First Row Seat Position Control

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(F003516)

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# Introduction

## Document Purpose

The Feature Implementation Specification (FIS) specifies the deployment of the logical functions of a feature to an electrical architecture. The FIS specifies all interactions between the ECUs of the electrical architecture required for the feature including the technical signals and the interfaces. It also gives interface and integration requirements, which are specific to the feature for the electrical architecture.

To get more information about the concept of feature, function and component level abstraction refer to the [Ford RE Wiki](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Engineering+for+SW+Enabled+Features).

## Document Scope

This FIS describes the deployment of the feature First Row Seat Position Control to the following electrical architecture(s):

*No Electrical Architecture found.*

## Document Audience

The FIS is authored by **Diana Aguilar** . All Stakeholders, i.e., all people who have a valid interest in the feature implementation should read and, if possible, review the FIS. It needs to be guaranteed, that all stakeholders have access to the currently valid version of the FIS.

### Stakeholder List

For the latest list of the function stakeholders and their roles & responsibilities refer to <Put VSEM Link here>.

|  |  |  |
| --- | --- | --- |
| Todd Beck | TBECK18 | Settings UX Applicable engineer |
| Gail Cheng | GCHENG | SYNC (APIM) |
| Matthew Borrelli | MBORREL4 | SYNC (APIM) |
| Gautam, Paritosh | PGAUTAM1 | ECG |
| Scott Hardiek | SHARDIEK | 1 Row Seat Switches |
| Jonathan Laquinto | JIAQUIN2 | Driver Seat Module (DSM+PSM) |
| Vijay Srikakolapu | vsrikak1 | Seat Module Software Eng |
| Laura Check | LBUREK | ELECTRONIC MODULES SYNC |
| Pavankumar Surabathula | PSURABAT | ELECTRONIC MODULES SYNC |
| Tumavitch, Jeffrey | JTUMAVIT | PDCM |
| Justin Bauer | JBAUER50 | PPP Feature |
| Paul Braithwaite | pbraith1 | BCM |
| Tok Lau | tlau4 | Stowable Steering Feature |
| Walter Stephens | WSTEPHE1 | Enhance Memory Feature |
| Evangelos Fountis | EFOUTIS | AutoSafe Feature |
| Matheus Brasileiro | MFERN203 | Classic Memory Feature |
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| Donna Schienke | DSCHIENK | 2nd Row Feature MBSE Modeler |
| Michelle Kinney | MKINNE13 | PMT 5 Leader |
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| Vikram Gokhale | VGOKHALE | Feature Deliverable |
| Bin He | BHE11 | First Row Seat Core Complete Seat Eng |
| Dinh Tran | dtran39 | SYNC Phoenix |
| Qiyang Li | GREED29 | SYNC DuerOs |

## Document Organization

### Document Context

Refer to the [Specification Structure page](http://wiki.ford.com/display/RequirementsEngineering/Specification+templates) in the [Ford RE Wiki](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Engineering+for+SW+Enabled+Features) to understand how the FIS relates to other Ford Requirements Documents and Specifications.

### Document Structure

The structure of this document is explained below:

**Section 1** – Introduction – Giving an explanation how to use this document including responsibilities and the scope of the document. Additionally, it contains the revision history and a list of unsettled but known issues that have to be consolidated in future versions. It explains the terminology and gives a clarification of the definitions, concepts and abbreviations used in the document.

**Section 2** – Feature Implementation Description – Giving an overview of the platform and listing assumptions, constraints or dependencies

**Section 3** – Feature Implementation Architecture – Describing 3 Architecture Views:

* Functional Architecture – Showing the logical architecture of functions
* Physical Architecture – Showing the physical architecture (first of all the E/E Architecture), which the Logical Functions get allocated to.
* Software Architecture – Showing the software architecture relevant for the feature (for features with in-house development only)
* Function Deployment – Presenting the allocation of logical functions and signals to the electrical and other components

**Section 4** – Deployment Specific Modeling –Modeling techniques providing additional detail on e.g. interface behavior

**Section 5** – Deployment Specific Requirements – Deployment specific requirements for ECUs, Network Communication, and Process

**Section 6** – List of Open Concerns

**Section 7** – Revision History

**Section 8** – Appendix - Presenting additional data mainly in a tabular form, e.g., a data dictionary

## Document Conventions

### Requirements Templates

Refer to “[How to use the Specification Templates](http://wiki.ford.com/display/RequirementsEngineering/How+to+use+the+Specification+Templates?src=contextnavpagetreemode)” on how to use the specification templates and the VBA macros to create/edit the requirements in the specifications.

The VBA macro enable the import of the specification to VSEM (refer to ["How to import specifications into VSEM as separate requirements"](http://wiki.ford.com/pages/viewpage.action?pageId=104991616&src=contextnavpagetreemode)).

#### Identification of requirements

The unique requirement ID given in the headline of any requirement follows the requirement throughout the development process. The requirement ID format follows a well-defined syntax.

All identifiers in an FIS shall be composed of 4 parts:

* A leading prefix, which indicates the type of requirement (R=Requirement, UC=Use Case, SC=Scenario, …)
* A prefix, which indicates the abstraction level (F=Feature, FNC=Function, CMP = component).
* Followed by a name, indicating the scope, which the requirement belongs to (e.g. feature or function name )
* Ending with the actual requirement number

*Example:*

*R\_CMP\_LockArbitrator\_00004* This is the fourth requirement on component level for the function Lock Arbitrator.

#### Requirements Attributes

Additionally attributes can be added to each requirement. This helps to classify requirements. A [list of available attributes](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes?src=contextnavpagetreemode) is given in the RE Wiki.

## References

### Ford Documents

The list of all Ford internal documents, which are directly related.

| **Reference** | **Title** | **Doc. ID** | **Revision** | **Document Location** |
| --- | --- | --- | --- | --- |
| Ford GIS Standard | Ford GIS Standard |  |  |  |

Table 1‑2: Ford internal Documents

### External Documents and Publications

The list of external documents could include books, reports and online sources.

| **Reference** | **Document / Publication** |
| --- | --- |
| IEEE Std 1012-2004 IEEE Standard for Software Verification and Validation |  |
| ISO/IEC 19500-2:2003 |  |
| UML Testing Profile (UTP), v1.2 |  |
| Wikipedia | https://en.wikipedia.org/wiki/Concept |

Table 1‑3: External documents and publications

## Glossary

### Definitions

| **Definition** | **Description** |
| --- | --- |
| "Enabled" Position | "For the 1st Row Seat, it is the target position for the 1st row seat to enable the pitch/slide action of the 2nd row seat to be able to complete. Also when the seat Fore/Aft position is in Enabled Fore/Aft Position and the seat Incline/Recline position is in Enabled Incline/Recline Position.  For the 2nd Row Seat, it is the target position for the 2nd row seat to be able to start the pitch/slide action." |
| "Initial" Position | The position that each seat starts in before the Power Pitch/Slide is requested.  Also, the position to which the 1st row seat shall return when the Power Pitch/Slide Return is commanded. |
| "Reset" Position | The position to which the 2nd row seat should return when the Power Pitch/Slide return is commanded. |
| 8-Way Driver | Comfort Seat adjustments with 8 movements for Driver seat |
| 8-Way Passenger | Comfort Seat adjustments with 8 movements for Passenger seat |
| 10-Way Driver | Comfort Seat adjustments with 10 movements for Driver seat |
| Activation Sequence Profile | The calibrated sequence profile of seat movement activation. The seat movements will occur in the order that is dictated by the profile. |
| Another Three Letter Acronym | self explanatory |
| Calf Rest End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat calf rest. |
| Calf Rest Move Angle | The angle (in degrees/s) that the FRS moves the seat Calf Rest comfort setting due to user request. |
| Calf Rest Obstacle Reverse Distance | The distance the "FRS Driver Calf Rest Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Calf Rest Obstacle Reverse Target Position Delta | The target calf rest position delta +/- tolerance that indicates the FRS calf rest position has moved by " Calf Rest Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Calf Rest Target Position Delta | The target calf rest position delta +/- tolerance that represents the FRS calf rest position is at the position indicated by "DesiredPositionCalfRest". |
| concept | An abstract idea representing fundamental characteristics of its representation. Concepts are perceptions of an object, its characteristics (i.e., structural and behavioral), and its relationship(s) to another object(s). |
| controlled vocabulary | an organized arrangement of words and phrases used to index content and/or to retrieve content through browsing or searching. It typically includes preferred and variant terms and has a defined scope or describes a specific domain. |
| controlled vocabulary term | An element of a controlled vocabulary |
| Cuhion Tilt Obstacle Reverse Target Position Delta | The target seat cushion tilt position delta +/- tolerance that indicates the FRS cushion tilt position has moved by "Cushion Tilt Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Cushion Tilt End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat cushion tilt. |
| Cushion Tilt Obstacle Reverse Distance | The distance the "FRS Driver Cushion Tilt Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Cushion Tilt Target Position Delta | The target cushion tilt position delta +/- tolerance that represents the FRS cushion tilt position is at the position indicated by "DesiredPositionTilt". |
| Drive Position | The driver seat position set by the driver for driving. Also the initial position of the driver seat prior to movement for Easy Entry and Exit. |
| Drive Position Target Position Delta | The target fore/aft position delta +/- tolerance for for Easy Entry and Exit at which the FRS fore/aft position is at the "Drive Position". |
| Easy Entry and Exit Distance | The distance the FRS Driver ForeAft Actuator" will move in the aft direction when Easy Entry and Exit is requested. |
| Easy Entry and Exit Target Position Delta | The target fore/aft position delta +/- tolerance for Easy Entry and Exit at which the FRS fore/aft position has:  1a) Moved by "Easy Entry and Exit Distance" from the previous position OR  1b) Moved to the aft end-point if the aft end-point is within "Easy Entry and Exit Distance" of the "Drive Position". |
| Enabled Fore/Aft Position | The fore/aft position of the FRS that enables the SRS to fully pitch/slide forward. |
| Enabled Incline/Recline Position | The incline/recline position of the FRS that enables the SRS to fully pitch/slide forward. |
| Fore/Aft End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat fore/aft. |
| Fore/Aft Move Timing | The time (in mm/s) that the FRS moves the seat Fore/Aft comfort settings due to user request. |
| Fore/Aft Obstacle Reverse Distance | The distance the "FRS Driver ForeAft Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Fore/Aft Obstacle Reverse Target Position Delta | The target fore/aft position delta +/- tolerance that indicates the FRS fore/aft position has moved by "Fore/Aft Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Fore/Aft Target Enabled Position Delta for Pitch/Slide | The target fore/aft position delta, with a +/- tolerance, for pitch/slide that represents the FRS fore/aft position is at the "Enabled Fore/Aft Position". |
| Fore/Aft Target Initial Position Delta for Pitch/Slide | The target fore/aft position delta, with a +/- tolerance, for pitch/slide that represents the FRS fore/aft position is at the "Initial Fore/Aft Position". |
| Fore/Aft Target Position Delta | The target fore/aft position delta +/- tolerance that represents the FRS fore/aft position is at the position indicated by "DesiredPositionForeAft". |
| Headrest Fore/Aft End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the headrest fore/aft. |
| Headrest Fore/Aft Obstacle Reverse Distance | The distance the "FRS Driver Headrest Fore/Aft Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Headrest Fore/Aft Obstacle Reverse Target Position Delta | The target headrest fore/aft position delta +/- tolerance that indicates the FRS headrest fore/aft position has moved by " Headrest Fore/Aft Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Headrest Fore/Aft Target Position Delta | The target headrest fore/aft position delta +/- tolerance that represents the FRS headrest fore/aft position is at the position indicated by "DesiredPositionHeadrestForeAft". |
| Headrest Forward/Rearward | The time (in mm/s) that the FRS moves the seat Headrest comfort settings forward/rearward due to user request. |
| Headrest Height End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the headrest height. |
| Headrest Height Obstacle Reverse Distance | The distance the "FRS Driver Headrest Height Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Headrest Height Obstacle Reverse Target Position Delta | The target headrest height position delta +/- tolerance that indicates the FRS headrest height position has moved by " Headrest Height Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Headrest Height Target Position Delta | The target headrest height position delta +/- tolerance that represents the FRS headrest height position is at the position indicated by "DesiredPositionHeadrestHeight". |
| Headrest Up/Down | The time (in mm/s) that the FRS moves the seat Headrest comfort settings up/down due to user request. |
| High speed | Approximately more than 52 mph (83 kph) |
| Horizontal Lumbar End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat horizontal lumbar. |
| Horizontal Lumbar Obstacle Reverse Distance | The distance the "FRS Driver Horizontal Lumbar Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Horizontal Lumbar Obstacle Reverse Target Position Delta | The target horizontal lumbar position delta +/- tolerance that indicates the FRS lumbar position has moved by "Horizontal Lumbar Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Horizontal Lumbar Target Position Delta | The target horizontal lumbar position delta +/- tolerance that represents the FRS horizontal lumbar position is at the position indicated by "DesiredPositionHorizontalLumbar". |
| Incline/Recline End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat incline/recline. |
| Incline/Recline Move Angle | The angle (in degrees/s) that the FRS moves the seat Incline/Recline comfort setting due to user request. |
| Incline/Recline Obstacle Reverse Distance | The distance the "FRS Driver InclineRecline Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Incline/Recline Obstacle Reverse Target Position Delta | The target incline/recline position delta +/- tolerance that indicates the FRS incline/recline position has moved by " Incline/Recline Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Incline/Recline Target Enabled Position Delta for Pitch/Slide | The target incline/recline position delta +/- tolerance for pitch/slide that represents the FRS incline/recline position is at the "Enabled Incline/Recline Position". |
| Incline/Recline Target Initial Position Delta for Pitch/Slide | The target incline/recline position delta +/- tolerance for pitch/slide that represents the FRS incline/recline position is at the "Initial Incline/Recline Position". |
| Incline/Recline Target Position Delta | The target incline/recline position delta +/- tolerance that represents the FRS incline/recline position is at the position indicated by "DesiredPositionInclineRecline". |
| Initial Fore/Aft Position | The fore/aft position of the FRS prior to being requested to move forward by SRS. |
| Initial Incline/Recline Position | The incline/recline position of the FRS prior to being requested to move forward by SRS. |
| Learn Calf Rest Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat calf rest. |
| Learn Cushion Tilt Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat cushion tilt. |
| Learn Fore/Aft Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat fore/aft. |
| Learn Headrest Fore/Aft Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the headrest fore/aft. |
| Learn Headrest Height Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the headrest height. |
| Learn Horizontal Lumbar Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat horizontal lumbar. |
| Learn Incline/Recline Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat incline/recline. |
| Learn Left Thigh Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat left thigh. |
| Learn Right Thigh Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat right thigh. |
| Learn Seat Height Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat height. |
| Learn Thoracic Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat thoracic. |
| Learn Vertical Lumbar Time | The maximum allowed time for the Comfort Position Controller to learn one end point of the seat vertical lumbar. |
| Left Thigh End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat left thigh. |
| Left Thigh Obstacle Reverse Distance | The distance the "FRS Driver Left Thigh Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Left Thigh Obstacle Reverse Target Position Delta | The target left thigh position delta +/- tolerance that indicates the FRS left thigh position has moved by " Left Thigh Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Left Thigh Target Position Delta | The target left thigh position delta +/- tolerance that represents the FRS left thigh position is at the position indicated by "DesiredPositionLeftThigh". |
| Low speed | Approximately 12 to 36 mph (19 to 58 kph ) |
| Lumbar Move Timing | The time (in mm/s) that the FRS moves the seat Lumbar comfort settings due to user request. |
| Maximum Calf Rest Soft Position | The position at which further calf rest actuation in the positive direction will not be permitted on the passenger's side. |
| Maximum Driver Fore/Aft Soft Position | The position at which further fore/aft actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Headrest Fore/Aft Soft Position | The position at which further headrest fore/aft actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Headrest Height Soft Position | The position at which further headrest height actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Horizontal Lumbar Soft Position | The position at which further horizontal lumbar actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Incline/Recline Soft Position | The position at which further incline/recline actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Left Thigh Soft Position | The position at which further left thigh actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Right Thigh Soft Position | The position at which further right thigh actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Seat Height Soft Position | The position at which further seat height actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Seat Tilt Soft Position | The position at which further seat tilt actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Thoracic Soft Position | The position at which further thoracic support actuation in the positive direction will not be permitted on the driver's side. |
| Maximum Driver Vertical Lumbar Soft Position | The position at which further vertical lumbar actuation in the positive direction will not be permitted on the driver's side. |
| Medium speed | Approximately 36 mph to 52 mph (58 to 83 kph) |
| Minimum Calf Rest Soft Position | The position at which further calf rest actuation in the negative direction will not be permitted on the passenger's side. |
| Minimum Driver Fore/Aft Soft Position | The position at which further fore/aft actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Headrest Fore/Aft Soft Position | The position at which further headrest fore/aft actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Headrest Height Soft Position | The position at which further headrest height actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Horizontal Lumbar Soft Position | The position at which further horizontal lumbar actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Incline/Recline Soft Position | The position at which further incline/recline actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Left Thigh Soft Position | The position at which further left thigh actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Right Thigh Soft Position | The position at which further right thigh actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Seat Height Soft Position | The position at which further seat height actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Seat Tilt Soft Position | The position at which further seat tilt actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Thoracic Soft Position | The position at which further thoracic support actuation on the in the negative direction will not be permitted on the driver's side. |
| Minimum Driver Vertical Lumbar Soft Position | The position at which further vertical lumbar actuation on the in the negative direction will not be permitted on the driver's side. |
| PPSEEE Pitch/Slide Process | The sequence of events where the 1st and 2nd row seats move to allow easy access to the 3rd row. |
| PPSEEE Return Process | The sequence of events following a 3rd row ingress/egress where the 1st and 2nd row seats reset themselves to post ingress/egress. |
| Right Thigh End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat right thigh. |
| Right Thigh Obstacle Reverse Distance | The distance the "FRS Driver Right Thigh Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Right Thigh Obstacle Reverse Target Position Delta | The target right thigh position delta +/- tolerance that indicates the FRS right thigh position has moved by " Right Thigh Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Right Thigh Target Position Delta | The target right thigh position delta +/- tolerance that represents the FRS right thigh position is at the position indicated by "DesiredPositionRightThigh". |
| Seat Height End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat height. |
| Seat Height Obstacle Reverse Distance | The distance the "FRS Driver Seat Height Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Seat Height Obstacle Reverse Target Position Delta | The target seat height position delta +/- tolerance that indicates the FRS height position has moved by " Seat Height Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Seat Height Target Position Delta | The target seat height position delta +/- tolerance that represents the FRS height position is at the position indicated by "DesiredPositionSeatHeight". |
| Seat Height Timing | The time (in mm/s) that the FRS moves the seat height comfort settings due to user request. |
| Seat Tilt Timing | The time (in mm/s) that the FRS moves the seat tilt comfort settings due to user request. |
| term | A representation of a Concept expressed in Natural Language. In the vocabulary of a Domain of Discourse a term enables common understanding of domain concepts. |
| term glossary | A term glossary is a table of agreed upon definitions for terms used in project development that may provide clarity or avoid confusion to stakeholders. |
| Thoracic End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat thoracic. |
| Thoracic Obstacle Reverse Distance | The distance the "FRS Driver Thoracic Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Thoracic Obstacle Reverse Target Position Delta | The target thoracic position delta +/- tolerance that indicates the FRS thoracic position has moved by " Thoracic Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Thoracic Target Position Delta | The target thoracic position delta +/- tolerance that represents the FRS thoracic position is at the position indicated by "DesiredPositionThoracic". |
| TLA | Three Letter Acronym |
| Unsupervised Fore/Aft Obstacle Current Threshold | Current threshold that indicates an obstacle has been detected |
| Vertical Lumbar End Point Range | The target range +/- tolerance for the end points of the learned minimum and maximum end points of the seat vertical lumbar. |
| Vertical Lumbar Obstacle Reverse Distance | The distance the "FRS Driver Vertical Lumbar Actuator" will reverse when the actuator detects an obstacle impeding its intended motion. |
| Vertical Lumbar Obstacle Reverse Target Position Delta | The target vertical lumbar position delta +/- tolerance that indicates the FRS lumbar position has moved by "Vertical Lumbar Obstacle Reverse Distance" from the position where the obstacle was detected. |
| Vertical Lumbar Target Position Delta | The target vertical lumbar position delta +/- tolerance that represents the FRS vertical lumbar position is at the position indicated by "DesiredPositionVerticalLumbar". |
| Very Low Speed | Approximately 0 to 12 mph (0 to 19 kph) |
| vocabulary | A set of terms, each representing a single concept in a Domain of Discourse. A fundamental tool for communication and creating a common understanding of a Domain. |
| vocabulary Term | An abstraction, in the form of a natural language expression, representing a concept existing in the Ontology of a Domain of Discourse |

Table 1‑4: Definitions used in this document

### Abbreviations

| **Abbr.** | **Stands for** | **Description** |
| --- | --- | --- |
| ATLA | Another Three Letter Acronym |  |
| FRS | First Row Seat |  |
| PPP | Personal Portable Profile |  |
| PPSEEE | Power Pitch Slide Easy Entry/Exit |  |
| SRS | Second Row Seat |  |
| TRS | Third Row Seat |  |

Table 1‑5: Abbreviations used in this document.

# Feature Implementation Overview

## Description

## Input Requirements/Documents

|  |  |  |  |
| --- | --- | --- | --- |
| **Reference**  (Reference as listed in ch. “References”) | **Section/Requirement** | **Description** | **Derived Requirement**  (optional – reference to requirement in ch. “Feature Implementation Requirements”) |
| **Feature/Function Requirements** | | | |
|  |  |  |  |
|  |  |  |  |
| **Ford Engineering Standards** | | | |
|  |  |  |  |
|  |  |  |  |
| **Legal Regulations** | | | |
|  | Compliance with FMVSS207 | The Feature shall comply with FMVSS207. |  |
|  | Compliance with FMVSS210 | The Feature shall comply with FMVSS210. |  |
|  |  |  |  |
| **Industry Standards** | | | |
|  | ISO 26262 | The system should be developed according to Ford's implementation of Functional Safety. |  |
|  |  |  |  |
| **Other Sources** | | | |
|  |  |  |  |
|  | Example AR |  |  |
|  | Comfort Adjustments | The vehicle shall allow the user's needs to be met for comfort in the FRS. |  |
|  |  |  |  |

Table 2‑1: Input Requirements/Documents

## Lessons Learned

No lessons learned specified.

## Assumptions

No Assumptions specified.

# Feature Implementation Architecture

## Functional Architecture

### Description

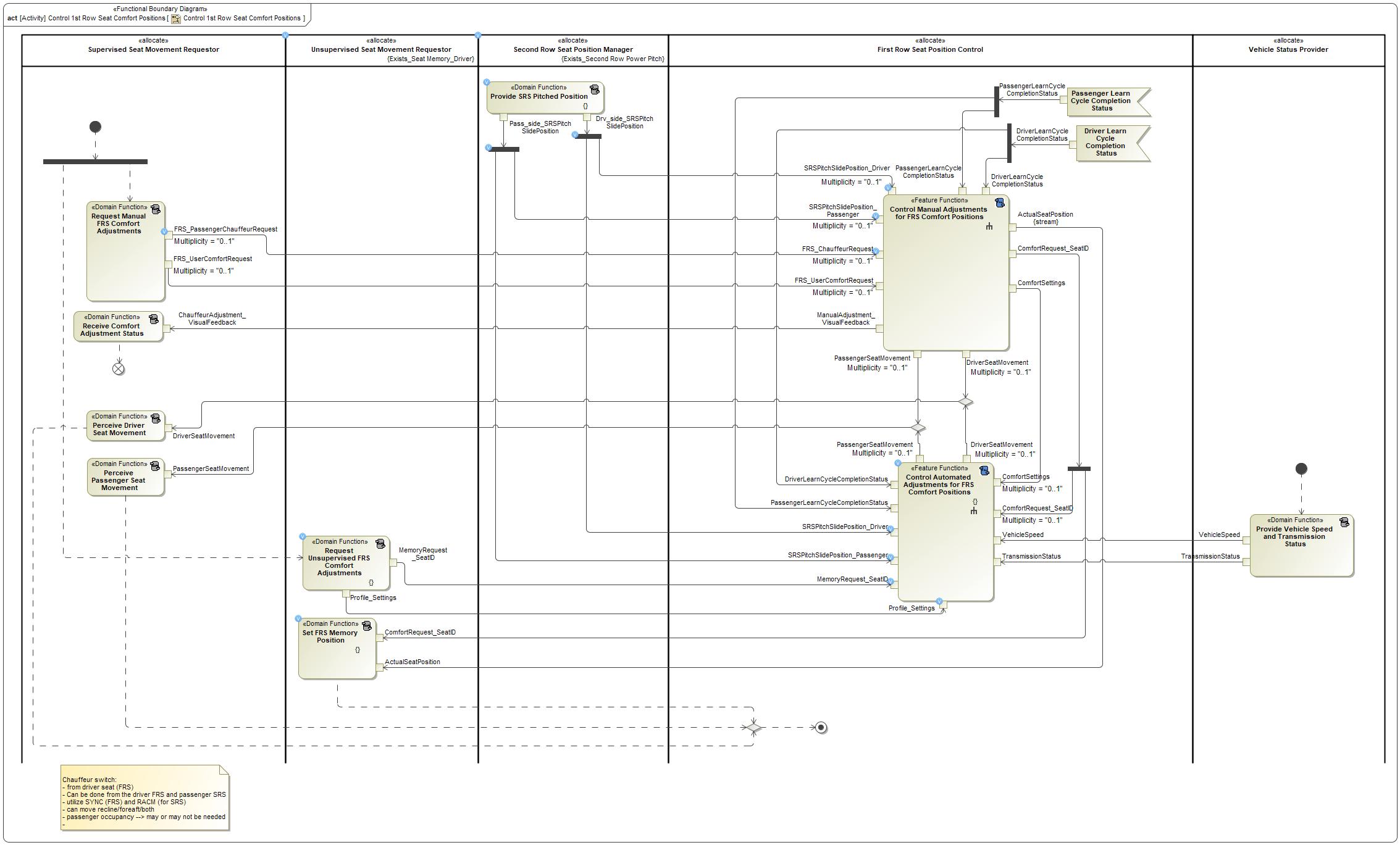


Figure 3‑1: Control 1st Row Seat Comfort Positions

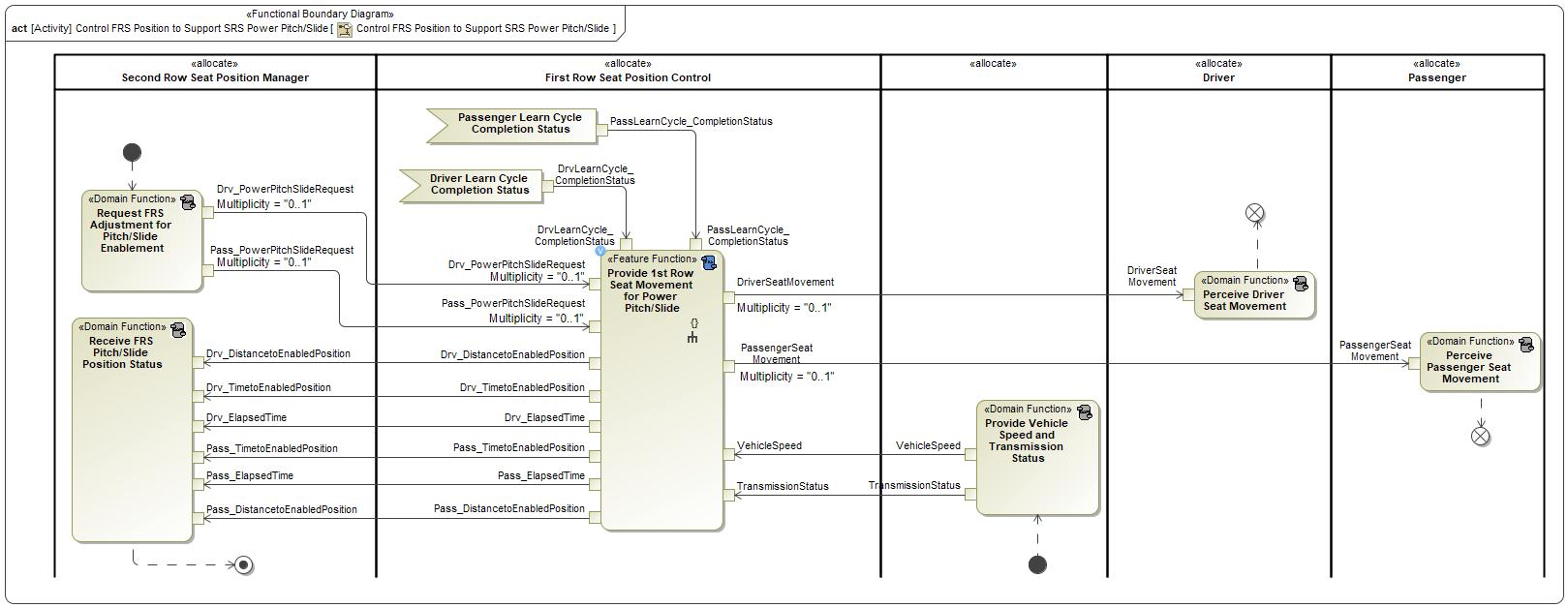


Figure 3‑1: Control FRS Position to Support SRS Power Pitch/Slide

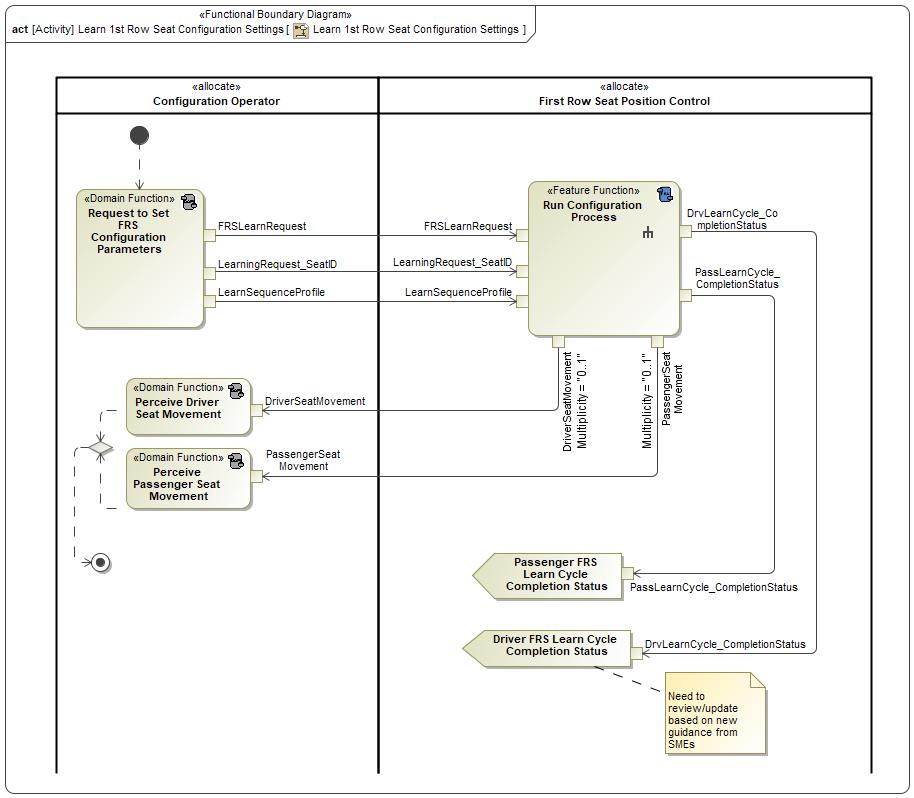


Figure 3‑1: Learn 1st Row Seat Configuration Settings

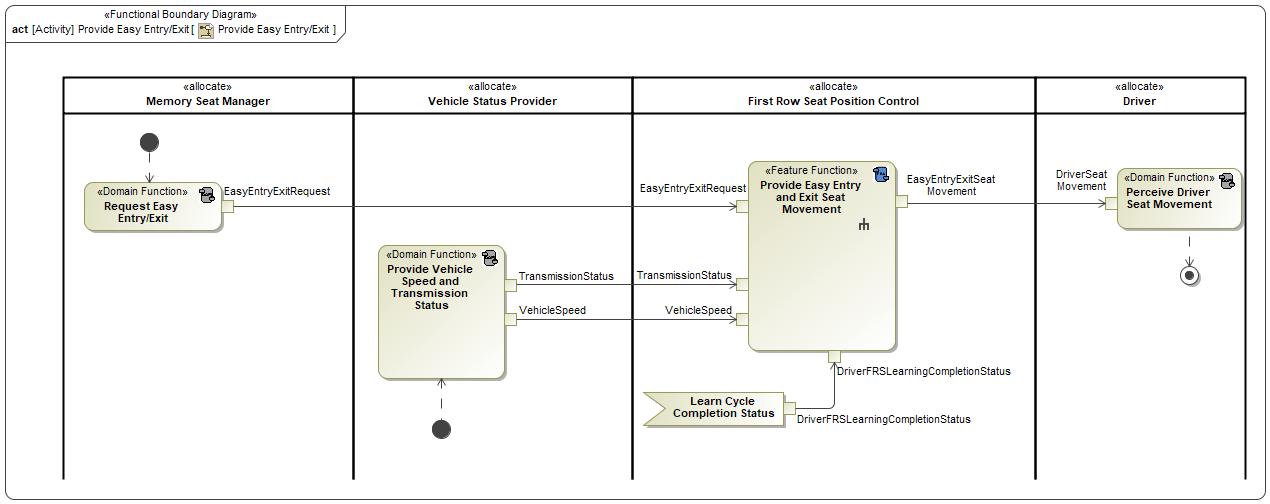


Figure 3‑1: Provide Easy Entry/Exit

### Function List

The following functions from the [Global Feature & Function List](https://www.vsemweb.ford.com:443/tc/launchapp?-attach=true&-s=226TCSession&-o=ZmZNi0JHx3NrTDAAAAAAAAAAAAA) are referenced in this Feature Implementation Specification:

### Signal List

|  |  |
| --- | --- |
| **Signal Name** | **Description** |
| **CalfRestAdjustment** |  |
| **CalfRestObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the calf rest. |
| **ChauffeurRequest** | The physical request from the Supervised Seat Movement Requestor for chauffeur adjustments in the passenger FRS. |
| **ComfortSettings** | Indicates the direction any of the comfort adjustments request. This enumeration is composed of the individual position adjustment enumerations for each seat movement. |
| **CurrentPositionCalfRest** | Indicates the current position of the calf rest. |
| **CurrentPositionForeAft** | Indicates the current position of the seat track. |
| **CurrentPositionHeadrestForeAft** | Indicates the current position of the headrest fore/aft. |
| **CurrentPositionHeadrestHeight** | Indicates the current position of the headrest height. |
| **CurrentPositionHorizontalLumbar** | Indicates the current position of the horizontal lumbar. |
| **CurrentPositionInclineRecline** | Indicates the current position of the seat back. |
| **CurrentPositionLeftThigh** | Indicates the current position of the left thigh. |
| **CurrentPositionRightThigh** | Indicates the current position of the right thigh. |
| **CurrentPositionSeatHeight** | Indicates the current position of the seat height. |
| **CurrentPositionThoracic** | Indicates the current position of the thoracic. |
| **CurrentPositionTilt** | Indicates the current position of the cushion tilt. |
| **CurrentPositionVerticalLumbar** | Indicates the current position of the vertical lumbar. |
| **CushionTiltObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the cushion tilt. |
| **DistanceToEnabled** |  |
| **DriverFRS\_PPSEEE\_Request** | The request from the second row seat control feature to move the requested FRS forward (fore/aft and/or incline/recline adjustments) or reset to the previous seat position to support the SRS power pitch/slide. |
| **EasyEntryExitRequest** | The request for driver FRS adjustments to support Easy Entry and Easy Exit. |
| **ElapsedTime** |  |
| **FRSUserComfortRequest** | This represents the physical request from the Supervised Seat Movement Requestor to move the FRS comfort positions. |
| **FRS\_ChauffeurAdjustment** | When requested by the FRS, this enumeration indicates the action that the passenger seat is to take. |
| **ForeAftAdjustment** | When user requests the seat's fore/aft comfort setting, this enumeration indicates the action that the Seat is to take. |
| **ForeAftObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the seat track. |
| **HeadrestForeAftAdjustment** | When user requests the headrest seat comfort setting, this enumeration indicates the action that the headrest fore/aft is to take. |
| **HeadrestForeAftObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the headrest fore/aft. |
| **HeadrestHeightAdjustment** | When user requests the headrest seat comfort setting, this enumeration indicates the action that the headrest height is to take. |
| **HeadrestHeightObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the headrest height. |
| **HorizontalLumbarAdjustment** |  |
| **HorizontalLumbarObstacleStatus** |  |
| **InclineReclineAdjustment** | When user requests the incline/recline seat comfort setting, this enumeration indicates the action that the Seatback is to take. |
| **InclineReclineObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the seat back. |
| **LearnCycleRequest** | The request to initiate the learn cycle process. |
| **LearnCycleStatus** | Indicates the learn cycle status for all seat movements. This value type contains the learning status enumerations for all seat movements. |
| **LearnSequenceProfile** | Indicates the sequence (order of the seat movements) at which the learn cycle process will be performed. |
| **LeftThighAdjustment** | When user requests the left thigh seat comfort setting, this enumeration indicates the action that the left thigh is to take. |
| **LeftThighObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the left thigh. |
| **PassengerFRS\_PPSEEE\_Request** |  |
| **Profile\_Settings** | This enumeration indicates for which profile is being requested. Within each profile is the information on the desired seat position. |
| **RightThighAdjustment** | When user requests the right thigh seat comfort setting, this enumeration indicates the action that the right thigh is to take. |
| **RightThighObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the right thigh. |
| **SRSPitchSlidePosition\_Driver** | This contains the fore/aft position of the Second Row Seat. |
| **SRSPitchSlidePosition\_Passenger** |  |
| **SeatHeightAdjustment** | When user requests the seat height comfort setting, this enumeration indicates the action that the seat height is to take. |
| **SeatHeightObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the seat height. |
| **SeatID** | This enumeration indicates for which seat is being requested; driver side, passenger side, driver memory, or passenger memory. |
| **ThoracicAdjustment** | When user requests the thoracic seat comfort setting, this enumeration indicates the action that the thoracic is to take. |
| **ThoracicObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the thoracic. |
| **TiltAdjustment** | When user requests the seat tilt comfort setting, this enumeration indicates the action that the seat tilt is to take. |
| **TimeToEnabledPosition** |  |
| **TransmissionStatus** |  |
| **UserPerceivedSeatMovement** | The physical visualization of the seat moving perceived by the driver or passenger of the vehicle. |
| **VehicleSpeed** |  |
| **VerticalLumbarAdjustment** |  |
| **VerticalLumbarObstacleStatus** | This enumeration will indicate whether an obstacle is detected or not for the vertical lumbar. |
| **VisualFeedback** | The visual feedback of the learn cycle status that is received by the Configuration Operator. |

Table 3‑3: List of Logical Signals

## Physical Architecture

### E/E Architecture

#### E/E Architecture Variants

*No E/E Architecture Variant found.*

##### E/E Architecture “Architecture Variant: Physical Architecture “

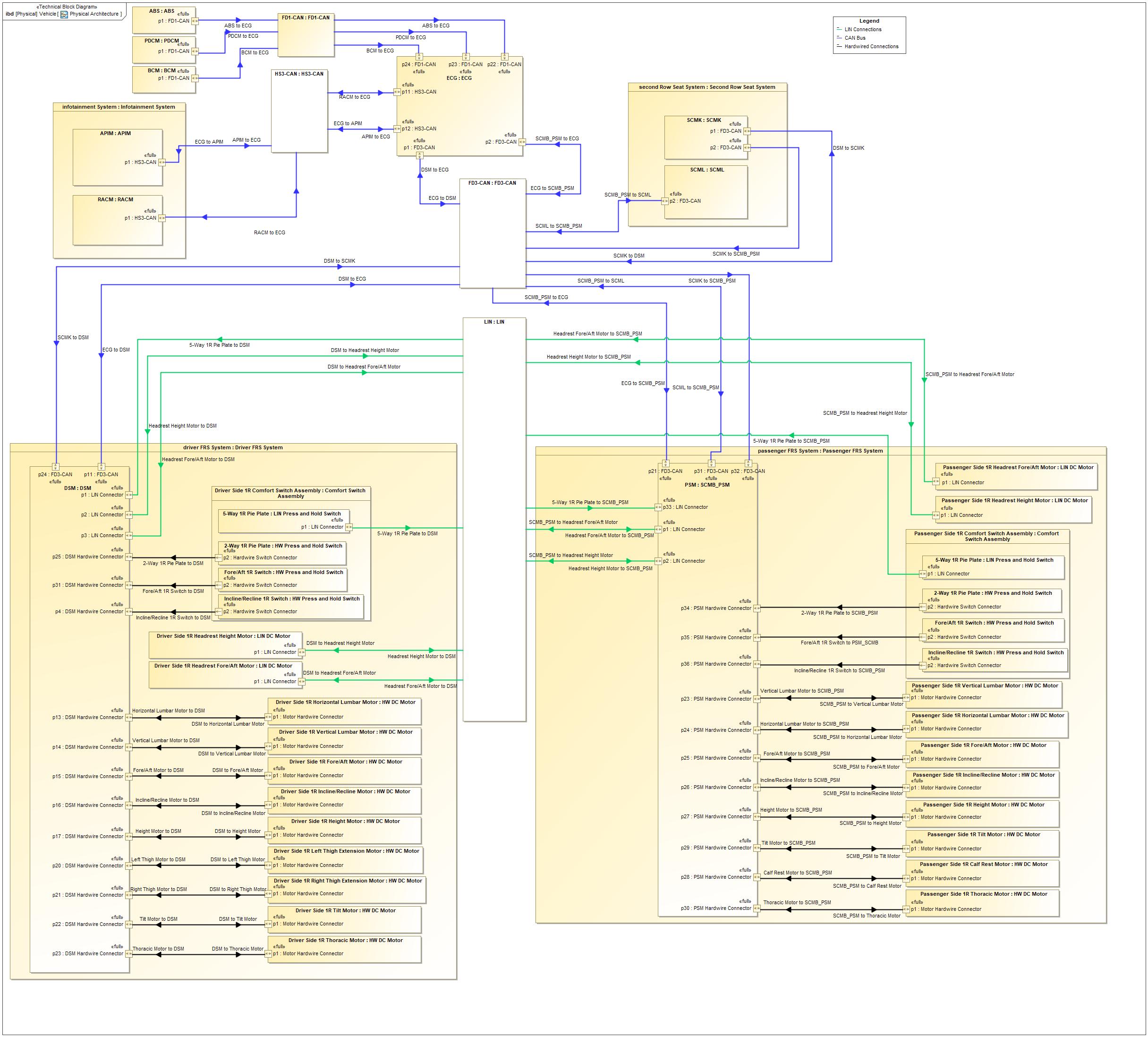


Figure 3‑2-1: Physical Architecture

#### E/E Components

|  |  |
| --- | --- |
| Component Name | **Description** |
| Passenger Side 1R Headrest Fore/Aft Motor (LIN DC Motor) |  |
| 2-Way 1R Pie Plate (HW Press and Hold Switch) | This represents switches with press and hold functionality with hardwired connections |
| 5-Way 1R Pie Plate (LIN Press and Hold Switch) | This represents switches with press and hold functionality with LIN connections |
| ABS |  |
| APIM | This represents the Auxiliary Protocol Interface Module (APIM) which controls the first row infotainment screen. |
| BCM |  |
| driver FRS System (Driver FRS System) | This represents the driver side of the first row seat system. |
| Driver Side 1R Comfort Switch Assembly (Comfort Switch Assembly) | This represents the switch assembly used to request first row seat comfort adjustments. |
| Driver Side 1R Fore/Aft Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Headrest Fore/Aft Motor (LIN DC Motor) |  |
| Driver Side 1R Headrest Height Motor (LIN DC Motor) |  |
| Driver Side 1R Height Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Horizontal Lumbar Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Incline/Recline Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Left Thigh Extension Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Right Thigh Extension Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Thoracic Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Tilt Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Driver Side 1R Vertical Lumbar Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| DSM | This represents the Driver Seat Module (DSM) controlling the seat movements of the driver's first row seat. |
| ECG | This represents the enhanced central gateway (ECG) used to allow communication between buses. |
| FD1-CAN |  |
| FD3-CAN | This represents the FD3 CAN communication bus. |
| Fore/Aft 1R Switch (HW Press and Hold Switch) | This represents switches with press and hold functionality with hardwired connections |
| HS3-CAN | This represents the HS3 CAN communication bus. |
| Incline/Recline 1R Switch (HW Press and Hold Switch) | This represents switches with press and hold functionality with hardwired connections |
| infotainment System (Infotainment System) | This represents the vehicle's infotainment system. |
| LIN | This represents the LIN communication. |
| passenger FRS System (Passenger FRS System) | This represents the passenger side of the first row seat system. |
| Passenger Side 1R Calf Rest Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Passenger Side 1R Comfort Switch Assembly (Comfort Switch Assembly) | This represents the switch assembly used to request first row seat comfort adjustments. |
| Passenger Side 1R Fore/Aft Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Passenger Side 1R Headrest Height Motor (LIN DC Motor) |  |
| Passenger Side 1R Height Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Passenger Side 1R Horizontal Lumbar Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Passenger Side 1R Incline/Recline Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Passenger Side 1R Thoracic Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Passenger Side 1R Tilt Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| Passenger Side 1R Vertical Lumbar Motor (HW DC Motor) | This represents Direct Current (DC) motors that provide movements of the first row seats. |
| PDCM |  |
| PSM (SCMB\_PSM) | This represents the Passenger Seat Module (SCMB\_PSM) controlling the seat movements of the passenger's side first row seat. |
| RACM | This represents the Rear Audio Control Module (RACM) which controls the second row infotainment screen. |
| SCMK | This represents the Seat Control Module-K (SCMK) controlling the seat movements of the driver's side second row seat. |
| SCML | This represents the Seat Control Module-L (SCML) controlling the seat movements of the passenger's side second row seat. |
| second Row Seat System (Second Row Seat System) | This represents the second row seat system. |

Table 3‑6: Electrical Components

#### E/E Connections

*No E/E Connections found.*

#### Signal List

|  |  |
| --- | --- |
| **Signal Name** | **Description** |

Table 3‑8: List of Technical Signals

### Software Component Architecture

*Not supported by MagicDraw report generation.*

#### Description

*Not supported by MagicDraw report generation.*

## Function Deployment

### Deployment Variants

*Not supported by MagicDraw report generation.*

#### Deployment “Variant 1”

This deployment variant … <add some explanatory text here>

No description specified.

