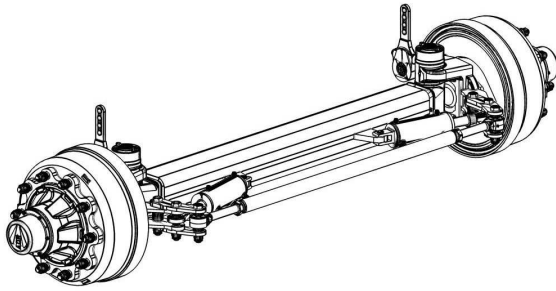
The STC commanded steering axle manufactured by ADR combines functionality, reliability and versatility for towed farming and public work machines.

Its well-known characteristics make it a fundamental component which ensures easy manoeuvring and precision even in the most difficult driving conditions.

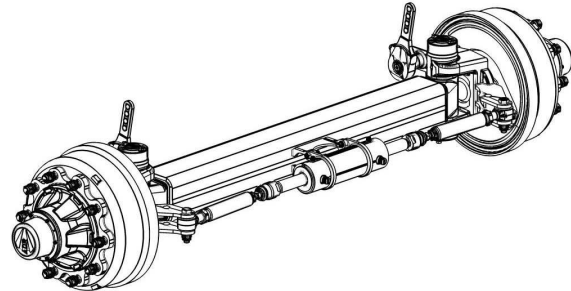
A compact and functional product has been obtained thanks to the new technological solutions adopted for the axle structure and hydraulic system. This product combines all the positive aspects which have characterized ADR technology through the years, always focusing on efficiency and simplicity.

The key component is an integrated hydraulic cylinder which acts as steering connection rod, too. In addition to this great innovation, other features are described below:

- Construction solutions which allows the vehicle designer to choose freely wheels and suspension fixing as the very compact integrated cylinder occupies only the central part of the axle.
- High precision and reliability based on years of experience in developing systems together with the component suppliers and the vehicle designers.
- Less passive resistances while working thanks to the optimized kinematics supported by a big-sized hydraulic drive.
- Easier start and maintenance of the system, thanks to the control hydraulic device that integrates the connection between the steering wheels.
- The big dimensions and the position of the cylinder in the structure allow the command system to use low working pressures, ensuring an easier driving and reducing the tractor fuel and tyre consumption.
- Easy installation of the hydraulic system on the trailer since all the cylinder connections are located in the central part of the frame.
- The cylinder position and its fixing to the structure leave much room to the axle fixing devices and to the brake enabling cylinders: therefore, the vehicle manufacturer can design his products freely.



Old commanded steering axle (STC)



New commanded steering axle

In order to complete the axle, ADR has manufactured a new steering wheel cylinder in compliance with the regulation in force for steering systems (ISO 26402 - Steering Systems 2008-06-01). This component can be connected to the tractor by means of a ball connection or a gauged pin.

In any case, the present steering wheel cylinder is always available for all the customers who decide to have a steering hydraulic system based on mechanical transmission or decide not to have a big steering wheel cylinder.

In short:

- simplification of the steering hydraulic system of the trailer since the feeding points are located in the axle centre.
- optimization of the steering axle size leaving a free area for the axle fixing to the trailer.
- reduced system working pressures because of the optimization of the steering arm and the increased cylinder size ensuring energy saving.
- optimization of the steering levers and consequently smaller axle overall dimensions

all these advantages can be obtained in addition to the well-established STC features, such as:

- the steering kinematics move on bimetal bushes which can be lubricated with very small clearances obtained thanks to the accuracy in manufacturing the conical articulations and to the high precision axial adjusting system on the top.
- The mechanical structure of the steering unit makes the maintenance operations easier since the conical articulation can be disassembled easily even after being exposed to external agents for a long time.
- High robustness of the steering unit thanks to the design, technological and material choices which have always characterized ADR.
- Compact structure ensuring versatility and compatibility with many tyres on the market.
- Control system of the hydraulic steering driven by the tractor but totally positioned on the trailer.
- High-precision driving in forward and most of all in reverse running thanks to its geometry.

For any further information or enquiry, please contact the ADR Commercial department which will be happy to show you all the advantages of the new axle.