**RESTRICTED ACCESS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DISTRIBUTION :** | **Firm** | **To** | **Ref** | **Copies** | **1st page** | **e-mail** |
|  | AEE-C | Mihai Ianos, Daniel Andris, | 2 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**SW Architecture Design & Interface Description :**

**CIL sw UNIT**

OBJECT: This document is the description of the design & interfaces for *CIL* SW unit.

SUMMARY: This document provides a high-level view of the *CIL* SW unit. The inputs of this document are provided by the software requirement. It is linked to the *DAIMLER\_MMA*\_SWarchitectureDesignInterfaceDescription document.

CONCLUSION: Applicable from **R08.1** SW release

**THIS DOCUMENT CONTAINS HIDDEN TEXT**

EVOLUTION OF THE DOCUMENT

|  |  |  |  |
| --- | --- | --- | --- |
| **Issue** | **Date** | **Author** | **Motive and nature of the modifications** |
| 1 | 31/08/2016 | C. Redon | First release (extract from the full PP4G architecture document) |
| Start extended description based on mainstream document | | | | |
| 1.1.1.2 | 11/07/2019 | A. Vaché | Update traceability to match PP4G extended platform requirements IDs |
| 1.1.1.3 | 08/08/2019 | A. Vaché | Solve some traceability issues highlighted by reqtify |
| Start DAI MMA description based on extended document | | | | |
| 1.3.3.1 | 04/01/22 | 1. Negrea | Duplicate revision |
| 1.3.3.2 | 04/01/22 | A. Negrea | Initial revision |
| 1.3.3.3 | 12/01/22 | A. Negrea | Add input/output messages |
| 1.3.3.4 | 31/01/22 | A. Negrea | Add signals for abortion/inhibiton |
| 1.3.3.5 | 15/02/22 | A. Negrea | Update after review |
| 1.3.3.6 | 07/03/22 | A. Negrea | Add signals Impact\_Ro\_typeX\_St3 |
| 1.3.3.7 | 08/03/22 | A. Negrea | Add signals Impact\_X/Y for abortion |
| 1.3.3.8 | 08/03/22 | A. Negrea | Add cycle validity check |
| 1.3.3.9 | 08/03/22 | A. Negrea | Add review for issue on 1.3.3.7 version |
| 1.3.3.10 | 09/06/22 | A. Negrea | Update for 2.0 release |
| 1.3.3.11 | 10/06/22 | A. Negrea | Update traceability |
| 1.3.3.12 | 15/05/22 | A. Negrea | Update after review |
| 1.3.3.13 | 11/08/22 | S. Dominte | Update for 3.0 release |
| 1.3.3.14 | 19/08/22 | S. Dominte | Update after review. |
| 1.3.3.15 | 22/08/22 | S. Dominte | Update with MF functionality. |
| 1.3.3.16 | 07/11/22 | A. Negrea | Update for 4.0 release with TF\_B |
| 1.3.3.17 | 08/11/22 | A. Negrea | Update for 4.0 with TF\_R |
| 1.3.3.18 | 08/11/22 | A. Negrea | Update after reqtify for 4.0 |
| 1.3.3.19 | 09/11/22 | M. Obada | Update for 4.0 with TF\_H |
| 1.3.3.20 | 09/11/22 | M. Obada | Update after reqtify |
| 1.3.3.21 | 18/11/22 | A. Negrea | Update after review |
| 1.3.3.22 | 19/12/22 | A. Negrea | Update for 5.0 with TF\_R |
| 1.3.3.23 | 19/12/22 | A. Negrea | Update for 5.0 TF\_B |
| 1.3.3.24 | 19/12/22 | M. Obada | Update for 5.0 TF\_B and TF\_H |
| 1.3.3.25 | 20/12/22 | M. Obada | Update for 5.0 TF\_B and TF\_H, after SRM |
| 1.3.3.26 | 06/02/22 | A. Negrea | Add updates for TF\_B |
| 1.3.3.27 | 06/02/22 | A. Negrea | Add updates for TF\_I |
| 1.3.3.29 | 08/02/23 | A. Paval | Updates related to 5.0 |
| 1.3.3.30 | 14/02/23 | A. Paval | Updates after review |