### Function Allocation

| Component | Technology Function Name | Logical Function Name |
| --- | --- | --- |
|
| RACM | Provide Chauffeur Adjustment Requests | * Translate User Chauffeur Request |
| APIM | Request Driver FRS Manual Adjustment through Soft Button | * Sense User Comfort Request |
| Request Passenger FRS Manual Adjustment through Soft Button | * Sense User Comfort Request |
| Display Passenger FRS Seat Position | * Display User Chauffeur Adjustment Status * Display User Comfort Adjustment Status |
| Display Driver FRS Seat Position | * Display User Comfort Adjustment Status |
| HW DC Motor | Actuate Passenger FRS Thoracic | * Actuate 1st Row Passenger Thoracic Position |
| Actuate Driver FRS Thoracic | * Actuate 1st Row Driver Thoracic Position |
| Actuate Passenger FRS Calf Rest | * Actuate 1st Row Passenger Calf Rest |
| Actuate Passenger FRS Height | * Actuate 1st Row Passenger Seat Height |
| Actuate Driver FRS Incline/Recline | * Actuate 1st Row Driver InclineRecline Position |
| Actuate Driver FRS Height | * Actuate 1st Row Driver Seat Height |
| Actuate Passenger FRS Fore/Aft | * Actuate 1st Row Passenger Fore/Aft Position |
| Actuate Driver FRS Fore/Aft | * Actuate 1st Row Driver Fore/Aft Position |
| Actuate Passenger FRS Vertical Lumbar | * Actuate 1st Row Passenger Vertical Lumbar |
| Actuate Driver FRS Left Thigh Extension | * Actuate 1st Row Driver Left Thigh Position |
| Actuate Driver FRS Right Thigh Extension | * Actuate 1st Row Driver Right Thigh Position |
| Actuate Passenger FRS Headrest Height | * Actuate 1st Row Passenger Headrest Height |
| Actuate Driver FRS Vertical Lumbar | * Actuate 1st Row Driver Vertical Lumbar |
| Actuate Passenger FRS Horizontal Lumbar | * Actuate 1st Row Passenger Horizontal Lumbar |
| Actuate Passenger FRS Incline/Recline | * Actuate 1st Row Passenger InclineRecline Position |
| Actuate Passenger FRS Cushion Tilt | * Actuate 1st Row Passenger Seat Cushion Tilt |
| Actuate Driver FRS Cushion Tilt | * Actuate 1st Row Driver Seat Cushion Tilt |
| Actuate Driver FRS Headrest Fore/Aft | * Actuate 1st Row Driver Headrest ForeAft |
| Actuate Driver FRS Horizontal Lumbar | * Actuate 1st Row Driver Horizontal Lumbar |
| Actuate Driver FRS Headrest Height | * Actuate 1st Row Driver Headrest Height |
| LIN DC Motor | Actuate Passenger FRS Headrest Height | * Actuate 1st Row Passenger Headrest Height |
| Actuate Passenger FRS Headrest Fore/Aft | * Actuate 1st Row Passenger Headrest ForeAft |
| Actuate Driver FRS Headrest Fore/Aft | * Actuate 1st Row Driver Headrest ForeAft |
| Actuate Driver FRS Headrest Height | * Actuate 1st Row Driver Headrest Height |
| HW Press and Hold Switch | Request FRS Incline/Recline Adjustment | * Sense User Comfort Request |
| Request FRS Lumbar Adjustment | * Sense User Comfort Request |
| Request FRS Seat Cushion Adjustment | * Sense User Comfort Request |
| Request FRS Adjustment through 5-Way Pie Plate | * Sense User Comfort Request |
| 2nd Row Seat Switch Assembly | Request Passenger FRS Adjustment through SRS Switch Assembly | * Sense User Chauffeur Request |
| SCMB\_PSM | Arbitrate Passenger FRS Unsupervised Adjustment Request | * Arbitrate Externally Requested Passenger Memory FRS Comfort Position * Arbitrate Externally Requested Desired Positions * Control Easy Entry and Exit Movement * Control FRS Passenger for SRS Pitch * Monitor Passenger FRS Position for SRS Pitch/Slide * Request Passenger Memory Termination * Request Passenger Termination |
| Arbitrate Passenger FRS Manual Adjustment Request | * Arbitrate Requested Chauffeur Adjustments * Arbitrate Requested Passenger FRS Comfort Position * Monitor Passenger FRS User Selection * Translate User Comfort Request |
| Control Requested Passenger FRS Comfort Position | * Control FRS Passenger for SRS Pitch |
| Validate Passenger FRS End Point Values | * Compare Calf Rest End Point Values * Compare Cushion Tilt End Point Values * Compare Driver FRS Position to SRS Pitched Position * Compare ForeAft End Point Values * Compare Headrest ForeAft End Point Values * Compare Headrest Height End Point Values * Compare Horizontal Lumbar End Point Values * Compare InclineRecline End Point Values * Compare Left Thigh End Point Values * Compare Passenger FRS Position to SRS Pitched Position * Compare Right Thigh End Point Values * Compare Seat Height End Point Values * Compare Thoracic End Point Values * Compare Vertical Lumbar End Point Values * Report Calf Rest Learn Status * Report Cushion Tilt Learn Status * Report ForeAft Learn Status * Report Headrest ForeAft Learn Status * Report Headrest Height Learn Status * Report Horizontal Lumbar Learn Status * Report InclineRecline Learn Status * Report Seat Height Learn Status * Report Thoracic Learn Status * Report Vertical Lumbar Learn Status |
| Translate Passenger FRS Motor current to Seat Position | * Monitor Passenger FRS Position for SRS Pitch/Slide * Provide FRS Passenger Calf Rest Position * Provide FRS Passenger ForeAft Position * Provide FRS Passenger Headrest ForeAft Position * Provide FRS Passenger Headrest Height Position * Provide FRS Passenger Horizontal Lumbar Position * Provide FRS Passenger InclineRecline Position * Provide FRS Passenger Seat Height Position * Provide FRS Passenger Seat Cushion Tilt Position * Provide FRS Passenger Thoracic Position * Provide FRS Passenger Vertical Lumbar Position * Track Passenger Seat Position |
| Detect Passenger FRS Obstacles and Terminate Supervised Movement | * Detect FRS Passenger Calf Obstacle * Detect FRS Passenger Cushion Tilt Obstacle * Detect FRS Passenger ForeAft Obstacle * Detect FRS Passenger Headrest ForeAft Obstacle * Detect FRS Passenger Headrest Height Obstacle * Detect FRS Passenger Horizontal Lumbar Obstacle * Detect FRS Passenger InclineRecline Obstacle * Detect FRS Passenger Seat Height Obstacle * Detect FRS Passenger Thoracic Obstacle * Detect FRS Passenger Vertical Lumbar Obstacle * Request Passenger Memory Termination * Request Passenger Termination |
| Manage Passenger FRS Power Pitch Slide | * Calculate Distance to Target for Pitch/Slide * Calculate Elapsed Distance for Pitch/Slide * Calculate Elapsed Time for Pitch/Slide * Calculate Position Delta * Calculate Time to Target for Pitch/Slide * Monitor Passenger FRS Position for SRS Pitch/Slide |
| Arbitrate Passenger FRS Learn Cycle | * Arbitrate Requested End-Point Learn Mode * Learn Calf Rest Maximum End Point * Learn Calf Rest Minimum End Point * Learn Cushion Tilt Maximum End Point * Learn Cushion Tilt Minimum End Point * Learn ForeAft Maximum End Point * Learn ForeAft Minimum End Point * Learn Headrest ForeAft Maximum End Point * Learn Headrest ForeAft Minimum End Point * Learn Headrest Height Maximum End Point * Learn Headrest Height Minimum End Point * Learn Horizontal Lumbar Maximum End Point * Learn Horizontal Lumbar Minimum End Point * Learn InclineRecline Maximum End Point * Learn InclineRecline Minimum End Point * Learn Seat Height Maximum End Point * Learn Seat Height Minimum End Point * Learn Thoracic Maximum End Point * Learn Thoracic Minimum End Point * Learn Vertical Lumbar Maximum End Point * Learn Vertical Lumbar Minimum End Point |
| Detect Passenger FRS Motor Stall | * Detect FRS Passenger Calf Obstacle * Detect FRS Passenger Cushion Tilt Obstacle * Detect FRS Passenger ForeAft Obstacle * Detect FRS Passenger Headrest ForeAft Obstacle * Detect FRS Passenger Headrest Height Obstacle * Detect FRS Passenger Horizontal Lumbar Obstacle * Detect FRS Passenger InclineRecline Obstacle * Detect FRS Passenger Seat Height Obstacle * Detect FRS Passenger Thoracic Obstacle * Detect FRS Passenger Vertical Lumbar Obstacle |
| SCML | Provide Hardswitch Chauffeur Adjustment Requests | * Translate User Chauffeur Request |
| Comfort Switch Assembly | Request FRS Incline/Recline Adjustment | * Sense User Comfort Request |
| Request FRS Lumbar Adjustment | * Sense User Comfort Request |
| Request FRS Seat Cushion Adjustment | * Sense User Comfort Request |
| Request FRS Adjustment through 5-Way Pie Plate | * Sense User Comfort Request |
| DSM | Manage Driver FRS Power Pitch Slide | * Calculate Distance to Target for Pitch/Slide * Calculate Elapsed Distance for Pitch/Slide * Calculate Elapsed Time for Pitch/Slide * Calculate Position Delta * Calculate Time to Target for Pitch/Slide * Monitor Driver FRS Position for SRS Pitch/Slide |
| Arbitrate Driver FRS Unsupervised Adjustment Request | * Arbitrate Externally Requested Desired Positions * Arbitrate Externally Requested Driver Memory FRS Comfort Position * Control Easy Entry and Exit Movement * Control FRS Driver for SRS Pitch * Monitor Easy Entry and Exit Position * Monitor Driver FRS Position for SRS Pitch/Slide * Request Driver Termination * Request Easy Entry/Exit Termination * Request Driver Memory Termination |
| Control Requested Driver FRS Comfort Position | * Control FRS Driver for SRS Pitch |
| Arbitrate Driver FRS Learn Cycle | * Arbitrate Requested End-Point Learn Mode * Learn Cushion Tilt Maximum End Point * Learn Cushion Tilt Minimum End Point * Learn ForeAft Maximum End Point * Learn ForeAft Minimum End Point * Learn Headrest ForeAft Maximum End Point * Learn Headrest ForeAft Minimum End Point * Learn Headrest Height Maximum End Point * Learn Headrest Height Minimum End Point * Learn Horizontal Lumbar Maximum End Point * Learn Horizontal Lumbar Minimum End Point * Learn InclineRecline Maximum End Point * Learn InclineRecline Minimum End Point * Learn Left Thigh Minimum End Point * Learn Left Thigh Maximum End Point * Learn Vertical Lumbar Minimum End Point * Learn Vertical Lumbar Maximum End Point * Learn Seat Height Minimum End Point * Learn Thoracic Maximum End Point * Learn Thoracic Minimum End Point * Learn Seat Height Maximum End Point * Learn Right Thigh Minimum End Point * Learn Right Thigh Maximum End Point |
| Translate Driver FRS Motor Current to Seat Position | * Monitor Driver FRS Position for SRS Pitch/Slide * Monitor Easy Entry and Exit Position * Provide FRS Driver ForeAft Position * Provide FRS Driver Headrest ForeAft Position * Provide FRS Driver Headrest Height Position * Provide FRS Driver Horizontal Lumbar Position * Provide FRS Driver InclineRecline Position * Provide FRS Driver Right Thigh Position * Provide FRS Driver Left Thigh Position * Provide FRS Driver Seat Cushion Tilt Position * Provide FRS Driver Seat Height Position * Provide FRS Driver Thoracic Position * Provide FRS Driver Vertical Lumbar Position * Track Driver Seat Position |
| Detect Driver FRS Obstacles and Terminate Supervised Movement | * Detect FRS Driver Cushion Tilt Obstacle * Detect FRS Driver ForeAft Obstacle * Detect FRS Driver Headrest ForeAft Obstacle * Detect FRS Driver Headrest Height Obstacle * Detect FRS Driver Horizontal Lumbar Obstacle * Detect FRS Driver InclineRecline Obstacle * Detect FRS Driver Left Thigh Obstacle * Detect FRS Driver Right Thigh Obstacle * Detect FRS Driver Seat Height Obstacle * Detect FRS Driver Thoracic Obstacle * Detect FRS Driver Vertical Lumbar Obstacle * Monitor Easy Entry and Exit Position * Request Driver Memory Termination * Request Driver Termination * Request Easy Entry/Exit Termination |
| Validate and Store Driver FRS End Point Values | * Compare Calf Rest End Point Values * Compare Cushion Tilt End Point Values * Compare Driver FRS Position to SRS Pitched Position * Compare ForeAft End Point Values * Compare Headrest ForeAft End Point Values * Compare Headrest Height End Point Values * Compare Horizontal Lumbar End Point Values * Compare InclineRecline End Point Values * Compare Left Thigh End Point Values * Compare Passenger FRS Position to SRS Pitched Position * Compare Right Thigh End Point Values * Compare Seat Height End Point Values * Compare Thoracic End Point Values * Compare Vertical Lumbar End Point Values * Report Cushion Tilt Learn Status * Report ForeAft Learn Status * Report Headrest ForeAft Learn Status * Report Headrest Height Learn Status * Report Horizontal Lumbar Learn Status * Report InclineRecline Learn Status * Report Left Thigh Learn Status * Report Right Thigh Learn Status * Report Seat Height Learn Status * Report Thoracic Learn Status * Report Vertical Lumbar Learn Status |
| Detect Driver FRS Motor Stall | * Detect FRS Driver Cushion Tilt Obstacle * Detect FRS Driver ForeAft Obstacle * Detect FRS Driver Headrest ForeAft Obstacle * Detect FRS Driver Headrest Height Obstacle * Detect FRS Driver Horizontal Lumbar Obstacle * Detect FRS Driver InclineRecline Obstacle * Detect FRS Driver Left Thigh Obstacle * Detect FRS Driver Right Thigh Obstacle * Detect FRS Driver Seat Height Obstacle * Detect FRS Driver Thoracic Obstacle * Detect FRS Driver Vertical Lumbar Obstacle |
| Arbitrate Driver FRS Manual Adjustment Request | * Arbitrate Requested Driver FRS Comfort Position * Monitor Driver FRS User Selection * Translate User Comfort Request |
| Arbitrate Passenger FRS Learn Cycle | * Arbitrate Requested End-Point Learn Mode * Learn Calf Rest Maximum End Point * Learn Calf Rest Minimum End Point * Learn Cushion Tilt Maximum End Point * Learn Cushion Tilt Minimum End Point * Learn ForeAft Maximum End Point * Learn ForeAft Minimum End Point * Learn Headrest ForeAft Maximum End Point * Learn Headrest ForeAft Minimum End Point * Learn Headrest Height Maximum End Point * Learn Headrest Height Minimum End Point * Learn Horizontal Lumbar Maximum End Point * Learn Horizontal Lumbar Minimum End Point * Learn InclineRecline Maximum End Point * Learn InclineRecline Minimum End Point * Learn Seat Height Maximum End Point * Learn Seat Height Minimum End Point * Learn Thoracic Maximum End Point * Learn Thoracic Minimum End Point * Learn Vertical Lumbar Maximum End Point * Learn Vertical Lumbar Minimum End Point |
| LIN Press and Hold Switch | Request FRS Adjustment through 5-Way Pie Plate | * Sense User Comfort Request |

Table 3‑9: Function Allocation Table (Basic)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Component | | Technology Function Name | TSR | |
| Name | ASIL |  | ID | ASIL |

Table 3‑10: Function Allocation Table (Functional Safety Extension)

# Feature Implementation Modeling

## Component Interaction Diagrams

*Not supported by MagicDraw report generation.*

## Component Interface Behavior Diagrams

*Not supported by MagicDraw report generation.*

*See Appendix Section 8.1.9 for Technology State Machines*

# Feature Implementation Requirements

## Functional Safety

### ASIL Decomposition of Technical Safety Requirements

*Not supported by MagicDraw report generation.*

## Requirements on Components

### SCML

SCML

#### Technology Function -575075073.jpg Provide Hardswitch Chauffeur Adjustment Requests

Sends adjustment of the first row passenger seat from the second row passenger seat comfort switch assembly

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Provide Hardswitch Chauffeur Adjustment Requests | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  SRSPass\_HS\_Fore/Aft\_Req | SRSPass\_HS\_Fore/Aft\_Req : | | |  |  |  |
| Review in model  SRSPass\_HS\_Incline/Recline\_Req | SRSPass\_HS\_Incline/Recline\_Req : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Provide Hardswitch Chauffeur Adjustment Requests

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Provide Hardswitch Chauffeur Adjustment Requests | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ChauffeurRequest\_Fore/Aft | ChauffeurRequest\_Fore/Aft : | | |  |  |  |
| Review in model  ChauffeurRequest\_Incline/Recline | ChauffeurRequest\_Incline/Recline : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Provide Hardswitch Chauffeur Adjustment Requests

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Provide Hardswitch Chauffeur Adjustment Requests

##### Function Requirements

No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

### Vehicle

Vehicle

### SCMK

SCMK

### ECG

ECG

### Comfort Switch Assembly

Comfort Switch Assembly

#### Technology Function -575075073.jpg Request FRS Adjustment through 5-Way Pie Plate

Requests adjustments of the driver's seat via the 5-way pie plate

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Adjustment through 5-Way Pie Plate | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SWP\_Pieplate\_Up | SWP\_Pieplate\_Up :  SWP\_Pieplate\_Up | | |  |  |  |
| Review in model  SWP\_Pieplate\_Down | SWP\_Pieplate\_Down :  SWP\_Pieplate\_Down | | |  |  |  |
| Review in model  SWP\_Pieplate\_Forward | SWP\_Pieplate\_Forward :  SWP\_Pieplate\_Forward | | |  |  |  |
| Review in model  SWP\_Pieplate\_Rearward | SWP\_Pieplate\_Rearward :  SWP\_Pieplate\_Rearward | | |  |  |  |
| Review in model  SWP\_Pieplate\_Center | SWP\_Pieplate\_Center :  SWP\_Pieplate\_Center | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Adjustment through 5-Way Pie Plate

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Adjustment through 5-Way Pie Plate

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1656930686.jpg - Hardswitch 1R Pie Plate Rearward

While the user has the rear of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Rearward" = "ON"

Satisfied by:

* -575075073.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Pie Plate Forward

While the user has the front of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Forward" = "ON"

Satisfied by:

* -575075073.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Pie Plate Down

While the user has the bottom of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Down" = "ON"

Satisfied by:

* -575075073.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Pie Plate Center

While the user has the center of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Center" = "ON"

Satisfied by:

* -575075073.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Pie Plate Up

While the user has the top of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Up" = "ON"

Satisfied by:

* -575075073.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1140745119.jpg Request FRS Lumbar Adjustment

Requests adjustments of the driver's lumbar support via the 2-way pie plate

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Lumbar Adjustment | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Lumbar\_Fwd\_Sw\_Rqst | Lumbar\_Fwd\_Sw\_Rqst :  Lumbar\_Fwd\_Sw\_Rqst | | |  |  |  |
| Review in model  Lumbar\_Rwd\_Sw\_Rqst | Lumbar\_Rwd\_Sw\_Rqst :  Lumbar\_Rwd\_Sw\_Rqst | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Lumbar Adjustment

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Lumbar Adjustment

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1656930686.jpg - Hardswitch 1R Lumbar Rearward

While the user has the rear of the "2-Way 1R Pie Plate" pushed, it shall output "Lumbar\_Rwd\_Sw\_Rqst" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Lumbar Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Lumbar Forward

While the user has the front of the "2-Way 1R Pie Plate" pushed, it shall output "Lumbar\_Fwd\_Sw\_Rqst" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Lumbar Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1140745119.jpg Request FRS Incline/Recline Adjustment

Requests adjustments of the driver's seatback via the incline/recline switch

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Incline/Recline Adjustment | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SeatBackFwd | SeatBackFwd :  SeatBackFwd | | |  |  |  |
| Review in model  SeatBackAft | SeatBackAft :  SeatBackAft | | |  |  |  |
| Review in model  HeadrestUp | HeadrestUp :  HeadrestUp | | |  |  |  |
| Review in model  HeadrestDown | HeadrestDown :  HeadrestDown | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Incline/Recline Adjustment

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Incline/Recline Adjustment

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |
|  |  |  | 1656930686.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1656930686.jpg - Hardswitch 1R Headrest Up

While the user has the "Incline/Recline 1R Switch" pushed up, it shall output "HeadrestUp" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Seatback Forward

While the user has the "Incline/Recline 1R Switch" pushed forward, it shall output "SeatBackFwd" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Headrest Down

While the user has the "Incline/Recline 1R Switch" pushed down, it shall output "HeadrestDown" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1656930686.jpg - Hardswitch 1R Seatback Rearward

While the user has the "Incline/Recline 1R Switch" pushed rearward, it shall output "SeatBackAft" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1140745119.jpg Request FRS Seat Cushion Adjustment

Requests adjustments of the driver's seat via the fore/aft switch

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Seat Cushion Adjustment | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SeatCushAft | SeatCushAft :  SeatCushAft | | |  |  |  |
| Review in model  SeatCushFwd | SeatCushFwd :  SeatCushFwd | | |  |  |  |
| Review in model  SeatCushUp | SeatCushUp :  SeatCushUp | | |  |  |  |
| Review in model  SeatCushDown | SeatCushDown :  SeatCushDown | | |  |  |  |
| Review in model  FrontTiltUp | FrontTiltUp :  FrontTiltUp | | |  |  |  |
| Review in model  FrontTiltDown | FrontTiltDown :  FrontTiltDown | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Seat Cushion Adjustment

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Seat Cushion Adjustment

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -626562575.jpg |  |
|  |  |  | -626562575.jpg |  |
|  |  |  | -626562575.jpg |  |
|  |  |  | -626562575.jpg |  |
|  |  |  | -626562575.jpg |  |
|  |  |  | -626562575.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-626562575.jpg - Hardswitch 1R Pan Rearward

While the user has the "Fore/Aft 1R Switch" pushed rearward, it shall output "SeatCushAft" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-626562575.jpg - Hardswitch 1R Tilt Down

While the user has the "Fore/Aft 1R Switch" front pushed down, it shall output "FrontTiltDown" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-626562575.jpg - Hardswitch 1R Pan Forward

While the user has the "Fore/Aft 1R Switch" pushed forward, it shall output "SeatCushFwd" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-626562575.jpg - Hardswitch 1R Pan Upward

While the user has the "Fore/Aft 1R Switch" rear pushed upward, it shall output "SeatCushUp" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-626562575.jpg - Hardswitch 1R Pan Downward

While the user has the "Fore/Aft 1R Switch" rear pushed downward, it shall output "SeatCushDown" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-626562575.jpg - Hardswitch 1R Tilt Up

While the user has the "Fore/Aft 1R Switch" front pushed up, it shall output "FrontTiltUp" = "ON"

Satisfied by:

* 1140745119.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

### DSM

DSM

#### Technology Function 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

Monitors ripples in the driver side motor feedback to track the position of each motor

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Translate Driver FRS Motor Current to Seat Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Drv\_Fore/Aft\_MotorCurrent :  Drv\_Fore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Drv\_Incline/Recline\_MotorCurrent :  Drv\_Incline/Recline\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Height\_MotorCurrent  CurrentPositionSeatHeight | Drv\_Height\_MotorCurrent :  Drv\_Height\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_HeadRest\_Up/Down\_MotorCurrent | Drv\_HeadRest\_Up/Down\_MotorCurrent :  Drv\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Tilt\_MotorCurrent  CurrentPositionTilt | Drv\_Tilt\_MotorCurrent :  Drv\_Tilt\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Headrest\_Fore/Aft\_MotorCurrent | Drv\_Headrest\_Fore/Aft\_MotorCurrent :  Drv\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_HorizontalLumbar\_MotorCurrent | Drv\_HorizontalLumbar\_MotorCurrent :  Drv\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_VerticalLumbar\_MotorCurrent | Drv\_VerticalLumbar\_MotorCurrent :  Drv\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_RightThigh\_MotorCurrent  CurrentPositionRightThigh | Drv\_RightThigh\_MotorCurrent :  Drv\_RightThighExtension\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_LeftThigh\_MotorCurrent  CurrentPositionLeftThigh | Drv\_LeftThigh\_MotorCurrent :  Drv\_LeftThighExtension\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Drv\_Thoracic\_MotorCurrent :  Drv\_Thoracic\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Translate Driver FRS Motor Current to Seat Position

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Translate Driver FRS Motor Current to Seat Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  CurrentPositionHeadrestForeAft | CurrentPositionHeadrestForeAft :  CurrentPositionHeadrestForeAft | | |  |  |  |
| Review in model  CurrentPositionSeatHeight | CurrentPositionSeatHeight :  CurrentPositionSeatHeight | | |  |  |  |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  CurrentPositionHeadrestHeight | CurrentPositionHeadrestHeight :  CurrentPositionHeadrestHeight | | |  |  |  |
| Review in model  CurrentPositionHorizontalLumbar | CurrentPositionHorizontalLumbar :  CurrentPositionHorizontalLumbar | | |  |  |  |
| Review in model  CurrentPositionVerticalLumbar | CurrentPositionVerticalLumbar :  CurrentPositionVerticalLumbar | | |  |  |  |
| Review in model  CurrentPositionRightThigh | CurrentPositionRightThigh :  CurrentPositionRightThigh | | |  |  |  |
| Review in model  CurrentPositionLeftThigh | CurrentPositionLeftThigh :  CurrentPositionLeftThigh | | |  |  |  |
| Review in model  CurrentPositionTilt | CurrentPositionTilt :  CurrentPositionTilt | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  CurrentPositionThoracic | CurrentPositionThoracic :  CurrentPositionThoracic | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Translate Driver FRS Motor Current to Seat Position

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Translate Driver FRS Motor Current to Seat Position

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |
|  |  |  | 800829179.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

800829179.jpg - Track 1R Driver Left Thigh Extension Position

The "DSM" shall monitor "Drv\_Left Thigh Extension\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Left Thigh Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Thoracic Support Position

The "DSM" shall monitor "Drv\_Thoracic\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Thoracic Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Seat Height Position

The "DSM" shall monitor "Drv\_Height\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Seat Height Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Headrest Fore/Aft Position

The "DSM" shall monitor "Drv\_Headrest Fore/Aft\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Headrest Fore/Aft Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Vertical Lumbar Position

The "DSM" shall monitor "Drv\_Vertical Lumbar\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Vertical Lumbar Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Seat Tilt Position

The "DSM" shall monitor "Drv\_Tilt\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Seat Cushion Tilt Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Headrest Up/Down Position

The "DSM" shall monitor "Drv\_Headrest Up/Down\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Headrest Height Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Fore/Aft Position

The "DSM" shall monitor "Drv\_Fore/Aft\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Fore/Aft Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Right Thigh Extension Position

The "DSM" shall monitor "Drv\_Right Thigh Extension\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Right Thigh Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Incline/Recline Position

The "DSM" shall monitor "Drv\_Incline/Recline\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Incline/Recline Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

800829179.jpg - Track 1R Driver Horizontal Lumbar Position

The "DSM" shall monitor "Drv\_Horizontal Lumbar\_MotorCurrent" and update the position of the driver's side seat

Satisfied by:

* 1735319457.jpg Translate Driver FRS Motor Current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row driver's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 696982681.jpg FRS Current Horizontal Lumbar Position - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1056443475.jpg Control Requested Driver FRS Comfort Position

Provide movement requests to the driver side motors

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Control Requested Driver FRS Comfort Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAndAftAdjustment | ForeAndAftAdjustment :  ForeAftAdjustment | | |  |  |  |
| Review in model  InclineReclineAdjustment | InclineReclineAdjustment :  InclineReclineAdjustment | | |  |  |  |
| Review in model  HeightAdjustment | HeightAdjustment :  SeatHeightAdjustment | | |  |  |  |
| Review in model  SeatTiltAdjustment | SeatTiltAdjustment :  TiltAdjustment | | |  |  |  |
| Review in model  HeadrestHeightAdjustment | HeadrestHeightAdjustment :  HeadrestHeightAdjustment | | |  |  |  |
| Review in model  HeadrestForeAftAdjustment | HeadrestForeAftAdjustment :  HeadrestForeAftAdjustment | | |  |  |  |
| Review in model  HorizontalLumbarAdjustment | HorizontalLumbarAdjustment :  HorizontalLumbarAdjustment | | |  |  |  |
| Review in model  VerticalLumbarAdjustment | VerticalLumbarAdjustment :  VerticalLumbarAdjustment | | |  |  |  |
| Review in model  RightThighAdjustment | RightThighAdjustment :  RightThighAdjustment | | |  |  |  |
| Review in model  LeftThighAdjustment | LeftThighAdjustment :  LeftThighAdjustment | | |  |  |  |
| Review in model  ThoracicAdjustment | ThoracicAdjustment :  ThoracicAdjustment | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Control Requested Driver FRS Comfort Position

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Control Requested Driver FRS Comfort Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Fore/Aft\_AdjCommand  ForeAftAdjustment | Drv\_Fore/Aft\_AdjCommand :  Drv\_Fore/Aft\_AdjCommand | | |  |  |  |
| Review in model  Drv\_Incline/Recline\_AdjCommand | Drv\_Incline/Recline\_AdjCommand :  Drv\_Incline/Recline\_AdjCommand | | |  |  |  |
| Review in model  Drv\_Height\_AdjCommand | Drv\_Height\_AdjCommand :  Drv\_Height\_AdjCommand | | |  |  |  |
| Review in model  Drv\_Tilt\_AdjCommand | Drv\_Tilt\_AdjCommand :  Drv\_Tilt\_AdjCommand | | |  |  |  |
| Review in model  Drv\_HeadRest\_Up/Down\_AdjCommand | Drv\_HeadRest\_Up/Down\_AdjCommand :  Drv\_HeadrestUp/Down\_AdjCommand | | |  |  |  |
| Review in model  Drv\_Headrest\_Fore/Aft\_AdjCommand | Drv\_Headrest\_Fore/Aft\_AdjCommand :  Drv\_HeadrestFore/Aft\_AdjCommand | | |  |  |  |
| Review in model  Drv\_HorizontalLumbar\_AdjCommand | Drv\_HorizontalLumbar\_AdjCommand :  Drv\_HorizontalLumbar\_AdjCommand | | |  |  |  |
| Review in model  Drv\_VerticalLumbar\_AdjCommand | Drv\_VerticalLumbar\_AdjCommand :  Drv\_VerticalLumbar\_AdjCommand | | |  |  |  |
| Review in model  Drv\_RightThighExtension\_AdjCommand | Drv\_RightThighExtension\_AdjCommand :  Drv\_RightThighExtension\_AdjCommand | | |  |  |  |
| Review in model  Drv\_LeftThighExtension\_AdjCommand | Drv\_LeftThighExtension\_AdjCommand :  Drv\_LeftThighExtension\_AdjCommand | | |  |  |  |
| Review in model  Actuate Driver FRS Thoracic | Actuate Driver FRS Thoracic :  Drv\_Thoracic\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Control Requested Driver FRS Comfort Position

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Control Requested Driver FRS Comfort Position

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1416629979.jpg |  |
|  |  |  | -1416629979.jpg |  |
|  |  |  | -1416629979.jpg |  |
|  |  |  | -1416629979.jpg |  |
|  |  |  | -1416629979.jpg |  |
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|  |  |  | -1416629979.jpg |  |
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|  |  |  | -1416629979.jpg |  |
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|  |  |  | -1416629979.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1416629979.jpg - Unsupervised Headrest Up/Down Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Headrest Up/Down Motor", it shall

1) Set "Drv\_Headrest Up/Down\_AdjCommand" to move the "Driver Side 1R Headrest Up/Down Motor" by "Headrest Up/Down Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Headrest Height Obstacle Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver * 1942746383.jpg FRS Headrest Height Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Incline/Recline Actuation

When "InclineReclineAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Incline/Recline Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Horizontal Lumbar Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Horizontal Lumbar Motor", it shall

1) Set "Drv\_Horizontal Lumbar\_AdjCommand" to move the "Driver Side 1R Horizontal Lumbar Motor" by "Horizontal Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Lumbar Obstacle Detected - Driver * 1942746383.jpg FRS Lumbar Obstacle Not Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Right Thigh Extension Actuation

When "RightThighAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Right Thigh Extension Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Seat Tilt Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Tilt Motor", it shall

1) Set "Drv\_Tilt\_AdjCommand" to move the "Driver Side 1R Tilt Motor" by "Tilt Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | current > threshold | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Seat Cushion Tilt Obstacle Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver * 1942746383.jpg FRS Seat Cushion Tilt Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Thoracic Support Actuation

When "ThoracicAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Thoracic Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Thoracic Support Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Thoracic Motor", it shall

1) Set "Drv\_Thoracic\_AdjCommand" to move the "Driver Side 1R Thoracic Motor" by "Thoracic Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Thoracic Obstacle Not Detected - Driver * 1942746383.jpg FRS Thoracic Obstacle Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Headrest Fore/Aft Actuation

When "HeadrestForeAftAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Headrest Fore/Aft Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Seat Height Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Height Motor", it shall

1) Set "Drv\_Height\_AdjCommand" to move the "Driver Side 1R Height Motor" by "Height Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | add 'current' before spike | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Seat Height Obstacle Not Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver * 1942746383.jpg FRS Seat Height Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Incline/Recline Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Incline/Recline Motor", it shall

1) Set "Drv\_Incline/Recline\_AdjCommand" to move the "Driver Side 1R Incline/Recline Motor" by "Incline/Recline Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Incline/Recline Obstacle Not Detected - Driver * 1942746383.jpg FRS Incline/Recline Obstacle Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Left Thigh Extension Actuation

When "LeftThighAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Left Thigh Extension Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Fore/Aft Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Fore/Aft Motor", it shall

1) Set "Drv\_Fore/Aft\_AdjCommand" to move the "Driver Side 1R Fore/Aft Motor" by "Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Modified since review  Unsupervised Seatback Obstacle Sense for Driver | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Fore/Aft Obstacle Not Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Vertical Lumbar Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Vertical Lumbar Motor", it shall

1) Set "Drv\_Vertical Lumbar\_AdjCommand" to move the "Driver Side 1R Vertical Lumbar Motor" by "Vertical Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Lumbar Obstacle Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver * 1942746383.jpg FRS Lumbar Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Horizontal Lumbar Actuation

When "HorizontalLumbarAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Horizontal Lumbar Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Headrest Height Actuation

When "HeadrestHeightAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Headrest Height Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Headrest Fore/Aft Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Headrest Fore/Aft Motor", it shall

1) Set "Drv\_Headrest Fore/Aft\_AdjCommand" to move the "Driver Side 1R Headrest Fore/Aft Motor" by "Headrest Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver * 1942746383.jpg FRS Headrest Fore/Aft Obstacle Detected - Driver * 1942746383.jpg FRS Headrest Fore/Aft Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Left Thigh Extension Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Left Thigh Extension Motor", it shall

1) Set "Drv\_Left Thigh Extension\_AdjCommand" to move the "Driver Side 1R Left Thigh Extension Motor" by "Left Thigh Extension Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Left Thigh Obstacle Not Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver * 1942746383.jpg FRS Left Thigh Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Seat Height Actuation

When "HeightAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Height Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Vertical Lumbar Actuation

When "VerticalLumbarAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Vertical Lumbar Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Fore/Aft Actuation

When "ForeAndAftAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Fore/Aft Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Unsupervised Right Thigh Extension Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Right Thigh Extension Motor", it shall

1) Set "Drv\_Right Thigh Extension\_AdjCommand" to move the "Driver Side 1R Right Thigh Extension Motor" by "Right Thigh Extension Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position
* -2068637718.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1942746383.jpg FRS Right Thigh Obstacle Not Detected - Driver * 1942746383.jpg FRS Right Thigh Obstacle Detected - Driver * 1942746383.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1416629979.jpg - Stop 1R Driver Seat Tilt Actuation

When "SeatTiltAdjustment" transitions to NULL, the "DSM" shall reverse the poles/current until the "Driver's Side 1R Tilt Motor" has stopped.

Satisfied by:

* 1056443475.jpg Control Requested Driver FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function -2068637718.jpg Detect Driver FRS Motor Stall

Monitor current feedback from driver side motors to detect motor stall during manual adjustments

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Detect Driver FRS Motor Stall | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Drv\_Thoracic\_MotorCurrent :  Drv\_Thoracic\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_LeftThigh\_MotorCurrent  CurrentPositionLeftThigh | Drv\_LeftThigh\_MotorCurrent :  Drv\_LeftThighExtension\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_RightThigh\_MotorCurrent  CurrentPositionRightThigh | Drv\_RightThigh\_MotorCurrent :  Drv\_RightThighExtension\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_HorizontalLumbar\_MotorCurrent | Drv\_HorizontalLumbar\_MotorCurrent :  Drv\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_VerticalLumbar\_MotorCurrent | Drv\_VerticalLumbar\_MotorCurrent :  Drv\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Headrest\_Fore/Aft\_MotorCurrent | Drv\_Headrest\_Fore/Aft\_MotorCurrent :  Drv\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_HeadRest\_Up/Down\_MotorCurrent | Drv\_HeadRest\_Up/Down\_MotorCurrent :  Drv\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Tilt\_MotorCurrent  CurrentPositionTilt | Drv\_Tilt\_MotorCurrent :  Drv\_Tilt\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Height\_MotorCurrent  CurrentPositionSeatHeight | Drv\_Height\_MotorCurrent :  Drv\_Height\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Drv\_Incline/Recline\_MotorCurrent :  Drv\_Incline/Recline\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Drv\_Fore/Aft\_MotorCurrent :  Drv\_Fore/Aft\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Detect Driver FRS Motor Stall

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Detect Driver FRS Motor Stall | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAftStallStatus | ForeAftStallStatus :  ForeAftStallStatus | | |  |  |  |
| Review in model  InclineReclineStallStatus | InclineReclineStallStatus :  InclineReclineStallStatus | | |  |  |  |
| Review in model  SeatHeightStallStatus | SeatHeightStallStatus :  SeatHeightStallStatus | | |  |  |  |
| Review in model  CushionTiltStallStatus | CushionTiltStallStatus :  CushionTiltStallStatus | | |  |  |  |
| Review in model  HeadrestHeightStallStatus | HeadrestHeightStallStatus :  HeadrestHeightStallStatus | | |  |  |  |
| Review in model  HeadrestForeStallStatus | HeadrestForeStallStatus :  HeadrestForeAftStallStatus | | |  |  |  |
| Review in model  HorizontalLumbarStallStatus | HorizontalLumbarStallStatus :  HorizontalLumbarStallStatus | | |  |  |  |
| Review in model  VerticalLumbarStallStatus | VerticalLumbarStallStatus :  VerticalLumbarStallStatus | | |  |  |  |
| Review in model  RightThighStallStatus | RightThighStallStatus :  RightThighStallStatus | | |  |  |  |
| Review in model  LeftThighStallStatus | LeftThighStallStatus :  LeftThighStallStatus | | |  |  |  |
| Review in model  ThoracicStallStatus | ThoracicStallStatus :  ThoracicStallStatus | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Detect Driver FRS Motor Stall

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Detect Driver FRS Motor Stall

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |
|  |  |  | 781247409.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

781247409.jpg - Detect Motor Stall 1R Driver Incline/Recline

When the "DSM" detects a motor stall in "Drv\_Incline/Recline\_MotorCurrent", it shall set and hold "Drv\_Incline/Recline\_AdjCommand" to NULL until the "DSM" receives "SeatBackFwd" == "OFF" AND "SeatBackAft" == "OFF"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Horizontal Lumbar

When the "DSM" detects a motor stall in "Drv\_Horizontal Lumbar\_MotorCurrent", it shall set and hold "Drv\_Horizontal Lumbar\_AdjCommand" to NULL until the "DSM" receives "Lumbar\_Fwd\_Sw\_Rqst" == "OFF" AND "Lumbar\_Rwd\_Sw\_Rqst" == "OFF"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Right Thigh Extension

When the "DSM" detects a motor stall in "Drv\_Right Thigh Extension\_MotorCurrent", it shall set and hold "Drv\_Right Thigh Extension\_AdjCommand" to NULL until the "DSM" receives:

1) "ActiveDevice" ~= "Right Thigh Extension" OR

2) "SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND "SeatDevcAdjDrv\_D\_Rq" == "Inactive"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Need Work | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Height

When the "DSM" detects a motor stall in "Drv\_Height\_MotorCurrent", it shall set and hold "Drv\_Height\_AdjCommand" to NULL until the "DSM" receives "SeatCushUp" == "OFF" AND "SeatCushDown" == "OFF"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Headrest Up/Down

When the "DSM" detects a motor stall in "Drv\_Headrest Up/Down\_MotorCurrent", it shall set and hold "Drv\_Headrest Up/Down\_AdjCommand" to NULL until the "DSM" receives:

1) ("HeadrestUp" == "OFF" AND "HeadrestDown" == "OFF") AND

2) (("ActiveDevice" ~= "Headrest") OR

3) ("SWP\_Pieplate\_Up" == "OFF" AND "SWP\_Pieplate\_Down" == "OFF" AND "SeatHeadrstAdjDrv\_D\_Rq" ~= "Up" AND "SeatHeadrstAdjDrv\_D\_Rq" ~= "Down"))

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Need Work | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Thoracic

When the "DSM" detects a motor stall in "Drv\_Thoracic\_MotorCurrent", it shall set and hold "Drv\_Thoracic\_AdjCommand" to NULL until the "DSM" receives:

1) "ActiveDevice" ~= "Thoracic" OR

2) "SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND "SeatDevcAdjDrv\_D\_Rq" == "Inactive"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Need Work | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver LeftThigh Extension

When the "DSM" detects a motor stall in "Drv\_Left Thigh Extension\_MotorCurrent", it shall set and hold "Drv\_Left Thigh Extension\_AdjCommand" to NULL until the "DSM" receives:

1) "ActiveDevice" ~= "Left Thigh Extension" OR

2) "SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND "SeatDevcAdjDrv\_D\_Rq" == "Inactive"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Need Work | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Headrest Fore/Aft

When the "DSM" detects a motor stall in "Drv\_Headrest Fore/Aft\_MotorCurrent", it shall set and hold "Drv\_Headrest Fore/Aft\_AdjCommand" to NULL until the "DSM" receives:

1) "ActiveDevice" ~= "Headrest" OR

2) "SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND "SeatHeadrstAdjDrv\_D\_Rq" ~= "Forward" AND "SeatHeadrstAdjDrv\_D\_Rq" ~= "Backward"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Need Work | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Fore/Aft

When the "DSM" detects a motor stall in "Drv\_Fore/Aft\_MotorCurrent", it shall set and hold "Drv\_Fore/Aft\_AdjCommand" to NULL until the "DSM" receives "SeatCushFwd" == "OFF" AND "SeatCushAft" == "OFF"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Reviewed by Bill, Yazan, and Diana | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Tilt

When the "DSM" detects a motor stall in "Drv\_Tilt\_MotorCurrent", it shall set and hold "Drv\_Tilt\_AdjCommand" to NULL until the "DSM" receives "FrontTiltUp" == "OFF" AND "FrontTiltDown" == "OFF"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

