TECHNICAL REPORT
No. 120180 – 25 – TAC

Test according to UN Regulation No. 105.06

Uniform provisions concerning the approval of vehicles intended for carriage of dangerous goods with regard to their specific construction features

Test method: Annexes A and B of the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), applicable from 2025-01-01
UN Regulation No. 105.00 of 1998-05-07
including all amendments up to and including: UN Regulation No. 105.06, Supplement 2 of 2023-09-24

Objectives: Test required by the customer

I. Technical data

0.1.1.	Order party:	COL-VEN S.A. Ruta 11 Km 814 Guadalupe Norte, Santa Fe (S3574XAB) Argentina
0.1.2.	Manufacturer:	COL-VEN S.A. Ruta 11 Km 814 Guadalupe Norte, Santa Fe (S3574XAB) Argentina
0.2.	Product under test:	SAF TIRE PILOT I.Q.
0.3.	Test required:	evaluation of compliance with Annexes A and B of Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) applicable from 2025-01-01 and UN Regulation No. 105.06, Supplement 2

II. Test report

1. Test conditions

1.1.	Test sample:	SAF TIRE PILOT I.Q. Tyre Pressure Refill System (TPRS) maintaining nominal pressure value in the tires against leaks or small / medium punctures and refilling the tires.
1.2.	Test procedures used:	Comparison of the equipment with the information document and other documents submitted with regard to Annexes A and B of Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) applicable from 2025-01-01 and UN Regulation No. 105.06, Supplement 2. Note: Requirements of the both above mentioned regulatory documents are equivalent in terms of the items tested.
1.3.	Measuring and test equipment:	N/A.
1.4.	Testing conditions:	N/A.

2. Test results

Following numbering (in italics) is in accordance with the above-mentioned regulation

5.1.1.2.	*Wiring*	Compliant. See Certificate TÜ.EGG.329-21 published by TÜV NORD 2016-06-15 in Annex 1.
5.1.1.2.1	*Cables:*	Compliant. The wires are sufficiently dimensioned to prevent them from overheating.
	Insulation of wires:	Compliant. The wires are sufficiently adequately insulated.
	Compliance with ISO standards	Compliant. The cables meet the requirements of the ISO 6722-1:2011 standard, including its Corr. 01:2012, or ISO 6722-2:2013.
5.1.1.2.2	*Additional protection:*	Compliant. The requirements for subsidiary protection are met because multi-core cables ISO 14 572:2011 compliant with the ISO standard is used.

5.1.1.3.	*Fuses and circuit breakers*	N/A. All circuits are protected by towing vehicle fuses. It is the responsibility of the vehicle manufacturer to comply with this point. The device has resettable fuses on the control unit electronic board that will act in case of overloads or short circuits produced in the device. In this way, the product itself is protected.
5.1.1.4.	*Batteries:*	N/A.
5.1.1.5.	*Lighting:*	N/A.
5.1.1.6.	*Electrical connections between motor vehicles and trailers*	N/A.
5.1.1.7	*Voltage:*	N/A.The maximum operating voltage of the device is 28 V D.C. In any case, this point refers to the operating voltage of the vehicle's electrical system. It is the responsibility of the vehicle manufacturer to comply with this point.
5.1.1.8	*Battery master switch:*	N/A.
5.1.1.9	*Permanently energized circuits:*	N/A. The device does not contain any battery. When the battery disconnector on the motor vehicle is switched on, the device under test is without electrical power.

3. Specimen submitted to test on: 2024-03-20

4. Date of test: 2024-03-20

III. Other documentation

No other documentation

IV. Attachments

Attachment No. 1: 3 pages

Certificate for the grant of a type test approval mark in respect of Electrical equipment Transport of dangerous goods No: TÜ.EGG.329-21

Attachment No. 2: 1 page
Product installation diagram

Measuring and test equipment and test site meet the requirements of the applicable legislation.
This report shall never be reproduced incomplete and without a written permission of the testing laboratory (except for use in the type-approval or approval documentation).
A decision rule (in the section Final assessment) without consideration of measurement uncertainties is used for statement of conformity.