| 1.3.3.31 | 15/02/23 | A. Paval | Small fixes related to traceability |
| 1.3.3.32 | 17/02/23 | A. Paval | Fixed duplicate requiremet IDs |
| 1.3.3.33 | 20/02/23 | A. Paval | Changed 199 and 200 duplicate IDs |
| 1.3.3.34 | 21/02/23 | A. Paval | Deleted unused runnable from 5.17 |
| 1.3.3.35 | 02/03/23 | A. Negrea | Add diag call to get Requested cycle |
| 1.3.3.36 | 02/03/23 | S. Dominte | Haptic repetion requirement updated |
| 1.3.3.37 | 09/03/23 | S. Dominte | Traceability updated |
| 1.3.3.38 | 11/04/23 | M. Obada | Update document for R06.0, with new autotests |
| 1.3.3.39 | 12/04/23 | M. Obada | Remove NA req. |
| 1.3.3.40 | 12/04/23 | A. Negrea | Add new HWA and BSR profiles |
| 1.3.3.41 | 18/04/23 | A. Negrea | Add BSR triggered on Mode Trasition |
| 1.3.3.42 | 27/04/23 | A. Negrea | Add delays for BSR , HWA , Release algo |
| 1.3.3.43 | 27/04/23 | M. Serban | Updated bits 1, 4,5 of FctPrecond\_Stat\_ST35 |
| 1.3.3.44 | 27/04/23 | A. Negrea | Update traceability |
| 1.3.3.45 | 03/05/23 | M. Obada | Update traceability after SRM |
| 1.3.3.46 | 04/05/23 | A. Negrea | Remove duplicate |
| 1.3.3.47 | 04/05/23 | A. Negrea | Remove Obsolete |
| 1.3.3.48 | 09/05/23 | A. Negrea | Update after review |
| 1.3.3.49 | 09/05/23 | M. Obada | Update for 6.0 |
| 1.3.3.50 | 12/05/23 | M. Obada | Update automatic fields |
| 1.3.3.51 | 12/05/23 | M. Obada | Update references |
| 1.3.3.52 | 12/05/23 | M. Obada | Update revision history |
| 1.3.3.53 | 15/05/23 | M. Serban | Fixes after review |
| 1.3.3.54 | 30/05/23 | M. Serban | Updated traceability |
| 1.3.3.55 | 19/06/2023 | A. Negrea | Update ARCH for R6.1 |
| 1.3.3.56 | 21/06/23 | M. Obada | Update for 6.1 , last valid value for EVC signal |
| 1.3.3.57 | 21/06/23 | A. Negrea | Update traceability |
| 1.3.3.58 | 22/06/23 | M. Obada | Update traceability |
| 1.3.3.59 | 05/07/23 | A. Negrea | Update for R7.0 Haptic Warning new implemnetation |
| 1.3.3.60 | 17/07/23 | A. Negrea | Update traceability for MF and cycle validity |
| 1.3.3.61 | 17/07/23 | A. Negrea | Update traceability for release profile |
| 1.3.3.62 | 21/07/23 | M. Obada | Update traceability for timeout BeltAdj |
| 1.3.3.63 | 28/07/23 | M. Serban | Update traceability for FctPrecond\_Stat\_ST35 |
| 1.3.3.64 | 09/08/2023 | M. Serban | Removed duplicates |
| 1.3.3.65 | 24/08/2023 | M. Obada | Update for 7.0 |
| 1.3.3.66 | 31/08/2023 | M. Obada | Update after review, all findings fixed. |
| 1.3.3.67 | 01.09.2023 | M. Obada | Add source for req ARCH\_SW\_CIL\_0421. |
| 1.3.3.68 | 12/12/2023 | M. Serban | Update for 8.1 |
| 1.3.3.69 | 13/12/23 | M. Serban | Added called function for PSCurve signal |
| 1.3.3.70 | 18/12/23 | A.Negrea | Update architecture for R8.1 TF\_R |
| 1.3.3.71 | 10/01/24 | M. Obada | Update for 8.1 with signals notifications to ERH module |
| 1.3.3.72 | 11/01/24 | M. Serban | Added runnables for timeout ExtTest\_Pres |
| 1.3.3.73 | 29/01/2024 | M. Serban | Fix findings after review |
| 1.3.3.74 | 30/01/2024 | M. Obada | Update after SRM |
| 1.3.3.75 | 18/03/2024 | M. Serban | Added new req for FctPrecond\_Stat\_ST35 |
| 1.3.3.76 | 02/04/2024 | M. Obada | Add of ignition power cycle |

This document contains **62** pages.

