



**Research & Vehicle Technology**  
**“Infotainment Systems Product Development”**

**Feature: Settings in the Infotainment  
Centerstack Module (Global)**

**Subsystem Part Specific Specification  
(SPSS)**

Version: v1.22

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Version Date: April 23, 2021

**FORD CONFIDENTIAL**



## Revision History

Date	Version	Notes	
Jan 23rd, 2017	0.1	Initial Draft Release	
March 6th, 2017	0.2		
	IIR-REQ-251250/B-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> added traffic sign recognition signals used to not allow the user to select the traffic sign recognition HMI settings	
	VS-SR-REQ-232098/J-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module	<jmyslin2> Added clarifications in track changes for what to do in the HMI if a Settings Feature Server is not responding to a query or set command	
	VS-SR-REQ-232237/F-FBMP Feature. St received from any FBMP Feature Settings Server module	<jmyslin2> Clarified requirement that Centerstack HMI Client receives the Feature. St even if not for a Set or Query operation	
	VS-SR-REQ-251193/A-Traffic Sign Recognition Settings HMI not user selectable	<jmyslin2> New requirement. This requirement specifies when the Traffic Sign Recognition settings are not user selectable	
March 28th, 2017	0.3		
	IIR-REQ-251250/C-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> Updated requirement to remove HMI Audio Mode since Queries will now only be done for Settings in the Centerstack after Ignition_Status changes to Run	
	VS-SR-REQ-232098/K-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module	<jmyslin2> Updated requirement to clarify for a crank event	
	VS-SR-REQ-234428/E-General Settings at Start-up	<jmyslin2> Updated General Settings query at start-up so that it is only done after Ignition_Status changes to Run	
April 5th, 2017	0.4		
	VS-SR-REQ-232098/L-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module	<jmyslin2> Updated so that reference most recent Feature Based Message Protocol which is needed to go along with this Settings in the Centerstack spec	
	FBMP-SR-REQ-238230/F-Enhanced Memory - Active Personality Profile change using Feature Based Message Protocol	<jmyslin2> spec clarification (no content change)	
	VS-SR-REQ-232245/F-Cruise Control	<jmyslin2> fixed a typo	
	VS-SR-REQ-259080/A-HMI Activation during Run - General Settings	<jmyslin2> New requirement	
	VS-SR-REQ-234316/D-Duration - Remote Start	<jmyslin2> Updated requirement to say for the Active Remote Start (enabled/disable) HMI the OFF/Disable settings uses the 10 minutes as the setting for OFF	
May 8, 2017	1.0	Initial Release	
	VS-SR-REQ-233862/G-Less Than Warning Threshold - Traffic Sign Recognition	<jmyslin2> Added Clarification for the TsrVIUnitMsgTxt_D_Rq signals usage	
	VS-SR-REQ-233867/G-Greater than Warning Threshold - Traffic Sign Recognition	<jmyslin2> Added Clarification for the TsrVIUnitMsgTxt_D_Rq signals usage	
June 1, 2017	1.0.1		
	VS-SR-REQ-232098/M-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module	<jmyslin2> removed HMI error handling for Query requests and deferred to the HMI specification	
	VS-SR-REQ-242439/B-EV+ Mode	<jmyslin2> EV+ Mode setting is deleted	
	VS-SR-REQ-267623/A-Heater Programming - Park Heater	<jmyslin2> New Requirement	
August 9, 2017	1.1		
	VS-SR-REQ-271525/A-Lane Keeping Aid	<Jmyslin2> New Requirement for Lane Keeping Aid	
	VS-SR-REQ-271526/A-Lane Keeping Alert	<Jmyslin2> New Requirement for Lane Keeping Alert	



VS-FUN-REQ-233809/B-Traffic Sign Recognition	<jmyslin2> Updated for Speed Limit Information
VS-SR-REQ-233812/D-Enable/Disable (Traffic Sign Recognition / Speed Limit Information) Feature	<jmyslin2> Updated requirement to include Speed Limit Information
VS-SR-REQ-233862/H-Less Than Warning Threshold - (Traffic Sign Recognition / Speed Limit Information)	<jmyslin2> Updated for Speed Limit Information
VS-SR-REQ-251193/B-Traffic Sign Recognition Settings/ Speed Limit Information HMI not user selectable	<jmyslin2> Updated to include Speed Limit Information
VS-FUN-REQ-272504/A-Speed Limit Information	<jmyslin2> Added Speed Limit Information Function
VS-SR-REQ-233812/D-Enable/Disable (Traffic Sign Recognition / Speed Limit Information) Feature	<jmyslin2> Updated requirement to include Speed Limit Information
VS-SR-REQ-239164/C-Tow Haul	<jmyslin2> Updated Tow Haul setting encodings to match the new encodings provided by the HMI team
VS-FUN-REQ-272332/A-Grade Assist	<jmyslin2> New Grade Assist function
VS-SR-REQ-272333/A-Grade Assist	<jmyslin2> New Requirement - Grade Assist
VS-SR-REQ-234061/D-Auto Engine OFF	<jmyslin2> Added note about possible HMI name
VS-SR-REQ-234339/C-Auto Highbeam / Adaptive Drivebeam	<jmyslin2> Updated to include Adaptive Highbeam
VS-SR-REQ-272030/A-Predictive Lighting	<jmyslin2> New Settings for Predictive Lighting
VS-SR-REQ-272687/A-Global Unlock	<jmyslin2> New global unlock setting
VS-SR-REQ-272694/A-Intelligent Access	<jmyslin2> New Intelligent Access locking setting
VS-FUN-REQ-272705/A-Air Suspension	<jmyslin2> New Setting requirement for Air Suspension
VS-SR-REQ-272706/A-Air Suspension	<jmyslin2> New requirement for Air Suspension
VS-FUN-REQ-272707/A-Auto Entry/Exit Height	<jmyslin2> New Setting requirement for Auto Entry/Exit Height
VS-SR-REQ-272708/A-Auto Entry/Exit Height	<jmyslin2> New requirement for Auto Entry/Exit Height

August 25, 2017

1.2

VSv4-FRD-REQ-232097/E-Settings in the Infotainment Centerstack (Global - CGEA)	<jmyslin2> changed name to settings in the centerstack
IIR-REQ-251250/D-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> Updated table to add BttLeft_D_RqDrv and BttRight_D_RqDrv for new BTT Lite feature
VS-IIR-REQ-243929/B-FBMP Interface requirements	<jmyslin2> Updated to add BTT Lite MD's
VS-FUN-REQ-234029/B-Park Aid	<jmyslin2> Per HMI team changed name from Rear Park Aid to Park Aid
VS-SR-REQ-234031/D-Park Aid	<jmyslin2> Per HMI changed name from Rear Park Aid to Park Aid
VS-FUN-REQ-273589/A-BTT Light (Blind Spot Trailer Tow)	<jmyslin2> Need Function added for BTT Lite
VS-SR-REQ-273590/A-Active Trailer Setting - BTT Lite	<jmyslin2> New requirement for new BTT Lite setting
VS-SR-REQ-273689/A-Trailer Length - BTT Lite	<jmyslin2> New requirement for new BTT Lite setting
VS-SR-REQ-273980/A-Pop-up Trailer Set-up Request - BTT Lite	<jmyslin2> New requirement for new BTT Lite setting
VS-FUN-REQ-234059/B-Auto Engine OFF / 30min Max Idle	<jmyslin2> Updated name per HMI group to 30 min max idle
VS-SR-REQ-234061/E-Auto Engine OFF / 30 min max idle	<jmyslin2> changed name to 30 min max idle from Auto Engine OFF per HMI group
VS-SR-REQ-234339/D-Auto Highbeam / Adaptive Drivebeam	<jmyslin2> Updated to add Glare Free
VS-FUN-REQ-273580/A-Passenger Airbag	<jmyslin2> Need function added for Passenger Airbag
VS-SR-REQ-273581/A-Passenger Airbag	<jmyslin2> New requirement for new passenger airbag setting
VS-FUN-REQ-273582/A-Engine Start/Stop Speed Threshold	<jmyslin2> Need Function added for Engine Start/Stop Speed Threshold
VS-SR-REQ-273583/A-Engine Start/Stop Speed Threshold	<jmyslin2> New requirement for new engine start/stop speed threshold setting
VS-FUN-REQ-274739/A-Tire Mobility Kit	<jmyslin2> Need function added for Tire Mobility
VS-SR-REQ-274740/A-Tire Mobility	<jmyslin2> New requirement for tire mobility setting

August 31, 2017

1.3

IIR-REQ-251250/E-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> Updated to include SUMA module Feature.St message
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VS-SR-REQ-273980/B-Pop-up Trailer Set-up Request - BTT Lite	<jmyslin2> added in an update regarding the BTT Lite pop-up
VS-FUN-REQ-273582/B-Engine Start/Stop Speed Threshold (Auto Start/Stop Speed Threshold)	<jmyslin2> Name change per HMI group
VS-SR-REQ-273583/B-Engine Start/Stop Speed Threshold (Auto Start/Stop Speed Threshold)	<jmyslin2> Name updated per HMI
VS-SR-REQ-274740/B-Tire Mobility	<jmyslin2> Added SYNC HMI screen number

September 12, 2017

1.4

VS-SR-REQ-233914/D-Enable/Disable Speed Warning - Traffic Sign Recognition / Speed Limit Information	<jmyslin2> Updated for Speed Limit Information
VS-FUN-REQ-272504/B-Speed Limit Information / Speed Sign Recognition	<jmyslin2> Updated name to include Speed Sign Recognition
VS-SR-REQ-239164/D-Tow Haul	<jmyslin2> Updated Tow Haul SYNC screen ID number
VS-SR-REQ-234232/D-Easy Entry / Easy Exit	<jmyslin2> updated SYNC Screen HMI number
VS-SR-REQ-238327/C-Power Running Board	<jmyslin2> updated the SYNC screen HMI number
VS-SR-REQ-272708/B-Auto Entry/Exit Height	<jmyslin2> Updated SYNC screen HMI number
VS-SR-REQ-273581/B-Passenger Airbag	<jmyslin2> added encoding for Passenger Airbag gray out

September 27, 2017

1.5

STR-389746/I-Interface Requirements	<jmyslin2> added MD's
VS-IIR-REQ-243929/C-FBMP Interface requirements	<jmyslin2> added MD's
MD-REQ-243934/B-Disp_Miles_Kilometers.St	<jmyslin2> Clarification only
MD-REQ-276458/A-Vehicle_Speed.St+	<jmyslin2> created MD
MD-REQ-276458/B-Vehicle_Speed.St	<jmyslin2> MD clarification
MD-REQ-276459/A-Vehicle_Speed_QF	<jmyslin2> created MD
MD-REQ-239857/B-TsrVUnitMsgTxt_D_Rq	<jmyslin2> added clarification
MD-REQ-276700/A-laccLamp_D_Rq	<jmyslin2> New MD
MD-REQ-276704/A-SLMde_D_Rqdsply	<jmyslin2> New MD
MD-REQ-276706/A-Aslicondsply_D_Rq	<jmyslin2> New MD
MD-REQ-274072/B-BTTLeft_D_RqDrv	<jmyslin2> Removed FID in title
MD-REQ-274073/B-BTTRight_D_RqDrv	<jmyslin2> Removed FID in title
IIR-REQ-251250/F-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> updated table with Vehicle Speed CAN signals
VS-FUN-REQ-234230/B-Easy Entry / Easy Exit (Seat Adjustment)	<jmyslin2> updated name to Seat Adjustment
VS-SR-REQ-234232/E-Easy Entry / Easy Exit (Seat Adjustment)	<jmyslin2> Update name to seat adjustment and SYNC wireframe number
VS-FUN-REQ-272707/B-Auto Entry/Exit Height (Easy Access Height)	<jmyslin2> Updated name to easy access height
VS-SR-REQ-272708/C-Auto Entry/Exit Height (Easy Access Height)	<jmyslin2> Update name to Easy Access Height and wireframe number
VS-FUN-REQ-276182/A-Cargo Loading	<jmyslin2> New Setting requirement for Cargo Loading
VS-SR-REQ-276183/A-Cargo Loading	<jmyslin2> New requirement for Cargo Loading setting
VS-SR-REQ-272706/B-Air Suspension	<jmyslin2> updated name to air suspension height

October 27, 2017

1.6

VSv4-FRD-REQ-232097/F-Settings in the Infotainment Centerstack - Common Spec	<jmyslin2> no content change just called Common Spec
VS-SR-REQ-239158/E-Traction Control	<jmyslin2> Updated requirement in reference to Advance Trac
VS-SR-REQ-273581/C-Passenger Airbag	<jmyslin2> updated passenger airbag wireframe number

December 14, 2017

1.7

VS-SR-REQ-232245/G-Cruise Control	<jmyslin2> added HMI settings ID
VS-SR-REQ-232285/F-Lane Keeping Mode	<jmyslin2> added HMI Setting ID
VS-SR-REQ-233578/E-Lane Keeping Intensity	<jmyslin2> add HMI Setting ID
VS-SR-REQ-233579/E-Lane Keeping Sensitivity	<jmyslin2> updated HMI Setting ID
VS-SR-REQ-271525/B-Lane Keeping Aid	<jmyslin2> added HMI Setting ID
VS-SR-REQ-271526/B-Lane Keeping Alert	<jmyslin2> added HMI Settings ID



VS-SR-REQ-239185/F-Pre-Collision Assist function - Enable / Disable	<jmyslin2> added HMI Setting ID
VS-SR-REQ-233575/G-Active Braking - Pre-Collision Assist	<jmyslin2> added FCW Active Braking HMI Setting ID
VS-SR-REQ-233577/I-Warning Sensitivity - Pre-Collision Assist	<jmyslin2> Added FCW Alert Sensitivity HMI Setting ID
VS-SR-REQ-233812/E-Enable/Disable Traffic Sign Recognition / Speed Limit Information Feature	<jmyslin2> added active traffic sign recognition HMI Setting ID
VS-SR-REQ-233914/E-Enable/Disable Speed Warning - Traffic Sign Recognition / Speed Limit Information	<jmyslin2> add HMI Setting ID for activate speed warning
VS-SR-REQ-233813/D-Enable/Disable Speed Warning Chime - Traffic Sign Recognition	<jmyslin2> added HMI Setting ID for Over Speed Chime TSR
VS-SR-REQ-233862/I-Less Than Warning Threshold - (Traffic Sign Recognition / Speed Limit Information)	<jmyslin2> added HMI Setting ID
VS-SR-REQ-233867/I-Greater than Warning Threshold - Traffic Sign Recognition	<jmyslin2> added HMI Setting ID for TSR greater than warning threshold
VS-SR-REQ-233944/E-Blindspot Detection (vehicle - non-trailer)	<jmyslin2> added HMI Setting ID for blind spot
VS-SR-REQ-233948/D-Cross Traffic Alert	<jmyslin2> added HMI Setting ID to Cross Traffic Alert
VS-SR-REQ-233951/D-Wrong Way Alert	<jmyslin2> added HMI Setting ID for Wrong Way Alert
VS-SR-REQ-234015/D-Driver Alert	<jmyslin2> added HMI Setting ID for Driver Alert Setting
VS-SR-REQ-234028/D-Trailer Sway	<jmyslin2> add HMI Setting ID for Trailer Sway setting
VS-SR-REQ-234031/E-Park Aid	<jmyslin2> added HMI Setting ID to Park Aid
VS-SR-REQ-239158/F-Traction Control	<jmyslin2> added HMI Setting ID
VS-SR-REQ-239160/C-Hill Decent Control	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234005/D-Hill Start Assist	<jmyslin2> added HMI Setting ID for Hill Start Assist
VS-SR-REQ-239164/E-Tow Haul	<jmyslin2> added HMI Setting ID
VS-SR-REQ-272333/B-Grade Assist	<jmyslin2> created HMI Setting ID for Grade Assist
VS-SR-REQ-273590/B-Active Trailer Setting - BTT Lite	<jmyslin2> added HMI Setting ID for BTT Active Trailer
VS-SR-REQ-273689/B-Trailer Length - BTT Lite	<jmyslin2> add HMI Setting ID for BTT Lite Trailer Length
VS-SR-REQ-273583/C-Engine Start/Stop Speed Threshold (Auto Start/Stop Speed Threshold)	<jmyslin2> added HMI Setting ID
VS-SR-REQ-280535/D-Handling in Drive / Drive Control manual transmission / Driver Select Transmission	<jmyslin2> HMI team changed wireframe numbers so updated with new number
VS-SR-REQ-281380/B-Handling in Sport - Drive Control	<jmyslin2> update wire frame number since SYNC team changed the numbers
VS-SR-REQ-281381/B-Performance in Sport - Drive Control	<jmyslin2> added feature number
VS-SR-REQ-280533/B-Steering in Drive / Steering with Manual Transmission - Adaptive Steering	<jmyslin2> updated SYNC HMI number since SYNC HMI team changed the wireframe number
VS-SR-REQ-280548/B-Steering in Sport - Adaptive Steering	<jmyslin2> updated SYNC HMI numbers since SYNC HMI team changed the number
VS-SR-REQ-280549/B-Adaptive Steering	<jmyslin2> updated SYNC HMI numbers since HMI team changed their numbers
VS-SR-REQ-234035/E-Tire Pressure Unit	<jmyslin2> added HMI setting ID
VS-SR-REQ-234039/J-Measure Units	<jmyslin2> added HMI settings ID
VS-SR-REQ-234061/F-Auto Engine OFF / 30 min max idle	<jmyslin2> added HMI Setting ID for 30 min max idle
VS-SR-REQ-234235/D-Park Lock Control	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234238/D-Silent Mode	<jmyslin2> add HMI Setting ID
VS-SR-REQ-234285/D-Ask on Exit - Alarm	<jmyslin2> add HMI Setting ID
VS-SR-REQ-234286/C-Sensor Set - Alarm	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234289/C-Park Slot - Chimes	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234290/C-Information - Chimes	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234312/G-Climate Control (Heater / AC) - Remote Start	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234313/G-Seats and Steering Wheel - Remote Start	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234316/E-Duration - Remote Start	<jmyslin2> added HMI Settings ID
VS-SR-REQ-234319/C-Global Window Open	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234320/C-Global Window Close	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234331/C-Courtesy Wiper	<jmyslin2> added HMI Setting ID





VS-SR-REQ-234332/C-Rain Sensing Wipers	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234333/C-Reverse Wipers	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234336/C-Power Liftgate	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234339/E-Auto Highbeam / Adaptive Drivebeam / Glare Free	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234340/C-Daytime Running Lights	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234341/C-Welcome Lighting	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234342/C-Adaptive Headlights	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234343/C-Adaptive Headlight Set-Up	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234344/C-Autolamp Delay	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234347/C-AutoLock	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234348/C-AutoUnlock	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234349/C-Mislock	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234351/D-Lock Trim Switch Inhibit	<jmyslin2> HMI Setting ID
VS-SR-REQ-234353/C-Audible Locking Feedback	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234354/C-Exterior Lights Feedback - Locking	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234357/D-Remote Unlock	<jmyslin2> added HMI Setting ID
VS-SR-REQ-272694/B-Intelligent Access	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234360/C-Auto Fold Mirrors	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234361/C-Reverse Tilt Mirrors	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234364/D-Continue Heat - Park Heater	<jmyslin2> add HMI setting ID
VS-SR-REQ-267623/B-Heater Programming - Park Heater	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234378/E-Programming Single Time - Park Heater	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234393/F-Programming Time 1 - Park Heater	<jmyslin2> added HMI setting ID's
VS-SR-REQ-234394/E-Programming Time 2 - Park Heater	<jmyslin2> added HMI Setting ID
VS-SR-REQ-262500/B-Aux Heater	<jmyslin2> added HMI Setting ID
VS-SR-REQ-273581/D-Passenger Airbag	<jmyslin2> added HMI Setting ID
VS-SR-REQ-274740/C-Tire Mobility	<jmyslin2> added HMI Setting ID
VS-SR-REQ-238327/D-Power Running Board	<jmyslin2> added HMI Setting ID
VS-SR-REQ-234232/F-Easy Entry / Easy Exit (Seat Adjustment)	<jmyslin2> added HMI Setting ID for seat adjustment
VS-SR-REQ-272708/D-Auto Entry/Exit Height (Easy Access Height)	<jmyslin2> added HMI setting ID
VS-SR-REQ-272706/C-Air Suspension	<jmyslin2> added HMI Setting ID
VS-SR-REQ-279098/B-Gauge Color / Primary Color - MyColor	<jmyslin2> added feature number
VS-SR-REQ-279099/B-Halo Color / Secondary Color - MyColor	<jmyslin2> added feature number
VS-SR-REQ-280522/B-Color Wheel 1 - MyColor	<jmyslin2> added feature number
VS-SR-REQ-280523/B-Color Wheel 2 - MyColor	<jmyslin2> added feature number
VS-SR-REQ-280524/B-Color Wheel 3 - MyColor	<jmyslin2> added feature number
VS-SR-REQ-279104/B-Ambient Lighting - MyColor	<jmyslin2> added feature number
VS-SR-REQ-280525/B-Ambient Color - MyColor	<jmyslin2> added feature number
VS-SR-REQ-280526/B-Ambient Dim - MyColor	<jmyslin2> add feature number
VS-SR-REQ-280528/B-Power Decklid / Liftgate	<jmyslin2> updated SYNC HMI wireframe ID per change by HMI team
VS-SR-REQ-280538/B-Auto Regen	<jmyslin2> Added feature number
VS-SR-REQ-280679/B-Quiet Start - Exhaust Mode	<jmyslin2> added feature number
VS-SR-REQ-280683/B-Set Quiet Time - Exhaust Mode	<jmyslin2> added feature number
VS-SR-REQ-280685/B-Rev Match (Engine Revolution Match)	<jmyslin2> added Rev Match feature number

April 25, 2018

1.8

IIR-REQ-251250/G-Logical Signal to HS3 CAN dB signal name translation table

&lt;jmyslin2&gt; Added VDM to list of FBMP messages that the centerstack will need to support

Added CCM to list of FBMP messages that centerstack will need to support (for FCW settings)



May 17, 2018	1.9	
	IIR-REQ-251250/H-Logical Signal to HS3 CAN dB signal name translation table+	<jmyslin2> added what CCM module stood for. No content change
	IIR-REQ-251250/I-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> added logical to physical mapping for the DDM module
	VS-SR-REQ-280670/B-Effort - Trailer Brake	<jmyslin2> corrected feature number from E10 to E11 (E10 already on Trailer Brake Mode)
June 13, 2018	1.10	
	VS-SR-REQ-234031/F-ParkAid (not long term)	<jmyslin2> updated with a clarification note. No content change so no software change
August 28, 2018	1.11	
	VS-SR-REQ-232098/O-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module	<jmyslin2> updated comments for not showing feature settings selections at start-up if no response from feature server
	VS-SR-REQ-232237/G-FBMP Feature. St received from any FBMP Feature Settings Server module	<jmyslin2> No content change
	VS-SR-REQ-312391/A-Long Term ParkAid Disable	<jmyslin2> New Requirement for Long Term ParkAid
	VS-SR-REQ-273689/C-Trailer Length - BTT Lite	jmyslin2: Updated with an example an imperial value being rounded to metric value for trailer length.  Update Trailer Length encodings since was off by 0.1 meter
	VS-SR-REQ-234428/F-General Settings at Start-up	jmyslin2 - no content change. Clarification added
	VS-SR-REQ-234336/D-Power Liftgate	jmyslin2: No content change. Duplicate of VS-280528-Power DeckId / Liftgate
	VS-SR-REQ-280528/C-Power DeckId / Liftgate	jmyslin2: added 201 for HMI SettingsID
	VS-SR-REQ-298602/A-Handsfree Liftgate	<jmyslin2> New Requirement for Handsfree Liftgate
October 4, 2018	1.12	
	MD-REQ-274072/C-BTTLeft_D_RqDrv	<jmyslin2> No change, ignore the revision
	MD-REQ-274073/C-BTTRight_D_RqDrv	<jmyslin2> No change, ignore the revision
	VS-SR-REQ-273980/C-Pop-up Trailer Set-up Request - BTT Lite	<jmyslin2> updated requirement allowing BTT Lite module to close the BTT Lite pop-up
	VS-SR-REQ-238327/E-Power Running Board	<jmyslin2> deleted power running boards from Settings in the Centerstack SPSS. Now defined in a separate feature specification without using feature based message protocol
October 11, 2018	1.13	
	VS-SR-REQ-331385/A-Single Tolerance Warning Threshold - Traffic Sign Recognition / Speed Limit Information	<jmyslin2> New requirement for single tolerance HMI for Traffic Sign Recognition and Speed Limit Information
	VS-SR-REQ-331385/A-Single Tolerance Warning Threshold - Traffic Sign Recognition / Speed Limit Information	<jmyslin2> New requirement for single tolerance HMI for Traffic Sign Recognition and Speed Limit Information
	VS-SR-REQ-273689/D-Trailer Length - BTT Lite	<jmyslin2> made a note regarding selecting a faulty trailer if HMI call it out. Clarification only, no content change
December 4, 2018	1.14	
	IIR-REQ-251250/J-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> added TjaMsgTxt_D_Rq signal for highway assist
	VS-SR-REQ-232098/P-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module	<jmyslin2> added additional reference to FBMP were callout querying the active menu first. No content change
	STR-389748/D-Functional Definition	<jmyslin2> Added additional settings section
	VS-SR-REQ-232245/H-Cruise Control	<jmyslin2> No content change. Removed Tolerance from this requirement and created a dedicated requirement for it.
	VS-SR-REQ-333002/A-Tolerance - Cruise Control	<jmyslin2> roke out tolerance from 232245 to its own separate requirement. Added new HMI settingsID