V. Final assessment

The described sample in tested items

complies

with the requirements of Annexes A and B of the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), applicable from 2025-01-01

UN Regulation No. 105.06, Supplement 2

This technical report consists of pages No. 1 to 4 and 4 pages of attachments.

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Czech Republic
DIČ: CZ63987121
- 38 -

Vít Bursík
Report author

Test report approved by

Martin Hron
Business Unit Manager

Prague, 2025-02-17

End of the technical report

quality&safety

Bescheinigung
Certificate

über die Zuerkennung eines Bauteilkennzeichens für — *for the grant of a type test approval mark in respect of*

Elektrische Einrichtungen Beförderung gefährlicher Güter
Electrical equipment Transport of dangerous goods

Aufgrund eines Prüfberichts zur Bauteilprüfung des — *In virtue of a test report concerning by*

TÜV NORD von/*dated* 2021-05-06

wird dem Antragsteller, der Firma — *the applicant, the company*

Kromberg & Schubert GmbH
Cable & Wire; Wiegenkamp 21; 46414 Rhede

zuerkannt das Bauteilkennzeichen-Nr. — *is granted the type test approval mark No.*

TÜ . EGG . 329 - 21

für — *for*

mehradrige PVC Mantel-/Kombileitungen
multiple core PVC jacket-/combicable

Typ — *type*

FLS32Y-Y ADR Kabel

Die Zuerkennung erfolgt in Anwendung von — *The adjudication is made pursuant to*

GGVSE-ADR Teil/*part* 9.2.2, Ausgabe/*edition* 2019; VdTÜV-Merkblatt Beförderung gefährlicher Güter 5205, Ausgabe/*edition* 2019-06; ISO 6722:2011; ISO 14572:2011

Sie ist bis **2026-05-31** befristet und kann widerrufen werden. — *It expires on **2026-05-31** and is revocable.*

Die Bescheinigung von --- wird hierdurch ersetzt. — *The certificate dated --- is replaced herewith.*

Berlin, 2021-06-15

Scö/Hel

Verband der TÜV e.V.
Geschäftsbereich Anlagentechnik,
Arbeitswelt, Systemsicherheit, Regelwerke
– Gefahrguttransporte –

Dr. Schröer

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	Bauteilgeprüfte Elektrische Einrichtung ***Type tested electrical equipment*** **Bauteilprüfnummer 329-21** ***Type test approval No. 329-21***	**Elektrische Einrichtungen** **Beförderung gefährlicher Güter** ***Electrical equipment*** ***Transport of dangerous goods*** **329** **2021-06-15**

Englische Übersetzung
Diese Übersetzung wurde beim VdTÜV eingereicht. Der VdTÜV übernimmt keine Verantwortung für die Richtigkeit der Übersetzung. Anregungen zur Verbesserung sind an den VdTÜV zu richten. Im Zweifel oder bei strittigen Passagen gilt ausschließlich der deutsche Text.

English translation
This translation was presented to the VdTÜV. VdTÜV takes no responsibility for the correctness of the translation. Hints (information) for improvement should be addressed to the VdTÜV. In case of doubt or dispute, the German text only is valid.

1 **Antragsteller/Hersteller**
Applicant/Manufacturer

Kromberg & Schubert GmbH
Cable & Wire
Wiegenkamp 21
46414 Rhede

2 **Bauart/*Type***

mehradrige PVC Mantel-/Kombileitungen,
multiple core PVC jacket-/combicable

ADR Kabel / *ADR cable* **Bauform/*Construction*** **N × M × A**	
N	2
M	2
A	0,5 mm²
Abmessungen gemäß ISO 6722:2011, Tabelle 4 *core dimension according to ISO 6722:2011, table 4*	