**CONTENTS**

1. Documentation 8

1.1. Upper Level Relevant Documents 8

1.2 Design interface description Documents 9

1.3 Design Specification Documents 10

1.4 Tier2 Documents 11

1.5 HW Data 12

1.6 Other Documents 12

1.7 Glossary And Definition 12

3. Description 13

4. Technical functions 14

5. Runnables 19

5.1. CIL\_runCANToAppli 19

5.1.1. Definition 19

5.1.2. Data flow / Parameters 20

5.1.3. Called functions 30

5.2. CIL\_runAppliToCAN 34

5.2.1. Definition 34

5.2.2. Data flow / Parameters 34

5.2.3. Called functions 40

5.3. CIL\_Autotest\_Presafe\_CheckTimeoutError 41

5.3.1. Definition 41

5.3.2. Data flow / Parameters 41

5.4. CIL\_Autotest\_Buckle\_CheckTimeoutError 41

5.4.1. Definition 41

5.4.2. Data flow / Parameters 42

5.5. CIL\_Autotest\_CheckImplausibleData\_Presafe 42

5.5.1. Definition 42

5.5.2. Data flow / Parameters 42

5.6. CIL\_Autotest\_CheckImplausibleData\_Ignition 43

5.6.1. Definition 43

5.6.2. Data flow / Parameters 43

5.7. CIL\_Autotest\_CheckImplausibleData\_Buckle 43

5.7.1. Definition 43

5.7.2. Data flow / Parameters 44

5.8. CIL\_Autotest\_CheckImplausibleData\_ORC 44

5.8.1. Definition 44

5.8.2. Data flow / Parameters 45

5.9. CIL\_Autotest\_CheckTimeoutError\_Ignition 45

5.9.1. Definition 45

5.9.2. Data flow / Parameters 45

5.10. CIL\_Autotest\_CheckTimeoutError\_Powertrain 45

5.10.1. Definition 45

5.10.2. Data flow / Parameters 46

5.11. CIL\_Autotest\_CheckTimeoutError\_Belthandover\_L 46

5.11.1. Definition 46

5.11.2. Data flow / Parameters 46

5.12. CIL\_Autotest\_CheckTimeoutError\_Belthandover\_R 46

5.12.1. Definition 46

5.12.2. Data flow / Parameters 47

5.13. CIL\_Autotest\_CheckTimeoutError\_API 47

5.13.1. Definition 47

5.13.2. Data flow / Parameters 47

5.14. CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Rdy 47

5.14.1. Definition 47

5.14.2. Data flow / Parameters 48

5.15. CIL\_Autotest\_CheckImplausibleData\_ORC 48

5.15.1. Definition 48

5.15.2. Data flow / Parameters 48

5.16. CIL\_Autotest\_CheckSteeringConfiguration 48

5.16.1. Definition 48

5.16.2. Data flow / Parameters 49

5.17. CIL\_Autotest\_CheckTimeoutError\_ OdoSpeedometer 49

5.17.1. Definition 49

5.17.2. Data flow / Parameters 49

5.18. CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Drv 49

5.18.1. Definition 49

5.18.2. Data flow / Parameters 50

5.19. CIL\_Autotest\_CheckVariantCoding 50

5.19.1. Definition 50

5.19.2. Data flow / Parameters 50

5.20. CIL\_Autotest\_CheckImplausibleData\_Api 50

5.20.1. Definition 50

5.20.2. Data flow / Parameters 51

5.1. CIL\_Autotest\_CheckTimeoutError\_ BeltAdj 51

5.1.1. Definition 51

5.1.2. Data flow / Parameters 51

5.2. CIL\_ExtTest\_Pres\_TimeoutError 51

5.2.1. Definition 51

5.2.2. Data flow / Parameters 52

5.3. CIL\_runManageMeasurementFrame 52

5.3.1. Definition 52

5.3.2. Data flow / Parameters 52

5.3.3. Called functions 54

5.4. CIL\_runGetInputSignalPresafeRecorderInfo 56

5.4.1. Definition 56

5.5. CIL\_ComNotification\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3\_dihag5a55iw4h5qk539fx0kup\_4c948f24\_Rx 56

5.5.1. Definition 56

5.6. CIL\_ComNotification\_Ign\_Stat\_Pr5\_ST3\_csgs1dv6drms80o1i9p49677w\_7bdae87d\_Rx 57

5.6.1. Definition 57

5.6.1. Data flow / Parameters 57

CIL\_ComNotification\_ORC\_Impact2\_Pr5\_ST3\_b9l09rrslyv7vj3o92j69irnd\_2f5ae8ac\_Rx 57