VS-SR-REQ-232284/H-Speed Limiter - Manual / Intelligent	<jmyslin2> No content change. Removed Tolerance from this requirement
VS-SR-REQ-332970/A-Speed Limiter - Intelligent Offset Tolerance	<jmyslin2> No content change. Broke out the Tolerance from a combined requirement into a new requirement.
VS-SR-REQ-233914/F-Enable/Disable Speed Warning - Traffic Sign Recognition / Speed Limit Information	<jmyslin2> No Change ignore revision bump
VS-SR-REQ-233862/J-Less Than Warning Threshold - (Traffic Sign Recognition / Speed Limit Information)	<jmyslin2> Updated to include when Null or NoDataExists is selected
VS-SR-REQ-233867/J-Greater than Warning Threshold - Traffic Sign Recognition	<jmyslin2> updated to reference what to do when Null or NoDataExists is selected
VS-SR-REQ-273980/D-Pop-up Trailer Set-up Request - BTT Lite	<jmyslin2> updated requirement so BTT Lite pop-up jumps ahead and queries the BTT Lite feature numbers before showing the pop-up
VS-SR-REQ-272030/B-Predictive Lighting	<jmyslin2> added a clarification to clarify a SYNC HMI rule. No content change
STR-598209/A-Additional Settings - FBMP based settings	<jmyslin2> Since HMI is changing from the lead program for Settings in the CenterStack putting new settings under this heading
VS-SR-REQ-333163/A-Settings Start-Up	<jmyslin2> New requirement for additional settings
VS-SR-REQ-333164/A-HMI Activation during Run	<jmyslin2> New requirement for HMI settings
VS-FUN-REQ-332901/A-Speed Limit	<jmyslin2> New Speed Limit function - replaces TSR and Speed Limiter
VSv2-SR-REQ-332978/A-Limiter with Speed Signs - Speed Limit	<jmyslin2> New Limiter with Speed Signs
VSv2-SR-REQ-332979/A-Speed Sign Warning - Speed Limit	<jmyslin2> updated to add Speed Warning Sign label
VSv2-SR-REQ-332980/A-Tolerance - Speed Limit	<jmyslin2> updated for Speed Limit single tolerance
VSv2-FUN-REQ-332984/A-Cruise Control - Variant 2	<jmyslin2> New Cruise Control variant 2
VSv2-SR-REQ-333001/A-Cruise Control - Variant 2	<jmyslin2> New Cruise Control variant 2 requirement
VS-SR-REQ-333005/A-with Lane Centering	<jmyslin2> New with Lane Centering setting
VS-SR-REQ-333008/A-with Smart Offerings	<jmyslin2> New with Smart Offerings setting
VS-SR-REQ-333009/A-with Speed Signs	<jmyslin2> New with Smart Signs setting
VS-FUN-REQ-333131/A-Tire Pressure Reset / Tire Monitor	<jmyslin2> New Tire Monitor function
VS-SR-REQ-333089/A-Tire Pressure Reset / Tire Monitor	<jmyslin2> New requirement for Tire Monitor
VS-FUN-REQ-333128/A-Border Crossing	<jmyslin2> New Border Crossing function
VS-SR-REQ-333100/A-Border Crossing	<jmyslin2> New requirement for Border Crossing
VS-FUN-REQ-333136/A-Ecocoach	<jmyslin2> New Ecocoach settings function
VS-SR-REQ-333154/A-Ecocoach	<jmyslin2> New requirement for Ecocoach setting
VS-SR-REQ-333155/A-Eco Advices	<jmyslin2> New requirement for Eco Advices
VS-SR-REQ-333156/A-Coasting Support	<jmyslin2> New requirement for Coasting Support
VS-FUN-REQ-333107/A-Speedometer	<jmyslin2> New Speedometer function
VS-SR-REQ-333114/A-Speedometer MPH	<jmyslin2> New requirement for Speedometer MPH setting
VS-SR-REQ-333162/A-Speedometer KPH	<jmyslin2> New requirement for Speedometer KPH setting
VS-FUN-REQ-333158/A-Brake Coach	<jmyslin2> New requirement for Brake Coach Function
VS-SR-REQ-333159/A-Brake Coach	<jmyslin2> New requirement for Brake Coach setting
VS-FUN-REQ-333160/A-Neutral Tow	<jmyslin2> New Neutral Tow Function
VS-SR-REQ-333161/A-Neutral Tow	<jmyslin2> New requirement for Neutral Tow Setting
VS-FUN-REQ-333185/A-Nav Repeater in Cluster	<jmyslin2> New Function for Nav Repeater in the Cluster
VS-SR-REQ-333186/A-Nav Repeater in the Cluster	<jmyslin2> New requirement for Nav Repeater in the Cluster Setting
VS-FUN-REQ-333189/A-Maps in the Cluster	<jmyslin2> New Function for Maps in the Cluster
VS-SR-REQ-333192/A-Maps in the Cluster	<jmyslin2> New requirement for Maps in the Cluster Setting

February 1, 2019

1.15

IIR-REQ-251250/K-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> deleted TjaMsgTxt_D_Rq from logical to physical list as no longer supported
VS-SR-REQ-234316/F-Duration - Remote Start	<jmyslin2> added clarification to the requirement. No content change





VSv2-SR-REQ-332978/B-Limiter with Speed Signs - Speed Limit	<jmyslin2> No content change. Just added another potential name. HMI SettingsID ties to the HMI itself so just added for clarification
VS-SR-REQ-333005/B-with Lane Centering	<jmyslin2> No content change. Just added another potential name. HMI SettingsID ties to the HMI itself so just added for clarification
VS-SR-REQ-333009/B-with Speed Signs	<jmyslin2> No content change. Just added another potential name. HMI SettingsID ties to the HMI itself so just added for clarification
VS-FUN-REQ-333107/B-Speedometer	<jmyslin2> added requirement for major speed scale by market
VS-SR-REQ-333114/B-Speedometer MPH	<jmyslin2> Updated requirement on clarification on when to use based on market
VS-SR-REQ-333162/B-Speedometer KPH	<jmyslin2> updated requirement for clarification on configurations when to use
VS-SR-REQ-341178/A-Mapping Table - Speedometer Major Units	<jmyslin2> Added requirement for Cluster speedometer major units
VS-FUN-REQ-333160/B-Neutral Tow	<jmyslin2> updated Neutral Tow function
MD-REQ-342193/A-TmGearNtmAllow_B_Stat	<jmyslin2> New MD for Neutral Tow
VS-SR-REQ-333161/B-Neutral Tow	<jmyslin2> updated Neutral Tow settings requirement

February 5, 2019	1.16	
	<b>Content change:</b>	
	MD-REQ-343175/A-MetricActv_B_Actl	<jmyslin2> added MetricActv_B_Actl MD
	IIR-REQ-251250/L-Logical Signal to HS3 CAN dB signal name translation table	<jmyslin2> updated to include MetricActv_B_Actl
	VS-SR-REQ-333002/B-Tolerance - Cruise Control	<jmyslin2> updated to change the usage of the tolerance signal for units shown from using Measure Unit to the signal MetricActv_B_Actl
	VS-SR-REQ-332970/B-Speed Limiter - Intelligent Offset Tolerance	<jmyslin2> Updated requirement to use MetricActv_B_Actl signal instead of measure units for cruise control speed units
	VS-SR-REQ-234039/K-Measure Units	<jmyslin2> Updated requirement to state Measure Units setting is used for distance units for other settings (not speed units)
	<b>Clarification only:</b>	
	MD-REQ-239857/C-TsrVlUnitMsgTxt_D_Rq	<jmyslin2> Clarification only. Changed KPM to Km/h
	VS-SR-REQ-233862/K-Less Than Warning Threshold - (Traffic Sign Recognition/ Speed Limit Information)	<jmyslin2> Clarification only. Changed KPH to Km/h
	VS-SR-REQ-233867/K-Greater than Warning Threshold - Traffic Sign Recognition	<jmyslin2> Clarification only. Change KPH to Km/h
	VS-FUN-REQ-332901/B-Speed Limit - Variant 2 (variant 2 of TSR, SLI and Speed Limiter)	<jmyslin2> No content change - updated name only to make more clear mutually exclusive with TSR, Speed Limit Information and Speed Limiter
	VSv2-SR-REQ-332980/B-Tolerance - Speed Limit	<jmyslin2> Clarification only. Changed KPH to Km/h
	VS-SR-REQ-333114/C-Speedometer MPH	<jmyslin2> Clarification only. Changed KPH to Km/h
	VS-SR-REQ-333162/C-Speedometer Km/h	<jmyslin2> Clarification only. Changed KPH to Km/h
	VS-SR-REQ-341178/B-Mapping Table - Speedometer Major Units	<jmyslin2> Clarification only. Changed KPH to Km/h

February 14, 2019	1.16.1	Updated Comment in v 1.11 Release
	VS-SR-REQ-273689/C-Trailer Length - BTT Lite	<p>Chohdi Mhohdi: Comment below added back in since part of the rev comment below was accidentally deleted. No content change just adding the correct rev comment below which was updated in version 1.11 originally.</p> <p>jmyslin2: Updated with an example an imperial value being rounded to metric value for trailer length.</p> <p>New: Update Trailer Length encoding since was off by 0.1 meter</p>

May 28, 2019	1.17	
	VS-SR-REQ-234286/D-Sensor Set - Alarm	<jmyslin2> New HMI name, updated to match for Alarm
	STR-401443/F-Requirements	<jmyslin2> added new settings for locks
	VS-SR-REQ-350467/A-Walk Away Lock	<jmyslin2> New requirement for walk-away lock
	VS-SR-REQ-350468/A-Walk Away Lock Feedback	<jmyslin2> New requirement for walk away lock feedback



VS-SR-REQ-350469/A-Double Lock Reminder Feedback

&lt;jmyslin2&gt; New requirement for double lock reminder feedback

November 27, 2019

1.18

MD-REQ-369894/A-EngOilLife\_Pc\_Actl

&lt;jmyslin2&gt; New engine oil life percentage signal

IIR-REQ-251250/M-Logical Signal to HS3 CAN dB signal name translation table

&lt;jmyslin2&gt; updated requirement to add Feature2.Rq, Feature2.St and Oil Life Percentage signals

STR-389748/E-Functional Definition

&lt;jmyslin2&gt; Updated to include new section in spec for Settings with dedicated Feature2.Rq and Feature2.St signals

VS-SR-REQ-251193/C-Traffic Sign Recognition Settings/Speed Limit Information HMI not user selectable

&lt;jmyslin2&gt; Clarification only, added overview

VS-SR-REQ-234028/E-Trailer Sway

&lt;jmyslin2&gt; No change. Ignore revision of requirement since nothing change.

VS-SR-REQ-234039/L-Measure Units

&lt;jmyslin2&gt; Updated measure units to support BEV HMI displays

VS-SR-REQ-280669/B-Mode - Trailer Brake

&lt;jmyslin2&gt; Updated requirement to support Trailer Settings SPSS

VS-SR-REQ-280670/C-Effort - Trailer Brake

&lt;jmyslin2&gt; Updated requirement to support Trailer Settings SPSS

VS-SR-REQ-280679/C-Quiet Start - Exhaust Mode

&lt;jmyslin2 - requirement obsolete

VS-SR-REQ-280683/C-Set Quiet Time - Exhaust Mode

&lt;jmyslin2&gt; requirement obsolete. See updated comments

VS-FUN-REQ-333136/B-EcoCoach

&lt;jmyslin2&gt; added new EcoCoach - Eco Mode setting requirement

VS-SR-REQ-364517/A-EcoCoach - Eco Mode

&lt;jmyslin2&gt; New EcoCoach in Eco Mode requirement

STR-598208/B-Requirements - shift by wire version of Neutral Tow

&lt;jmyslin2 - updated title

VS-SR-REQ-333161/C-Neutral Tow

&lt;jmyslin2 - made updates to the Neutral Tow requirement

VS-SR-REQ-333186/B-Nav Repeater in the Cluster

&lt;jmyslin2&gt; No content change, clarification only with the name

STR-683554/A-Cluster Settings with dedicated FBMP messages

&lt;jmyslin2&gt; New section of spec for settings that use Feature2.Rq and Feature2.St

VS-SR-REQ-362577/A-Cluster and Centerstack Settings HMI Client dedicated Feature2.Rq/Feature2.St FBMP message usage

&lt;jmyslin2&gt; New settings in the centerstack requirement for dedicated Cluster FBMP message

VS-SR-REQ-364389/A-Settings Start-up

&lt;jmyslin2&gt; new requirement

VS-SR-REQ-364390/A-HMI Activation during Run

&lt;jmyslin2&gt; New Requirement

VS-FUN-REQ-364615/A-Engine Oil Temp

&lt;jmyslin2&gt; New Engine Oil Temp function

VS-SR-REQ-364614/A-Engine Oil Temp Life Gauge - Cluster menu

&lt;jmyslin2&gt; New Engine Oil Temp Life setting

VS-FUN-REQ-364616/A-Power Gauge

&lt;jmyslin2&gt; New Power Gauge function

VS-SR-REQ-365515/A-Power Gauge - Cluster Menu

&lt;jmyslin2&gt; New Power Gauge setting requirement

VS-FUN-REQ-365516/A-Tachometer

&lt;jmyslin2&gt; New Tachometer function

VS-SR-REQ-365517/A-Tachometer Gauge - Cluster menu

&lt;jmyslin2&gt; Tachometer Gauge setting

VS-FUN-REQ-365529/A-Oil Life

&lt;jmyslin2&gt; new Oil Life function

VS-SR-REQ-365551/A-Oil Life Percentage

&lt;jmyslin2&gt; New Oil Life Percentage requirement

VS-SR-REQ-365550/A-Oil Life Reset

&lt;jmyslin2&gt; New Oil Life Reset requirement

VS-FUN-REQ-365643/A-Cluster IoD menu configurations

&lt;jmyslin2&gt; New function for Cluster IoD configuration menu items

VS-SR-REQ-365685/A-Calm Screen - Cluster IoD config

&lt;jmyslin2&gt; New Cluster IoD config setting

VS-SR-REQ-365686/A-Trip 1 - Cluster IoD config

&lt;jmyslin2&gt; New Trip 1 IoD config setting

VS-SR-REQ-365687/A-Trip 2 - Cluster IoD config

&lt;jmyslin2&gt; New Trip 2 Cluster IoD setting

VS-SR-REQ-365688/A-This Trip - Cluster IoD config

&lt;jmyslin2&gt; New This Trip Cluster IoD config setting

VS-SR-REQ-365689/A-Fuel Economy - Cluster IoD config

&lt;jmyslin2&gt; New Fuel Economy Cluster IoD config setting

VS-SR-REQ-365690/A-Electric Efficiency - Cluster IoD config

&lt;jmyslin2&gt; new Electric Efficiency Cluster IoD config

VS-SR-REQ-365691/A-Eco Behaviors - Cluster IoD config

&lt;jmyslin2&gt; New Eco Behaviors Cluster IoD config setting

VS-SR-REQ-365692/A-EV Coach - Cluster IoD config

&lt;jmyslin2&gt; new EV Coach Cluster IoD config setting

VS-SR-REQ-365696/A-Auto Start Stop - Cluster IoD config

&lt;jmyslin2&gt; new Auto Start Stop Cluster IoD config setting

VS-SR-REQ-365697/A-Seatbelt Status - Cluster IoD config

&lt;jmyslin2&gt; New seatbelt status cluster IoD config setting

VS-SR-REQ-365701/A-TPMS - Cluster IoD config

&lt;jmyslin2&gt; New TPMS Cluster IoD config setting

VS-SR-REQ-365706/A-Eco Coach - Cluster IoD config

&lt;jmyslin2&gt; New Eco Coach / Eco Behaviours Cluster IoD config setting

VS-SR-REQ-365722/A-Now Playing (Audio / Phone) - Cluster IoD config

&lt;jmyslin2&gt; New Now Playing (Audio / Phone) Cluster IoD config

VS-SR-REQ-365740/A-Nav / Compass - Cluster IoD config

&lt;jmyslin2&gt; New Nav / Compass Cluster IoD config setting

VS-SR-REQ-365741/A-Average Speed - Cluster IoD config

&lt;jmyslin2&gt; New Average Speed Cluster IoD config requirement

VS-SR-REQ-365743/A-Battery Charge - Cluster IoD config

&lt;jmyslin2&gt; New Battery Charge - Cluster IoD config setting

VS-SR-REQ-365744/A-ADAS - Cluster IoD config

&lt;jmyslin2&gt; ADAS Cluster IoD config setting



VS-SR-REQ-365745/A-Maps/ Augmented Reality - Cluster IoD config	<jmyslin2> New Maps/ Augmented Reality Cluster IoD config setting
VS-SR-REQ-369132/A-Classic View - Cluster IoD config	<jmyslin2> New Classic View Cluster IoD config setting
VS-FUN-REQ-365765/A-Cluster Trip 1 menu	<jmyslin2> New Cluster Trip 1 menu function
VS-SR-REQ-365846/A-Cluster Trip 1 Menu Reset	<jmyslin2> New requirement for Cluster Trip 1 menu reset
VS-SR-REQ-365847/A-Set to Default - configure Cluster Trip 1 view	<jmyslin2> New requirement to set to default Cluster Trip 1 view
VS-SR-REQ-365855/A-Trip 1 Odometer - configure Cluster Trip 1 view	<jmyslin2> New Trip Odometer - configure Cluster Trip 1 view setting
VS-SR-REQ-365858/A-Trip 1 Timer - configure Cluster Trip 1 view	<jmyslin2> New settings requirement for Trip 1 timer
VS-SR-REQ-365860/A-Average Speed - configure Cluster Trip 1 view	<jmyslin2> New average speed configure cluster trip 1 view setting requirement
VS-SR-REQ-365864/A-Average Fuel - configure Cluster Trip 1 view	<jmyslin2> new settings requirement for average fuel for cluster trip 1 view
VS-SR-REQ-365865/A-Instantaneous Fuel - configure Cluster Trip 1 view	<jmyslin2> new settings requirement for Instantaneous fuel - configure cluster trip 1 view
VS-FUN-REQ-365845/A-Cluster Trip 2 menu	<jmyslin2> New Cluster Trip 2 menu function
VS-SR-REQ-365866/A-Cluster Trip 2 Menu Reset	<jmyslin2> New requirement for Cluster Trip 2 menu reset
VS-SR-REQ-365867/A-Set to Default - configure Cluster Trip 2 view	<jmyslin2> New Set to Default - configure Cluster trip 2 view
VS-SR-REQ-365877/A-Trip 2 Odometer - configure Cluster Trip 2 view	jmyslin2 - New setting Trip 2 odometer - configure cluster trip 2 view
VS-SR-REQ-365878/A-Trip 2 Timer - configure Cluster Trip 2 view	<jmyslin2> New Trip 2 Timer - configure cluster trip 2 view requirement
VS-SR-REQ-365880/A-Average Speed - configure Cluster Trip 2 view	<jmyslin2> New requirement for Average Speed - configure Cluster Trip 2 view
VS-SR-REQ-365884/A-Average Fuel - configure Cluster Trip 2 view	<jmyslin2> New settings requirement for Average Fuel - configure Cluster Trip 2 view
VS-SR-REQ-365885/A-Instantaneous Fuel - configure Cluster Trip 2 view	<jmyslin2> New setting requirement for Instantaneous Fuel - configure Cluster Trip 2 view
VS-FUN-REQ-369169/A-Classic View - Cluster Speedo view	<jmyslin2> New Classic View Speedo function
VS-SR-REQ-369170/A-Classic View - Cluster Speedo view - Cluster Menu	<jmyslin2> New Classic View Speedo view setting

June 18, 2020

1.19

VS-SR-REQ-232245/I-Cruise Control	jmyslin2: Deleted screen number so only HMI SettingsID is there. No change to requirement
VS-SR-REQ-333002/C-Tolerance - Cruise Control	jmyslin2: Deleted screen number so only HMI SettingsID is there. No change to requirement
VS-SR-REQ-333005/C-with Lane Centering	jmyslin2: Deleted screen number so only HMI SettingsID is there. No change to requirement
VS-SR-REQ-333008/B-with Smart Offerings	jmyslin2: Deleted screen number so only HMI SettingsID is there. No change to requirement
VSv3-FUN-REQ-391926/A-Cruise Control - Variant 3	<jmyslin2> New function for Cruise Control variant 3
VS-SR-REQ-333161/D-Neutral Tow	jmyslin2: clarification only, see track changes for details
VS-FUN-REQ-393166/A-Classic Gauges - Cluster Menu	jmyslin2: new Classic Gauges function
VS-SR-REQ-384384/A-Classic Gauge	jmyslin2: New Classic Gauge setting

November 2, 2020

1.20

MD-REQ-396483/A-AhbcMnu_D_Rq	jmyslin2: New MD for auto-config lighting
MD-REQ-396485/A-GfbbMnu_D_Rq	jmyslin2: New MD for auto-config of lighting
VS-SR-REQ-234339/F-Auto Highbeam / Adaptive Drivebeam / Glare Free - Variant 1	jmyslin2: No change to requirements, just updated the name of the requirement
VS-SR-REQ-396237/A-Auto Highbeam / Adaptive Drivebeam / Glare Free - Variant 2	jmyslin2: new lighting requirement
CLD-REQ-396484/A-Lighting Settings Configuration Server	jmyslin2: New Class Description for auto-configuring the lighting settings
VS-SR-REQ-396712/A-HMI settings when not in Run	jmyslin2: New requirement for auto-configuring headlamps
VS-SR-REQ-396711/A-Usage of Auto-configuration lighting signals vs DID configuration	jmyslin2: New requirement for auto-configuring headlamps
VS-SR-REQ-396713/A-Configuring the HMI based on the Lighting Settings auto-configuration signals	jmyslin2: New requirement for auto-config lighting signals
VS-SR-REQ-396714/A-Storing the auto-configuration lighting settings last state	jmyslin2: New requirement for auto-configuring lighting settings

March 31, 2021

1.21



	VS-SR-REQ-333009/C-with Speed Signs	jmyslin2: No content change. Just updated name
	STR-400153/Q-Vehicle Settings	jmyslin2: removed MyColor and Exhaust Mode and put under section that uses Feature2.Rq and Feature2.St messages
	VS-FUN-REQ-280684/B-Rev Match (Engine Revolution Match)	jmyslin2: No change to function, just added an overview of the feature
	VS-SR-REQ-404307/A-Status Screen - Cluster IoD config	jmyslin2: new StatusScreen setting
	VS-FUN-REQ-404378/A-Cluster Appearance	jmyslin2: new Cluster appearance function
	VS-SR-REQ-404379/A-Cluster Appearance	jmyslin2: new cluster appearance setting
	VS-FUN-REQ-404408/A-Performance Shift Indicator - Cluster menu	jmyslin2: New Performance Shift Indicator function
	VS-SR-REQ-404459/A-Shift Point Setup - RPM	jmyslin2: New shift point setting
	VS-SR-REQ-404460/A-Shift Tone	jmyslin2: new Shift Tone setting
	VS-SR-REQ-404461/A-Shift Light Mode	jmyslin2: new shift light mode setting
	VS-FUN-REQ-279097/B-MyColor	jmyslin2: added overview to function and made updates captured in the individual requirement rev log items
	VS-SR-REQ-279098/C-Gauge Color / Primary Color - MyColor	jmyslin2: Updated encoding and used Feature2.Rq / Feature2.St
	VS-SR-REQ-279099/C-Halo Color / Secondary Color - MyColor	jmyslin2: updated the encodings and since MyColor never used went to Feature2.Rq and Feature2.St
	VS-SR-REQ-279101/C-Halo Lighting / Secondary Lighting - MyColor	jmyslin2: uses Feature2.Rq and Feature2.St
	VS-SR-REQ-280522/C-Color Wheel 1 - MyColor	jmyslin2: Updated to include Feature2.Rq / Feature2.St
	VS-SR-REQ-280523/C-Color Wheel 2 - MyColor	jmyslin2: Updated to include Feature2.Rq / Feature2.St
	VS-SR-REQ-280524/C-Color Wheel 3 - MyColor	jmyslin2: Updated to say use Feature2.Rq/Feature2.St
	VS-SR-REQ-279104/C-Ambient Lighting - MyColor	jmyslin2: Updated to change encodings and added a note to use FBMP2 signals
	VS-SR-REQ-280525/C-Ambient Light Color - MyColor	jmyslin2: updated encodings and changed to use Feature2.Rq and Feature2.St
	VS-SR-REQ-280526/C-Ambient Light Dim - MyColor - DELETED	jmyslin2: Requirement Deleted
	VS-FUN-REQ-280671/B-Exhaust Mode	jmyslin2: added overview to function
	VS-SR-REQ-280672/C-Exhaust Mode	jmyslin2: since never implemented and lead program is S650 made this FBMP2 signals
April 23, 2021	1.22	
	VS-SR-REQ-415044/A-Centerstack and Cluster HMI both supporting MyColor	jmyslin2: new MyColor HMI when Centerstack module support MyColors
	VS-SR-REQ-280525/D-Ambient Light Color - MyColor	jmyslin2: Updated grey back to white per the HMI team



# Table of Contents

REVISION HISTORY .....	2
<b>1 ARCHITECTURAL DESIGN .....</b>	<b>16</b>
1.1 <i>Interface Requirements</i> .....	16
1.1.1 VS-IIR-REQ-243929/C-FBMP Interface requirements .....	16
1.1.2 MD-REQ-243934/B-Disp_Miles_Kilometers.St.....	17
1.1.3 MD-REQ-016222/B-IgnKeyType_D_Actl (TcSE ROIN-200609-4).....	17
1.1.4 MD-REQ-276458/B-Vehicle_Speed.St.....	17
1.1.5 MD-REQ-276459/A-Vehicle_Speed_QF.....	18
1.1.6 MD-REQ-239857/C-TsrVUnitMsgTxt_D_Rq.....	18
1.1.7 MD-REQ-276700/A-laccLamp_D_Rq.....	18
1.1.8 MD-REQ-276704/A-SLMde_D_Rqdsply.....	18
1.1.9 MD-REQ-276706/A-Aslicondsply_D_Rq.....	19
1.1.10 MD-REQ-274072/C-BTTLeft_D_RqDrv .....	19
1.1.11 MD-REQ-274073/C-BTTRight_D_RqDrv .....	19
1.1.12 MD-REQ-343175/A-MetricActv_B_Actl.....	19
1.1.13 MD-REQ-369894/A-EngOilLife_Pc_Actl .....	20
1.1.14 MD-REQ-396483/A-AhbcMnu_D_Rq.....	20
1.1.15 MD-REQ-396485/A-GfhhMnu_D_Rq.....	20
1.2 IIR-REQ-251250/M-Logical Signal to HS3 CAN dB signal name translation table.....	21
1.3 VS-CLD-REQ-232301/B-Centerstack Settings HMI Client .....	22
1.4 VS-CLD-REQ-232302/A-Settings Gateway_Translator Module.....	22
1.5 VS-CLD-REQ-232303/A-Feature Settings Server.....	22
<b>2 GENERAL REQUIREMENTS .....</b>	<b>23</b>
2.1 VS-SR-REQ-232098/P-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module.....	23
2.2 VS-SR-REQ-232106/G-Configuration of Settings HMI displayed in Centerstack .....	25
2.3 VS-SR-REQ-232237/G-FBMP Feature.St received from any FBMP Feature Settings Server module.....	25
2.4 VS-SR-REQ-233588/D-HMI Settings MyKey Limited.....	26
2.5 VS-SR-REQ-234228/C-Driver Distraction - Settings in the Centerstack .....	26
2.6 VS-SR-REQ-234437/C-Carryover Settings functionality from other specifications .....	26
2.7 FBMP-SR-REQ-238230/F-Enhanced Memory - Active Personality Profile change using Feature Based Message Protocol.....	26
2.8 Specification Overview layout.....	27
<b>3 FUNCTIONAL DEFINITION .....</b>	<b>28</b>
3.1 <i>Driver Assistance Settings</i> .....	28
3.1.1 General Requirements - Driver Assistance Settings .....	28
3.1.2 VS-FUN-REQ-232286/B-Cruise Control.....	28
3.1.3 VSv2-FUN-REQ-332984/A-Cruise Control - Variant 2 .....	29
3.1.4 VSv3-FUN-REQ-391926/A-Cruise Control - Variant 3 .....	32
3.1.5 VS-FUN-REQ-232288/B-Speed Limiter.....	35
3.1.6 VS-FUN-REQ-233809/B-Traffic Sign Recognition.....	36
3.1.7 VS-FUN-REQ-272504/B-Speed Limit Information / Speed Sign Recognition.....	41
3.1.8 VS-FUN-REQ-332901/B-Speed Limit - Variant 2 (variant 2 of TSR, SLI and Speed Limiter).....	45
3.1.9 VS-FUN-REQ-232290/B-Lane Keeping System .....	47
3.1.10 VS-FUN-REQ-233569/B-Pre-Collision Assist.....	50