781247409.jpg - Detect Motor Stall 1R Driver Vertical Lumbar

When the "DSM" detects a motor stall in "Drv\_Vertical Lumbar\_MotorCurrent", it shall set and hold "Drv\_Vertical Lumbar\_AdjCommand" to NULL until the "DSM" receives "Lumbar\_Up\_Sw\_Rqst" == "OFF" AND "Lumbar\_Dwn\_Sw\_Rqst" == "OFF"

Satisfied by:

* -2068637718.jpg Detect Driver FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Need Work | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1945545733.jpg Arbitrate Driver FRS Learn Cycle

Aribtrate driver side actuations to learn max and min endpoints

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Arbitrate Driver FRS Learn Cycle | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  input | input : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Arbitrate Driver FRS Learn Cycle

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Arbitrate Driver FRS Learn Cycle | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAndAftAdjustment | ForeAndAftAdjustment :  ForeAftAdjustment | | |  |  |  |
| Review in model  InclineReclineAdjustment | InclineReclineAdjustment :  InclineReclineAdjustment | | |  |  |  |
| Review in model  HeightAdjustment | HeightAdjustment :  SeatHeightAdjustment | | |  |  |  |
| Review in model  SeatTiltAdjustment | SeatTiltAdjustment :  TiltAdjustment | | |  |  |  |
| Review in model  HeadrestHeightAdjustment | HeadrestHeightAdjustment :  HeadrestHeightAdjustment | | |  |  |  |
| Review in model  HeadrestForeAftAdjustment | HeadrestForeAftAdjustment :  HeadrestForeAftAdjustment | | |  |  |  |
| Review in model  HorizontalLumbarAdjustment | HorizontalLumbarAdjustment :  HorizontalLumbarAdjustment | | |  |  |  |
| Review in model  VerticalLumbarAdjustment | VerticalLumbarAdjustment :  VerticalLumbarAdjustment | | |  |  |  |
| Review in model  RightThighAdjustment | RightThighAdjustment :  RightThighAdjustment | | |  |  |  |
| Review in model  LeftThighAdjustment | LeftThighAdjustment :  LeftThighAdjustment | | |  |  |  |
| Review in model  ThoracicAdjustment | ThoracicAdjustment :  ThoracicAdjustment | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Arbitrate Driver FRS Learn Cycle

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Arbitrate Driver FRS Learn Cycle

##### Function Requirements

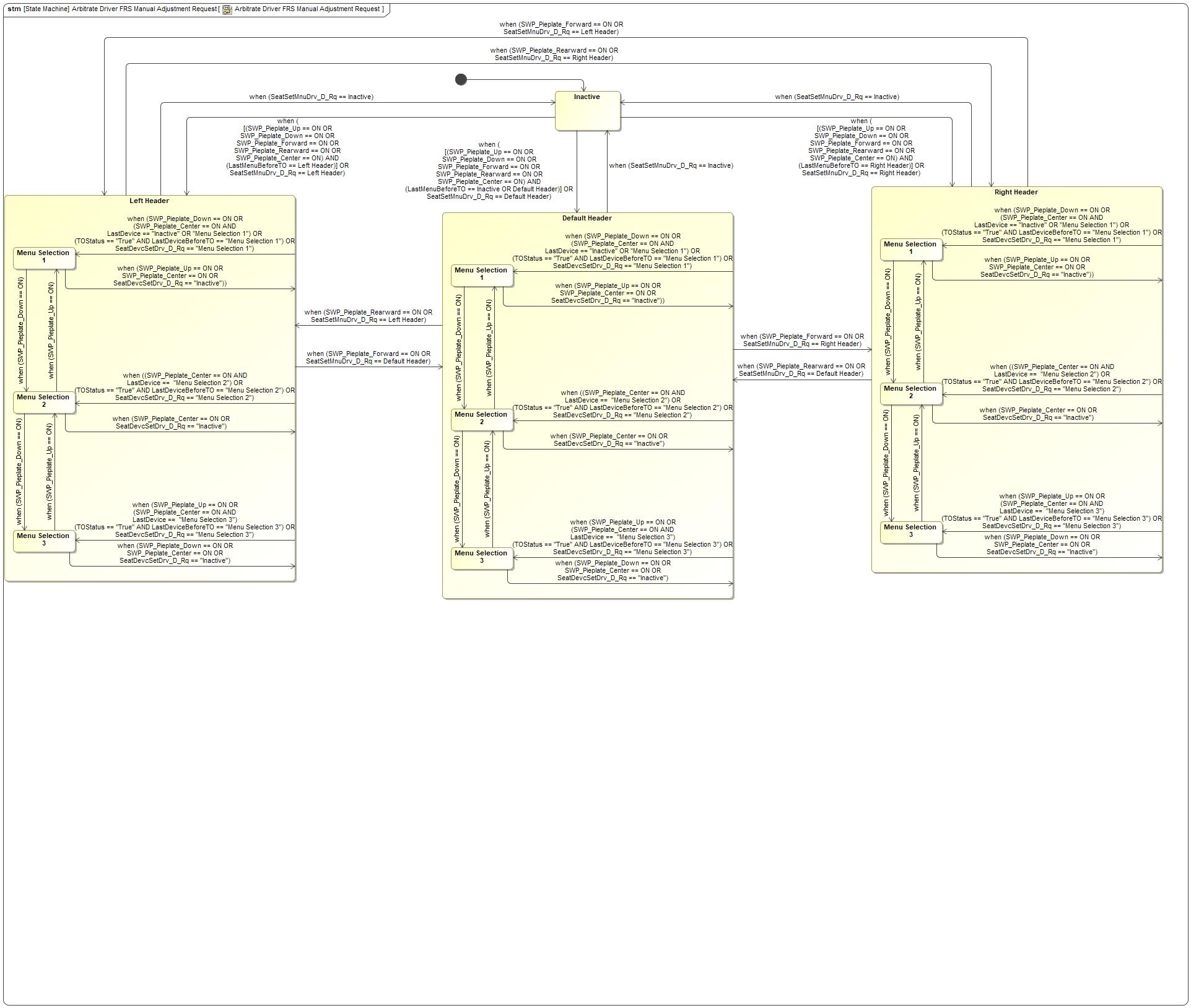
No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

#### Technology Function -2022656126.jpg Arbitrate Driver FRS Manual Adjustment Request

Arbitrate manual adjustment requests for the driver's comfort



##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Arbitrate Driver FRS Manual Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_HS\_Fore/Aft\_Req | Drv\_HS\_Fore/Aft\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_Incline/Recline\_Req | Drv\_HS\_Incline/Recline\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_Height\_Req | Drv\_HS\_Height\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_Tilt\_Req | Drv\_HS\_Tilt\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_LumbarHorizontal\_Req | Drv\_HS\_LumbarHorizontal\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_ArrowUp\_Req | Drv\_HS\_ArrowUp\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_ArrowDown\_Req | Drv\_HS\_ArrowDown\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_ArrowLeft\_Req | Drv\_HS\_ArrowLeft\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_ArrowRight\_Req | Drv\_HS\_ArrowRight\_Req : | | |  |  |  |
| Review in model  Drv\_HS\_ArrowCenter\_Req | Drv\_HS\_ArrowCenter\_Req : | | |  |  |  |
| Review in model  Drv\_SeatMotorChange\_Rq | Drv\_SeatMotorChange\_Rq :  SeatDevcAdjDrv\_D\_Rq | | |  |  |  |
| Review in model  Drv\_SeatMotor\_Rq | Drv\_SeatMotor\_Rq :  SeatDevcSetDrv\_D\_Stat | | |  |  |  |
| Review in model  Drv\_ActiveMenu\_Rq | Drv\_ActiveMenu\_Rq :  SeatSetMnuDrv\_D\_Stat | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  CurrentPositionSeatHeight | CurrentPositionSeatHeight :  CurrentPositionSeatHeight | | |  |  |  |
| Review in model  CurrentPositionTilt | CurrentPositionTilt :  CurrentPositionTilt | | |  |  |  |
| Review in model  CurrentPositionHeadrestHeight | CurrentPositionHeadrestHeight :  CurrentPositionHeadrestHeight | | |  |  |  |
| Review in model  CurrentPositionHeadrestForeAft | CurrentPositionHeadrestForeAft :  CurrentPositionHeadrestForeAft | | |  |  |  |
| Review in model  CurrentPositionHorizontalLumbar | CurrentPositionHorizontalLumbar :  CurrentPositionHorizontalLumbar | | |  |  |  |
| Review in model  CurrentPositionVerticalLumbar | CurrentPositionVerticalLumbar :  CurrentPositionVerticalLumbar | | |  |  |  |
| Review in model  CurrentPositionRightThigh | CurrentPositionRightThigh :  CurrentPositionRightThigh | | |  |  |  |
| Review in model  CurrentPositionLeftThigh | CurrentPositionLeftThigh :  CurrentPositionLeftThigh | | |  |  |  |
| Review in model  CurrentPositionThoracic | CurrentPositionThoracic :  CurrentPositionThoracic | | |  |  |  |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  ForeAftTermination | ForeAftTermination :  ForeAftTermination | | |  |  |  |
| Review in model  InclineReclineTermination | InclineReclineTermination :  InclineReclineTermination | | |  |  |  |
| Review in model  SeatHeightTermination | SeatHeightTermination :  SeatHeightTermination | | |  |  |  |
| Review in model  CushionTiltTermination | CushionTiltTermination :  CushionTiltTermination | | |  |  |  |
| Review in model  HeadrestHeightTermination | HeadrestHeightTermination :  HeadrestHeightTermination | | |  |  |  |
| Review in model  HeadrestForeAftTermination | HeadrestForeAftTermination :  HeadrestForeAftTermination | | |  |  |  |
| Review in model  HorizontalLumbarTermination | HorizontalLumbarTermination :  HoriztonalLumbarTermination | | |  |  |  |
| Review in model  VerticalLumbarTermination | VerticalLumbarTermination :  VerticalLumbarTermination | | |  |  |  |
| Review in model  RightThighTermination | RightThighTermination :  RightThighTermination | | |  |  |  |
| Review in model  LeftThighTermination | LeftThighTermination :  LeftThighTermination | | |  |  |  |
| Review in model  ThoracicTermination | ThoracicTermination :  ThoracicTermination | | |  |  |  |
| Review in model  Vehicle\_Ignition\_Status | Vehicle\_Ignition\_Status : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Arbitrate Driver FRS Manual Adjustment Request

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Arbitrate Driver FRS Manual Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAndAftAdjustment | ForeAndAftAdjustment :  ForeAftAdjustment | | |  |  |  |
| Review in model  InclineReclineAdjustment | InclineReclineAdjustment :  InclineReclineAdjustment | | |  |  |  |
| Review in model  HeightAdjustment | HeightAdjustment :  SeatHeightAdjustment | | |  |  |  |
| Review in model  SeatTiltAdjustment | SeatTiltAdjustment :  TiltAdjustment | | |  |  |  |
| Review in model  HeadrestHeightAdjustment | HeadrestHeightAdjustment :  HeadrestHeightAdjustment | | |  |  |  |
| Review in model  HeadrestForeAftAdjustment | HeadrestForeAftAdjustment :  HeadrestForeAftAdjustment | | |  |  |  |
| Review in model  HorizontalLumbarAdjustment | HorizontalLumbarAdjustment :  HorizontalLumbarAdjustment | | |  |  |  |
| Review in model  VerticalLumbarAdjustment | VerticalLumbarAdjustment :  VerticalLumbarAdjustment | | |  |  |  |
| Review in model  RightThighAdjustment | RightThighAdjustment :  RightThighAdjustment | | |  |  |  |
| Review in model  LeftThighAdjustment | LeftThighAdjustment :  LeftThighAdjustment | | |  |  |  |
| Review in model  ThoracicAdjustment | ThoracicAdjustment :  ThoracicAdjustment | | |  |  |  |
| Review in model  Drv\_MenuActive | Drv\_MenuActive : | | |  |  |  |
| Review in model  Drv\_PromptMessage | Drv\_PromptMessage : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Arbitrate Driver FRS Manual Adjustment Request

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Arbitrate Driver FRS Manual Adjustment Request

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1521691533.jpg |  |
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|  |  |  | -1521691533.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1521691533.jpg - Update 1R Driver Middle Lumbar Selection

When the "DSM" receives "SeatDevcSetDrv\_D\_Stat" = "Middle Lumbar", it shall set "ActiveDevice" = "Middle Lumbar"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Upper Lumbar Selection

When the "DSM" receives "SeatDevcSetDrv\_D\_Stat" = "Upper Lumbar", it shall set "ActiveDevice" = "Upper Lumbar"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Menu Not Active

When the "DSM" receives "SeatSetMnuDrv\_D\_Rq" = "Inactive", it shall set "ActiveMenu" = "Inactive"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Thoracic Soft Button Rearward Adjustment

While "CurrentPositionThoracic" > "Minimum Driver Thoracic Soft Position" AND the "DSM" receives "SeatDevcAdjDrv\_D\_Rq" == "Decrease" and "ActiveDevice" == "Thoracic", it shall output "Drv\_Thoracic\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Request Prompt 1 from 1R Driver Side

When "ActiveMenu" == "Inactive" AND "LastMenuBeforeTO" == "Inactive" AND "PromptDisplayed" == "False" and the "DSM" receives any of the following signals:

1) "SeatCushFwd" = "ON"

2) "SeatCushAft" = "ON"

3) "SeatBackFwd" = "ON"

4) "SeatBackAft" = "ON"

5) "SeatCushUp" = "ON"

6) "SeatCushDown" = "ON"

7) "HeadrestUp" = "ON"

8) "HeadrestDown" = "ON"

9) "FrontTiltUp" = "ON"

10) "FrontTiltDown" = "ON"

it shall:

1) Output "SeatSetNotfnDrv\_D\_Rq" = "Pop 1"

2) Set "PromptDisplayed" = "True"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to prompt user regarding the pie plate and active menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Headrest Soft Button Forward Adjustment

While "CurrentPositionHeadrestForeAft" < "Maximum Driver Headrest Fore/Aft Soft Position" AND the "DSM" receives "SeatHeadrstAdjDrv\_D\_Rq" == "Forward" and "ActiveDevice" == "Headrest", it shall output "Drv\_Headrest Fore/Aft\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Active Motor Thoracic

When the "DSM" receives "SeatDevcSetDrv\_D\_Rq" = "Thoracic", it shall set "ActiveDevice" = "Thoracic"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Deactivate Massage Mode

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "LOW" AND the "DSM" receives "SWP\_Pieplate\_Rearward", the "DSM" shall:

1) Set "Massage Intensity" = "OFF"

2) Output "StmsDrv\_D\_Stat" = "Massage Intensity"

3) Output "SeatDevcSetDrv\_D\_Stat" = "Massage Pattern (n)"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Reset 1R Driver Active Menu

When the vehicle is turned off, the "DSM" shall set:

1) "ActiveMenu" = "Inactive"

2) "ActiveDevice" = "Inactive"

4) "LastDevice" = "Inactive"

5) "PromptDisplayed" = "False"

6) LastDeviceBeforeTO = "Inactive"

7) LastMenuBeforeTO = "Inactive"

8) TOStatus = "False"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required reset of DSM variables for proper active menu behavior when vehicle is turned on | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Increase Massage Intensity to Medium

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "LOW" AND the "DSM" receives "SWP\_Pieplate\_Forward, the "DSM" shall:

1) Set "Massage Intensity" = "MEDIUM"

2) Output "StmsDrv\_D\_Stat" = "Massage Intensity"

3) Output "SeatDevcSetDrv\_D\_Stat" = "Massage Pattern (n)"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Vertical Lumbar Hardswitch 1R Driver Actuation Down

While "CurrentPositionVerticalLumbar" > "Minimum Driver Vertical Lumbar Soft Position" AND "Lumbar\_Down\_Sw\_Rqst" == "ON", the "DSM" shall output "Drv\_Vertical Lumbar\_AdjCommand" to move in the downward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | CHECK | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Vertical Lumbar Down | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Headrest Height Hardswitch 1R Driver Actuation Down

While "CurrentPositionHeadrestHeight" > "Minimum Driver Headrest Up/Down Soft Position" AND "HeadrestDown" == "ON", the "DSM" shall output "Drv\_Headrest Up/Down\_AdjCommand" to move in the downward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Headrest Height Down | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Thoracic Soft Button Forward Adjustment

While "CurrentPositionThoracic" < "Maximum Driver Thoracic Soft Position" AND the "DSM" receives "SeatDevcAdjDrv\_D\_Rq" == "Increase" AND "ActiveDevice" == "Thoracic", it shall output "Drv\_Thoracic\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Thoracic Hardswitch Pie Plate 1R Driver Actuation Forward

While "CurrentPositionThoracic" < "Maximum Driver Thoracic Soft Position" AND "ActiveDevice" == "Thoracic" AND the "DSM" receives "SWP\_Pieplate\_Forward" = ON, the "DSM" shall output "Drv\_Thoracic\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | CHECK | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Thoracic Out | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Active Menu Seat Back

When the "DSM" receives "SeatSetMnuDrv\_D\_Rq" = "Seat Back", it shall set "ActiveMenu" = "Seat Back"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Incline Recline Hardswitch 1R Driver Actuation Forward

While "CurrentPositionInclineRecline" > "Minimum Driver Incline/Recline Soft Position" AND "SeatBackRwd" == "ON", the "DSM" shall output "Drv\_Incline/Recline\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Incline/Recline Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Deactivation

When the driver's seat comfort menu on the "infotainment screen" times out or the user navigates to another menu, the "DSM" shall set:

1) "LastDeviceBeforeTO" = "ActiveDevice"

2) "LastMenuBeforeTO" = "ActiveMenu"

3) "TOStatus" = "True"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to recall menu after menu time-out or if the user navigates to another menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Header Navigation Right

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Inactive" AND the "DSM" receives "SWP\_Pieplate\_Forward" = "ON", the "DSM" shall:

1) Set "ActiveMenu" equal to the header displayed on the right of the current selection on the front row infotainment screen

2) Output "SeatSetMnuDrv\_D\_Stat" = "ActiveMenu"

3) Set "LastDevice" = "Inactive"

If no header is displayed on the right of the current selection in the "Infotainment System", the "DSM" shall:

1) Set "ActiveDevice" equal to the header displayed on the far left on the front row infotainment screen

2) Output "SeatSetMnuDrv\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Activation with Center

While "ActiveMenu" == "Inactive" AND "Last Device" == "Inactive" AND the "DSM" receives one of the following:

1) "SWP\_Pieplate\_Center" = "ON"

The "DSM" shall:

1) Set "ActiveMenu" = "Massage Header"

2) Output "SeatSetMnuDrv\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to activate seat comfort massage menu via pie plate center button | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Horizontal Lumbar Hardswitch 1R Driver Actuation Forward

While "CurrentPositionHorizontalLumbar" < "Maximum Driver Horizontal Lumbar Soft Position" AND "Lumbar\_Fwd\_Sw\_Rqst" == "ON", the "DSM" shall output "Drv\_Horizontal Lumbar\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Horizontal Lumbar More Support | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Seat Tilt Hardswitch 1R Driver Actuation Down

While "CurrentPositionTilt" > "Minimum Driver Tilt Soft Position" AND "FrontTiltDown" == "ON", the "DSM" shall output "Drv\_Tilt\_AdjCommand" to move in the downward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Passenger Seat Tilt Down * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Seat Tilt Down | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - MCS Lumbar Pie Plate 1R Driver Decrease

While "ActiveDevice" == ("Upper Lumbar" OR "Middle Lumbar" OR " Lower Lumbar") and the "DSM" receives "SWP\_Pieplate\_Rearward" = ON, it shall output "SeatLmbrPosDrv\_Pc\_Actl" = "Decrease"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Active Menu Headrest

When the "DSM" receives "SeatSetMnuDrv\_D\_Rq" = "Headrest", it shall set "ActiveMenu" = "Headrest"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Back to Last Device Using Center Button

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Inactive" AND the "DSM" receives "SWP\_Pieplate\_Center" AND LastDevice ~="Inactive", the "DSM" shall:

1) Set "ActiveDevice" = "LastDevice"

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

If "LastDevice" =="Inactive", the "DSM" shall:

1) Set "ActiveDevice" = "Menu Selection 1"

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Headrest Height Hardswitch 1R Driver Actuation Up

While "CurrentPositionHeadrestHeight" < "Maximum Driver Headrest Up/Down Soft Position" AND "HeadrestUp" == "ON", the "DSM" shall output "Drv\_Headrest Up/Down\_AdjCommand" to move in the upward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Headrest Height Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Vertical Lumbar Hardswitch 1R Driver Actuation Up

While "CurrentPositionVerticalLumbar" < "Maximum Driver Vertical Lumbar Soft Position" AND "Lumbar\_Up\_Sw\_Rqst" == "ON", the "DSM" shall output "Drv\_Vertical Lumbar\_AdjCommand" to move in the upward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | CHECK | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Vertical Lumbar Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Active Menu Seat Cushion

When the "DSM" receives "SeatSetMnuDrv\_D\_Rq" = "Seat Cushion", it shall set "ActiveMenu" = "Seat Cushion"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Transition 1R Driver to Adjusting

When the "DSM" receives:

1) "SeatCushFwd" == "ON" OR

2) "SeatCushAft" == "ON" OR

3) "SeatBackFwd" == "ON" OR

4) "SeatBackAft" == "ON" OR

5) "SeatCushUp" == "ON" OR

6) "SeatCushDown" == "ON" OR

7) "HeadrestUp" == "ON" OR

8) "HeadrestDown" == "ON" OR

9) "FrontTiltUp" =="ON" OR

10) "FrontTiltDown" == "ON" OR

11) "Lumbar\_Fwd\_Sw\_Rqst" == "ON" OR

12) "Lumbar\_Rwd\_Sw\_Rqst" == "ON" OR

13) {("ActiveDevice" == "Right Thigh" OR "Left Thigh" OR " Thoracic") AND

14) [("SWP\_Pieplate\_Forward" == "ON" OR "SWP\_Pieplate\_Rearward" == "ON") OR

15) ("SeatDevcAdjDrv\_D\_Rq" == "Increase" OR"Decrease")]} OR

16) "SeatHeadrstAdjDrv\_D\_Rq" ~= "Inactive" OR

17) ["ActiveDevice" == "Headrest" AND

18) ("SWP\_Pieplate\_Forward" == "ON" OR "SWP\_Pieplate\_Rearward" == "ON" OR

"SWP\_Pieplate\_Up" == "ON" OR "SWP\_Pieplate\_Down" == "ON")]

it shall transition from idle to the "Adjusting" comfort adjustments state, set the flags for "Comfort Adjustments", and respond to additional manual comfort adjustment requests.

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates a manual adjustment and interrupts other features | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Output Status

The "DSM" shall periodically output:

1) "SeatThrcAdjDrv\_Pc\_Act"

2) "SeatThghLExtnDrv\_Pc\_Act"

3) "SeatThghRExtnDrv\_Pc\_Act"

to reflect the positions of the thoracic, left thigh, and right thigh supports.

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to display position of seat supports that are adjustable via the active menu/pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Right Thigh Extension Hardswitch Pie Plate 1R Driver Actuation Forward

While "CurrentPositionRightThigh" < "Maximum Driver Right Thigh Extension Soft Position" AND "ActiveDevice" == "Right Thigh Extension" AND the "DSM" receives "SWP\_Pieplate\_Forward" = ON, the "DSM" shall output "Drv\_Right Thigh Extension\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Right Thigh Out | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Massage Header Selection

When the "DSM" receives "SeatSetMnuDrv\_D\_Rq" = "Massage Menu", it shall set "ActiveMenu" = "Massage Menu"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Navigation Down from Header

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Inactive" AND the "DSM" receives "SWP\_Pieplate\_Down" = "ON", the "DSM" shall:

1) Set "ActiveDevice" = "Menu Selection 1" displayed under the menu header on the infotainment screen

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Horizontal Lumbar Actuation for 1R Driver

The "Driver Side 1R Lumbar Horizontal DC Motor" shall provide movements of the driver's side lumbar support in the forward or rearward direction when it receives "Drv\_HorizontalLumbar\_AdjCommand"

Satisfied by:

* 754286249.jpg Actuate Driver FRS Horizontal Lumbar
* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat lumbar support in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Actuate FRS Horizontal Lumbar Position More Support - Driver * 421622975.jpg Actuate FRS Horizontal Lumbar Position Less Support - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - MCS Lumbar Pie Plate 1R Driver Increase

While "ActiveDevice" == ("Upper Lumbar" OR "Middle Lumbar" OR " Lower Lumbar") and the "DSM" receives "SWP\_Pieplate\_Forward" = ON, it shall output "SeatLmbrPosDrv\_Pc\_Actl" = "Increase"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Right Thigh Extension Soft Button Forward Adjustment

While "CurrentPositionRightThigh" < "Maximum Driver Right Thigh Extension Soft Position" AND the "DSM" receives "SeatDevcAdjDrv\_D\_Rq" == "Increase" AND "ActiveDevice" == "Right Thigh Extension", it shall output "Drv\_Right Thigh Extension\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Left Thigh Extension Hardswitch Pie Plate 1R Driver Actuation Forward

While "CurrentPositionLeftThigh" < "Maximum Driver Left Thigh Extension Soft Position" AND "ActiveDevice" == "LeftThigh Extension" AND the "DSM" receives "SWP\_Pieplate\_Forward" = ON, the "DSM" shall output "Drv\_Left Thigh Extension\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Left Thigh Out | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Lower Lumbar Selection

When the "DSM" receives "SeatDevcSetDrv\_D\_Stat" = "Lower Lumbar", it shall set "ActiveDevice" = "Lower Lumbar"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Active Motor Right Thigh Extension

When the "DSM" receives "SeatDevcSetDrv\_D\_Rq" = "Right Thigh Extension", it shall set "ActiveDevice" = "Right Thigh Extension"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Fore Aft Hardswitch 1R Driver Actuation Rearward

While "CurrentPositionForeAft" > "Minimum Driver Fore/Aft Soft Position" AND "SeatCushRwd" == "ON", the "DSM" shall output "Drv\_Fore/Aft\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Fore/Aft Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Headrest Height Hardswitch Pie Plate 1R Driver Actuation Down

While "CurrentPositionHeadrestHeight" > "Minimum Driver Headrest Up/Down Soft Position" AND "ActiveDevice" == "Headrest" AND the "DSM" receives "SWP\_Pieplate\_Down" = ON, the "DSM" shall output "Drv\_Headrest Up/Down\_AdjCommand" to move in the downward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | CHECK | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Passenger Headrest Height Down * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Headrest Height Down | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Headrest Height Hardswitch Pie Plate 1R Driver Actuation Up

While "CurrentPositionHeadrestHeight" < "Maximum Driver Headrest Up/Down Soft Position" AND "ActiveDevice" == "Headrest" AND the "DSM" receives "SWP\_Pieplate\_Up" = ON, the "DSM" shall output "Drv\_Headrest Up/Down\_AdjCommand" to move in the upward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | CHECK | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Headrest Height Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Navigation Up from Header

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Inactive" AND the "DSM" receives "SWP\_Pieplate\_Up" = "ON", the "DSM" shall:

1) Set "ActiveDevice" = "Menu Selection (N)" displayed as the last selection under the menu header on the infotainment screen

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Massage Intensity Selection Off

When the "DSM" receives "StmsDrv\_D\_RqMnu" = "Off", it shall set "Massage Intensity" = "Off"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Right Thigh Extension Soft Button Rearward Adjustment

While "CurrentPositionRightThigh" > "Minimum Driver Right Thigh Extension Soft Position" AND the "DSM" receives "SeatDevcAdjDrv\_D\_Rq" == "Decrease" and "ActiveDevice" == "Right Thigh Extension", it shall output "Drv\_Right Thigh Extension\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Navigation Up

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Menu Selection (n)" AND "ActiveDevice" ~= "Headrest" AND the "DSM" receives "SWP\_Pieplate\_Up", the "DSM" shall:

1) Set "ActiveDevice" = "Menu Selection (n-1)"

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

If "Menu Selection (n-1)" does not exist under the current "ActiveMenu", the DSM shall:

1) Set "ActiveDevice" = "Inactive"

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Massage Intensity Selection Low

When the "DSM" receives "StmsDrv\_D\_RqMnu" = "Low", it shall set "Massage Intensity" = "Low"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Decrease Massage Intensity to Medium

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "HIGH" AND the "DSM" receives "SWP\_Pieplate\_Rearward", the "DSM" shall:

1) Set "Massage Intensity" = "MEDIUM"

2) Output "StmsDrv\_D\_Stat" = "Massage Intensity"

3) Output "SeatDevcSetDrv\_D\_Stat" = "Massage Pattern (n)"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Left Thigh Extension Soft Button Rearward Adjustment

While "CurrentPositionLeftThigh" > "Minimum Driver Left Thigh Extension Soft Position" AND the "DSM" receives "SeatDevcAdjDrv\_D\_Rq" == "Decrease" and "ActiveDevice" == "Left Thigh Extension", it shall output "Drv\_Left Thigh Extension\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Activation

While "ActiveMenu" == "Inactive" AND "LastDevice" == "Inactive" AND the "DSM" receives one of the following:

1) "SWP\_Pieplate\_Up" = "ON"

2) "SWP\_Pieplate\_Down" = "ON"

3) "SWP\_Pieplate\_Forward" = "ON"

4) "SWP\_Pieplate\_Rearward" = "ON"

The "DSM" shall:

1) Set "ActiveMenu" = "Default Header"

2) Output "SeatSetMnuDrv\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to activate seat comfort menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Fore Aft Hardswitch 1R Driver Actuation Forward

While "CurrentPositionForeAft" < "Maximum Driver Fore/Aft Soft Position" AND "SeatCushFwd" == "ON", the "DSM" shall output "Drv\_Fore/Aft\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | CHECK  Manual or unsupervised actuations | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Fore/Aft Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Horizontal Lumbar Hardswitch 1R Driver Actuation Rearward

While "CurrentPositionHorizontalLumbar" > "Minimum Driver Horizontal Lumbar Soft Position" AND "Lumbar\_Rwd\_Sw\_Rqst" == "ON", the "DSM" shall output "Drv\_Horizontal Lumbar\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | CHECK | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Horizontal Lumbar Less Support | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Navigation Down

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Menu Selection (n)" AND "ActiveDevice" ~= "Headrest" AND the "DSM" receives "SWP\_Pieplate\_Down", the "DSM" shall:

1) Set "ActiveDevice" = "Menu Selection (n+1)"

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

If "Menu Selection (n+1)" does not exist under the current "ActiveMenu", the DSM shall:

1) Set "ActiveDevice" = "Inactive"

2) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Menu Reactivation

While "TOStatus" == "True" AND the "DSM" receives one of the following:

1) "SWP\_Pieplate\_Up" = "ON"

2) "SWP\_Pieplate\_Down" = "ON"

3) "SWP\_Pieplate\_Forward" = "ON"

4) "SWP\_Pieplate\_Rearward" = "ON"

5) "SWP\_Pieplate\_Center" = "ON"

The "DSM" shall:

1) Set "ActiveMenu" = "LastMenuBeforeTO"

2) Set "ActiveDevice" = "LastDeviceBeforeTO"

3) Set TOStatus = "False"

4) Set "LastMenuBeforeTO" = "Inactive"

5) Set "LastDeviceBeforeTO" = "Inactive"

6) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

7) Output "SeatSetMnuDrv\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to recall menu after menu time-out or if the user navigates to another menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Headrest Fore/Aft Hardswitch Pie Plate 1R Driver Actuation Forward

While "CurrentPositionHeadrestForeAft" < "Maximum Driver Headrest Fore/Aft Soft Position" AND "ActiveDevice" == "Headrest" AND the "DSM" receives "SWP\_Pieplate\_Forward" = ON, the "DSM" shall output "Drv\_Headrest Fore/Aft\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Check - Need one for each motor? | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Headrest Fore/Aft Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Left Thigh Extension Hardswitch Pie Plate 1R Driver Actuation Rearward

While "CurrentPositionLeftThigh" > "Minimum Driver Left Thigh Extension Soft Position" AND "ActiveDevice" == "LeftThigh Extension" AND the "DSM" receives "SWP\_Pieplate\_Rearward" = ON, the "DSM" shall output "Drv\_Left Thigh Extension\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Left Thigh In | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Thoracic Hardswitch Pie Plate 1R Driver Actuation Rearward

While "CurrentPositionThoracic" > "Minimum Driver Thoracic Soft Position" AND "ActiveDevice" == "Thoracic" AND the "DSM" receives "SWP\_Pieplate\_Rearward" = ON, the "DSM" shall output "Drv\_Thoracic\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Thoracic In | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Massage Intensity Selection Medium

When the "DSM" receives "StmsDrv\_D\_RqMnu" = "Medium", it shall set "Massage Intensity" = "Medium"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Header Navigation Left

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Inactive" AND the "DSM" receives "SWP\_Pieplate\_Rearward" = "ON", the "DSM" shall:

1) Set "ActiveDevice" equal to the header displayed on the left of the current selection on the front row infotainment screen

2) Output "SeatSetMnuDrv\_D\_Stat" = "ActiveMenu"

3) Set "LastDevice" ="Inactive"

If no header is displayed on the left of the current selection in the "Infotainment System", the "DSM" shall:

1) Set "ActiveDevice" equal to the header displayed on the far right on the front row infotainment screen

2) Output "SeatSetMnuDrv\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Decrease Massage Intensity to Low

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "MEDIUM" AND the "DSM" receives "SWP\_Pieplate\_Rearward", the "DSM" shall:

1) Set "Massage Intensity" = "LOW"

2) Output "StmsDrv\_D\_Stat" = "Massage Intensity"

3) Output "SeatDevcSetDrv\_D\_Stat" = "Massage Pattern (n)"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Headrest Soft Button Rearward Adjustment

While "CurrentPositionHeadrestForeAft" > "Minimum Driver Headrest Fore/Aft Soft Position" the "DSM" receives "SeatHeadrstAdjDrv\_D\_Rq" == "Rearward" and "ActiveDevice" == "Headrest", it shall output "Drv\_Headrest Fore/Aft\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Active Motor Headrest

When the "DSM" receives "SeatDevcSetDrv\_D\_Rq" = "Headrest", it shall set "ActiveDevice" = "Headrest"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Back to Header using Center Button

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Menu Selection (n)" AND the "DSM" receives "SWP\_Pieplate\_Center", the "DSM" shall:

1) Set "LastDevice" = "ActiveDevice"

2) Set "ActiveDevice" = "Inactive"

3) Output "SeatDevcSetDrv\_D\_Stat" = "ActiveDevice"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Seat Tilt Hardswitch 1R Driver Actuation Up

While "CurrentPositionTilt" < "Maximum Driver Tilt Soft Position" AND "FrontTiltUp" == "ON", the "DSM" shall output "Drv\_Tilt\_AdjCommand" to move in the upwardward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Seat Tilt Up * 421622975.jpg Arbitrate Requested FRS Comfort Position - Passenger Seat Tilt Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Seat Height Hardswitch 1R Driver Actuation Down

While "CurrentPositionSeatHeight" > "Minimum Driver Height Soft Position" AND "SeatCushDowd" == "ON", the "DSM" shall output "Drv\_Height\_AdjCommand" to move in the downward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Seat Height Down | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Seat Height Hardswitch 1R Driver Actuation Up

While "CurrentPositionSeatHeight" < "Maximum Driver Height Soft Position" AND "SeatCushUp" == "ON", the "DSM" shall output "Drv\_Height\_AdjCommand" to move in the upward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Seat Height Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Activate Massage Mode

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "OFF" AND the "DSM" receives "SWP\_Pieplate\_Forward", the "DSM" shall:

1) Set "Massage Intensity" = "LOW"

2) Output "StmsDrv\_D\_Stat" = "Massage Intensity"

3) Output "SeatDevcSetDrv\_D\_Stat" = "Massage Pattern (n)"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Massage Intensity Selection High

When the "DSM" receives "StmsDrv\_D\_RqMnu" = "High", it shall set "Massage Intensity" = "High"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Right Thigh Extension Hardswitch Pie Plate 1R Driver Actuation Rearward

While "CurrentPositionRightThigh" > "Minimum Driver Right Thigh Extension Soft Position" AND "ActiveDevice" == "Right Thigh Extension" AND the "DSM" receives "SWP\_Pieplate\_Rearward" = ON, the "DSM" shall output "Drv\_Right Thigh Extension\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Right Thigh In | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Left Thigh Extension Soft Button Forward Adjustment

While "CurrentPositionLeftThigh" < "Maximum Driver Left Thigh Extension Soft Position" AND the "DSM" receives "SeatDevcAdjDrv\_D\_Rq" == "Increase" AND "ActiveDevice" == "Left Thigh Extension", it shall output "Drv\_Left Thigh Extension\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Incline Recline Hardswitch 1R Driver Actuation Rearward

While "CurrentPositionInclineRecline" < "Maximum Driver Incline/Recline Soft Position" AND "SeatBackFwd" == "ON", the "DSM" shall output "Drv\_Incline/Recline\_AdjCommand" to move in the forward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Incline/Recline Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Headrest Fore/Aft Hardswitch Pie Plate 1R Driver Actuation Rearward

While "CurrentPositionHeadrestForeAft" > "Minimum Driver Headrest Fore/Aft Soft Position" AND "ActiveDevice" == "Headrest" AND the "DSM" receives "SWP\_Pieplate\_Rearward" = ON, the "DSM" shall output "Drv\_Headrest Fore/Aft\_AdjCommand" to move in the rearward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row driver's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 421622975.jpg Arbitrate Requested FRS Comfort Position - Driver Headrest Fore/Aft Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Headrest Soft Button Upward Adjustment

While "CurrentPositionHeadrestHeight" < "Maximum Driver Headrest Up/Down Soft Position" AND the "DSM" receives "SeatHeadrstAdjDrv\_D\_Rq" == "Up" and "ActiveDevice" == "Headrest", it shall output "Drv\_Headrest Fore/Aft\_AdjCommand" to move in the upward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Headrest Soft Button Downward Adjustment

While "CurrentPositionHeadrestHeight" > "Minimum Driver Headrest Up/Down Soft Position" AND the "DSM" receives "SeatHeadrstAdjDrv\_D\_Rq" == "Down" and "ActiveDevice" == "Headrest", it shall output "Drv\_Headrest Fore/Aft\_AdjCommand" to move in the downward direction

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Update 1R Driver Active Motor Left Thigh Extension

When the "DSM" receives "SeatDevcSetDrv\_D\_Rq" = "Left Thigh Extension", it shall set "ActiveDevice" = "Left Thigh Extension"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - 1R Driver Increase Massage Intensity to High

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "MEDIUM" AND the "DSM" receives "SWP\_Pieplate\_Forward", the "DSM" shall:

1) Set "Massage Intensity" = "HIGH"

2) Output "StmsDrv\_D\_Stat" = "Massage Intensity"

3) Output "SeatDevcSetDrv\_D\_Stat" = "Massage Pattern (n)"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1521691533.jpg - Transition 1R Driver to Idle for Comfort Adjustments

When the "DSM" receives:

1) "SeatCushFwd" == "OFF" AND

2) "SeatCushAft" == "OFF" AND

3) "SeatBackFwd" == "OFF" AND

4) "SeatBackAft" == "OFF" AND

5) "SeatCushUp" == "OFF" AND

6) "SeatCushDown" == "OFF" AND

7) "HeadrestUp" == "OFF" AND

8) "HeadrestDown" == "OFF" AND

9) "FrontTiltUp" == "OFF" AND

10) "FrontTiltDown" == "OFF" AND

11) "Lumbar\_Fwd\_Sw\_Rqst" == "OFF" AND

12) "Lumbar\_Rwd\_Sw\_Rqst" == "OFF" AND

13) {("ActiveDevice" ~= "Right Thigh" OR "Left Thigh" OR " Thoracic") OR

14) [("SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF") AND

15) ("SeatDevcAdjDrv\_D\_Rq" ~= "Increase" OR "Decrease")]} AND

16) "SeatHeadrstAdjDrv\_D\_Rq" == "Inactive" AND

17) ["ActiveDevice" ~= "Headrest" OR

18) ("SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND

"SWP\_Pieplate\_Up" == "OFF" AND "SWP\_Pieplate\_Down" == "OFF")]

it shall transition to the "Idle" comfort adjustments state and reset the flags for "Comfort Adjustments"

Satisfied by:

* 754286249.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates no manual adjustments and allows other feature requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 754286249.jpg Arbitrate Passenger FRS Learn Cycle

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

(No outputs have been defined)

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Arbitrate Passenger FRS Learn Cycle

##### Function Requirements

No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

#### Technology Function -1621914909.jpg Validate and Store Driver FRS End Point Values

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Validate and Store Driver FRS End Point Values | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  input | input :  ForeAftStallStatus | | |  |  |  |
| Review in model  input1 | input1 :  InclineReclineStallStatus | | |  |  |  |
| Review in model  input2 | input2 :  SeatHeightStallStatus | | |  |  |  |
| Review in model  input3 | input3 :  CushionTiltStallStatus | | |  |  |  |
| Review in model  input4 | input4 :  HeadrestHeightStallStatus | | |  |  |  |
| Review in model  input5 | input5 :  HeadrestForeAftStallStatus | | |  |  |  |
| Review in model  input6 | input6 :  HorizontalLumbarStallStatus | | |  |  |  |
| Review in model  input7 | input7 :  VerticalLumbarStallStatus | | |  |  |  |
| Review in model  input8 | input8 :  RightThighStallStatus | | |  |  |  |
| Review in model  input9 | input9 :  LeftThighStallStatus | | |  |  |  |
| Review in model  input10 | input10 :  ThoracicStallStatus | | |  |  |  |
| Review in model  input11 | input11 :  CurrentPositionForeAft | | |  |  |  |
| Review in model  input12 | input12 :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  input13 | input13 :  CurrentPositionSeatHeight | | |  |  |  |
| Review in model  input14 | input14 :  CurrentPositionTilt | | |  |  |  |
| Review in model  input15 | input15 :  CurrentPositionHeadrestHeight | | |  |  |  |
| Review in model  input16 | input16 :  CurrentPositionHeadrestForeAft | | |  |  |  |
| Review in model  input17 | input17 :  CurrentPositionHorizontalLumbar | | |  |  |  |
| Review in model  input18 | input18 :  CurrentPositionVerticalLumbar | | |  |  |  |
| Review in model  input19 | input19 :  CurrentPositionRightThigh | | |  |  |  |
| Review in model  input20 | input20 :  CurrentPositionLeftThigh | | |  |  |  |
| Review in model  input21 | input21 :  CurrentPositionThoracic | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Validate and Store Driver FRS End Point Values

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Validate and Store Driver FRS End Point Values | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  LearnCycleStatus | LearnCycleStatus :  LearnCycleStatus | | |  |  |  |
| Review in model  NextActuator | NextActuator : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Validate and Store Driver FRS End Point Values

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Validate and Store Driver FRS End Point Values

##### Function Requirements

No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

#### Technology Function 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

Monitor current feedback from driver side motors to detect obstacles during unsupervised adjustments

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Detect Driver FRS Obstacles and Terminate Supervised Movement | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Drv\_Fore/Aft\_MotorCurrent :  Drv\_Fore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Drv\_Incline/Recline\_MotorCurrent :  Drv\_Incline/Recline\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Height\_MotorCurrent  CurrentPositionSeatHeight | Drv\_Height\_MotorCurrent :  Drv\_Height\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Tilt\_MotorCurrent  CurrentPositionTilt | Drv\_Tilt\_MotorCurrent :  Drv\_Tilt\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_HeadRest\_Up/Down\_MotorCurrent | Drv\_HeadRest\_Up/Down\_MotorCurrent :  Drv\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Headrest\_Fore/Aft\_MotorCurrent | Drv\_Headrest\_Fore/Aft\_MotorCurrent :  Drv\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_HorizontalLumbar\_MotorCurrent | Drv\_HorizontalLumbar\_MotorCurrent :  Drv\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_VerticalLumbar\_MotorCurrent | Drv\_VerticalLumbar\_MotorCurrent :  Drv\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_RightThigh\_MotorCurrent  CurrentPositionRightThigh | Drv\_RightThigh\_MotorCurrent :  Drv\_RightThighExtension\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_LeftThigh\_MotorCurrent  CurrentPositionLeftThigh | Drv\_LeftThigh\_MotorCurrent :  Drv\_LeftThighExtension\_MotorCurrent | | |  |  |  |
| Review in model  Drv\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Drv\_Thoracic\_MotorCurrent :  Drv\_Thoracic\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Detect Driver FRS Obstacles and Terminate Supervised Movement