3 **Typbezeichnung / *Type designation*** **FLS32Y-Y ADR Kabel**

Bezeichnung/*Designation* ADR Kabel / *ADR cable*

Kennzeichnung/*Marking* TÜ . EGG . 329-21

4 **Prüfanforderungen**
Normative References

- GGVSE-ADR Teil/*part* 9.2.2, Ausgabe/*edition* 2019
- VdTÜV-Merkblatt Beförderung gefährlicher Güter 5205, Ausgabe/*edition* 2019-06-20
- ISO 6722:2011
- ISO 14572:2011

Nach Prüfbericht des TÜV NORD von 2021-05-06
According to test report of TÜV NORD dated 2021-05-06

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5 Aufgaben des Sachverständigen bei der Abnahmeprüfung der elektrischen Einrichtung
Tasks of the officially recognized expert testing the electrical devices

keine Angaben / *none*

6 Bauteilkennzeichen / *Type test approval:* **TÜ . EGG . 329 - 21**

Gültig bis / *Valid until:* **2026-05-31**

7 Bemerkungen/*Notes*

keine Angaben / *none*

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TÜV®

Our/Your Reference	Contact	Direct Dial	Date
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	abeltaief@extern.tuev-nord.de	Fax: 0511 998-61998	

Advanced Confirmation ADR 2025 type approval for EB+ 4.0/ABS 4.0 cables

New additional cable variants for the Haldex EB+ 4.0/ABS 4.0 systems, cable part number series 844 522 xxx and 844 523 xxx, are developed as extensions of the approved Tyre Pressure Monitoring System (TPMS) 2.0 cable design and are engineered to interface between the EB+ 4.0 or ABS 4.0 ECU CAN Bus ports and any compatible TPMS Receiver Control Units (RCUs).

The new cable variants are based on the established TPMS 2.0 design. They have been developed to accommodate both diagnostics and standard wiring requirements for Telematics applications.

The cable part number series 844 522 XXX is an EB+ 4.0/ABS 4.0 Diagnostics CAN Bus cable to Axscend Ltd Telematics or SAF Holland Tire Pilot I.Q. system (Tire Pressure Refill System) and the cable part number series 844 523 xxx is an EB+ 4.0/ABS 4.0 Diagnostics CAN Bus cable for standard wiring on Telematics. Although the build remains essentially identical to the series 844 522 xxx, the 844 523 xxx variant features a different pin-out and cable length. Importantly, these modifications do not affect the sealing integrity or overall performance.

Both new cable variants utilize the cable base from Omni Matrix, which is documented in the ADR approval list in the test report Nr. 143.001.23 of 23.01.2024.

Water and dust ingress tests according to ISO 20653 : 2023 have been successfully completed on cable part number series 844 522 xxx, which also covers cable with part number series 844 523 xxx. These tests, which include examples such as cable 844 522 040 (4 m length) and cable 844 523 012 (1.2 m length), confirm that the performance criteria for both series are met (see table below).

Connector End	IP6KX Report No.	IPX9K Report No.
EB+ 4.0 ECU	1557003533	1557003547
SAF Transition Cable / Axscend ECU	1557003534	1557003548

An updated ADR report (ADR 2025) will incorporate these variants for Haldex EB+ 4.0/ABS 4.0 braking systems.

