

**Research & Vehicle Technology**

**“Infotainment Systems Product Development”**

**Feature – MyKey Settings in the Centerstack (CGEA)**

**Subsystem Part Specific Specification (SPSS)**

Version 1.4

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**Version Date: July 9th, 2019**

**FORD CONFIDENTIALF**

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Notes** | |
| **May 8, 2017** | **1.0** | **Initial Release** |  |
|  |  |  |  |
| **January 25, 2019** | **1.1** |  | |
|  | MKv6-FUR-REQ-341987/A-Region Units Configuration Status – Regional Setting | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341986/A-Region Units Configuration - Speed Minder Settings | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341985/A-Region Units Configuration Request - Speed Minder Settings | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341984/A-Region Units Configuration Status - Speed Minder Settings | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341961/A-Mapping Tables - Speed Minder | | ndecia: Clarification update to SpeedMinder Function, single consolidated table to replace individual tables |
|  |  |  |  |
| **February 13, 2019** | **1.2** |  | |
|  | MK-FRD-REQ-235933/B-MyKey Settings in the Centerstack Common Spec (CGEA) | | ndecia: Updated structure as a result of PaaK MyKey integration |
|  | STR-467227/A-Overview | | ndecia: Added reference to phone as a result of PaaK MyKey integration |
|  | STR-405672/B-Architectural Design | | ndecia: added new keycontrol subsystem class description |
|  | MKv6-CLD-REQ-243449/B-MyKey Centerstack Settings Server+ | | Work in progress |
|  | MKv6-CLD-REQ-243449/C-MyKey Centerstack Settings Server | | ndecia: clarified role of Settings Server |
|  | MKv6-CLD-REQ-243450/B-MyKey Centerstack Settings User Client+ | | Work in progress |
|  | MKv6-CLD-REQ-243450/C-MyKey Centerstack Settings User Client | | ndecia: clarifed role of Settings User Client |
|  | MKv6-CLD-REQ-342895/A-MyKey Centerstack Settings KeyControl SubSystem | | ndecia: New class description to indicate direct communication between this class and the Client for the PaaK MyKey creation process |
|  | STR-618750/A-Physical Mapping of Classes | | ndecia: added table to clarify module deployment |
|  | MKv6-IIR-REQ-243447/C-Interface Requirement+ | | Work in progress |
|  | MKv6-IIR-REQ-243447/D-Interface Requirement | | ndecia: added new interfaces for PaaK MyKey integration under this section |
|  | MD-REQ-238908/B-SystemKeyCount\_St+ | | Work in progress |
|  | MD-REQ-238908/C-SystemKeyCount\_St | | ndecia: updated key count signals to use the total key count and mykey key count signals from the keycontrol subsystem which includes both conventional and PaaK key counts. |
|  | MD-REQ-335405/A-CreateNewPaaKMyKey\_Rq | | ndecia: added new signal interface to support assignment of a PaaK key as a MyKey |
|  | MD-REQ-335406/A-CreateNewPaaKMyKey\_St | | ndecia: added new signal interface to support assignment of a PaaK key as a MyKey |
|  | STR-405673/C-General Requirements | | ndecia: Updated structure as a result of PaaK MyKey integration |
|  | MKv6-REQ-268517/A-Phone-As-A-Key MyKey+ | | Work in progress |
|  | MKv6-REQ-268517/B-Phone-As-A-Key MyKey | | ndecia: general requirement describing ability for assignment of a PaaK key to a MyKey |
|  | STR-405675/C-Functional Definition+ | | Work in progress |
|  | STR-405675/D-Functional Definition | | ndecia: Updated Function structure to add new requirements for PaaK MyKey integration |
|  | MKv6-REQ-235964/B-Creating a new MyKey+ | | Work in progress |
|  | MKv6-REQ-235964/C-Creating a new MyKey | | ndecia: Updated requirement to reference phone in the case of a PaaK MyKey |
|  | STR-405888/B-Use Cases | | ndecia: Updated structure as a result of PaaK MyKey integration |
|  | MKv6-UC-REQ-235959/B-Create a new MyKey key | | ndecia: No content change |
|  | MKv6-UC-REQ-268536/A-Create a new PaaK MyKey+ | | Work in progress |
|  | MKv6-UC-REQ-268536/B-Create a new PaaK MyKey | | ndecia: new use case for assignment of a PaaK key to a MyKey |
|  | STR-405890/B-WhiteBoxView - Create a new MyKey | | ndecia: Updated Function structure to add new diagrams for PaaK MyKey integration |
|  | MKv6-ACT-REQ-335397/A-Create a new PaaK MyKey | | ndecia: new activity diagram for how a PaaK key is assigned as a MyKey |
|  | MKv6-SD-REQ-335398/A-Create a new PaaK MyKey - successful | | ndecia: new sequence diagram for how a PaaK key is assigned as a MyKey |
|  | MKv6-SD-REQ-335399/A-Create a new PaaK MyKey - unsuccessful - PaaK Not Created | | ndecia: new sequence diagram for a failure condition of attempting to assign a PaaK key as a MyKey |
|  | MKv6-SD-REQ-335400/A-Create a new PaaK MyKey - unsuccessful - PaaK Not Found | | ndecia: new sequence diagram for a failure condition of attempting to assign a PaaK key as a MyKey |
|  | MKv6-SD-REQ-335401/A-Create a new PaaK MyKey - unsuccessful - Lock Button Timeout | | ndecia: new sequence diagram for a failure condition of attempting to assign a PaaK key as a MyKey |
|  | MKv6-SD-REQ-335402/A-Create a new PaaK MyKey - unsuccessful - Invalid PaaK | | ndecia: new sequence diagram for a failure condition of attempting to assign a PaaK key as a MyKey |
|  | MKv6-SD-REQ-335403/A-Create a new PaaK MyKey - unsuccessful - User Declines | | ndecia: new sequence diagram for a failure condition of attempting to assign a PaaK key as a MyKey |
|  | MKv6-SD-REQ-335404/A-Create a new PaaK MyKey - unsuccessful - General Failure | | ndecia: new sequence diagram for a failure condition of attempting to assign a PaaK key as a MyKey |
|  | MKv6-FUN-REQ-236040/B-Speed Minder Administration | | ndecia: clarified SpeedMinder function requirements to align with format of SpeedLimiter function |
|  | STR-406192/B-Requirements | | ndecia: Updated structure to clarify SpeedMinder requirements to align with SpeedLimiter section |
|  | MKv6-FUR-REQ-341987/A-Region Units Configuration Status – Regional Setting | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341986/A-Region Units Configuration - Speed Minder Settings | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341985/A-Region Units Configuration Request - Speed Minder Settings | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341984/A-Region Units Configuration Status - Speed Minder Settings | | ndecia: Clarification update to SpeedMinder Function, supporting requirement to replace individual tables with a single consolidated version |
|  | MKv6-FUR-REQ-341961/A-Mapping Tables - Speed Minder | | ndecia: Clarification update to SpeedMinder Function, single consolidated table to replace individual tables |
|  |  |  |  |
| **March 19, 2019** | **1.3** |  | |
|  | MD-REQ-335406/B-CreateNewPaaKMyKey\_St | | ndecia: Updated to correct typo in value 0x3 from InvalidPaakFound to MyKeyPaakFound |
|  | MKv6-FUR-REQ-341961/B-Mapping Tables - Speed Minder | | ndecia: Update to the note on the Speed Minder table that clarifies the max available selection when Speed Limiter is set to 100kph in Other Markets. |
|  |  |  |  |
| **July 9, 2019** | **1.4** |  | |
|  | STR-405673/D-General Requirements | | ndecia: Updated section to include new requirements (355033, 355032) |
|  | MKv6-REQ-355033/A-General timeout to determine MyKey Server or KeyControl Subsystem are unresponsive | | ndecia: New error handling requirement to determine an unresponsive fault by the MyKey Server or KeyControl Subsystem |
|  | MKv6-TMR-REQ-355032/A-T\_GeneralTimeout | | ndecia: New timer value to determine an unresponsive fault by the MyKey Server or KeyControl Subsystem |
|  | STR-405889/B-Requirements | | ndecia: Updated section to include new requirements (355033, 355032) |
|  | MKv6-REQ-355027/A-Timeout when confirming creation of a new PaaK MyKey | | ndecia: New requirement to clarify determination of a PaaK MyKey creation success or failure based on assessing MyKey Key Count status |
|  | MKv6-TMR-REQ-355031/A-T\_NullDelay | | ndecia: New timer value to clarify period of time to wait prior to assessing MyKey Key Count status |