3.1.11	VS-FUN-REQ-233942/A-Blindspot Detection.....	52
3.1.12	VS-FUN-REQ-273589/A-BTT Light (Blind Spot Trailer Tow) .....	53
3.1.13	VS-FUN-REQ-233946/A-Cross Traffic Alert .....	58
3.1.14	VS-FUN-REQ-233949/A-Wrong Way Alert.....	58
3.1.15	VS-FUN-REQ-234013/A-Driver Alert.....	59
3.1.16	VS-FUN-REQ-234026/B-Trailer Sway .....	59
3.1.17	VS-FUN-REQ-234029/B-Park Aid.....	60
3.1.18	VS-FUN-REQ-312390/A-Long Term Park Aid Disable .....	60
3.1.19	VS-FUN-REQ-239157/B-Traction Control.....	61
3.1.20	VS-FUN-REQ-239159/B-Hill Decent Control .....	62
3.1.21	VS-FUN-REQ-234003/A-Hill Start Assist .....	62
3.1.22	VS-FUN-REQ-239163/A-Tow Haul .....	63
3.1.23	VS-FUN-REQ-242438/C-EV+ Mode.....	63
3.1.24	VS-FUN-REQ-272332/A-Grade Assist.....	64
3.1.25	VS-FUN-REQ-273582/B-Engine Start/Stop Speed Threshold (Auto Start/Stop Speed Threshold) .....	65
3.1.26	VS-FUN-REQ-280534/A-Drive Control (Selectable Drive Mode).....	65
3.1.27	VS-FUN-REQ-280532/A-Adaptive Steering.....	68
3.2	<i>General Settings</i> .....	72
3.2.1	General Requirements - General Settings .....	72
3.2.2	VS-FUN-REQ-234033/B-Tire Pressure Units .....	72
3.2.3	VS-FUN-REQ-234037/B-Measure Units.....	73
3.3	<i>Vehicle Settings</i> .....	75
3.3.1	General Requirements - Vehicle Settings .....	75
3.3.2	VS-FUN-REQ-234059/B-Auto Engine OFF / 30min Max Idle .....	75
3.3.3	VS-FUN-REQ-234233/A-Park Lock Control .....	76
3.3.4	VS-FUN-REQ-234236/A-Silent Mode .....	76
3.3.5	VS-FUN-REQ-234283/A-Alarm.....	77
3.3.6	VS-FUN-REQ-234287/A-Chimes .....	78
3.3.7	VS-FUN-REQ-234307/A-Remote Start.....	79
3.3.8	VS-FUN-REQ-234317/A-Windows .....	82
3.3.9	VS-FUN-REQ-234329/A-Wipers .....	83
3.3.10	VS-FUN-REQ-234334/A-Power Liftgate .....	85
3.3.11	VS-FUN-REQ-280527/A-Power Decklid / Liftgate.....	85
3.3.12	VS-FUN-REQ-298601/A-Handsfree Liftgate.....	86
3.3.13	VS-FUN-REQ-234337/A-Lighting.....	87
3.3.14	VS-FUN-REQ-234345/A-Locks .....	94
3.3.15	VS-FUN-REQ-234358/A-Mirrors.....	100
3.3.16	VS-FUN-REQ-234362/B-Park Heater.....	101
3.3.17	VS-FUN-REQ-262499/A-Aux Heater.....	113
3.3.18	VS-FUN-REQ-273580/A-Passenger Airbag.....	113
3.3.19	VS-FUN-REQ-274739/A-Tire Mobility Kit .....	114
3.3.20	VS-FUN-REQ-238326/A-Power Running Board.....	114
3.3.21	VS-FUN-REQ-234230/B-Easy Entry / Easy Exit (Seat Adjustment).....	115
3.3.22	VS-FUN-REQ-272707/B-Auto Entry/Exit Height (Easy Access Height) .....	115
3.3.23	VS-FUN-REQ-276182/A-Cargo Loading.....	116
3.3.24	VS-FUN-REQ-272705/A-Air Suspension .....	117
3.3.25	VS-FUN-REQ-280537/A-Auto Regen.....	117
3.3.26	VS-FUN-REQ-280668/A-Trailer Brake.....	118
3.3.27	VS-FUN-REQ-280678/A-Quiet Start - Exhaust Mode.....	119
3.3.28	VS-FUN-REQ-280682/A-Set Quiet Time - Exhaust Mode.....	119
3.3.29	VS-FUN-REQ-280684/B-Rev Match (Engine Revolution Match).....	121
3.4	<i>Additional Settings - FBMP based settings</i> .....	122
3.4.1	Additional Settings (FBMP based settings) - General Requirements .....	122
3.4.2	VS-FUN-REQ-333131/A-Tire Pressure Reset / Tire Monitor.....	122
3.4.3	VS-FUN-REQ-333128/A-Border Crossing .....	123
3.4.4	VS-FUN-REQ-333136/B-Ecocoach.....	123
3.4.5	VS-FUN-REQ-333107/B-Speedometer.....	125



3.4.6	VS-FUN-REQ-333158/A-Brake Coach.....	127
3.4.7	VS-FUN-REQ-333160/B-Neutral Tow .....	127
3.4.8	VS-FUN-REQ-333185/A-Nav Repeater in Cluster.....	129
3.4.9	VS-FUN-REQ-333189/A-Maps in the Cluster .....	130
3.5	<i>Cluster Settings with dedicated FBMP messages .....</i>	<i>131</i>
3.5.1	Overview .....	131
3.5.2	General Requirements - Cluster Settings with dedicated FBMP messages .....	131
3.5.3	VS-FUN-REQ-364615/A-Engine Oil Temp.....	132
3.5.4	VS-FUN-REQ-364616/A-Power Gauge.....	132
3.5.5	VS-FUN-REQ-365516/A-Tachometer .....	133
3.5.6	VS-FUN-REQ-365529/A-Oil Life .....	133
3.5.7	VS-FUN-REQ-365643/A-Cluster IoD menu configurations .....	135
3.5.8	VS-FUN-REQ-365765/A-Cluster Trip 1 menu.....	144
3.5.9	VS-FUN-REQ-365845/A-Cluster Trip 2 menu.....	148
3.5.10	VS-FUN-REQ-369169/A-Classic View - Cluster Speedo view .....	152
3.5.11	VS-FUN-REQ-393166/A-Classic Gauges - Cluster Menu.....	152
3.5.12	VS-FUN-REQ-404378/A-Cluster Appearance.....	153
3.5.13	VS-FUN-REQ-404408/A-Performance Shift Indicator - Cluster menu.....	154
3.5.14	VS-FUN-REQ-279097/B-MyColor.....	156
3.5.15	VS-FUN-REQ-280671/B-Exhaust Mode .....	162
4	<b>APPENDIX: REFERENCE DOCUMENTS.....</b>	<b>163</b>



# 1 Architectural Design

## 1.1 Interface Requirements

### 1.1.1 VS-IIR-REQ-243929/C-FBMP Interface requirements

#### 1.1.1.1 MD-REQ-243930/A-Feature\_St

Message Type: Status

Represents the current status of a feature (feature selected, feature setting, etc.).

Included Parameters:

FeatureID

Configuration

PersIndex

Name	Literals	Value	Description
FeatureID	-	-	Active feature number
		0x0000 – 0xFFFF	
Configuration	-	-	Active configuration value
		0x0000 – 0xFFFF	
PersIndex	-	-	Indicates which personality profile is active
	PERS_1	0x0	
	PERS_2	0x1	
	PERS_3	0x2	
	PERS_4	0x3	
	VEHICLE	0x4	
	Not Used	0x5	
	Not Used	0x6	
	Not Used	0x7	

#### 1.1.1.2 MD-REQ-243931/A-Feature\_Rq

Message Type: Request

Represents the request to command a feature change (select new feature, change feature setting, query features, etc.).

Included Parameters:

Operation

FeatureID

Configuration

PersIndex

Name	Literals	Value	Description
Operation	-	-	Type of operation being requested
	Null	0x0	
	Query	0x1	
	Set	0x2	
	Upload	0x3	
	Restore	0x4	
	Copy	0x5	
	NotUsed	0x6 – 0x7	



FeatureID	-	-	Feature number being requested
		0x0000 – 0xFFFF	
Configuration	-	-	Configuration value being requested
		0x0000 – 0xFFFF	
PersIndex	-	-	Indicates which personality profile is being accessed
	PERS_1	0x0	
	PERS_2	0x1	
	PERS_3	0x2	
	PERS_4	0x3	
	VEHICLE	0x4	
	Not Used	0x5	
	Not Used	0x6	
	Not Used	0x7	

### 1.1.2 MD-REQ-243934/B-Disp\_Miles\_Kilometers.St

Message Type: Status

Signal from the Vehicle Settings Server stating what the setting is for Distance units.

Logical Signal Name	Literals	Value	Description
Disp_Miles_Kilometers.St	Metric (kilometers)	0x0	
	Imperial (miles)	0x1	

### 1.1.3 MD-REQ-016222/B-IgnKeyType\_D\_Actl (TcSE ROIN-200609-4)

Message Type: Status

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

Name	Literals	Value	Description
IgnKeyType_D_Actl	-	-	Type of key that is in the ignition
	KeyReadInProgress	0x0	Key(s) will be read now
	KeyInIgnStandardKey	0x1	Admin (full) mode
	KeyInIgnMyKey	0x2	MyKey restricted mode
	Key_Not_Prgm_Read_Failure	0x3	Key not programmed
	Unknown	0xE	Disable MyKey System mode
	Invalid	0xF	Initial value

### 1.1.4 MD-REQ-276458/B-Vehicle\_Speed.St

Message Type: Status

Signal with the current status of the Vehicle Speed



Logical Signal Name	Literals	Value	Description
Vehicle_Speed.St	See info-CAN database for signal details	See info-CAN database for signal details	

**1.1.5 MD-REQ-276459/A-Vehicle\_Speed\_QF****Message Type:** Status

Signal with the Vehicle Speed Quality Factor

Logical Signal Name	Literals	Value	Description
Vehicle_Speed_QF	Faulty	0x0	
	No_Data_Exists	0x1	
	Not_Within_Specifications	0x2	
	OK	0x3	

**1.1.6 MD-REQ-239857/C-TsrVIUnitMsgTxt\_D\_Rq****Message Type:** Request

Traffic Sign Recognition signal indicating if the Traffic Sign Recognition settings should be in Km/h or MPH.

Note: This signal only applies for Traffic Sign Recognition settings.

Logical Signal Name	Literals	Value	Description
TsrVIUnitMsgTxt_D_Rq	Null	0x0	
	Km/h	0x1	
	MPH	0x2	
	NoDataExists	0x3	

**1.1.7 MD-REQ-276700/A-laccLamp\_D\_Rq****Message Type:** Request

Intelligent Adaptive Cruise Control signal used by Traffic Sign Recognition / Speed Limit Information for Settings in the Centerstack

Logical Signal Name	Literals	Value	Description
laccLamp_D_Rq	DoNotDisplayIaccIcon	0x0	
	DisplayIaccIcon	0x1	
	NotUsed	0x2	
	NotUsed	0x3	

**1.1.8 MD-REQ-276704/A-SLMde\_D\_Rqdsply****Message Type:** Request

Intelligent Speed Assist signal used by Traffic Sign Recognition / Speed Limit Information for Settings in the Centerstack





Logical Signal Name	Literals	Value	Description
SLMde_D_Rqdsply	NoSpeed_LimiterSymbol	0x0	
	AutoSpeed_LimiterSymbol	0x1	
	ManualSpeed_LimiterSymbol	0x2	
	NotUsed	0x3	

**1.1.9 MD-REQ-276706/A-Aslicondsply\_D\_Rq****Message Type:** Request

Intelligent Speed Assist signal used by Traffic Sign Recognition / Speed Limit Information for Settings in the Centerstack

Logical Signal Name	Literals	Value	Description
Aslicondsply_D_Rq	Off	0x0	
	On_Passive	0x1	
	On_Active	0x2	
	Override	0x3	

**1.1.10 MD-REQ-274072/C-BTTLeft\_D\_RqDrv****Message Type:** Request

BTT Lite (Blind spot Trailer Tow Lite) left side detection signal sent to tell if the BTT Lite pop-up should be shown in the Centerstack HMI

Logical Signal Name	Literals	Value	Description
BttLeft_D_RqDrv	Null	0x0	
	No Request	0x1	
	Request	0x2	Used for pop-up
	Not Used	0x3	

**1.1.11 MD-REQ-274073/C-BTTRight\_D\_RqDrv****Message Type:** Request

BTT Lite (Blind spot Trailer Tow Lite) right side detection signal sent to tell if the BTT Lite pop-up should be shown in the Centerstack HMI

Logical Signal Name	Literals	Value	Description
BttRight_D_RqDrv	Null	0x0	
	No Request	0x1	
	Request	0x2	Used for pop-up
	Not Used	0x3	

**1.1.12 MD-REQ-343175/A-MetricActv\_B\_Actl****Message Type:** Status

This signal provides the MPH or Km/h speed setting unit to use (see setting function for details and applicability)

Logical Signal Name	Literals	Value	Description
MetricActv_B_Actl	Inactive	0x0	MPH
	Active	0x1	Km/h

**1.1.13 MD-REQ-369894/A-EngOilLife\_Pc\_Actl**

Message Type: Status

Status signal from the Engine Oil Life Server with the oil life percentage until the oil life has expired

Logical Signal Name	Literals	Value	Description
EngOilLife_Pc_Actl	0 percent oil life	0x0	
	1 percent oil life	0x1	
	2 percent oil life	0x2	
	...	...	
	99 percent oil life	0x63	
	100 percent oil life	0x64	

**1.1.14 MD-REQ-396483/A-AhbcMnu\_D\_Rq**

Message Type: Request

Periodic Request signal from the Lighting Settings Configuration Server to the Centerstack Settings HMI Client to auto-configure the Auto Highbeam variant 2 HMI and Interface to be used.

Logical Signal Name	Literals	Value	Description
AhbcMnu_D_Rq	Null	0x0	
	Disable	0x1	Don't show Auto-Highbeam HMI
	Enable	0x2	Show Auto-Highbeam HMI

**1.1.15 MD-REQ-396485/A-GfhbMnu\_D\_Rq**

Periodic Request signal from the Lighting Settings Configuration Server to the Centerstack Settings HMI Client to auto-configure the Glare Free and Adaptive Drive Beam variant 2 HMI and Interface to be used.

Logical Signal Name	Literals	Value	Description
GfhbMnu_D_Rq	Null	0x0	
	Disable	0x1	Don't show Glare Free / Adaptive Drive Beam HMI
	Enable Glare Free	0x2	Show Glare Free
	Enable Adaptive Drive Beam	0x3	Show Glare Free / Adaptive Drive Beam HMI

**1.2 IIR-REQ-251250/M-Logical Signal to HS3 CAN dB signal name translation table**

Transmitter	Logical Signal Name	HS3 CAN dB signal name
Centerstack Settings HMI Client (APIM, CHR..)	Feature.Rq : Operation	CtrStkDsplyOp_D_Rq
	Feature.Rq : FeatureID	CtrStkFeatNoActl
	Feature.Rq : Configuration	CtrStkFeatConfigActl
	Feature.Rq : PersIndex	CtrStkPersIndex_D_Actl
	<a href="#">Feature2.Rq : Operation</a>	<a href="#">CtrStkDsplyOp2_D_Rq</a>
	<a href="#">Feature2.Rq : FeatureID</a>	<a href="#">CtrStkFeat2NoActl</a>
	<a href="#">Feature2.Rq : Configuration</a>	<a href="#">CtrStkFeat2ConfigActl</a>
	<a href="#">Feature2.Rq : PersIndex</a>	<a href="#">CtrStkPersIndex2_D_Actl</a>
Cluster Feature Settings Server / Settings Gateway_Translator Module	Feature.St : FeatureID	FeatNolpcActl
	Feature.St : Configuration	FeatConfiglpcActl
	Feature.St : PersIndex	PersIndexlpc_D_Actl
	<a href="#">Feature2.St : FeatureID</a>	<a href="#">FeatNolpc2Actl</a>
	<a href="#">Feature2.St : Configuration</a>	<a href="#">FeatConfiglpc2Actl</a>
	<a href="#">Feature2.St : PersIndex</a>	<a href="#">PersIndexlpc2_D_Actl</a>
BCM Feature Settings Server (Body Control Module)	Feature.St : FeatureID	FeatNoBcm_No_Actl
	Feature.St : Configuration	FeatConfigBcmActl
	Feature.St : PersIndex	PersIndexBcm_D_Actl
IPMA Feature Settings Server	Feature.St : FeatureID	FeatNolpmaActl
	Feature.St : Configuration	FeatConfiglpmaActl
	Feature.St : PersIndex	PersIndexlpma_D_Actl
DSM Feature Settings Server (Driver Seat Module)	Feature.St : FeatureID	FeatNoDsmActl
	Feature.St : Configuration	FeatConfigDsmActl
	Feature.St : PersIndex	PersIndexDsm_D_Actl
HCM Feature Settings Server (Headlamp Control Module)	Feature.St : FeatureID	FeatNoHcm_No_Actl
	Feature.St : Configuration	FeatConfigHcmActl
	Feature.St : PersIndex	Signal does not exist. Treat as though PersIndex is equal to Vehicle
FCIM (HVAC) Feature Settings Server	Feature.St : FeatureID	FeatNoFcimActl
	Feature.St : Configuration	FeatConfigFcimActl
	Feature.St : PersIndex	PersIndexFcim_D_Actl
SCCM Feature Settings Server (Steering Column Control module)	Feature.St : FeatureID	FeatNoSccmActl
	Feature.St : Configuration	FeatConfigSccmActl
	Feature.St : PersIndex	PersIndexSccm_D_Actl
SUMA Feature Settings Server (Suspension Control Module)	Feature.St : FeatureID	FeatNoSumaActl
	Feature.St : Configuration	FeatConfigSumaActl
	Feature.St : PersIndex	PersIndexSuma_D_Actl
VDM Feature Settings Server (Variable Dynamics Module)	Feature.St : FeatureID	FeatNoVdmActl
	Feature.St : Configuration	FeatConfigVdmActl
	Feature.St : PersIndex	PersIndexVdm_D_Actl
CCM Feature Settings Server (CADS Control Module)	Feature.St : FeatureID	FeatNoCcmActl
	Feature.St : Configuration	FeatConfigCcmActl
	Feature.St : PersIndex	PersIndexCcm_D_Actl
DDM Feature Settings Server	Feature.St : FeatureID	FeatNoDdm_No_Actl
	Feature.St : Configuration	FeatConfigDdmActl
	Feature.St : PersIndex	PersIndexDdm_D_Actl
Applicable Traffic Sign Recognition module	TsrVIUnitMsgTxt_D_Rq	TsrVIUnitMsgTxt_D_Rq
MyKey Ignition Key Type Server	IgnitionKeyType	IgnKeyType_D_Actl
Speed Unit Server (Cluster)	MetricActv_B_Actl	MetricActv_B_Actl
Neutral Tow Server (PCM)	TrnGearNtmAllow_B_Stat	TrnGearNtmAllow_B_Stat
Distance Unit Server (Cluster)	Disp_Miles_Kilometers.St	Mc_VehUntTrpCoUsrSel_St



	laccLamp_D_Rq	laccLamp_D_Rq
	SLMde_D_Rqdsply	SLMde_D_Rqdsply
	Aslicondsply_D_Rq	Aslicondsply_D_Rq
BTT Lite Server	BttLeft_D_RqDrv	BttLeft_D_RqDrv
BTT Lite Server	BttRight_D_RqDrv	BttRight_D_RqDrv
	Vehicle_Speed.St	Veh_V_ActlEng
	Vehicle_Speed_QF	VehVActlEng_D_Qf
	<a href="#">EngOilLife_Pc_Actl</a>	<a href="#">EngOilLife_Pc_Actl</a>

The Centerstack Settings HMI client (ex APIM...) needs to support receiving Feature.St signals from any of the Feature.St signals in the above table.

- Note: the Centerstack Settings HMI Client needs to support any Feature.St it receives from Feature Settings Servers. At the time this spec was written the above table was the latest. Check the module CAN dB for any additional Feature.St signals that the Centerstack Settings HMI Client may receive.

### 1.3 VS-CLD-REQ-232301/B-Centerstack Settings HMI Client

The Infotainment Centerstack Settings HMI Client is responsible for sending the Feature.Rq HMI selections to the Settings Gateway\_Translator Module / Feature Settings Server and updating its HMI based on the Feature.St responses

### 1.4 VS-CLD-REQ-232302/A-Settings Gateway\_Translator Module

The Settings Gateway\_Translator module is responsible for being the interface between the Centerstack Settings HMI Client and the Feature Settings Servers

### 1.5 VS-CLD-REQ-232303/A-Feature Settings Server

The Feature Settings Server is responsible for responding to the request for a particular feature and performing the feature operation



## 2 General Requirements

This specification covers non-infotainment Settings not already covered in other SPSS specifications that will have those settings moving to the infotainment Centerstack module (ex SYNC, CHR). Most the settings in the specification resided in the Cluster and are being moved to the infotainment Centerstack module (ie Centerstack Settings HMI Client).

This specification is in addition to the “Vehicle Settings (Global) SPSS” and other Feature SPSS specifications where those Settings are already covered. When supporting Settings in the Centerstack the “Vehicle Setting (Global) SPSS” and “Vehicle Settings – Settings in the Infotainment Centerstack Module (Global)” shall both be used in addition to any other Feature SPSS with settings that are already supported by the infotainment Centerstack module.

For MyKey settings in the Centerstack feature reference the MyKey Settings in the Centerstack SPSS.

### 2.1 VS-SR-REQ-232098/P-Feature Based Message Protocol usage for Settings in the Infotainment Centerstack Display Module

The definition of how to use Feature Based Message Protocol for Set and Query operations is defined in the Feature Based Message Protocol SPSS and shall be followed to support this Settings in the Centerstack SPSS specification.

To support this SPSS for Settings in the Centerstack the supplier will need an April 2017 or later version of the FBMP SPSS to accompany this spec.

For the features/functions in this Centerstack Settings SPSS specification the Centerstack Settings HMI Client shall use the Feature.Rq(Operation = Query) method at start-up described in the Feature Based Message Protocol SPSS. The Retry method shall be supported as defined in “FBMP-REQ-023025-Query request but no response form Feature Server (Query Retries)” in the case where there is no response from the Feature Server.

- If the Centerstack Setting HMI Client has not yet queried a setting at start-up (or have not received a response from a query) and the user goes to the HMI for the setting(s) then no settings selections can be shown (HMI to decide how to show that it does not know the setting selection – grey out, don’t show setting, etc). The settings cannot be saved from the previous ignition cycle. The setting selection (ex enabled/disabled selected) HMI can only show a setting as being selected if there was a response from the feature server.
- Note: additional error handling could be taken such as if the user enters a particular HMI settings screen the Centerstack HMI Client can always re-query any items that were missed at start-up.

For the features/functions in this Centerstack Settings SPSS specification the Centerstack Settings HMI Client shall use the Feature.Rq (Operation = Set) method as described in the Feature Based Message Protocol SPSS. The Retry method shall be supported as defined in “FBMP-REQ-023017-Set request but no response from Feature Server” in the case where there is no response from the Feature Server. Unless noted otherwise displaying centerstack settings HMI menu items such as what to do if Feature Client does not receive a response for a set operation or its retry is defined by the HMI specification (HMI team make final call on how to display if never get a response for a set command).

When the ignition\_status changes from OFF/ACC to RUN then the RUN query start-up method is used from the FBMP SPSS for all settings in this specification (FBMP-REQ-023024-Query Operation during Start-Up). For these settings the Centerstack Setting Client shall support the following:

- If already queried everything in Run and the ignition\_status changes to OFF / ACC and back to Run then settings normally queried in Run would have to be re-queried again. When ignition\_status changes to OFF/ACC the menu settings that were queried in Run would be considered unknown.
- When Ignition\_Status changes to Crank it is considered a don’t care and the last Ignition\_Status state shall be assumed. For example if in Run with everything queried and the Ignition\_Status changes to Crank and back to Run then the settings would not need to be re-queried again.
- If a query event is in progress and a crank event happens then after the crank event finishes (Ignition\_Status goes from Crank/Start → Run) the Query shall resume were it left off. As noted in the FBMP SPSS specification if the user went to a specific Centerstack Settings menu before all the settings are queried at start-up then the active settings menu has priority and shall be queried next (if it wasn’t queried already earlier).
- When the query begins it is recommended to create a priority list on what items are queried first so the setting HMI can update the high priority items first:





- It is recommended that Pre-Collision Assist, Lane Keeping System settings are queried first (any active safety items deemed higher priority or anything deemed high priority) followed by Driver Alerts (0x0808), Auto High Beam (0x080C), Global Window Open (0x0401), Global Window Close (0x0402)
- After that the next to be queried is recommended to be any HMI settings that the customer is more likely to see first.
  - Example: There is a setting or HMI item the user is likely to see (ie menu not buried many layers deep). It is recommended to query those at the beginning of the query list
  - Example2: When the user enters an HMI screen if there is a list of 10 settings and if without scrolling you can only see the top 3 settings then it is recommended that those three items be higher on the query priority list since those are among the first that could be seen by the user.

Note: the priority list might vary by module since the HMI may be different on different modules.

- As noted in the FBMP SPSS specification (FBMP-REQ-023024-Query Operation at Start-Up) if the user went to a specific Centerstack Settings menu before all the settings are queried at start-up then the active settings menu has priority and shall be queried next (if it wasn't queried already earlier). See FBMP SPSS for details.

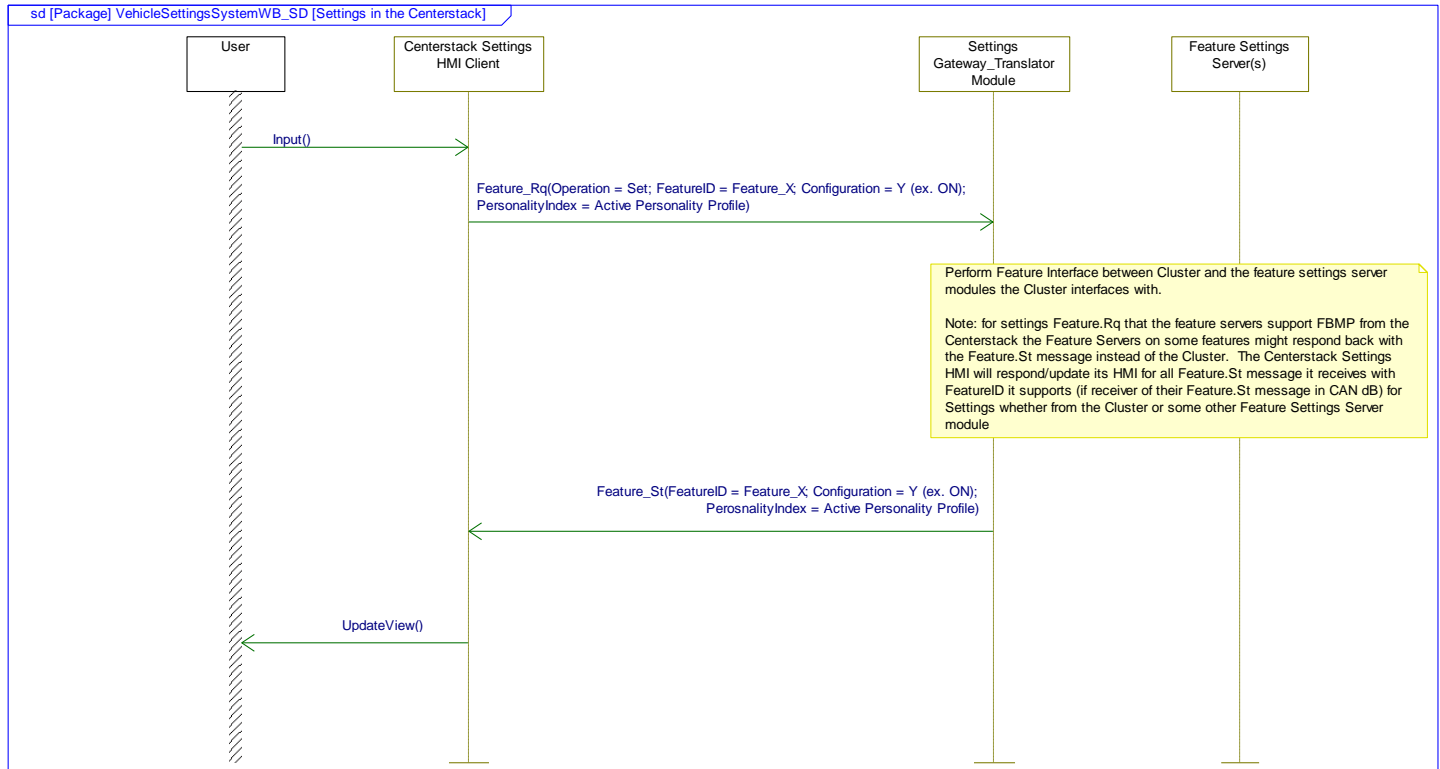
The Centerstack Settings HMI Client shall be capable of performing multiple QUERY or SET actions at once. An input from the driver, for example, shall never be "lost" if the Centerstack Settings HMI Client is performing a QUERY.