5.6.2. Definition 57

5.7. CIL\_ComNotification\_ORC\_Impact3\_Pr5\_ST3\_c4pqnkonfjwv3uiohsxhe9dwu\_1bc89a3a\_Rx 57

5.7.1. Definition 58

5.8. CIL\_ComNotification\_PresfAct\_Adj\_Pr5\_ST3\_2joar1a41xrgjqab60epnbplm\_25141edc\_Rx 58

5.8.1. Definition 58

5.9. CIL\_ComNotification\_SBeltTens\_SP\_Lvl\_Pr5\_ST3\_4tqpkri37441o5ht9g9ekmyzh\_4719328f\_Rx 58

5.9.1. Definition 58

5.10. CIL\_ComNotification\_PT4\_PTCoor4\_Pr5\_ST3\_af4fxb1ykieox3itqdfzs0kpb\_2277a854\_Rx 59

5.10.1. Definition 59

5.11. CIL\_ComNotification\_BeltHdOvr\_FR\_Stat\_ST3\_0eefd507\_Rx 59

5.11.1. Definition 59

5.12. CIL\_ComNotification\_BeltHdOvr\_FL\_Stat\_ST3\_3489841d\_Rx 59

5.12.1. Definition 59

5.13. CIL\_ComNotification\_EVC\_CfgList\_01\_08\_Pr5\_ST3\_co3q1mwsf7pwxo2ix5jryc04x\_3a43a00a\_Rx 60

5.13.1. Definition 60

5.13.2. Called functions 60

5.14. CIL\_ComNotification\_DI\_Odo\_Pr5\_ST3\_e68xmtlkywxgxsdwekdjjhw3t\_eb760b63\_Rx 60

5.14.1. Definition 60

5.15. CIL\_ComNotification\_BltSlckDec\_Md\_Rq\_HU\_ST3\_64a95ccf\_Rx 61

5.15.1. Definition 61

5.15.2. Called functions 61

5.16. CIL\_ComNotification\_ProdMd\_Stat\_ST3\_be2b5dfe\_Rx 61

5.16.1. Definition 61

5.16.2. Called functions 61

5.17. CIL\_ComNotification\_PN14\_TransMd\_Stat\_ST3\_2208da29\_Rx 61

5.17.1. Definition 61

5.17.2. Called functions 62

5.18. CIL\_ComNotification\_ExtTest\_Pres\_ST3\_7e50ca1d\_Rx 62

5.18.1. Definition 62

5.18.2. Called functions 62

6. MCU resources 62

**TABLE OF FIGURES**

[Figure 1 CIL - Static description 14](#_Toc157499928)

# Documentation

## Upper Level Relevant Documents

This section presents all the documents needed to write the software architecture design document.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Document** | **Reference** | **Company** |
|  | TF-A: To Manage the power supply | /RevAS/30\_DES\_Requirements/Technical Functions/  DES\_TF\_A\_To\_Manage\_The\_Power\_Supply | RBE/FCE |
|  | TF-B: To Manage the communication | /RevAS/30\_DES\_Requirements/Technical Functions/  DES\_TF\_B\_To\_Manage\_The\_Communication | RBE/FCE |
|  | TF-C: To Secure PP ECU functioning using Pictus MCU | /RevAS/30\_DES\_Requirements/Technical Functions/  DES\_TF\_C\_To\_Secure\_PP\_ECU\_Functioning\_Pictus | RBE/FCE |
|  | TF-D: To Program MCU | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_D\_To\_Program\_MCU | RBE/FCE |
|  | TF-E: To Manage Diagnostic Requests | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_E\_To\_Manage\_Diagnostic\_Requests | RBE/FCE |
|  | TF-F: To Perform Measurements | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_F\_To\_Perform\_Measurements | RBE/FCE |
|  | TF-G: To Drive the Motor | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_G\_To\_Drive\_the\_Motor | RBE/FCE |
|  | TF-H: To Perform Autotests | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_H\_To\_Perform\_Autotests | RBE/FCE |
|  | TF-I: To Manage the Failure | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_I\_To\_Manage\_The\_Failure | RBE/FCE |
|  | TF-J: To Manage NVM - NVP (Non Volatile Parameters) | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_J\_To\_Manage\_NVM | RBE/FCE |
|  | TF-K: To Ensure ECU Protection and Integration | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_K\_To\_Ensure\_ECU\_Protection\_And\_Integration | RBE/FCE |
|  | TF-L: To Ensure ECU Integration in Environment EMC ESD | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_L\_To\_Ensure\_ECU\_Integration\_In\_Environment\_EMC\_ESD | RBE/FCE |
|  | TF-M: To generate time base | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_M\_To\_Generate\_Time\_Base | RBE/FCE |
|  | TF-N: To evaluate belt data | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_N\_To\_Evaluate\_Belt\_Data | RBE/FCE |
|  | TF-O: To schedule the SW | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_O\_To\_Run\_SW | RBE/FCE |
|  | TF-P: To handle network management | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_P\_To Handle\_Network\_Management | RBE/FCE |
|  | TF-Q: To Provide Data For Expertise | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_Q\_To\_Provide\_Data\_For\_Expertise | RBE/FCE |
|  | TF-R: To Decide Belt Function Execution | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_R\_To\_Decide\_Belt\_Function\_Execution | RBE/FCE |
|  | TF-S: To drive the boost | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_S\_To\_Drive\_Boost | RBE/FCE |
|  | TF-X: To generate time base | /RevAS/30\_DES\_Requirements/Technical Functions/DES\_TF\_M\_To\_Generate\_Time\_Base | RBE/FCE |