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# Overview

The MyKey System utilizes the Ignition Key/Phone to identify the driver of the vehicle as either an Admin User or a MyKey User. The Administrative User is able to setup which key IDs will be treated as MyKeys, configure the optional functions, monitor system status and monitor total miles driven by all MyKey Users via the HMI. The MyKey User, identified by the key ID, set up by the Administrator, is restricted to MyKey functionality.

This specification covers the MyKey Infotainment Centerstack module (e.g. SYNC) Settings which are not covered in other SPSS specifications. For other MyKey SYNC related functions,

reference “MyKey APIM SPSS”. For other Settings in Centerstack functions, reference “Vehicle Settings – Settings in the Infotainment Centerstack Module (Global) SPSS”.

# Architectural Design

## MKv6-CLD-REQ-243449/C-MyKey Centerstack Settings Server

The MyKey Centerstack Settings Server is responsible for interfacing with the MyKey Centerstack Settings User Client based on Admin/MyKey user’s operations.

## MKv6-CLD-REQ-243450/C-MyKey Centerstack Settings User Client

The MyKey Centerstack Settings User Client is responsible for implementing applicable functions based on the HMI input from the User and interfaces from the MyKey Centerstack Settings Server and MyKey Centerstack Settings KeyControl SubSystem.

## MKv6-CLD-REQ-342895/A-MyKey Centerstack Settings KeyControl SubSystem

The MyKey Centerstack Settings KeyControl SubSystem is responsible for coordinating with the MyKey Centerstack Settings Server to manage the assignment and creation of conventional MyKey and Admin keys.

For the creation of a Phone-As-A-Key MyKey, the KeyControl SubSystem shall perform some of the functions typically associated with the MyKey Centerstack Settings Server and interface directly with the MyKey Centerstack Settings User Client.

## Physical Mapping of Classes

The table below shows an example of how the logical classes that make up the MyKey Centerstack Settings feature may be mapped into physical modules.

|  |  |
| --- | --- |
| **Logical Class** | **Physical Module (ECU)** |
| MyKey Centerstack Settings Server | IPC |
| MyKey Centerstack Settings User Client | APIM |
| MyKey Centerstack Settings KeyControl SubSystem | BCM |

## MKv6-IIR-REQ-243447/D-Interface Requirement

### MD-REQ-238455/A-IgnKeyType\_D\_Actl

Message Type: Status

This signal represents the MyKey system status and is provided to all affected system components to configure their local modes.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| IgnKeyType\_D\_Actl | - | - | Type of key that is in the ignition |
|  | KeyReadInProgress | 0x0 | Key(s) will be read now |
|  | KeyInIgnStandardKey | 0x1 | Admin (full) mode |
|  | KeyInIgnMyKey | 0x2 | MyKey restricted mode |
|  | Key\_Not\_Prgrm\_Read\_Failure | 0x3 | Key not programmed |
|  | Unknown | 0xE | Disable MyKey System mode |
|  | Invalid | 0xF | Initial value |

### MD-REQ-238908/C-SystemKeyCount\_St

Message Type: Status

This status contains the system information of key counts, including both physical keys and PaaK keys

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| TotalCountOfMyKeys\_St | - | - | Total count of MyKeys, including PaaK keys assigned as MyKeys |
|  | - | 0x0-0x7D | Number of MyKeys |
|  | Unlimited | 0x7E | Unlimited MyKeys |
|  | NoDataExist | 0x7F | Initial Value |
| TotalCountOfMyKeys\_UB | - | - | Update Bit for the Total Count of MyKeys |
|  | Unchanged\_data | 0x0 |  |
|  | Fresh\_data | 0x1 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| TotalCountOfAdminKeys\_St | - | - | Total count of Admin Keys, including PaaK keys assigned as Admin Keys |
|  | - | 0x0-0x7D | Number of Admin Keys |
|  | Unlimited | 0x7E | Unlimited Admin Keys |
|  | NoDataExist | 0x7F | Initial Value |
| TotalCountOfAdminKeys\_UB | - | - | Update Bit for the Total Count of Admin Keys |
|  | Unchanged\_data | 0x0 |  |
|  | Fresh\_data | 0x1 |  |

Below tables are used for legacy programs and will be replaced by above tables in order to have more physical range of key counts and to include PaaK keys.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| UserMyKeyCount | - | - | Number of User MyKeys. |
|  | - | 0x0-0xD | Number of User Keys |
|  | Unlimited | 0xE | Unlimited Number |
|  | NoDataExist | 0xF | Initial Value |

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| AdminKeyCount | - | - | Number of Admin Keys. |
|  | - | 0x0-0xD | Number of User Keys |
|  | Unlimited | 0xE | Unlimited Numbers |
|  | NoDataExist | 0xF | Initial Value |

### MD-REQ-238467/B-Request\_New\_MyKey\_Rq

Message Type: Request

This mode (“CreateMyKey\_Rq” is used in MKv3) requests a new MyKey.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| Mode | - | - |  |
|  | Inactive | 0x0 |  |
|  | Create | 0x1 |  |

### MD-REQ-238457/B-Request\_New\_MyKey\_Rsp

Message Type: Response

This reflects the result of MyKey creation request.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| Result | - | - |  |
|  | NoDataExist | 0x0 | No Data Exist |
|  | KeyInSlotAlreadyMyKey | 0x1 |  |
|  | NoKeyInSlot | 0x2 |  |
|  | GenericFailure | 0x3 |  |
|  | Success | 0x4 |  |

### MD-REQ-238472/A-Clear\_All\_MyKeys\_Rq

Message Type: Request

This mode (“ResetAllUserKeys\_Rq” is used in MKv3) requests resetting of all MyKeys.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| Mode | - | - |  |
|  | Inactive | 0x0 |  |
|  | ResetAllKeys | 0x1 |  |