For any FBMP Settings Server module that only responds to the Cluster FBMP Feature.Rq Set or Query operation signal and not the Centerstack FBMP Feature.Rq Set or Query operation signal then the Cluster will be the gateway/translator module. The Cluster will receive the Centerstack FBMP Feature.Rq message and then will send the corresponding Cluster FBMP Feature.Rq message to the respective module for a particular feature.

For any Settings feature in this specification that the Cluster doesn't currently use Feature Based Message Protocol for when communicating with the feature server modules the Cluster shall:

- receive a Feature.Rq FBMP message from the Centerstack Settings HMI Client for the selected settings HMI and then the Cluster Gateway/Translator can use the existing Cluster strategy to communicate with the module feature servers to support the settings feature. The Cluster shall send the Feature.St to the Centerstack Settings HMI Client in response to the Feature.Rq so the Settings HMI can be updated.

Example diagram below with Cluster as the Gateway/Translator module for Settings:



## 2.2 VS-SR-REQ-232106/G-Configuration of Settings HMI displayed in Centerstack

The Infotainment Centerstack module (ie Centerstack Settings HMI Client) shall have a configuration item for the different HMI setting options displayed to the user. This may vary by vehicle program and vary on vehicle program depending on the feature content supported on a particular vehicle.

Reference the HMI specifications which list the configurations (ex DE0X, Byte Y, Bit Z) for all the HMI settings (ie shows what HMI will be activated/deactivated for each configuration).

Reference the Infotainment Centerstack module Setting IDS (Infotainment Diagnostics Specification) for list of configuration settings.

If any conflict between configurations shown in the HMI and IDS bring to Ford's attention.

## 2.3 VS-SR-REQ-232237/G-FBMP Feature.St received from any FBMP Feature Settings Server module

The Centerstack Settings HMI Client which sends out the Centerstack FBMP Feature.Rq message shall be able to accept the response from any FBMP Feature Settings Server module that it receives the Feature.St response from (ex could be Cluster, BCM, FCIM...).

- Note: that is as long as Centerstack Settings HMI Client is a receiver of that server modules FBMP Feature.St message in their CAN dB.

The Centerstack Settings HMI Client shall update its HMI setting based on any Feature.St message from any feature server responsible for that setting (as long as the feature number in the Feature.St is a setting the Centerstack HMI Client supports). This could happen because of a Set or Query operation or if the feature server sends the Feature.St on event with a new value (ie without a Set or Query Feature.Rq).



## 2.4 VS-SR-REQ-233588/D-HMI Settings MyKey Limited

Some settings might not be supported when a MyKey is being used as the key. For those settings the HMI shall not allow the user to select those settings when MyKey limited or may not show those settings at all.

Some settings are MyKey limited in the sense that they go to a default setting when a MyKey is used but still allow the MyKey user to adjust the setting. For those settings there would be no impact on the Centerstack Settings HMI Client since when key to Run with a MyKey the MyKey limited default values will be queried at start-up from the feature servers using Feature Based Message Protocol. The feature servers would respond back to the query with the MyKey default values.

### Activating MyKey Settings Limit:

To activate MyKey limited settings, signal IgnKeyType\_D\_Actl must be KeyInIgnMyKey. The Centerstack Settings HMI Client shall monitor this signal to know when MyKey is active.

Signal Name	Encodings	Value	Description
IgnitionKeyType	-	-	Type of key that is in the ignition
	KeyReadInProgress	0x0	Key(s) will be read now
	KeyInIgnStandardKey	0x1	Admin (full) mode
	KeyInIgnMyKey	0x2	MyKey restricted mode
	Unknown	0xE	Disable MyKey System mode
	Invalid	0xF	Initial value

## 2.5 VS-SR-REQ-234228/C-Driver Distraction - Settings in the Centerstack

Reference applicable Driver Restrictions specification(s) to see if there are any driver restrictions on settings in the Centerstack.

- Reference the Driver Restrictions SPSS
- For SYNC Gen 3 also reference the HMI driver restriction specification (H21j\_SYNC\_GEN3\_Driver\_Restrictions specification)
- Any other Settings HMI specifications showing what is driver restricted

## 2.6 VS-SR-REQ-234437/C-Carryover Settings functionality from other specifications

Settings that are described in other SPSS specifications (ex Vehicle Settings SPSS, Rear View Camera SPSS, Adjustable Chimes SPSS...) are not redefined here unless noted otherwise. Follow the existing specifications on how those settings work.

For the different MyKey Settings reference the MyKey Settings in the Centerstack SPSS specification.

## 2.7 FBMP-SR-REQ-238230/F-Enhanced Memory - Active Personality Profile change using Feature Based Message Protocol

If Enhanced Memory is supported, then after the ActivePersonality\_St changes to a new personality profile as defined in the Enhanced Memory SPSS, the FBMP Feature Client (ex Centerstack Settings HMI Client module) shall Query all the FBMP Feature Servers (ex Query all FBMP settings in centerstack) that use FBMP with the PersIndex set to the new personality profile. The query is performed 200 msec after the ActivePersonality\_St signal changes to the new profile (the 200 msec gives the Feature Settings Servers time to update to the new active personality before queried). If the active screen is displaying any FBMP settings, those settings shall be queried first.

- See Enhanced Memory requirement "ENMEM-REQ-099693-Display Data Refresh After Driver Profile Change" in the Enhanced Memory SPSS.

The FBMP Feature Settings Client (ex Centerstack Settings HMI Client module) shall save all FBMP settings the Feature Servers responds back with, regardless of what the PersIndex is set to for Enhanced Memory.



- Note: some Feature Servers using FBMP don't support enhanced memory (or the FBMP SPSS). Since those features may not respond with a relevant PersIndex, the PersIndex shall be ignored by the FBMP Feature Setting Client.
- Note2: infotainment Feature Server modules supporting the infotainment FBMP SPSS, and not supporting Enhanced Memory, shall respond with PersIndex set to Vehicle per "FBMP-REQ-023037-PersIndex Definition".

For FBMP Feature Server modules that do support Enhanced Memory, when a FBMP Feature Server module is being Queried, it shall respond back with the settings/data for whatever PersIndex the FBMP Feature Client is Querying regardless what is the Active Personality (ActivePersonality\_St) for Enhanced Memory.

## 2.8 Specification Overview layout

For the individual settings in this specification they are organized into a Driver Assistance Settings, Vehicle Settings and General Settings section. This may or may not match the actual HMI. Follow the actual HMI specifications for how these are shown on the Centerstack display.



### 3 Functional Definition

#### 3.1 Driver Assistance Settings

##### 3.1.1 General Requirements - Driver Assistance Settings

###### 3.1.1.1 VS-SR-REQ-234426/D-Driver Assistance Settings Start-Up

Driver Assistance Settings shall be queried by the Centerstack Settings HMI Client when the Ignition\_Status changes from OFF/ACC to Run. See the FBMP SPSS for details on querying at start-up when ignition\_status changes to Run.

When Ignition\_Status changes from Run to OFF/ACC the infotainment Centerstack Driver Information Settings shall be considered unknown. The HMI should not show any settings selections when Driver Assistance Settings selection information is unknown.

###### 3.1.1.2 VS-SR-REQ-234435/C-HMI Activation during Run - Driver Assistance Settings

Settings in this Driver Assistance Settings Function/Section can only be selected on the HMI when the Ignition\_Status = Run.

###### 3.1.1.3 VS-SR-REQ-235185/B-Carryover Driver Information Assistance functionality

The Rear View Camera system interface and settings are defined in the "Rear View Camera SPSS".

##### 3.1.2 VS-FUN-REQ-232286/B-Cruise Control

###### 3.1.2.1 Requirements

###### 3.1.2.1.1 VS-SR-REQ-232245/I-Cruise Control

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Cruise Control - Adaptive Speed Control Auto Setting	0x081F	0x00	Normal Cruise
		0x01	Adaptive Cruise
		0x02	Intelligent

HMI Setting ID
116





### 3.1.2.1.2 VS-SR-REQ-333002/C-Tolerance - Cruise Control

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tolerance - Cruise Control Intelligent Adaptive Offset	0x0860	0x00	-30
		0x01	-29
		0x02	-28
		...	...
		0x3A	+28
		0x3B	+29
		0x3C	+30

For the “HMI selection / Configuration name” column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to Imperial (ex MPH) or Metric (ex Km/h) based on what the signal MetricActv\_B\_Actl is set to.

- When MetricActv\_B\_Actl = Inactive then MPH would be the unit shown in the HMI
- When MetricActv\_B\_Actl = Active then Km/h would be the unit shown in the HMI

Example if MetricActv\_B\_Actl = Active then 0x3C would represent +30 Km/h.

HMI Setting ID
117, 1007

### 3.1.3 VSv2-FUN-REQ-332984/A-Cruise Control - Variant 2

Cruise Control “[VS-FUN-REQ-232286-Cruise Control](#)” variant 1 is mutually exclusive with the Cruise Control in this variant 2 function. Which version to use is handled via configurations.

#### 3.1.3.1 Requirements

##### 3.1.3.1.1 VSv2-SR-REQ-333001/A-Cruise Control - Variant 2

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Cruise Control - Adaptive Speed Control Auto Setting	0x081F	0x00	Cruise Control
		0x01	Adaptive Cruise Control
		0x02	Not Used

Note: for variant 1 of feature number 0x081F see requirement "[VS-REQ-23245-Cruise Control](#)".

SYNC Gen 4 Screen / ID HMI Number	HMI Setting ID
6b	1003

#### 3.1.3.1.2 [VS-SR-REQ-333002/C-Tolerance - Cruise Control](#)

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tolerance - Cruise Control Intelligent Adaptive Offset	0x0860	0x00	-30
		0x01	-29
		0x02	-28
		...	...
		0x3A	+28
		0x3B	+29
		0x3C	+30

For the "HMI selection / Configuration name" column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to Imperial (ex MPH) or Metric (ex Km/h) based on what the signal MetricActv\_B\_Actl is set to.

- When MetricActv\_B\_Actl = Inactive then MPH would be the unit shown in the HMI
- When MetricActv\_B\_Actl = Active then Km/h would be the unit shown in the HMI

Example if MetricActv\_B\_Actl = Active then 0x3C would represent +30 Km/h.

**HMI Setting ID**

117, 1007

**3.1.3.1.3 VS-SR-REQ-333005/C-with Lane Centering**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Adaptive Cruise Control with Lane Centering / Highway Drive Assist	0x0841	0x00	OFF / Disabled
		0x01	ON / Enabled

**HMI Setting ID**

1004

**3.1.3.1.4 VS-SR-REQ-333008/B-with Smart Offerings**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Adaptive Cruise Control with Smart Offering	0x0842	0x00	OFF / Disabled
		0x01	ON / Enabled



## HMI Setting ID

1005

**3.1.3.1.5 VS-SR-REQ-333009/C-with Speed Signs**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Adaptive Cruise Control with Speed Signs / with Speed Sign Recognition / <a href="#">Predictive Speed Assist</a>	0x0843	0x00	OFF / Disabled
		0x01	ON / Enabled

## HMI Setting ID

1006

**3.1.4 VSv3-FUN-REQ-391926/A-Cruise Control - Variant 3**

[Note: at the time this Cruise Control Variant 3 was created this was a temporary/interim variant based off Cruise Control Variant 2 until the ADAS module supported Cruise Control Variant 2 in its entirety.](#)

[Differences from Variant 2 included adding Intelligent back into 0x081F and removing with Speed Signs. See HMI specs with the HMI rules for Cruise Control Variant 3.](#)

**3.1.4.1 Requirements****3.1.4.1.1 VS-SR-REQ-232245/I-Cruise Control**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Cruise Control - Adaptive Speed Control Auto Setting	0x081F	0x00	Normal Cruise
		0x01	Adaptive Cruise
		0x02	Intelligent

HMI Setting ID
116

#### 3.1.4.1.2 VS-SR-REQ-333002/C-Tolerance - Cruise Control

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tolerance - Cruise Control Intelligent Adaptive Offset	0x0860	0x00	-30
		0x01	-29
		0x02	-28
		...	...
		0x3A	+28
		0x3B	+29
		0x3C	+30

For the "HMI selection / Configuration name" column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to Imperial (ex MPH) or Metric (ex Km/h) based on what the signal MetricActv\_B\_Actl is set to.

- When MetricActv\_B\_Actl = Inactive then MPH would be the unit shown in the HMI
- When MetricActv\_B\_Actl = Active then Km/h would be the unit shown in the HMI

Example if MetricActv\_B\_Actl = Active then 0x3C would represent +30 Km/h.

**HMI Setting ID**

117, 1007

**3.1.4.1.3 VS-SR-REQ-333005/C-with Lane Centering**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Adaptive Cruise Control with Lane Centering / Highway Drive Assist	0x0841	0x00	OFF / Disabled
		0x01	ON / Enabled

**HMI Setting ID**

1004

**3.1.4.1.4 VS-SR-REQ-333008/B-with Smart Offerings**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Adaptive Cruise Control with Smart Offering	0x0842	0x00	OFF / Disabled
		0x01	ON / Enabled



**HMI Setting ID**

1005

**3.1.5 VS-FUN-REQ-232288/B-Speed Limiter****3.1.5.1 Requirements****3.1.5.1.1 VS-SR-REQ-232284/H-Speed Limiter - Manual / Intelligent**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Speed Limiter	0x0D00	0x00	Manual Mode (Intelligent Offset OFF)
		0x01	Intelligent Mode (Intelligent Offset ON)

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
7	118

**3.1.5.1.2 VS-SR-REQ-332970/B-Speed Limiter - Intelligent Offset Tolerance**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Intelligent Offset / Tolerance – Speed Limiter	0x0D01	0x00	0 Tolerance / Intelligent Offset
		0x01	+1 Tolerance / Intelligent Offset
		0x02	+2 Tolerance / Intelligent Offset



	0x03	+3 Tolerance / Intelligent Offset
	0x04	+4 Tolerance / Intelligent Offset
	0x05	+5 Tolerance / Intelligent Offset
	0x06	+6 Tolerance / Intelligent Offset
	0x07	+7 Tolerance / Intelligent Offset
	0x08	+8 Tolerance / Intelligent Offset
	0x09	+9 Tolerance / Intelligent Offset
	0x0A	+10 Tolerance / Intelligent Offset

For the "HMI selection / Configuration name" column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to Imperial (ex MPH) or Metric (ex Km/h) based on what the signal MetricActv B Actl is set to.

- When MetricActv B Actl = Inactive then MPH would be the unit shown in the HMI
- When MetricActv B Actl = Active then Km/h would be the unit shown in the HMI

Example if MetricActv B Actl = Active then 0x01 would represent +1 Km/h Intelligent Offset.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
7 / 11	119

### 3.1.6 VS-FUN-REQ-233809/B-Traffic Sign Recognition

Note: Traffic Sign Recognition and Speed Limit Information are mutually exclusive. See HMI spec for the configurations for the HMI.

#### 3.1.6.1 Requirements

##### 3.1.6.1.1 VS-SR-REQ-233812/E-Enable/Disable Traffic Sign Recognition / Speed Limit Information Feature

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Activate Traffic Sign Recognition / Speed Limit Information Customer Enable	0x0809	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12 (TSR) SYNC HMI supplement (SLI under TSR)	130

#### 3.1.6.1.2 VS-SR-REQ-233914/F-Enable/Disable Speed Warning - Traffic Sign Recognition / Speed Limit Information

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Activate Speed Warning – Traffic Sign recognition / Speed Limit Information	0x080D	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12	131

#### 3.1.6.1.3 VS-SR-REQ-233813/D-Enable/Disable Speed Warning Chime - Traffic Sign Recognition

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Speed Warning Chime – Traffic Sign Recognition	0x0830	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12	132

#### 3.1.6.1.4 VS-SR-REQ-233862/K-Less Than Warning Threshold - (Traffic Sign Recognition / Speed Limit Information)

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Less Than Warning Threshold (ex less than 65 Km/h)	0x080E	0x10	0 Tolerance / Intelligent Offset
		0x11	+1 Tolerance / Intelligent Offset
		0x12	+2 Tolerance / Intelligent Offset
		0x13	+3 Tolerance / Intelligent Offset
		...	...
		0x36	+38 Tolerance / Intelligent Offset
		0x37	+39 Tolerance / Intelligent Offset
		0x38	+40 Tolerance / Intelligent Offset

For this setting whether the display is in MPH or Km/h is not based on what Measure Units is set to but based on what the Traffic Sign Recognition / Speed Limit Information signal TsrVIUnitMsgTxt\_D\_Rq is set to. The TsrVIUnitMsgTxt\_D\_Rq signal is an event-periodic status signal and the status signal shall be used in Run to determine if the traffic sign recognition units are in Km/h or MPH.

- If the TsrVIUnitMsgTxt\_D\_Rq signal is missing for more than 5 seconds in Run then the traffic sign recognition units would be displayed in Km/h.

For the “HMI selection / Configuration name” column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to MPH or Km/h based on what the signal TsrVIUnitMsgTxt\_D\_Rq is set to.

- Example 1: if Km/h is selected then 0x12 would represent +2 Km/h Intelligent Offset.
- Example 2: If MPH is selected then 0x12 would represent +2 MPH Intelligent Offset.
- If 0x0 Null or 0x3 NoDataExists is selected, then the Centerstack Settings HMI Client shall use the last saved value of Km/h or MPH for units.

Signal Name	Encodings	Notes
TsrVIUnitMsgTxt_D_Rq	0x0 Null	
	0x01 Km/h	
	0x02 MPH	
	0x03 NoDataExists	



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12 / 11 (TSR) SYNC HMI supplement (SLI under TSR)	133

### 3.1.6.1.5 VS-SR-REQ-233867/K-Greater than Warning Threshold - Traffic Sign Recognition

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Greater than Warning Threshold (ex greater than 65 Km/h)	0x0811	0x10	0 Tolerance / Intelligent Offset
		0x11	+1 Tolerance / Intelligent Offset
		0x12	+2 Tolerance / Intelligent Offset
		0x13	+3 Tolerance / Intelligent Offset
		...	...
		0x36	+38 Tolerance / Intelligent Offset
		0x37	+39 Tolerance / Intelligent Offset
		0x38	+40 Tolerance / Intelligent Offset

For this setting whether the display is in MPH or Km/h is not based on what Measure Units is set to but based on what the Traffic Sign Recognition / Speed Limit Information signal TsrVIUnitMsgTxt\_D\_Rq is set to. The TsrVIUnitMsgTxt\_D\_Rq signal is an event-periodic status signal and the status signal shall be used in Run to determine if the traffic sign recognition units are in Km/h or MPH.

- If the TsrVIUnitMsgTxt\_D\_Rq signal is missing for more than 5 seconds in Run then the traffic sign recognition units would be displayed in Km/h.

For the “HMI selection / Configuration name” column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to MPH or Km/h based on what the signal TsrVIUnitMsgTxt\_D\_Rq is set to.

- Example 1: if Km/h is selected then 0x12 would represent +2 Km/h Intelligent Offset.
- Example 2: If MPH is selected then 0x12 would represent +2 MPH Intelligent Offset.
- [If 0x0 Null or 0x3 NoDataExists is selected, then the Centerstack Settings HMI Client shall use the last saved value of Km/h or MPH for units.](#)

Signal Name	Encodings	Notes
TsrVIUnitMsgTxt_D_Rq	0x0 Null	
	0x01 Km/h	
	0x02 MPH	
	0x03 NoDataExists	



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12 / 11 (TSR) SYNC HMI supplement (SLI under TSR)	135 / 136

### 3.1.6.1.6 VS-SR-REQ-331385/A-Single Tolerance Warning Threshold - Traffic Sign Recognition / Speed Limit Information

When the HMI for Traffic Sign Recognition or Speed Limit information only has one tolerance setting in the HMI then:

- At start-up the Centerstack Settings HMI Client shall query both 0x080E and 0x0811.
- At start-up when the Centerstack Settings HMI Client queries 0x080E and 0x0811 the only value looked at to update the HMI for single tolerance setting is 0x080E.
  - Note: at the time this spec was written the reason the Centerstack Settings HMI Client has to query both settings is because the HUD module will need to see both 0x080E and 0x0811.
- When selecting a tolerance setting the Centerstack Settings HMI Client shall perform the Feature.Rq Set operation for both 0x080E and 0x0811 set to the same value. The set operation shall be put on the CAN bus for both 0x080E and 0x0811 within 100 msec of each other.

Reference requirements "VS-REQ-233862-Less Than Warning Threshold" and "VS-REQ-VS-REQ-233867-Greater Than Warning Threshold" for details on feature numbers 0x0811 and 0x080E.

### 3.1.6.1.7 VS-SR-REQ-251193/C-Traffic Sign Recognition Settings / Speed Limit Information HMI not user selectable

#### Overview:

The traffic sign recognition / speed limit information HMI settings are not selectable when either Intelligent Cruise Control or Intelligent Speed Limiter are active in the vehicle (activated on cruise control switch).

#### Requirement:

The table below describes what CAN signals to look at to decide when the traffic sign recognition / speed limit information settings HMI is not selectable. When the conditions in the table are true for a particular row then the traffic sign recognition / speed limit information settings HMI shall be not selectable. If none of the rows are true then the TSR / SLI Settings HMI shall be selectable.

Signals SLMde\_D\_Rqdsply and Aslicondsply\_D\_Rq are only applicable when Intelligent Speed Assist is configured enabled (see diagnostic spec for configuration, ex DE0X).

Signal laccLamp\_D\_Rq is only applicable when Intelligent Adaptive Cruise Control is configured enabled (see diagnostic spec for configuration, ex DE0X).

laccLamp_D_Rq	SLMde_D_Rqdsply	Aslicondsply_D_Rq	TSR Setting HMI
0x1 DisplaylaccIcon	N/A	N/A	TSR greyed out
N/A	0x1 Auto Speed_Limiter symbol	0x1 On-Passive	TSR greyed out
N/A	0x1 Auto Speed_Limiter symbol	0x2 On-Active	TSR greyed out
N/A	0x1 Auto Speed_Limiter symbol	0x3 Override	TSR greyed out

Note: when say TSR (traffic sign recognition) / SLI (speed limit information) greyed out the HMI team will decide how to show this (not necessarily greyed out but a way to show that TSR/SLI settings are not selectable). See HMI specs for details.





### 3.1.7 VS-FUN-REQ-272504/B-Speed Limit Information / Speed Sign Recognition

Note:

- [Traffic Sign Recognition and Speed Limit Information / Speed Sign Recognition are mutually exclusive.](#)
- [Speed Limit Information and Speed Sign Recognition are two HMI names for the same feature. The names can be used interchangeably.](#)

#### 3.1.7.1 Requirements

##### 3.1.7.1.1 VS-SR-REQ-233812/E-Enable/Disable Traffic Sign Recognition / Speed Limit Information Feature

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Activate Traffic Sign Recognition / Speed Limit Information Customer Enable	0x0809	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12 (TSR) SYNC HMI supplement (SLI under TSR)	130

##### 3.1.7.1.2 VS-SR-REQ-233914/F-Enable/Disable Speed Warning - Traffic Sign Recognition / Speed Limit Information

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Activate Speed Warning – Traffic Sign recognition / Speed Limit Information	0x080D	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12	131

### 3.1.7.1.3 VS-SR-REQ-233862/K-Less Than Warning Threshold - (Traffic Sign Recognition / Speed Limit Information)

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Less Than Warning Threshold (ex less than 65 Km/h)	0x080E	0x10	0 Tolerance / Intelligent Offset
		0x11	+1 Tolerance / Intelligent Offset
		0x12	+2 Tolerance / Intelligent Offset
		0x13	+3 Tolerance / Intelligent Offset
		...	...
		0x36	+38 Tolerance / Intelligent Offset
		0x37	+39 Tolerance / Intelligent Offset
		0x38	+40 Tolerance / Intelligent Offset

For this setting whether the display is in MPH or Km/h is not based on what Measure Units is set to but based on what the Traffic Sign Recognition / Speed Limit Information signal TsrVIUnitMsgTxt\_D\_Rq is set to. The TsrVIUnitMsgTxt\_D\_Rq signal is an event-periodic status signal and the status signal shall be used in Run to determine if the traffic sign recognition units are in Km/h or MPH.

- If the TsrVIUnitMsgTxt\_D\_Rq signal is missing for more than 5 seconds in Run then the traffic sign recognition units would be displayed in Km/h.

For the “HMI selection / Configuration name” column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to MPH or Km/h based on what the signal TsrVIUnitMsgTxt\_D\_Rq is set to.

- Example 1: if Km/h is selected then 0x12 would represent +2 Km/h Intelligent Offset.
- Example 2: If MPH is selected then 0x12 would represent +2 MPH Intelligent Offset.
- [If 0x0 Null or 0x3 NoDataExists is selected, then the Centerstack Settings HMI Client shall use the last saved value of Km/h or MPH for units.](#)

Signal Name	Encodings	Notes
TsrVIUnitMsgTxt_D_Rq	0x0 Null	
	0x01 Km/h	
	0x02 MPH	
	0x03 NoDataExists	



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12 / 11 (TSR) SYNC HMI supplement (SLI under TSR)	133

#### 3.1.7.1.4 VS-SR-REQ-233867/K-Greater than Warning Threshold - Traffic Sign Recognition

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Greater than Warning Threshold (ex greater than 65 Km/h)	0x0811	0x10	0 Tolerance / Intelligent Offset
		0x11	+1 Tolerance / Intelligent Offset
		0x12	+2 Tolerance / Intelligent Offset
		0x13	+3 Tolerance / Intelligent Offset
		...	...
		0x36	+38 Tolerance / Intelligent Offset
		0x37	+39 Tolerance / Intelligent Offset
		0x38	+40 Tolerance / Intelligent Offset

For this setting whether the display is in MPH or Km/h is not based on what Measure Units is set to but based on what the Traffic Sign Recognition / Speed Limit Information signal TsrVIUnitMsgTxt\_D\_Rq is set to. The TsrVIUnitMsgTxt\_D\_Rq signal is an event-periodic status signal and the status signal shall be used in Run to determine if the traffic sign recognition units are in Km/h or MPH.