## 1.2 Design interface description Documents

This section presents all the documents that are linked to this software architecture design document.

Note: All links are related to S:\drive, to have them functional, please mount the S:\drive on your sandbox.

|  |  |  |  |
| --- | --- | --- | --- |
| **Nb.** | **Document** | **Reference** | **Company** |
|  | EEPROM parameters | SBE\_4G\_NVP\_layout.xls | RBE/FCE |
|  | Design Interface description of AdcIf | N/A | RBE/FCE |
|  | Design Interface Description of Auto Tests Manager | [ATM - Design Interface Description.docx](ATM%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Belt Function Decision | N/A | RBE/FCE |
|  | Design Interface Description of Belt Function Execution | [BFE - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\BFE%20-%20Design%20Interface%20Description%20.docx) | RBE/FCE |
|  | Design Interface Description of Belt Function Selection | [BFS - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\BFS%20-%20Design%20Interface%20Description%20.docx) | RBE/FCE |
|  | Design Interface Description of Belt Movement Monitoring | [BMM - Design Interface Description.docx](file:///C:\Users\alexandru.paval\Documents\Sandboxes\Daimler_MMA_ReVAS\Phase_02\View_Development\Architectures\Application\Description\Associated_Documents\BMM%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Belt Parking Algorithm | N/A | RBE/FCE |
|  | Design Interface Description of Belt Slack Reduction | [BSR - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\BFS%20-%20Design%20Interface%20Description%20.docx) | RBE/FCE |
|  | Design Interface Description of Basic Software Manager | N/A | RBE/FCE |
|  | Design Interface Description of Basic Software Manager Interface | N/A | RBE/FCE |
|  | Design Interface Description of Can Tranceiver Interface | N/A | RBE/FCE |
|  | Design Interface Description of Communication Interaction Layer | [CIL - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Diagnostic Communication Manager Interface | N/A | RBE/FCE |
|  | Design Interface Description of Diagnostic Event Manager Interface | N/A | RBE/FCE |
|  | Design Interface Description of DiagOnCAN services management | [DIA - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\DIA%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Electronic Control Unit Manager | N/A | RBE/FCE |
|  | Design Interface Description of Electronic Control Unit Manager Interface | N/A | RBE/FCE |
|  | Design Interface Description of End of life | [EOL - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\DIA%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Error Handler | [ERH - Design Interface Description.docx](ERH%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Haptic Warning | [HWA - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\DIA%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Memory Integrity Control | N/A | RBE/FCE |
|  | Design Interface Description of Mode Management | [MMG - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\MMG%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Network Management Interface | N/A | RBE/FCE |
|  | Design Interface Description of Non-Volatile Memory Interface | N/A | RBE/FCE |
|  | Design Interface Description of Non-Volatile Parameters | [NVP - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\NVP%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Operating System Interface | N/A | RBE/FCE |
|  | Design Interface Description of Power Abstraction Layer | [PAL - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\PAL%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Pre-Crash Master | N/A | RBE/FCE |
|  | Design Interface Description of Physical Measures Provider | [PMP - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\PMP%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Port Interface | N/A | RBE/FCE |
|  | Design Interface Description of Pre-Tensioning | [PRE - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\PMP%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Production cycle function | N/A | RBE/FCE |
|  | Design Interface Description of Pulse Width Modulation Interface | N/A | RBE/FCE |
|  | Design Interface Description of Reset Cause Management | N/A | RBE/FCE |
|  | Design Interface Description of SBC | N/A | RBE/FCE |
|  | Design Interface Description of System Context Management | N/A | RBE/FCE |
|  | Design Interface Description of Standard Function Recovery (releasing function) | [SFR - Design Interface Description.docx](file:///S:\Architectures\Application\Description\Associated_Documents\SFR%20-%20Design%20Interface%20Description.docx) | RBE/FCE |
|  | Design Interface Description of Serial Peripheral Interface Interface | N/A | RBE/FCE |
|  | Design Interface Description of Startup | N/A | RBE/FCE |
|  | Design Interface Description of System Time Management | N/A | RBE/FCE |
|  | Design Interface Description of Vehicle Dynamics algorithm | N/A | RBE/FCE |

