Kramp GmbH

Tractor linkage triangle, category 2S

Durability

DLG Test Report 6012F

Figure 1: Tractor linkage triangle, category 2S, on the front linkage

FOKUS TEST
Apr 11 Durability

Applicant

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Test content

A tractor linkage triangle from normal production was used for the test.

The durability of the linkage triangle was examined on the vehicle test rig at the DLG Test Center. For test purposes it was mounted on the rear linkage of a tractor.

During the test it was subjected to a ballast weight using a ballast carrier.

No other criteria were tested.

Brief description

The tractor linkage triangle category 2S is the tractor-side component of a single-stage quick-action coupler for implement-side components complying with ISO 11001-2.

The dimensions of the coupling points for the tractor linkage correspond to category 2.

Rollers are mounted at the tip of the tractor linkage triangle to facilitate mounting into the implement triangle.

In practical farming, the tractor linkage triangle is frequently used for front mounting of implements and is generally designated as "Weiste triangle".

Summary of assessment

Test feature	Test result	Assessment
Durability	Very good	+ +

Assessment range: + + / + / ○ / – / – – (○ = standard)

Test

Figure 2:
The tractor linkage triangle with ballast carrier and ballast mounted on the test tractor during the endurance/fatigue testing.

Test method

The standard programme for durability testing on the vehicle test rig was used. It consists a total **3950 laps of the test track** at speeds between 4.0 km/h and 7.0 km/h in steps of 0.5 km/h. 450 laps were driven at each speed. After this a further 200 laps were driven at speeds of 4.0 km/h, 5.0 km/h, 6.0 km/h and 7.0 km/h. This represents a total travel distance of 530 km and thus simulates stresses and loads during the service life of an implement.

The ballast carried resulted in stressing/loading of the triangle to an extent exceeding stresses and loads encountered in practice.

Figure 3:
The tractor linkage triangle with ballast carrier and ballast during the endurance/fatigue testing.

Test results and individual assessments

The tractor linkage triangle 2S withstood the heavy loads and stresses during the endurance/fatigue testing lasting 3950 laps on the vehicle test rig without damage.

No dimensional changes by comparison with the new condition could be ascertained.

Summary and assessment

The durability of the tractor linkage triangle 2S proven by the endurance/fatigue testing is **very good**.

For applications in practical farming no damage is to be expected in normal operation.

The tractor linkage triangle should be provided with a manufacturer's code and serial number in indelible lettering.

Figure 4:
Mounting arrangement of the triangle in the front linkage.

Figure 5:
The tractor linkage triangle with ballast carrier and ballast during the endurance/fatigue testing.

Technical data

Dimensions	Compliant with ISO 11001-2
Weight of the tractor linkage triangle with bolts and spring cotter pins	40 kg
Total weight of the ballast during testing	1380 kg
Total length of the ballast carrier from coupling point of lower link	1650 mm
Distance of the 1250 kg ballast weight from centre of gravity	1500 mm

Testing

Test performed by

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