### MD-REQ-238909/A-MyKeySystemInfo\_Rq

Message Type: Request

This mode requests information of MyKey System Status.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| DataRequest | - | - |  |
|  | Inactive | 0x0 |  |
|  | GetData | 0x1 |  |

### MD-REQ-242972/A-MyKeySystemInfo\_Rsp

Message Type: Response

This response contains the system information about the MyKey feature.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| UserMyKeyCount | - | - | Number of User MyKeys. |
|  | - | 0x0-0xD | Number of User Keys |
|  | Unlimited | 0xE | Unlimited Number |
|  | NoDataExist | 0xF | Initial Value |

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| AdminMyKeyCount | - | - | Number of Admin MyKeys. |
|  | - | 0x0-0xD | Number of User Keys |
|  | Unlimited | 0xE | Unlimited Numbers |
|  | NoDataExist | 0xF | Initial Value |

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| MyKeyDrivenKm | - | - | Count of km driven with User MyKey |
|  | - | 0x00000-0xFFFFE | Distance driven (in km) |
|  | NoDataExist | 0xFFFFF | Initial Value |

### MD-REQ-238460/A-SpeedLimitConfig\_St

Message Type: Status

This signal contains the status of MyKey speed limit restrictions configuration.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| MK\_SpeedLimitConf\_St | - | - |  |
|  | Off | 0x00 | Speed limit Off |
|  | kmh70 | 0x01 | Speed limit 70 km/h |
|  | kmh75 | 0x02 | Speed limit 75 km/h |
|  | kmh80 | 0x03 | Speed limit 80 km/h |
|  | kmh85 | 0x04 | Speed limit 85 km/h |
|  | kmh90 | 0x05 | Speed limit 90 km/h |
|  | kmh95 | 0x06 | Speed limit 95 km/h |
|  | kmh100 | 0x07 | Speed limit 100 km/h |
|  | kmh105 | 0x08 | Speed limit 105 km/h |
|  | kmh110 | 0x09 | Speed limit 110 km/h |
|  | kmh115 | 0x0A | Speed limit 115 km/h |
|  | kmh120 | 0x0B | Speed limit 120 km/h |
|  | kmh125 | 0x0C | Speed limit 125 km/h |
|  | kmh130 | 0x0D | Speed limit 130 km/h |
|  | kmh135 | 0x0E | Speed limit 135 km/h |
|  | kmh140 | 0x0F | Speed limit 140 km/h |
|  | kmh145 | 0x10 | Speed limit 145 km/h |
|  | kmh150 | 0x11 | Speed limit 150 km/h |
|  | kmh155 | 0x12 | Speed limit 155 km/h |
|  | kmh160 | 0x13 | Speed limit 160 km/h |
|  | kmh165 | 0x14 | Speed limit 165 km/h |
|  | mph40 | 0x15 | Speed limit 40 mph |
|  | mph45 | 0x16 | Speed limit 45 mph |
|  | mph50 | 0x17 | Speed limit 50 mph |
|  | mph55 | 0x18 | Speed limit 55 mph |
|  | mph60 | 0x19 | Speed limit 60 mph |
|  | mph65 | 0x1A | Speed limit 65 mph |
|  | mph70 | 0x1B | Speed limit 70 mph |
|  | mph75 | 0x1C | Speed limit 75 mph |
|  | mph80 | 0x1D | Speed limit 80 mph |
|  | mph85 | 0x1E | Speed limit 85 mph |
|  | mph90 | 0x1F | Speed limit 90 mph |

### MD-REQ-238473/A-SpeedSettingConfig\_Rq

Message Type: Request

This mode requests a change of MyKey speed limit settings or speed minder settings.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| SpeedSetting |  |  |  |
|  | Inactive | 0x0 |  |
|  | SpeedLimit | 0x1 | Speed limiter shall be adjusted |
|  | SpeedMinder | 0x2 | Speed minder shall be adjusted |
| SpeedValue | - | - |  |
|  | Off | 0x0 | Switch to Speed limit Off |
|  | kmh70 | 0x01 | Speed limit 70 km/h |
|  | kmh75 | 0x02 | Speed limit 75 km/h |
|  | kmh80 | 0x03 | Speed limit 80 km/h |
|  | kmh85 | 0x04 | Speed limit 85 km/h |
|  | kmh90 | 0x05 | Speed limit 90 km/h |
|  | kmh95 | 0x06 | Speed limit 95 km/h |
|  | Kmh100 | 0x07 | Speed limit 100 km/h |
|  | Kmh105 | 0x08 | Speed limit 105 km/h |
|  | Kmh110 | 0x09 | Speed limit 110 km/h |
|  | Kmh115 | 0x0A | Speed limit 115 km/h |
|  | Kmh120 | 0x0B | Speed limit 120 km/h |
|  | Kmh125 | 0x0C | Speed limit 125 km/h |
|  | Kmh130 | 0x0D | Speed limit 130 km/h |
|  | Kmh135 | 0x0E | Speed limit 135 km/h |
|  | Kmh140 | 0x0F | Speed limit 140 km/h |
|  | Kmh145 | 0x10 | Speed limit 145 km/h |
|  | Kmh150 | 0x11 | Speed limit 150 km/h |
|  | Kmh155 | 0x12 | Speed limit 155 km/h |
|  | Kmh160 | 0x13 | Speed limit 160 km/h |
|  | Kmh165 | 0x14 | Speed limit 165 km/h |
|  | mph40 | 0x15 | Speed limit 40 mph |
|  | mph45 | 0x16 | Speed limit 45 mph |
|  | mph50 | 0x17 | Speed limit 50 mph |
|  | mph55 | 0x18 | Speed limit 55 mph |
|  | mph60 | 0x19 | Speed limit 60 mph |
|  | mph65 | 0x1A | Speed limit 65 mph |
|  | mph70 | 0x1B | Speed limit 70 mph |
|  | mph75 | 0x1C | Speed limit 75 mph |
|  | mph80 | 0x1D | Speed limit 80 mph |
|  | mph85 | 0x1E | Speed limit 85 mph |
|  | mph90 | 0x1F | Speed limit 90 mph |

### MD-REQ-238461/A-SpeedMinderConfig\_St

Message Type: Status

This signal contains the status of MyKey speed minder configuration.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| MK\_SpeedMinderConf\_St | - | - |  |
|  | Off | 0x00 | Speed minder is Off |
|  | kmh70 | 0x01 | Speed minder at 70 km/h |
|  | kmh75 | 0x02 | Speed minder at 75 km/h |
|  | kmh80 | 0x03 | Speed minder at 80 km/h |
|  | kmh85 | 0x04 | Speed minder at 85 km/h |
|  | kmh90 | 0x05 | Speed minder at 90 km/h |
|  | kmh95 | 0x06 | Speed minder at 95 km/h |
|  | kmh100 | 0x07 | Speed minder at 100 km/h |
|  | kmh105 | 0x08 | Speed minder at 105 km/h |
|  | kmh110 | 0x09 | Speed minder at 110 km/h |
|  | kmh115 | 0x0A | Speed minder at 115 km/h |
|  | kmh120 | 0x0B | Speed minder at 120 km/h |
|  | kmh125 | 0x0C | Speed minder at 125 km/h |
|  | kmh130 | 0x0D | Speed minder at 130 km/h |
|  | kmh135 | 0x0E | Speed minder at 135 km/h |
|  | kmh140 | 0x0F | Speed minder at 140 km/h |
|  | kmh145 | 0x10 | Speed minder at 145 km/h |
|  | kmh150 | 0x11 | Speed minder at 150 km/h |
|  | kmh155 | 0x12 | Speed minder at 155 km/h |
|  | kmh160 | 0x13 | Speed minder at 160 km/h |
|  | kmh165 | 0x14 | Speed minder at 165 km/h |
|  | mph40 | 0x15 | Speed minder at 40 mph |
|  | mph45 | 0x16 | Speed minder at 45 mph |
|  | mph50 | 0x17 | Speed minder at 50 mph |
|  | mph55 | 0x18 | Speed minder at 55 mph |
|  | mph60 | 0x19 | Speed minder at 60 mph |
|  | mph65 | 0x1A | Speed minder at 65 mph |
|  | mph70 | 0x1B | Speed minder at 70 mph |
|  | mph75 | 0x1C | Speed minder at 75 mph |
|  | mph80 | 0x1D | Speed minder at 80 mph |
|  | mph85 | 0x1E | Speed minder at 85 mph |
|  | mph90 | 0x1F | Speed minder at 90 mph |

### MD-REQ-238911/A-VolLimitConfig\_Rq

Message Type: Request

This mode (“AudioLimitConfig\_Rq” is used in MKv3) requests a change of MyKey volume limit settings.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| Mode | - | - |  |
|  | Inactive | 0x0 |  |
|  | Off | 0x1 |  |
|  | On | 0x2 |  |

### MD-REQ-238465/A-VolLimitConfig\_St

Message Type: Status

This signal (“AudioLimitConfig\_St” is used in MKv3) contains the status of MyKey volume limit configuration.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| IPC\_MyKeyVolLimit\_St | - | - |  |
|  | NoDataExist | 0x0 | Initial value |
|  | Off | 0x1 | Restriction NOT set |
|  | On | 0x2 | Restriction set |

### MD-REQ-242986/A-ECallRestrictionConfig\_Rq

Message Type: Request

This mode requests a change of MyKey eCall settings.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| Mode | - | - |  |
|  | Inactive | 0x0 |  |
|  | Off | 0x1 |  |
|  | On | 0x2 |  |

### MD-REQ-238463/A-e911Override\_St

Message Type: Status

This signal is from the MyKey Server to the MyKey Client. It is a status of e911 Override by MyKey Administrator. If the status = On, the Client shall override whatever the e911 setting is at the client and turn e911 Assist On if a MyKey is in ignition.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| MyKey\_e911Override\_St | - | - | Status of e911 override |
|  | Null | 0x0 | Initial value |
|  | Off | 0x1 | Overriding allowed |
|  | On | 0x2 | Overriding refused |

### MD-REQ-238470/A-ESCRestrictionConfig\_Rq

Message Type: Request

This signal requests a change of MyKey Electronic Stability Control Restrictions settings.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| Mode | - | - |  |
|  | Inactive | 0x0 |  |
|  | Off | 0x1 |  |
|  | On | 0x2 |  |

### MD-REQ-238462/A-ESCRestrictionConfig\_St

Message Type: Status

This signal contains the status of MyKey Electronic Stability Control restrictions configuration.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| Mode | - | - |  |
|  | NoDataExist | 0x0 | Initial value |
|  | Off | 0x1 | Restriction NOT set |
|  | On | 0x2 | Restriction set |

### MD-REQ-335405/A-CreateNewPaaKMyKey\_Rq

Message Type: Request

This method transmitted by the MyKeyUserClient is used to initiate a request to assign a PaaK key as a new MyKey.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| CreateNewPaakMyKey\_Rq | - | - | A request to create a new MyKey from a PaaK key |
|  | Null | 0x0 |  |
|  | RequestNewPaakMyKey | 0x1 |  |
|  | ConfirmNewPaakMyKey | 0x2 |  |
|  | NotUsed | 0x3 |  |

### MD-REQ-335406/B-CreateNewPaaKMyKey\_St

Message Type: Status

This method transmitted by the KeyControlSubsytem provides the status of the current request to create a new MyKey from a PaaK key.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Literals** | **Value** | **Description** |
| CreateNewPaaKMyKey\_St | - | - | Status of MyKey PaaK creation process |
|  | Null | 0x0 |  |
|  | NoValidPaakFound | 0x1 |  |
|  | StandardPaakFound | 0x2 |  |
|  | MyKeyPaakFound | 0x3 |  |
|  | ConfirmHmi | 0x4 |  |
|  | PressLockButton | 0x5 |  |
|  | LockButtonTimeOut | 0x6 |  |
|  | PhoneErased | 0x7 |  |
| CreateNewPaaKMyKey\_UB | - | - | Update Bit for CreateNewPaaKMyKey status |
|  | Unchanged\_data | 0x0 |  |
|  | Fresh\_data | 0x1 |  |

# General Requirements

For Settings that are MyKey limited reference the Settings in the Centerstack SPSS.

## MKv6-REQ-238475/A-Status signal initial value behavior

If value is the initial value (e.g. "Invalid", "Inactive", "NoDataExist" or "Null" or "not available" in HMI documents) then behavior shall be like deactivation of the related function (e.g. "Off", "NoMsg", "Unknown").

## MKv6-REQ-238481/A-KeyReadInProgress behavior

While value is "KeyReadInProgress" the behavior shall be like in receiving the initial value.

## MKv6-REQ-238476/A-Status signal never received at startup behavior

If modules detect that a CAN signal has not been received since bus wake-up the behavior shall be like receiving the initial value until the message is received.

## MKv6-REQ-238477/A-Status signal missing message behavior

If modules detect that a CAN message is missing more than the time defined in other diagnostic specifications then behavior shall be like in receiving the initial value.

* Ex. APIM IDS (infotainment diagnostic specification) would define missing message time for the APIM periodic messages in Run

## MKv6-REQ-238480/A-Status signal absent behavior

If modules detect that a CAN message is absent it shall keep the last received value of the related CAN signal until it will be received again or until it is determined to be a missing message as defined in the applicable diagnostic specifications.

* A status signal is absent if modules detect that a CAN status message has not been received after its periodic rate cycle time has elapsed but less than the missing message time defined in the applicable diagnostic specification (ex APIM Infotainment Diagnostic Specification)

## MKv6-REQ-268517/B-Phone-As-A-Key MyKey

The association of a phone to MyKey Centerstack Settings shall be supported by use of the Phone-As-A-Key (PaaK) feature. The phone must be setup, authorized, and connected as a PaaK before it can be associated to a MyKey. Refer to the PaaK feature SPSS for detailed information.

PaaK acting as Admin user key, and PaaK MyKey acting as MyKey user key shall apply to requirements and use cases in this specification.

## MKv6-REQ-355033/A-General timeout to determine MyKey Server or KeyControl Subsystem are unresponsive

Several functions in the MyKey Settings in Centerstack may feature specify a response from the MyKey Server or KeyControl Subsystem back to the MyKey User Client. In any of these functions, if a particular response or expected status update is not received prior to the expiration of T\_GeneralTimeout, then the particular action/process can be considered as faulted, and the action/process flow can then be aborted after displaying any associated HMI indications to the user.

This T\_GeneralTimeout value is the maximum time the MyKey User Client shall wait prior to determining a fault has occurred. This is intended to prevent any HMI indications or process flows to be indefinitely stuck waiting for a particular response.

Any associated HMI related to this type of fault condition can also be displayed to the user if the MyKey User Client has determined that any MyKey related periodic status message has not been sent by the MyKey Server or KeyControl Subsystem for a period of T\_GeneralTimeout while the Ignition Status is set to RUN.

## MKv6-TMR-REQ-355032/A-T\_GeneralTimeout

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Description** | **Units** | **Range** | **Resolution** | **Default** |
| T\_GeneralTimeout | Maximum amount of time to wait before determining the MyKey Server or KeyControl Subsystem has become unresponsive.    Note: Use the default value | sec | 1-30 | 1 | 10 |

# Functional Definition

## MKv6-FUN-REQ-236034/B-MyKey Information Menu

The MyKey information menu provides the status about configured keys and distance driven by MyKey user.

### Requirements

#### MKv6-REQ-236036/A-MyKey Information Screen Data

The MyKey Information screen shall display three values:

The count of MyKeys

The count of Admin Keys

The mile/kilometer count driven with MyKeys (all MyKey users accumulated)

#### MKv6-REQ-236037/A-Prefetch of MyKey Information

The MyKey Settings Client has to prefetch the current MyKey Information in time to show them without perceivable delay.

### Use Cases

#### MKv6-UC-REQ-236035/A-User enters MyKey Information Menu

|  |  |
| --- | --- |
| **Actors** | Admin or MyKey User |
| **Pre-conditions** | Ignition is in Run.  MyKey feature is configured to on.  MyKey mode is of no relevance. |
| **Scenario Description** | User enters MyKey Information Menu. |
| **Post-conditions** | MyKey Information is displayed to the User. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

### WhiteBoxView - User enters MyKey Information Menu

#### MKv6-ACT-REQ-236038/A-User enters MyKey Information Menu

Activity Diagram



#### MKv6-SD-REQ-236039/A-User enters MyKey Information Menu

Scenarios

Normal Usage

User enters MyKey information menu

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

MyKey feature is configured to on.

Pre-condition

MyKey mode is of no relevance.

Post-condition

MyKey Information is displayed to the User.

Sequence Diagram



## MKv6-FUN-REQ-235958/A-Create A New MyKey

The MyKey subsystem offers admin user to configure a vehicle recognized key as MyKey. For this procedure a key has to be available in the backup slot or in the ignition switch.

### Requirements

#### MKv6-REQ-235964/C-Creating a new MyKey

The key/phone to be classified as MyKey has to be located in the vehicle and in the case of a conventional key, placed in the backup position, in the ignition switch, or within a defined distance, and has to be a valid admin key. A Phone as a Key, has to have already been created using the Phone as a Key process.

#### MKv6-REQ-235965/A-MyKey startup behavior handling

Before enabling any MyKey restrictions or functions, the subsystem, server or client must wait for stable system conditions distributed over the network.

For example, if the key identification status is valid and the function is configurable, the system object need to wait until a valid function status / configuration exists.

#### MKv6-REQ-355027/A-Timeout when confirming creation of a new PaaK MyKey

At the beginning of the MyKey creation process for a PaaK device, the KeyControl Subsytem will report the total number of assigned MyKeys in the TotalCountOfMyKey\_St signal. During the process, the user will be asked to confirm the assignment of that PaaK device as a MyKey. Upon confirmation from the user, the MyKey User Client shall send the signal CreateNewPaaKMyKey\_Rq set to ConfirmNewPaakMyKey to the KeyControl Subsytem. Upon receiving a value of Null in the CreateNewPaaKMyKey\_St signal, MyKey User Client shall start a timer T\_NullDelay, and then upon expiration of that timer, re-assess the value of the TotalCountOfMyKey\_St to confirm it has been successfully incremented. If so, the process can be deemed a success. If the value of the MyKey key count has not been incremented from the value reported at the beginning of the process, then a general failure has occurred within the KeyControl Subsystem.

#### MKv6-TMR-REQ-355031/A-T\_NullDelay

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Description** | **Units** | **Range** | **Resolution** | **Default** |
| T\_NullDelay | Amount of time to wait prior to assessing Key Count Totals to determine if the PaaK MyKey creation process succeeded or failed.    Note: Use the default value | msec | 200 - 5000 | 100 | 3000 |

### Use Cases

#### MKv6-UC-REQ-235959/B-Create a new MyKey key

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active.  Admin key count >1. |
| **Scenario Description** | Admin requests the key in ignition lock or backup slot to be configured as a MyKey user key.  Setup process and status is shown via the display HMI. |
| **Post-conditions** | Admin count is decreased.  Key is configured as MyKey user key.  MyKey user key restriction function available with the next ignition cycle. |
| **Notes** | **E1-Unsuccessful – GeneralFailure:**  The Admin requests the key in the backup slot/ignition lock to be configured as a MyKey user key and an error occurs.  **Post-conditions:**  Error message shown via the display HMI.  MyKey user key shall be not configured and not available.  Admin key count shall not be changed.  **E2-Unsuccessful - AlreadyMyKey:**  The Admin requests the key in the backup slot/ignition lock to be configured as a MyKey user key but it is already configured as MyKey.  **Post-conditions:**  Information message shown via the display HMI.  MyKey user key setup and key count shall not be changed.  Admin key count shall not be changed.  **E3-Unsuccessful - NoKey**  The Admin requests the key in the backup slot/ignition lock to be configured as a MyKey user key but no key is available.  **Post-conditions:**  Key-Error message shown via the display HMI.  MyKey user key setup and key count shall not be changed.  Admin key count shall not be changed. |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

#### MKv6-UC-REQ-268536/B-Create a new PaaK MyKey

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active.  Admin key count >1.  Phone and BLEM paired and connected. |
| **Scenario Description** | User attempts to create Phone as a Key MyKey, presses the Lock Button on the device HMI, and confirms the assignment of the PaaK device as a MyKey via the vehicle HMI. |
| **Post-conditions** | Admin count is decreased and MyKey count is increased.  PaaK device is configured as MyKey.  MyKey restriction function available with the next ignition cycle. |
| **Notes** |  |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface, Device HMI |

### WhiteBoxView - Create a new MyKey

#### MKv6-ACT-REQ-235966/A-Create a new MyKey

Activity Diagram



#### MKv6-SD-REQ-235967/A-Create a new MyKey - successful

Scenarios

Normal Usage

Admin requests the key in ignition or back up slot to be configured as a MyKey user key.

Setup process and status is shown via the display HMI.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Admin count is decreased.

Post-condition

Key is configured as MyKey user key.

Post-condition

MyKey user key restriction function available with the next ignition cycle.

Sequence Diagram



#### MKv6-SD-REQ-235968/A-Create a new MyKey - unsuccessful - GeneralFailure

Scenarios

Normal Usage

The Admin requests the key in the Backup slot/Ignition to be configured as a MyKey user key and an error occurs.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Error message shown via the display HMI.

Post-condition

MyKey user key shall be not configured and not available.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-SD-REQ-235969/B-Create a new MyKey - unsuccessful - AlreadyMyKey

Scenarios

Normal Usage

The Admin requests the key in the Backup slot/Ignition to be configured as a MyKey user key but it is already configured as MyKey.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Information message shown via the display HMI.

Post-condition

MyKey user key setup and key count shall not be changed.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-SD-REQ-235970/A-Create a new MyKey - unsuccessful - NoKey

Scenarios

Normal Usage

The Admin requests the key in the Backup slot/Ignition to be configured as a MyKey user key but no key is available.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Key-Error message shown via the display HMI.

Post-condition

MyKey user key setup and key count shall not be changed.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-ACT-REQ-335397/A-Create a new PaaK MyKey

Activity Diagram



#### MKv6-SD-REQ-335398/A-Create a new PaaK MyKey - successful

Scenarios

Normal Usage

The User attempts to create a PaaK MyKey and confirms to have it successfully assigned as a MyKey via the HMI.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Admin key count is decreased and MyKey count is increased.

Post-condition

PaaK device is configured as MyKey user key.

Post-condition

MyKey user key restriction function available with the next ignition cycle.

Sequence Diagram



#### MKv6-SD-REQ-335399/A-Create a new PaaK MyKey - unsuccessful - PaaK Not Created

Scenarios

Normal Usage

The User attempted to create a PaaK MyKey but a PaaK was never created for this vehicle.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >=1.

Post-condition

Error message shown via the display HMI.

Post-condition

MyKey user key shall be not configured and not available.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-SD-REQ-335400/A-Create a new PaaK MyKey - unsuccessful - PaaK Not Found

Scenarios

Normal Usage

The User attempts to create a PaaK MyKey, but the presence of a PaaK is not detected inside the vehicle.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Error message shown via the display HMI.

Post-condition

MyKey user key setup and key count shall not be changed.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-SD-REQ-335401/A-Create a new PaaK MyKey - unsuccessful - Lock Button Timeout

Scenarios

Normal Usage

The User attempted to create a PaaK MyKey but failed to press the Lock Button on a valid PaaK device before the timeout expired.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Error message shown via the display HMI.

Post-condition

MyKey user key setup and key count shall not be changed.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-SD-REQ-335402/A-Create a new PaaK MyKey - unsuccessful - Invalid PaaK

Scenarios

Normal Usage

The User attempted to assign a PaaK as a MyKey but the PaaK being assigned was not valid to be assigned as a new MyKey.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Error message shown via the display HMI.

Post-condition

MyKey user key setup and key count shall not be changed.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-SD-REQ-335403/A-Create a new PaaK MyKey - unsuccessful - User Declines

Scenarios

Normal Usage

The User attempted to create a PaaK MyKey but declined to confirm the assignment of that PaaK as a MyKey via the HMI.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Error message shown via the display HMI.

Post-condition

MyKey user key setup and key count shall not be changed.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



#### MKv6-SD-REQ-335404/A-Create a new PaaK MyKey - unsuccessful - General Failure

Scenarios

Normal Usage

The User attempted to assign a PaaK as a MyKey but a General Failure has occurred.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin Mode is active.

Pre-condition

Admin key count >1.

Post-condition

Error message shown via the display HMI.

Post-condition

MyKey user key setup and key count shall not be changed.

Post-condition

Admin key count shall not be changed.

Sequence Diagram



## MKv6-FUN-REQ-235982/A-Clear All MyKeys

The MyKey subsystem offers the admin user to clear all configured MyKey user keys. For this requirement at least one MyKey user key needs to be set up in the system.

### Requirements

#### MKv6-REQ-235965/A-MyKey startup behavior handling

Before enabling any MyKey restrictions or functions, the subsystem, server or client must wait for stable system conditions distributed over the network.

For example, if the key identification status is valid and the function is configurable, the system object need to wait until a valid function status / configuration exists.

### Use Cases

#### MKv6-UC-REQ-235983/A-Clear all MyKeys - successful

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active. |
| **Scenario Description** | Admin User requests to clear all MyKeys. |
| **Post-conditions** | All Keys are configured as admin.  MyKey count has been reset to zero.  Driven miles/kilometers count has been reset to zero. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

#### MKv6-UC-REQ-235984/A-Clear all MyKeys - unsuccessful

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active. |
| **Scenario Description** | Admin User requests to clear all MyKeys. But due to any error the MyKeys are not cleared. |
| **Post-conditions** | Previous Key configuration is still valid. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

### WhiteBoxView - Clear all MyKeys

#### MKv6-ACT-REQ-235986/A-Clear all MyKeys - successful

Activity Diagram



#### MKv6-SD-REQ-235987/A-Clear all MyKeys - successful

Scenarios

Normal Usage

User requests clearing of all MyKeys

Constraints

Pre-condition

Admin Key is present

Post-condition

All keys are configured as admin

Sequence Diagram



#### MKv6-ACT-REQ-235988/A-Clear all MyKeys - unsuccessful

Activity Diagram



#### MKv6-SD-REQ-235989/A-Clear all MyKeys - unsuccessful

Scenarios

Normal Usage

User requests clearing of all MyKeys

Constraints

Pre-condition

Admin Key is present

Post-condition

All MyKeys are not cleared

Sequence Diagram



## MKv6-FUN-REQ-236006/A-Speed Limiter Administration

The Administrative user will have the ability to enable or disable the MyKey Speed Limiter. The maximum speed options are available to the Administrative user depends on the major market.

### Requirements

#### MKv6-FUR-REQ-236096/A-Region Units Configuration Status – Regional Setting

The APIM shall use the DE01 byte 1 and 2 (country code) to select the appropriate signal request units on the bus for that country, using the mapping table.

#### MKv6-FUR-REQ-236097/A-Region Units Configuration - Speed Limiter Settings

MyKey Speed limiter settings menu units must follow the vehicle distance unit status on the bus and the regional requirement in MyKey message center requirement as specified in the mapping table.

#### MKv6-FUR-REQ-236098/A-Region Units Configuration Request - Speed Limiter Settings

MyKey Speed limiter settings client should send the request in the one format miles/hour or kilometers/hour depending on the region and country configuration as specified in the mapping table.

#### MKv6-FUR-REQ-236099/A-Region Units Configuration Status - Speed Limiter Settings

MyKey Speed limiter settings client should convert the status of the Speed limiter settings from miles/hour or kilometers/hour depending on the region and country configuration as specified in the mapping table.