## 1.3 Design Specification Documents

This section presents all the documents that complete this software architecture design document.

Note: All links are related to S:\drive, to have them functional, please mount the S:\drive on your sandbox.

|  |  |  |  |
| --- | --- | --- | --- |
| **Nb** | **Document** | **Reference** | **Company** |
|  | Design document of AdcIf | N/A | RBE/FCE |
|  | Design document of Auto Tests Manager | [ATM - Detailed Design Document.docx](../../../../Components/Application/Autoliv/ATM/Design/ATM%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Belt Function Decision | N/A | RBE/FCE |
|  | Design document of Belt Function Execution | [BFE - Detailed Design Document.docx](../../../../Components/Application/Autoliv/BFE/Design/BFE%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Belt Function Selection | [BFS - Detailed Design Document.docx](../../../../Components/Application/Autoliv/BFS/Design/BFS%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Belt Movement Monitoring | [BMM - Detailed Design Document.docx](file:///C:\Users\alexandru.paval\Documents\Sandboxes\Daimler_MMA_ReVAS\Phase_02\View_Development\Components\Application\Autoliv\BMM\Design\BMM%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Belt Parking Algorithm | N/A | RBE/FCE |
|  | Design document of Basic Software Manager Interface | N/A | RBE/FCE |
|  | Design document of Belt Slack Reduction | [BSR - Detailed Design Document.docx](../../../../Components/Application/Autoliv/BSR/Design/BSR%20-%20Detailed%20Design%20Document.docx) |  |
|  | Design document of Communication Interaction Layer | [CIL - Detailed Design Document.docx](../../../../Components/Application/Autoliv/CIL/Design/CIL%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Diagnostic Communication Manager Interface | N/A | RBE/FCE |
|  | Design document of Diagnostic Event Manager Interface | N/A | RBE/FCE |
|  | Design document of DiagOnCAN services management | [DIA - Detailed Design Document.docx](../../../../Components/Application/Autoliv/DIA/Design/DIA%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of End of life | [EOL - Detailed Design Document.docx](../../../../Components/Application/Autoliv/EOL/Design/EOL%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Error Handler | [ERH - Detailed Design Document.docx](../../../../Components/Application/Autoliv/ERH/Design/ERH%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Haptic Warning | [HWA - Detailed Design Document.docx](../../../../Components/Application/Autoliv/HWA/Design/HWA%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Memory Integrity Control | N/A | RBE/FCE |
|  | Design document of Mode Management | [MMG - Detailed Design Document.docx](../../../../Components/Application/Autoliv/MMG/Design/MMG%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Network Management Interface | N/A | RBE/FCE |
|  | Design document of Non-Volatile Memory Interface | N/A | RBE/FCE |
|  | Design document of Non-Volatile Parameters | N/A | RBE/FCE |
|  | Design document of Power Abstraction Layer | [PAL - Detailed Design Document.docx](../../../../Components/Application/Autoliv/PAL/Design/PAL%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Physical Measures Provider | [PMP - Detailed Design Document.docx](../../../../Components/Application/Autoliv/PMP/Design/PMP%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Port Interface | N/A | RBE/FCE |
|  | Design document of Production cycle function | N/A | RBE/FCE |
|  | Design document of Reset Cause Management | N/A | RBE/FCE |
|  | Design document of RTE If | N/A | RBE/FCE |
|  | Design document of System Context Management | N/A | RBE/FCE |
|  | Design document of Standard Function Recovery (releasing function) | [SFR - Detailed Design Document.docx](../../../../Components/Application/Autoliv/SFR/Design/SFR%20-%20Detailed%20Design%20Document.docx) | RBE/FCE |
|  | Design document of Serial Peripheral Interface Interface | N/A | RBE/FCE |

## 1.4 Tier2 Documents

This section presents all the documents that complete this software architecture design document.

|  |  |  |  |
| --- | --- | --- | --- |
| Nb | **Document** | **Reference** | **Company** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## 1.5 HW Data

This section presents all the documents related to the HW components that complete this software architecture design document.

|  |  |  |  |
| --- | --- | --- | --- |
| Nb | **Document** | **Reference** | **Company** |
|  | Infineon-TLE9471-3ES datasheet | TLE9461-3ES-Infineon.pdf | Infineon |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## 1.6 Other Documents

This section presents all the documents that also have been needed to write this software architecture design document.

|  |  |  |  |
| --- | --- | --- | --- |
| Nb | **Document** | **Reference** | **Company** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Glossary And Definition

This section presents all the definitions and/or abbreviations used in this document.

*List of terms in alphabetical order:*

|  |  |
| --- | --- |
| ***Term*** | ***Meaning*** |
| ADC | Analog Digital Converter |
| AEC | Autoliv Error Code |
| API | Application Programming Interface |
| ASDM | Active Safety Domain Master |
| ASIC | Application Specific Integrated Circuit |
| ASY | Active SafetY |
| BSW | Basic SW modules |
| CAN | Controller Area Network |
| C/S | Chip Select |
| COP | Computer Operating Properly |
| eCPL | Electronic Crash Pole Locking |
| DART | Ditch - Airborne - Rough Terrain |
| DFLASH | Data FLASH |
| ECC | Error Code Correction |
| ECU | Electronic Control Unit |
| EOL | End Of Life |
| EEPROM | Electric Erasable and Programmable Read only Memory |
| HFPP | High Force Pre-Pre-Tensioning belt function |
| HF-PRE | High Force PRE pre-tensioning |
| HR | Hard Releasing |
| I/O | Input/Output |
| IMU | Inartial Measurements Unit |
| ISS | Integrated Safing System |
| LFPP | Low Force Pre-Pre-Tensioning belt function |
| MSA | Motor Start/Stop Automatic |
| MCAL | Micro-Controller Abstraction Layer |
| MCU | Micro-controller Unit |
| NMG | Mode ManaGement |
| NVM | Non Volatile Memory |
| OS | Operating System |
| PCM | Pre-Crash Master |
| PFLASH | Program FLASH |
| PIT | Periodic Interrupt Timer |
| PLL | Phase-locked loop |
| RAM | Random Access Memory |
| RCWM | Rear Collision Warning and Mitigation |
| RML | Left PP ECU |
| RMR | Right PP ECU |
| RMx | Both PP ECU |
| ROM | Read Only Memory |
| RSU | Remote Sensor Unit |
| RTE | Real Time Environment |
| RTOS | Real Time Operating System |
| SFR | Standard Function Recovery |
| SODL | Side Obstacle Detection Left |
| SPI | Serial Peripheral Interface |
| SRS | Supplementary Restraint System |
| TBC | To be confirmed |
| TBD | To be defined |
| TF | Technical Function |
| TFLASH | Test FLASH of the Pictus MCU (“one time programmable” memory) |
| W/D | Watchdog |

# Description

CIL is intended to link the SW application to the vehicle communication bus. Then all the received and transmitted functional messages (other than DiagOnCAN messages are managed by other SW units) will be handled at CIL level.

Its role will basically consist in reformatting/rescalling the information received and to be transmitted on CAN.

Behind CIL aims at making the rest of the SW application independent to the bus specification (type, information format).