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Detect Driver FRS Obstacles and Terminate Supervised Movement | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  InclineReclineObstacleStatus | InclineReclineObstacleStatus :  InclineReclineObstacleStatus | | |  |  |  |
| Review in model  HeadrestForeAftObstacleStatus | HeadrestForeAftObstacleStatus :  HeadrestForeAftObstacleStatus | | |  |  |  |
| Review in model  CushionTiltObstacleStatus | CushionTiltObstacleStatus : | | |  |  |  |
| Review in model  HorizontalLumbarObstacleStatus | HorizontalLumbarObstacleStatus :  HorizontalLumbarObstacleStatus | | |  |  |  |
| Review in model  HeadrestHeightObstacleStatus | HeadrestHeightObstacleStatus :  HeadrestHeightObstacleStatus | | |  |  |  |
| Review in model  VerticalLumbarObstacleStatus | VerticalLumbarObstacleStatus :  VerticalLumbarObstacleStatus | | |  |  |  |
| Review in model  HeadrestHeightObstacleStatus | HeadrestHeightObstacleStatus :  SeatHeightObstacleStatus | | |  |  |  |
| Review in model  LeftThighObstacleStatus | LeftThighObstacleStatus :  LeftThighObstacleStatus | | |  |  |  |
| Review in model  ForeAftObstacleStatus | ForeAftObstacleStatus :  ForeAftObstacleStatus | | |  |  |  |
| Review in model  RightThighObstacleStatus | RightThighObstacleStatus :  RightThighObstacleStatus | | |  |  |  |
| Review in model  ThoracicObstacleStatus | ThoracicObstacleStatus :  ThoracicObstacleStatus | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Detect Driver FRS Obstacles and Terminate Supervised Movement

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Detect Driver FRS Obstacles and Terminate Supervised Movement

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |
|  |  |  | 1002400288.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1002400288.jpg - Unsupervised Headrest Fore/Aft Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Headrest Fore/Aft Motor", it shall

1) Set "Drv\_Headrest Fore/Aft\_AdjCommand" to move the "Driver Side 1R Headrest Fore/Aft Motor" by "Headrest Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver * 1858181580.jpg FRS Headrest Fore/Aft Obstacle Detected - Driver * 1858181580.jpg FRS Headrest Fore/Aft Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Headrest Up/Down Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Headrest Up/Down Motor", it shall

1) Set "Drv\_Headrest Up/Down\_AdjCommand" to move the "Driver Side 1R Headrest Up/Down Motor" by "Headrest Up/Down Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Headrest Height Obstacle Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver * 1858181580.jpg FRS Headrest Height Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Horizontal Lumbar Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Horizontal Lumbar Motor", it shall

1) Set "Drv\_Horizontal Lumbar\_AdjCommand" to move the "Driver Side 1R Horizontal Lumbar Motor" by "Horizontal Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Lumbar Obstacle Detected - Driver * 1858181580.jpg FRS Lumbar Obstacle Not Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Left Thigh Extension Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Left Thigh Extension Motor", it shall

1) Set "Drv\_Left Thigh Extension\_AdjCommand" to move the "Driver Side 1R Left Thigh Extension Motor" by "Left Thigh Extension Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Left Thigh Obstacle Not Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver * 1858181580.jpg FRS Left Thigh Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Seat Tilt Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Tilt Motor", it shall

1) Set "Drv\_Tilt\_AdjCommand" to move the "Driver Side 1R Tilt Motor" by "Tilt Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | current > threshold | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Seat Cushion Tilt Obstacle Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver * 1858181580.jpg FRS Seat Cushion Tilt Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Thoracic Support Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Thoracic Motor", it shall

1) Set "Drv\_Thoracic\_AdjCommand" to move the "Driver Side 1R Thoracic Motor" by "Thoracic Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Thoracic Obstacle Not Detected - Driver * 1858181580.jpg FRS Thoracic Obstacle Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Incline/Recline Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Incline/Recline Motor", it shall

1) Set "Drv\_Incline/Recline\_AdjCommand" to move the "Driver Side 1R Incline/Recline Motor" by "Incline/Recline Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Incline/Recline Obstacle Not Detected - Driver * 1858181580.jpg FRS Incline/Recline Obstacle Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Seat Height Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Height Motor", it shall

1) Set "Drv\_Height\_AdjCommand" to move the "Driver Side 1R Height Motor" by "Height Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | add 'current' before spike | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Seat Height Obstacle Not Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver * 1858181580.jpg FRS Seat Height Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Fore/Aft Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Fore/Aft Motor", it shall

1) Set "Drv\_Fore/Aft\_AdjCommand" to move the "Driver Side 1R Fore/Aft Motor" by "Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Modified since review  Unsupervised Seatback Obstacle Sense for Driver | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Fore/Aft Obstacle Not Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Vertical Lumbar Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Vertical Lumbar Motor", it shall

1) Set "Drv\_Vertical Lumbar\_AdjCommand" to move the "Driver Side 1R Vertical Lumbar Motor" by "Vertical Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Lumbar Obstacle Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver * 1858181580.jpg FRS Lumbar Obstacle Not Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1002400288.jpg - Unsupervised Right Thigh Extension Obstacle Sense for 1R Driver

When the "DSM" detects an obstacle in the "Driver 1R Right Thigh Extension Motor", it shall

1) Set "Drv\_Right Thigh Extension\_AdjCommand" to move the "Driver Side 1R Right Thigh Extension Motor" by "Right Thigh Extension Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* -253609622.jpg Control Requested Driver FRS Comfort Position
* 1649462680.jpg Detect Driver FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the driver's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1858181580.jpg FRS Right Thigh Obstacle Not Detected - Driver * 1858181580.jpg FRS Right Thigh Obstacle Detected - Driver * 1858181580.jpg FRS Fore/Aft Obstacle Detected - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function -253609622.jpg Manage Driver FRS Power Pitch Slide

Moves the driver seat to allow the second row to pitch forward. While moving, it will provide feedback to the second row

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Manage Driver FRS Power Pitch Slide | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  SeatSlidDrv\_D\_Rq | SeatSlidDrv\_D\_Rq :  SeatSlidDrv\_D\_Rq | | |  |  |  |
| Review in model  SeatMovComplR2Drv\_L\_Act | SeatMovComplR2Drv\_L\_Act :  SeatMovComplR2Drv\_L\_Act | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Manage Driver FRS Power Pitch Slide

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Manage Driver FRS Power Pitch Slide | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  DesiredPositionForeAft | DesiredPositionForeAft :  DesiredPositionForeAft | | |  |  |  |
| Review in model  DesiredPositionInclineRecline | DesiredPositionInclineRecline :  DesiredPositionInclineRecline | | |  |  |  |
| Review in model  Requestor ID | Requestor ID : | | |  |  |  |
| Review in model  SeatMovDrv\_T\_Actl | SeatMovDrv\_T\_Actl :  SeatMovDrv\_T\_Actl | | |  |  |  |
| Review in model  SeatMovCompltDrv\_T\_Act | SeatMovCompltDrv\_T\_Act :  SeatMovCompltDrv\_T\_Act | | |  |  |  |
| Review in model  SeatMovCompltDrv\_L\_Act | SeatMovCompltDrv\_L\_Act :  SeatMovCompltDrv\_L\_Act | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Manage Driver FRS Power Pitch Slide

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Manage Driver FRS Power Pitch Slide

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |
|  |  |  | -149177611.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-149177611.jpg - 1R Driver Transition to Enabled Feedback

While the first row driver's seat is transitioning to the "Enabled" position, the "DSM" shall output:

1) SeatMovDrv\_T\_Actl

2) SeatMovCompltDrv\_T\_Act

3) SeatMovCompltDrv\_L\_Act

Satisfied by:

* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Provides information to the second row seats to prevent them from hitting the first row seats | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Request 1R Driver Return to Drive

While the first row driver's seat is in the "Enabled" position and the "DSM" receives "SeatSlidDrv\_D\_Rq" == "Returning", the "DSM" shall restore the seat position from before the seat transitioned to "Enabled"

Satisfied by:

* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Tells the first row seat that it can return to the drive position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Request 1R Driver Pitch to Enabled

When the "DSM" receives "SeatSlidDrv\_D\_Rq" == "Enabling", it shall move the seat to the "Enabled" position

Satisfied by:

* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Moves the front row seat out of the way for second row power pitch/slide | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - 1R Driver Limited Behavior in Enabled Position

While the "DSM" is in the "Enabled" state for power pitch slide, it shall set:

1) "Minimum Driver Fore/Aft Soft Position" = "Limited PPS Minimum Driver Fore/Aft Position"

2) "Maximum Driver Incline/Recline Soft Position" = "Limited PPS Maximum Driver Incline/Recline Position"

Satisfied by:

* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents first row seat from moving into the second row seat while pitched | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Enabled for Power Pitch/Slide

When the "DSM" has transitioned to the "Enabled" position or one of the following conditions are met:

1) PPSPitchRestrictedByComfortAdj == Prohibited OR

2) StowRequestToEnterWork == True OR

3) RejuvRelaxRequest == True OR

4) RejuvInvigorateRequest == True

it shall transition from the "Pitch (Transition Normal-to-Enabled)" state to the "Enabled" state and set flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Terminates the transition to enabled and sets flags for the enabled state | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Pitching for Power Pitch/Slide

When the "DSM" receives "SeatSlidDrv\_D\_Rq" == "Enabling" and the following conditions are met:

1) PPSPitchRestrictedByDriveMode ~= Prohibited AND

2) PPSPitchRestrictedByComfortAdj ~= Prohibited

it shall transition from the "Idle" state to the "Pitch (Transition Normal-to-Enabled)" state, move the seat to the "enabled" position, and set flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates transition to enabling and sets flags | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Returning for Power Pitch/Slide

When the "DSM" receives "SeatSlidDrv\_D\_Rq" == "Returning" and the following conditions are met:

1) PPSPitchRestrictedByDriveMode ~= Prohibited AND

2) PPSPitchRestrictedByComfortAdj ~= Prohibited

it shall transition from the "Enabled" state to the "Return (Transition Enabled-to-Normal)" state, move the seat to the previous position before pitching, and set flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags, initiates return to drive mode, and sets flags for returning | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Idle for Power Pitch/Slide

When the "DSM" has transitioned to the previous position before pitching or one of the following conditions are met:

1) PPSReturnRestrictedByComfortAdj == Prohibited OR

2) EEEERequestGotoEEEE == True OR

3) MemoryRecallRequest == True OR

4) StowRequestToEnterWork == True OR

5) StowRequestToExitWork == True OR

6) RejuvRelaxRequest == True OR

7) RejuvInvigorateRequest == True OR

8) RejuvExitRequest == True

it shall transition from the "Return (Transition Enabled-to-Normal)" state to the "Idle" state and reset flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions to idle for PPS when triggered | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Invigorate Mode for Rejuvenate

When the "DSM" has transitioned to the "Relax" position or one of the following conditions are met:

1) RejuvInvigorateRestrictedByComfortAdj == Prohibited OR

2) PPSRequestToEnable == True OR

3) MemoryRecallRequest == True

it shall transition from the "Transition to Invigorate" state to the "Invigorate Mode" state and set flags for "Rejuvenate"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Trigger for transition from moving to invigorate mode to idle at invigorate position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

Arbitrate unsupervised adjustment requests for the driver's comfort

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Arbitrate Driver FRS Unsupervised Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  CurrentPositionHeadrestForeAft | CurrentPositionHeadrestForeAft :  CurrentPositionHeadrestForeAft | | |  |  |  |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  CurrentPositionSeatHeight | CurrentPositionSeatHeight :  CurrentPositionSeatHeight | | |  |  |  |
| Review in model  CurrentPositionTilt | CurrentPositionTilt :  CurrentPositionTilt | | |  |  |  |
| Review in model  CurrentPositionHeadrestHeight | CurrentPositionHeadrestHeight :  CurrentPositionHeadrestHeight | | |  |  |  |
| Review in model  CurrentPositionHorizontalLumbar | CurrentPositionHorizontalLumbar :  CurrentPositionHorizontalLumbar | | |  |  |  |
| Review in model  CurrentPositionVerticalLumbar | CurrentPositionVerticalLumbar :  CurrentPositionVerticalLumbar | | |  |  |  |
| Review in model  CurrentPositionRightThigh | CurrentPositionRightThigh :  CurrentPositionRightThigh | | |  |  |  |
| Review in model  CurrentPositionLeftThigh | CurrentPositionLeftThigh : | | |  |  |  |
| Review in model  CurrentPositionThoracic | CurrentPositionThoracic :  CurrentPositionThoracic | | |  |  |  |
| Review in model  ForeAftObstacleStatus | ForeAftObstacleStatus :  ForeAftObstacleStatus | | |  |  |  |
| Review in model  InclineReclineObstacleStatus | InclineReclineObstacleStatus :  InclineReclineObstacleStatus | | |  |  |  |
| Review in model  HeadrestHeightObstacleStatus | HeadrestHeightObstacleStatus :  SeatHeightObstacleStatus | | |  |  |  |
| Review in model  CushionTiltObstacleStatus | CushionTiltObstacleStatus : | | |  |  |  |
| Review in model  HeadrestHeightObstacleStatus | HeadrestHeightObstacleStatus :  HeadrestHeightObstacleStatus | | |  |  |  |
| Review in model  HeadrestForeAftObstacleStatus | HeadrestForeAftObstacleStatus :  HeadrestForeAftObstacleStatus | | |  |  |  |
| Review in model  HorizontalLumbarObstacleStatus | HorizontalLumbarObstacleStatus :  HorizontalLumbarObstacleStatus | | |  |  |  |
| Review in model  VerticalLumbarObstacleStatus | VerticalLumbarObstacleStatus :  VerticalLumbarObstacleStatus | | |  |  |  |
| Review in model  RightThighObstacleStatus | RightThighObstacleStatus :  RightThighObstacleStatus | | |  |  |  |
| Review in model  LeftThighObstacleStatus | LeftThighObstacleStatus :  LeftThighObstacleStatus | | |  |  |  |
| Review in model  ThoracicObstacleStatus | ThoracicObstacleStatus :  ThoracicObstacleStatus | | |  |  |  |
| Review in model  DesiredPositionForeAft | DesiredPositionForeAft :  DesiredPositionForeAft | | |  |  |  |
| Review in model  DesiredPositionInclineRecline | DesiredPositionInclineRecline :  DesiredPositionInclineRecline | | |  |  |  |
| Review in model  DesiredPositionSeatHeight | DesiredPositionSeatHeight :  DesiredPositionSeatHeight | | |  |  |  |
| Review in model  DesiredPositionTilt | DesiredPositionTilt :  DesiredPositionTilt | | |  |  |  |
| Review in model  DesiredPositionHeadrestHeight | DesiredPositionHeadrestHeight :  DesiredPositionHeadrestHeight | | |  |  |  |
| Review in model  DesiredPositionHeadrestForeAft | DesiredPositionHeadrestForeAft :  DesiredPositionHeadrestForeAft | | |  |  |  |
| Review in model  DesiredPositionHorizontalLumbar | DesiredPositionHorizontalLumbar :  DesiredPositionHorizontalLumbar | | |  |  |  |
| Review in model  DesiredPositionVerticalLumbar | DesiredPositionVerticalLumbar :  DesiredPositionVerticalLumbar | | |  |  |  |
| Review in model  DesiredPositionRightThigh | DesiredPositionRightThigh :  DesiredPositionRightThigh | | |  |  |  |
| Review in model  DesiredPositionLeftThigh | DesiredPositionLeftThigh :  DesiredPositionLeftThigh | | |  |  |  |
| Review in model  DesiredPositionThoracic | DesiredPositionThoracic :  DesiredPositionThoracic | | |  |  |  |
| Review in model  Requestor | Requestor : | | |  |  |  |
| Review in model  Veh\_V\_ActlBrk | Veh\_V\_ActlBrk :  Veh\_V\_ActlBrk | | |  |  |  |
| Review in model  TrnPrkSys\_D\_Actl | TrnPrkSys\_D\_Actl :  TrnPrkSys\_D\_Actl | | |  |  |  |
| Review in model  Ignition\_Status | Ignition\_Status :  Ignition\_Status | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Arbitrate Driver FRS Unsupervised Adjustment Request

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Arbitrate Driver FRS Unsupervised Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ThoracicAdjustment | ThoracicAdjustment :  ThoracicAdjustment | | |  |  |  |
| Review in model  HorizontalLumbarAdjustment | HorizontalLumbarAdjustment :  HorizontalLumbarAdjustment | | |  |  |  |
| Review in model  ForeAndAftAdjustment | ForeAndAftAdjustment :  ForeAftAdjustment | | |  |  |  |
| Review in model  HeadrestHeightAdjustment | HeadrestHeightAdjustment :  HeadrestHeightAdjustment | | |  |  |  |
| Review in model  LeftThighAdjustment | LeftThighAdjustment :  LeftThighAdjustment | | |  |  |  |
| Review in model  HeadrestForeAftAdjustment | HeadrestForeAftAdjustment :  HeadrestForeAftAdjustment | | |  |  |  |
| Review in model  SeatTiltAdjustment | SeatTiltAdjustment :  TiltAdjustment | | |  |  |  |
| Review in model  RightThighAdjustment | RightThighAdjustment :  RightThighAdjustment | | |  |  |  |
| Review in model  HeightAdjustment | HeightAdjustment :  SeatHeightAdjustment | | |  |  |  |
| Review in model  VerticalLumbarAdjustment | VerticalLumbarAdjustment :  VerticalLumbarAdjustment | | |  |  |  |
| Review in model  InclineReclineAdjustment | InclineReclineAdjustment :  InclineReclineAdjustment | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Arbitrate Driver FRS Unsupervised Adjustment Request

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Arbitrate Driver FRS Unsupervised Adjustment Request

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 706132548.jpg |  |
|  |  |  | 706132548.jpg |  |
|  |  |  | 706132548.jpg |  |
|  |  |  | -149177611.jpg |  |
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|  |  |  | 706132548.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

706132548.jpg - Transition 1R Driver to Move to Drive Position

When the "DSM" receives "EEEERequestGotoDrive == True" and the following conditions are met:

1) EEEEGotoDriveRestrictedByDriveMode ~= Prohibited AND

2) EEEEGotoDriveRestrictedByComfortAdj ~= Prohibited AND

3) EEEEGotoDriveRestrictedByPPS ~= Prohibited AND

4) EEEEGotoDriveRestrictedByStow ~= Prohibited AND

5) EEEEGotoDriveRestrictedByRejuv ~= Prohibited

it shall transition from the "EEEE Mode" state to the "Transition to Drive" state, move the seat to the previous position before moving to the the "Easy Entry/Easy Exit" position, and set flags for "Easy Entry/Easy Exit"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates return to drive mode | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Idle Without Moving for PPS

When the "DSM" receives ""SeatSlidDrv\_D\_Rq" == "Returning"" and one of the following conditions are met:

1) PPSReturnRestrictedByDriveMode == Prohibited OR

2) PPSReturnRestrictedByComfortAdj == Prohibited

it shall transition from the "Enabled" state to the "Idle" state and reset flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions PPS state to idle even though the seat is blocked from moving | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Moving to Memory Recall Position

When the "DSM" receives a memory recall request while in the "Idle" memory recall state and the following condtions are met:

1) MemoryRecallRestrictedByDriveMode ~= Prohibited AND

2) MemoryRecallRestrictedByComfortAdj ~= Prohibited AND

3) MemoryRecallRestrictedByPPS ~= Prohibited AND

4) MemoryRecallRestrictedByEEEE ~= Prohibited AND

5) MemoryRecallRestrictedByStow ~= Prohibited

it shall transition to moving to the desired memory profile position.

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates a memory recall | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Returning for Power Pitch/Slide

When the "DSM" receives "SeatSlidDrv\_D\_Rq" == "Returning" and the following conditions are met:

1) PPSPitchRestrictedByDriveMode ~= Prohibited AND

2) PPSPitchRestrictedByComfortAdj ~= Prohibited

it shall transition from the "Enabled" state to the "Return (Transition Enabled-to-Normal)" state, move the seat to the previous position before pitching, and set flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags, initiates return to drive mode, and sets flags for returning | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Idle for Power Pitch/Slide

When the "DSM" has transitioned to the previous position before pitching or one of the following conditions are met:

1) PPSReturnRestrictedByComfortAdj == Prohibited OR

2) EEEERequestGotoEEEE == True OR

3) MemoryRecallRequest == True OR

4) StowRequestToEnterWork == True OR

5) StowRequestToExitWork == True OR

6) RejuvRelaxRequest == True OR

7) RejuvInvigorateRequest == True OR

8) RejuvExitRequest == True

it shall transition from the "Return (Transition Enabled-to-Normal)" state to the "Idle" state and reset flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions to idle for PPS when triggered | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Moving to Relax for Rejuvenate

When the "DSM" receives "RejuvRelaxRequest == True" and the following conditions are met:

1) RejuvRelaxRestrictedByDriveMode ~= Prohibited AND

2) RejuvRelaxRestrictedByComfortAdj ~= Prohibited AND

3) RejuvRelaxRestrictedByStow ~= Prohibited

it shall transition from the "Drive Mode" state to the "Transition to Relax" state, move the seat to the "Relax" position, and set flags for "Rejuvenate"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Check flags and initates moving to relax mode | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Headrest Height Down * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Incline/Recline Forward * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Right Thigh In * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Seat Height Down * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Vertical Lumbar Up * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Fore/Aft Forward * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Right Thigh Out * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Fore/Aft Rearward * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Seat Tilt Down * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Headrest Height Up * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Horizontal Lumbar More Support * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Horizontal Lumbar Less Support * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Vertical Lumbar Down * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Headrest Fore/Aft Forward * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Incline/Recline Rearward * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Thoracic Out * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Seat Height Up * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Seat Tilt Up * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Left Thigh Out * -1084403727.jpg Arbitrate Externally Requested Desired Positions * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Thoracic In * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Headrest Fore/Aft Rearward * -1084403727.jpg Arbitrate Externally Requested FRS Comfort Position - Driver Left Thigh In | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Drive Mode for EEEE

When the "DSM" has transitioned to the the previous position before moving to the the "Easy Entry/Easy Exit" position or one of the following conditions are met:

1) Transition == Finished OR

2) EEEEGotoDriveRestrictedByComfortAdj == Prohibited

3) MemoryRecallRequest == True OR

4) StowRequestToEnterWork == True OR

5) StowRequestToExitWork == True OR

6) RejuvRelaxRequest == True OR

7) RejuvInvigorateRequest == True OR

8) RejuvExitRequest == True

it shall transition from the "Transition to Drive" state to the "Drive Mode" state and reset flags for "Easy Entry/Easy Exit"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Trigger for transition from moving to drive mode to idle at the drive position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Parked and Stopped

When the "DSM" receives "Veh\_V\_ActlBrk" < 5KPH and is in the "Not Parked And Stopped" state, it shall transition to state "Parked And Stopped" and reset the flags for "Drive Mode"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents driver side unsupervised movements while driving | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Deployed for Stowable Steering

When the "DSM" receives confirmation that the transition to deployed for stowable steering is finished or one of the following conditions are met:

1) StowEnterWorkRestrictedByComfortAdj == Prohibited OR

2) PPSRequestToEnable == True OR

3) PPSRequestToReturn == True

it shall transition from the "Transition to Deployed" state to the "Deployed" state and set flags for "Stowable Steering"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Trigger for transition from deploying to idle at deployed state | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Pitching for Power Pitch/Slide

When the "DSM" receives "SeatSlidDrv\_D\_Rq" == "Enabling" and the following conditions are met:

1) PPSPitchRestrictedByDriveMode ~= Prohibited AND

2) PPSPitchRestrictedByComfortAdj ~= Prohibited

it shall transition from the "Idle" state to the "Pitch (Transition Normal-to-Enabled)" state, move the seat to the "enabled" position, and set flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates transition to enabling and sets flags | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Drive Mode Without Moving for EEEE

When the "DSM" receives "EEEERequestGotoDrive == True" and one of the following conditions are met:

1) EEEEGotoDriveRestrictedByDriveMode == Prohibited OR

2) EEEEGotoDriveRestrictedByComfortAdj == Prohibited OR

3) EEEEGotoDriveRestrictedByPPS == Prohibited OR

4) EEEEGotoDriveRestrictedByStow == Prohibited OR

5) EEEEGotoDriveRestrictedByRejuv == Prohibited

it shall transition from the "EEEE Mode" state to the "Drive Mode" state and reset flags for "Easy Entry/Easy Exit"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions EEEE state to idle even though the seat is blocked from moving | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Invigorate Mode for Rejuvenate

When the "DSM" has transitioned to the "Relax" position or one of the following conditions are met:

1) RejuvInvigorateRestrictedByComfortAdj == Prohibited OR

2) PPSRequestToEnable == True OR

3) MemoryRecallRequest == True

it shall transition from the "Transition to Invigorate" state to the "Invigorate Mode" state and set flags for "Rejuvenate"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Trigger for transition from moving to invigorate mode to idle at invigorate position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Moving to Drive for Rejuvenate

When the "DSM" is in either the "Transition to Relax", "Relax Mode", "Transition to Invigorate", or "Invigorate Mode" rejuvenate state and receives "RejuvExitRequest == True" with the following conditions met:

1) RejuvExitRestrictedByDriveMode ~= Prohibited AND

2) RejuvExitRestrictedByComfortAdj ~= Prohibited AND

3) RejuvExitRestrictedByPPS ~= Prohibited AND

4) RejuvExitRestrictedByStow ~= Prohibited

it shall transition from its current state to "Transition to Drive", move the seat to the previous position before it transitioned to "Relax Mode", and set the flags for "Rejuvenate"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates moving to drive mode | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Move to EEEE Position

When the "DSM" receives "EEEERequestGotoEEEE == True" and the following conditions are met:

1) EEEEGotoEEEERestrictedByDriveMode ~= Prohibited AND

2) EEEEGotoEEEERestrictedByComfortAdj ~= Prohibited AND

3) EEEEGotoEEEERestrictedByPPS ~= Prohibited AND

4) EEEEGotoEEEERestrictedByStow ~= Prohibited AND

5) EEEEGotoEEEERestrictedByRejuv ~= Prohibited

it shall transition from the "Drive Mode" state to the "Transition to EEEE" state, move the seat to the "Easy Entry/Easy Exit" position, and set flags for "Easy Entry/Easy Exit"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates transition to EEEE | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to EEEE Mode

When the "DSM" has transitioned to the "Easy Entry/Easy Exit" position or one of the following conditions are met:

1) EEEEGotoEEEERestrictedByComfortAdj == Prohibited OR

2) PPSRequestToEnable == True OR

3) PPSRequestToReturn == True OR

4) StowRequestToEnterWork == True OR

5) StowRequestToExitWork == True OR

6) RejuvRelaxRequest == True OR

7) RejuvInvigorateRequest == True OR

8) RejuvExitRequest == True

it shall transition from the "Transition to EEEE" state to the "EEEE Mode" state and set flags for "Easy Entry/Easy Exit"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Trigger for transition from moving to EEEE to idle at EEEE position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Not Parked and Stopped

When the "DSM" receives "Veh\_V\_ActlBrk" >= 5KPH and is in the "Parked and Stopped" state, it shall transition to the state "Not Parked And Stopped" and set the flags for "Drive Mode"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Allows driver side unsupervised movements while moving under 5 kph | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Stowing for Stowable Steering

When the "DSM" receives "StowRequestToExitWork == True" and the following conditions are met:

1) StowExitWorkRestrictedByDriveMode ~= Prohibited AND

2) StowExitWorkRestrictedByComfortAdj ~= Prohibited AND

3) StowExitWorkRestrictedByPPS ~= Prohibited AND

4) StowExitWorkRestrictedByRejuv ~= Prohibited

it shall transition from the "Deployed" state to the "Transition to Stowed" state, move the seat to the "Stowed" position, and set flags for "Stowable Steering"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates stowing for stowable steering | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Relax Mode for Rejuvenate

When the "DSM" has transitioned to the "Relax" position or one of the following conditions are met:

1) RejuvRelaxRestrictedByComfortAdj == Prohibited OR

2) PPSRequestToEnable == True OR

3) MemoryRecallRequest == True

it shall transition from the "Transition to Relax" state to the "Relax Mode" state and set flags for "Rejuvenate"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Tigger for transition from moving to relax mode to idle at relax position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-149177611.jpg - Transition 1R Driver to Enabled for Power Pitch/Slide

When the "DSM" has transitioned to the "Enabled" position or one of the following conditions are met:

1) PPSPitchRestrictedByComfortAdj == Prohibited OR

2) StowRequestToEnterWork == True OR

3) RejuvRelaxRequest == True OR

4) RejuvInvigorateRequest == True

it shall transition from the "Pitch (Transition Normal-to-Enabled)" state to the "Enabled" state and set flags for "Power Pitch Slide"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -253609622.jpg Manage Driver FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Terminates the transition to enabled and sets flags for the enabled state | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Moving to Second Memory Recall Position

When the "DSM" receives a memory recall request while in the "Moving to Memory Recall Position" state, it shall transition to moving to the new desired memory profile position.

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Updates desired positions to last memory recall request | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Stowed for Drive Mode for Stowable Steering

When the "DSM" receives confirmation that the transition to stowed for stowable steering is finished or one of the following conditions are met:

1) StowEnterWorkRestrictedByComfortAdj == Prohibited OR

2) PPSRequestToEnable == True OR

3) PPSRequestToReturn == True OR

4) EEEERequestGotoDrive == True OR

5) EEEERequestGotoEEEE == True

it shall transition from the "Transition to Stowed" state to the "Stowed for Drive Mode" state and reset flags for "Stowable Steering"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Trigger for transition from stowing to idle at stowed state | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Calf Rest Hardswitch Pie Plate 1R Passenger Actuation Rearward

While "CurrentPositionCalfRest" > "Minimum Passenger Calf Rest Soft Position" AND "ActiveDevice" == "Calf Rest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward" = ON, the "SCMB\_PSM" shall output "Pass\_CalfRaise\_AdjCommand" to move in the rearward direction

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* -1722944321.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1084403727.jpg Arbitrate Requested FRS Comfort Position - Passenger Calf Rest In | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Deploying for Stowable Steering

When the "DSM" receives "StowRequestToEnterWork == True" and the following conditions are met:

1) StowEnterWorkRestrictedByDriveMode ~= Prohibited AND

2) StowEnterWorkRestrictedByComfortAdj ~= Prohibited AND

3) StowEnterWorkRestrictedByRejuv ~= Prohibited

it shall transition from the "Stowed for Drive Mode" state to the "Transition to Deployed" state, move the seat to the "Deployed" position, and set flags for "Stowable Steering"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates deploying for stowable steering | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Idle for Memory Recall

When the "DSM" has transitioned the seat to the desired memory profile position OR one of the following conditions are met:

1) MemoryRecallRestrictedByComfortAdj == Prohibited OR

2) EEEERequestGotoDrive == True OR

3) EEEERequestGotoEEEE == True OR

4) MemoryRecallRequest == True OR

5) StowRequestToEnterWork == True OR

6) StowRequestToExitWork == True OR

7) RejuvRelaxRequest == True OR

8) RejuvInvigorateRequest == True OR

9) RejuvExitRequest == True

it shall transition back to the idle memory recall state.

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates no memory recall is being performed anymore | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Drive Mode for Rejuvenate

When the "DSM" is in the "Transition to Drive" rejuvenate state and has moved the seat to the previous position before it transitioned to "Relax Mode" or one of the following conditions are met:

1) RejuvExitRestrictedByComfortAdj == Prohibited OR

2) PPSRequestToEnable == True OR

3) MemoryRecallRequest == True

it shall transition from the "Transition to Drive" state to the "Drive Mode" rejuvenate state and reset the flags for "Rejuvenate"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Trigger for transition from moving to drive mode to idle at drive position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

706132548.jpg - Transition 1R Driver to Moving to Invigorate for Rejuvenate

When the "DSM" receives "RejuvInvigorateRequest == True" and the following conditions are met:

1) RejuvInvigorateRestrictedByDriveMode ~= Prohibited AND

2) RejuvInvigorateRestrictedByComfortAdj ~= Prohibited AND

3) RejuvInvigorateRestrictedByStow ~= Prohibited

it shall transition from the "Relax Mode" state to the "Transition to Invigorate" state, move the seat to the "Invigorate" position, and set flags for "Rejuvenate"

Satisfied by:

* 2125428331.jpg Arbitrate Driver FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates moving to invigorate mode | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

### LIN DC Motor

LIN DC Motor

#### Technology Function -1722944321.jpg Actuate Driver FRS Headrest Height

Provide up/down actuation of the driver's headrest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_HeadRest\_Up/Down\_AdjCommand | Drv\_HeadRest\_Up/Down\_AdjCommand :  Drv\_HeadrestUp/Down\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Headrest Height

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_HeadRest\_Up/Down\_MotorCurrent | Drv\_HeadRest\_Up/Down\_MotorCurrent :  Drv\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Headrest Height

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Headrest Height

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 706132548.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

706132548.jpg - Headrest Up/Down Actuation for 1R Driver

The "Driver Side 1R Headrest Height DC Motor" shall provide movements of the driver's side headrest in the upward or downward direction when it receives "Drv\_Headrest\_Up/Down\_AdjCommand"

Satisfied by:

* -1722944321.jpg Actuate Driver FRS Headrest Height

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat headrest in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1084403727.jpg Actuate FRS Headrest Height Position Down - Passenger * -1084403727.jpg Actuate FRS Headrest Height Position Up - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function -1722944321.jpg Actuate Driver FRS Headrest Fore/Aft

Provide fore/aft actuation of the driver's headrest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Headrest Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Headrest\_Fore/Aft\_AdjCommand | Drv\_Headrest\_Fore/Aft\_AdjCommand :  Drv\_HeadrestFore/Aft\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Headrest Fore/Aft

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Headrest Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Headrest\_Fore/Aft\_MotorCurrent | Drv\_Headrest\_Fore/Aft\_MotorCurrent :  Drv\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Headrest Fore/Aft

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Headrest Fore/Aft

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -372474549.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-372474549.jpg - Headrest Fore/Aft Actuation for 1R Driver

The "Driver Side 1R Headrest Fore/Aft DC Motor" shall provide movements of the driver's side headrest in the forward or rearward direction when it receives "Drv\_Headrest\_Fore/Aft\_AdjCommand"

Satisfied by:

* -1722944321.jpg Actuate Driver FRS Headrest Fore/Aft

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat headrest in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 2113707817.jpg Actuate FRS Headrest Fore/Aft Position Forward - Driver * 2113707817.jpg Actuate FRS Headrest Fore/Aft Position Rearward - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 384854361.jpg Actuate Passenger FRS Headrest Height

Provide up/down actuation of the passenger's headrest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_HeadRest\_Up/Down\_AdjCommand | Pass\_HeadRest\_Up/Down\_AdjCommand :  Pass\_HeadrestUp/Down\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Headrest Height

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_HeadRest\_Up/Down\_MotorCurrent | Pass\_HeadRest\_Up/Down\_MotorCurrent :  Pass\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Headrest Height

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Headrest Height

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -372474549.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-372474549.jpg - Headrest Up/Down Actuation for 1R Passenger

The "Passenger Side 1R Headrest Height DC Motor" shall provide movements of the driver's side headrest in the upward or downward direction when it receives "Pass\_Headrest\_Up/Down\_AdjCommand"

Satisfied by:

* 384854361.jpg Actuate Passenger FRS Headrest Height

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat headrest in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 384854361.jpg Actuate Passenger FRS Headrest Fore/Aft

Provide fore/aft actuation of the passenger's headrest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Headrest Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Headrest\_Fore/Aft\_AdjCommand | Pass\_Headrest\_Fore/Aft\_AdjCommand :  Pass\_HeadrestFore/Aft\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Headrest Fore/Aft

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Headrest Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Headrest\_Fore/Aft\_MotorCurrent | Pass\_Headrest\_Fore/Aft\_MotorCurrent :  Pass\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Headrest Fore/Aft

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Headrest Fore/Aft

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -372474549.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-372474549.jpg - Headrest Fore/Aft Actuation for 1R Passenger

The "Passenger Side 1R Headrest Fore/Aft DC Motor" shall provide movements of the driver's side headrest in the forward or rearward direction when it receives "Pass\_Headrest\_Fore/Aft\_AdjCommand"

Satisfied by:

* 384854361.jpg Actuate Passenger FRS Headrest Fore/Aft

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat headrest in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 2113707817.jpg Actuate FRS Headrest Fore/Aft Position Rearward - Passenger * 2113707817.jpg Actuate FRS Headrest Fore/Aft Position Forward - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

### APIM

APIM

#### Technology Function 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

Requests adjustments of the driver's seat via the first row infotainment screen

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request Driver FRS Manual Adjustment through Soft Button | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SeatDevcAdjDrv\_D\_Rq | SeatDevcAdjDrv\_D\_Rq :  SeatDevcAdjDrv\_D\_Rq | | |  |  |  |
| Review in model  SeatDevcSetDrv\_D\_Rq | SeatDevcSetDrv\_D\_Rq :  SeatDevcSetDrv\_D\_Rq | | |  |  |  |
| Review in model  SeatHeadrstAdjDrv\_D\_Rq | SeatHeadrstAdjDrv\_D\_Rq :  SeatHeadrstAdjDrv\_D\_Rq | | |  |  |  |
| Review in model  SeatSetMnuDrv\_D\_Rq | SeatSetMnuDrv\_D\_Rq :  SeatSetMnuDrv\_D\_Rq | | |  |  |  |
| Review in model  StmsDrv\_D\_RqMnu | StmsDrv\_D\_RqMnu : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request Driver FRS Manual Adjustment through Soft Button

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request Driver FRS Manual Adjustment through Soft Button

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -372474549.jpg |  |
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|  |  |  | -372474549.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-372474549.jpg - HMI 1R Driver Middle Lumbar Selection

While "Middle Lumbar" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Stat" = "Middle Lumbar"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Massage Intensity Selection Off

While "Massage Pattern (n)" is selected and the selected intensity is "Off", the "APIM" shall output "StmsDrv\_D\_RqMnu" = "Off"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Menu Not Active

While no seat comfort menu for the driver's side is showing on the "infotainment screen",the "APIM" shall output "SeatSetMnuDrv\_D\_Rq" = "Inactive"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Massage Header Selection

While the "Massage" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuDrv\_D\_Rq" = "Massage Menu"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Left Thigh Extension Selection

While "Left Thigh Extension Adjustment" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Rq" = "Left Thigh Extension"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Massage Intensity Selection Medium

While "Massage Pattern (n)" is selected and the selected intensity is "Medium", the "APIM" shall output "StmsDrv\_D\_RqMnu" = "Medium"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Headrest Header Selection

While the "Headrest" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuDrv\_D\_Rq" = "Headrest Menu"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Headrest Adjustment Down

While the user presses the down arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjDrv\_D\_Rq" = "Down"

2) "SeatDevcSetDrv\_D\_Rq" = "Headrest"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Headrest Adjustment Up

While the user presses the up arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjDrv\_D\_Rq" = "Up"

2) "SeatDevcSetDrv\_D\_Rq" = "Headrest"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Selected Adjustment Increase Req

While the user presses the right arrow with either the "Right Thigh", "Left Thigh", or "Thoracic" support slected, the "APIM" shall output:

1) "SeatDevcAdjDrv\_D\_Rq" = "Increase"

2) "SeatDevcSetDrv\_D\_Rq" = "ActiveDevice"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Right Thigh Extension Selection

While "Right Thigh Extension Adjustment" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Rq" = "Right Thigh Extension"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Thoracic Selection

While "Thoracic Adjustment" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Rq" = "Thoracic"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Seat Back Header Selection

While the "Seat Back" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuDrv\_D\_Rq" = "Seat Back Menu"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Upper Lumbar Selection

While "Upper Lumbar" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Stat" = "Upper Lumbar"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Headrest Adjustment Rearward

While the user presses the left arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjDrv\_D\_Rq" = "Rearward"

2) "SeatDevcSetDrv\_D\_Rq" = "Headrest"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Selected Adjustment Decrease Req

While the user presses the left arrow with either the "Right Thigh", "Left Thigh", or "Thoracic" support slected, the "APIM" shall output:

1) "SeatDevcAdjDrv\_D\_Rq" = "Decrease"

2) SeatDevcSetDrv\_D\_Rq" = "ActiveDevice"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Headrest Adjustment Forward

While the user presses the right arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjDrv\_D\_Rq" = "Forward"

2) "SeatDevcSetDrv\_D\_Rq" = "Headrest"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Seat Cushion Header Selection

While the "Seat Cushion" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuDrv\_D\_Rq" = "Seat Cushion Menu"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Lumbar Adjustment Request Increase

While the user presses the Right Arrow with either the "Upper Lumbar", "Middle Lumbar", OR "Lower Lumbar" selected, the "APIM" shall output "SeatDevcAdjDrv\_D\_Rq" = "Increase"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Lumbar Adjustment Request Decrease

While the user presses the Left Arrow with either the "Upper Lumbar", "Middle Lumbar", OR "Lower Lumbar" selected, the "APIM" shall output "SeatDevcAdjDrv\_D\_Rq" = "Decrease"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Header Select

While any header is selected on the "infotainment screen", the corresponding menu will open and the APIM will output "SeatDevcSetDrv\_D\_Rq" = "Inactive"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Massage Pattern (n) Selection

While "Massage Pattern (n)" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Rq" = "Massage Pattern (n)"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Massage Intensity Selection High

While "Massage Pattern (n)" is selected and the selected intensity is "High", the "APIM" shall output "StmsDrv\_D\_RqMnu" = "High"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Massage Intensity Selection Low

While "Massage Pattern (n)" is selected and the selected intensity is "Low", the "APIM" shall output "StmsDrv\_D\_RqMnu" = "Low"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Lower Lumbar Selection

While "Lower Lumbar" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Stat" = "Lower Lumbar"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-372474549.jpg - HMI 1R Driver Headrest Selection

While "Headrest Adjustment" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetDrv\_D\_Rq" = "Headrest"

Satisfied by:

* 384854361.jpg Request Driver FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the DSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 384854361.jpg Display Driver FRS Seat Position

Displays the current driver seat settings to the infotainment screen

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Display Driver FRS Seat Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  SeatDevcSetDrv\_D\_Stat | SeatDevcSetDrv\_D\_Stat :  SeatDevcSetDrv\_D\_Stat | | |  |  |  |
| Review in model  SeatSetMnuDrv\_D\_Stat | SeatSetMnuDrv\_D\_Stat :  SeatSetMnuDrv\_D\_Stat | | |  |  |  |
| Review in model  SeatThrcicAdjDrv\_PC\_Act | SeatThrcicAdjDrv\_PC\_Act :  SeatThrcAdjDrv\_PC\_Act | | |  |  |  |
| Review in model  StmsDrv\_D\_Stat | StmsDrv\_D\_Stat :  StmsDrv\_D\_Stat | | |  |  |  |
| Review in model  SeatLmbrPosDrv\_Pc\_Actl | SeatLmbrPosDrv\_Pc\_Actl :  SeatLmbrPosDrv\_Pc\_Actl | | |  |  |  |
| Review in model  SeatSetNotfnDrv\_D\_Rq | SeatSetNotfnDrv\_D\_Rq :  SeatSetNotfnDrv\_D\_Rq | | |  |  |  |
| Review in model  SeatThghLExtnDrv\_Pc\_Act | SeatThghLExtnDrv\_Pc\_Act :  SeatThghLExtnDrv\_Pc\_Act | | |  |  |  |
| Review in model  SeatThghRExtnDrv\_Pc\_Act | SeatThghRExtnDrv\_Pc\_Act :  SeatThghRExtnDrv\_Pc\_Act | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Display Driver FRS Seat Position

###### Outputs

(No outputs have been defined)

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Display Driver FRS Seat Position

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1913607537.jpg |  |
|  |  |  | 1913607537.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1913607537.jpg - 1R Driver Mirror Position

The "APIM" shall receive:

1) "SeatThrcAdjDrv\_Pc\_Act"

2) "SeatThghLExtnDrv\_Pc\_Act"

3) "SeatThghRExtnDrv\_Pc\_Act"

and update the displayed status for the thoracic, right thigh, and left thigh supports

Satisfied by:

* 384854361.jpg Display Driver FRS Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to display position of seat supports that are adjustable via the active menu/pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1913607537.jpg - Display Prompt 1 from 1R Driver Side

The "APIM" shall display prompt message 1 when it receives "SeatSetNotfnDrv\_D\_Rq" == "Pop 1".