#### MKv6-FUR-REQ-236100/B-Mapping Tables - Speed Limiter

The APIM should use the following tables to map the conversion for different region.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Req. #** | **MyKey Function** | **Major Market** | **request and status Signal** | **APIM distance unites Display in miles** | **APIM distance unite Display in kilometers** | **Default Setting** |
| MKFS-Req200.001 | MyKey Speed Limiter   * Limit speed to target set by the Admin | * United States | OFF |  |  |  |
| 65 mph | 65 mph | (105 km/h) |  |
| 70 mph | 70 mph | (113 km/h) |  |
| 75 mph | 75 mph | (121 km/h) |  |
| **80 mph** | **80 mph** | **(129 km/h)** | **X** |
| * All others | OFF |  |  |  |
| 100 km/h | (62 mph) | 100 km/h |  |
| 110 km/h | (68 mph) | 110 km/h |  |
| 120 km/h | (75 mph) | 120 km/h |  |
| **130 km/h** | **(81 mph)** | **130 km/h** | **X** |
| * United Kingdom | OFF |  |  |  |
| **80 mph** | **80 mph** | **(129 km/h)** | **X** |
| * Europe (other than U.K.) | OFF |  |  |  |
| **140 km/h** | **(87 mph)** | **140 km/h** | **X** |

### Use Cases

#### MKv6-UC-REQ-236007/A-Admin sets Speed Limiter restrictions

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active. |
| **Scenario Description** | Admin sets the MyKey Restriction for Speed Limiter. |
| **Post-conditions** | New speed limiter settings are stored. |
| **Notes** | N/A |
| **Interfaces** | CBI , G-HMI, Vehicle System Interface |

#### MKv6-UC-REQ-236094/A-Unit Changes from Miles to Kilometers - Speed Limiter Settings

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin mode is active.  The distance unit is in miles. |
| **Scenario Description** | Driver sets the distance unit to kilometers.  The Speed limiter menu selection will be in kilometers.  Driver sets the MyKey restriction for Speed Limiter. |
| **Post-conditions** | New Speed limiter settings are shown in kilometers in the APIM.  The APIM sent the request signal depending on the regional setting of the APIM and apply unit conversion if needed. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

#### MKv6-UC-REQ-236095/A-Unit Changes from Kilometers to Miles - Speed Limiter Settings

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin mode is active.  The distance unit is in kilometers. |
| **Scenario Description** | Driver sets the distance unit to miles.  The Speed limiter menu selection will be in miles.  Driver sets the MyKey restriction for Speed limiter. |
| **Post-conditions** | New Speed limiter settings are shown in miles in the APIM.  The APIM sent the request signal depending on the regional setting of the APIM and apply unit conversion if needed. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

### WhiteBoxView - Admin sets Speed Limiter restrictions

#### MKv6-ACT-REQ-236018/A-Admin sets Speed Limiter restrictions

Activity Diagram



#### MKv6-SD-REQ-236019/A-Admin sets Speed Limiter restrictions

Scenarios

Normal Usage

Admin sets the MyKey restriction for speed limiter (here for example to 130 kilometers per hour)

Constraints

Pre-condition

Admin key is present

Post-condition

New speed limiter settings are stored

Sequence Diagram



## MKv6-FUN-REQ-236040/B-Speed Minder Administration

The Admin user will have the ability to enable or disable the MyKey Speed Minder. The speed options are available to the Admin user depends on the major markets.

### Requirements

#### MKv6-FUR-REQ-341987/A-Region Units Configuration Status – Regional Setting

The APIM shall use the DE01 byte 1 and 2 (country code) to select the appropriate signal request units on the bus for that country, using the mapping table.

#### MKv6-FUR-REQ-341986/A-Region Units Configuration - Speed Minder Settings

MyKey Speed Minder settings menu units must follow the vehicle distance unit status on the bus and the regional requirement in MyKey message center requirement as specified in the mapping table.

#### MKv6-FUR-REQ-341985/A-Region Units Configuration Request - Speed Minder Settings

MyKey Settings client should send the request in the one format miles/hour or kilometers/hour depending on the region and country configuration as specified in the mapping table.

#### MKv6-FUR-REQ-341984/A-Region Units Configuration Status - Speed Minder Settings

MyKey Settings client should convert the status of the Speed Minder settings from miles/hour or kilometers/hour depending on the region and country configuration as specified in the mapping table.

#### MKv6-FUR-REQ-341961/B-Mapping Tables - Speed Minder

The APIM should use the following tables to map the conversion for different regions.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Req. #** | **MyKey Function** | **Major Market** | **Request and Status Signal** | **APIM distance units Display in miles** | **APIM distance units Display in kilometers** | **Default Setting** |
| MKFS-Req200.005 | MyKey Speed Minder   * Warn when target speed set by the Admin is reached | * United States | OFF |  |  | **X** |
| 45 mph | 45 mph | (72 km/h) |  |
| 55 mph | 55 mph | (89 km/h) |  |
| 65 mph\* | 65 mph | (105 km/h) |  |
| * All others | OFF |  |  | **X** |
| 75 km/h | (47 mph) | 75 km/h |  |
| 90 km/h | (56 mph) | 90 km/h |  |
| 100 km/h\* | (62 mph) | 100 km/h |  |
| * United Kingdom | OFF |  |  | **X** |
| 45 mph | 45 mph | (72 km/h) |  |
| 55 mph | 55 mph | (89 km/h) |  |
| 65 mph | 65 mph | (105 km/h) |  |
| * Europe (other than U.K.) | OFF |  |  | **X** |
| 75 km/h | (47 mph) | 75 km/h |  |
| 90 km/h | (56 mph) | 90 km/h |  |
| 100 km/h | (62 mph) | 100 km/h |  |

\*NOTE: When set to units of mph, if the selected Speed Limit is 65 mph OR 70 mph, then the maximum speed minder selection, shall be 55mph (not 65mph). When set to units of km/h, if the selected Speed Limit is 100kph, then the maximum speed minder selection, shall be 75kph (not 90 or 100kph)

### Use Cases

#### MKv6-UC-REQ-236041/A-Admin sets Speed Minder

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  MyKey mode is active. |
| **Scenario Description** | Admin user sets the MyKey Restriction for Speed Minder |
| **Post-conditions** | New Speed Minder settings are stored. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

### WhiteBoxView - Admin sets Speed Minder

#### MKv6-ACT-REQ-236053/A-Admin sets Speed Minder

Activity Diagram



#### MKv6-SD-REQ-236054/A-Admin sets Speed Minder

Scenarios

Normal Usage

Admin sets the MyKey Restriction for Speed Minder

Constraints

Pre-condition

Admin key is present

Post-condition

New speed minder settings are stored

Sequence Diagram



## MKv6-FUN-REQ-236020/A-Audio Volume Limiter Administration

The Admin user will have the ability to enable or disable the MyKey Volume Limiter.

### Requirements

#### MKv6-REQ-236022/A-Audio Volume Limiter Settings

|  |  |  |
| --- | --- | --- |
| **Market** | **Available**  **Audio Volume Limit - Settings** | **Default**  **Setting** |
| All | OFF |  |
| ON | X |

### Use Cases

#### MKv6-UC-REQ-236021/A-Admin sets Audio Volume Limiter restrictions

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active. |
| **Scenario Description** | Admin sets the audio volume limiter restrictions. |
| **Post-conditions** | New audio volume limiter setting for MyKey user is stored. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Audio Out |

### WhiteBoxView - Admin sets Audio Volume Limiter restrictions

#### MKv6-ACT-REQ-236023/A-Admin sets Audio Volume Limiter restrictions

Activity Diagram



#### MKv6-SD-REQ-236024/A-Admin sets Audio Volume Limiter restrictions - ON

Scenarios

Normal Usage

Admin sets the audio volume limiter restrictions to ON

Constraints

Pre-condition

Admin Key is present

Post-condition

New audio volume limiter setting for MyKey user is stored

Sequence Diagram



#### MKv6-SD-REQ-236025/A-Admin sets Audio Volume Limiter restrictions - OFF

Scenarios

Normal Usage

Admin sets the audio volume limiter restrictions to OFF

Constraints

Pre-condition

Admin Key is present

Post-condition

New audio volume limiter setting for MyKey user is stored

Sequence Diagram



## MKv6-FUN-REQ-236055/A-e911/eCall Setting Administration

The Admin user will have the ability to enable or disable the MyKey e911/eCall override restriction. The options are available to the Admin user depending on availability of the feature.

