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**Road vehicles - Diagnostic communication over K-Line
((DoK-Line) - Part 2: Data link layer**

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This Document was Part 2 of GB/T 41590 Road Vehicles - Diagnostic Communication over K-

Line (DoK-Line). GB/T 41590 has published the following parts.

- Part 1.Physical Layer;
- Part 2.Data Link Layer;
- Part 3.Application Layer;
- Part 4.Requirements for Emission-Related Systems.

This Document equivalently adopts ISO 14230-2.2016 Road Vehicles - Diagnostic Communication over K-Line (DoK-Line) - Part 2.Data Link Layer.

This Document made the minimum editorial modifications.

- Include the technical corrigendum (change three types in 7.3 of ISO 14230-2.2016 into four types).

Please note some contents of this Document may involve patents. The issuing agency of this

Document shall not assume the responsibility to identify these patents.

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Road Vehicles - Diagnostic Communication over K-Line

(DoK-Line) - Part 2.Data Link Layer

1 Scope

This Document specifies data link layer services tailored to meet the requirements of UART-based vehicle communication systems on K-Line as specified in ISO 14230-1. It has been defined in accordance with the diagnostic services established in ISO 14229-1 and ISO 15031-

5, but is not limited to use with them and is also compatible with most other communication needs for in-vehicle networks. The protocol specifies an unconfirmed communication.

The diagnostic communication over K-Line (DoK-Line) protocol supports the standardized service primitive interface as specified in ISO 14229-2.

This Document provides the data link layer services to support different application layer

implementations like the following.

- enhanced vehicle diagnostics (emissions-related system diagnostics beyond legislated functionality, non-emissions-related system diagnostics);
- emissions-related OBD as specified in ISO 15031, SAE J1979-DA and SAE J2012-DA;
- in addition, this document clarifies the differences in initialization for K-line protocols defined in ISO 9141 and ISO 14230. This is important since a server supports only one of the protocols mentioned above and the client has to handle the coexistence of all protocols during the protocol determination procedure.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates

indicated are applicable to this Document; for the undated documents, only the latest version

(including all the amendments) is applicable to this Document.

ISO 14230-4 ROAD Vehicles - Diagnostic Systems - Keyword Protocol 2000 - Part 4.

Requirements for Emission-Related Systems

NOTE. GB/T 41590.4-2022 Road Vehicles - Diagnostic Communication over K-Line (DoK-Line)

- Part 4. Requirements for Emission-Related Systems (ISO 14230-4:2000, IDT)

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