Kind regards from Hannover

IFM - Whole Vehicle - Type Approval

Trucks / Trailers / Special Vehicles / Load Securing

i. V. Jessy Kruse

Manager

Whole Vehicle Type Approval

i. A. Amira Beltaief

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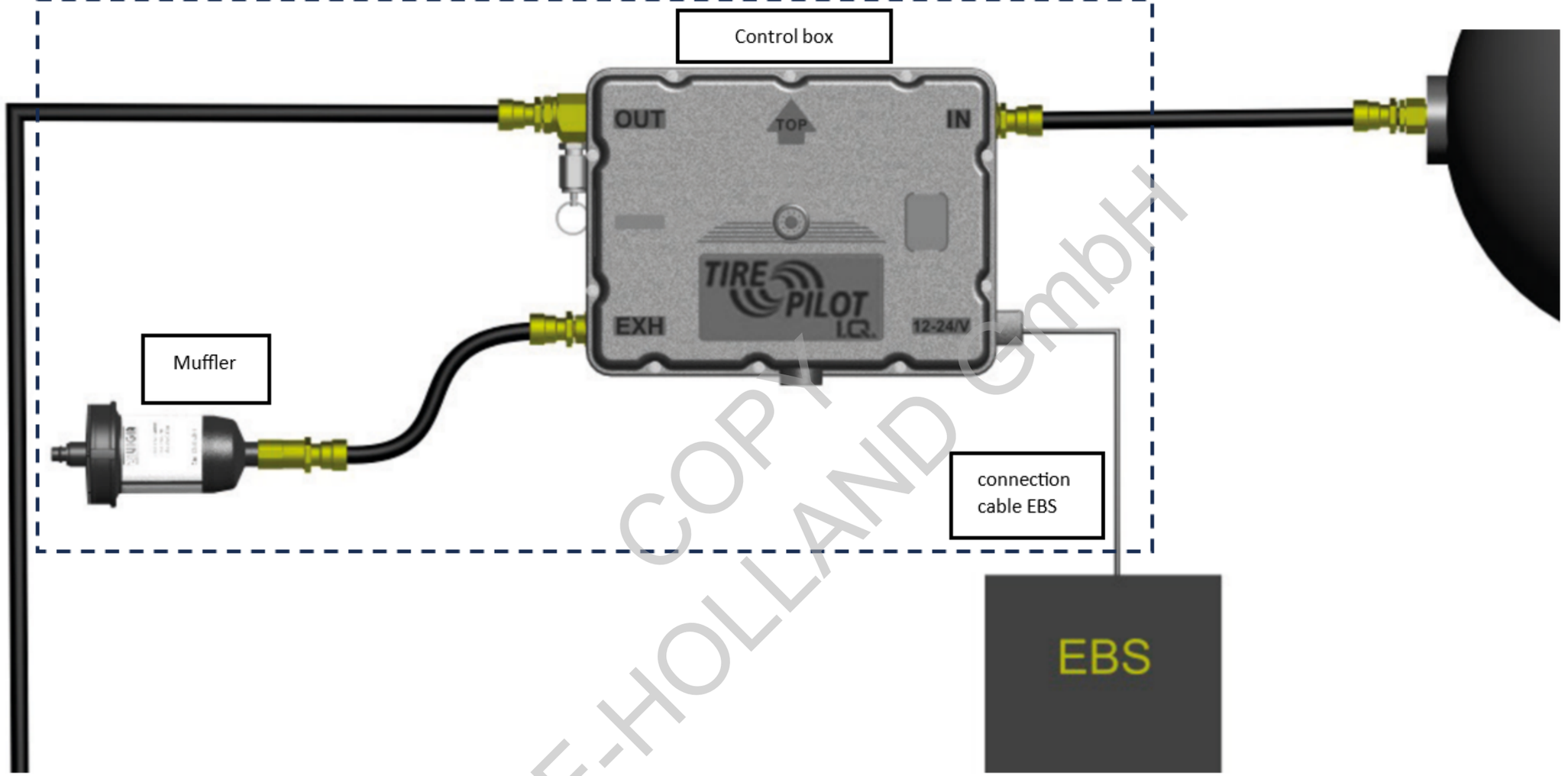
SAF TIRE PILOT I.Q.



REFORM	BY	DATE

TREATMENT:

COLVEN

DESCRIPTION:
PRODUCT INSTALLATIONS DIAGRAM

See Attached Matrix...

FORMAT: A3
SCALE: 1:1

DESIGNED:	M.B.T	12.04.24
DRAWN:	W.A.Q.	12.04.24
APPROVED:	M.B.T.	12.04.24

CODE N°: -
VERSION N°: -
FOLDER N°: 288

UNSPECIFIED TOLERANCES: