



Informal Working Group on Agricultural Coupling Devices and Components (ACDC) Present Status



Background: Report of 81st GRRF (1 – 5 February 2016)

The expert from **Germany** introduced GRRF-81-09 **proposing ToR for a new IWG on Agricultural Coupling** that would remove the Agricultural Coupling provisions from Regulation No. 55 and would include them in a **new Regulation**. The proposal received some comments to **limit the number of classes**, as reproduced in GRRF-81-09-Rev.1. **GRRF agreed with the proposal** for a new IWG that would **take into consideration the work done by the Task Force on Agricultural Couplings** (GRRF-81-10). GRRF agreed in principle with the proposal of the expert from Spain proposing generic provisions to be defined, which could be used for the approval of specific agricultural coupling at the national level. The secretariat noted that GRRF-81-10 was based on a former version of Regulation No. 55 and proposed that the **new IWG on Agricultural Coupling would take into consideration the latest version of Regulation No. 55**. GRRF agreed that **the expert from Germany would chair the IWG** and that **the expert from the Comité Européen des groupements de constructeurs du machinisme agricole (CEMA) would provide the secretariat** of the group. GRRF requested that the **IWG would first revise and clarify the ToR** of the group.



TOR Agreed by GRRF (text identical to GRRF-81-09e Rev. 1)

1. The informal group shall prepare a proposal for a new UN Regulation No. 55-A "Uniform Provisions Concerning the Approval of Mechanical Coupling Components of Combinations of Agricultural Vehicles".
2. The informal group shall follow the structure and concept of the present UN Regulation No. 55 also with regard the limited number of coupling classes and will consider the peculiarities of agricultural vehicles when determining the requirements and test methods.
3. As a basis for the discussions the informal group shall use the present UN Regulation No. 55 and the results achieved by the Task Force Group Agricultural Couplings (TFAC) in the frame of the work of IWG R 55 (GRRF 81-10).
4. The informal group will consider the scope to be applied to vehicles of category T, R and S as defined in the Consolidated Resolution (R.E.3).
5. The target completion date for the work of the informal group shall be the 84th session of GRRF in September 2017.
6. A final decision on regulatory proposals rests with WP29 and the Contracting Parties.



RoP Agreed by the IWG (text identical to GRRF-81-09e Rev. 1)

1. The informal group is a sub group of GRRF, and is open to Contracting Parties, Vehicle Manufacturers, Component Manufacturers and Suppliers, Technical Services, Mechanical Strength Experts, etc.
2. A Chairman and a Secretary will manage the informal group.
3. The official working language of the informal group will be English.
4. All documents and/or proposals must be submitted to the Secretary of the group in a suitable electronic format in advance of the meeting. The group may refuse to discuss any item or proposal which has not been circulated 10 working days in advance.
5. An agenda and related documents will be made available on the website by the Secretary of the group, in advance of all scheduled meetings.
6. Decisions will be reached by consensus. When consensus cannot be reached, the Chairman of the group shall present the different points of view to GRRF. The Chairman may seek guidance from GRRF as appropriate.



RoP Agreed by the IWG (text identical to GRRF-81-09e Rev. 1)

7. The progress of the informal group will be routinely reported to GRRF – wherever possible as an informal document and presented by the Chairman, the Secretary or their representative(s).
8. All working documents shall be distributed in digital format. Meeting documents should be made available to the Secretary for publication on the dedicated website.



What is the Subject Matter? Vehicles of category T, R and S



Road transport



Work in field



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Present Status in IWG ACDC

Five meetings

- 2016-07-14 (Bonn), 2017-01-10 (Bonn), 2017-03-10 (Brussels), 2017-04-28 (Garching), 2017-05-23 (Bergisch-Gladbach)
- Participants: 18 Experts from
 - Contracting Parties
 - Technical Services
 - Manufacturers of tractors, manufacturers of agricultural trailers and implements and manufacturers of coupling devices
 - Chairman: Andreas Schauer (Germany)
 - Secretary: Stephan Belaen (CEMA)
- Document received consensus of all participants of ACDC, except two technical items:
 - Paragraph 4.7.: Quick height-adjustable towing devices with no power assistance may not exceed an operating force of **[40]** daN.
 - Annex 6 paragraph 3.7.1.: Permissible stress of weld shall not exceed **[90 N/mm²]**
- Document was finalized in due time after the last meeting by the end of June 2017 in order to meet the target date for working documents of 84th GRRF
- Work of ACDC completed for the time being



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Scope

- This Regulation lays down the requirements which mechanical coupling devices and components shall meet in order to be regarded internationally as being mutually compatible.
- This Regulation applies to devices and components intended for vehicles of category T, R or S (agricultural vehicles) intended to form a combination of vehicles.
- This Regulation applies to:
 - standard devices and components as defined in paragraph 2.2.;
 - non-standard devices and components as defined in paragraph 2.3.;
 - non-standard miscellaneous devices and components as defined in paragraph 2.4.
- This regulation does not apply to power lifts (three-point hitch) or tractor lower link arms and their connections to the towed vehicle.



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Classes of Agricultural Couplings

- Class a: Ball type 80 mm (ISO 24347:2005)
- Class b: Coupling head 80 mm (ISO 24347:2005)
- Class c: Clevis-type drawbar couplings with a pin (30 mm to 38 mm diameter, ISO 6489-2:2002)
- Class d40: Drawbar eyes 40 mm (d40-1: ISO 8755:2001, d40-2: ISO 5692-2:2002)
- Class d50: Drawbar eyes 50 mm (d50-1: ISO 5692-1:2004, d50-2: ISO 20019:2001)
- Class e: Non-standard drawbars like forked and other drawbars, overrun devices etc.
- Class f: Towing frames
- Class g: Hitch hooks (ISO 6489-1:2001)



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Classes of Agricultural Couplings

- Class h: Piton-type couplings (ISO 6489-4:2004)
- Class i: Tractor drawbar couplings non-swivel around longitudinal axis (ISO 6489-3:2004)
- Class j: Drawbar eyes fitted to trailer drawbars for connecting to a tractor drawbar (class i) (ISO 21244:2008 modified)
- Class q: Clevis-type drawbar couplings non-swivel around longitudinal axis (ISO 6489-5:2011)
- Class r: Drawbar eye, swivel around longitudinal axis, having a circular cross-section and fitted to the drawbar of trailers for connection with nonswivel clevis type couplings (class q) (ISO 5692-3:2011)
- Class s: Coupling devices and components which do not conform to any of the classes a to r and which are used for special applications and which are generally covered by existing national or international standards (unique to some countries)



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Requirements

- Dimensions according to Annex 5
- Strength according to Annex 6
 - Static test up to 40 km/h and only for Classes i, q and r
 - Dynamic test (alternating and/or pulsating, 2,000,000 cycles for steel) up to 60 km/h
 - Above 60 km/h same test procedures as in R 55
- Annex 7 contains installation and special requirements



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14. Assignment of mechanical coupling devices of towing vehicles or self-propelled machines and towed vehicles

The assignment of mechanical coupling devices of towing vehicles or self-propelled machines and towed vehicles shall conform to Table 6.

Table 6

Assignment of mechanical coupling devices of towing vehicles or self-propelled machines and towed vehicles

<i>Coupling device on the towing vehicle</i>	<i>Coupling device on the towed vehicle</i>
Class a80	Class b80
Class c40	Class d40-1, d40-2
Class g	Class d50-1, d50-2
Class h	Class d50-2
Class i	Class j
Class q	Class r

Thank you for your attention!

Federal Ministry of Transport
and Digital Infrastructure

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