- If the TsrVIUnitMsgTxt\_D\_Rq signal is missing for more than 5 seconds in Run then the traffic sign recognition units would be displayed in Km/h.

For the “HMI selection / Configuration name” column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to MPH or Km/h based on what the signal TsrVIUnitMsgTxt\_D\_Rq is set to.

- Example 1: if Km/h is selected then 0x12 would represent +2 Km/h Intelligent Offset.
- Example 2: If MPH is selected then 0x12 would represent +2 MPH Intelligent Offset.
- If 0x0 Null or 0x3 NoDataExists is selected, then the Centerstack Settings HMI Client shall use the last saved value of Km/h or MPH for units.

Signal Name	Encodings	Notes
TsrVIUnitMsgTxt_D_Rq	0x0 Null	
	0x01 Km/h	
	0x02 MPH	
	0x03 NoDataExists	



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
12 / 11 (TSR) SYNC HMI supplement (SLI under TSR)	135 / 136

### 3.1.7.1.5 VS-SR-REQ-331385/A-Single Tolerance Warning Threshold - Traffic Sign Recognition / Speed Limit Information

When the HMI for Traffic Sign Recognition or Speed Limit information only has one tolerance setting in the HMI then:

- At start-up the Centerstack Settings HMI Client shall query both 0x080E and 0x0811.
- At start-up when the Centerstack Settings HMI Client queries 0x080E and 0x0811 the only value looked at to update the HMI for single tolerance setting is 0x080E.
  - Note: at the time this spec was written the reason the Centerstack Settings HMI Client has to query both settings is because the HUD module will need to see both 0x080E and 0x0811.
- When selecting a tolerance setting the Centerstack Settings HMI Client shall perform the Feature.Rq Set operation for both 0x080E and 0x0811 set to the same value. The set operation shall be put on the CAN bus for both 0x080E and 0x0811 within 100 msec of each other.

Reference requirements "VS-REQ-233862-Less Than Warning Threshold" and "VS-REQ-VS-REQ-233867-Greater Than Warning Threshold" for details on feature numbers 0x0811 and 0x080E.

### 3.1.7.1.6 VS-SR-REQ-251193/C-Traffic Sign Recognition Settings / Speed Limit Information HMI not user selectable

#### Overview:

The traffic sign recognition / speed limit information HMI settings are not selectable when either Intelligent Cruise Control or Intelligent Speed Limiter are active in the vehicle (activated on cruise control switch).

#### Requirement:

The table below describes what CAN signals to look at to decide when the traffic sign recognition / speed limit information settings HMI is not selectable. When the conditions in the table are true for a particular row then the traffic sign recognition / speed limit information settings HMI shall be not selectable. If none of the rows are true then the TSR / SLI Settings HMI shall be selectable.

Signals SLMde\_D\_Rqdsply and Aslicondsply\_D\_Rq are only applicable when Intelligent Speed Assist is configured enabled (see diagnostic spec for configuration, ex DE0X).

Signal laccLamp\_D\_Rq is only applicable when Intelligent Adaptive Cruise Control is configured enabled (see diagnostic spec for configuration, ex DE0X).

laccLamp_D_Rq	SLMde_D_Rqdsply	Aslicondsply_D_Rq	TSR Setting HMI
0x1 DisplaylaccIcon	N/A	N/A	TSR greyed out
N/A	0x1 Auto Speed_Limiter symbol	0x1 On-Passive	TSR greyed out
N/A	0x1 Auto Speed_Limiter symbol	0x2 On-Active	TSR greyed out
N/A	0x1 Auto Speed_Limiter symbol	0x3 Override	TSR greyed out

Note: when say TSR (traffic sign recognition) / SLI (speed limit information) greyed out the HMI team will decide how to show this (not necessarily greyed out but a way to show that TSR/SLI settings are not selectable). See HMI specs for details.



### 3.1.8 VS-FUN-REQ-332901/B-Speed Limit - Variant 2 (variant 2 of TSR, SLI and Speed Limiter)

The functions “[VS-FUN-233809-Traffic Sign Recognition](#)”, “[VS-FUN-272504-Speed Limit Information / Speed Sign Recognition](#)” and “[VS-FUN-232288-Speed Limiter](#)” are mutually exclusive with this Speed Limit function. This is handled via configurations.

#### 3.1.8.1 Requirements

##### 3.1.8.1.1 VSv2-SR-REQ-332978/B-Limiter with Speed Signs - Speed Limit

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Limiter with Speed Signs <a href="#">/ Intelligent Speed Assist</a>	0x0D00	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: for variant 1 of this feature number 0x0D00 see SPSS requirement “[VS-REQ-232284-Speed Limiter – Manual / Intelligent](#)”.

SYNC Gen 4 Screen / ID HMI Number	HMI Setting ID
170	1001

##### 3.1.8.1.2 VSv2-SR-REQ-332979/A-Speed Sign Warning - Speed Limit

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Speed Sign Warning	0x080D	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: for variant 1 of this feature number 0x080D see SPSS requirement “[VS-REQ-233914-Enable/Disable Speed Warning – Traffic Sign Recognition / Speed Limit Information](#)”.



SYNC Gen 4 Screen / ID HMI Number	HMI Setting ID
170	1000

### 3.1.8.1.3 VSv2-SR-REQ-332980/B-Tolerance - Speed Limit

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tolerance - Speed Limit	0x080E	0x10	0 Tolerance
		0x11	+1 Tolerance
		0x12	+2 Tolerance
		0x13	+3 Tolerance
		...	...
		0x36	+38 Tolerance
		0x37	+39 Tolerance
		0x38	+40 Tolerance

Note: for variant 1 of this feature number 0x080E see SPSS requirement “VS-REQ-Less Than Warning Threshold – (Traffic Sign Recognition / Speed Limit Information)”.

For this setting whether the display is in MPH or Km/h is not based on what Measure Units is set to but based on what the Traffic Sign Recognition / Speed Limit Information signal TsrVIUnitMsgTxt\_D\_Rq is set to. The TsrVIUnitMsgTxt\_D\_Rq signal is an event-periodic status signal and the status signal shall be used in Run to determine if the traffic sign recognition units are in Km/h or MPH.

- If the TsrVIUnitMsgTxt\_D\_Rq signal is missing for more than 5 seconds in Run then the traffic sign recognition units would be displayed in Km/h.

For the “HMI selection / Configuration name” column above the unitless values (ex +1 tolerance, +2 tolerance) shall be assigned to MPH or Km/h based on what the signal TsrVIUnitMsgTxt\_D\_Rq is set to.

- Example 1: if Km/h is selected then 0x12 would represent +2 Km/h Intelligent Offset.
- Example 2: If MPH is selected then 0x12 would represent +2 MPH Intelligent Offset.
- If 0x0 Null or 0x3 NoDataExists is selected, then the Centerstack Settings HMI Client shall use the last saved value of Km/h or MPH for units.

Signal Name	Encodings	Notes
TsrVIUnitMsgTxt_D_Rq	0x0 Null	
	0x01 Km/h	
	0x02 MPH	
	0x03 NoDataExists	





SYNC Gen 4 Screen / ID HMI Number	HMI Setting ID
170	1002

### 3.1.9 VS-FUN-REQ-232290/B-Lane Keeping System

#### 3.1.9.1 Requirements

##### 3.1.9.1.1 VS-SR-REQ-232285/F-Lane Keeping Mode

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Lane Keeping Mode / Lane Keeping Mode Customer Enable	0x0807	0x01	Alert Only / LDW
		0x02	Aid Only / LKA
		0x03	Aid & Alert / LDW + LKA

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
9B	120

##### 3.1.9.1.2 VS-SR-REQ-233578/E-Lane Keeping Intensity

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Lane Keeping Intensity / LDW Haptic Intensity	0x080B	0x00	Undefined / Not Used
		0x01	Low



		0x02	Normal / Medium
		0x03	High

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
9C	121

#### 3.1.9.1.3 VS-SR-REQ-233579/E-Lane Keeping Sensitivity

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	Configuration Name / HMI selection
Lane Keeping Sensitivity	0x0806	0x00	Normal / Level 1
		0x01	Increased / Level 2

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
9D	122

#### 3.1.9.1.4 VS-SR-REQ-271525/B-Lane Keeping Aid

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Lane Keeping Aid	0x0870	0x00	Off



		0x01	On
		0x02	Reduced / Basic
		0x03	Enhanced / Plus

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
Reference SYNC HMI supplement for AID Lane Keeping System	123

#### 3.1.9.1.5 VS-SR-REQ-271526/B-Lane Keeping Alert

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Example Lane Keeping Alert HMI (see HMI documents for actual HMI).

Alert	<input type="radio"/>	High
	<input checked="" type="radio"/>	Normal
	<input type="radio"/>	Low
	<input type="radio"/>	On
	<input type="radio"/>	Off

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Alert Lane Keeping Intensity / LDW Haptic Intensity	0x080B	0x00	OFF
		0x01	Low
		0x02	Normal / Medium / ON
		0x03	High

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
Reference SYNC HMI supplement for Alert LDW	124



### 3.1.10 VS-FUN-REQ-233569/B-Pre-Collision Assist

#### 3.1.10.1 Requirements

##### 3.1.10.1.1 VS-SR-REQ-239185/F-Pre-Collision Assist function - Enable / Disable

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Pre-Collision Assist ON/OFF – FCW ON/OFF	0x0804	0x00	Disabled / FCW_OFF	Yes
		0x01	Enabled / FCW_ON	

The Pre-Collision Assist ON/OFF setting menu selection is not shown in the HMI when a MyKey is used

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
10	125

##### 3.1.10.1.2 VS-SR-REQ-233571/H-Distance Indication - Pre-Collision Assist

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Distance Indication / Forward Distance Alerts_ON/OFF	0x080F	0x00	OFF / FDA_OFF	Yes
		0x01	ON / FDA_ON	

The Distance Indication ON/OFF setting menu selection is not shown in the HMI when a MyKey is used

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
10	126



### 3.1.10.1.3 VS-SR-REQ-233575/G-Active Braking - Pre-Collision Assist

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Active Braking / FCW_BrakingOnOFF	0x0840	0x00	OFF / FCW_BrakingOFF	No
		0x01	ON / FCW BrakingOn	

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
10	127

### 3.1.10.1.4 VS-SR-REQ-233576/H-Emergency Steering - Pre-Collision Assist

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Evasive Steering / Emergency Steering	0x0D50	0x00	OFF / Disabled	No
		0x01	ON / Enabled	

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
10	128

### 3.1.10.1.5 VS-SR-REQ-233577/I-Warning Sensitivity - Pre-Collision Assist

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Warning Sensitivity / FCW Sensitivity / Alert Sensitivity	0x0802	0x00	Not Used	No
		0x01	Low / FCW_Sensitivity_1	
		0x02	Normal / FCW_Sensitivity_2	
		0x03	High / FCW_Sensitivity_3	

Note: at the time this spec was written when a MyKey is used the Warning Sensitivity sets its default (see FCW specs for details). The MyKey user can still change the setting from the default. This has no effect on the Centerstack Setting HMI client since the default value is queried at start-up when the MyKey is turned to Run.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
10 / 10B	129

### 3.1.11 VS-FUN-REQ-233942/A-Blindspot Detection

#### 3.1.11.1 Requirements

##### 3.1.11.1.1 VS-SR-REQ-233944/E-Blindspot Detection (vehicle - non-trailer)

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Blind Spot Detection	0x0920	0x00	OFF / Disabled	Yes
		0x01	ON / Enabled	

There is no HMI shown for this setting when a MyKey is used.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	299





### 3.1.11.1.2 VS-SR-REQ-233945/C-Trailer Blindspot Detection

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Trailer Blind Spot Detection	0x0921	0x00	OFF / Disabled	Yes
		0x01	ON / Enabled	

There is no HMI shown for this setting when a MyKey is used.

SYNC Gen 3 Screen / ID HMI Number
2

### 3.1.12 VS-FUN-REQ-273589/A-BTT Light (Blind Spot Trailer Tow)

#### 3.1.12.1 Requirements

#### 3.1.12.1.1 VS-SR-REQ-273590/B-Active Trailer Setting - BTT Lite

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

This is used by the Centerstack Settings HMI Client to tell the BTT Lite Server via a Feature.Rq set command that a trailer was selected or that no active trailer was selected. The BTT Lite Server would respond back with the Feature.St response and the Centerstack Settings HMI Client would update its HMI based on this.

The Centerstack Settings HMI Client will know the active trailer setting at start-up when the Centerstack Settings HMI Client queries the BTT Lite Server.

The BTT Lite Server shall send any update to the active trailer to the Centerstack Settings HMI Client via the Feature.St message.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trailer Active (BTT Lite)	0x0930	0x00	None / No Active Trailer
		0x01	Trailer A Active
		0x02	Trailer B Active
		0x03	Trailer C Active



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
42, 48, 47	147

### 3.1.12.1.2 VS-SR-REQ-273689/D-Trailer Length - BTT Lite

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Trailer A/B/C Length Feature.Rq is used by the Centerstack HMI Client to tell the BTT Lite Server via a Feature.Rq Set command what trailer length was selected (or faulty) and the BTT Lite server shall respond with the Feature.St with the updated trailer length (or faulty) setting.

The Centerstack Setting HMI Client will know at start-up the following when the Centerstack Settings HMI Client queries the BTT Lite Server:

- The Trailer Lengths
- Whether a particular trailer has not been set-up
- Whether a particular trailer is faulty (Trailer doesn't meet size requirements)

If when editing the trailer length the trailer does not meet trailer length size requirement then:

1. The Centerstack HMI Client shall set Feature.Rq config equal to “Faulty” in the Feature.Rq Set command, and then
2. The BTT Lite Server shall respond with the Feature.St Configuration set to “Faulty”

Note: See HMI spec for whether the Centerstack HMI Client selects the trailer with invalid trailer length (ie 0x0930). If says select as active trailer then the faulty trailer (invalid trailer size) shall be made active.

If in trailer length edit mode after entering the trailer length once the BTT Lite Server responds back with the Feature.St for length if the trailer that was being edited needs to be automatically selected/activated without user input (this will be noted in the HMI if the edited length trailer should become the active trailer) then:

1. the Centerstack Settings HMI Client shall send a Feature.Rq Set command “Trailer Active (feature # 0x0930)” for the trailer that was being edited, and then
2. the BTT Lite Server shall respond back with the Feature.St with the active trailer.

Note: For SYNC Gen 3 steps 1 and 2 above are done when:

- a. Get a pop-up to edit the trailer length (SYNC screen number 48)
  - b. Select a trailer setting length that is not set-up on the “select trailer” HMI screen (SYNC screen number 42)
  - c. Note: The active trailer is not automatically selected if the user changes trailer length from the “Change Trailer Length” HMI screen (SYNC screen number 43)
- See SYNC HMI for the latest. If SYNC HMI and SPSS contradict follow the HMI and bring issue of conflict to Ford's attention

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trailer A Length (BTT Lite)	0x0931	0x00	<a href="#">0.1 meters</a> <a href="#">0.0 meters</a>
		0x01	<a href="#">0.2 meters</a> <a href="#">0.1 meters</a>
		0x02	<a href="#">0.3 meters</a> <a href="#">0.2 meters</a>



		...	...
		0x7D	12.5 meters
		0x7E	Trailer A Length not set-up / No Data Exists
		0x7F	Faulty (Trailer doesn't meet size requirements)

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trailer B Length (BTT Lite)	0x0932	0x00	<a href="#">0.1 meters</a> <a href="#">0.0 meters</a>
		0x01	<a href="#">0.2 meters</a> <a href="#">0.1 meters</a>
		0x02	<a href="#">0.3 meters</a> <a href="#">0.2 meters</a>
		...	...
		0x7D	12.5 meters
		0x7E	Trailer B Length not set-up / No Data Exists
		0x7F	Faulty (Trailer doesn't meet size requirements)

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trailer C Length (BTT Lite)	0x0933	0x00	<a href="#">0.1 meters</a> <a href="#">0.0 meters</a>
		0x01	<a href="#">0.2 meters</a> <a href="#">0.1 meters</a>
		0x02	<a href="#">0.3 meters</a> <a href="#">0.2 meters</a>
		...	...
		0x7D	12.5 meters
		0x7E	Trailer C Length not set-up / No Data Exists
		0x7F	Faulty (Trailer doesn't meet size requirements)

Whether the trailer lengths are in Imperial (ie Feet) or Metric (ex Meters) is based on what the Measure Units is set to. See [VS-SR-REQ-234039-Measure Units](#) for details.

- If the units are imperial then the Centerstack HMI Client will have to round the imperial value (feet) received to the closest metric length equivalent.
  - [Ex. HMI the user selects 6ft on the HMI. When converted to metric that is 1.8288 meters. For Trailer A/B/C Length the configuration encoding would be rounded to 1.8 meters.](#)



SYNC Gen 3 Screen / ID HMI Number	SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
For Trailer Length set- up	For Faulty pop-up / Send Faulty setting	
46	45	148

### 3.1.12.1.3 VS-SR-REQ-273980/D-Pop-up Trailer Set-up Request - BTT Lite

The Centerstack Settings HMI Client shall initiate a BTT Lite trailer pop-up when BttLeft\_D\_RqDrv changes to Request OR BttRight\_D\_RqDrv changes to Request AND Ignition\_Status = Run.

- If a pop-up event occurs as defined above at start-up when all the settings feature ID's are being queried (ignition = OFF → Run) and the feature numbers 0x930, 0x931, 0x932 and 0x933 have not yet been queried then:
  - The pop-up shall not be shown until feature numbers 0x930, 0x931, 0x932 and 0x933 have all been queried.
  - the next feature numbers to be queried are 0x930, 0x931, 0x932 and 0x933. This means that these feature numbers will jump ahead of all other feature numbers and be queried next. Once queried the BTT Lite trailer pop-up can be shown.

~~The Centerstack HMI Client shall not initiate the BTT Lite trailer pop-up when BttLeft\_D\_RqDrv does not equal Request AND BttRight\_D\_RqDrv does not equal Request.~~

The Centerstack HMI client shall close any active BTT Lite trailer pop-up when:

- BttLeft\_D\_RqDrv != Request AND BttRight\_D\_RqDrv != Request, OR
- The HMI specification calls out closing the pop-up (ex press button on pop-up, speed limited etc)

If Ignition\_Status does not equal Run/Crank then the Centerstack HMI Client shall not show the BTT Lite pop-up.

See HMI specs for driver distraction requirements for BTT Lite.

- Ex. If the pop-up is shown and the vehicle speed increase above the limit for driver distraction the pop-up shall not be shown.
  - Note: If vehicle slows back down to below the limit for driver distraction (make sure hysteresis protection is added in) and BTTLeft\_D\_RqDrv or BTTRight\_D\_RqDrv equals Active then show the pop-up again.

Note (informational only – not to design to):

One or both of the BTTRight\_D\_RqDrv / BTTLeft\_D\_RqDrv signals are typically set to “Request” when a trailer is connected that wasn't connected on the previous ignition cycle.

Example BTT Lite pop-up HMI (see HMI spec for actual HMI)

**Choose Trailer To Begin Towing:**

Trailer A: {1} [m][ft]

Trailer B: {3} [m][ft]

Set Up Trailer C

None

**SYNC Gen 3 Screen /  
ID HMI Number**

48

**3.1.12.1.4 MD-REQ-274072/C-BTTLeft\_D\_RqDrv****Message Type:** Request

BTT Lite (Blind spot Trailer Tow Lite) left side detection signal sent to tell if the BTT Lite pop-up should be shown in the Centerstack HMI

Logical Signal Name	Literals	Value	Description
BttLeft_D_RqDrv	Null	0x0	
	No Request	0x1	
	Request	0x2	Used for pop-up
	Not Used	0x3	

**3.1.12.1.5 MD-REQ-274073/C-BTTRight\_D\_RqDrv****Message Type:** Request

BTT Lite (Blind spot Trailer Tow Lite) right side detection signal sent to tell if the BTT Lite pop-up should be shown in the Centerstack HMI

Logical Signal Name	Literals	Value	Description
BttRight_D_RqDrv	Null	0x0	
	No Request	0x1	
	Request	0x2	Used for pop-up
	Not Used	0x3	



### 3.1.13 VS-FUN-REQ-233946/A-Cross Traffic Alert

#### 3.1.13.1 Requirements

##### 3.1.13.1.1 VS-SR-REQ-233948/D-Cross Traffic Alert

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Cross Traffic Alert	0x0922	0x00	OFF / Disabled	Yes
		0x01	ON / Enabled	

There is no HMI shown for this setting when a MyKey is used.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	149

### 3.1.14 VS-FUN-REQ-233949/A-Wrong Way Alert

#### 3.1.14.1 Requirements

##### 3.1.14.1.1 VS-SR-REQ-233951/D-Wrong Way Alert

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Wrong Way Alert	0x0850	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	150

**3.1.15 VS-FUN-REQ-234013/A-Driver Alert****3.1.15.1 Requirements****3.1.15.1.1 VS-SR-REQ-234015/D-Driver Alert**

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Driver Alert / DAS Customer Enable	0x0808	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	152

**3.1.16 VS-FUN-REQ-234026/B-Trailer Sway****3.1.16.1 Requirements****3.1.16.1.1 VS-SR-REQ-234028/E-Trailer Sway**

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trailer Sway	0x0E00	0x00	OFF / Disabled
		0x01	ON / Enabled

HMI Setting ID
153



**3.1.17 VS-FUN-REQ-234029/B-Park Aid****3.1.17.1 Requirements****3.1.17.1.1 VS-SR-REQ-234031/F-Park Aid (not long term)**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes/No
Park Aid (Reverse Park Aid)	0x0950	0x00	OFF / Disabled	Yes
		0x01	ON / Enabled	

There is no HMI shown for this setting when a MyKey is used.

Note: verify with HMI team if this is correct. This is probably the short term park aid setting that is only shown for one ignition cycle

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	155

**3.1.18 VS-FUN-REQ-312390/A-Long Term Park Aid Disable****3.1.18.1 Requirements****3.1.18.1.1 VS-SR-REQ-312391/A-Long Term Park Aid Disable**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Front Park Aid Long Term Disable</a>	0x0952	0x00	OFF / Disable Switch
		0x01	ON / Enable Switch



SYNC Gen 3 Screen / ID HMI Number	HMI Settings ID
64	301

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Rear Park Aid Long Term Disable</a>	0x0951	0x00	OFF / Disable Switch
		0x01	ON / Enable Switch

SYNC Gen 3 Screen / ID HMI Number	HMI Settings ID
64	300

### 3.1.19 VS-FUN-REQ-239157/B-Traction Control

#### 3.1.19.1 Requirements

##### 3.1.19.1.1 VS-SR-REQ-239158/F-Traction Control

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name	HMI MyKey Limited Yes / No
Traction Control	0x0E01	0x00	OFF / Disabled	Yes
		0x01	ON / Enabled	

#### MyKey Limited Setting:

- Traction Control can only be adjusted by a MyKey user when admin user has selected “Selectable” for the MyKey user from the MyKey Settings HMI menu.
  - See MyKey Settings in the Centerstack SPSS for details on the CAN status signals to look at
- There shall be no Traction Control setting HMI for the MyKey user when the admin user selects “Traction Control Always ON” for the MyKey user from the MyKey Settings HMI menu.
  - See MyKey Settings in the Centerstack SPSS for details on the CAN status signals to look at



Note: if there is AdvanceTrac setting in place of Traction Control setting then AdvanceTrac would use the same feature number as above

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	221, 222

### 3.1.20 VS-FUN-REQ-239159/B-Hill Decent Control

#### 3.1.20.1 Requirements

##### 3.1.20.1.1 VS-SR-REQ-239160/C-Hill Decent Control

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Hill Decent Control	0x0E02	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	223

### 3.1.21 VS-FUN-REQ-234003/A-Hill Start Assist

#### 3.1.21.1 Requirements

##### 3.1.21.1.1 VS-SR-REQ-234005/D-Hill Start Assist

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Hill Start Assist	0x0E03	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	151

### 3.1.22 VS-FUN-REQ-239163/A-Tow Haul

#### 3.1.22.1 Requirements

##### 3.1.22.1.1 VS-SR-REQ-239164/E-Tow Haul

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tow Haul	0x0D02	0x00	OFF / Disabled
		0x01	ON / Enabled
		0x02	Automatic

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2 / 39	224

### 3.1.23 VS-FUN-REQ-242438/C-EV+ Mode

#### 3.1.23.1 Requirements

##### 3.1.23.1.1 VS-SR-REQ-242439/B-EV+ Mode

~~For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.~~



If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
EV+ Mode	0x0907	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number
2

### 3.1.24 VS-FUN-REQ-272332/A-Grade Assist

#### 3.1.24.1 Requirements

##### 3.1.24.1.1 VS-SR-REQ-272333/B-Grade Assist

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Grade Assist	0x0D04	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
2	154

**3.1.25 VS-FUN-REQ-273582/B-Engine Start/Stop Speed Threshold (Auto Start/Stop Speed Threshold)****3.1.25.1 Requirements****3.1.25.1.1 VS-SR-REQ-273583/C-Engine Start/Stop Speed Threshold (Auto Start/Stop Speed Threshold)**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Engine Start/Stop Speed Threshold (Auto Start/Stop Speed Threshold)  HEV Boost Sensitivity /Engine Start Stop Speed Threshold – (Mile Hybrids 48V)	0x0D05	0x00	Undefined / Not Used / Off
		0x01	Low
		0x02	Medium
		0x03	High

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
40	226

**3.1.26 VS-FUN-REQ-280534/A-Drive Control (Selectable Drive Mode)**

Note: Drive Control and Adaptive Steering are mutually exclusive (use some of the same feature numbers).

**3.1.26.1 Requirements****3.1.26.1.1 VS-SR-REQ-280535/D-Handling in Drive / Drive Control manual transmission / Driver Select Transmission**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Gear in Drive – Continuously Controlled Damping</a>	0x0B00	0x00	No Mode Selected
		0x01	Comfort
		0x02	Normal

[\(Handling in Drive /  
Handling with Manual  
Transmission\)](#)

0x03

Sport

**Req:** this shall be used for the handling HMI that doesn't show Drive or Sport for certain configurations.

- Ex when used (see HMI spec for actual HMI):

Drive Control	submenu
comfort	radial
normal	radial
sport	radial

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
78	231

OR,

Driver Select Suspension	
Sport	radial
Normal	radial
Comfort	radial

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
105	238

The two HMI's above would be handled by configurations

Note: see HMI settings ID to see the actual HMI. Above was just for an example for reference only

**Req:** this shall be used for the Handling HMI that shows gear in Drive for certain configurations.

- Ex when used (see HMI spec for actual HMI):

Drive Control	submenu
Handling in D	submenu
comfort	radial
normal	radial
sport	radial





Note: see HMI settings ID to see the actual HMI. Above was just for an example for reference only

The different HMI's above and which to use would be covered by the configurations in the HMI spec.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
75	228

### 3.1.26.1.2 VS-SR-REQ-281380/B-Handling in Sport - Drive Control

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Gear in Sport – Continuously Controlled Damping</a>  <a href="#">(Handling in Sport)</a>	0x0B01	0x00	No Mode Selected
		0x01	Comfort
		0x02	Normal
		0x03	Sport

**Req:** this shall be used for the Handling HMI that shows gear in Sport.

- Ex when used (see HMI spec for actual HMI):

Drive Control	submenu
Handling in S	submenu
normal	radial
sport	radial

Note: see HMI setting ID to see the actual HMI. Above in an example for reference only

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
76	229



### 3.1.26.1.3 VS-SR-REQ-281381/B-Performance in Sport - Drive Control

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Performance in Sport – Continuously Controlled Damping</a>	0x0D07	0x00	No Mode Selected
		0x01	Comfort
		0x02	Normal
		0x03	Sport

**Req:** this shall be used for the performance HMI that shows gear in.

- Ex when used (see HMI spec for actual HMI):

Drive Control	submenu
Performance in S	submenu
normal	radial
sport	radial

Note: see HMI setting ID to see the actual HMI. Above was just for an example for reference only

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
77	230

### 3.1.27 VS-FUN-REQ-280532/A-Adaptive Steering

Note: Drive Control and Adaptive Steering are mutually exclusive (use some of the same feature numbers).