Satisfied by:

* 384854361.jpg Display Driver FRS Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to prompt user regarding the pie plate and active menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

Requests adjustments of the passenger's seat via the first row infotainment screen

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request Passenger FRS Manual Adjustment through Soft Button | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SeatCshnRclPsn\_D\_RqMnu | SeatCshnRclPsn\_D\_RqMnu :  SeatCshnRclPsn\_D\_RqMnu | | |  |  |  |
| Review in model  SeatSetMnuPsngr\_D\_Rq | SeatSetMnuPsngr\_D\_Rq :  SeatSetMnuPsngr\_D\_Rq | | |  |  |  |
| Review in model  SeatHeadrstAdjPsn\_D\_Rq | SeatHeadrstAdjPsn\_D\_Rq :  SeatHeadrstAdjPsn\_D\_Rq | | |  |  |  |
| Review in model  SeatDevcSetPsngr\_D\_Rq | SeatDevcSetPsngr\_D\_Rq :  SeatDevcSetPsngr\_D\_Rq | | |  |  |  |
| Review in model  SeatDevcAdjPsngr\_D\_Rq | SeatDevcAdjPsngr\_D\_Rq :  SeatDevcAdjPsngr\_D\_Rq | | |  |  |  |
| Review in model  StmsPsngr\_D\_RqMnu | StmsPsngr\_D\_RqMnu :  StmsPsngr\_D\_RqMnu | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request Passenger FRS Manual Adjustment through Soft Button

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request Passenger FRS Manual Adjustment through Soft Button

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -2002922817.jpg |  |
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|  |  |  | -2002922817.jpg |  |
|  |  |  | -2002922817.jpg |  |
|  |  |  | -2002922817.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-2002922817.jpg - HMI 1R Passenger Headrest Adjustment Forward

While the user presses the right arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjPsn\_D\_Rq" = "Forward"

2) "SeatDevcSetPsngr\_D\_Rq" = "Headrest"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Middle Lumbar Selection

While "Middle Lumbar" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetPsngr\_D\_Stat" = "Middle Lumbar"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Selected Adjustment Increase Req

While the user presses the right arrow with either the "Calf Rest" or "Thoracic" support slected, the "APIM" shall output:

1) "SeatDevcAdjPsngr\_D\_Rq" = "Increase"

2) "SeatDevcSetPsngr\_D\_Rq" = "ActiveDevice"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Headrest Selection

While "Headrest Adjustment" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetPsngr\_D\_Rq" = "Headrest"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Selected Adjustment Decrease Req

While the user presses the left arrow with either the "Calf Rest" or "Thoracic" support slected, the "APIM" shall output:

1) "SeatDevcAdjPsngr\_D\_Rq" = "Decrease"

2) SeatDevcSetPsngr\_D\_Rq" = "ActiveDevice"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Lower Lumbar Selection

While "Lower Lumbar" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetPsngr\_D\_Stat" = "Lower Lumbar"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Calf Rest Selection

While "Calf Rest Adjustment" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetPsngr\_D\_Rq" = "Calf Raise Extension"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Upper Lumbar Selection

While "Upper Lumbar" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetPsngr\_D\_Stat" = "Upper Lumbar"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Massage Intensity Selection High

While "Massage Pattern (n)" is selected and the selected intensity is "High", the "APIM" shall output "StmsPsngr\_D\_RqMnu" = "High"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Seat Back Header Selection

While the "Seat Back" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuPsngr\_D\_Rq" = "Seat Back Menu"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Menu Not Active

While no seat comfort menu for the driver's side is showing on the "infotainment screen",the "APIM" shall output "SeatSetMnuPsngr\_D\_Rq" = "Inactive"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Headrest Header Selection

While the "Headrest" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuPsngr\_D\_Rq" = "Headrest Menu"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Massage Intensity Selection Medium

While "Massage Pattern (n)" is selected and the selected intensity is "Medium", the "APIM" shall output "StmsPsngr\_D\_RqMnu" = "Medium"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Header Select

While any header is selected on the "infotainment screen", the corresponding menu will open and the APIM will output "SeatDevcSetPsngr\_D\_Rq" = "Inactive"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Massage Header Selection

While the "Massage" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuPsngr\_D\_Rq" = "Massage Menu"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Lumbar Adjustment Request Decrease

While the user presses the Left Arrow with either the "Upper Lumbar", "Middle Lumbar", OR "Lower Lumbar" selected, the "APIM" shall output "SeatDevcAdjPsngr\_D\_Rq" = "Decrease"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Lumbar Adjustment Request Increase

While the user presses the Right Arrow with either the "Upper Lumbar", "Middle Lumbar", OR "Lower Lumbar" selected, the "APIM" shall output "SeatDevcAdjPsngr\_D\_Rq" = "Increase"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Headrest Adjustment Up

While the user presses the up arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjPsn\_D\_Rq" = "Up"

2) "SeatDevcSetPsngr\_D\_Rq" = "Headrest"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Thoracic Selection

While "Thoracic Adjustment" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetPsngr\_D\_Rq" = "Thoracic"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Massage Pattern (n) Selection

While "Massage Pattern (n)" is selected in the "infotainment screen", the "APIM" shall output "SeatDevcSetPsngr\_D\_Rq" = "Massage Pattern (n)"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Massage Intensity Selection Low

While "Massage Pattern (n)" is selected and the selected intensity is "Low", the "APIM" shall output "StmsPsngr\_D\_RqMnu" = "Low"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Headrest Adjustment Rearward

While the user presses the left arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjPsn\_D\_Rq" = "Rearward"

2) "SeatDevcSetPsngr\_D\_Rq" = "Headrest"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Seat Cushion Header Selection

While the "Seat Cushion" menu is open on the "infotainment screen", the "APIM" shall output "SeatSetMnuPsngr\_D\_Rq" = "Seat Cushion Menu"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Massage Intensity Selection Off

While "Massage Pattern (n)" is selected and the selected intensity is "Off", the "APIM" shall output "StmsPsngr\_D\_RqMnu" = "Off"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - HMI 1R Passenger Headrest Adjustment Down

While the user presses the down arrow on the headrest menu, the "APIM" shall output:

1) "SeatHeadrstAdjPsn\_D\_Rq" = "Down"

2) "SeatDevcSetPsngr\_D\_Rq" = "Headrest"

Satisfied by:

* 605845705.jpg Request Passenger FRS Manual Adjustment through Soft Button

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1219529586.jpg Display Passenger FRS Seat Position

Displays the current passenger seat settings to the infotainment screen

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Display Passenger FRS Seat Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  SeatSetMnuPsngr\_D\_Stat | SeatSetMnuPsngr\_D\_Stat :  SeatSetMnuPsngr\_D\_Stat | | |  |  |  |
| Review in model  SeatDevcSetPsngr\_D\_St | SeatDevcSetPsngr\_D\_St :  SeatDevcSetPsngr\_D\_St | | |  |  |  |
| Review in model  SeatThrcAdjPsng\_Pc\_Act | SeatThrcAdjPsng\_Pc\_Act :  SeatThrcAdjPsng\_Pc\_Act | | |  |  |  |
| Review in model  SeatCalfRaisPsn\_Pc\_Actl | SeatCalfRaisPsn\_Pc\_Actl :  SeatCalfRaisPsn\_Pc\_Actl | | |  |  |  |
| Review in model  StmsPsngr\_D\_Stat | StmsPsngr\_D\_Stat :  StmsPsngr\_D\_Stat | | |  |  |  |
| Review in model  SeatMasgPsger\_Pc\_Act | SeatMasgPsger\_Pc\_Act :  SeatSetNotfnPsngr\_D\_Rq | | |  |  |  |
| Review in model  SeatLmbrPosPsng\_Pc\_Act | SeatLmbrPosPsng\_Pc\_Act :  SeatLmbrPosPsng\_Pc\_Act | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Display Passenger FRS Seat Position

###### Outputs

(No outputs have been defined)

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Display Passenger FRS Seat Position

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -2002922817.jpg |  |
|  |  |  | -2002922817.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-2002922817.jpg - Display Prompt 1 from 1R Passenger Side

The "APIM" shall display prompt message 1 when it receives "SeatSetNotfnPsngr\_D\_Rq" == "Pop 1".

Satisfied by:

* 1219529586.jpg Display Passenger FRS Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to prompt user regarding the pie plate and active menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-2002922817.jpg - 1R Passenger Mirror Position

The "APIM" shall receive:

1) "SeatThrcAdjPsng\_Pc\_Act"

2) "SeatCalfRaisPsn\_Pc\_Actl"

and update the displayed status for the thoracic and calf rest supports.

Satisfied by:

* 1219529586.jpg Display Passenger FRS Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to display position of seat supports that are adjustable via the active menu/pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

### RACM

RACM

#### Technology Function 1219529586.jpg Provide Chauffeur Adjustment Requests

Requests adjustments of the first row passenger seat from the second row passenger seat infotainment screen

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Provide Chauffeur Adjustment Requests | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SeatCshnRclCtlPsn\_D\_Rq3 | SeatCshnRclCtlPsn\_D\_Rq3 :  SeatCshnRclCtlPsn\_D\_Rq3 | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Provide Chauffeur Adjustment Requests

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Provide Chauffeur Adjustment Requests

##### Function Requirements

No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

### 2nd Row Seat Switch Assembly

2nd Row Seat Switch Assembly

#### Technology Function 1219529586.jpg Request Passenger FRS Adjustment through SRS Switch Assembly

Requests adjustments of the first row passenger seat via the hard switches on the second row passenger seat comfort switch assembly

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request Passenger FRS Adjustment through SRS Switch Assembly | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SRSPass\_HS\_Fore/Aft\_Req | SRSPass\_HS\_Fore/Aft\_Req : | | |  |  |  |
| Review in model  SRSPass\_HS\_Incline/Recline\_Req | SRSPass\_HS\_Incline/Recline\_Req : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request Passenger FRS Adjustment through SRS Switch Assembly

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request Passenger FRS Adjustment through SRS Switch Assembly

##### Function Requirements

No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

### Second Row Seat System

Second Row Seat System

### SCMB\_PSM

SCMB\_PSM

#### Technology Function 1219529586.jpg Control Requested Passenger FRS Comfort Position

Provide movement requests to the passenger side motors

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Control Requested Passenger FRS Comfort Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAndAftAdjustment | ForeAndAftAdjustment :  ForeAftAdjustment | | |  |  |  |
| Review in model  InclineReclineAdjustment | InclineReclineAdjustment :  InclineReclineAdjustment | | |  |  |  |
| Review in model  HeightAdjustment | HeightAdjustment :  SeatHeightAdjustment | | |  |  |  |
| Review in model  SeatTiltAdjustment | SeatTiltAdjustment :  TiltAdjustment | | |  |  |  |
| Review in model  HeadrestHeightAdjustment | HeadrestHeightAdjustment :  HeadrestHeightAdjustment | | |  |  |  |
| Review in model  HeadrestForeAftAdjustment | HeadrestForeAftAdjustment :  HeadrestForeAftAdjustment | | |  |  |  |
| Review in model  HorizontalLumbarAdjustment | HorizontalLumbarAdjustment :  HorizontalLumbarAdjustment | | |  |  |  |
| Review in model  VerticalLumbarAdjustment | VerticalLumbarAdjustment :  VerticalLumbarAdjustment | | |  |  |  |
| Review in model  CalfAdjustment | CalfAdjustment :  CalfRestAdjustment | | |  |  |  |
| Review in model  ThoracicAdjustment | ThoracicAdjustment :  ThoracicAdjustment | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Control Requested Passenger FRS Comfort Position

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Control Requested Passenger FRS Comfort Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Fore/Aft\_AdjCommand  ForeAftAdjustment | Pass\_Fore/Aft\_AdjCommand :  Pass\_Fore/Aft\_AdjCommand | | |  |  |  |
| Review in model  Pass\_Incline/Recline\_AdjCommand | Pass\_Incline/Recline\_AdjCommand :  Pass\_Incline/Recline\_AdjCommand | | |  |  |  |
| Review in model  Pass\_Height\_AdjCommand  CurrentPositionSeatHeight | Pass\_Height\_AdjCommand :  Pass\_Height\_AdjCommand | | |  |  |  |
| Review in model  Pass\_Tilt\_AdjCommand | Pass\_Tilt\_AdjCommand :  Pass\_Tilt\_AdjCommand | | |  |  |  |
| Review in model  Pass\_HeadRest\_Up/Down\_AdjCommand | Pass\_HeadRest\_Up/Down\_AdjCommand :  Pass\_HeadrestUp/Down\_AdjCommand | | |  |  |  |
| Review in model  Pass\_Headrest\_Fore/Aft\_AdjCommand | Pass\_Headrest\_Fore/Aft\_AdjCommand :  Pass\_HeadrestFore/Aft\_AdjCommand | | |  |  |  |
| Review in model  Pass\_HorizontalLumbar\_AdjCommand | Pass\_HorizontalLumbar\_AdjCommand :  Pass\_HorizontalLumbar\_AdjCommand | | |  |  |  |
| Review in model  Pass\_VerticalLumbar\_AdjCommand | Pass\_VerticalLumbar\_AdjCommand :  Pass\_VerticalLumbar\_AdjCommand | | |  |  |  |
| Review in model  Pass\_CalfRaise\_AdjCommand | Pass\_CalfRaise\_AdjCommand :  Pass\_Calf Rest\_AdjCommand | | |  |  |  |
| Review in model  Pass\_Thoracic\_AdjCommand | Pass\_Thoracic\_AdjCommand :  Pass\_Thoracic\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Control Requested Passenger FRS Comfort Position

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Control Requested Passenger FRS Comfort Position

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1480068303.jpg |  |
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|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1480068303.jpg - Stop 1R Passenger Seat Height Actuation

When "HeightAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Height Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Seat Tilt Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Tilt Motor", it shall

1) Set "Pass\_Tilt\_AdjCommand" to move the "Passenger Side 1R Tilt Motor" by "Tilt Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Seat Cushion Tilt Obstacle Not Detected - Passenger * -1660172776.jpg FRS Seat Cushion Tilt Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Vertical Lumbar Actuation

When "VerticalLumbarAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Vertical Lumbar Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Seat Tilt Actuation

When "SeatTiltAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Tilt Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Vertical Lumbar Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Vertical Lumbar Motor", it shall

1) Set "Pass\_VerticalLumbar\_AdjCommand" to move the "Passenger Side 1R Vertical Lumbar Motor" by "Vertical Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Not Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Calf Rest Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Calf Rest Motor", it shall

1) Set "Pass\_CalfRaise\_AdjCommand" to move the "Passenger Side 1R Calf Rest Motor" by "Calf Rest Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Fore/Aft Actuation

When "ForeAndAftAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Fore/Aft Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Horizontal Lumbar Actuation

When "HorizontalLumbarAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Horizontal Lumbar Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Calf Rest Actuation

When "CalfRestAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Calf Rest Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Fore/Aft Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Fore/Aft Motor", it shall

1) Set "Pass\_Fore/Aft\_AdjCommand" to move the "Passenger Side 1R Fore/Aft Motor" by "Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Not Detected - Passenger * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Incline/Recline Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Incline/Recline Motor", it shall

1) Set "Pass\_Incline/Recline\_AdjCommand" to move the "Passenger Side 1R Incline/Recline Motor" by "Incline/Recline Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Incline/Recline Obstacle Detected - Passenger * -1660172776.jpg FRS Incline/Recline Obstacle Not Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Thoracic Hardswitch Pie Plate 1R Passenger Actuation Rearward

While "CurrentPositionThoracic" > "Minimum Passenger Thoracic Soft Position" AND "ActiveDevice" == "Thoracic" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward" = ON, the "SCMB\_PSM" shall output "Pass\_Thoracic\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg Arbitrate Requested FRS Comfort Position - Passenger Thoracic In | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Seat Height Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Height Motor", it shall

1) Set "Pass\_Height\_AdjCommand" to move the "Passenger Side 1R Height Motor" by "Height Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Seat Height Obstacle Not Detected - Passenger * -1660172776.jpg FRS Seat Height Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Thoracic Support Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Thoracic Motor", it shall

1) Set "Pass\_Thoracic\_AdjCommand" to move the "Passenger Side 1R Thoracic Motor" by "Thoracic Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Thoracic Obstacle Detected - Passenger * -1660172776.jpg FRS Thoracic Obstacle Not Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Horizontal Lumbar Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Horizontal Lumbar Motor", it shall

1) Set "Pass\_HorizontalLumbar\_AdjCommand" to move the "Passenger Side 1R Horizontal Lumbar Motor" by "Horizontal Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Not Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Thoracic Hardswitch Pie Plate 1R Passenger Actuation Forward

While "CurrentPositionThoracic" < "Maximum Passenger Thoracic Soft Position" AND "ActiveDevice" == "Thoracic" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward" = ON, the "SCMB\_PSM" shall output "Pass\_Thoracic\_AdjCommand" to move in the forward direction

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg Arbitrate Requested FRS Comfort Position - Passenger Thoracic Out | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Incline/Recline Actuation

When "InclineReclineAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Incline/Recline Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Headrest Fore/Aft Actuation

When "HeadrestForeAftAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Headrest Fore/Aft Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Headrest Height Actuation

When "HeadrestHeightAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Headrest Height Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Headrest Fore/Aft Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Headrest Fore/Aft Motor", it shall

1) Set "Pass\_HeadrestFore/Aft\_AdjCommand" to move the "Passenger Side 1R Headrest Fore/Aft Motor" by "Headrest Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Headrest Fore/Aft Obstacle Not Detected - Passenger * -1660172776.jpg FRS Headrest Fore/Aft Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Headrest Up/Down Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Headrest Up/Down Motor", it shall

1) Set "Pass\_HeadrestUp/Down\_AdjCommand" to move the "Passenger Side 1R Headrest Up/Down Motor" by "Headrest Up/Down Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Headrest Height Obstacle Detected - Passenger * -1660172776.jpg FRS Headrest Height Obstacle Not Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Stop 1R Passenger Thoracic Support Actuation

When "ThoracicAdjustment" transitions to NULL, the "SCMB\_PSM" shall reverse the poles/current until the "Passenger's Side 1R Thoracic Motor" has stopped.

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to continue tracking position while seat comes to a stop | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 512183693.jpg Translate Passenger FRS Motor current to Seat Position

Monitors ripples in the passenger side motor feedback to track the position of each motor

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Translate Passenger FRS Motor current to Seat Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Pass\_Incline/Recline\_MotorCurrent :  Pass\_Incline/Recline\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Pass\_Fore/Aft\_MotorCurrent :  Pass\_Fore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Height\_MotorCurrent | Pass\_Height\_MotorCurrent :  Pass\_Height\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Tilt\_MotorCurrent  CurrentPositionTilt | Pass\_Tilt\_MotorCurrent :  Pass\_Tilt\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_HeadRest\_Up/Down\_MotorCurrent | Pass\_HeadRest\_Up/Down\_MotorCurrent :  Pass\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Headrest\_Fore/Aft\_MotorCurrent | Pass\_Headrest\_Fore/Aft\_MotorCurrent :  Pass\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_HorizontalLumbar\_MotorCurrent | Pass\_HorizontalLumbar\_MotorCurrent :  Pass\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_VerticalLumbar\_MotorCurrent | Pass\_VerticalLumbar\_MotorCurrent :  Pass\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_CalfRest\_MotorCurrent  CurrentPositionCalfRest  CalfRestObstacleStatus | Pass\_CalfRest\_MotorCurrent :  Pass\_Calf Rest\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Pass\_Thoracic\_MotorCurrent :  Pass\_Thoracic\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Translate Passenger FRS Motor current to Seat Position

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Translate Passenger FRS Motor current to Seat Position | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  CurrentPositionSeatHeight | CurrentPositionSeatHeight :  CurrentPositionSeatHeight | | |  |  |  |
| Review in model  CurrentPositionTilt | CurrentPositionTilt :  CurrentPositionTilt | | |  |  |  |
| Review in model  CurrentPositionHeadrestHeight | CurrentPositionHeadrestHeight :  CurrentPositionHeadrestHeight | | |  |  |  |
| Review in model  CurrentPositionHeadrestForeAft | CurrentPositionHeadrestForeAft :  CurrentPositionHeadrestForeAft | | |  |  |  |
| Review in model  CurrentPositionHorizontalLumbar | CurrentPositionHorizontalLumbar :  CurrentPositionHorizontalLumbar | | |  |  |  |
| Review in model  CurrentPositionVerticalLumbar | CurrentPositionVerticalLumbar :  CurrentPositionVerticalLumbar | | |  |  |  |
| Review in model  CurrentPositionCalfRest | CurrentPositionCalfRest :  CurrentPositionCalfRest | | |  |  |  |
| Review in model  CurrentPositionThoracic | CurrentPositionThoracic :  CurrentPositionThoracic | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Translate Passenger FRS Motor current to Seat Position

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Translate Passenger FRS Motor current to Seat Position

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |
|  |  |  | 1238467189.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1238467189.jpg - Track 1R Passenger Headrest Fore/Aft Position

The "SCMB\_PSM" shall monitor "Pass\_HeadrestFore/Aft\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Headrest Fore/Aft Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Seat Tilt Position

The "SCMB\_PSM" shall monitor "Pass\_Tilt\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Seat Cushion Tilt Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Horizontal Lumbar Position

The "SCMB\_PSM" shall monitor "Pass\_HorizontalLumbar\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Horizontal Lumbar Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Headrest Up/Down Position

The "SCMB\_PSM" shall monitor "Pass\_HeadrestUp/Down\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Headrest Height Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Incline/Recline Position

The "SCMB\_PSM" shall monitor "Pass\_Incline/Recline\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Incline/Recline Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Thoracic Support Position

The "SCMB\_PSM" shall monitor "Pass\_Thoracic\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Thoracic Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Calf Rest Position

The "SCMB\_PSM" shall monitor "Pass\_CalfRest\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Calf Rest Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Vertical Lumbar Position

The "SCMB\_PSM" shall monitor "Pass\_VerticalLumbar\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Vertical Lumbar Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Seat Height Position

The "SCMB\_PSM" shall monitor "Pass\_Height\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Seat Height Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1238467189.jpg - Track 1R Passenger Fore/Aft Position

The "SCMB\_PSM" shall monitor "Pass\_Fore/Aft\_MotorCurrent" and update the position of the passenger's side seat

Satisfied by:

* 512183693.jpg Translate Passenger FRS Motor current to Seat Position

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for unsupervised movement of the first row passenger's seat | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -576936962.jpg FRS Current Fore/Aft Position - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function -932746551.jpg Detect Passenger FRS Motor Stall

Monitor current feedback from passenger side motors to detect motor stall during manual adjustments

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Detect Passenger FRS Motor Stall | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Pass\_Incline/Recline\_MotorCurrent :  Pass\_Incline/Recline\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Height\_MotorCurrent | Pass\_Height\_MotorCurrent :  Pass\_Height\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Tilt\_MotorCurrent  CurrentPositionTilt | Pass\_Tilt\_MotorCurrent :  Pass\_Tilt\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_HeadRest\_Up/Down\_MotorCurrent | Pass\_HeadRest\_Up/Down\_MotorCurrent :  Pass\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Headrest\_Fore/Aft\_MotorCurrent | Pass\_Headrest\_Fore/Aft\_MotorCurrent :  Pass\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Pass\_Fore/Aft\_MotorCurrent :  Pass\_Fore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_HorizontalLumbar\_MotorCurrent | Pass\_HorizontalLumbar\_MotorCurrent :  Pass\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_VerticalLumbar\_MotorCurrent | Pass\_VerticalLumbar\_MotorCurrent :  Pass\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_CalfRest\_MotorCurrent  CurrentPositionCalfRest  CalfRestObstacleStatus | Pass\_CalfRest\_MotorCurrent :  Pass\_Calf Rest\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Pass\_Thoracic\_MotorCurrent :  Pass\_Thoracic\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Detect Passenger FRS Motor Stall

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Detect Passenger FRS Motor Stall | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAftTermination | ForeAftTermination :  ForeAftTermination | | |  |  |  |
| Review in model  InclineReclineTermination | InclineReclineTermination :  InclineReclineTermination | | |  |  |  |
| Review in model  SeatHeightTermination | SeatHeightTermination :  SeatHeightTermination | | |  |  |  |
| Review in model  CushionTiltTermination | CushionTiltTermination :  CushionTiltTermination | | |  |  |  |
| Review in model  HeadrestHeightTermination | HeadrestHeightTermination :  HeadrestHeightTermination | | |  |  |  |
| Review in model  HeadrestForeAftTermination | HeadrestForeAftTermination :  HeadrestForeAftTermination | | |  |  |  |
| Review in model  HorizontalLumbarTermination | HorizontalLumbarTermination :  HoriztonalLumbarTermination | | |  |  |  |
| Review in model  VerticalLumbarTermination | VerticalLumbarTermination :  VerticalLumbarTermination | | |  |  |  |
| Review in model  CalfRestTermination | CalfRestTermination :  CalfRestTermination | | |  |  |  |
| Review in model  ThoracicTermination | ThoracicTermination :  ThoracicTermination | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Detect Passenger FRS Motor Stall

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Detect Passenger FRS Motor Stall

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |
|  |  |  | -680703216.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-680703216.jpg - Detect Motor Stall 1R Passenger Horizontal Lumbar

When the "SCMB\_PSM" detects a motor stall in "Pass\_Horizontal Lumbar\_MotorCurrent", it shall set and hold "Pass\_Horizontal Lumbar\_AdjCommand" to NULL until the "SCMB\_PSM" receives "Lumbar\_Fwd\_Sw\_Rqst" == "OFF" AND "Lumbar\_Rwd\_Sw\_Rqst" == "OFF"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Thoracic

When the "SCMB\_PSM" detects a motor stall in "Pass\_Thoracic\_MotorCurrent", it shall set and hold "Pass\_Thoracic\_AdjCommand" to NULL until the "SCMB\_PSM" receives:

1) "ActiveDevice" ~= "Thoracic" OR

2) "SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND "SeatDevcAdjPsngr\_D\_Rq" == "Inactive"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Height

When the "SCMB\_PSM" detects a motor stall in "Pass\_Height\_MotorCurrent", it shall set and hold "Pass\_Height\_AdjCommand" to NULL until the "SCMB\_PSM" receives "SeatCushUp" == "OFF" AND "SeatCushDown" == "OFF"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Headrest Up/Down

When the "SCMB\_PSM" detects a motor stall in "Pass\_Headrest Up/Down\_MotorCurrent", it shall set and hold "Pass\_Headrest Up/Down\_AdjCommand" to NULL until the "SCMB\_PSM" receives:

1) ("HeadrestUp" == "OFF" AND "HeadrestDown" == "OFF") AND

2) (("ActiveDevice" ~= "Headrest") OR

3) ("SWP\_Pieplate\_Up" == "OFF" AND "SWP\_Pieplate\_Down" == "OFF" AND "SeatHeadrstAdjPsn\_D\_Rq" ~= "Up" AND "SeatHeadrstAdjPsn\_D\_Rq" ~= "Down"))

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Fore/Aft

When the "SCMB\_PSM" detects a motor stall in "Pass\_Fore/Aft\_MotorCurrent", it shall set and hold "Pass\_Fore/Aft\_AdjCommand" to NULL until the "SCMB\_PSM" receives:

1) "SeatCushFwd" == "OFF" AND

2) "SeatCushAft" == "OFF" AND

3) "SeatCshnRclCtlPsn\_D\_Rq" ~= "Cushion Fore" AND

4) "SeatCshnRclCtlPsn\_D\_Rq" ~= "Cushion Backward" AND

5) "SeatCshnRclCtlPsn\_D\_Rq2" ~= "Cushion Fore" AND

6) "SeatCshnRclCtlPsn\_D\_Rq2" ~= "Cushion Backward" AND

7) "SeatCshnRclCtlPsn\_D\_Rq3" ~= "Cushion Fore" AND

8) "SeatCshnRclCtlPsn\_D\_Rq3" ~= "Cushion Backward" AND

9) "SeatCshnRclPsn\_D\_RqMnu" ~= "Cushion Forward" AND

10) "SeatCshnRclPsn\_D\_RqMnu" ~= "Cushion Backward"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Tilt

When the "SCMB\_PSM" detects a motor stall in "Pass\_Tilt\_MotorCurrent", it shall set and hold "Pass\_Tilt\_AdjCommand" to NULL until the "SCMB\_PSM" receives "FrontTiltUp" == "OFF" AND "FrontTiltDown" == "OFF"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Incline/Recline

When the "SCMB\_PSM" detects a motor stall in "Pass\_Incline/Recline\_MotorCurrent", it shall set and hold "Pass\_Incline/Recline\_AdjCommand" to NULL until the "SCMB\_PSM" receives:

1) "SeatBackFwd" == "OFF" AND

2) "SeatBackAft" == "OFF"

3) "SeatCshnRclCtlPsn\_D\_Rq" ~= "Recliner Fore" AND

4) "SeatCshnRclCtlPsn\_D\_Rq" ~= "Recliner Backward" AND

5) "SeatCshnRclCtlPsn\_D\_Rq2" ~= "Recliner Fore" AND

6) "SeatCshnRclCtlPsn\_D\_Rq2" ~= "Recliner Backward" AND

7) "SeatCshnRclCtlPsn\_D\_Rq3" ~= "Recliner Fore" AND

8) "SeatCshnRclCtlPsn\_D\_Rq3" ~= "Recliner Backward" AND

9) "SeatCshnRclPsn\_D\_RqMnu" ~= "Recliner Forward" AND

10) "SeatCshnRclPsn\_D\_RqMnu" ~= "Recliner Backward"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Calf Rest

When the "SCMB\_PSM" detects a motor stall in "Pass\_CalfRest\_MotorCurrent", it shall set and hold "Pass\_Right Thigh Extension\_AdjCommand" to NULL until the "SCMB\_PSM" receives:

1) "ActiveDevice" ~= "Calf Rest" OR

2) "SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND "SeatDevcAdjPsngr\_D\_Rq" == "Inactive"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Vertical Lumbar

When the "SCMB\_PSM" detects a motor stall in "Pass\_Vertical Lumbar\_MotorCurrent", it shall set and hold "Pass\_Vertical Lumbar\_AdjCommand" to NULL until the "SCMB\_PSM" receives "Lumbar\_Up\_Sw\_Rqst" == "OFF" AND "Lumbar\_Dwn\_Sw\_Rqst" == "OFF"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-680703216.jpg - Detect Motor Stall 1R Passenger Headrest Fore/Aft

When the "SCMB\_PSM" detects a motor stall in "Pass\_Headrest Fore/Aft\_MotorCurrent", it shall set and hold "Pass\_Headrest Fore/Aft\_AdjCommand" to NULL until the "SCMB\_PSM" receives:

1) "ActiveDevice" ~= "Headrest" OR

2) "SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND "SeatHeadrstAdjPsn\_D\_Rq" ~= "Fore" AND "SeatHeadrstAdjPsn\_D\_Rq" ~= "Aft"

Satisfied by:

* -932746551.jpg Detect Passenger FRS Motor Stall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to protect the motor from stall damage | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request

Arbitrate unsupervised adjustment requests for the passenger's comfort

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Arbitrate Passenger FRS Unsupervised Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  CurrentPositionSeatHeight | CurrentPositionSeatHeight :  CurrentPositionSeatHeight | | |  |  |  |
| Review in model  CurrentPositionTilt | CurrentPositionTilt :  CurrentPositionTilt | | |  |  |  |
| Review in model  CurrentPositionHeadrestHeight | CurrentPositionHeadrestHeight :  CurrentPositionHeadrestHeight | | |  |  |  |
| Review in model  CurrentPositionHeadrestForeAft | CurrentPositionHeadrestForeAft :  CurrentPositionHeadrestForeAft | | |  |  |  |
| Review in model  CurrentPositionHorizontalLumbar | CurrentPositionHorizontalLumbar :  CurrentPositionHorizontalLumbar | | |  |  |  |
| Review in model  CurrentPositionVerticalLumbar | CurrentPositionVerticalLumbar :  CurrentPositionVerticalLumbar | | |  |  |  |
| Review in model  CurrentPositionCalfRest | CurrentPositionCalfRest :  CurrentPositionCalfRest | | |  |  |  |
| Review in model  CurrentPositionThoracic | CurrentPositionThoracic :  CurrentPositionThoracic | | |  |  |  |
| Review in model  DesiredPositionForeAft | DesiredPositionForeAft :  DesiredPositionForeAft | | |  |  |  |
| Review in model  DesiredPositionInclineRecline | DesiredPositionInclineRecline :  DesiredPositionInclineRecline | | |  |  |  |
| Review in model  DesiredPositionSeatHeight | DesiredPositionSeatHeight :  DesiredPositionSeatHeight | | |  |  |  |
| Review in model  DesiredPositionTilt | DesiredPositionTilt :  DesiredPositionTilt | | |  |  |  |
| Review in model  DesiredPositionHorizontalLumbar | DesiredPositionHorizontalLumbar :  DesiredPositionHorizontalLumbar | | |  |  |  |
| Review in model  DesiredPositionHeadrestHeight | DesiredPositionHeadrestHeight :  DesiredPositionHeadrestHeight | | |  |  |  |
| Review in model  DesiredPositionHeadrestForeAft | DesiredPositionHeadrestForeAft :  DesiredPositionHeadrestForeAft | | |  |  |  |
| Review in model  DesiredPositionVerticalLumbar | DesiredPositionVerticalLumbar :  DesiredPositionVerticalLumbar | | |  |  |  |
| Review in model  DesiredPositionCalfRest | DesiredPositionCalfRest :  DesiredPositionCalfRest | | |  |  |  |
| Review in model  DesiredPositionThoracic | DesiredPositionThoracic :  DesiredPositionThoracic | | |  |  |  |
| Review in model  ForeAftObstacleStatus | ForeAftObstacleStatus :  ForeAftObstacleStatus | | |  |  |  |
| Review in model  InclineReclineObstacleStatus | InclineReclineObstacleStatus :  InclineReclineObstacleStatus | | |  |  |  |
| Review in model  SeatHeightObstacleStatus | SeatHeightObstacleStatus :  SeatHeightObstacleStatus | | |  |  |  |
| Review in model  CushionTiltObstacleStatus | CushionTiltObstacleStatus :  CushionTiltObstacleStatus | | |  |  |  |
| Review in model  HeadrestHeightObstacleStatus | HeadrestHeightObstacleStatus :  HeadrestHeightObstacleStatus | | |  |  |  |
| Review in model  HeadrestForeAftObstacleStatus | HeadrestForeAftObstacleStatus :  HeadrestForeAftObstacleStatus | | |  |  |  |
| Review in model  HorizontalLumbarObstacleStatus | HorizontalLumbarObstacleStatus :  HorizontalLumbarObstacleStatus | | |  |  |  |
| Review in model  VerticalLumbarObstacleStatus | VerticalLumbarObstacleStatus :  VerticalLumbarObstacleStatus | | |  |  |  |
| Review in model  CalfRestObstacleStatus | CalfRestObstacleStatus :  CalfRestObstacleStatus | | |  |  |  |
| Review in model  ThoracicObstacleStatus | ThoracicObstacleStatus :  ThoracicObstacleStatus | | |  |  |  |
| Review in model  Requestor ID | Requestor ID : | | |  |  |  |
| Review in model  Veh\_V\_ActlBrk | Veh\_V\_ActlBrk :  Veh\_V\_ActlBrk | | |  |  |  |
| Review in model  TrnPrkSys\_D\_Actl | TrnPrkSys\_D\_Actl :  TrnPrkSys\_D\_Actl | | |  |  |  |
| Review in model  Ignition\_Status | Ignition\_Status :  Ignition\_Status | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Arbitrate Passenger FRS Unsupervised Adjustment Request

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Arbitrate Passenger FRS Unsupervised Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAndAftAdjustment | ForeAndAftAdjustment :  ForeAftAdjustment | | |  |  |  |
| Review in model  HeightAdjustment | HeightAdjustment :  SeatHeightAdjustment | | |  |  |  |
| Review in model  InclineReclineAdjustment | InclineReclineAdjustment :  InclineReclineAdjustment | | |  |  |  |
| Review in model  HeadrestHeightAdjustment | HeadrestHeightAdjustment :  HeadrestHeightAdjustment | | |  |  |  |
| Review in model  SeatTiltAdjustment | SeatTiltAdjustment :  TiltAdjustment | | |  |  |  |
| Review in model  HorizontalLumbarAdjustment | HorizontalLumbarAdjustment :  HorizontalLumbarAdjustment | | |  |  |  |
| Review in model  VerticalLumbarAdjustment | VerticalLumbarAdjustment :  VerticalLumbarAdjustment | | |  |  |  |
| Review in model  CalfRestAdjustment | CalfRestAdjustment :  CalfRestAdjustment | | |  |  |  |
| Review in model  HeadrestForeAftAdjustment | HeadrestForeAftAdjustment :  HeadrestForeAftAdjustment | | |  |  |  |
| Review in model  ThoracicAdjustment | ThoracicAdjustment :  ThoracicAdjustment | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Arbitrate Passenger FRS Unsupervised Adjustment Request

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Arbitrate Passenger FRS Unsupervised Adjustment Request

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1653241430.jpg - Transition 1R Passenger to Parked and Stopped

When the "SCMB\_PSM" receives "Veh\_V\_ActlBrk" < 5KPH and is in the "Not Parked And Stopped" state, it shall transition to state "Parked And Stopped" and reset the flags for "Drive Mode"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Tracks if the vehicle is moving and sets flags for passenger | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Returning for Power Pitch/Slide

When the "SCMB\_PSM" receives "SeatSlidPsngr\_D\_Rq" == "Returning" and the following conditions are met:

1) PPSReturnRestrictedByComfortAdj ~= Prohibited AND

2) PPSReturnRestrictedByURC ~= Prohibited

it shall transition from the "Idle" state to the "Return (Transition Enabled-to-Normal)" state, move the seat to the previous position before pitching, and set flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags, initiates return to drive mode, and sets flags for returning | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Pitching for Power Pitch/Slide

When the "SCMB\_PSM" receives "SeatSlidPsngr\_D\_Rq" == "Enabling" and the following conditions are met:

1) PPSPitchRestrictedByDriveMode ~= Prohibited AND

2) PPSPitchRestrictedByComfortAdj ~= Prohibited AND

3) PPSPitchRestrictedByURC ~= Prohibited

it shall transition from the "Idle" state to the "Pitch (Transition Normal-to-Enabled)" state, move the seat to the "enabled" position, and set flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates transition to enabling and sets flags | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Moving to Second Memory Recall Position

When the "SCMB\_PSM" receives a memory recall request while in the "Moving to Memory Recall Position" state, it shall transition to moving to the new desired memory profile position.

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Updates desired positions to last memory recall request | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Idle for Memory Recall

When the "SCMB\_PSM" has transitioned the seat to the desired memory profile position OR one of the following condition is met:

1) MemoryRecallRestrictedByComfortAdj == Prohibited

2) URCRequest == True

it shall transition back to the idle memory recall state.

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates no memory recall is being performed anymore | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Idle Without Moving for PPS

When the "SCMB\_PSM" receives ""SeatSlidPsngr\_D\_Rq" == "Returning"" and one of the following conditions are met:

1) PPSReturnRestrictedByComfortAdj == Prohibited OR

2) PPSReturnRestrictedByURC == Prohibited

it shall transition from the "Enabled" state to the "Idle" state and reset flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions to idle for PPS when triggered | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Not Parked and Stopped

When the "SCMB\_PSM" receives "Veh\_V\_ActlBrk" >= 5KPH and is in the "Parked and Stopped" state, it shall transition to the state "Not Parked And Stopped" and set the flags for "Drive Mode"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Tracks if the vehicle is moving and sets flags for passenger | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Moving to Memory Recall Position

When the "SCMB\_PSM" receives a memory recall request while in the "Idle" memory recall state and the following condtions are met:

1) MemoryRecallRestrictedByComfortAdj ~= Prohibited AND

2) MemoryRecallRestrictedByURC ~= Prohibited

it shall transition to moving to the desired memory profile position.

