プログラム等改変システム試験
（協定規則第 156 号（同規則の規則 7.2. に限る））

1. 総則

　　プログラム等改変システム試験の実施にあたっては、「道路運送車両の保安基準の細目を定める告示」（平成 14 年国土交通省告示第 619 号）に定める「協定規則第 156 号の技術的な要件（同規則の規則 7.2. に限る。）」の規定及び本規定によるものとする。

2. 試験条件

　　自動車での実車試験及び書面等の説明により試験を行うことができる。

3. 試験記録及び成績

　　試験記録及び成績は、付表の様式に記入する。

3.1. 当該試験時において該当しない箇所には斜線を引くこと。

3.2. 記入欄は、順序配列を変えない範囲で伸縮することができ、必要に応じて追加してもよい。

3.3. 試験記録及び成績は、日本語又は英語のみの記載でもよい。

付表
Attached Table

プログラム等改変システム試験記録及び成績
SOFTWARE UPDATE TEST DATE RECORD FORM
（協定規則第156号（規則7.2.車両型式に関する要件））
1958 Agreement of the United Nations Economic Commission for Europe Regulation No.156
(Restricted to paragraphs 7.2. Requirements for vehicle types)

試験期日 Test Date	年 Y.	月 M.	日 D.	試験場所 Test Site	試験担当者 Tested by

○ 改訂
Series

改訂番号 Series No.	補足改訂番号 Supplement No.

○ 試験自動車
Test vehicle

車名 Make	型式 Type	類別 Variant	車台番号 Chassis No.

○ 試験成績
Test Results

要件 Requirements			適合性 Conformity
段落 Paragraph		内容 Contents	
7.2.1.		Requirements for Software updates	
	7.2.1.1.	The authenticity and integrity of software updates shall be protected to reasonably prevent their compromise and reasonably prevent invalid updates.	pass ／ fail
	7.2.1.2.	Where a vehicle type uses RXSWIN:	
		7.2.1.2.1. Each RXSWIN shall be uniquely identifiable. When type approval relevant software is modified by the vehicle manufacturer, the RXSWIN shall be updated if it leads to a type approval extension or to a new type approval.	pass ／ fail ／ N.A
		7.2.1.2.2. Each RXSWIN shall be easily readable in a standardized way via the use of an electronic communication interface, at least by the standard interface (OBD port). If RXSWINs are not held on the vehicle, the manufacturer shall declare the software version(s) of the vehicle or single ECUs with the connection to the relevant type approvals to the Approval Authority. This declaration shall be updated each time the declared software version(s) is updated. In this case, the software version(s) shall be easily readable in a standardized way via the use of an electronic communication interface, at least by the standard interface (OBD port).	pass ／ fail ／ N.A
		7.2.1.2.3. The vehicle manufacturer shall protect the RXSWINs and/or software version(s) on a vehicle against unauthorised modification. At the time of Type Approval, the means implemented to protect against unauthorized modification of the RXSWIN and/or software version(s) chosen by the vehicle manufacturer shall be confidentially provided.	pass ／ fail ／ N.A

7.2.2.		Additional Requirements for over the air updates	
	7.2.2.1.	The vehicle shall have the following functionality with regards to software updates:	
		7.2.2.1.1. The vehicle manufacturer shall ensure that the vehicle is able to restore systems to their previous version in case of a failed or interrupted update or that the vehicle can be placed into a safe state after a failed or interrupted update.	pass ／ fail ／ N.A
		7.2.2.1.2. The vehicle manufacturer shall ensure that software updates can only be executed when the vehicle has enough power to complete the update process (including that needed for a possible recovery to the previous version or for the vehicle to be placed into a safe state).	pass ／ fail ／ N.A
		7.2.2.1.3. When the execution of an update may affect the safety of the vehicle, the vehicle manufacturer shall demonstrate how the update will be executed safely. This shall be achieved through technical means that ensures the vehicle is in a state where the update can be executed safely.	pass ／ fail ／ N.A
	7.2.2.2.	The vehicle manufacturer shall demonstrate that the vehicle user is able to be informed about an update before the update is executed. The information made available shall contain: In case of groups of updates with a similar content one information may cover a group.	
		(a) The purpose of the update. This could include the criticality of the update and if the update is for recall, safety and/or security purposes;	pass ／ fail ／ N.A
		(b) Any changes implemented by the update on vehicle functions;	pass ／ fail ／ N.A
		(c) The expected time to complete execution of the update;	pass ／ fail ／ N.A
		(d) Any vehicle functionalities which may not be available during the execution of the update;	pass ／ fail ／ N.A
		(e) Any instructions that may help the vehicle user safely execute the update;	pass ／ fail ／ N.A
	7.2.2.3.	In the situation where the execution of an update whilst driving may not be safe, the vehicle manufacturer shall demonstrate how they will:	
		(a) Ensure the vehicle cannot be driven during the execution of the update;	pass ／ fail ／ N.A
		(b) Ensure that the driver is not able to use any functionality of the vehicle that would affect the safety of the vehicle or the successful execution of the update.	pass ／ fail ／ N.A
	7.2.2.4.	After the execution of an update the vehicle manufacturer shall demonstrate how the following will be implemented:	
		(a) The vehicle user is able to be informed of the success (or failure) of the update;	pass ／ fail ／ N.A
		(b) The vehicle user is able to be informed about the changes implemented and any related updates to the user manual (if applicable).	pass ／ fail ／ N.A
	7.2.2.5.	The vehicle shall ensure that preconditions have to be met before the software update is executed.	pass ／ fail ／ N.A

備考
Remarks