#### 3.1.27.1 Requirements

##### 3.1.27.1.1 VS-SR-REQ-280533/B-Steering in Drive / Steering with Manual Transmission - Adaptive Steering

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Steering in Drive / Steering with Manual Transmission</a>	0x0B00	0x00	No Mode Selected
		0x01	Comfort
		0x02	Normal
		0x03	Sport

**Req:** this shall be used for the HMI that doesn't show Drive or Sport.

- Ex when used (see HMI spec for actual HMI):

<b>Adaptive steering</b>	submenu
normal	radial
sport	radial

Note: see HMI settings ID to see the actual HMI. Above was just for an example

SYNC Gen 3 Screen / ID HMI Number	HMI Settings ID
82	235

**Req:** this shall be used for the steering HMI that shows gear in Drive.

- Ex when used (see HMI spec for actual HMI):

<b>Adaptive steering</b>	submenu
<b>Steering in D</b>	submenu
comfort	radial
normal	radial
sport	radial

Note: see HMI settings ID to see the actual HMI. Above was just for an example

The HMI's above regarding what to use would be handled by the configurations in the HMI spec.

SYNC Gen 3 Screen / ID HMI Number	HMI Settings ID
80	233



### 3.1.27.1.2 VS-SR-REQ-280548/B-Steering in Sport - Adaptive Steering

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Steering in Sport</a>	0x0B01	0x00	No Mode Selected
		0x01	Comfort
		0x02	Normal
		0x03	Sport

Req: this shall be used for the steering HMI that shows gear in Sport.

- Ex when used (see HMI spec for actual HMI):

Adaptive steering	submenu
Steering in S	submenu
normal	radial
sport	radial

Note: see HMI setting ID to see actual HMI. Above was just for an example for reference

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
79, 81	234

### 3.1.27.1.3 VS-SR-REQ-280549/B-Adaptive Steering

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Adaptive Steering</a>	0x0B02	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
79, 82	236, 237



## 3.2 General Settings

### 3.2.1 General Requirements - General Settings

#### 3.2.1.1 VS-SR-REQ-234428/F-General Settings at Start-up

General Settings shall be queried by the Centerstack Settings HMI Client when the Ignition\_Status changes from OFF/ACC to Run. See the FBMP SPSS for details on querying at start-up when ignition\_status changes to Run.

When Ignition\_Status changes from Run to OFF/ACC the infotainment Centerstack [Driver Information General Settings defined in this General Settings section](#) shall be considered unknown. The HMI should not show any [General Settings](#) HMI selections when [Driver Assistance General Settings](#) selection information is unknown. [In the General Settings HMI for Settings not defined in Settings in the Centerstack SPSS reference the HMI for whether these settings can be shown or not when ignition status does not equal Run.](#)

#### 3.2.1.2 VS-SR-REQ-259080/A-HMI Activation during Run - General Settings

Settings in General Settings Function/Section (not necessarily applicable to carryover functionality not covered in this spec) can only be selected on the HMI when the Ignition\_Status = Run.

#### 3.2.1.3 VS-SR-REQ-232109/J-Carryover General Settings functionality from the Vehicle Settings SPSS

The functions in the "General Settings" section of this Settings in the Centerstack SPSS specification are only for the general setting items not already covered in the Vehicle Settings (Global) SPSS or some other specification.

The feature/function defined in the Vehicle Settings SPSS shall still be followed and all the requirements in the Vehicle Settings SPSS still apply unless noted otherwise. This includes but is not limited to:

1. 12/24 hour mode
2. Language selection
3. Distance Units (this is only if the HMI has two choices such as "Imperial" and "Metric").
  - a. If the HMI has three choices such as "1/100 km", "km/l" and "Miles & Gallons" then use the system interface described in the Measure Units function in this specification.
4. Beep Settings
5. Master Reset
6. Temperature Units
7. Valet Mode settings

If there is no menu in the Cluster for these general settings which are in the Vehicle Settings SPSS (ex distance units, temperature units, language...) and the settings menu is only in the Centerstack all the internal requirements from the Vehicle Settings SPSS for the Cluster still apply. This would mean the Cluster would remain the feature server if it was already the server in the Vehicle Settings SPSS.

- For example if the Cluster is the Temperature Units server in the vehicle settings SPSS then it would still be the Temperature Units server without the menu in the Cluster. The Centerstack module (ex SYNC) would still request the temperature unit setting from the Cluster and the Cluster would respond as defined in the Vehicle Settings SPSS.

### 3.2.2 VS-FUN-REQ-234033/B-Tire Pressure Units

#### 3.2.2.1 Requirements

##### 3.2.2.1.1 VS-SR-REQ-234035/E-Tire Pressure Unit

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tire Pressure Unit	0x0908	0x00	psi
		0x01	kPa
		0x02	bar

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
34	104

### 3.2.3 VS-FUN-REQ-234037/B-Measure Units

#### 3.2.3.1 Requirements

##### 3.2.3.1.1 VS-SR-REQ-234039/L-Measure Units

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Measure Units	0x0901	0x00	Miles and Gallons / <u>BEV: Miles and kWh (mi/kWh)</u>
		0x01	Miles and Gallons (UK only) <u>/ BEV: Miles and kWh (mi/kWh) (UK only)</u>
		0x02	Liter/100 km / <u>BEV: km and kWh (kWh/100km)</u>
		0x03	km/Liter / <u>BEV: km and kWh (km/kWh)</u>

If the Measure Units HMI supports a BEV (Battery Electric Vehicle) HMI (ex no Gallons or Liters shown) than the “BEV” units values shall be used above for feature number 0x0901.

When the Miles and Gallons HMI is selected the Centerstack Settings HMI Client shall send 0x00 Miles and Gallons to the Measure Units Feature Settings Server.

- The “0x01 Miles and Gallons (UK only) / BEV: Miles and kWh (mi/kWh) (UK only)” this will not be sent by the Centerstack Settings HMI Client when the Miles and Gallons HMI is selected by the user.
- The Feature Settings Server may respond back to Feature.Rq(Configuration = 0x0 Miles and Gallons / BEV: Miles and kWh (mi/kWh)) with either Feature.St(Configuration = 0x00 or 0x01) and the Centerstack Settings HMI Client shall treat them the same and update the Miles and Gallons HMI / BEV HMI for either response.





Unless noted otherwise what is set in Feature Number 0x0901 will be used by other Settings features with distance units (ex miles or kilometers) in this specification to display those HMI settings as Metric or Imperial units. Speed settings are not covered by Measure Units.

- “Miles and Gallons / [BEV: Miles and kWh \(mi/kWh\)](#)” set to “Imperial Distance Units for HMI”
- “Liter/100 km / [BEV: km and kWh \(kWh/100km\)](#)” or “km/Liter / [BEV: km and kWh \(km/kWh\)](#)” set to “Metric Distance units for HMI”

When the Cluster Measure Units feature server responds back to the Feature.Rq signal with the updated FBMP Feature.St signal the Cluster shall also update the non-FBMP Disp\_Miles\_Kilometers.st CAN Distance status signal below from the Vehicle Settings SPSS.

- “Miles and Gallons / [BEV: Miles and kWh \(mi/kWh\)](#)” set to “Imperial”
- “Liter/100 km / [BEV: km and kWh \(kWh/100km\)](#)” or “km/Liter / [BEV: km and kWh \(km/kWh\)](#)” set to “Metric”

#### MD-REQ-025451-Disp Miles Kilometers.St (TcSE ROIN-297373)

Message Type: Status

Status update from the Vehicle Settings Server stating what the setting is for Distance units (from the Vehicle Settings SPSS)

Name	Literals	Value	Description
Mode	-	-	
	Inactive	int <i>Mode</i> 0x0: Metric (Kilometers) 0x1: Imperial (Miles)	Status update from the Vehicle settings server stating what the setting is for Distance units.

Note:

- When Distance Units Setting HMI is “Metric” or “Imperial” use the interface defined in the Vehicle Settings (Global) SPSS.
- When Unit Settings HMI is “Miles & Gallon”, or “KM & Liters (Liter/100km)”, or “Km & Liters (km/liter)” then use the interface described in this requirement.

#### HMI Settings ID

102



### 3.3 Vehicle Settings

#### 3.3.1 General Requirements - Vehicle Settings

##### 3.3.1.1 VS-SR-REQ-234430/D-Vehicle Settings Start-Up

The functions in this Vehicle Settings section shall be queried by the Centerstack Settings HMI Client when the Ignition\_Status changes from OFF/ACC to Run. See the FBMP SPSS for details on querying at start-up when ignition\_status changes to Run.

When Ignition\_Status changes from Run to OFF/ACC the infotainment Centerstack Vehicle Settings shall be considered unknown. The HMI should not show any settings selections when Vehicle Settings selection information is unknown.

##### 3.3.1.2 VS-SR-REQ-234434/C-HMI Activation during Run - Vehicle Settings

The functions listed in the Vehicle Settings section (not necessarily applicable to carryover functionality not covered in this spec) can only be selected on the HMI when the Ignition\_Status = Run.

##### 3.3.1.3 VS-SR-REQ-234431/D-Carryover Vehicle Settings functionality in Vehicle Settings SPSS

The functions in the "Vehicle Settings" section of this Settings in the Centerstack SPSS specification are only for the items not already covered in the Vehicle Settings (Global) SPSS or other Centerstack Feature SPSS specifications.

The feature/function defined in the Vehicle Settings SPSS shall still be followed and all the requirements in the Vehicle Settings SPSS still apply unless noted otherwise. This includes but is not limited to:

1. Charge Port Light Ring setting
2. Charge Cord Unlock setting
3. Door KeyCode
4. Ambient Lighting

See Vehicle Setting SPSS, HMI spec, or other Centerstack Feature SPSS specifications for whether these carryover features not covered in this Settings in the Centerstack specification can be selected when ignition does not equal Run.

#### 3.3.2 VS-FUN-REQ-234059/B-Auto Engine OFF / 30min Max Idle

##### 3.3.2.1 Requirements

##### 3.3.2.1.1 VS-SR-REQ-234061/F-Auto Engine OFF / 30 min max idle

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Auto Engine OFF	0x0D03	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: may also be called "30 min Max idle". See HMI documents for actual name



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13	156

### 3.3.3 VS-FUN-REQ-234233/A-Park Lock Control

#### 3.3.3.1 Requirements

##### 3.3.3.1.1 VS-SR-REQ-234235/D-Park Lock Control

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Park Lock Control (electronic BTSI Manual Override)	0x0414	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13	160

### 3.3.4 VS-FUN-REQ-234236/A-Silent Mode

#### 3.3.4.1 Requirements

##### 3.3.4.1.1 VS-SR-REQ-234238/D-Silent Mode

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Silent Mode	0x0418	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13	161

### 3.3.5 VS-FUN-REQ-234283/A-Alarm

#### 3.3.5.1 Requirements

##### 3.3.5.1.1 VS-SR-REQ-234285/D-Ask on Exit - Alarm

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Ask on Exit – Perimeter Alarm	0x041C	0x00	0x00 OFF / Disabled
		0x01	0x01 ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13 / 14	162

##### 3.3.5.1.2 VS-SR-REQ-234286/D-Sensor Set - Alarm

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Sensor Set	0x041D	0x00	All Sensors Active / Full Guard
		0x01	Perimeter Sensing / Reduced Guard



<u>Feature Description</u>	<u>Feature Number</u>	<u>Configuration Number</u>	<u>HMI selection / Configuration Name</u>
<u>Motion Sensors</u>	<u>0x041D</u>	<u>0x00</u>	<u>ON</u>
		<u>0x01</u>	<u>OFF</u>

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
14b	163

### 3.3.6 VS-FUN-REQ-234287/A-Chimes

#### 3.3.6.1 Requirements

##### 3.3.6.1.1 VS-SR-REQ-234289/C-Park Slot - Chimes

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Park Slot - Chimes	0x0904	0x00	0x00 OFF / Disabled
		0x01	0x01 ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
15	164

##### 3.3.6.1.2 VS-SR-REQ-234290/C-Information - Chimes

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Information - Chimes	0x0905	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
15	165

### 3.3.7 VS-FUN-REQ-234307/A-Remote Start

#### 3.3.7.1 Requirements

##### 3.3.7.1.1 VS-SR-REQ-234312/G-Climate Control (Heater / AC) - Remote Start

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Climate Control – Remote Start (Heater / AC)	0x0509	0x00	Auto
		0x01	Last Setting

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Front Defrost – Remote Start	0x0503	0x00	OFF
		0x01	ON

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Rear Defrost – Remote Start	0x0504	0x00	OFF
		0x01	ON

For the Climate Control Auto / Last Setting HMI if there are not separate Auto / Last Settings HMI selections for the Remote Start Front Defrost (0x0503) and Remote Start Rear Defrost (0x0504) then then the following shall be followed:



- When either "AUTO" or "Last Settings" is selected for the climate control HMI setting selection a series of Feature.Rq (Operation = SET) requests will be initiated in the order as shown below:
  - Climate "AUTO" Selected perform FBMP Feature.Rq Set operation in the following order:
    - Climate Control (ID 0x509) = Auto
    - Front Defrost (ID 0x503) = ON
    - Rear Defrost (ID 0x504) = ON
  - Climate "Last Setting" selected perform FBMP Feature.Rq Set operation in the following order:
    - Climate Control (ID 0x509) = Last Setting
    - Front Defrost (ID 0x503) = ON
    - Rear Defrost (ID 0x504) = ON
- For the FBMP Feature.St response from the Remote Start feature server as soon as Climate Control (ID 0x509) is received, the response will be accepted and appropriate HMI setting selection (AUTO / Last Setting) in the Centerstack HMI will be updated. The Centerstack Settings HMI is not dependent on the 0x0503 and 0x0504 Feature.St responses from the Remote Start feature server and those Feature.St responses are treated as don't cares.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
17B	167

### 3.3.7.1.2 VS-SR-REQ-234313/G-Seats and Steering Wheel - Remote Start

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Driver Heated/Cooled Seat – Remote Start	0x0501	0x00	Auto
		0x01	OFF

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Passenger Heated/Cooled Seat – Remote Start	0x0502	0x00	Auto
		0x01	OFF

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Heated Steering Wheel – Remote Start	0x040A	0x00	Auto
		0x01	OFF

For Seats Only HMI or Seats and Steering Wheel HMI with one Auto / OFF HMI selection available for everything (no distinction of front driver seat, front passenger seat, steering wheel control) then the following strategy shall be used when an HMI selection is made:





- Remote Start “AUTO” selected then a series of FBMP Feature.Rq (Operation = SET) requests will be initiated in the order as shown below:
  - Driver Heated/Cooled Seat (0x0501) = Auto
  - Passenger Heated/Cooled Seat (0x0502) = Auto
  - Heated Steering Wheel (0x040A) = Auto
- Remote Start “OFF” selected then a series of FBMP Feature.Rq (Operation = SET) requests will be initiated in the order as shown below:
  - Driver Heated/Cooled Seat (0x0501) = OFF
  - Passenger Heated/Cooled Seat (0x0502) = OFF
  - Heated Steering Wheel (0x040A) = OFF
- For the Feature.St response once the Remote Start Server responds to the 0x0501 FBMP Feature.Rq Set command with the 0x0501 Feature.St value requested then the HMI can be updated to show the new setting as called out in the 0x0501 Feature.St response (the 0x0502 and 0x0503 values can be ignored).

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
17c / 17d	168, 169

#### 3.3.7.1.3 VS-SR-REQ-234316/F-Duration - Remote Start

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Duration – Remote Start	0x0406	0x00	OFF
		0x01	5 min
		0x02	10 min
		0x03	15 min

Note: If there is HMI for “Activate Remote Start (Enable/Disable) or System (Enable/Disable) etc” then the duration feature number is used for this setting as follows:

- The OFF/Disable Remote Start HMI setting uses the configuration number is 0x00 OFF.
- The ON/Enable Remote Start HMI setting uses the configuration number, 0x02 10 min,

Note: the Activate Remote Start setting HMI would be shown as enabled whenever remote start is active (ie duration at 5 min, 10 min or 15 min). The Active Remote Start setting HMI would be shown as disabled when remote start is not active (ie Duration set to OFF).

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
17 / 17e	166, 170



#### 3.3.7.1.4 VS-SR-REQ-234315/C-Quiet Start - Remote Start

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Quiet Start – Remote Start	0x0505	0x00	OFF
		0x01	ON

SYNC Gen 3 Screen / ID HMI Number
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No SYNC HMI at the time this SPSS was written
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#### 3.3.8 VS-FUN-REQ-234317/A-Windows

##### 3.3.8.1 Requirements

##### 3.3.8.1.1 VS-SR-REQ-234319/C-Global Window Open

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Global Window Open / Remote Open	0x0401	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
20	195



### 3.3.8.1.2 VS-SR-REQ-234320/C-Global Window Close

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Global Window Close / Remote Close	0x0402	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
20	196

### 3.3.9 VS-FUN-REQ-234329/A-Wipers

#### 3.3.9.1 Requirements

#### 3.3.9.1.1 VS-SR-REQ-234331/C-Courtesy Wiper

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Courtesy Wiper	0x0407	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
21	197



### 3.3.9.1.2 VS-SR-REQ-234332/C-Rain Sensing Wipers

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Rain Sensing Wipers	0x0408	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
21	198

### 3.3.9.1.3 VS-SR-REQ-234333/C-Reverse Wipers

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Rear Reverse Gear Wipe	0x0409	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
21	199



### 3.3.10 VS-FUN-REQ-234334/A-Power Liftgate

#### 3.3.10.1 Requirements

##### 3.3.10.1.1 VS-SR-REQ-234336/D-Power Liftgate

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Power Liftgate	0x0C50	0x00	OFF / Disable Switch
		0x01	ON / Enable Switch

Note: Same feature number used for both Power Liftgate and Power Decklid

Duplicate of “[VS-REQ-280528-Power Decklid / Liftgate](#)”. Please reference that requirement

<del>SYNC Gen 3 Screen / ID HMI Number</del>	<del>HMI Setting ID</del>
22	201

### 3.3.11 VS-FUN-REQ-280527/A-Power Decklid / Liftgate

#### 3.3.11.1 Requirements

##### 3.3.11.1.1 VS-SR-REQ-280528/C-Power Decklid / Liftgate

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Power Decklid / Liftgate	0x0C50	0x00	OFF / Disable Switch
		0x01	ON / Enable Switch

Req: Whether the HMI shown for a Decklid or Liftgate the configuration would be shown in the HMI spec. For both those configurations use this feature number



SYNC Gen 3 Screen / ID HMI Number	HMI Settings ID
13, 22	232, 201

### 3.3.12 VS-FUN-REQ-298601/A-Handsfree Liftgate

#### 3.3.12.1 Requirements

##### 3.3.12.1.1 VS-SR-REQ-298602/A-Handsfree Liftgate

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Handsfree Liftgate</a>	0x041E	0x00	OFF / Disable Switch
		0x01	ON / Enable Switch

SYNC Gen 3 Screen / ID HMI Number	HMI Settings ID
22	305

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Power Decklid / Liftgate</a>	0x0C50	0x00	OFF / Disable Switch
		0x01	ON / Enable Switch

Req: for 0x0C50 above when Hands Free Liftgate is configured ON then 0x0 would correlate with Manual and 0x01 would correlate with Automatic.

Req: Whether the HMI shown for a Decklid or Liftgate the configuration would be shown in the HMI spec. For both those configurations use this feature number

SYNC Gen 3 Screen / ID HMI Number	HMI Settings ID
22	304



### 3.3.13 VS-FUN-REQ-234337/A-Lighting

#### 3.3.13.1 Requirements

##### 3.3.13.1.1 VS-SR-REQ-234339/F-Auto Highbeam / Adaptive Drivebeam / Glare Free - Variant 1

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Auto Highbeam / Adaptive Drive Beam / Glare Free	0x080C	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: whether the HMI refers to Auto Highbeam or Glare Free/Adaptive Drivebeam depends on the configuration. See HMI spec for details on the configuration.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
23	202, 203

##### 3.3.13.1.2 VS-SR-REQ-234340/C-Daytime Running Lights

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Daytime Running Lights	0x0415	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
23	204





### 3.3.13.1.3 VS-SR-REQ-234341/C-Welcome Lighting

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Welcome Lighting / Approach Detection	0x0416	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
23	205

### 3.3.13.1.4 VS-SR-REQ-234342/C-Adaptive Headlights

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Adaptive Headlamps	0x040E	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
23	206

### 3.3.13.1.5 VS-SR-REQ-234343/C-Adaptive Headlight Set-Up

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Adaptive Headlamp Set-Up	0x040F	0x00	LHD (Left Hand Drive/Traffic)
		0x01	RHD (Right Hand Drive/Traffic)

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
24	207

#### 3.3.13.1.6 VS-SR-REQ-234344/C-Autolamp Delay

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Autolamp Delay	0x040D	0x00	0 seconds (Off)
		0x01	1 second
		0x02	2 seconds
		...	...
		0xFF	255 seconds

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
25	208

#### 3.3.13.1.7 VS-SR-REQ-272030/B-Predictive Lighting

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Predictive Lighting / Advanced Front Lighting	0x041B	0x00	OFF / Disabled
		0x01	ON / Enabled

**Note:**

Clarification of the SYNC HMI rule is pasted below in terms of system impact. Please reference the H31K HMI spec in case there are any updates to the rule. The version of the requirement below means that if predictive lighting is configured on with adaptive head lamps configured on that only feature number 0x040E Adaptive Headlamp will be used. Predictive Headlamps feature number 0x041B Predictive Lighting will not be used.

[H31k.R109.01] If vehicle is equipped with both Predictive Lighting and Adaptive Headlamps ( (DE08, Byte 1, Bit 4 Adaptive Head Lamp control function = 1, (Enabled) AND Predictive Lighting (DE08, Byte 11, Bit 7 Predictive Lighting = 1 (Enabled))), then the list item "Adaptive Headlamps" will turn both on/off.

**SYNC Gen 3 Screen / ID HMI Number**

N/A

**3.3.13.1.8 Auto Highbeam / Adaptive Drivebeam / Glare Free - Variant 2 requirements****3.3.13.1.8.1 Requirements for setting interface****3.3.13.1.8.1.1 VS-SR-REQ-396237/A-Auto Highbeam / Adaptive Drivebeam / Glare Free - Variant 2**

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

If configured for "Auto Highbeam / Adaptive Drivebeam / Glare Free – Variant 2" via the auto-configure CAN signals then this requirement supersedes requirement "VS-REQ-234449-Auto Highbeam / Adaptive Drivebeam / Glare Free" and supersedes the feature number used in that requirement.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Auto Highbeam / Adaptive Drive Beam / Glare Free	0x0847	0x00	OFF / Disabled
		0x01	Auto Highbeam
		0x02	Adaptive Drive Beam / Glare Free



HMI Setting ID Auto Highbeam – variant 2	HMI Settings ID Adaptive Drive Beam / Glare Free – variant 2
1084	1085

### 3.3.13.1.8.2 Requirements for auto-configuring via CAN signals

#### 3.3.13.1.8.2.1 CLD-REQ-396484/A-Lighting Settings Configuration Server

The Lighting Settings Configuration Server interfaces with the Centerstack Settings HMI Client and is responsible for sending the auto-configure signals to the Centerstack Settings HMI Client.

#### 3.3.13.1.8.2.2 MD-REQ-396483/A-AhbcMnu\_D\_Rq

Message Type: Request

Periodic Request signal from the Lighting Settings Configuration Server to the Centerstack Settings HMI Client to auto-configure the Auto Highbeam variant 2 HMI and Interface to be used.

Logical Signal Name	Literals	Value	Description
AhbcMnu_D_Rq	Null	0x0	
	Disable	0x1	Don't show Auto-Highbeam HMI
	Enable	0x2	Show Auto-Highbeam HMI

#### 3.3.13.1.8.2.3 MD-REQ-396485/A-GfhbMnu\_D\_Rq

Periodic Request signal from the Lighting Settings Configuration Server to the Centerstack Settings HMI Client to auto-configure the Glare Free and Adaptive Drive Beam variant 2 HMI and Interface to be used.

Logical Signal Name	Literals	Value	Description
GfhbMnu_D_Rq	Null	0x0	
	Disable	0x1	Don't show Glare Free / Adaptive Drive Beam HMI
	Enable Glare Free	0x2	Show Glare Free
	Enable Adaptive Drive Beam	0x3	Show Glare Free / Adaptive Drive Beam HMI

#### 3.3.13.1.8.2.4 Note

For this section of the SPSS for auto-configuring lighting settings, when reference auto-configuration lighting settings signals, the signals being referenced are AhbcMnu\_B\_Rq and GfhbMnu\_B\_Rq.



### 3.3.13.1.8.2.5 VS-SR-REQ-396712/A-HMI settings when not in Run

The HMI for the Auto-Highbeam setting and/or Glare Free / Adaptive Drivebeam setting shall only be shown (or only shown as selectable) when Ignition\_Status = Run.

### 3.3.13.1.8.2.6 VS-SR-REQ-396711/A-Usage of Auto-configuration lighting signals vs DID configuration

"Auto Highbeam / Adaptive Drivebeam / Glare Free – Variant 2" is used when either of the signals AhbcMnu\_B\_Rq or GfhbMnu\_B\_Rq configures the settings HMI for Glare Free Lighting or Auto High Beam. When this happens:

1. The DID for variant 1 of the Auto highbeam / Adaptive Drive Beam / Glare free, defined in the HMI spec is NOT used (ie Auto High Beam Menu: 0x0 Disabled, 0x1 Auto High Beams, 0x2 Glare Free High Beams, 0x3 Adaptive Driving Beams), AND
2. Feature number 0x0847 from requirement "VS-REQ-396237-Auto Highbeam / Adaptive Drivebeam / Glare Free – Variant 2" is used
  - a. feature number 0x080C from the requirement "VS-REQ-234339- Auto Highbeam / Adaptive Drivebeam / Glare Free" is NOT used.

Once configured for "Auto Highbeam / Adaptive Drivebeam / Glare Free – Variant 2" any EOL DID for Glare Free Lighting and Auto High Beam shall be ignored and both the auto-configure CAN signals AhbcMnu\_B\_Rq and GfhbMnu\_B\_Rq take precedence.

The only way to revert to EOL DID configuration for Glare Free and Auto Highbeam lighting once configured by the auto-configuration signals AhbcMnu\_B\_Rq or GfhbMnu\_B\_Rq is:

1. Use the DID defined in the IDS (Infotainment Diagnostic Spec) to clear the CAN based auto-configure settings, AND
2. The auto-configure signals AhbcMnu\_B\_Rq and GfhbMnu\_B\_Rq remain at 0x0 Null as to not re-configure the Auto Highbeam or Glare Free settings overwriting the DID for variant 1.

### 3.3.13.1.8.2.7 VS-SR-REQ-396713/A-Configuring the HMI based on the Lighting Settings auto-configuration signals

The auto-config signals AhbcMnu\_D\_Rq and GfhbMnu\_D\_Rq sent by the Lighting Settings Configuration Server shall be periodic or event-periodic.

The Centerstack Setting HMI Client shall auto-configure based on what's in the signal when it has received the signal set to the auto-configure value (ex AhbcMnu\_D\_Rq = Enable) for 3 consecutive times in a row with the same value.

Example:

- When the signal AhbcMnu\_D\_Rq = Enable 3 consecutive times in a row then the HMI for Auto-Highbeam setting shall be shown.
- When the signal AhbcMnu\_D\_Rq = Disable 3 consecutive times in a row then the HMI for Auto-Highbeam setting shall not be shown.
- When the signal GfhbMnu\_D\_Rq = Enable Glare Free 3 consecutive times in a row then the HMI for Glare Free setting shall be shown.
- When the signal GfhbMnu\_D\_Rq = Enable Adaptive Drive Beam 3 consecutive times in a row then the HMI for Adaptive Drive Beam shall be shown.
- When the signal GfhbMnu\_D\_Rq = Disable 3 consecutive times in a row then the HMI for the Glare Free or Adaptive Drive Beam HMI shall not be shown.

Auto-Highbeam and Glare Free/Adaptive Drive Beam cannot both be selected at the same time.

Example below:



Picture below is only an example using the CAN auto-config CAN signals to configure the HMI and doesn't represent the actual HMI. See the HMI spec for the actual HMI

AhbcMnu\_D\_Rq = Enable (Auto-Highbeams) && GfhbMnu\_D\_Rq = Disable

S#1084  ☐

AhbcMnu\_D\_Rq = Disable && GfhbMnu\_D\_Rq = Enable Glare Free

S#1085  ☐

AhbcMnu\_D\_Rq = Enable (Auto-Highbeams) && GfhbMnu\_D\_Rq = Enable Glare Free  
(note below Auto-Highbeam and Glare Free only one is allowed to be selected at one time)

☐ Off

S#1084 ☐ Auto High Beam

S#1085 ☐ Glare Free Lighting

[Selected\_Feature\_Visualization]

Domain Buttons

Possible combinations:

Inputs		Outputs		
AhbcMnu_D_Rq	GfhbMnu_D_Rq	HMI Auto High Beam	HMI Glare Free / Adaptive Drive Beam	Settings Feature Number
Null – No stored value (ie the Centerstack Settings HMI Client never received a value other than Null)	Null – No stored value (ie the Centerstack Settings HMI Client never received a value other than Null)	See HMI spec for variant 1 and EOL configurations for variant 1	See HMI spec for variant 1 and EOL configurations for variant 1	0x080C
Null	Null	Use stored value	Use stored value	
Null	Disable	Use stored value	No GF/ADB HMI shown	



Null	Enable Glare Free	Use stored value	GF HMI shown	0x0847
Null	Enable Adaptive Drive Beam	Use stored value	GF HMI shown	
Disable	Null	No AHB HMI Shown	Use stored value	
Disable	Disable	No AHB HMI shown	No GF/ADB HMI shown	
Disable	Enable Glare Free	No AHB HMI shown	GF HMI shown	
Disable	Enable Adaptive Drive Beam	No AHB HMI shown	GF HMI shown	
Enable	Null	AHB HMI shown	Use stored value	
Enable	Disable	AHB HMI shown	No GF/ADB HMI shown	
Enable	Enable Glare Free	AHB HMI shown	GF HMI shown	
Enable	Enable Adaptive Drive Beam	AHB HMI Shown	GF HMI shown	

### 3.3.13.1.8.2.8 VS-SR-REQ-396714/A-Storing the auto-configuration lighting settings last state

The Centerstack Settings HMI Client shall store and remember the last state of the auto-configuration lighting setting signals between ignition cycles.

When auto-configuration lighting setting signals are no longer on the bus or if the signals are set to Null then the Centerstack Settings HMI Client shall use the last state of those signals.

- Ex. When not in Run those signals might not be on the bus. When change ignition\_status to Run those signals should come back on the bus
- Ex 2. When the Lighting Settings Configuration Server powers up it might have the auto-configuration lighting settings signals set as Null until the module is powered up and knows the actual values to publish on the bus.

## 3.3.14 VS-FUN-REQ-234345/A-Locks

### 3.3.14.1 Requirements

#### 3.3.14.1.1 VS-SR-REQ-234347/C-AutoLock

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
AutoLock (drive away locking)	0x0403	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	209

#### 3.3.14.1.2 VS-SR-REQ-234348/C-AutoUnlock

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
AutoUnlock	0x0404	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	210

#### 3.3.14.1.3 VS-SR-REQ-234356/C-Relock

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Auto Relock	0x0413	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number
27





#### 3.3.14.1.4 VS-SR-REQ-234349/C-Mislock

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Mis-lock feedback	0x0411	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	211

#### 3.3.14.1.5 VS-SR-REQ-234351/D-Lock Trim Switch Inhibit

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Lock Trim Switch Inhibit / Switch Inhibit	0x0410	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	212

#### 3.3.14.1.6 VS-SR-REQ-234353/C-Audible Locking Feedback

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Audible Locking Feedback	0x0419	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	215

#### 3.3.14.1.7 VS-SR-REQ-234354/C-Exterior Lights Feedback - Locking

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Exterior Lights Feedback - Locking	0x041A	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	216

#### 3.3.14.1.8 VS-SR-REQ-234357/D-Remote Unlock

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Remote Unlock: One/Two Stage Unlocking	0x0405	0x00	All Doors / One Stage
		0x01	Driver's door / Two Stage



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
26	217

#### 3.3.14.1.9 VS-SR-REQ-272687/B-Global Unlock

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
One/Two Stage Unlocking	0x0405	0x00	One Stage / All Doors / Global Unlock ON(enabled)
		0x01	Two Stage / Drivers Door / Global Unlock OFF(disabled)

Note: created separate requirement numbers for Global Unlock and Remote Unlock but they send the same feature numbers with different HMI labels. HMI labels are determined by configuration. See HMI document for configuration.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	218

#### 3.3.14.1.10VS-SR-REQ-272694/B-Intelligent Access

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Intelligent Access / Key Free / Passive Entry Customer Enable	0x0412	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
27	213, 214

#### 3.3.14.1.11 VS-SR-REQ-350467/A-Walk Away Lock

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Walk Away Lock	0x0420	0x00	OFF / Disabled
		0x01	ON / Enabled

HMI Setting ID
1034

#### 3.3.14.1.12 VS-SR-REQ-350468/A-Walk Away Lock Feedback

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Walk Away Lock Feedback Audible	0x0421	0x00	OFF / Disabled
		0x01	ON / Enabled

**HMI Setting ID**

1035

**3.3.14.1.13VS-SR-REQ-350469/A-Double Lock Reminder Feedback**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Double Lock Reminder Feedback	0x0422	0x00	OFF / Disabled
		0x01	ON / Enabled

**HMI Setting ID**

1036

**3.3.15 VS-FUN-REQ-234358/A-Mirrors****3.3.15.1 Requirements****3.3.15.1.1 VS-SR-REQ-234360/C-Auto Fold Mirrors**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Auto Fold Mirrors	0x0702	0x00	OFF / Disabled
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
28	219

#### 3.3.15.1.2 VS-SR-REQ-234361/C-Reverse Tilt Mirrors

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Reverse Tilt Mirrors	0x0703	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
28	220

#### 3.3.16 VS-FUN-REQ-234362/B-Park Heater

##### 3.3.16.1 Requirements

##### 3.3.16.1.1 VS-SR-REQ-234364/D-Continue Heat - Park Heater

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Continue Heat – Park Heater	0x0C70	0x00	OFF / Disable
		0x01	ON / Enable



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18	172

#### 3.3.16.1.2 VS-SR-REQ-267623/B-Heater Programming - Park Heater

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Heater Programming – Park Heater	0x0C91	0x00	OFF / Disable
		0x01	ON / Enable

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18b	173

#### 3.3.16.1.3 VS-SR-REQ-234378/E-Programming Single Time - Park Heater

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Single Time – Park Heater	0x0C71	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18c	174



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Hour - Programming Single Time	0x0C72	0x00	Hour 0 (12 AM)
		0x01	Hour 1 (1 AM)
		0x02	Hour 2 (2 AM)
		0x03	Hour 3 (3 AM)
		0x04	...
		...	Hour 21 (9 PM)
		0x16	Hour 22 (10 PM)
		0x17	Hour 23 (11 PM)

Whether time is displayed in 12 or 24 mode depends what HMI setting is set for 12/24 hour mode.

- Reference function [“VS-FUN-REQ-025239-Set 12/24 hour mode setting”](#) in the Vehicle Setting SPSS for details.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18c, 19a	175

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Minute - Programming Single Time	0x0C73	0x00	Minute 0
		0x01	Minute 1
		0x02	Minute 2
		0x03	Minute 3
		...	....
		0x39	Minute 57
		0x3A	Minute 58
		0x3B	Minute 59





SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18c, 19a	175

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Year - Programming Single Time	0x0C74	0x00	2016
		0x01	2017
		0x02	2018
		...	...
		0x51	2097
		0x52	2098
		0x53	2099

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18c, 19b	176

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Month - Programming Single Time	0x0C75	0x00	January
		0x01	February
		0x02	March
		0x03	April
		0x04	May
		0x05	June
		0x06	July
		0x07	August



		0x08	September
		0x09	October
		0x0A	November
		0x0B	December

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18c, 19b	176

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Day - Programming Single Time	0x0C76	0x00	Day 1 (1 <sup>st</sup> day of the month)
		0x01	Day 2
		0x02	Day 3
		0x03	Day 4
		...	...
		0x1C	Day 29
		0x1D	Day 30
		0x1E	Day 31

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18c, 19b	176

#### 3.3.16.1.4 VS-SR-REQ-234393/F-Programming Time 1 - Park Heater

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Park Heater	0x0C77	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	177

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Hour - Programming Time 1	0x0C78	0x00	Hour 0 (12 AM)
		0x01	Hour 1 (1 AM)
		0x02	Hour 2 (2 AM)
		0x03	Hour 3 (3 AM)
		0x04	...
		...	Hour 21 (9 PM)
		0x16	Hour 22 (10 PM)
		0x17	Hour 23 (11 PM)

Whether time is displayed in 12 or 24 mode depends what HMI setting is set for 12/24 hour mode. Reference function “VS-FUN-REQ-025239-Set 12/24 hour mode setting” in the Vehicle Setting SPSS for details.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d, 19a	178

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Minute - Programming Time 1	0x0C79	0x00	Minute 0
		0x01	Minute 1
		0x02	Minute 2



		0x03	Minute 3
		...	....
		0x39	Minute 57
		0x3A	Minute 58
		0x3B	Minute 59

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d, 19a	178

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Monday	0x0C7A	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	179

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Tuesday	0x0C7B	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	180

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Wednesday	0x0C7C	0x00	OFF / Disable
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	181

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Thursday	0x0C7D	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	182

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Friday	0x0C7E	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	183

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Saturday	0x0C7F	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	184



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 1 – Sunday	0x0C80	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	185

#### 3.3.16.1.5 VS-SR-REQ-234394/E-Programming Time 2 - Park Heater

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Park Heater	0x0C81	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	186

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Hour - Programming Time 2	0x0C82	0x00	Hour 0 (12 AM)
		0x01	Hour 1 (1 AM)
		0x02	Hour 2 (2 AM)
		0x03	Hour 3 (3 AM)



		0x04	...
		...	Hour 21 (9 PM)
		0x16	Hour 22 (10 PM)
		0x17	Hour 23 (11 PM)

Whether time is displayed in 12 or 24 mode depends what HMI setting is set for 12/24 hour mode. Reference function “VS-FUN-REQ-025239-Set 12/24 hour mode setting” in the Vehicle Setting SPSS for details.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d, 19a	187

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Minute - Programming Time 2	0x0C83	0x00	Minute 0
		0x01	Minute 1
		0x02	Minute 2
		0x03	Minute 3
		...	....
		0x39	Minute 57
		0x3A	Minute 58
		0x3B	Minute 59

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d, 19a	187

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Monday	0x0C84	0x00	OFF / Disable
		0x01	ON / Enabled



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	188

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Tuesday	0x0C85	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	189

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Wednesday	0x0C86	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	190

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Thursday	0x0C87	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	191





Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Friday	0x0C88	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	192

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Saturday	0x0C89	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	193

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Programming Time 2 – Sunday	0x0C8A	0x00	OFF / Disable
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
18d	194

**3.3.17 VS-FUN-REQ-262499/A-Aux Heater****3.3.17.1 Requirements****3.3.17.1.1 VS-SR-REQ-262500/B-Aux Heater**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Aux Heater – Fuel Operated Heater	0x0C90	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13	171

**3.3.18 VS-FUN-REQ-273580/A-Passenger Airbag****3.3.18.1 Requirements****3.3.18.1.1 VS-SR-REQ-273581/D-Passenger Airbag**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Passenger Airbag	0x0E50	0x00	OFF / Disabled
		0x01	ON / Enabled
		0x02	Gray Out Menu

If Feature.st is set as “Passenger Airbag 0x0E50 = 0x2 Gray out Menu” then the passenger airbag menu setting shall be Grayed out and settings not selectable (see HMI spec for exact way the HMI is shown).



SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13 / 54	225

### 3.3.19 VS-FUN-REQ-274739/A-Tire Mobility Kit

#### 3.3.19.1 Requirements

##### 3.3.19.1.1 VS-SR-REQ-274740/C-Tire Mobility

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tire Mobility	0x0909	0x00	1 Year
		0x01	2 Years
		0x02	3 Years
		0x03	4 Years

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
49	227

### 3.3.20 VS-FUN-REQ-238326/A-Power Running Board

#### 3.3.20.1 Requirements

##### 3.3.20.1.1 VS-SR-REQ-238327/E-Power Running Board

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

[No Longer Supported via feature based message protocol](#)



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Power Running Board	0x0C51	0x00	Auto
		0x01	Off
		0x02	Out

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
51 / 29	159

### 3.3.21 VS-FUN-REQ-234230/B-Easy Entry / Easy Exit (Seat Adjustment)

#### 3.3.21.1 Requirements

##### 3.3.21.1.1 VS-SR-REQ-234232/F-Easy Entry / Easy Exit (Seat Adjustment)

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Easy Entry / Easy Exit (Seat Adjustment)	0x0701	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
51	157

### 3.3.22 VS-FUN-REQ-272707/B-Auto Entry/Exit Height (Easy Access Height)

#### 3.3.22.1 Requirements

##### 3.3.22.1.1 VS-SR-REQ-272708/D-Auto Entry/Exit Height (Easy Access Height)

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.



If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Auto Entry/Exit Height (Easy Access Height)	0x0B04	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
51	158

### 3.3.23 VS-FUN-REQ-276182/A-Cargo Loading

#### 3.3.23.1 Requirements

##### 3.3.23.1.1 VS-SR-REQ-276183/A-Cargo Loading

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Cargo Loading</a>	<a href="#">0x0B05</a>	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number
51



### 3.3.24 VS-FUN-REQ-272705/A-Air Suspension

#### 3.3.24.1 Requirements

##### 3.3.24.1.1 VS-SR-REQ-272706/C-Air Suspension

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Air Suspension (Air Suspension Service)	0x0B03	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13	200

### 3.3.25 VS-FUN-REQ-280537/A-Auto Regen

#### 3.3.25.1 Requirements

##### 3.3.25.1.1 VS-SR-REQ-280538/B-Auto Regen

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Auto Regen Control / Auto Regeneration Control</a>	0x0D06	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
13	237



### 3.3.26 VS-FUN-REQ-280668/A-Trailer Brake

#### 3.3.26.1 Requirements

##### 3.3.26.1.1 VS-SR-REQ-280669/B-Mode - Trailer Brake

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

[Note: If the Trailer Settings SPSS is used for this setting then follow the requirements in that SPSS for whether the Set and/or Query operation is supported.](#)

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Mode – Trailer Brake	0x0E10	0x00	Electric
		0x01	EOH (Electric Over Hydraulic)

HMI Setting ID
239

##### 3.3.26.1.2 VS-SR-REQ-280670/C-Effort - Trailer Brake

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

[Note: If the Trailer Settings SPSS is used for this setting then follow the requirements in that SPSS for whether the Set and/or Query operation is supported.](#)

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Effort – Trailer Brake	<a href="#">0x0E10</a> <a href="#">0x0E11</a>	0x00	Heavy
		0x01	Medium
		0x02	Light



## HMI Setting ID

240

**3.3.27 VS-FUN-REQ-280678/A-Quiet Start - Exhaust Mode****3.3.27.1 Requirements****3.3.27.1.1 VS-SR-REQ-280679/C-Quiet Start - Exhaust Mode**

Requirement obsolete. See the Vehicle Settings SPSS and function "VS-FUN-REQ-362897-Quiet Time for Exhaust Mode"

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<u>Quiet Start — Exhaust Mode</u>	0x0D0A	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
98	254

**3.3.28 VS-FUN-REQ-280682/A-Set Quiet Time - Exhaust Mode****3.3.28.1 Requirements****3.3.28.1.1 VS-SR-REQ-280683/C-Set Quiet Time - Exhaust Mode**

Requirement obsolete. See the Vehicle Settings SPSS and function "VS-FUN-REQ-362897-Quiet Time for Exhaust Mode"

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.





If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Set Quiet Time— Exhaust Mode Start	0x0D0B	0x00	Hour 0 (12 AM)
		0x01	Hour 1 (1 AM)
		0x02	Hour 2 (2 AM)
		0x03	Hour 3 (3 AM)
		0x04	---
		---	Hour 21 (9 PM)
		0x16	Hour 22 (10 PM)
		0x17	Hour 23 (11 PM)

Whether time is displayed in 12 or 24 mode depends what HMI setting is set for 12/24 hour mode.  
Reference function “VS-FUN-REQ-025239-Set 12/24 hour mode setting” in the Vehicle Setting SPSS for details.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Set Quiet Time— Exhaust Mode End	0x0D0E	0x00	Hour 0 (12 AM)
		0x01	Hour 1 (1 AM)
		0x02	Hour 2 (2 AM)
		0x03	Hour 3 (3 AM)
		0x04	---
		---	Hour 21 (9 PM)
		0x16	Hour 22 (10 PM)
		0x17	Hour 23 (11 PM)

Whether time is displayed in 12 or 24 mode depends what HMI setting is set for 12/24 hour mode.  
Reference function “VS-FUN-REQ-025239-Set 12/24 hour mode setting” in the Vehicle Setting SPSS for details.

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
98, 99	252



### 3.3.29 VS-FUN-REQ-280684/B-Rev Match (Engine Revolution Match)

#### 3.3.29.1 Overview

Rev (engine revolution) Match is a feature on manual transmissions that allows the vehicle to have automatically controlled REV-Matching downshifts. This makes downshifting smoother between gears.

#### 3.3.29.2 Requirements

##### 3.3.29.2.1 VS-SR-REQ-280685/B-Rev Match (Engine Revolution Match)

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
<a href="#">Rev Match (Engine Revolution Match)</a>	0x0D08	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 3 Screen / ID HMI Number	HMI Setting ID
96	253



### 3.4 Additional Settings - FBMP based settings

#### 3.4.1 Additional Settings (FBMP based settings) - General Requirements

##### 3.4.1.1 VS-SR-REQ-333163/A-Settings Start-Up

The Settings under Additional Settings (FBMP based) shall be queried by the Centerstack Settings HMI Client when the Ignition\_Status changes from OFF/ACC to Run. See the FBMP SPSS for details on querying at start-up when ignition\_status changes to Run.

When Ignition\_Status changes from Run to OFF/ACC the Settings shall be considered unknown. The HMI should not show any settings selections when Settings selection information is unknown.

##### 3.4.1.2 VS-SR-REQ-333164/A-HMI Activation during Run

Settings in this Additional Settings (FBMP based settings) section can only be selected on the HMI when the Ignition\_Status = Run.

#### 3.4.2 VS-FUN-REQ-333131/A-Tire Pressure Reset / Tire Monitor

##### 3.4.2.1 Requirements

##### 3.4.2.1.1 VS-SR-REQ-333089/A-Tire Pressure Reset / Tire Monitor

For this feature when performing the "Set" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tire Pressure Reset / Tire Monitor	0x0960	0x00	Null / Inactive
		0x01	Reset (Request from Centerstack Settings HMI Client)
		0x2	Tire Pressure Reset Successful (Response from the Feature Server)
		0x3	Tire Pressure Not Reset (Response from the Feature Server)

The Centerstack Settings HMI Client shall not query this feature number at start-up as this is a reset function. If it was queried at start-up as an error state then the Tire Monitor feature Server would respond back with 0x0 Null / Inactive.

If some kind of Notification/Pop-ups are supported on the Centerstack Settings HMI Client (ex Successful / Not Successful) then configuration numbers 0x2 and 0x3 would be used to indicate success or failure to reset. The Notification/Pop-up shall only occur when 0x2 or 0x3 is first set (periodic message on the bus of the same state would not re-initiate a pop-up).

SYNC Gen 4.0 Screen / ID HMI Number	HMI Setting ID
TBD	1012



### 3.4.3 VS-FUN-REQ-333128/A-Border Crossing

#### 3.4.3.1 Requirements

##### 3.4.3.1.1 VS-SR-REQ-333100/A-Border Crossing

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Considerate Prompts - Border Crossing	0x0961	0x00	Reminder OFF
		0x01	Reminder ON

SYNC Gen 4.0 Screen / ID HMI Number	HMI Setting ID
TBD	1013

### 3.4.4 VS-FUN-REQ-333136/B-Ecocoach

#### 3.4.4.1 Requirements

##### 3.4.4.1.1 VS-SR-REQ-333154/A-Ecocoach

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
EcoCoach / Show EcoCoach in Go Mode	0x0962	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 4.0 Screen / ID HMI Number	HMI Setting ID
TBD	1014



#### 3.4.4.1.2 VS-SR-REQ-333155/A-Eco Advices

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Ecocoach - Eco Advices	0x0963	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 4.0 Screen / ID HMI Number	HMI Setting ID
TBD	1015

#### 3.4.4.1.3 VS-SR-REQ-333156/A-Coasting Support

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Ecocoach - Coasting Support	0x0964	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 4.0 Screen / ID HMI Number	HMI Setting ID
TBD	1016



#### 3.4.4.1.4 VS-SR-REQ-364517/A-EcoCoach - Eco Mode

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
EcoCoach in Eco Mode	0x096E	0x00	OFF / Disabled
		0x01	ON / Enabled

HMI Setting ID
1077

#### 3.4.5 VS-FUN-REQ-333107/B-Speedometer

##### 3.4.5.1 Requirements

##### 3.4.5.1.1 VS-SR-REQ-333114/C-Speedometer MPH

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Speedometer MPH	0x0965	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: the Speedometer MPH and Speedometer Km/h settings are mutually exclusive. Which setting to show is handled via configurations based on market. See table in requirement “[VS-REQ-341178-Mapping Table – Speedometer Major Units](#)” for details.

- Ex. If in the Canada the vehicle major speed scale is Km/h on the Cluster speedometer, then:
  - the Speedometer MPH setting would be configured enabled to be shown on the HMI, and
  - the Speedometer Km/h setting would not be shown

**HMI Setting ID**

1017

**3.4.5.1.2 VS-SR-REQ-333162/C-Speedometer Km/h**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Speedometer Km/h	0x0966	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: the Speedometer MPH and Speedometer Km/h settings are mutually exclusive. Which setting to show is handled via configurations based on market. See table in requirement “[VS-REQ-341178-Mapping Table – Speedometer Major Units](#)” for details.

- Ex. If in the US the vehicle major speed scale is MPH on the Cluster speedometer, then:
  - the Speedometer Km/h setting would be configured enabled to be shown on the HMI, and
  - the Speedometer MPH setting would not be shown

**HMI Setting ID**

1018

**3.4.5.1.3 VS-SR-REQ-341178/B-Mapping Table - Speedometer Major Units**

The table below maps the country to the Cluster major speedometer speed scale units (MPH or Km/h).

Market	Cluster Speedometer major speed scale units
US and US Territories	MPH
UK	MPH
All other markets	Km/h

**3.4.6 VS-FUN-REQ-333158/A-Brake Coach****3.4.6.1 Requirements****3.4.6.1.1 VS-SR-REQ-333159/A-Brake Coach**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Brake Coach / Show Brake Coach in Go Mode	0x0967	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 4.0 Screen / ID HMI Number	HMI Setting ID
TBD	1019

**3.4.7 VS-FUN-REQ-333160/B-Neutral Tow****3.4.7.1 MD-REQ-342193/A-TrnGearNtmAllow\_B\_Stat**

Message Type: Status

Note: Status signal from the Neutral Tow Server indicating if the Neutral Tow HMI needs to be greyed out or not

Logical Signal Name	Literals	Value	Description
TrnGearNtmAllow_B_Stat	No	0x0	Grey out HMI for Neutral Tow
	Yes	0x1	This signal encoding does not cause the Neutral Tow Setting HMI to be greyed out





### 3.4.7.2 Requirements - shift by wire version of Neutral Tow

#### 3.4.7.2.1 VS-SR-REQ-333161/D-Neutral Tow

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Neutral Tow	0x0968	0x00	OFF / Disabled - not in Neutral Tow (Response/Status from FBMP Feature Server)
		0x01	ON / Enabled - in Neutral tow (Response/Status from FBMP Feature Server)
		0x02	Initialize for Neutral Tow (Set Request from Centerstack Settings HMI Client)

The Centerstack Setting HMI Client shall not Query feature numbers 0x0968 at start-up.

- Note: if query at start-up (if was last item queried by Centerstack Settings HMI Client) the FBMP Neutral Tow Server could potentially keep broadcasting the last state of Disabled which could cause issues with exiting the HMI flow at the incorrect time in the Neutral Tow screen flow.

The Centerstack Settings HMI Client shall grey out the Neutral Tow HMI setting whenever:

- The Centerstack Settings HMI Client receives TrnGearNtmAllow\_B\_Stat = No, OR
- The Centerstack Setting HMI Client receives the Neutral Tow feature number 0x0968 set to 0x01 ON/Enabled

Else

Don't grey out the Neutral Tow "Initialize for Neutral Tow" setting in the HMI.

**Note:** How to show the greyed out setting is defined by the HMI. HMI may decide not to show the greyed out setting at all (ie remove neutral tow setting). Reference HMI specification for how greyed out setting is shown.

The Centerstack Setting HMI Client shall use the Set command to set feature number 0x0968 Neutral Tow to "0x02 Initialize for Neutral Tow" as defined by the HMI. See HMI for details such as HMI setting being pressed and held for 2 seconds before making the Set request

- Note: when do the Set command there may not be a response from the FBMP Neutral Tow Server module for up to 500 msec.

The Neutral Tow setting (ie Initialize for Neutral Tow) is only available to be selected when Neutral Tow is not greyed out.

The Centerstack Settings HMI Client shall never do a Set request for OFF/Disabled or On/Enabled.

The FBMP Neutral Tow Server shall respond to the Set request for Initialize for Neutral Tow request with either OFF/Disabled or ON/Enabled when the conditions are met to send a FBMP response. See FBMP Neutral Tow Server specification for details.

- Note: FBMP Neutral Tow Server also means "Gateway/Translator module" if it is the middle man for CAN signals to the Server module

#### HMI screen flow rules based on network signals:

- After the Centerstack Settings HMI client sends a Feature.Rq Set operation for feature number 0x0968 set to 0x02 Initialize for Neutral Tow and receives 0x00 OFF/Disabled from the FBMP Neutral Tow Server then the Centerstack Settings HMI Client shall display some sort of HMI for placing the vehicle in Neutral (see HMI spec for details)



- After the Centerstack Settings HMI client sends a Feature.Rq Set operation for feature number 0x0968 set to 0x02 Initialize for Neutral Tow and receives 0x01 ON/Enabled from the FBMP Neutral Tow Server then the Centerstack Settings HMI Client shall go to the appropriate HMI screen (see HMI spec for details) and grey out the Neutral Tow setting
- When the "Place Vehicle in Neutral" HMI is shown, that HMI screen shall be exited to the appropriate HMI screen whenever the Centerstack Settings HMI Client receives:
  - TrnGearNtmAllow\_B\_Stat = No (setting greyed out), or
  - Neutral Tow feature number 0x0968 set as enabled (setting greyed out) ~~or~~
- If the signal TrnGearNtmAllow\_B\_Stat = No at any time, then exit the screen flow and the Neutral Tow setting shall be greyed out. See HMI for details
- When TrnGearNtmAllow\_B\_Stat = Yes and the last state Rx by the Centerstack Settings HMI Client of feature 0x0968 was 0x00 Disabled, then if the user exits the Neutral Tow HMI on the screen for "Place the Vehicle in Neutral" and re-enters the Neutral Tow settings screen the Initialize for Neutral Tow settings is allowed to be sent again using FBMP (if HMI supports).

HMI Setting ID
1020

### 3.4.8 VS-FUN-REQ-333185/A-Nav Repeater in Cluster

#### 3.4.8.1 Requirements

##### 3.4.8.1.1 VS-SR-REQ-333186/B-Nav Repeater in the Cluster

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Nav Repeater in the Cluster / Turn by Turn	0x0969	0x00	OFF / Disabled
		0x01	ON / Enabled

HMI Setting ID
1021



### 3.4.9 VS-FUN-REQ-333189/A-Maps in the Cluster

#### 3.4.9.1 Requirements

##### 3.4.9.1.1 VS-SR-REQ-333192/A-Maps in the Cluster

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Maps in the Cluster	0x096A	0x00	OFF / Disabled
		0x01	ON / Enabled

SYNC Gen 4.0 Screen / ID HMI Number	HMI Setting ID
TBD	1022



## 3.5 Cluster Settings with dedicated FBMP messages

### 3.5.1 Overview

This section covers new features in which the interface is only between the Cluster and Centerstack Settings HMI Client that will use dedicated messaging and signaling. This is so there is an additional FBMP (feature based message protocol) Feature.Rq / Feature.St interface so querying settings after ignition goes to run can happen quicker than otherwise would happen.

The Cluster in this section can be the Centerstack Feature Settings Server or Setting Gateway/Translator module (ie middle-man) to the actual server module.

### 3.5.2 General Requirements - Cluster Settings with dedicated FBMP messages

#### 3.5.2.1 VS-SR-REQ-362577/A-Cluster and Centerstack Settings HMI Client dedicated Feature2.Rq/Feature2.St FBMP message usage

Deployment of FBMP (Feature Based Message Protocol) Feature2.Rq / Feature2.St:

Transmitter	Logical Signal Name	CAN dB signal name
Centerstack Settings HMI Client (APIM, CHR..)	Feature2.Rq : Operation	CtrStkDsplyOp2_D_Rq
	Feature2.Rq : FeatureID	CtrStkFeat2NoActl
	Feature2.Rq : Configuration	CtrStkFeat2ConfigActl
	Feature2.Rq : PersIndex	CtrStkPersIndex2_D_Actl
Cluster Feature Settings Server / Settings Gateway_Translator Module	Feature2.St : FeatureID	FeatNolpc2Actl
	Feature2.St : Configuration	FeatConfiglpc2Actl
	Feature2.St : PersIndex	PersIndexlpc2_D_Actl

#### Centerstack Settings HMI Client requirements:

The feature numbers under the section "Cluster Settings with dedicated FBMP section" shall be used by the Centerstack Settings HMI Client for sending Feature2.Rq Query and Set requests (Feature.Rq shall not be used).

- Example: If feature number 0x1234 is listed in the "Cluster Settings with dedicated FBMP section" then only Feature2.Rq and Feature2.St dedicated signals shall ever be used with feature number 0x1234.

The Centerstack Settings HMI Client shall query the settings under "Cluster Settings with dedicated FBMP section" with Feature2.Rq at the same time it is querying the other settings in this spec using Feature.Rq. Since these are done in parallel this will speed up the process to query all the settings when ignition goes to Run.

#### Cluster requirements:

The Cluster shall be able to support responding to both Feature.Rq and Feature2.Rq concurrently since these are different feature numbers that never overlap.

For the Cluster it shall respond to any feature number in the Feature.Rq/Feature2.Rq with the corresponding Feature.St/Feature2.St message

- Example1: The Centerstack Settings HMI Client performs a Query or Set operation for feature number 0x1234 using Feature.Rq. The Cluster shall respond back to the Query or Set operation for feature number 0x1234 using Feature.St.
- Example2: The Centerstack Setting HMI Client performs a Query or Set operation for feature number 0x1234 using Feature2.Rq. The Cluster shall respond back to the Query or Set operation for feature number 0x1234 using Feature2.St.

#### 3.5.2.2 VS-SR-REQ-364389/A-Settings Start-up

The Settings under "Cluster Settings with dedicated FBMP messages" shall be queried by the Centerstack Settings HMI Client when the Ignition\_Status changes from OFF/ACC to Run. See the FBMP SPSS for details on querying at start-up when ignition\_status changes to Run.

When Ignition\_Status changes from Run to OFF/ACC the Settings shall be considered unknown. The HMI should not show any settings selections when Settings selection information is unknown.



### 3.5.2.3 VS-SR-REQ-364390/A-HMI Activation during Run

Settings in this “Cluster Settings with dedicated FBMP messages” section can only be selected on the HMI when the Ignition\_Status = Run.

## 3.5.3 VS-FUN-REQ-364615/A-Engine Oil Temp

### 3.5.3.1 Requirements

#### 3.5.3.1.1 VS-SR-REQ-364614/A-Engine Oil Temp Life Gauge - Cluster menu

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Engine Oil Temp Gauge – Cluster menu	0x096B	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1040

## 3.5.4 VS-FUN-REQ-364616/A-Power Gauge

### 3.5.4.1 Requirements

#### 3.5.4.1.1 VS-SR-REQ-365515/A-Power Gauge - Cluster Menu

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Power Gauge – Cluster menu	0x096C	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

**HMI Setting ID**

1041

**3.5.5 VS-FUN-REQ-365516/A-Tachometer****3.5.5.1 Requirements****3.5.5.1.1 VS-SR-REQ-365517/A-Tachometer Gauge - Cluster menu**

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Tachometer Gauge – Cluster menu	0x096D	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

**HMI Setting ID**

1042

**3.5.6 VS-FUN-REQ-365529/A-Oil Life****3.5.6.1 Requirements****3.5.6.1.1 MD-REQ-369894/A-EngOilLife\_Pc\_Actl**

Message Type: Status

Status signal from the Engine Oil Life Server with the oil life percentage until the oil life has expired

Logical Signal Name	Literals	Value	Description
	0 percent oil life	0x0	
	1 percent oil life	0x1	
	2 percent oil life	0x2	



EngOilLife_Pc_Actl	...	...	
	99 percent oil life	0x63	
	100 percent oil life	0x64	

#### 3.5.6.1.2 VS-SR-REQ-365551/A-Oil Life Percentage

The signal EngOilLife\_Pc\_Actl shall be used for oil life percentage HMI if displayed in the Centerstack HMI

HMI Settings ID
1044

#### 3.5.6.1.3 VS-SR-REQ-365550/A-Oil Life Reset

For this feature when performing the "Set" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Oil Life Reset	0x096F	0x00	Null / Inactive
		0x01	Reset (Request from Centerstack Settings HMI Client)
		0x2	Oil Life Reset Successful (Response from the Feature Server)
		0x3	Oil Life Not Reset (Response from the Feature Server)

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

The Centerstack Settings HMI Client shall not query this feature number at start-up as this is a reset function. If it was queried at start-up as an error state then the Oil Life Reset Server would respond back with 0x0 Null / Inactive.

If some kind of Notification/Pop-ups are supported on the Centerstack Settings HMI Client (ex Successful / Not Successful) then configuration numbers 0x2 and 0x3 would be used to indicate success or failure to reset. The Notification/Pop-up shall only occur when 0x2 or 0x3 is first set (periodic message on the bus of the same state would not re-initiate a pop-up).

HMI Setting ID
1043



### 3.5.7 VS-FUN-REQ-365643/A-Cluster IoD menu configurations

#### 3.5.7.1 Requirements

##### 3.5.7.1.1 VS-SR-REQ-365685/A-Calm Screen - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Calm Screen – Cluster IoD config	0x0980	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1045

##### 3.5.7.1.2 VS-SR-REQ-365686/A-Trip 1 - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trip 1 – Cluster IoD config	0x0981	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1046





### 3.5.7.1.3 VS-SR-REQ-365687/A-Trip 2 - Cluster IoD config

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trip 2 – Cluster IoD config	0x0982	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1047

### 3.5.7.1.4 VS-SR-REQ-365688/A-This Trip - Cluster IoD config

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
This Trip – Cluster IoD config	0x0983	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1048

### 3.5.7.1.5 VS-SR-REQ-365689/A-Fuel Economy - Cluster IoD config

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.



If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Fuel Economy – Cluster loD config	0x0984	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1049

#### 3.5.7.1.6 VS-SR-REQ-365690/A-Electric Efficiency - Cluster loD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Electric Efficiency – Cluster loD config	0x0985	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1050

#### 3.5.7.1.7 VS-SR-REQ-365691/A-Eco Behaviors - Cluster loD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.



If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Eco Behaviors – Cluster IoD config	0x0986	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1051

#### 3.5.7.1.8 VS-SR-REQ-365692/A-EV Coach - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
EV Coach – Cluster IoD config	0x0987	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1052

#### 3.5.7.1.9 VS-SR-REQ-365696/A-Auto Start Stop - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Auto Start Stop – Cluster IoD config	0x0988	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1053

#### 3.5.7.1.10 VS-SR-REQ-365697/A-Seatbelt Status - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Seatbelt Status – Cluster IoD config	0x0989	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1054

#### 3.5.7.1.11 VS-SR-REQ-365701/A-TPMS - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
TPMS – Cluster IoD config	0x098A	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1055

#### 3.5.7.1.12 VS-SR-REQ-365706/A-Eco Coach - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Eco Coach – Cluster IoD config	0x098B	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1056

#### 3.5.7.1.13 VS-SR-REQ-365722/A-Now Playing (Audio / Phone) - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Now Playing (Audio / Phone) – Cluster IoD config	0x098C	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1057

#### 3.5.7.1.14 VS-SR-REQ-365740/A-Nav/ Compass - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Nav / Compass – Cluster IoD config	0x098D	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1058

#### 3.5.7.1.15 VS-SR-REQ-365741/A-Average Speed - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Average Speed – Cluster IoD config	0x098E	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1059

#### 3.5.7.1.16 VS-SR-REQ-365743/A-Battery Charge - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Battery Charge – Cluster IoD config	0x098F	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1060

#### 3.5.7.1.17 VS-SR-REQ-365744/A-ADAS - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
ADAS – Cluster IoD config	0x0990	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1061

#### 3.5.7.1.18 VS-SR-REQ-365745/A-Maps / Augmented Reality - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Maps / Augmented Reality – Cluster IoD config	0x0991	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1062

#### 3.5.7.1.19 VS-SR-REQ-369132/A-Classic View - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Classic View – Cluster IoD config	0x0992	0x00	OFF / Disabled





		0x01	ON / Enabled
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Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1078

#### 3.5.7.1.20 VS-SR-REQ-404307/A-Status Screen - Cluster IoD config

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Status Screen – Cluster IoD config	0x0993	0x00	OFF / Disabled
		0x01	ON / Enabled

This setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1089

### 3.5.8 VS-FUN-REQ-365765/A-Cluster Trip 1 menu

#### 3.5.8.1 Requirements

##### 3.5.8.1.1 VS-SR-REQ-365846/A-Cluster Trip 1 Menu Reset

For this feature when performing the “Set” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Cluster Trip 1 menu reset		0x00	Null / Inactive



	0x09A0	0x01	Reset All values for Trip 1
		0x02	Reset Trip 1 Odometer
		0x03	Reset Trip 1 Average Speed
		0x04	Reset Trip 1 Average Fuel

Note:

- this feature number uses Feature2.Rq and Feature2.St feature based message protocol
- configuration numbers 0x01 – 0x04 are all requests from the Centerstack Settings HMI Client

The Centerstack Settings HMI Client shall not query this feature number at start-up as this is a reset function. If it was queried at start-up as an error state then the Cluster Trip 1 Menu Reset Server would respond back with 0x0 Null / Inactive.

HMI Setting ID
1063

#### 3.5.8.1.2 VS-SR-REQ-365847/A-Set to Default - configure Cluster Trip 1 view

For this feature when performing the “Set” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Set to Default – configure Cluster Trip 1 view	0x09A1	0x00	Null / Inactive
		0x01	Default Trip 1 view (Request from Centerstack Settings HMI Client)

Note: this feature number uses Feature2.Rq and Feature2.St feature based message protocol

The Centerstack Settings HMI Client shall not query this feature number at start-up as this is a set only function. If it was queried at start-up as an error state then the Set to Default Server would respond back with 0x0 Null / Inactive.

HMI Setting ID
1064

#### 3.5.8.1.3 VS-SR-REQ-365855/A-Trip 1 Odometer - configure Cluster Trip 1 view

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.



If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trip 1 Odometer – configure Cluster Trip 1 view	0x09A2	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1065

#### 3.5.8.1.4 VS-SR-REQ-365858/A-Trip 1 Timer - configure Cluster Trip 1 view

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trip 1 Timer – configure Cluster Trip 1 view	0x09A3	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1066

#### 3.5.8.1.5 VS-SR-REQ-365860/A-Average Speed - configure Cluster Trip 1 view

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.



If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Average Speed – configure Cluster Trip 1 view	0x09A4	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1067

#### 3.5.8.1.6 VS-SR-REQ-365864/A-Average Fuel - configure Cluster Trip 1 view

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Average Fuel – configure Cluster Trip 1 view	0x09A5	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1068

#### 3.5.8.1.7 VS-SR-REQ-365865/A-Instantaneous Fuel - configure Cluster Trip 1 view

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Instantaneous Fuel – configure Cluster Trip 1 view	0x09A6	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1069

### 3.5.9 VS-FUN-REQ-365845/A-Cluster Trip 2 menu

#### 3.5.9.1 Requirements

##### 3.5.9.1.1 VS-SR-REQ-365866/A-Cluster Trip 2 Menu Reset

For this feature when performing the “Set” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Cluster Trip 2 menu reset	0x09B0	0x00	Null / Inactive
		0x01	Reset All values for Trip 2
		0x02	Reset Trip 2 Odometer
		0x03	Reset Trip 2 Average Speed
		0x04	Reset Trip 2 Average Fuel

Note:

- this feature number uses Feature2.Rq and Feature2.St feature based message protocol
- configuration numbers 0x01 – 0x04 are all requests from the Centerstack Settings HMI Client

The Centerstack Settings HMI Client shall not query this feature number at start-up as this is a reset function. If it was queried at start-up as an error state then the Cluster Trip 2 Menu Reset Server would respond back with 0x0 Null / Inactive.

HMI Setting ID
1070



### 3.5.9.1.2 VS-SR-REQ-365867/A-Set to Default - configure Cluster Trip 2 view

For this feature when performing the "Set" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Set to Default – configure Cluster Trip 2 view	0x09B1	0x00	Null / Inactive
		0x01	Default Trip 2 view (Request from Centerstack Settings HMI Client)

Note: this feature number uses Feature2.Rq and Feature2.St feature based message protocol

The Centerstack Settings HMI Client shall not query this feature number at start-up as this is a set only function. If it was queried at start-up as an error state then the Set to Default Server would respond back with 0x0 Null / Inactive.

HMI Setting ID
1071

### 3.5.9.1.3 VS-SR-REQ-365877/A-Trip 2 Odometer - configure Cluster Trip 2 view

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trip 2 Odometer – configure Cluster Trip 2 view	0x09B2	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1072



#### 3.5.9.1.4 VS-SR-REQ-365878/A-Trip 2 Timer - configure Cluster Trip 2 view

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Trip 2 Timer – configure Cluster Trip 2 view	0x09B3	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1073

#### 3.5.9.1.5 VS-SR-REQ-365880/A-Average Speed - configure Cluster Trip 2 view

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Average Speed – configure Cluster Trip 2 view	0x09B4	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1074

**3.5.9.1.6 VS-SR-REQ-365884/A-Average Fuel - configure Cluster Trip 2 view**

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Average Fuel – configure Cluster Trip 2 view	0x09B5	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1075

**3.5.9.1.7 VS-SR-REQ-365885/A-Instantaneous Fuel - configure Cluster Trip 2 view**

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Instantaneous Fuel – configure Cluster Trip 2 view	0x09B6	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1076





### 3.5.10 VS-FUN-REQ-369169/A-Classic View - Cluster Speedo view

#### 3.5.10.1 Requirements

##### 3.5.10.1.1 VS-SR-REQ-369170/A-Classic View - Cluster Speedo view - Cluster Menu

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Classic View – Cluster Speedo view – Cluster Menu	0x0970	0x00	Digital Speedometer only
		0x01	Round Speedometer Gauge

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1079

### 3.5.11 VS-FUN-REQ-393166/A-Classic Gauges - Cluster Menu

#### 3.5.11.1 Requirements

##### 3.5.11.1.1 VS-SR-REQ-384384/A-Classic Gauge

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Classic Gauges – Cluster Menu	0x0971	0x00	OFF / Disabled
		0x01	ON / Enabled

Note: this setting uses Feature2.Rq and Feature2.St feature based message protocol



## HMI Setting ID

1082

**3.5.12 VS-FUN-REQ-404378/A-Cluster Appearance****3.5.12.1 Overview**

Cluster Appearance consists of a list of IPC Display Layouts that can be selected by the vehicle occupant. Once an IPC Display Layout Menu item is selected, the cluster display will be updated to the selected IPC Display Layout.

**3.5.12.2 Requirements****3.5.12.2.1 VS-SR-REQ-404379/A-Cluster Appearance**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Cluster Appearance – Cluster Menu	0x0973	0x00	Change with Drive Mode
		0x01	Normal
		0x02	Sport
		0x03	Track
		0x04	Calm
		0x05	67 – 68 Mustang
		0x06	87 – 93 Mustang
		0x07	99 – 01 SVT Cobra

This setting uses Feature2.Rq and Feature2.St feature based message protocol

## HMI Setting ID

1088



### 3.5.13 VS-FUN-REQ-404408/A-Performance Shift Indicator - Cluster menu

#### 3.5.13.1 Overview

Performance Shift Indicator activates an animation in the cluster that will illuminate based on a shift point set by the user. There are 3 different type of shift lights that give feedback to the driver of when to shift differently. Tach mode uses color changes within the Tachometer to indicate when to shift. Track mode is quite different, when the engine revs build, unique elements looking like LEDs light up from the outside ends to the center until the shift point is reached, then the whole LED bar flashes. In Drag mode, as in the other two, the customer sets the shift point but nothing happens until the engine reaches the preset RPM threshold, then the cluster will flash some portions of the screen in amber.

#### 3.5.13.2 Requirements

##### 3.5.13.2.1 VS-SR-REQ-404459/A-Shift Point Setup - RPM

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Shift Point set-up - RPM	0x0D0F	0x0000	0 RPM
		0x0001	100 RPM
		0x0002	200 RPM
		0x0003	300 RPM
		...	
		0x0050	8000 RPM

This setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1090



### 3.5.13.2.2 VS-SR-REQ-404460/A-Shift Tone

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Shift Tone	0x0D10	0x00	OFF / Disabled
		0x01	ON / Enabled

This setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1091

### 3.5.13.2.3 VS-SR-REQ-404461/A-Shift Light Mode

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Shift Light Mode	0x0D11	0x00	OFF / Disabled
		0x01	Tach
		0x02	Track
		0x03	Drag

This setting uses Feature2.Rq and Feature2.St feature based message protocol

HMI Setting ID
1092



### 3.5.14 VS-FUN-REQ-279097/B-MyColor

#### 3.5.14.1 Overview

MyColor allows the user to select either 1 of 7 pre-defined colors or 1 of 3 custom colors for the Primary and Secondary elements in the Cluster.

#### 3.5.14.2 Requirements

##### 3.5.14.2.1 VS-SR-REQ-415044/A-Centerstack and Cluster HMI both supporting MyColor

This requirement is only applicable if the Centerstack module supports both the MyColor Setting AND updating the Centerstack HMI based on the MyColor selected (ie update Centerstack HMI (ex a graphic) to the color selected on the MyColor setting screen). This requirement is not about the setting itself. See the Centerstack HMI spec if the MyColor Primary Color, Secondary Color or Ambient Lighting color (or combination of them) is supported as a color on the Centerstack HMI.

The Centerstack module shall update the color used for its HMI not based on the user selection but based on the Feature.St signal that is received from the MyColor Settings Server.

Note: for the lead program on S650 the MyColor Setting Server was the Cluster module.

##### 3.5.14.2.2 VS-SR-REQ-279098/C-Gauge Color / Primary Color - MyColor

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Gauge Color / Primary Color - MyColor	0x0940	0x0	OFF
		0x1	Ice Blue
		0x2	<del>White</del> Copper
		0x3	Green <del>/ Highland Green</del>
		0x4	Purple
		0x5	Blue
		0x6	Orange <del>Dark Copper</del>
		0x7	Red
		0x8	MyColor1
		0x9	MyColor2
		0xA	MyColor3

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)



Req: This feature number and the configuration numbers are also used for both “Gauge Color” HMI and “Primary Color” HMI.

- See HMI specification for configuration used to distinguish between Gauge Color and Primary Color HMI.

HMI Setting ID
254

#### 3.5.14.2.3 VS-SR-REQ-279099/C-Halo Color / Secondary Color - MyColor

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Halo Color / Secondary Color - MyColor	0x0941	0x0	OFF
		0x1	Ice Blue
		0x2	<a href="#">White Copper</a>
		0x3	Green <a href="#">/ Highland Green</a>
		0x4	Purple
		0x5	Blue
		0x6	<a href="#">Orange Dark Copper</a>
		0x7	Red
		0x8	MyColor1
		0x9	MyColor2
		0xA	MyColor3

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)

Req: This feature number and the configuration numbers are also used for both “Halo Color” HMI and “Secondary Color” HMI.

- See HMI specification for configuration used to distinguish between Halo Color and Gauge Color HMI.

HMI Settings ID
255



#### 3.5.14.2.4 VS-SR-REQ-279101/C-Halo Lighting / Secondary Lighting - MyColor

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Halo Lighting / Secondary Lighting - MyColor	0x0942	0x0	OFF / Disabled
		0x1	ON / Enabled

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)

HMI Settings ID
242

#### 3.5.14.2.5 VS-SR-REQ-280522/C-Color Wheel 1 - MyColor

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Color Wheel 1 – MyColor	0x0943	0x00	OFF
		0x01	Color 1
		0x02	Color 2
		0x03	Color 3
		cont.	....
		0x18	Color 24
		0x19	Color 25
		0x1A	Color 26

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)

**HMI Setting ID**

247

**3.5.14.2.6 VS-SR-REQ-280523/C-Color Wheel 2 - MyColor**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Color Wheel 2 - MyColor	0x0944	0x00	OFF
		0x01	Color 1
		0x02	Color 2
		0x03	Color 3
		cont.	....
		0x18	Color 24
		0x19	Color 25
		0x1A	Color 26

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)

**HMI Setting ID**

248

**3.5.14.2.7 VS-SR-REQ-280524/C-Color Wheel 3 - MyColor**

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.





Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Color Wheel 3 - MyColor	0x0945	0x00	OFF
		0x01	Color 1
		0x02	Color 2
		0x03	Color 3
		cont.	....
		0x18	Color 24
		0x19	Color 25
		0x1A	Color 26

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)

HMI Setting ID
249

#### 3.5.14.2.8 VS-SR-REQ-279104/C-Ambient Lighting - MyColor

For this feature when performing the “Set” or “Query” operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Ambient Lighting - MyColor	0x0946	0x00	OFF / Disabled
		0x01	<a href="#">Low Dim (and On)</a>
		0x02	<a href="#">High Dim (and On)</a>

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)

HMI Setting ID
256



### 3.5.14.2.9 VS-SR-REQ-280525/D-Ambient Light Color - MyColor

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Ambient Light Color - MyColor	0x0947	0x0	OFF
		0x1	Ice Blue
		0x2	<del>Grey</del> White
		0x3	Green <del>/ Highland Green</del>
		0x4	Purple
		0x5	Blue
		0x6	Orange
		0x7	Red
		0x8	MyColor1
		0x9	MyColor2
		0xA	MyColor3

[This setting uses Feature2.Rq and Feature2.St feature based message protocol](#)

HMI Setting ID
258

### 3.5.14.2.10 ~~VS-SR-REQ-280526/C-Ambient Light Dim - MyColor - DELETED~~

~~For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.~~

~~If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.~~

REQUIREMENT DELETED



Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Ambient Light Dim-MyColor	0x0948	0x00	OFF / Disabled
		0x01	ON / Enabled

This setting uses Feature2.Rq and Feature2.St feature based message protocol.

HMI Setting ID
257

### 3.5.15 VS-FUN-REQ-280671/B-Exhaust Mode

#### 3.5.15.1 Overview

Exhaust mode allows the user to customize the loudness of the exhaust.

#### 3.5.15.2 Requirements

##### 3.5.15.2.1 VS-SR-REQ-280672/C-Exhaust Mode

For this feature when performing the "Set" or "Query" operation the Feature Number and Configuration Number in the Feature.Rq and Feature.St messages shall be used below.

If Enhanced Memory is supported the Active Personality Profile shall be used for PersIndex. If Enhanced Memory is not supported PersIndex shall be set to Vehicle.

Feature Description	Feature Number	Configuration Number	HMI selection / Configuration Name
Exhaust Mode	0x0D09	0x00	Quiet / Stealth
		0x01	Normal
		0x02	Sport
		0x03	Track

This setting uses Feature2.Rq and Feature2.St feature based message protocol.

HMI Setting ID
250



## 4 Appendix: Reference Documents

Reference #	Document Title
1	Feature Based Message Protocol SPSS <ul style="list-style-type: none"><li>• Nothing earlier than April 2017 release</li></ul>
2	Driver Restrictions SPSS
3	HMI Driver Restriction specification(s) <ul style="list-style-type: none"><li>• For SYNC H21J_SYNC_GEN3_Driver_Restrictions</li></ul>
4	Setting in the Centerstack HMI specifications <ul style="list-style-type: none"><li>• For SYNC H31k HMI spec and SYNC H31K supplement</li></ul>
5	Vehicle Settings (Global) SPSS
6	MyKey Settings in the Centerstack SPSS
7	Infotainment Diagnostics Specification
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