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates a memory recall | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Headrest Height Down * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Left Thigh In * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Incline/Recline Forward * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Thoracic Out * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Horizontal Lumbar Up * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Calf Out * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Right Thigh In * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Horizontal Lumbar Down * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Seat Height Up * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Headrest Fore/Aft Rearward * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Seat Tilt Down * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Seat Tilt Up * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Headrest Height Up * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Thoracic In * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Seat Height Down * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Headrest Fore/Aft Forward * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Vertical Lumbar Less Support * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Calf In * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Fore/Aft Forward * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Right Thigh Out * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Fore/Aft Rearward * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Left Thigh Out * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Incline/Recline Rearward * 2050178230.jpg Arbitrate Externally Requested FRS Comfort Position - Passenger Vertical Lumbar More Support | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Enabled for Power Pitch/Slide

When the "SCMB\_PSM" has transitioned to the "Enabled" position or one of the following conditions are met:

1) PPSPitchRestrictedByComfortAdj == Prohibited OR

2) URCRequest == True

it shall transition from the "Pitch (Transition Normal-to-Enabled)" state to the "Enabled" state and set flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Terminates the transition to enabled and sets flags for the enabled state | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Idle for Power Pitch/Slide

When the "SCMB\_PSM" has transitioned to the previous position before pitching or one of the following conditions are met:

1) PPSReturnRestrictedByComfortAdj == Prohibited OR

2) URCRequest == True OR

3) MemoryRecallRequest == True

it shall transition from the Return (Transition Enabled-to-Normal)" state to the "Idle" state and reset flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions PPS state to idle even though the seat is blocked from moving | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

Monitor current feedback from passenger side motors to detect obstacles during unsupervised adjustments

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Detect Passenger FRS Obstacles and Terminate Supervised Movement | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Pass\_Fore/Aft\_MotorCurrent :  Pass\_Fore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Pass\_Incline/Recline\_MotorCurrent :  Pass\_Incline/Recline\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Height\_MotorCurrent | Pass\_Height\_MotorCurrent :  Pass\_Height\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Tilt\_MotorCurrent  CurrentPositionTilt | Pass\_Tilt\_MotorCurrent :  Pass\_Tilt\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_HeadRest\_Up/Down\_MotorCurrent | Pass\_HeadRest\_Up/Down\_MotorCurrent :  Pass\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Headrest\_Fore/Aft\_MotorCurrent | Pass\_Headrest\_Fore/Aft\_MotorCurrent :  Pass\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_HorizontalLumbar\_MotorCurrent | Pass\_HorizontalLumbar\_MotorCurrent :  Pass\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_VerticalLumbar\_MotorCurrent | Pass\_VerticalLumbar\_MotorCurrent :  Pass\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_CalfRest\_MotorCurrent  CurrentPositionCalfRest  CalfRestObstacleStatus | Pass\_CalfRest\_MotorCurrent :  Pass\_Calf Rest\_MotorCurrent | | |  |  |  |
| Review in model  Pass\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Pass\_Thoracic\_MotorCurrent :  Pass\_Thoracic\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Detect Passenger FRS Obstacles and Terminate Supervised Movement

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Detect Passenger FRS Obstacles and Terminate Supervised Movement | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  ForeAftObstacleStatus | ForeAftObstacleStatus :  ForeAftObstacleStatus | | |  |  |  |
| Review in model  InclineReclineObstacleStatus | InclineReclineObstacleStatus :  InclineReclineObstacleStatus | | |  |  |  |
| Review in model  SeatHeightObstacleStatus | SeatHeightObstacleStatus :  SeatHeightObstacleStatus | | |  |  |  |
| Review in model  CushionTiltObstacleStatus | CushionTiltObstacleStatus :  CushionTiltObstacleStatus | | |  |  |  |
| Review in model  HeadrestHeightObstacleStatus | HeadrestHeightObstacleStatus :  HeadrestHeightObstacleStatus | | |  |  |  |
| Review in model  HeadrestForeAftObstacleStatus | HeadrestForeAftObstacleStatus :  HeadrestForeAftObstacleStatus | | |  |  |  |
| Review in model  HorizontalLumbarObstacleStatus | HorizontalLumbarObstacleStatus :  HorizontalLumbarObstacleStatus | | |  |  |  |
| Review in model  Vertical | Vertical :  VerticalLumbarObstacleStatus | | |  |  |  |
| Review in model  CalfRestObstacleStatus | CalfRestObstacleStatus :  CalfRestObstacleStatus | | |  |  |  |
| Review in model  ThoracicObstacleStatus | ThoracicObstacleStatus :  ThoracicObstacleStatus | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Detect Passenger FRS Obstacles and Terminate Supervised Movement

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Detect Passenger FRS Obstacles and Terminate Supervised Movement

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |
|  |  |  | -1480068303.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1480068303.jpg - Unsupervised Seat Tilt Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Tilt Motor", it shall

1) Set "Pass\_Tilt\_AdjCommand" to move the "Passenger Side 1R Tilt Motor" by "Tilt Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Seat Cushion Tilt Obstacle Not Detected - Passenger * -1660172776.jpg FRS Seat Cushion Tilt Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Thoracic Support Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Thoracic Motor", it shall

1) Set "Pass\_Thoracic\_AdjCommand" to move the "Passenger Side 1R Thoracic Motor" by "Thoracic Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Thoracic Obstacle Detected - Passenger * -1660172776.jpg FRS Thoracic Obstacle Not Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Vertical Lumbar Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Vertical Lumbar Motor", it shall

1) Set "Pass\_VerticalLumbar\_AdjCommand" to move the "Passenger Side 1R Vertical Lumbar Motor" by "Vertical Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Not Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Calf Rest Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Calf Rest Motor", it shall

1) Set "Pass\_CalfRaise\_AdjCommand" to move the "Passenger Side 1R Calf Rest Motor" by "Calf Rest Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Horizontal Lumbar Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Horizontal Lumbar Motor", it shall

1) Set "Pass\_HorizontalLumbar\_AdjCommand" to move the "Passenger Side 1R Horizontal Lumbar Motor" by "Horizontal Lumbar Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Not Detected - Passenger * -1660172776.jpg FRS Lumbar Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Fore/Aft Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Fore/Aft Motor", it shall

1) Set "Pass\_Fore/Aft\_AdjCommand" to move the "Passenger Side 1R Fore/Aft Motor" by "Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Not Detected - Passenger * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Incline/Recline Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Incline/Recline Motor", it shall

1) Set "Pass\_Incline/Recline\_AdjCommand" to move the "Passenger Side 1R Incline/Recline Motor" by "Incline/Recline Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Incline/Recline Obstacle Detected - Passenger * -1660172776.jpg FRS Incline/Recline Obstacle Not Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Headrest Fore/Aft Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Headrest Fore/Aft Motor", it shall

1) Set "Pass\_HeadrestFore/Aft\_AdjCommand" to move the "Passenger Side 1R Headrest Fore/Aft Motor" by "Headrest Fore/Aft Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Headrest Fore/Aft Obstacle Not Detected - Passenger * -1660172776.jpg FRS Headrest Fore/Aft Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Headrest Up/Down Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Headrest Up/Down Motor", it shall

1) Set "Pass\_HeadrestUp/Down\_AdjCommand" to move the "Passenger Side 1R Headrest Up/Down Motor" by "Headrest Up/Down Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Headrest Height Obstacle Detected - Passenger * -1660172776.jpg FRS Headrest Height Obstacle Not Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1480068303.jpg - Unsupervised Seat Height Obstacle Sense for 1R Passenger

When the "SCMB\_PSM" detects an obstacle in the "Passenger 1R Height Motor", it shall

1) Set "Pass\_Height\_AdjCommand" to move the "Passenger Side 1R Height Motor" by "Height Reverse Distance" in the opposite direction

2) Set all other actuator commands to NULL

Satisfied by:

* 1219529586.jpg Control Requested Passenger FRS Comfort Position
* 512183693.jpg Detect Passenger FRS Obstacles and Terminate Supervised Movement

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents the passenger's seat from moving into an obstacle during an unsupervised seat movement | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * -1660172776.jpg FRS Fore/Aft Obstacle Detected - Passenger * -1660172776.jpg FRS Seat Height Obstacle Not Detected - Passenger * -1660172776.jpg FRS Seat Height Obstacle Detected - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1056587636.jpg Manage Passenger FRS Power Pitch Slide

Moves the passenger seat to allow the second row to pitch forward. While moving, it will provide feedback to the second row

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Manage Passenger FRS Power Pitch Slide | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  SeatMovComplR2Psngr\_L\_Act | SeatMovComplR2Psngr\_L\_Act :  SeatMovComplR2Psn\_L\_Act | | |  |  |  |
| Review in model  SeatSlidPsngr\_D\_Rq | SeatSlidPsngr\_D\_Rq :  SeatSlidPsngr\_D\_Rq | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Manage Passenger FRS Power Pitch Slide

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Manage Passenger FRS Power Pitch Slide | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  DesiredPositionForeAft | DesiredPositionForeAft :  DesiredPositionForeAft | | |  |  |  |
| Review in model  DesiredPositionInclineRecline | DesiredPositionInclineRecline :  DesiredPositionInclineRecline | | |  |  |  |
| Review in model  Requestor ID | Requestor ID : | | |  |  |  |
| Review in model  SeatMovCompltPsngr\_T\_Act | SeatMovCompltPsngr\_T\_Act :  SeatMovCompltPsn\_T\_Act | | |  |  |  |
| Review in model  SeatMovCompltPsngr\_L\_Act | SeatMovCompltPsngr\_L\_Act :  SeatMovCompltPsn\_L\_Act | | |  |  |  |
| Review in model  SeatMovPsngr\_T\_Actl | SeatMovPsngr\_T\_Actl :  SeatMovPsngr\_T\_Actl | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Manage Passenger FRS Power Pitch Slide

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Manage Passenger FRS Power Pitch Slide

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | -809649705.jpg |  |
|  |  |  | -809649705.jpg |  |
|  |  |  | -809649705.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | -809649705.jpg |  |
|  |  |  | -809649705.jpg |  |
|  |  |  | 1653241430.jpg |  |
|  |  |  | 1653241430.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

1653241430.jpg - Transition 1R Passenger to Returning for Power Pitch/Slide

When the "SCMB\_PSM" receives "SeatSlidPsngr\_D\_Rq" == "Returning" and the following conditions are met:

1) PPSReturnRestrictedByComfortAdj ~= Prohibited AND

2) PPSReturnRestrictedByURC ~= Prohibited

it shall transition from the "Idle" state to the "Return (Transition Enabled-to-Normal)" state, move the seat to the previous position before pitching, and set flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags, initiates return to drive mode, and sets flags for returning | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Pitching for Power Pitch/Slide

When the "SCMB\_PSM" receives "SeatSlidPsngr\_D\_Rq" == "Enabling" and the following conditions are met:

1) PPSPitchRestrictedByDriveMode ~= Prohibited AND

2) PPSPitchRestrictedByComfortAdj ~= Prohibited AND

3) PPSPitchRestrictedByURC ~= Prohibited

it shall transition from the "Idle" state to the "Pitch (Transition Normal-to-Enabled)" state, move the seat to the "enabled" position, and set flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Checks flags and initiates transition to enabling and sets flags | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-809649705.jpg - 1R Passenger Limited Behavior in Enabled Position

While the "SCMB\_PSM" is in the "Enabled" state for power pitch slide, it shall set:

1) "Minimum Passenger Fore/Aft Soft Position" = "Limited PPS Minimum Passenger Fore/Aft Position"

2) "Maximum Passenger Incline/Recline Soft Position" = "Limited PPS Maximum Passenger Incline/Recline Position"

Satisfied by:

* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents first row seat from moving into the second row seat while pitched | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-809649705.jpg - 1R Passenger Transition to Enabled Feedback

While the first row driver's seat is transitioning to the "Enabled" position, the "SCMB\_PSM" shall output:

1) SeatMovPsngr\_T\_Actl

2) SeatMovCompltPsn\_T\_Act

3) SeatMovCompltPsn\_L\_Act

Satisfied by:

* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Provides information to the second row seats to prevent them from hitting the first row seats | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-809649705.jpg - Request 1R Passenger Return to Drive

While the first row driver's seat is in the "Enabled" position and the "SCMB\_PSM" receives "SeatSlidPsngr\_D\_Rq" == "Returning", the "SCMB\_PSM" shall restore the seat position from before the seat transitioned to "Enabled"

Satisfied by:

* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Tells the first row seat that it can return to the drive position | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Idle Without Moving for PPS

When the "SCMB\_PSM" receives ""SeatSlidPsngr\_D\_Rq" == "Returning"" and one of the following conditions are met:

1) PPSReturnRestrictedByComfortAdj == Prohibited OR

2) PPSReturnRestrictedByURC == Prohibited

it shall transition from the "Enabled" state to the "Idle" state and reset flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions to idle for PPS when triggered | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-809649705.jpg - Request 1R Passenger Pitch to Enabled

When the "SCMB\_PSM" receives "SeatSlidPsngr\_D\_Rq" == "Enabling", it shall move the seat to the "Enabled" position

Satisfied by:

* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Moves the front row seat out of the way for second row power pitch/slide | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-809649705.jpg - 1R Passenger Enabled Limits

When in the "Enabled" position, the "SCMB\_PSM" shall receive:

1) "SeatMovComplR2Psn\_L\_Act"

and use the values to set:

1) "Limited PPS Minimum Passenger Fore/Aft Position"

2) "Limited PPS Maximum Passenger Incline/Recline Position"

Satisfied by:

* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Prevents first row seat from moving into the second row seat while pitched | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Enabled for Power Pitch/Slide

When the "SCMB\_PSM" has transitioned to the "Enabled" position or one of the following conditions are met:

1) PPSPitchRestrictedByComfortAdj == Prohibited OR

2) URCRequest == True

it shall transition from the "Pitch (Transition Normal-to-Enabled)" state to the "Enabled" state and set flags for "Power Pitch Slide"

Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Terminates the transition to enabled and sets flags for the enabled state | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

1653241430.jpg - Transition 1R Passenger to Idle for Power Pitch/Slide

When the "SCMB\_PSM" has transitioned to the previous position before pitching or one of the following conditions are met:

1) PPSReturnRestrictedByComfortAdj == Prohibited OR

2) URCRequest == True OR

3) MemoryRecallRequest == True

it shall transition from the Return (Transition Enabled-to-Normal)" state to the "Idle" state and reset flags for "Power Pitch Slide"

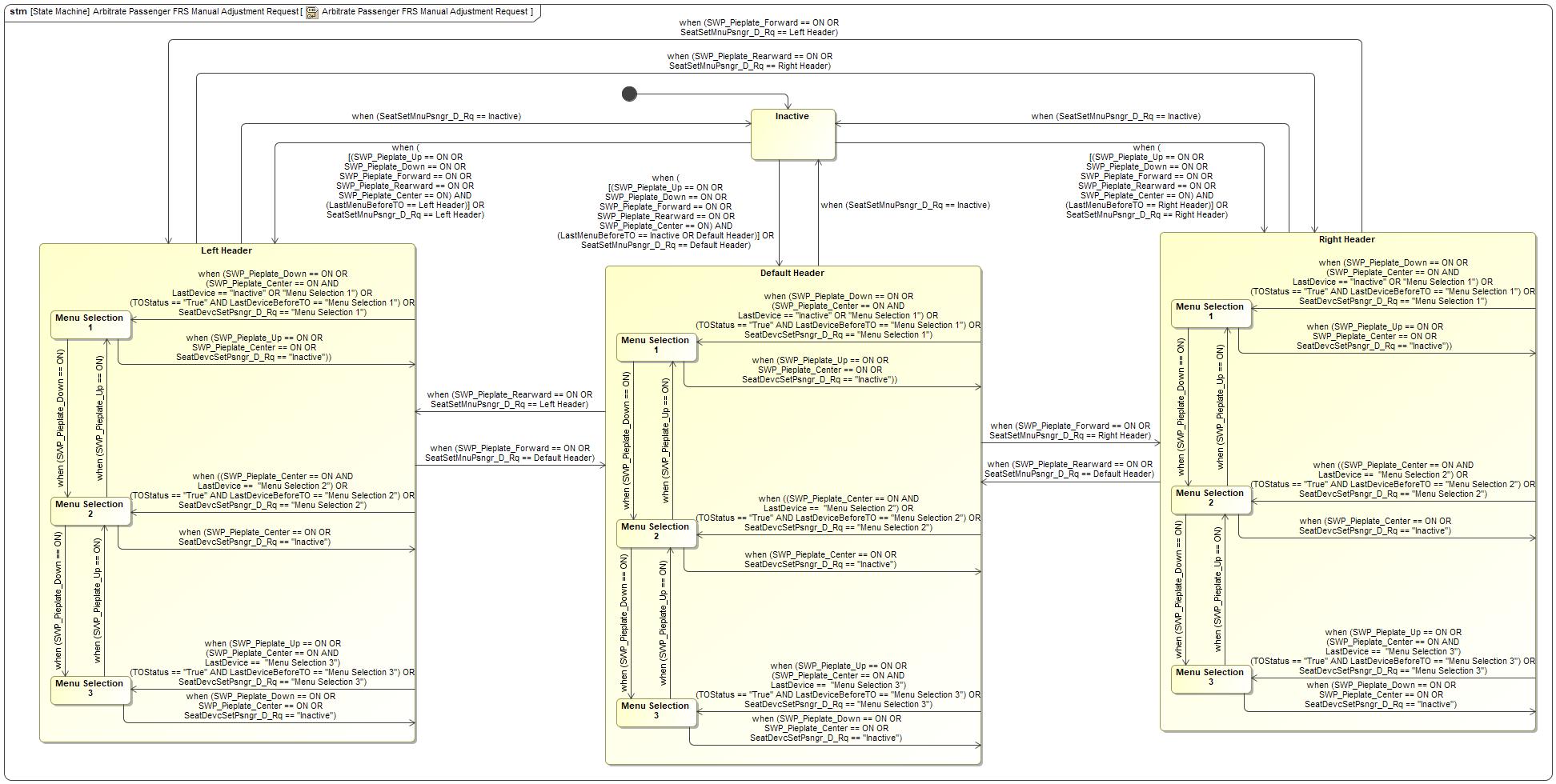
Satisfied by:

* -561509217.jpg Arbitrate Passenger FRS Unsupervised Adjustment Request
* 1056587636.jpg Manage Passenger FRS Power Pitch Slide

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Transitions PPS state to idle even though the seat is blocked from moving | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function -1722944321.jpg Arbitrate Passenger FRS Manual Adjustment Request

Arbitrate manual adjustment requests for the passenger's comfort



##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Arbitrate Passenger FRS Manual Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_HS\_Fore/Aft\_Req | Pass\_HS\_Fore/Aft\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_Incline/Recline\_Req | Pass\_HS\_Incline/Recline\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_Height\_Req | Pass\_HS\_Height\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_Tilt\_Req | Pass\_HS\_Tilt\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_LumbarHorizontal\_Req | Pass\_HS\_LumbarHorizontal\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_ArrowUp\_Req | Pass\_HS\_ArrowUp\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_ArrowDown\_Req | Pass\_HS\_ArrowDown\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_ArrowLeft\_Req | Pass\_HS\_ArrowLeft\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_ArrowRight\_Req | Pass\_HS\_ArrowRight\_Req : | | |  |  |  |
| Review in model  Pass\_HS\_ArrowCenter\_Req | Pass\_HS\_ArrowCenter\_Req : | | |  |  |  |
| Review in model  Pass\_SeatMotorChange\_Rq | Pass\_SeatMotorChange\_Rq : | | |  |  |  |
| Review in model  Pass\_SeatMotor\_Rq | Pass\_SeatMotor\_Rq : | | |  |  |  |
| Review in model  Pass\_ActiveMenu\_Rq | Pass\_ActiveMenu\_Rq : | | |  |  |  |
| Review in model  CurrentPositionThoracic | CurrentPositionThoracic :  CurrentPositionThoracic | | |  |  |  |
| Review in model  CurrentPositionCalfRest | CurrentPositionCalfRest :  CurrentPositionCalfRest | | |  |  |  |
| Review in model  CurrentPositionVerticalLumbar | CurrentPositionVerticalLumbar :  CurrentPositionVerticalLumbar | | |  |  |  |
| Review in model  CurrentPositionHorizontalLumbar | CurrentPositionHorizontalLumbar :  CurrentPositionHorizontalLumbar | | |  |  |  |
| Review in model  CurrentPositionHeadrestForeAft | CurrentPositionHeadrestForeAft :  CurrentPositionHeadrestForeAft | | |  |  |  |
| Review in model  CurrentPositionHeadrestHeight | CurrentPositionHeadrestHeight :  CurrentPositionHeadrestHeight | | |  |  |  |
| Review in model  CurrentPositionTilt | CurrentPositionTilt :  CurrentPositionTilt | | |  |  |  |
| Review in model  CurrentPositionSeatHeight | CurrentPositionSeatHeight :  CurrentPositionSeatHeight | | |  |  |  |
| Review in model  CurrentPositionInclineRecline | CurrentPositionInclineRecline :  CurrentPositionInclineRecline | | |  |  |  |
| Review in model  CurrentPositionForeAft | CurrentPositionForeAft :  CurrentPositionForeAft | | |  |  |  |
| Review in model  ForeAftTermination | ForeAftTermination :  ForeAftTermination | | |  |  |  |
| Review in model  InclineReclineTermination | InclineReclineTermination :  InclineReclineTermination | | |  |  |  |
| Review in model  SeatHeightTermination | SeatHeightTermination :  SeatHeightTermination | | |  |  |  |
| Review in model  CushionTiltTermination | CushionTiltTermination :  CushionTiltTermination | | |  |  |  |
| Review in model  HeadrestHeightTermination | HeadrestHeightTermination :  HeadrestHeightTermination | | |  |  |  |
| Review in model  HeadrestForeAftTermination | HeadrestForeAftTermination :  HeadrestForeAftTermination | | |  |  |  |
| Review in model  HorizontalLumbarTermination | HorizontalLumbarTermination :  HoriztonalLumbarTermination | | |  |  |  |
| Review in model  VerticalLumbarTermination | VerticalLumbarTermination :  VerticalLumbarTermination | | |  |  |  |
| Review in model  CalfRestTermination | CalfRestTermination :  CalfRestTermination | | |  |  |  |
| Review in model  ThoracicTermination | ThoracicTermination :  ThoracicTermination | | |  |  |  |
| Review in model  Pass\_HS\_HeadrestHeight\_Req | Pass\_HS\_HeadrestHeight\_Req : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Arbitrate Passenger FRS Manual Adjustment Request

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Arbitrate Passenger FRS Manual Adjustment Request | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  InclineReclineAdjustment | InclineReclineAdjustment :  InclineReclineAdjustment | | |  |  |  |
| Review in model  ForeAndAftAdjustment | ForeAndAftAdjustment :  ForeAftAdjustment | | |  |  |  |
| Review in model  HeadrestForeAftAdjustment | HeadrestForeAftAdjustment :  HeadrestForeAftAdjustment | | |  |  |  |
| Review in model  CalfAdjustment | CalfAdjustment :  CalfRestAdjustment | | |  |  |  |
| Review in model  HeadrestHeightAdjustment | HeadrestHeightAdjustment :  HeadrestHeightAdjustment | | |  |  |  |
| Review in model  ThoracicAdjustment | ThoracicAdjustment :  ThoracicAdjustment | | |  |  |  |
| Review in model  HorizontalLumbarAdjustment | HorizontalLumbarAdjustment :  HorizontalLumbarAdjustment | | |  |  |  |
| Review in model  VerticalLi,narAdjustment | VerticalLi,narAdjustment :  VerticalLumbarAdjustment | | |  |  |  |
| Review in model  HeightAdjustment | HeightAdjustment :  SeatHeightAdjustment | | |  |  |  |
| Review in model  SeatTiltAdjustment | SeatTiltAdjustment :  TiltAdjustment | | |  |  |  |
| Review in model  Pass\_SeatMotorStat | Pass\_SeatMotorStat : | | |  |  |  |
| Review in model  Pass\_SeatMotorPosition | Pass\_SeatMotorPosition : | | |  |  |  |
| Review in model  Pass\_MenuActive | Pass\_MenuActive : | | |  |  |  |
| Review in model  Pass\_PromptMessage | Pass\_PromptMessage : | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Arbitrate Passenger FRS Manual Adjustment Request

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Arbitrate Passenger FRS Manual Adjustment Request

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
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Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

725882915.jpg - Request Prompt 1 from 1R Passenger Side

When "ActiveMenu" == "Inactive" AND "LastMenuBeforeTO" == "Inactive" AND "PromptDisplayed" == "False" and the "SCMB\_PSM" receives any of the following signals:

1) "SeatCushFwd" = "ON"

2) "SeatCushAft" = "ON"

3) "SeatBackFwd" = "ON"

4) "SeatBackAft" = "ON"

5) "SeatCushUp" = "ON"

6) "SeatCushDown" = "ON"

7) "HeadrestUp" = "ON"

8) "HeadrestDown" = "ON"

9) "FrontTiltUp" = "ON"

10) "FrontTiltDown" = "ON"

it shall:

1) Output "SeatSetNotfnPsngr\_D\_Rq" = "Pop 1"

2) Set "PromptDisplayed" = "True"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to prompt user regarding the pie plate and active menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 2R Chauffeur Recline Forward Selection

While the user presses the "Recline Forward" button on the chauffeur menu, the "RACM" shall:

1) Output "SeatCshnRclCtlPsn\_D\_Rq3" = "Recliner Forward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the second row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Incline/Recline Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Headrest Height Hardswitch Pie Plate 1R Passenger Actuation Up

While "CurrentPositionHeadrestHeight" < "Maximum Passenger Headrest Up/Down Soft Position" AND "ActiveDevice" == "Headrest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Up" = ON, the "SCMB\_PSM" shall output "Pass\_HeadrestUp/Down\_AdjCommand" to move in the upward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Actuate FRS Headrest Height Position Down - Driver * 1012184552.jpg Actuate FRS Headrest Height Position Up - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 1R Chauffeur Pan Rearward Selection

While the user presses the "Pan Rearward" button on the chauffeur menu, the "APIM" shall output:

1) Output "SeatCshnRclCtlPsn\_D\_RqMnu" = "Cushion Rearward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the first row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Fore/Aft Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Back to Header using Center Button

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Menu Selection (n)" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Center", the "SCMB\_PSM" shall:

1) Set "LastDevice" = "ActiveDevice"

2) Set "ActiveDevice" = "Inactive"

3) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Middle Lumbar Selection

When the "SCMB\_PSM" receives "SeatDevcSetPsngr\_D\_Stat" = "Middle Lumbar", it shall set "ActiveDevice" = "Middle Lumbar"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Transition 1R Passenger to Adjusting URC

When the "SCMB\_PSM" receives "URCRequest" == "True", it shall transition from idle to the "Adjusting" ultimate remote control state, set the flags for "Ultimate Remote Control", and respond to additional ultimate remote control adjustment requests.

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates a URC request is being made and blocks external feature requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Horizontal Lumbar Hardswitch 1R Passenger Actuation Forward

While "CurrentPositionHorizontalLumbar" < "Maximum Passenger Horizontal Lumbar Soft Position" AND "Lumbar\_Fwd\_Sw\_Rqst" == "ON", the "SCMB\_PSM" shall output "Pass\_HorizontalLumbar\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Horizontal Lumbar More Support | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Activate Massage Mode

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "OFF" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward", the "SCMB\_PSM" shall:

1) Set "Massage Intensity" = "LOW"

2) Output "StmsPsngr\_D\_Stat" = "LOW"

3) Output "SeatDevcSetPsngr\_D\_St" = "Massage Pattern (n)"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - MCS Lumbar Pie Plate 1R Passenger Increase

While "ActiveDevice" == ("Upper Lumbar" OR "Middle Lumbar" OR " Lower Lumbar") and the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward" = ON, it shall output "StmsPsngr\_D\_Stat" = "Increase"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Massage Intensity Selection Low

When the "SCMB\_PSM" receives "StmsPsngr\_D\_RqMnu" = "Low", it shall set "Massage Intensity" = "Low"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Seat Tilt Hardswitch 1R Passenger Actuation Down

While "CurrentPositionTilt" > "Minimum Passenger Tilt Soft Position" AND "FrontTiltDown" == "ON", the "SCMB\_PSM" shall output "Pass\_Tilt\_AdjCommand" to move in the downward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Headrest Soft Button Upward Adjustment

While "CurrentPositionHeadrestHeight" < "Maximum Passenger Headrest Up/Down Soft Position" AND the "SCMB\_PSM" receives "SeatHeadrstAdjPsn\_D\_Rq" == "Up" and "ActiveDevice" == "Headrest", it shall output "Psngr\_Headrest Fore/Aft\_AdjCommand" to move in the upward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Active Motor Calf Rest

When the "SCMB\_PSM" receives "SeatDevcSetPsngr\_D\_Rq" = "Calf Rest", it shall set "ActiveDevice" = "Calf Rest"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Massage Intensity Selection Medium

When the "SCMB\_PSM" receives "StmsPsngr\_D\_RqMnu" = "Medium", it shall set "Massage Intensity" = "Medium"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Navigation Down

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Menu Selection (n)" AND "ActiveDevice" ~= "Headrest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Down", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" = "Menu Selection (n+1)"

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

If "Menu Selection (n+1)" does not exist under the current "ActiveMenu", the SCMB\_PSM shall:

1) Set "ActiveDevice" = "Inactive"

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Output Status

The "SCMB\_PSM" shall periodically output:

1) "SeatThrcAdjPsng\_Pc\_Act"

2) "SeatCalfRaisPsn\_Pc\_Actl"

to reflect the positions of the thoracic and calf rest supports.

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to display position of seat supports that are adjustable via the active menu/pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 2R Chauffeur Recline Rearward Selection

While the user presses the "Recline Rearward" button on the chauffeur menu, the "RACM" shall output:

1) Output "SeatCshnRclCtlPsn\_D\_Rq3" = "Recliner Rearward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the second row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Incline/Recline Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Back to Last Device Using Center Button

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Inactive" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Center" AND LastDevice ~="Inactive", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" = "LastDevice"

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

If "LastDevice" =="Inactive", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" = "Menu Selection 1"

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Reset 1R Passenger Active Menu

When the vehicle is turned off, the "SCMB\_PSM" shall set:

1) "ActiveMenu" = "Inactive"

2) "ActiveDevice" = "Inactive"

4) "LastDevice" = "Inactive"

5) "PromptDisplayed" = "False"

6) LastDeviceBeforeTO = "Inactive"

7) LastMenuBeforeTO = "Inactive"

8) TOStatus = "False"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required reset of DSM variables for proper active menu behavior when vehicle is turned on | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Headrest Soft Button Rearward Adjustment

While "CurrentPositionHeadrestForeAft" > "Minimum Passenger Headrest Fore/Aft Soft Position" the "SCMB\_PSM" receives "SeatHeadrstAdjPsn\_D\_Rq" == "Rearward" and "ActiveDevice" == "Headrest", it shall output "Psngr\_Headrest Fore/Aft\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Active Motor Thoracic

When the "SCMB\_PSM" receives "SeatDevcSetPsngr\_D\_Rq" = "Thoracic", it shall set "ActiveDevice" = "Thoracic"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Transition 1R Passenger to Adjusting

When the "SCMB\_PSM" receives:

1) "SeatCushFwd" == "ON" OR

2) "SeatCushAft" == "ON" OR

3) "SeatBackFwd" == "ON" OR

4) "SeatBackAft" == "ON" OR

5) "SeatCushUp" == "ON" OR

6) "SeatCushDown" == "ON" OR

7) "HeadrestUp" == "ON" OR

8) "HeadrestDown" == "ON" OR

9) "FrontTiltUp" =="ON" OR

10) "FrontTiltDown" == "ON" OR

11) "Lumbar\_Fwd\_Sw\_Rqst" == "ON" OR

12) "Lumbar\_Rwd\_Sw\_Rqst" == "ON" OR

13) "SeatCshnRclCtlPsn\_D\_Rq" == ("Cushion Fore" OR "Cushion Backward" OR "Recliner Fore" OR "Recliner Backward") OR

14) "SeatCshnRclCtlPsn\_D\_Rq2" == ("Cushion Fore" OR "Cushion Backward" OR "Recliner Fore" OR "Recliner Backward") OR

15) "SeatCshnRclCtlPsn\_D\_Rq3" == ("Cushion Fore" OR "Cushion Backward" OR "Recliner Fore" OR "Recliner Backward") OR

16) "SeatCshnRclPsn\_D\_RqMnu" == ("Cushion Fore" OR "Cushion Backward" OR "Recliner Fore" OR "Recliner Backward") OR

17) {(ActiveDevice" == "Calf Rest" OR " Thoracic") AND

18) [("SWP\_Pieplate\_Forward" == "ON" OR "SWP\_Pieplate\_Rearward" == "ON") OR

19) ("SeatDevcAdjPsngr\_D\_Rq" == "Increase" OR"Decrease")]} OR

20) "SeatHeadrstAdjPsn\_D\_Rq" ~= "Inactive" OR

21) [ActiveDevice" == "Headrest" AND

22) ("SWP\_Pieplate\_Forward" == "ON" OR "SWP\_Pieplate\_Rearward" == "ON" OR

"SWP\_Pieplate\_Up" == "ON" OR "SWP\_Pieplate\_Down" == "ON")]

it shall transition from idle to the "Adjusting" comfort adjustments state, set the flags for "Comfort Adjustments", and respond to additional manual comfort adjustment requests.

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates a manual adjustment and blocks other feature requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Seat Height Hardswitch 1R Passenger Actuation Up

While "CurrentPositionSeatHeight" < "Maximum Passenger Height Soft Position" AND "SeatCushUp" == "ON", the "SCMB\_PSM" shall output "Pass\_Height\_AdjCommand" to move in the upward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Seat Height Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Calf Rest Hardswitch Pie Plate 1R Passenger Actuation Rearward

While "CurrentPositionCalfRest" > "Minimum Passenger Calf Rest Soft Position" AND "ActiveDevice" == "Calf Rest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward" = ON, the "SCMB\_PSM" shall output "Pass\_CalfRaise\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Driver FRS Unsupervised Adjustment Request
* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Calf Rest In | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Active Menu Seat Back

When the "SCMB\_PSM" receives "SeatSetMnuPsngr\_D\_Rq" = "Seat Back", it shall set "ActiveMenu" = "Seat Back"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Headrest Height Hardswitch 1R Passenger Actuation Up

While "CurrentPositionHeadrestHeight" < "Maximum Passenger Headrest Up/Down Soft Position" AND "HeadrestUp" == "ON", the "SCMB\_PSM" shall output "Pass\_HeadrestUp/Down\_AdjCommand" to move in the upward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Headrest Height Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Fore Aft Chauffeur 1R Passenger Actuation Forward

While "CurrentPositionForeAft" < "Maximum Driver Fore/Aft Soft Position" and the SCMB\_PSM recieves:

1) "SeatCshnRclCtlPsn\_D\_RqMnu" == "Cushion Forward" OR

2) "SeatCshnRclCtlPsn\_D\_Rq" == "Cushion Forward" OR

3) "SeatCshnRclCtlPsn\_D\_Rq2" == "Cushion Forward" OR

4) "SeatCshnRclPsn\_D\_RqMnu" == "Cushion Forward"

it shall output "Pass\_Fore/Aft\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to support chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Fore/Aft Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Deactivation

When the driver's seat comfort menu on the "infotainment screen" times out or the user navigates to another menu, the "SCMB\_PSM" shall set:

1) "LastDeviceBeforeTO" = "ActiveDevice"

2) "LastMenuBeforeTO" = "ActiveMenu"

3) "TOStatus" = "True"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to recall menu after menu time-out or if the user navigates to another menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Activation with Center

While "ActiveMenu" == "Inactive" AND "Last Device" == "Inactive" AND the "SCMB\_PSM" receives one of the following:

1) "SWP\_Pieplate\_Center" = "ON"

The "SCMB\_PSM" shall:

1) Set "ActiveMenu" = "Massage Header"

2) Output "SeatSetMnuPsngr\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to activate seat comfort massage menu via pie plate center button | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Incline Recline Chauffeur 1R Passenger Actuation Rearward

While "CurrentPositionForeAft" > "Minimum Driver Incline/Recline Soft Position" and the SCMB\_PSM recieves:

1) "SeatCshnRclCtlPsn\_D\_RqMnu" == "Recliner Rearward" OR

2) "SeatCshnRclCtlPsn\_D\_Rq" == "Recliner Rearward" OR

3) "SeatCshnRclCtlPsn\_D\_Rq2" == "Recliner Rearward" OR

4) "SeatCshnRclPsn\_D\_RqMnu" == "Recliner Rearward"

it shall output "Pass\_Incline/Recline\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to support chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Incline/Recline Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Massage Intensity Selection High

When the "SCMB\_PSM" receives "StmsPsngr\_D\_RqMnu" = "High", it shall set "Massage Intensity" = "High"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and DSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Active Menu Seat Cushion

When the "SCMB\_PSM" receives "SeatSetMnuPsngr\_D\_Rq" = "Seat Cushion", it shall set "ActiveMenu" = "Seat Cushion"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Header Navigation Right

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Inactive" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward" = "ON", the "SCMB\_PSM" shall:

1) Set "ActiveMenu" equal to the header displayed on the right of the current selection on the front row infotainment screen

2) Output "SeatSetMnuPsngr\_D\_Stat" = "ActiveMenu"

3) Set "LastDevice" = "Inactive"

If no header is displayed on the right of the current selection in the "Infotainment System", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" equal to the header displayed on the far left on the front row infotainment screen

2) Output "SeatSetMnuPsngr\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Navigation Up

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Menu Selection (n)" AND "ActiveDevice" ~= "Headrest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Up", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" = "Menu Selection (n-1)"

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

If "Menu Selection (n-1)" does not exist under the current "ActiveMenu", the SCMB\_PSM shall:

1) Set "ActiveDevice" = "Inactive"

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Increase Massage Intensity to Medium

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "LOW" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward, the "SCMB\_PSM" shall:

1) Set "Massage Intensity" = "MEDIUM"

2) Output "StmsPsngr\_D\_Stat" = "MEDIUM"

3) Output "SeatDevcSetPsngr\_D\_St" = "Massage Pattern (n)"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Fore Aft Hardswitch 1R Passenger Actuation Rearward

While "CurrentPositionForeAft" > "Minimum Passenger Fore/Aft Soft Position" AND "SeatCushRwd" == "ON", the "SCMB\_PSM" shall output "Pass\_Fore/Aft\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Fore/Aft Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Fore Aft Hardswitch 1R Passenger Actuation Forward

While "CurrentPositionForeAft" < "Maximum Passenger Fore/Aft Soft Position" AND "SeatCushFwd" == "ON", the "SCMB\_PSM" shall output "Pass\_Fore/Aft\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Fore/Aft Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 1R Chauffeur Recline Rearward Selection

While the user presses the "Recline Rearward" button on the chauffeur menu, the "APIM" shall output:

1) Output "SeatCshnRclCtlPsn\_D\_RqMnu" = "Recliner Rearward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the first row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Incline/Recline Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Calf Rest Soft Button Forward Adjustment

While "CurrentPositionCalfRest" < "Maximum Passenger Calf Rest Soft Position" AND the "SCMB\_PSM" receives "SeatDevcAdjPsngr\_D\_Rq" == "Increase" AND "ActiveDevice" == "Calf Rest", it shall output "Psngr\_CalfRaise\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Headrest Fore/Aft Hardswitch Pie Plate 1R Passenger Actuation Forward

While "CurrentPositionHeadrestForeAft" < "Maximum Passenger Headrest Fore/Aft Soft Position" AND "ActiveDevice" == "Headrest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward" = ON, the "SCMB\_PSM" shall output "Pass\_HeadrestFore/Aft\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Headrest Fore/Aft Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 1R Chauffeur Pan Forward Selection

While the user presses the "Pan Forward" button on the chauffeur menu, the "APIM" shall:

1) Output "SeatCshnRclCtlPsn\_D\_RqMnu" = "Cushion Forward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the first row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Fore/Aft Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Incline Recline Chauffeur 1R Passenger Actuation Forward

While "CurrentPositionForeAft" < "Maximum Driver Incline/Recline Soft Position" and the SCMB\_PSM recieves:

1) "SeatCshnRclCtlPsn\_D\_RqMnu" == "Recliner Forward" OR

2) "SeatCshnRclCtlPsn\_D\_Rq" == "Recliner Forward" OR

3) "SeatCshnRclCtlPsn\_D\_Rq2" == "Recliner Forward" OR

4) "SeatCshnRclPsn\_D\_RqMnu" == "Recliner Forward"

it shall output "Pass\_Incline/Recline\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to support chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Incline/Recline Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Increase Massage Intensity to High

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "MEDIUM" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward", the "SCMB\_PSM" shall:

1) Set "Massage Intensity" = "HIGH"

2) Output "StmsPsngr\_D\_Stat" = "HIGH"

3) Output "SeatDevcSetPsngr\_D\_St" = "Massage Pattern (n)"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Calf Rest Extension Hardswitch Pie Plate 1R Passenger Actuation Forward

While "CurrentPositionCalfRest" < "Maximum Passenger Calf Rest Soft Position" AND "ActiveDevice" == "Calf Rest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Forward" = ON, the "SCMB\_PSM" shall output "Pass\_CalfRaise\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Calf Rest Out | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Active Menu Headrest

When the "SCMB\_PSM" receives "SeatSetMnuPsngr\_D\_Rq" = "Headrest", it shall set "ActiveMenu" = "Headrest"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Thoracic Soft Button Rearward Adjustment

While "CurrentPositionThoracic" > "Minimum Passenger Thoracic Soft Position" AND the "SCMB\_PSM" receives "SeatDevcAdjPsngr\_D\_Rq" == "Decrease" and "ActiveDevice" == "Thoracic", it shall output "Psngr\_Thoracic\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Horizontal Lumbar Hardswitch 1R Passenger Actuation Rearward

While "CurrentPositionHorizontalLumbar" > "Minimum Passenger Horizontal Lumbar Soft Position" AND "Lumbar\_Rwd\_Sw\_Rqst" == "ON", the "SCMB\_PSM" shall output "Pass\_HorizontalLumbar\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Horizontal Lumbar Less Support | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Menu Not Active

When the "SCMB\_PSM" receives "SeatSetMnuPsngr\_D\_Rq" = "Inactive", it shall set "ActiveMenu" = "Inactive"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Seat Height Hardswitch 1R Passenger Actuation Down

While "CurrentPositionSeatHeight" > "Minimum Passenger Height Soft Position" AND "SeatCushDowd" == "ON", the "SCMB\_PSM" shall output "Pass\_Height\_AdjCommand" to move in the downward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Seat Height Down | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Decrease Massage Intensity to Low

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "MEDIUM" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward", the "SCMB\_PSM" shall:

1) Set "Massage Intensity" = "LOW"

2) Output "StmsPsngr\_D\_Stat" = "LOW"

3) Output "SeatDevcSetPsngr\_D\_St" = "Massage Pattern (n)"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Deactivate Massage Mode

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "LOW" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward", the "SCMB\_PSM" shall:

1) Set "Massage Intensity" = "OFF"

2) Output "StmsPsngr\_D\_Stat" = "OFF"

3) Output "SeatDevcSetPsngr\_D\_St" = "Massage Pattern (n)"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Massage Header Selection

When the "SCMB\_PSM" receives "SeatSetMnuPsngr\_D\_Rq" = "Massage Menu", it shall set "ActiveMenu" = "Massage Menu"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Lower Lumbar Selection

When the "SCMB\_PSM" receives "SeatDevcSetPsngr\_D\_Stat" = "Lower Lumbar", it shall set "ActiveDevice" = "Lower Lumbar"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Thoracic Soft Button Forward Adjustment

While "CurrentPositionThoracic" < "Maximum Passenger Thoracic Soft Position" AND the "SCMB\_PSM" receives "SeatDevcAdjPsngr\_D\_Rq" == "Increase" AND "ActiveDevice" == "Thoracic", it shall output "Psngr\_Thoracic\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Headrest Soft Button Forward Adjustment

While "CurrentPositionHeadrestForeAft" < "Maximum Passenger Headrest Fore/Aft Soft Position" AND the "SCMB\_PSM" receives "SeatHeadrstAdjPsn\_D\_Rq" == "Forward" and "ActiveDevice" == "Headrest", it shall output "Psngr\_Headrest Fore/Aft\_AdjCommand" to move in the forward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Upper Lumbar Selection

When the "SCMB\_PSM" receives "SeatDevcSetPsngr\_D\_Stat" = "Upper Lumbar", it shall set "ActiveDevice" = "Upper Lumbar"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Decrease Massage Intensity to Medium

While "ActiveMenu" == "Massage Mode" AND "ActiveDevice" == "Massage Pattern (n)" AND "Massage Intensity" == "HIGH" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward", the "SCMB\_PSM" shall:

1) Set "Massage Intensity" = "MEDIUM"

2) Output "StmsPsngr\_D\_Stat" = "MEDIUM"

3) Output "SeatDevcSetPsngr\_D\_St" = "Massage Pattern (n)"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Fore Aft Chauffeur 1R Passenger Actuation Rearward

While "CurrentPositionForeAft" > "Minimum Driver Fore/Aft Soft Position" and the SCMB\_PSM recieves:

1) "SeatCshnRclCtlPsn\_D\_RqMnu" == "Cushion Rearward" OR

2) "SeatCshnRclCtlPsn\_D\_Rq" == "Cushion Rearward" OR

3) "SeatCshnRclCtlPsn\_D\_Rq2" == "Cushion Rearward" OR

4) "SeatCshnRclPsn\_D\_RqMnu" == "Cushion Rearward"

it shall output "Pass\_Fore/Aft\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to support chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Fore/Aft Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Navigation Down from Header

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Inactive" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Down" = "ON", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" = "Menu Selection 1" displayed under the menu header on the infotainment screen

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Massage Intensity Selection Off

When the "SCMB\_PSM" receives "StmsPsngr\_D\_RqMnu" = "Off", it shall set "Massage Intensity" = "Off"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for proper active menu sychronization between APIM and SCMB\_PSM | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Header Navigation Left

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" == "Inactive" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward" = "ON", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" equal to the header displayed on the left of the current selection on the front row infotainment screen

2) Output "SeatSetMnuPsngr\_D\_Stat" = "ActiveMenu"

3) Set "LastDevice" ="Inactive"

If no header is displayed on the left of the current selection in the "Infotainment System", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" equal to the header displayed on the far right on the front row infotainment screen

2) Output "SeatSetMnuPsngr\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Transition 1R Passenger to Idle for Comfort Adjustments

When the "SCMB\_PSM" receives:

1) "SeatCushFwd" == "OFF" AND

2) "SeatCushAft" == "OFF" AND

3) "SeatBackFwd" == "OFF" AND

4) "SeatBackAft" == "OFF" AND

5) "SeatCushUp" == "OFF" AND

6) "SeatCushDown" == "OFF" AND

7) "HeadrestUp" == "OFF" AND

8) "HeadrestDown" == "OFF" AND

9) "FrontTiltUp" == "OFF" AND

10) "FrontTiltDown" == "OFF" AND

11) "Lumbar\_Fwd\_Sw\_Rqst" == "OFF" AND

12) "Lumbar\_Rwd\_Sw\_Rqst" == "OFF" AND

13) "SeatCshnRclCtlPsn\_D\_Rq" == "Inactive" AND

14) "SeatCshnRclCtlPsn\_D\_Rq2" == "Inactive" AND

15) "SeatCshnRclCtlPsn\_D\_Rq3" == "Inactive" AND

16) "SeatCshnRclPsn\_D\_RqMnu" == "Inactive" AND

17) {("ActiveDevice" == "Calf Rest" OR " Thoracic") OR

18) [("SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF") AND

19) ("SeatDevcAdjPsngr\_D\_Rq" ~= "Increase" OR "Decrease")]} AND

20) "SeatHeadrstAdjPsn\_D\_Rq" == "Inactive" AND

21) ["ActiveDevice" ~= "Headrest" OR

22) ("SWP\_Pieplate\_Forward" == "OFF" AND "SWP\_Pieplate\_Rearward" == "OFF" AND

"SWP\_Pieplate\_Up" == "OFF" AND "SWP\_Pieplate\_Down" == "OFF")]

it shall transition to the "Idle" comfort adjustments state and reset the flags for "Comfort Adjustments"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates no manual adjustments and allows other feature requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Headrest Height Hardswitch 1R Passenger Actuation Down

While "CurrentPositionHeadrestHeight" > "Minimum Passenger Headrest Up/Down Soft Position" AND "HeadrestDown" == "ON", the "SCMB\_PSM" shall output "Pass\_HeadrestUp/Down\_AdjCommand" to move in the downward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Navigation Up from Header

While "ActiveMenu" ~= "Inactive" AND "ActiveDevice" =="Inactive" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Up" = "ON", the "SCMB\_PSM" shall:

1) Set "ActiveDevice" = "Menu Selection (N)" displayed as the last selection under the menu header on the infotainment screen

2) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to navigate the menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Reactivation

While "TOStatus" == "True" AND the "SCMB\_PSM" receives one of the following:

1) "SWP\_Pieplate\_Up" = "ON"

2) "SWP\_Pieplate\_Down" = "ON"

3) "SWP\_Pieplate\_Forward" = "ON"

4) "SWP\_Pieplate\_Rearward" = "ON"

5) "SWP\_Pieplate\_Center" = "ON"

The "SCMB\_PSM" shall:

1) Set "ActiveMenu" = "LastMenuBeforeTO"

2) Set "ActiveDevice" = "LastDeviceBeforeTO"

3) Set TOStatus = "False"

4) Set "LastMenuBeforeTO" = "Inactive"

5) Set "LastDeviceBeforeTO" = "Inactive"

6) Output "SeatDevcSetPsngr\_D\_St" = "ActiveDevice"

7) Output "SeatSetMnuPsngr\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to recall menu after menu time-out or if the user navigates to another menu | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Menu Activation

While "ActiveMenu" == "Inactive" AND "LastDevice" == "Inactive" AND the "SCMB\_PSM" receives one of the following:

1) "SWP\_Pieplate\_Up" = "ON"

2) "SWP\_Pieplate\_Down" = "ON"

3) "SWP\_Pieplate\_Forward" = "ON"

4) "SWP\_Pieplate\_Rearward" = "ON"

The "SCMB\_PSM" shall:

1) Set "ActiveMenu" = "Default Header"

2) Output "SeatSetMnuPsngr\_D\_Stat" = "ActiveMenu"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to activate seat comfort menu via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Headrest Height Hardswitch Pie Plate 1R Passenger Actuation Down

While "CurrentPositionHeadrestHeight" > "Minimum Passenger Headrest Up/Down Soft Position" AND "ActiveDevice" == "Headrest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Down" = ON, the "SCMB\_PSM" shall output "Pass\_HeadrestUp/Down\_AdjCommand" to move in the downward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Headrest Soft Button Downward Adjustment

While "CurrentPositionHeadrestHeight" > "Minimum Passenger Headrest Up/Down Soft Position" AND the "SCMB\_PSM" receives "SeatHeadrstAdjPsn\_D\_Rq" == "Down" and "ActiveDevice" == "Headrest", it shall output "Psngr\_Headrest Fore/Aft\_AdjCommand" to move in the downward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Vertical Lumbar Hardswitch 1R Passenger Actuation Down

While "CurrentPositionVerticalLumbar" > "Minimum Passenger Vertical Lumbar Soft Position" AND "Lumbar\_Down\_Sw\_Rqst" == "ON", the "SCMB\_PSM" shall output "Pass\_VerticalLumbar\_AdjCommand" to move in the downward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Vertical Lumbar Down | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - 1R Passenger Calf Rest Soft Button Rearward Adjustment

While "CurrentPositionCalfRest" > "Minimum Passenger Calf Rest Soft Position" AND the "SCMB\_PSM" receives "SeatDevcAdjPsngr\_D\_Rq" == "Decrease" AND "ActiveDevice" == "Calf Rest", it shall output "Psngr\_CalfRaise\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for soft button manual adjustments | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Transition 1R Passenger to Idle for URC

When the "SCMB\_PSM" receives "URCRequest" ~= "True", it shall transition to the "Idle" ultimate remote control state and reset the flags for "Ultimate Remote Control"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Indicates no URC request is being made and allows external feature requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Vertical Lumbar Hardswitch 1R Passenger Actuation Up

While "CurrentPositionVerticalLumbar" < "Maximum Passenger Vertical Lumbar Soft Position" AND "Lumbar\_Up\_Sw\_Rqst" == "ON", the "SCMB\_PSM" shall output "Pass\_VerticalLumbar\_AdjCommand" to move in the upward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Vertical Lumbar Up | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Update 1R Passenger Active Motor Headrest

When the "SCMB\_PSM" receives "SeatDevcSetPsngr\_D\_Rq" = "Headrest", it shall set "ActiveDevice" = "Headrest"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for the SCMB\_PSM to know which motor to actuate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 2R Chauffeur Pan Rearward Selection

While the user presses the "Pan Rearward" button on the chauffeur menu, the "RACM" shall output:

1) Output "SeatCshnRclCtlPsn\_D\_Rq3" = "Cushion Rearward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the second row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Fore/Aft Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Headrest Fore/Aft Hardswitch Pie Plate 1R Passenger Actuation Rearward

While "CurrentPositionHeadrestForeAft" > "Minimum Passenger Headrest Fore/Aft Soft Position" AND "ActiveDevice" == "Headrest" AND the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward" = ON, the "SCMB\_PSM" shall output "Pass\_HeadrestFore/Aft\_AdjCommand" to move in the rearward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested FRS Comfort Position - Passenger Headrest Fore/Aft Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 2R Chauffeur Pan Forward Selection

While the user presses the "Pan Forward" button on the chauffeur menu, the "RACM" shall:

1) Output "SeatCshnRclCtlPsn\_D\_Rq3" = "Cushion Forward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the second row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Fore/Aft Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - HMI 1R Chauffeur Recline Forward Selection

While the user presses the "Recline Forward" button on the chauffeur menu, the "APIM" shall:

1) Output "SeatCshnRclCtlPsn\_D\_RqMnu" = "Recliner Forward"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required the first row occupants capability of making soft button chauffeur requests | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Arbitrate Requested Chauffeur Adjustments - Incline/Recline Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - MCS Lumbar Pie Plate 1R Passenger Decrease

While "ActiveDevice" == ("Upper Lumbar" OR "Middle Lumbar" OR " Lower Lumbar") and the "SCMB\_PSM" receives "SWP\_Pieplate\_Rearward" = ON, it shall output "StmsPsngr\_D\_Stat" = "Decrease"

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for MCS adjustments via pie plate | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

725882915.jpg - Seat Tilt Hardswitch 1R Passenger Actuation Up

While "CurrentPositionTilt" < "Maximum Passenger Tilt Soft Position" AND "FrontTiltUp" == "ON", the "SCMB\_PSM" shall output "Pass\_Tilt\_AdjCommand" to move in the upwardward direction

Satisfied by:

* 1537555110.jpg Arbitrate Passenger FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1537555110.jpg Arbitrate Passenger FRS Learn Cycle

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

(No outputs have been defined)

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Arbitrate Passenger FRS Learn Cycle

##### Function Requirements

No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

#### Technology Function 1537555110.jpg Validate Passenger FRS End Point Values

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

(No outputs have been defined)

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Validate Passenger FRS End Point Values

##### Function Requirements

No Requirements identified for this function.