### Requirements

#### MKv6-REQ-236058/A-e911/eCall Override Setting

|  |  |  |
| --- | --- | --- |
| **Market** | **Available**  **e911/eCall switch OFF restriction - Settings** | **Default**  **Setting** |
| All | OFF | X |
| ON |  |

Hint: "ON" means restriction is set and it is not possible to switch off.

### Use Cases

#### MKv6-UC-REQ-236056/A-Admin sets e911/eCall setting to ON

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active. |
| **Scenario Description** | Admin sets e911/eCall restrictions setting to ON. |
| **Post-conditions** | New e911/eCall setting for MyKey user is stored.  MyKey user cannot change the e911/eCall setting. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

#### MKv6-UC-REQ-236057/A-Admin sets e911/eCall setting to OFF

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin key mode is active. |
| **Scenario Description** | Admin sets e911/eCall restrictions setting to OFF. |
| **Post-conditions** | New e911/eCall setting for MyKey user is stored.  MyKey user can change the e911/eCall setting. |
| **Notes** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

### WhiteBoxView - Admin sets e911/eCall setting to ON

#### MKv6-ACT-REQ-236059/A-Admin sets e911/eCall setting to ON

Activity Diagram



#### MKv6-SD-REQ-236060/A-Admin sets e911/eCall setting to ON

Scenarios

Normal Usage

Admin sets eCall restrictions setting to ON

Constraints

Pre-condition

Admin key is present

Post-condition

New e911/eCall setting for MyKey user is stored

Sequence Diagram



### WhiteBoxView - Admin sets e911/eCall setting to OFF

#### MKv6-ACT-REQ-236061/A-Admin sets e911/eCall setting to OFF

Activity Diagram



#### MKv6-SD-REQ-236062/A-Admin sets e911/eCall setting to OFF

Scenarios

Normal Usage

Admin sets e911/eCall restrictions setting to OFF.

Constraints

Pre-condition

Admin key is present

Post-condition

New e911/eCall setting for MyKey user is stored

Sequence Diagram



## MKv6-FUN-REQ-257697/A-TC/ESC Off Inhibited Administration

The MyKey subsystem will allow admin user to prevent the restricted user from disabling the traction control (TC)/electronic stability control (ESC) system.

Therefore, the MyKey subsystem relies on the admin user to configure this feature.

### Requirements

#### MKv6-REQ-257700/A-ESC Override Settings

|  |  |  |
| --- | --- | --- |
| **Market** | **Available**  **ESC switch OFF restriction - Settings** | **Default**  **Setting** |
| All | OFF | X |
| ON |  |

Hint: "ON" means restriction is set and it is not possible to switch off.

### Use Cases

#### MKv6-UC-REQ-257698/A-Admin sets TC/ESC Off inhibited setting to ON

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin mode is active. |
| **Scenario Description** | Admin sets TC/ESC Off inhibited restrictions setting to ON. |
| **Post-conditions** | New TC/ESC Off inhibited setting for MyKey user is stored.  MyKey user cannot change the TC/ESC setting and it is forced to "ON". |
| **List of Exception Use Cases** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

#### MKv6-UC-REQ-257699/A-Admin sets TC/ESC Off inhibited setting to OFF

|  |  |
| --- | --- |
| **Actors** | Admin User |
| **Pre-conditions** | Ignition is in Run.  Admin mode is active. |
| **Scenario Description** | Admin sets TC/ESC Off inhibited restrictions setting to OFF. |
| **Post-conditions** | New TC/ESC Off inhibited setting for MyKey user is stored.  MyKey user can change the TC/ESC setting. |
| **List of Exception Use Cases** | N/A |
| **Interfaces** | CBI, G-HMI, Vehicle System Interface |

### WhiteBoxView - Admin sets ESC Off inhibited setting to ON

#### MKv6-ACT-REQ-257701/A-Admin sets ESC Off inhibited setting to ON

Activity Diagram



#### MKv6-SD-REQ-257702/A-Admin sets ESC Off inhibited setting to ON

Scenarios

Normal Usage

Admin sets TC/ESC Off inhibited restrictions setting to ON.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin mode is active.

Post-condition

New TC/ESC Off inhibited setting for MyKey user is stored.

Post-condition

MyKey user cannot change the TC/ESC setting and it is forced to "ON".

Sequence Diagram



### WhiteBoxView - Admin sets ESC Off inhibited setting to OFF

#### MKv6-ACT-REQ-257703/A-Admin sets ESC Off inhibited setting to OFF

Activity Diagram



#### MKv6-SD-REQ-257704/A-Admin sets ESC Off inhibited setting to OFF

Scenarios

Normal Usage

Admin sets TC/ESC Off inhibited restrictions setting to OFF.

Constraints

Pre-condition

Ignition is in Run.

Pre-condition

Admin mode is active.

Post-condition

New TC/ESC Off inhibited setting for MyKey user is stored.

Post-condition

MyKey user can change the TC/ESC setting.

Sequence Diagram



## MKv6-FUN-REQ-235938/A-HMI Restrictions - MyKey Driver Restrictions

### Requirements

#### MKv6-REQ-235941/B-HMI Restriction Level - MyKey Driver Distraction

To reduce driving distraction, MyKey shall restrict certain functionalities while vehicle is moving per Infotainment Drive Restriction specifications for regions that do not have such restriction.

Driver Restriction specifications:

1. Driver Restrictions SPSS
2. H21j\_SYNC\_GEN3\_Driving\_Restrictions (for other modules (ex CHR, CTR) reference their equivalent specification)
3. H21\_SYNC\_3\_GUI\_Design\_Standards (for other modules (ex CHR, CTR) reference their equivalent specification)
4. A73c\_Driving\_Restrictions\_Market\_Behavior\_Table (for other modules (ex CHR, CTR) reference their equivalent specification)

# Appendix: Reference Documents

|  |  |
| --- | --- |
| Reference # | Document Title |
| 1 | MyKey SPSS (for non-settings features such as Volume Limit, Seatbelt Mute…) |
| 2 | Latest version of “FSDA8T-MYKEYSYS” MyKey functional specification |
| 3 | Driver Restrictions SPSS |
| 4 | H21j\_SYNC\_GEN3\_Driving\_Restrictions (for other modules (ex CHR, CTR) reference their equivalent specification) |
| 5 | H21\_SYNC\_3\_GUI\_Design\_Standards (for other modules (ex CHR, CTR) reference their equivalent specification) |
| 6 | A73c\_Driving\_Restrictions\_Market\_Behavior\_Table (for other modules (ex CHR, CTR) reference their equivalent specification) |
| 7 | Settings in the Centerstack SPSS |
|  |  |