###### Component Specific Requirements

No “Approved” or “In-Progress” requirements identified for this function.

### HW DC Motor

HW DC Motor

#### Technology Function 1537555110.jpg Actuate Driver FRS Fore/Aft

Provide fore/aft actuation of the driver's seat

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Fore/Aft\_AdjCommand  ForeAftAdjustment | Drv\_Fore/Aft\_AdjCommand :  Drv\_Fore/Aft\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Fore/Aft

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Drv\_Fore/Aft\_MotorCurrent :  Drv\_Fore/Aft\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Fore/Aft

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Fore/Aft

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 725882915.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

725882915.jpg - Seat Fore/Aft Actuation for 1R Driver

The "Driver Side 1R Fore/After DC Motor" shall provide movement of the driver's side seat track in the forward or rearward direction when it receives "Drv\_Fore/Aft\_AdjCommand"

Satisfied by:

* 1537555110.jpg Actuate Driver FRS Fore/Aft

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat cushion in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Actuate FRS Fore/Aft Position Forward - Driver * 1012184552.jpg Actuate FRS Fore/Aft Position Rearward - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1537555110.jpg Actuate Driver FRS Incline/Recline

Provide incline/recline actuation of the driver's seatback support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Incline/Recline | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Incline/Recline\_AdjCommand | Drv\_Incline/Recline\_AdjCommand :  Drv\_Incline/Recline\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Incline/Recline

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Incline/Recline | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Drv\_Incline/Recline\_MotorCurrent :  Drv\_Incline/Recline\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Incline/Recline

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Incline/Recline

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 725882915.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

725882915.jpg - Seatback Recliner Actuation for 1R Driver

The "Driver Side 1R Incline/Recline DC Motor" shall provide movement of the driver's side seatback in the rearward (recline) or forward (incline) direction when it receives "Drv\_Incline/Recline\_AdjCommand"

Satisfied by:

* 1537555110.jpg Actuate Driver FRS Incline/Recline

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat back in the incline/recline direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Actuate FRS Incline/Recline Position Rearward - Driver * 1012184552.jpg Actuate FRS Incline/Recline Position Forward - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1537555110.jpg Actuate Driver FRS Height

Provide up/down actuation of the driver's seat

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Height\_AdjCommand | Drv\_Height\_AdjCommand :  Drv\_Height\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Height

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Height\_MotorCurrent  CurrentPositionSeatHeight | Drv\_Height\_MotorCurrent :  Drv\_Height\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Height

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Height

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 725882915.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

725882915.jpg - Seat Height Actuation for 1R Driver

The "Driver Side 1R Height DC Motor" shall provide movements of the driver's side seat in the upward or downward direction when it receives "Drv\_Height\_AdjCommand"

Satisfied by:

* 1537555110.jpg Actuate Driver FRS Height

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat cushion in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1012184552.jpg Actuate FRS Seat Height Up - Driver * 1012184552.jpg Actuate FRS Seat Height Down - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1537555110.jpg Actuate Driver FRS Cushion Tilt

Provide tilt actuation of the driver's seat

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Cushion Tilt | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Tilt\_AdjCommand | Drv\_Tilt\_AdjCommand :  Drv\_Tilt\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Cushion Tilt

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Cushion Tilt | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Tilt\_MotorCurrent  CurrentPositionTilt | Drv\_Tilt\_MotorCurrent :  Drv\_Tilt\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Cushion Tilt

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Cushion Tilt

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -478583841.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-478583841.jpg - Seat Tilt Actuation for 1R Driver

The "Driver Side 1R Tilt DC Motor" shall provide movements of the driver's side seat cushion in the tilt up or tilt downward direction when it receives "Drv\_Tilt\_AdjCommand"

Satisfied by:

* 1537555110.jpg Actuate Driver FRS Cushion Tilt

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat cushion in the tilt forward/rearward direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1783844954.jpg Actuate FRS Seat Cushion Tilt Up - Driver * 1783844954.jpg Actuate FRS Seat Cushion Tilt Down - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 398285809.jpg Actuate Driver FRS Headrest Height

Provide up/down actuation of the driver's headrest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_HeadRest\_Up/Down\_AdjCommand | Drv\_HeadRest\_Up/Down\_AdjCommand :  Drv\_HeadrestUp/Down\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Headrest Height

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_HeadRest\_Up/Down\_MotorCurrent | Drv\_HeadRest\_Up/Down\_MotorCurrent :  Drv\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Headrest Height

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Headrest Height

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -478583841.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-478583841.jpg - Headrest Up/Down Actuation for 1R Driver

The "Driver Side 1R Headrest Height DC Motor" shall provide movements of the driver's side headrest in the upward or downward direction when it receives "Drv\_Headrest\_Up/Down\_AdjCommand"

Satisfied by:

* 398285809.jpg Actuate Driver FRS Headrest Height

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat headrest in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1783844954.jpg Actuate FRS Headrest Height Position Down - Passenger * 1783844954.jpg Actuate FRS Headrest Height Position Up - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 398285809.jpg Actuate Driver FRS Horizontal Lumbar

Provide fore/aft actuation of the driver's lumbar support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Horizontal Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_HorizontalLumbar\_AdjCommand | Drv\_HorizontalLumbar\_AdjCommand :  Drv\_HorizontalLumbar\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Horizontal Lumbar

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Horizontal Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_HorizontalLumbar\_MotorCurrent | Drv\_HorizontalLumbar\_MotorCurrent :  Drv\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Horizontal Lumbar

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Horizontal Lumbar

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -478583841.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-478583841.jpg - Horizontal Lumbar Actuation for 1R Driver

The "Driver Side 1R Lumbar Horizontal DC Motor" shall provide movements of the driver's side lumbar support in the forward or rearward direction when it receives "Drv\_HorizontalLumbar\_AdjCommand"

Satisfied by:

* 398285809.jpg Actuate Driver FRS Horizontal Lumbar
* 398285809.jpg Arbitrate Driver FRS Manual Adjustment Request

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat lumbar support in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1783844954.jpg Actuate FRS Horizontal Lumbar Position More Support - Driver * 1783844954.jpg Actuate FRS Horizontal Lumbar Position Less Support - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 398285809.jpg Actuate Driver FRS Right Thigh Extension

Provide actuation of the driver's side right thigh extension

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Right Thigh Extension | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_RightThighExtension\_AdjCommand | Drv\_RightThighExtension\_AdjCommand :  Drv\_RightThighExtension\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Right Thigh Extension

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Right Thigh Extension | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_RightThigh\_MotorCurrent  CurrentPositionRightThigh | Drv\_RightThigh\_MotorCurrent :  Drv\_RightThighExtension\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Right Thigh Extension

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Right Thigh Extension

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -478583841.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-478583841.jpg - Right Thigh Actuation for 1R Driver

The "Driver Side 1R Right Thigh Extension DC Motor" shall provide movements of the driver's side right thigh support in the forward or rearward direction when it receives "Drv\_RightThightExtension\_AdjCommand"

Satisfied by:

* 398285809.jpg Actuate Driver FRS Right Thigh Extension

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's right thigh support in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1783844954.jpg Actuate FRS Right Thigh Position Outward - Driver * 1783844954.jpg Actuate FRS Right Thigh Position Inward - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 398285809.jpg Actuate Driver FRS Left Thigh Extension

Provide actuation of the driver's side left thigh extension

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Left Thigh Extension | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_LeftThighExtension\_AdjCommand | Drv\_LeftThighExtension\_AdjCommand :  Drv\_LeftThighExtension\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Left Thigh Extension

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Left Thigh Extension | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_LeftThigh\_MotorCurrent  CurrentPositionLeftThigh | Drv\_LeftThigh\_MotorCurrent :  Drv\_LeftThighExtension\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Left Thigh Extension

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Left Thigh Extension

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -478583841.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-478583841.jpg - Left Thigh Actuation for 1R Driver

The "Driver Side 1R Left Thigh Extension DC Motor" shall provide movements of the driver's side left thigh support in the forward or rearward direction when it receives "Drv\_LeftThightExtension\_AdjCommand"

Satisfied by:

* 398285809.jpg Actuate Driver FRS Left Thigh Extension

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's left thigh support in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1783844954.jpg Actuate FRS Left Thigh Position Inward - Driver * 1783844954.jpg Actuate FRS Left Thigh Position Outward - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 398285809.jpg Actuate Driver FRS Thoracic

Provide actuation of the driver's side thoracic support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Thoracic | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Thoracic\_AdjCommand | Drv\_Thoracic\_AdjCommand :  Drv\_Thoracic\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Thoracic

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Thoracic | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Drv\_Thoracic\_MotorCurrent :  Drv\_Thoracic\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Thoracic

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Thoracic

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -478583841.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-478583841.jpg - Thoracic Support Actuation for 1R Driver

The "Driver Side 1R Thoracic DC Motor" shall provide movements of the driver's side thoracic back support in the forward or rearward direction when it receives "Drv\_Thoracic\_AdjCommand"

Satisfied by:

* 398285809.jpg Actuate Driver FRS Thoracic

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's thoracic support in the pivot forward/rearward direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1783844954.jpg Actuate FRS Thoracic Position Inward - Driver * 1783844954.jpg Actuate FRS Thoracic Position Outward - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 398285809.jpg Actuate Passenger FRS Fore/Aft

Provide fore/aft actuation of the passenger's seat

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Fore/Aft\_AdjCommand  ForeAftAdjustment | Pass\_Fore/Aft\_AdjCommand :  Pass\_Fore/Aft\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Fore/Aft

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Fore/Aft\_MotorCurrent  CurrentPositionForeAft  ForeAftObstacleStatus | Pass\_Fore/Aft\_MotorCurrent :  Pass\_Fore/Aft\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Fore/Aft

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Fore/Aft

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 2140586618.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

2140586618.jpg - Seat Fore/Aft Actuation for 1R Passenger

The "Passenger Side 1R Fore/After DC Motor" shall provide movement of the driver's side seat track in the forward or rearward direction when it receives "Pass\_Fore/Aft\_AdjCommand"

Satisfied by:

* 398285809.jpg Actuate Passenger FRS Fore/Aft

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat cushion in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Actuate FRS Fore/Aft Position Forward - Passenger * 1223485108.jpg Actuate FRS Fore/Aft Position Rearward - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 658829389.jpg Actuate Passenger FRS Incline/Recline

Provide incline/recline actuation of the passenger's seatback support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Incline/Recline | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Incline/Recline\_AdjCommand | Pass\_Incline/Recline\_AdjCommand :  Pass\_Incline/Recline\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Incline/Recline

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Incline/Recline | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Incline/Recline\_MotorCurrent  CurrentPositionInclineRecline | Pass\_Incline/Recline\_MotorCurrent :  Pass\_Incline/Recline\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Incline/Recline

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Incline/Recline

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 2140586618.jpg |  |
|  |  |  | 2140586618.jpg |  |
|  |  |  | 2140586618.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

2140586618.jpg - Incline Recline Hardswitch 1R Passenger Actuation Forward

While "CurrentPositionInclineRecline" > "Minimum Passenger Incline/Recline Soft Position" AND "SeatBackRwd" == "ON", the "SCMB\_PSM" shall output "Pass\_Incline/Recline\_AdjCommand" to move in the rearward direction

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Incline/Recline

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Arbitrate Requested FRS Comfort Position - Passenger Incline/Recline Forward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

2140586618.jpg - Incline Recline Hardswitch 1R Passenger Actuation Rearward

While "CurrentPositionInclineRecline" < "Maximum Passenger Incline/Recline Soft Position" AND "SeatBackFwd" == "ON", the "SCMB\_PSM" shall output "Pass\_Incline/Recline\_AdjCommand" to move in the forward direction

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Incline/Recline

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to move the first row passenger's seat via hardswitch | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Arbitrate Requested FRS Comfort Position - Passenger Incline/Recline Rearward | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

2140586618.jpg - Seatback Recliner Actuation for 1R Passenger

The "Passenger Side 1R Incline/Recline DC Motor" shall provide movement of the driver's side seatback in the rearward (recline) or forward (incline) direction when it receives "Pass\_Incline/Recline\_AdjCommand"

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Incline/Recline

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat back in the incline/recline direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Actuate FRS Incline/Recline Position Forward - Passenger * 1223485108.jpg Actuate FRS Incline/Recline Position Rearward - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 658829389.jpg Actuate Passenger FRS Height

Provide up/down actuation of the passenger's seat

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Height\_AdjCommand  CurrentPositionSeatHeight | Pass\_Height\_AdjCommand :  Pass\_Height\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Height

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Height\_MotorCurrent | Pass\_Height\_MotorCurrent :  Pass\_Height\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Height

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Height

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 2140586618.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

2140586618.jpg - Seat Height Actuation for 1R Passenger

The "Passenger Side 1R Height DC Motor" shall provide movements of the driver's side seat in the upward or downward direction when it receives "Pass\_Height\_AdjCommand"

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Height

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat cushion in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Actuate FRS Seat Height Down - Passenger * 1223485108.jpg Actuate FRS Seat Height Up - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 658829389.jpg Actuate Passenger FRS Cushion Tilt

Provide tilt actuation of the passenger's seat

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Cushion Tilt | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Tilt\_AdjCommand | Pass\_Tilt\_AdjCommand :  Pass\_Tilt\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Cushion Tilt

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Cushion Tilt | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Tilt\_MotorCurrent  CurrentPositionTilt | Pass\_Tilt\_MotorCurrent :  Pass\_Tilt\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Cushion Tilt

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Cushion Tilt

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 2140586618.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

2140586618.jpg - Seat Tilt Actuation for 1R Passenger

The "Passenger Side 1R Tilt DC Motor" shall provide movements of the driver's side seat cushion in the tilt up or tilt downward direction when it receives "Pass\_Tilt\_AdjCommand"

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Cushion Tilt

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat cushion in the tilt forward/rearward direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Actuate FRS Seat Cushion Tilt Up - Passenger * 1223485108.jpg Actuate FRS Seat Cushion Tilt Down - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 658829389.jpg Actuate Passenger FRS Headrest Height

Provide up/down actuation of the passenger's headrest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_HeadRest\_Up/Down\_AdjCommand | Pass\_HeadRest\_Up/Down\_AdjCommand :  Pass\_HeadrestUp/Down\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Headrest Height

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Headrest Height | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_HeadRest\_Up/Down\_MotorCurrent | Pass\_HeadRest\_Up/Down\_MotorCurrent :  Pass\_HeadrestUp/Down\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Headrest Height

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Headrest Height

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 2140586618.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

2140586618.jpg - Headrest Up/Down Actuation for 1R Passenger

The "Passenger Side 1R Headrest Height DC Motor" shall provide movements of the driver's side headrest in the upward or downward direction when it receives "Pass\_Headrest\_Up/Down\_AdjCommand"

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Headrest Height

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat headrest in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 658829389.jpg Actuate Passenger FRS Horizontal Lumbar

Provide fore/aft actuation of the passenger's lumbar support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Horizontal Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_HorizontalLumbar\_AdjCommand | Pass\_HorizontalLumbar\_AdjCommand :  Pass\_HorizontalLumbar\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Horizontal Lumbar

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Horizontal Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_HorizontalLumbar\_MotorCurrent | Pass\_HorizontalLumbar\_MotorCurrent :  Pass\_HorizontalLumbar\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Horizontal Lumbar

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Horizontal Lumbar

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 2140586618.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

2140586618.jpg - Horizontal Lumbar Actuation for 1R Passenger

The "Passenger Side 1R Lumbar Horizontal DC Motor" shall provide movements of the driver's side lumbar support in the forward or rearward direction when it receives "Pass\_HorizontalLumbar\_AdjCommand"

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Horizontal Lumbar

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat lumbar support in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Actuate FRS Horizontal Lumbar Position Less Support - Passenger * 1223485108.jpg Actuate FRS Horizontal Lumbar Position More Support - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 658829389.jpg Actuate Passenger FRS Vertical Lumbar

Provide up/down actuation of the passenger's lumbar support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Vertical Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_VerticalLumbar\_AdjCommand | Pass\_VerticalLumbar\_AdjCommand :  Pass\_VerticalLumbar\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Vertical Lumbar

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Vertical Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_VerticalLumbar\_MotorCurrent | Pass\_VerticalLumbar\_MotorCurrent :  Pass\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Vertical Lumbar

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Vertical Lumbar

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 2140586618.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

2140586618.jpg - Vertical Lumbar Actuation for 1R Passenger

The "Passenger Side 1R Vertical Horizontal DC Motor" shall provide movements of the driver's side lumbar support in the upward or downward direction when it receives "Pass\_HorizontalLumbar\_AdjCommand"

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Vertical Lumbar

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's seat lumbar support in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1223485108.jpg Actuate FRS Vertical Lumbar Position Up - Passenger * 1223485108.jpg Actuate FRS Vertical Lumbar Position Down - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 658829389.jpg Actuate Passenger FRS Calf Rest

Provide incline/recline actuation of the passenger's calf rest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Calf Rest | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_CalfRaise\_AdjCommand | Pass\_CalfRaise\_AdjCommand :  Pass\_Calf Rest\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Calf Rest

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Calf Rest | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_CalfRest\_MotorCurrent  CurrentPositionCalfRest  CalfRestObstacleStatus | Pass\_CalfRest\_MotorCurrent :  Pass\_Calf Rest\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Calf Rest

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Calf Rest

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1048462996.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1048462996.jpg - Calf Rest Actuation for 1R Passenger

The "Passenger Side 1R Calf Rest DC Motor" shall provide movements of the driver's side right thigh support in the forward or rearward direction when it receives "Pass\_CalfRaise\_AdjCommand"

Satisfied by:

* 658829389.jpg Actuate Passenger FRS Calf Rest

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's calf rest support in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1235434076.jpg Actuate FRS Calf Rest Inward - Passenger * 1235434076.jpg Actuate FRS Calf Rest Outward - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1279913167.jpg Actuate Passenger FRS Thoracic

Provide actuation of the passenger's side thoracic support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Passenger FRS Thoracic | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Thoracic\_AdjCommand | Pass\_Thoracic\_AdjCommand :  Pass\_Thoracic\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Passenger FRS Thoracic

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Passenger FRS Thoracic | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Pass\_Thoracic\_MotorCurrent  CurrentPositionThoracic | Pass\_Thoracic\_MotorCurrent :  Pass\_Thoracic\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Passenger FRS Thoracic

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Passenger FRS Thoracic

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1048462996.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1048462996.jpg - Thoracic Support Actuation for 1R Passenger

The "Passenger Side 1R Thoracic DC Motor" shall provide movements of the driver's side thoracic back support in the forward or rearward direction when it receives "Pass\_Thoracic\_AdjCommand"

Satisfied by:

* 1279913167.jpg Actuate Passenger FRS Thoracic

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row passenger's thoracic support in the pivot forward/rearward direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1235434076.jpg Actuate FRS Thoracic Position Inward - Passenger * 1235434076.jpg Actuate FRS Thoracic Position Outward - Passenger | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1279913167.jpg Actuate Driver FRS Headrest Fore/Aft

Provide fore/aft actuation of the driver's headrest

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Headrest Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Headrest\_Fore/Aft\_AdjCommand | Drv\_Headrest\_Fore/Aft\_AdjCommand :  Drv\_HeadrestFore/Aft\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Headrest Fore/Aft

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Headrest Fore/Aft | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_Headrest\_Fore/Aft\_MotorCurrent | Drv\_Headrest\_Fore/Aft\_MotorCurrent :  Drv\_HeadrestFore/Aft\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Headrest Fore/Aft

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Headrest Fore/Aft

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1048462996.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1048462996.jpg - Headrest Fore/Aft Actuation for 1R Driver

The "Driver Side 1R Headrest Fore/Aft DC Motor" shall provide movements of the driver's side headrest in the forward or rearward direction when it receives "Drv\_Headrest\_Fore/Aft\_AdjCommand"

Satisfied by:

* 1279913167.jpg Actuate Driver FRS Headrest Fore/Aft

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat headrest in the fore/aft direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1235434076.jpg Actuate FRS Headrest Fore/Aft Position Forward - Driver * 1235434076.jpg Actuate FRS Headrest Fore/Aft Position Rearward - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1279913167.jpg Actuate Driver FRS Vertical Lumbar

Provide up/down actuation of the driver's lumbar support

##### Function Interfaces

###### Inputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inputs: Actuate Driver FRS Vertical Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Subscriber Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_VerticalLumbar\_AdjCommand | Drv\_VerticalLumbar\_AdjCommand :  Drv\_VerticalLumbar\_AdjCommand | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Inputs | | | |

Table 1‑1: Input Signal mappings of Function Actuate Driver FRS Vertical Lumbar

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Actuate Driver FRS Vertical Lumbar | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Drv\_VerticalLumbar\_MotorCurrent | Drv\_VerticalLumbar\_MotorCurrent :  Drv\_VerticalLumbar\_MotorCurrent | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Actuate Driver FRS Vertical Lumbar

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Actuate Driver FRS Vertical Lumbar

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1048462996.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1048462996.jpg - Vertical Lumbar Actuation for 1R Driver

The "Driver Side 1R Vertical Horizontal DC Motor" shall provide movements of the driver's side lumbar support in the upward or downward direction when it receives "Drv\_HorizontalLumbar\_AdjCommand"

Satisfied by:

* 1279913167.jpg Actuate Driver FRS Vertical Lumbar

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required to provide actuation to the first row driver's seat lumbar support in the up/down direction | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** | Ok'd Diana and Bill | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** | * 1235434076.jpg Actuate FRS Vertical Lumbar Position Up - Driver * 1235434076.jpg Actuate FRS Vertical Lumbar Position Down - Driver | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

### Passenger FRS System

Passenger FRS System

### Infotainment System

Infotainment System

### Driver FRS System

Driver FRS System

### HW Press and Hold Switch

HW Press and Hold Switch

#### Technology Function 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

Requests adjustments of the driver's seat via the 5-way pie plate

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Adjustment through 5-Way Pie Plate | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SWP\_Pieplate\_Up | SWP\_Pieplate\_Up :  SWP\_Pieplate\_Up | | |  |  |  |
| Review in model  SWP\_Pieplate\_Down | SWP\_Pieplate\_Down :  SWP\_Pieplate\_Down | | |  |  |  |
| Review in model  SWP\_Pieplate\_Forward | SWP\_Pieplate\_Forward :  SWP\_Pieplate\_Forward | | |  |  |  |
| Review in model  SWP\_Pieplate\_Rearward | SWP\_Pieplate\_Rearward :  SWP\_Pieplate\_Rearward | | |  |  |  |
| Review in model  SWP\_Pieplate\_Center | SWP\_Pieplate\_Center :  SWP\_Pieplate\_Center | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Adjustment through 5-Way Pie Plate

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Adjustment through 5-Way Pie Plate

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1048462996.jpg - Hardswitch 1R Pie Plate Rearward

While the user has the rear of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Rearward" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Forward

While the user has the front of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Forward" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Down

While the user has the bottom of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Down" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Center

While the user has the center of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Center" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Up

While the user has the top of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Up" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1279913167.jpg Request FRS Lumbar Adjustment

Requests adjustments of the driver's lumbar support via the 2-way pie plate

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Lumbar Adjustment | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  Lumbar\_Fwd\_Sw\_Rqst | Lumbar\_Fwd\_Sw\_Rqst :  Lumbar\_Fwd\_Sw\_Rqst | | |  |  |  |
| Review in model  Lumbar\_Rwd\_Sw\_Rqst | Lumbar\_Rwd\_Sw\_Rqst :  Lumbar\_Rwd\_Sw\_Rqst | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Lumbar Adjustment

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Lumbar Adjustment

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

320451450.jpg - Hardswitch 1R Lumbar Rearward

While the user has the rear of the "2-Way 1R Pie Plate" pushed, it shall output "Lumbar\_Rwd\_Sw\_Rqst" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Lumbar Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Lumbar Forward

While the user has the front of the "2-Way 1R Pie Plate" pushed, it shall output "Lumbar\_Fwd\_Sw\_Rqst" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Lumbar Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1422526483.jpg Request FRS Incline/Recline Adjustment

Requests adjustments of the driver's seatback via the incline/recline switch

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Incline/Recline Adjustment | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SeatBackFwd | SeatBackFwd :  SeatBackFwd | | |  |  |  |
| Review in model  SeatBackAft | SeatBackAft :  SeatBackAft | | |  |  |  |
| Review in model  HeadrestUp | HeadrestUp :  HeadrestUp | | |  |  |  |
| Review in model  HeadrestDown | HeadrestDown :  HeadrestDown | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Incline/Recline Adjustment

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Incline/Recline Adjustment

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

320451450.jpg - Hardswitch 1R Headrest Up

While the user has the "Incline/Recline 1R Switch" pushed up, it shall output "HeadrestUp" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Seatback Forward

While the user has the "Incline/Recline 1R Switch" pushed forward, it shall output "SeatBackFwd" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Headrest Down

While the user has the "Incline/Recline 1R Switch" pushed down, it shall output "HeadrestDown" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Seatback Rearward

While the user has the "Incline/Recline 1R Switch" pushed rearward, it shall output "SeatBackAft" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Incline/Recline Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

#### Technology Function 1422526483.jpg Request FRS Seat Cushion Adjustment

Requests adjustments of the driver's seat via the fore/aft switch

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Seat Cushion Adjustment | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SeatCushAft | SeatCushAft :  SeatCushAft | | |  |  |  |
| Review in model  SeatCushFwd | SeatCushFwd :  SeatCushFwd | | |  |  |  |
| Review in model  SeatCushUp | SeatCushUp :  SeatCushUp | | |  |  |  |
| Review in model  SeatCushDown | SeatCushDown :  SeatCushDown | | |  |  |  |
| Review in model  FrontTiltUp | FrontTiltUp :  FrontTiltUp | | |  |  |  |
| Review in model  FrontTiltDown | FrontTiltDown :  FrontTiltDown | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Seat Cushion Adjustment

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Seat Cushion Adjustment

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |
|  |  |  | 320451450.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

320451450.jpg - Hardswitch 1R Pan Rearward

While the user has the "Fore/Aft 1R Switch" pushed rearward, it shall output "SeatCushAft" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Tilt Down

While the user has the "Fore/Aft 1R Switch" front pushed down, it shall output "FrontTiltDown" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Pan Forward

While the user has the "Fore/Aft 1R Switch" pushed forward, it shall output "SeatCushFwd" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Pan Upward

While the user has the "Fore/Aft 1R Switch" rear pushed upward, it shall output "SeatCushUp" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Pan Downward

While the user has the "Fore/Aft 1R Switch" rear pushed downward, it shall output "SeatCushDown" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

320451450.jpg - Hardswitch 1R Tilt Up

While the user has the "Fore/Aft 1R Switch" front pushed up, it shall output "FrontTiltUp" = "ON"

Satisfied by:

* 1422526483.jpg Request FRS Seat Cushion Adjustment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

### LIN Press and Hold Switch

LIN Press and Hold Switch

#### Technology Function 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

Requests adjustments of the driver's seat via the 5-way pie plate

##### Function Interfaces

###### Inputs

(No inputs have been defined)

###### Outputs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outputs: Request FRS Adjustment through 5-Way Pie Plate | | | | | | |
| **Logical Signal Name** | **Technical Signal Name** | | | **Mapping Details** *(Conditional)* | **Publisher Interface** | **Connection**  (*Optional)* |
| Review in model  SWP\_Pieplate\_Up | SWP\_Pieplate\_Up :  SWP\_Pieplate\_Up | | |  |  |  |
| Review in model  SWP\_Pieplate\_Down | SWP\_Pieplate\_Down :  SWP\_Pieplate\_Down | | |  |  |  |
| Review in model  SWP\_Pieplate\_Forward | SWP\_Pieplate\_Forward :  SWP\_Pieplate\_Forward | | |  |  |  |
| Review in model  SWP\_Pieplate\_Rearward | SWP\_Pieplate\_Rearward :  SWP\_Pieplate\_Rearward | | |  |  |  |
| Review in model  SWP\_Pieplate\_Center | SWP\_Pieplate\_Center :  SWP\_Pieplate\_Center | | |  |  |  |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.1 | End of Outputs | | | |

Table 1‑2: Output Signal mappings of Function Request FRS Adjustment through 5-Way Pie Plate

###### Parameters

*Not supported by MagicDraw report generation.*

###### Interface Requirements

No Interface Requirements identified for Function Request FRS Adjustment through 5-Way Pie Plate

##### Function Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID**  (of Logical Function) | **Requirement Title** | **Modification** | **Requirement ID**  (of Technology Function) | **Comment** |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |
|  |  |  | -1048462996.jpg |  |

Table 5‑5: Component Specific Requirements

###### Component Specific Requirements

-1048462996.jpg - Hardswitch 1R Pie Plate Rearward

While the user has the rear of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Rearward" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Forward

While the user has the front of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Forward" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Down

While the user has the bottom of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Down" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Center

While the user has the center of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Center" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

-1048462996.jpg - Hardswitch 1R Pie Plate Up

While the user has the top of the "5-Way 1R Pie Plate" pushed, it shall output "SWP\_Pieplate\_Up" = "ON"

Satisfied by:

* 1279913167.jpg Request FRS Adjustment through 5-Way Pie Plate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID: | | | | | | | |
| **Rationale** | Required for communiction between the hardswitches and the seat module | | | | | | |
| **Acceptance Criteria** |  | | | | | | |
| **Notes** |  | | | | | | |
| **Source** |  | | | | | **Owner** | Diana Aguilar |
| **Source Req.** |  | | | | | **V&V Method** |  |
| **Type** |  | | | **Priority** | 1 - High | **Status** | Approved |
| [Req. Template](http://wiki.ford.com/display/RequirementsEngineering/Requirements+Attributes) Version | | 6.0c | End of Requirement | | | | |

## Requirements on Connections

### Networks

#### “CAN Bus xxx”

*Not supported by MagicDraw report generation.*

##### Protocol Requirements

*Not supported by MagicDraw report generation.*

##### Electrical Requirements

*Not supported by MagicDraw report generation.*

#### “LIN Bus xxx”

*Not supported by MagicDraw report generation.*

##### Protocol Requirements

*Not supported by MagicDraw report generation.*

###### Schedule Table

*Not supported by MagicDraw report generation.*

##### Electrical Requirements

*Not supported by MagicDraw report generation.*

#### “Ethernet xxx”

*Not supported by MagicDraw report generation.*

### HW I/Os

#### “HW I/O xxx”

*Not supported by MagicDraw report generation.*

## Requirements on Development Process

| ID | Name | Satisfied By |
| --- | --- | --- |

# Open Concerns

*Not supported by MagicDraw report generation.*

| ID | Concern Description | e-Tracker Reference | Status | Solution |
| --- | --- | --- | --- | --- |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |

Table 6‑1: Open Concerns

# Revision History

No Revision History found.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Revision | Date | Description | Approved by | Responsible |
| 1 | 10/01/21 | Initial version |  | Daguil24 |
| 2 | 10/04/21 | Updates in DSM requirements |  | Daguil24 |

## Template Revisions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Version | Rev. | Date | Description | Responsible |
| 1 | A | 10/01/21 | * Initial Revision | Daguil24 |
| 2 | B | 10/04/21 | * Updates in DSM requirements | Daguil24 |

# Appendix

## Data Dictionary

### Logical Signals

CalfRestAdjustment

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CalfRestAdjustment

CalfRestObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the calf rest.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CalfRestObstacleStatus

ChauffeurRequest

The physical request from the Supervised Seat Movement Requestor for chauffeur adjustments in the passenger FRS.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of ChauffeurRequest

ComfortSettings

Indicates the direction any of the comfort adjustments request. This enumeration is composed of the individual position adjustment enumerations for each seat movement.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of ComfortSettings

CurrentPositionCalfRest

Indicates the current position of the calf rest.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionCalfRest

CurrentPositionForeAft

Indicates the current position of the seat track.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionForeAft

CurrentPositionHeadrestForeAft

Indicates the current position of the headrest fore/aft.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionHeadrestForeAft

CurrentPositionHeadrestHeight

Indicates the current position of the headrest height.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionHeadrestHeight

CurrentPositionHorizontalLumbar

Indicates the current position of the horizontal lumbar.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionHorizontalLumbar

CurrentPositionInclineRecline

Indicates the current position of the seat back.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionInclineRecline

CurrentPositionLeftThigh

Indicates the current position of the left thigh.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionLeftThigh

CurrentPositionRightThigh

Indicates the current position of the right thigh.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionRightThigh

CurrentPositionSeatHeight

Indicates the current position of the seat height.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionSeatHeight

CurrentPositionThoracic

Indicates the current position of the thoracic.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionThoracic

CurrentPositionTilt

Indicates the current position of the cushion tilt.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionTilt

CurrentPositionVerticalLumbar

Indicates the current position of the vertical lumbar.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CurrentPositionVerticalLumbar

CushionTiltObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the cushion tilt.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of CushionTiltObstacleStatus

DistanceToEnabled

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of DistanceToEnabled

DriverFRS\_PPSEEE\_Request

The request from the second row seat control feature to move the requested FRS forward (fore/aft and/or incline/recline adjustments) or reset to the previous seat position to support the SRS power pitch/slide.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of DriverFRS\_PPSEEE\_Request

EasyEntryExitRequest

The request for driver FRS adjustments to support Easy Entry and Easy Exit.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of EasyEntryExitRequest

ElapsedTime

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of ElapsedTime

FRSUserComfortRequest

This represents the physical request from the Supervised Seat Movement Requestor to move the FRS comfort positions.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of FRSUserComfortRequest

FRS\_ChauffeurAdjustment

When requested by the FRS, this enumeration indicates the action that the passenger seat is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of FRS\_ChauffeurAdjustment

ForeAftAdjustment

When user requests the seat's fore/aft comfort setting, this enumeration indicates the action that the Seat is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of ForeAftAdjustment

ForeAftObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the seat track.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of ForeAftObstacleStatus

HeadrestForeAftAdjustment

When user requests the headrest seat comfort setting, this enumeration indicates the action that the headrest fore/aft is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of HeadrestForeAftAdjustment

HeadrestForeAftObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the headrest fore/aft.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of HeadrestForeAftObstacleStatus

HeadrestHeightAdjustment

When user requests the headrest seat comfort setting, this enumeration indicates the action that the headrest height is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of HeadrestHeightAdjustment

HeadrestHeightObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the headrest height.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of HeadrestHeightObstacleStatus

HorizontalLumbarAdjustment

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of HorizontalLumbarAdjustment

HorizontalLumbarObstacleStatus

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of HorizontalLumbarObstacleStatus

InclineReclineAdjustment

When user requests the incline/recline seat comfort setting, this enumeration indicates the action that the Seatback is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of InclineReclineAdjustment

InclineReclineObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the seat back.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of InclineReclineObstacleStatus

LearnCycleRequest

The request to initiate the learn cycle process.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of LearnCycleRequest

LearnCycleStatus

Indicates the learn cycle status for all seat movements. This value type contains the learning status enumerations for all seat movements.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of LearnCycleStatus

LearnSequenceProfile

Indicates the sequence (order of the seat movements) at which the learn cycle process will be performed.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of LearnSequenceProfile

LeftThighAdjustment

When user requests the left thigh seat comfort setting, this enumeration indicates the action that the left thigh is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of LeftThighAdjustment

LeftThighObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the left thigh.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of LeftThighObstacleStatus

PassengerFRS\_PPSEEE\_Request

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of PassengerFRS\_PPSEEE\_Request

Profile\_Settings

This enumeration indicates for which profile is being requested. Within each profile is the information on the desired seat position.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of Profile\_Settings

RightThighAdjustment

When user requests the right thigh seat comfort setting, this enumeration indicates the action that the right thigh is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of RightThighAdjustment

RightThighObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the right thigh.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of RightThighObstacleStatus

SRSPitchSlidePosition\_Driver

This contains the fore/aft position of the Second Row Seat.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of SRSPitchSlidePosition\_Driver

SRSPitchSlidePosition\_Passenger

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of SRSPitchSlidePosition\_Passenger

SeatHeightAdjustment

When user requests the seat height comfort setting, this enumeration indicates the action that the seat height is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of SeatHeightAdjustment

SeatHeightObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the seat height.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of SeatHeightObstacleStatus

SeatID

This enumeration indicates for which seat is being requested; driver side, passenger side, driver memory, or passenger memory.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of SeatID

ThoracicAdjustment

When user requests the thoracic seat comfort setting, this enumeration indicates the action that the thoracic is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of ThoracicAdjustment

ThoracicObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the thoracic.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of ThoracicObstacleStatus

TiltAdjustment

When user requests the seat tilt comfort setting, this enumeration indicates the action that the seat tilt is to take.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of TiltAdjustment

TimeToEnabledPosition

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of TimeToEnabledPosition

TransmissionStatus

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of TransmissionStatus

UserPerceivedSeatMovement

The physical visualization of the seat moving perceived by the driver or passenger of the vehicle.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of UserPerceivedSeatMovement

VehicleSpeed

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of VehicleSpeed

VerticalLumbarAdjustment

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of VerticalLumbarAdjustment

VerticalLumbarObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the vertical lumbar.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of VerticalLumbarObstacleStatus

VisualFeedback

The visual feedback of the learn cycle status that is received by the Configuration Operator.

|  |  |  |
| --- | --- | --- |
| **ASIL** | | Choose an item. |
| **Encoding Type Name** | |  |
| Note: An encoding is either discrete or continuous. Delete fields below which are not needed | | |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) | Value 1 |  |
| Value 2 | … |
| … | … |
|  |  |
|  |  |
| **Unit** | |  |

Table: Signal Details of VisualFeedback

### Logical Parameters

*Not supported by MagicDraw report generation.*

### Technical Signals

#### GSDB Signals

*Not supported by MagicDraw report generation.*

#### HW I/Os

*Not supported by MagicDraw report generation.*

#### Diagnostic Interfaces

##### DTCs

<Some Description of the DTC.

Refer to VSEM document “[Diagnostic Fault Coverage and DTC Numbers](https://www.vsemweb.ford.com/tc/launchapp?-attach=true&-s=226TCSession&-o=yAUtrNhnx3NrTDAAAAAAAAAAAAA&servername=Production_Server)

[Design Consideration](https://www.vsemweb.ford.com/tc/launchapp?-attach=true&-s=226TCSession&-o=yAUtrNhnx3NrTDAAAAAAAAAAAAA&servername=Production_Server)”, what to fill into the attributes below>

|  |  |
| --- | --- |
| **Test Period Time** |  |
| **Test Run Criteria,** |  |
| **Enable Criteria (EC)** |  |
| **Applicable** |  |
| **FailureTypeBytes** |  |
| **Test Period Time** |  |
| **Test Run Criteria,** |  |

##### DIDs

*Not supported by MagicDraw report generation.*

### Technical Parameters

*Not supported by MagicDraw report generation.*

### Mappings

### Technical Interfaces

*Not supported by MagicDraw report generation.*

#### AIS Interfaces

##### Publisher Interfaces

##### Subscriber Interfaces

#### AUTOSAR Ports

*Not supported by MagicDraw report generation.*

### Messages/APIs

#### CAN Bus “<Bus Name>”

*Not supported by MagicDraw report generation.*

#### LIN Bus “<Bus Name>”

*Not supported by MagicDraw report generation.*

#### AUTOSAR Interfaces

*Not supported by MagicDraw report generation.*

#### SOA Service Contracts

*Not supported by MagicDraw report generation.*

### Encoding Types

TimeToEnabledPosition

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of TimeToEnabledPosition

SeatMovCompltPsn\_T\_Act

Signal for time remaining to complete Passenger seat move to location to enable power pitch/slide

Resolution = 10

Minimum value = 0

Maximum value = 100000

Unit of measure = millisecond

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovCompltPsn\_T\_Act

Drv\_Height\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Height\_AdjCommand

SeatDevcSetPsngr\_D\_St

Signal to identity the submenu option highligher in the Passenger seat settings HMI screen

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Upper\_Thoracic** |  |
| **0x02 Left\_Thigh\_Extension** |  |
| **0x03 Right\_Thigh\_Extension** |  |
| **0x04 Calf\_Raise\_Extension** |  |
| **0x05 Upper\_Lumbar** |  |
| **0x06 Mid\_Lumbar** |  |
| **0x07 Lower\_Lumbar** |  |
| **0x08 Back\_Bolsters** |  |
| **0x09 Cushion\_Bolsters** |  |
| **0x0A Headrest** |  |
| **0x0B Lumbar** |  |
| **0x0C Pattern\_1** |  |
| **0x0D Pattern\_2** |  |
| **0x0E Pattern \_3** |  |
| **0x0F Pattern\_4** |  |
| **0x10 Pattern\_5** |  |
| **0x11 Pattern\_6** |  |
| **0x12 Pattern\_7** |  |
| **0x13 Pattern\_8** |  |
| **0x14 Pattern\_9** |  |
| **0x15 Pattern\_10** |  |
| **0x16 Unused** |  |
| **0x17 Unused1** |  |
| **0x18 Unused2** |  |
| **0x19 Unused3** |  |
| **0x1A Unused4** |  |
| **0x1B Unused5** |  |
| **0x1C Unused6** |  |
| **0x1D Unused7** |  |
| **0x1E Unused8** |  |
| **0x1F Unused9** |  |
| **Unit** | |  |

Table: Encoding Details of SeatDevcSetPsngr\_D\_St

CurrentPositionForeAft

Indicates the current position of the seat track.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionForeAft

DesiredSeatPosition

The desired seat position that the seat is requested to be moved to. This value type is composed of the desired position enumerations of each individual seat adjustments.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredSeatPosition

ForeAftAdjustment

When user requests the seat's fore/aft comfort setting, this enumeration indicates the action that the Seat is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **FORWARD** |  |
| **REARWARD** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of ForeAftAdjustment

MaxVerticalLumbarActuationPosition

Indicates the maximum end point position of the seat vertical lumbar movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxVerticalLumbarActuationPosition

Drv\_HeadrestFore/Aft\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_HeadrestFore/Aft\_AdjCommand

MinHeadrestForeAftActuationPosition

Indicates the minimum end point position of the headrest fore/aft movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinHeadrestForeAftActuationPosition

CurrentPositionThoracic

Indicates the current position of the thoracic.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionThoracic

Drv\_HorizontalLumbar\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_HorizontalLumbar\_AdjCommand

Pass\_Height\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Height\_AdjCommand

LearnSequenceProfile

Indicates the sequence (order of the seat movements) at which the learn cycle process will be performed.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of LearnSequenceProfile

CalfRestObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the calf rest.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **UNKNOWN** |  |
| **Unit** | |  |

Table: Encoding Details of CalfRestObstacleStatus

SeatSetMnuPsngr\_D\_Rq

Signal to identify the Passenger menu header highligher in the seat setting HMI screen from touchscreen input

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Massage\_Menu** |  |
| **0x02 Seat\_Back\_Menu** |  |
| **0x03 Seat\_Cushion\_Menu** |  |
| **0x04 Headrestraint\_Menu** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSetMnuPsngr\_D\_Rq

HeadrestForeAftStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestForeAftStallStatus

CurrentPositionHeadrestForeAft

Indicates the current position of the headrest fore/aft.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionHeadrestForeAft

FlagStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Allowed** |  |
| **Prohibited** |  |
| **Interrupt** |  |
| **Limited** |  |
| **Unit** | |  |

Table: Encoding Details of FlagStatus

HeadrestDown

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestDown

MaxHorizontalLumbarActuationPosition

Indicates the maximum end point position of the seat horizontal lumbar movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxHorizontalLumbarActuationPosition

HorizontalLumbarAdjustment

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **FORWARD** |  |
| **REARWARD** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of HorizontalLumbarAdjustment

PassengerFRS\_PPSEEE\_Request

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **MOVE\_PASSENGER\_FORWARD** |  |
| **RESET\_PASSENGER** |  |
| **DO\_NOT\_MOVE** |  |
| **Unit** | |  |

Table: Encoding Details of PassengerFRS\_PPSEEE\_Request

Drv\_RightThighExtension\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_RightThighExtension\_AdjCommand

Drv\_LeftThighExtension\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_LeftThighExtension\_AdjCommand

SWP\_Pieplate\_Down

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SWP\_Pieplate\_Down

CalfRaiseStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of CalfRaiseStallStatus

CalfRestTermination

The command to terminate or reverse the direction of the seat calf rest adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of CalfRestTermination

DesiredPositionForeAft

The desired fore/aft position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionForeAft

RequestorStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of RequestorStatus

SWP\_Pieplate\_Up

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SWP\_Pieplate\_Up

SeatCshnRclCtlPsn\_D\_Rq

Signal to control the first row Passenger seat Pan/Recliner position thru SCMK

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Cushion Forward** |  |
| **0x02 Cushion Backward** |  |
| **0x03 Recliner Forward** |  |
| **0x04 Recliner Backward** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCshnRclCtlPsn\_D\_Rq

MinInclineReclineActuationPosition

Indicates the minimum end point position of the seat incline/recline movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinInclineReclineActuationPosition

CalfRestAdjustment

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **IN** |  |
| **OUT** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of CalfRestAdjustment

ForeAftStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of ForeAftStallStatus

SeatHeightPositionDelta

The calculated positional difference between a target seat height position and the current seat height position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeightPositionDelta

SeatLmbrPosDrv\_Pc\_Actl

Signal to identify lumbar adjustment position status from Driver

Resolution = 1

Minimum Value = 0

Maximum Value = 125

Unit of Measure = percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatLmbrPosDrv\_Pc\_Actl

MaxHeadrestForeAftActuationPosition

Indicates the maximum end point position of the headrest fore/aft movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxHeadrestForeAftActuationPosition

CalfRestPositionDelta

The calculated positional difference between a target calf rest position and the current calf rest position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CalfRestPositionDelta

FRS\_TerminatePitch

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **FRS\_OBSTACLE\_DETECTED** |  |
| **STOWABLE\_STEERING\_WHEEL\_ACTIVE** |  |
| **REJUVENATE\_ACTIVE** |  |
| **FRS\_USER\_MANUAL\_ADJUSTMENT** |  |
| **Unit** | |  |

Table: Encoding Details of FRS\_TerminatePitch

ChauffeurRequest

The physical request from the Supervised Seat Movement Requestor for chauffeur adjustments in the passenger FRS.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of ChauffeurRequest

SeatDevcAdjDrv\_D\_Rq

Signal to control the Driver seat device adjustments. Increase/decrease seat command for power adjustments thru HMI screen

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Increase** |  |
| **0x02 Decrease** |  |
| **Unit** | |  |

Table: Encoding Details of SeatDevcAdjDrv\_D\_Rq

HeadrestForeAftTermination

The command to terminate or reverse the direction of the seat headrest fore/aft adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestForeAftTermination

DesiredPositionVerticalLumbar

The desired vertical lumbar position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionVerticalLumbar

DesiredPositionTilt

The desired cushion tilt position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionTilt

Pass\_Incline/Recline\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Incline/Recline\_MotorCurrent

RightThighPositionDelta

The calculated positional difference between a target right thigh position and the current right thigh position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of RightThighPositionDelta

LeftThighObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the left thigh.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of LeftThighObstacleStatus

DesiredPositionSeatHeight

The desired seat height position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionSeatHeight

ForeAftPositionDelta

The calculated positional difference between a target fore/aft position and the current fore/aft position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of ForeAftPositionDelta

Drv\_Incline/Recline\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Incline/Recline\_AdjCommand

SWP\_Pieplate\_Forward

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SWP\_Pieplate\_Forward

MaxHeightActuationPosition

Indicates the maximum end point position of the seat height movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxHeightActuationPosition

SWP\_Pieplate\_Center

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SWP\_Pieplate\_Center

MaxInclineReclineActuationPosition

Indicates the maximum end point position of the seat incline/recline movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxInclineReclineActuationPosition

InclineReclineLearningStatus

Indicates the status of the end point learn cycle process for the seat incline and recline.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of InclineReclineLearningStatus

Drv\_Tilt\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Tilt\_AdjCommand

FrontTiltDown

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of FrontTiltDown

UserPerceivedSeatMovement

The physical visualization of the seat moving perceived by the driver or passenger of the vehicle.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of UserPerceivedSeatMovement

SeatHeightLearningStatus

Indicates the status of the end point learn cycle process for the seat height.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeightLearningStatus

DriverFRS\_PPSEEE\_Request

The request from the second row seat control feature to move the requested FRS forward (fore/aft and/or incline/recline adjustments) or reset to the previous seat position to support the SRS power pitch/slide.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **MOVE\_DRIVER\_FORWARD** |  |
| **RESET\_DRIVER** |  |
| **DO\_NOT\_MOVE** |  |
| **Unit** | |  |

Table: Encoding Details of DriverFRS\_PPSEEE\_Request

ElapsedDistance\_ForeAft

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of ElapsedDistance\_ForeAft

Ignition\_Status

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x0 Unknown** |  |
| **0x1 Off** |  |
| **0x2 Accessory** |  |
| **0x4 Run** |  |
| **0x8 Start** |  |
| **0xF Invalid** |  |
| **Unit** | |  |

Table: Encoding Details of Ignition\_Status

Drv\_Incline/Recline\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Incline/Recline\_MotorCurrent

LeftThighAdjustment

When user requests the left thigh seat comfort setting, this enumeration indicates the action that the left thigh is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **IN** |  |
| **OUT** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of LeftThighAdjustment

SRSPitchSlidePosition\_Passenger

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SRSPitchSlidePosition\_Passenger

TiltLearningStatus

Indicates the status of the end point learn cycle process for the seat cushion tilt.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of TiltLearningStatus

SeatSlidPsngr\_D\_Rq

Signal to request to move 1st Row Pass seat due Power Pitch . Signal to provide the Power Pitch Passenger status to the HMI

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Enabling** |  |
| **0x02 Pitching** |  |
| **0x03 Pitched** |  |
| **0x04 Returning** |  |
| **0x05 Stopped** |  |
| **0x06 Unused** |  |
| **0x07 Unused** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSlidPsngr\_D\_Rq

Drv\_ElapsedDistance\_InclineRecline

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_ElapsedDistance\_InclineRecline

CushionTiltObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the cushion tilt.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of CushionTiltObstacleStatus

LeftThighStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of LeftThighStallStatus

SeatHeightAdjustment

When user requests the seat height comfort setting, this enumeration indicates the action that the seat height is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **UP** |  |
| **DOWN** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeightAdjustment

Profile\_Settings

This enumeration indicates for which profile is being requested. Within each profile is the information on the desired seat position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Rejuvenate** |  |
| **StowableSteeringWheel** |  |
| **MEMORY\_SEAT1** |  |
| **MEMORY\_SEAT2** |  |
| **Unit** | |  |

Table: Encoding Details of Profile\_Settings

EndofTravel

The request to terminate the specified seat movement for the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **END** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of EndofTravel

Pass\_Fore/Aft\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Fore/Aft\_MotorCurrent

ForeAftObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the seat track.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of ForeAftObstacleStatus

HeadrestHeightLearningStatus

Indicates the status of the end point learn cycle process for the seat headrest height.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestHeightLearningStatus

ThoracicStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of ThoracicStallStatus

SRSPitchSlidePosition\_Driver

This contains the fore/aft position of the Second Row Seat.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SRSPitchSlidePosition\_Driver

Drv\_Tilt\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Tilt\_MotorCurrent

SeatHeadrstAdjPsn\_D\_Rq

Request signal to adjust position of Head Restraint of Passenger seat from HMI.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Forward** |  |
| **0x02 Backward** |  |
| **0x03 Up** |  |
| **0x04 Down** |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeadrstAdjPsn\_D\_Rq

SeatLmbrPosPsng\_Pc\_Act

Signal to identify lumbar adjustment position status from Passenger

Resolution = 1

Minimum value = 0

Maximum value = 125

Unit of measure = percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatLmbrPosPsng\_Pc\_Act

CurrentPositionSeatHeight

Indicates the current position of the seat height.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionSeatHeight

LearnCycleTimeCount

The internal time counter used in the comfort position controllers during the Learn Cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of LearnCycleTimeCount

HeadrestHeightStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestHeightStallStatus

VerticalLumbarStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of VerticalLumbarStallStatus

SeatCalfRaisPsn\_Pc\_Actl

Signal to identify Calf Raise adjustment position status from Passenger seat.

Resolution = 1

Minimum Value = 0

Maximum Value = 125

Unit of Measure = percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatCalfRaisPsn\_Pc\_Actl

InclineReclinePositionDelta

The calculated positional difference between a target incline/recline position and the current incline/recline position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of InclineReclinePositionDelta

Drv\_VerticalLumbar\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_VerticalLumbar\_AdjCommand

ForeAftLearningStatus

Indicates the status of the end point learn cycle process for the seat fore and aft.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of ForeAftLearningStatus

MaxLeftThighActuationPosition

Indicates the maximum end point position of the seat left thigh movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxLeftThighActuationPosition

Lumbar\_Fwd\_Sw\_Rqst

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of Lumbar\_Fwd\_Sw\_Rqst

HorizontalLumbarLearningStatus

Indicates the status of the end point learn cycle process for the seat horizontal lumbar.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of HorizontalLumbarLearningStatus

MinCushionTiltActuationPosition

Indicates the minimum end point position of the seat cushion tilt movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinCushionTiltActuationPosition

SeatThghRExtnPsn\_Pc\_Act

Signal to identify Right thight extension adjustment position status from Passenger seat.

Resolution = 10

Minimum Value = 0

Maximum Value = 140

Unit of Measure = percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatThghRExtnPsn\_Pc\_Act

SeatDevcSetDrv\_D\_Stat

Signal to identity the submenu option highlighter in the Driver seat settings HMI screen

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Upper\_Thoracic** |  |
| **0x02 Left\_Thigh\_Extension** |  |
| **0x03 Right\_Thigh\_Extension** |  |
| **0x04 Calf\_Raise\_Extension** |  |
| **0x05 Upper\_Lumbar** |  |
| **0x06 Mid\_Lumbar** |  |
| **0x07 Lower\_Lumbar** |  |
| **0x08 Back\_Bolsters** |  |
| **0x09 Cushion\_Bolsters** |  |
| **0x0A Headrest** |  |
| **0x0B Lumbar** |  |
| **0x0C Pattern\_1** |  |
| **0x0D Pattern\_2** |  |
| **0x0E Pattern \_3** |  |
| **0x0F Pattern\_4** |  |
| **0x10 Pattern\_5** |  |
| **0x11 Pattern\_6** |  |
| **0x12 Pattern\_7** |  |
| **0x13 Pattern\_8** |  |
| **0x14 Pattern\_9** |  |
| **0x15 Pattern\_10** |  |
| **Unused** |  |
| **Unused1** |  |
| **Unused2** |  |
| **Unused3** |  |
| **Unused4** |  |
| **Unused5** |  |
| **Unused6** |  |
| **Unused7** |  |
| **Unused8** |  |
| **Unused9** |  |
| **Unit** | |  |

Table: Encoding Details of SeatDevcSetDrv\_D\_Stat

VerticalLumbarLearningStatus

Indicates the status of the end point learn cycle process for the seat vertical lumbar.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of VerticalLumbarLearningStatus

FRSUserComfortRequest

This represents the physical request from the Supervised Seat Movement Requestor to move the FRS comfort positions.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of FRSUserComfortRequest

MaxHeadrestHeightActuationPosition

Indicates the maximum end point position of the headrest height movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxHeadrestHeightActuationPosition

Pass\_Thoracic\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Thoracic\_AdjCommand

HeadrestForeAftLearningStatus

Indicates the status of the end point learn cycle process for the seat headrest fore and aft.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestForeAftLearningStatus

FlagStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Allowed** |  |
| **Prohibited** |  |
| **Limited** |  |
| **Unit** | |  |

Table: Encoding Details of FlagStatus

InclineReclineStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of InclineReclineStallStatus

RightThighTermination

The command to terminate or reverse the direction of the seat right thigh adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of RightThighTermination

CurrentPositionHeadrestHeight

Indicates the current position of the headrest height.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionHeadrestHeight

MeasuredActuationSignal

This enumeration will indicate the measured location of the comfort settings.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MeasuredActuationSignal

CushionTiltTermination

The command to terminate or reverse the direction of the seat cushion tilt adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of CushionTiltTermination

SeatThghRExtnDrv\_Pc\_Act

Signal to identify Right Thigh Extension adjustment position status from Driver seat.

Resolution = 10

Minimum Value = 0

Maximum Value = 140

Unit of Measure = Percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatThghRExtnDrv\_Pc\_Act

PassengerLearningCompletionStatus

Indicates the holistic status of learn cycle process for the passenger FRS.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **LEARNED** |  |
| **NOT\_LEARNED** |  |
| **Unit** | |  |

Table: Encoding Details of PassengerLearningCompletionStatus

Pass\_HeadrestUp/Down\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_HeadrestUp/Down\_MotorCurrent

SeatDevcAdjPsngr\_D\_Rq

Signal to control the Passenger increase/decrease seat command for power adjustments thru screen

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Increase** |  |
| **0x02 Decrease** |  |
| **Unit** | |  |

Table: Encoding Details of SeatDevcAdjPsngr\_D\_Rq

CushionTiltPositionDelta

The calculated positional difference between a target cushion tilt position and the current cushion tilt position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CushionTiltPositionDelta

HeadrestHeightTermination

The command to terminate or reverse the direction of the seat headrest height adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestHeightTermination

SeatMovPsngr\_T\_Actl

Signal for time elapsed since request received to move the Passenger seat to location to enable power pitch/slide

Resolution = 10

Minimum value = 0

Maximum value = 100000

Unit of measure = millisecond

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovPsngr\_T\_Actl

SeatID

This enumeration indicates for which seat is being requested; driver side, passenger side, driver memory, or passenger memory.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **DRIVER** |  |
| **PASSENGER** |  |
| **DRIVER\_MEMORY** |  |
| **PASSENGER\_MEMORY** |  |
| **Unit** | |  |

Table: Encoding Details of SeatID

MinVerticalLumbarActuationPosition

Indicates the minimum end point of the seat vertical lumbar movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinVerticalLumbarActuationPosition

TransientPitchSlideEndpointStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ENDPOINT\_MET** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of TransientPitchSlideEndpointStatus

Drv\_HeadrestUp/Down\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_HeadrestUp/Down\_AdjCommand

PromptStatus

True = Prompt displayed previously during current key cycle

False = Prompt NOT displayed previously during current key cycle

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **True** |  |
| **False** |  |
| **Unit** | |  |

Table: Encoding Details of PromptStatus

VerticalLumbarAdjustment

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **UP** |  |
| **DOWN** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of VerticalLumbarAdjustment

SeatCshnRclCtlPsn\_D\_Rq2

Signal to control the first row Passenger seat Pan/Recliner position thru SCML

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Cushion Forward** |  |
| **0x02 Cushion Backward** |  |
| **0x03 Recliner Forward** |  |
| **0x04 Recliner Backward** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCshnRclCtlPsn\_D\_Rq2

VerticalLumbarPositionDelta

The calculated positional difference between a target vertical lumbar position and the current vertical lumbar position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of VerticalLumbarPositionDelta

HeadrestUp

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestUp

Drv\_Fore/Aft\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Fore/Aft\_AdjCommand

Lumbar\_Rwd\_Sw\_Rqst

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of Lumbar\_Rwd\_Sw\_Rqst

Pass\_Calf Rest\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Calf Rest\_AdjCommand

HeadrestHeightPositionDelta

The calculated positional difference between a target headrest height position and the current headrest height position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestHeightPositionDelta

MaxCushionTiltActuationPosition

Indicates the maximum end point position of the seat cushion tilt movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxCushionTiltActuationPosition

SeatCshnRclPsn\_D\_RqMnu

Signal to control the cushion/Recliner passenger Fore/aft first row thru HMI

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Cushion Forward** |  |
| **0x02 Cushion Backward** |  |
| **0x03 Recliner Forward** |  |
| **0x04 Recliner Backward** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCshnRclPsn\_D\_RqMnu

MinHeadrestHeightActuationPosition

Indicates the minimum end point position of the headrest height movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinHeadrestHeightActuationPosition

MinLeftThighActuationPosition

Indicates the minimum end point of the seat left thigh movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinLeftThighActuationPosition

MaxForeAftActuationPosition

Indicates the maximum end point position of the seat fore/aft movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxForeAftActuationPosition

HeadrestHeightObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the headrest height.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestHeightObstacleStatus

MinCalfActuationPosition

Indicates the minimum end point position of the seat calf rest movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinCalfActuationPosition

Drv\_Thoracic\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Thoracic\_MotorCurrent

SeatCushAft

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCushAft

VisualFeedback

The visual feedback of the learn cycle status that is received by the Configuration Operator.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of VisualFeedback

DesiredPositionLeftThigh

The desired left thigh position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionLeftThigh

LeftThighPositionDelta

The calculated positional difference between a target left thigh position and the current left thigh position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of LeftThighPositionDelta

SeatMovComplR2Drv\_L\_Act

Signal for distance remaining to complete Second Row Driver seat move to location to enable power pitch/slide

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovComplR2Drv\_L\_Act

HeadrestForeAftObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the headrest fore/aft.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestForeAftObstacleStatus

HeadrestHeightAdjustment

When user requests the headrest seat comfort setting, this enumeration indicates the action that the headrest height is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **UP** |  |
| **DOWN** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestHeightAdjustment

Drv\_Fore/Aft\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Fore/Aft\_MotorCurrent

HorizontalLumbarStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of HorizontalLumbarStallStatus

DesiredPositionThoracic

The desired thoracic position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionThoracic

ThoracicAdjustment

When user requests the thoracic seat comfort setting, this enumeration indicates the action that the thoracic is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **IN** |  |
| **OUT** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of ThoracicAdjustment

HorizontalLumbarObstacleStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of HorizontalLumbarObstacleStatus

TransmissionStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **PARK** |  |
| **NEUTRAL** |  |
| **DRIVE** |  |
| **REVERSE** |  |
| **Unit** | |  |

Table: Encoding Details of TransmissionStatus

MaxRightThighActuationPosition

Indicates the maximum end point position of the seat riight thigh movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxRightThighActuationPosition

SeatBackFwd

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SeatBackFwd

StmsPsngr\_D\_RqMnu

Seat massage request from HMI

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Null** |  |
| **0x01 Low** |  |
| **0x02 Medium** |  |
| **0x03 High** |  |
| **Unit** | |  |

Table: Encoding Details of StmsPsngr\_D\_RqMnu

LeftThighTermination

The command to terminate or reverse the direction of the seat left thigh adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of LeftThighTermination

SeatCushFwd

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCushFwd

LeftThighLearningStatus

Indicates the status of the end point learn cycle process for the driver seat left thigh.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of LeftThighLearningStatus

SeatCshnRclCtlPsn\_D\_Rq3

Signal to control the first row Passenger seat Pan/Recliner position thru rear HMI

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Cushion Forward** |  |
| **0x02 Cushion Backward** |  |
| **0x03 Recliner Forward** |  |
| **0x04 Recliner Backward** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCshnRclCtlPsn\_D\_Rq3

MinForeAftActuationPosition

Indicates the minimum end point position of the seat fore/aft movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinForeAftActuationPosition

CurrentSeatPosition

Indicates the current positions for the comfort settings.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentSeatPosition

ThoracicPositionDelta

The calculated positional difference between a target thoracic position and the current thoracic position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of ThoracicPositionDelta

Pass\_Tilt\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Tilt\_AdjCommand

RightThighAdjustment

When user requests the right thigh seat comfort setting, this enumeration indicates the action that the right thigh is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **IN** |  |
| **OUT** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of RightThighAdjustment

SeatSlidDrv\_D\_Rq

Signal to request to move 1st row driver seat due Power Pitch

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Enabling** |  |
| **0x02 Pitching** |  |
| **0x03 Pitched** |  |
| **0x04 Returning** |  |
| **0x05 Stopped** |  |
| **0x06 Unused** |  |
| **0x07 Unused** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSlidDrv\_D\_Rq

SeatDevcSetDrv\_D\_Rq

Signal to control the Driver seat device adjustments. Increase/decrease seat command for power adjustments thru HMI screen

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Upper\_Thoracic** |  |
| **0x02 Left\_Thigh\_Extension** |  |
| **0x03 Right\_Thigh\_Extension** |  |
| **0x04 Calf\_Raise\_Extension** |  |
| **0x05 Upper\_Lumbar** |  |
| **0x06 Mid\_Lumbar** |  |
| **0x07 Lower\_Lumbar** |  |
| **0x08 Back\_Bolsters** |  |
| **0x09 Cushion\_Bolsters** |  |
| **0x0A Headrest** |  |
| **0x0B Lumbar** |  |
| **0x0C Pattern\_1** |  |
| **0x0D Pattern\_2** |  |
| **0x0E Pattern \_3** |  |
| **0x0F Pattern\_4** |  |
| **0x10 Pattern\_5** |  |
| **0x11 Pattern\_6** |  |
| **0x12 Pattern\_7** |  |
| **0x13 Pattern\_8** |  |
| **0x14 Pattern\_9** |  |
| **0x15 Pattern\_10** |  |
| **Unused** |  |
| **Unused1** |  |
| **Unused2** |  |
| **Unused3** |  |
| **Unused4** |  |
| **Unused5** |  |
| **Unused6** |  |
| **Unused7** |  |
| **Unused8** |  |
| **Unused9** |  |
| **Unit** | |  |

Table: Encoding Details of SeatDevcSetDrv\_D\_Rq

InclineReclineAdjustment

When user requests the incline/recline seat comfort setting, this enumeration indicates the action that the Seatback is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **FORWARD** |  |
| **REARWARD** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of InclineReclineAdjustment

SeatSetMnuDrv\_D\_Rq

Request Signal going to the Driver seat from the selected seat setting menu of HMI/ touchscreen input

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Massage\_Menu** |  |
| **0x02 Seat\_Back\_Menu** |  |
| **0x03 Seat\_Cushion\_Menu** |  |
| **0x04 Headrestraint\_Menu** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSetMnuDrv\_D\_Rq

SeatHeightStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeightStallStatus

ComfortSettings

Indicates the direction any of the comfort adjustments request. This enumeration is composed of the individual position adjustment enumerations for each seat movement.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of ComfortSettings

Drv\_HeadrestFore/Aft\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_HeadrestFore/Aft\_MotorCurrent

VerticalLumbarObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the vertical lumbar.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of VerticalLumbarObstacleStatus

SeatHeightObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the seat height.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeightObstacleStatus

DesiredPositionHeadrestHeight

The desired headrest height position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionHeadrestHeight

MinHorizontalLumbarActuationPosition

Indicates the minimum end point position of the seat horizontal lumbar movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinHorizontalLumbarActuationPosition

SeatThrcAdjPsng\_Pc\_Act

Signal to identify thoracic adjustment position status from Passenger seat

Resolution = 10

Minimum Value = 0

Maximum Value = 140

Unit of Measure = percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatThrcAdjPsng\_Pc\_Act

LearnProcess

Indicates the command to initiate the individual learn cycle process for each seat movement.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **FORE\_AFT** |  |
| **INCLINE\_RECLINE** |  |
| **HEADREST\_FORE\_AFT** |  |
| **HEADREST\_HEIGHT** |  |
| **SEAT\_HEIGHT** |  |
| **LEFT\_THIGH** |  |
| **RIGHT\_THIGH** |  |
| **CUSHION\_TILT** |  |
| **VERTICAL\_LUMBAR** |  |
| **THORACIC** |  |
| **CALF\_REST** |  |
| **HORIZONTAL\_LUMBAR** |  |
| **Unit** | |  |

Table: Encoding Details of LearnProcess

SWP\_Pieplate\_Rearward

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SWP\_Pieplate\_Rearward

Drv\_HeadrestUp/Down\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_HeadrestUp/Down\_MotorCurrent

VehicleSpeed

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of VehicleSpeed

InclineReclineObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the seat back.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of InclineReclineObstacleStatus

Pass\_HeadrestFore/Aft\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_HeadrestFore/Aft\_AdjCommand

SeatMovCompltDrv\_T\_Act

Signal for time remaining to complete Driver seat move to location to enable power pitch/slide

Resolution = 10

Minimum value = 0

Maximum value = 100000

Unit of measure = millisecond

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovCompltDrv\_T\_Act

StmsDrv\_D\_Stat

Signal to identify massage status from Driver seat module

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Null** |  |
| **0x01 Low** |  |
| **0x02 Medium** |  |
| **0x03 High** |  |
| **Unit** | |  |

Table: Encoding Details of StmsDrv\_D\_Stat

MinThoracicActuationPosition

Indicates the minimum end point of the seat thoracic movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinThoracicActuationPosition

CurrentPositionHorizontalLumbar

Indicates the current position of the horizontal lumbar.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionHorizontalLumbar

Menu

List of seat comfort menus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Inactive** |  |
| **Massage\_Menu** |  |
| **Seat\_Back\_Menu** |  |
| **Seat\_Cushion\_Menu** |  |
| **Headrestraint\_Menu** |  |
| **Unit** | |  |

Table: Encoding Details of Menu

SeatHeadrstAdjDrv\_D\_Rq

Signal to identify Head Restraint adjustment position status from Driver seat.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Forward** |  |
| **0x02 Backward** |  |
| **0x03 Up** |  |
| **0x04 Down** |  |
| **0x0E No Data Exists** |  |
| **0x0F Faulty** |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeadrstAdjDrv\_D\_Rq

Drv\_Thoracic\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Thoracic\_AdjCommand

LearningCompletionStatus

The status of the learn cycle process of both driver and passenger FRS. This value type contains the learning completion status enumerations of the driver and passenger FRS.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of LearningCompletionStatus

Pass\_VerticalLumbar\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_VerticalLumbar\_MotorCurrent

SeatMovDrv\_T\_Actl

Signal for time elapsed since request received to move the Driver seat to location to enable power pitch/slide

Resolution = 10

Minimum value = 0

Maximum value = 100000

Unit of measure = millisecond

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovDrv\_T\_Actl

HeadrestForeAftAdjustment

When user requests the headrest seat comfort setting, this enumeration indicates the action that the headrest fore/aft is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **FORWARD** |  |
| **REARWARD** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestForeAftAdjustment

DesiredPositionInclineRecline

The desired incline/recline position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionInclineRecline

Device

List of adjustable components/behaviors that can be controlled through the infotainment screen

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Inactive** |  |
| **Upper\_Thoracic** |  |
| **Left\_Thigh\_Extension** |  |
| **Right\_Thigh\_Extension** |  |
| **Calf\_Raise\_Extension** |  |
| **Upper\_Lumbar** |  |
| **Mid\_Lumbar** |  |
| **Lower\_Lumbar** |  |
| **Back\_Bolsters** |  |
| **Cushion\_Bolsters** |  |
| **Headrest** |  |
| **Lumbar** |  |
| **Pattern\_1** |  |
| **Pattern\_2** |  |
| **Pattern \_3** |  |
| **Pattern\_4** |  |
| **Pattern\_5** |  |
| **Pattern\_6** |  |
| **Pattern\_7** |  |
| **Pattern\_8** |  |
| **Pattern\_9** |  |
| **Pattern\_10** |  |
| **Unit** | |  |

Table: Encoding Details of Device

SeatSetMnuPsngr\_D\_Stat

Signal to identify the menu header highligher in the Passenger seat settings HMI screen from hardswitch input.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Massage\_Menu** |  |
| **0x02 Seat\_Back\_Menu** |  |
| **0x03 Seat\_Cushion\_Menu** |  |
| **0x04 Headrestraint\_Menu** |  |
| **0x05 Unused** |  |
| **0x06 Unused1** |  |
| **0x07 Unused2** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSetMnuPsngr\_D\_Stat

Drv\_Height\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_Height\_MotorCurrent

LearnCycleRequest

The request to initiate the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **REQUESTED** |  |
| **NOT\_REQUESTED** |  |
| **Unit** | |  |

Table: Encoding Details of LearnCycleRequest

SeatBackAft

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SeatBackAft

SeatSetNotfnDrv\_D\_Rq

Signal to display more seat settings option in the screen for Driver side

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Pop\_1** |  |
| **0x02 Pop\_2** |  |
| **Unused** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSetNotfnDrv\_D\_Rq

HeadrestForeAftPositionDelta

The calculated positional difference between a target headrest fore/aft position and the current headrest fore/aft position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of HeadrestForeAftPositionDelta

Drv\_HorizontalLumbar\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_HorizontalLumbar\_MotorCurrent

EasyEntryExitRequest

The request for driver FRS adjustments to support Easy Entry and Easy Exit.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **RESTORE\_DRIVE\_POSITION** |  |
| **EASY\_ENTRY\_EXIT** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of EasyEntryExitRequest

MaxCalfActuationPosition

Indicates the maximum end point position of the seat calf rest movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxCalfActuationPosition

Pass\_Tilt\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Tilt\_MotorCurrent

RightThighLearningStatus

Indicates the status of the end point learn cycle process for the driver seat right thigh.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of RightThighLearningStatus

DesiredPositionHeadrestForeAft

The desired headrest fore/aft position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionHeadrestForeAft

TrnPrkSys\_D\_Actl

This signal gives the actual state of the park system including fault information. This signal does not change state until sensor reading the park lever indicates that the parking pawl is in position to fall into the park gear though it could still be abutted. This signal is the most direct replacement for GearLvrPos\_D\_Actl for functions that are trying to determine if the vehicle is secured or securable.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 NotKnown** |  |
| **0x01 Park** |  |
| **0x02 TransitionCloseToPark** |  |
| **0x03 AtNoSpring** |  |
| **0x04 TransitionCloseToOutOfPark** |  |
| **0x05 OutOfPark** |  |
| **0x06 Override** |  |
| **0x07 OutOfRangeLow** |  |
| **0x08 OutOfRangeHigh** |  |
| **0x09 Frequency Error** |  |
| **0x0A NotUsed\_1** |  |
| **0x0B NotUsed\_2** |  |
| **0x0C NotUsed\_3** |  |
| **0x0D NotUsed\_4** |  |
| **0x0E NotUsed\_5** |  |
| **0x0F Faulty** |  |
| **Unit** | |  |

Table: Encoding Details of TrnPrkSys\_D\_Actl

ThoracicTermination

The command to terminate or reverse the direction of the seat thoracic adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of ThoracicTermination

DesiredPositionRightThigh

The desired right thigh position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionRightThigh

SeatMovCompltPsn\_L\_Act

Signal for distance (in mm) remaining to complete Passenger seat move to location to enable power pitch/slide

Resolution = 1

Minimum value = 0

Maximum value = 4095

Unit of measure = Milimeter

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovCompltPsn\_L\_Act

StmsDrv\_D\_RqMnu

Seat massage request from HMI

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Null** |  |
| **0x01 Low** |  |
| **0x02 Medium** |  |
| **0x03 High** |  |
| **Unit** | |  |

Table: Encoding Details of StmsDrv\_D\_RqMnu

ThoracicLearningStatus

Indicates the status of the end point learn cycle process for the seat thoracic.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of ThoracicLearningStatus

TiltAdjustment

When user requests the seat tilt comfort setting, this enumeration indicates the action that the seat tilt is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **UP** |  |
| **DOWN** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of TiltAdjustment

HoriztonalLumbarTermination

The command to terminate or reverse the direction of the seat horizontal lumbar adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of HoriztonalLumbarTermination

InclineReclineTermination

The command to terminate or reverse the direction of the seat incline/recline adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of InclineReclineTermination

CurrentPositionCalfRest

Indicates the current position of the calf rest.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionCalfRest

HorizontalLumbarPositionDelta

The calculated positional difference between a target horizontal lumbar position and the current horizontal lumbar position.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of HorizontalLumbarPositionDelta

CurrentPositionInclineRecline

Indicates the current position of the seat back.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionInclineRecline

SeatCushDown

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCushDown

SeatCushUp

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of SeatCushUp

FRSPositionDelta

The calculated positional difference between a target position and the current position of a seat adjustment. This value type is composed of the position delta enumerations of each individual seat adjustments.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of FRSPositionDelta

FrontTiltUp

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **ON** |  |
| **OFF** |  |
| **Unit** | |  |

Table: Encoding Details of FrontTiltUp

DesiredPositionHorizontalLumbar

The desired horizontal lumbar position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionHorizontalLumbar

SeatThghLExtnDrv\_Pc\_Act

Signal to identify Left Thigh Extension adjustment position status from Driver seat.

Resolution = 10

Minimum Value = 0

Maximum Value = 140

Unit of Measure = Percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatThghLExtnDrv\_Pc\_Act

Drv\_LeftThighExtension\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_LeftThighExtension\_MotorCurrent

ThoracicObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the thoracic.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of ThoracicObstacleStatus

Pass\_HorizontalLumbar\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_HorizontalLumbar\_MotorCurrent

Pass\_HorizontalLumbar\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_HorizontalLumbar\_AdjCommand

CurrentPositionTilt

Indicates the current position of the cushion tilt.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionTilt

FRS\_ChauffeurAdjustment

When requested by the FRS, this enumeration indicates the action that the passenger seat is to take.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **CHAUFFEUR\_RECLINE\_FORWARD** |  |
| **CHAUFFEUR\_SLIDE\_SEAT\_FORWARD** |  |
| **CHAUFFEUR\_RECLINE\_REARWARD** |  |
| **CHAUFFEUR\_SLIDE\_SEAT\_REARWARD** |  |
| **NULL** |  |
| **Unit** | |  |

Table: Encoding Details of FRS\_ChauffeurAdjustment

Pass\_Calf Rest\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Calf Rest\_MotorCurrent

Pass\_Thoracic\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Thoracic\_MotorCurrent

MinLearningStatus

Indicates whether the minimum end point of the seat movement undergoing the learning cycle process has been learned.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **MIN\_LEARNED** |  |
| **MIN\_NOT\_LEARNED** |  |
| **Unit** | |  |

Table: Encoding Details of MinLearningStatus

CurrentPositionLeftThigh

Indicates the current position of the left thigh.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionLeftThigh

SeatThrcAdjDrv\_PC\_Act

Signal to identify thoracic adjustment position status from Driver seat.

Resolution = 10

Minimum Value = 0

Maximum Value = 140

Unit of Measure = Percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatThrcAdjDrv\_PC\_Act

CurrentPositionVerticalLumbar

Indicates the current position of the vertical lumbar.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionVerticalLumbar

Pass\_Fore/Aft\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Fore/Aft\_AdjCommand

SeatHeightTermination

The command to terminate or reverse the direction of the seat height adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of SeatHeightTermination

SeatSetMnuDrv\_D\_Stat

Signal to identify the menu header highlighter in the Driver seat settings HMI screen from hardswitch input.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Massage\_Menu** |  |
| **0x02 Seat\_Back\_Menu** |  |
| **0x03 Seat\_Cushion\_Menu** |  |
| **0x04 Headrestraint\_Menu** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSetMnuDrv\_D\_Stat

LearnedEndPointRangeStatus

Indicates the whether the range between the minimum and maximum end point of the given seat movement is within the range or out of range of the target range.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **IN\_RANGE** |  |
| **OUT\_OF\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of LearnedEndPointRangeStatus

SeatMovComplR2Psn\_L\_Act

Signal for distance remaining to complete Second Row Passenger seat move to location to enable power pitch/slide

Resolution = 1

Minimum value = 0

Maximum value = 4095

Unit of measure = Milimeter

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovComplR2Psn\_L\_Act

RightThighStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of RightThighStallStatus

CushionTiltStallStatus

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of CushionTiltStallStatus

SeatDevcSetPsngr\_D\_Rq

Signal to identify the Passenger submenu option highligher in the seat setting HMI screen from touchscreen input

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Upper\_Thoracic** |  |
| **0x02 Left\_Thigh\_Extension** |  |
| **0x03 Right\_Thigh\_Extension** |  |
| **0x04 Calf\_Raise\_Extension** |  |
| **0x05 Upper\_Lumbar** |  |
| **0x06 Mid\_Lumbar** |  |
| **0x07 Lower\_Lumbar** |  |
| **0x08 Back\_Bolsters** |  |
| **0x09 Cushion\_Bolsters** |  |
| **0x0A Headrest** |  |
| **0x0B Lumbar** |  |
| **0x0C Pattern\_1** |  |
| **0x0D Pattern\_2** |  |
| **0x0E Pattern \_3** |  |
| **0x0F Pattern\_4** |  |
| **0x10 Pattern\_5** |  |
| **0x11 Pattern\_6** |  |
| **0x12 Pattern\_7** |  |
| **0x13 Pattern\_8** |  |
| **0x14 Pattern\_9** |  |
| **0x15 Pattern\_10** |  |
| **Unused** |  |
| **Unused1** |  |
| **Unused2** |  |
| **Unused3** |  |
| **Unused4** |  |
| **Unused5** |  |
| **Unused6** |  |
| **Unused7** |  |
| **Unused8** |  |
| **Unused9** |  |
| **Unit** | |  |

Table: Encoding Details of SeatDevcSetPsngr\_D\_Rq

SeatThghLExtnPsn\_Pc\_Act

Signal to identify Left thight extension adjustment position status from Passenger seat.

Resolution = 10

Minimum Value = 0

Maximum Value = 140

Unit of Measure = percent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatThghLExtnPsn\_Pc\_Act

DistanceToEnabled

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of DistanceToEnabled

SeatMovCompltDrv\_L\_Act

Signal for distance (in mm) remaining to complete Driver seat move to location to enable power pitch/slide

Resolution = 1

Minimum value = 0

Maximum value = 4095

Unit of measure = Milimeter

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of SeatMovCompltDrv\_L\_Act

DriverLearningCompletionStatus

Indicates the holistic status of learn cycle process for the driver FRS.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **LEARNED** |  |
| **NOT\_LEARNED** |  |
| **Unit** | |  |

Table: Encoding Details of DriverLearningCompletionStatus

StmsPsngr\_D\_Stat

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Null** |  |
| **0x01 Low** |  |
| **0x02 Medium** |  |
| **0x03 High** |  |
| **Unit** | |  |

Table: Encoding Details of StmsPsngr\_D\_Stat

MinHeightActuationPosition

Indicates the minimum end point position of the seat height movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinHeightActuationPosition

SeatSetNotfnPsngr\_D\_Rq

Signal to display more seat settings option in the screen for Passanger side

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **0x00 Inactive** |  |
| **0x01 Pop\_1** |  |
| **0x02 Pop\_2** |  |
| **Unused** |  |
| **Unit** | |  |

Table: Encoding Details of SeatSetNotfnPsngr\_D\_Rq

Pass\_HeadrestFore/Aft\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_HeadrestFore/Aft\_MotorCurrent

Drv\_VerticalLumbar\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_VerticalLumbar\_MotorCurrent

ElapsedTime

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of ElapsedTime

VerticalLumbarTermination

The command to terminate or reverse the direction of the seat vertical lumbar adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of VerticalLumbarTermination

Veh\_V\_ActlBrk

Vehicle speed source from brake module. This is usually the primary vehicle speed source in FiE vehicles. In non-failure mode operation this will be based on wheel speed sensors. In FNA vehicles the primary source is usually Veh\_V\_ActlEng (ID#1191). Both signals will be on HS-CAN for all CGEA V1.1 vehicles. The receiving modules will be configured to honor one signal as the master. Use id#507 for quality factor information.

Resolution = 0.01

Minimum value = 0

Maximum value = 655.35

Unit of measure = Kilometers/hour

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Veh\_V\_ActlBrk

ForeAftTermination

The command to terminate or reverse the direction of the seat fore/aft adjustment.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **STOP** |  |
| **REVERSE** |  |
| **NO\_ACTION** |  |
| **Unit** | |  |

Table: Encoding Details of ForeAftTermination

LearnCycleStatus

Indicates the learn cycle status for all seat movements. This value type contains the learning status enumerations for all seat movements.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
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|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of LearnCycleStatus

Pass\_Height\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Height\_MotorCurrent

CalfRestLearningStatus

Indicates the status of the end point learn cycle process for the passenger seat calf rest.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **NOT\_LEARNED** |  |
| **LEARNED** |  |
| **INVALID\_RANGE** |  |
| **Unit** | |  |

Table: Encoding Details of CalfRestLearningStatus

CurrentPositionRightThigh

Indicates the current position of the right thigh.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of CurrentPositionRightThigh

MaxThoracicActuationPosition

Indicates the maximum end point position of the seat thoracic movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MaxThoracicActuationPosition

Pass\_HeadrestUp/Down\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_HeadrestUp/Down\_AdjCommand

MinRightThighActuationPosition

Indicates the minimum end point of the seat right thigh movement learned during the learn cycle process.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of MinRightThighActuationPosition

SeatActuationTermination

The command to terminate or reverse the direction of any of the seat comfort adjustments. This value type is composed of termination enumerations for each individual seat adjustments.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of SeatActuationTermination

Drv\_RightThighExtension\_MotorCurrent

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Drv\_RightThighExtension\_MotorCurrent

MaxLearningStatus

Indicates whether the maximum end point of the seat movement undergoing the learning cycle process has been learned.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **MAX\_LEARNED** |  |
| **MAX\_NOT\_LEARNED** |  |
| **Unit** | |  |

Table: Encoding Details of MaxLearningStatus

DesiredPositionCalfRest

The desired calf rest position that the seat is requested to be moved to.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
|  |  |
| **Unit** | |  |

Table: Encoding Details of DesiredPositionCalfRest

Pass\_Incline/Recline\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_Incline/Recline\_AdjCommand

Pass\_VerticalLumbar\_AdjCommand

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **Unit** | |  |

Table: Encoding Details of Pass\_VerticalLumbar\_AdjCommand

RightThighObstacleStatus

This enumeration will indicate whether an obstacle is detected or not for the right thigh.

**Note:** An encoding is either discrete or continuous. Delete those fields, which are not needed.

|  |  |  |
| --- | --- | --- |
| **Value**  (Continuous Encoding) | Min Value |  |
| Max Value |  |
| Resolution |  |
| Offset |  |
| **Value**  (Discrete  Encoding) |  |  |
| **OBSTACLE\_DETECTED** |  |
| **OBSTACLE\_NOT\_DETECTED** |  |
| **Unit** | |  |

Table: Encoding Details of RightThighObstacleStatus

### Technology State Machines

Document ends here.