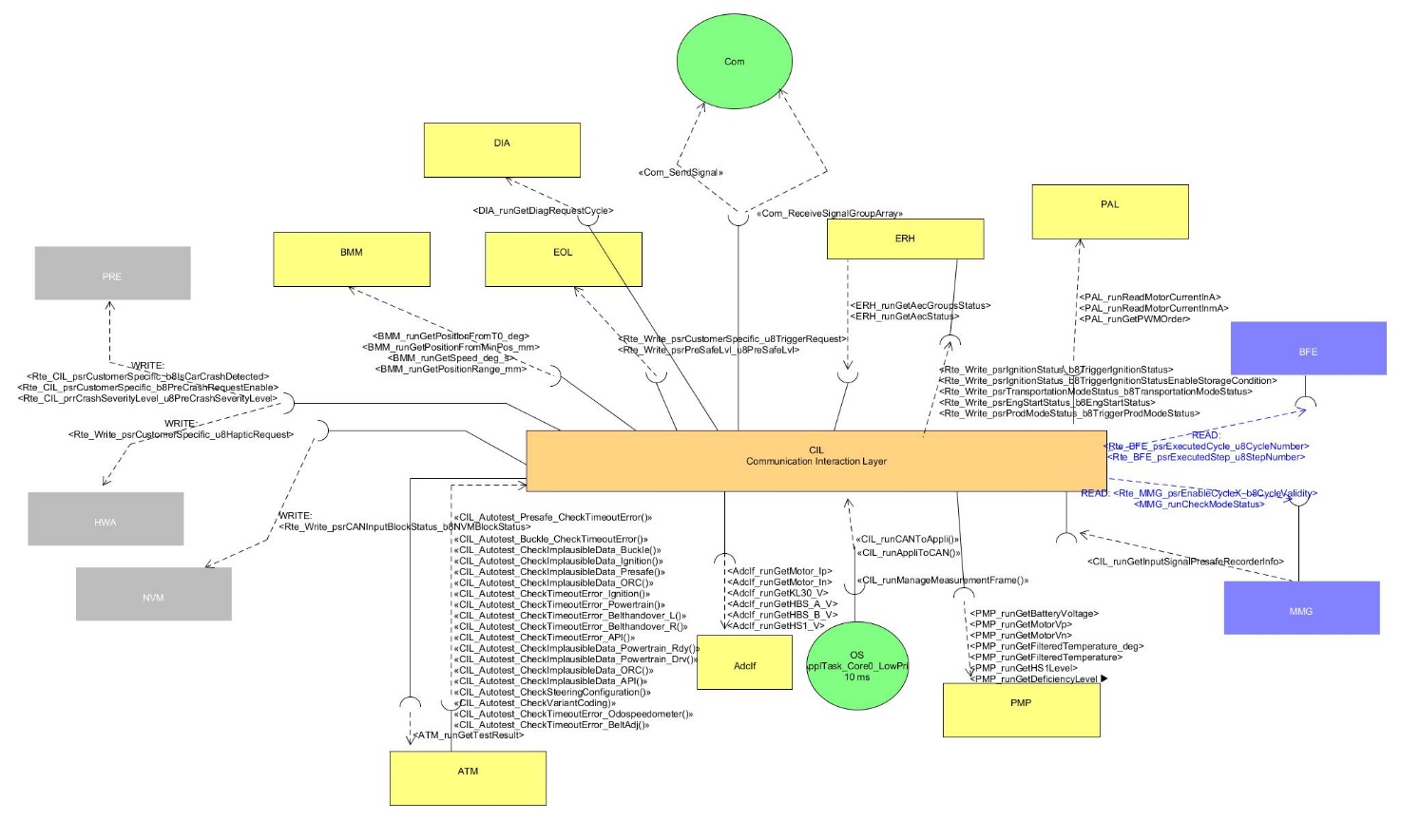


Figure 1 CIL - Static description

# Technical functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| ARCH\_SW\_CIL\_0001 | Frame **PresfAct\_Adj\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1690; DAI\_EXT\_TF\_B\_1693; DAI\_EXT\_TF\_B\_1697; DAI\_EXT\_TF\_B\_1698; DAI\_EXT\_TF\_B\_1704; DAI\_EXT\_TF\_B\_1705; DAI\_EXT\_TF\_B\_1709; DAI\_EXT\_TF\_B\_1710; DAI\_EXT\_TF\_B\_1960; DAI\_EXT\_TF\_B\_1961; DAI\_EXT\_TF\_B\_1975; DAI\_EXT\_TF\_B\_1976; |
| ARCH\_SW\_CIL\_0005 | Frame **Ign\_Stat\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1714; DAI\_EXT\_TF\_B\_1716; DAI\_EXT\_TF\_B\_1722; DAI\_EXT\_TF\_B\_1723; DAI\_EXT\_TF\_B\_1981; DAI\_EXT\_TF\_B\_1982; DAI\_EXT\_TF\_B\_1987; DAI\_EXT\_TF\_B\_1988; DAI\_EXT\_TF\_B\_1998; DAI\_EXT\_TF\_B\_1999; DAI\_EXT\_TF\_B\_2003; DAI\_EXT\_TF\_B\_2004 |
| ARCH\_SW\_CIL\_0007 | Frame **Bckl\_Sw\_Fx\_Stat\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1727; DAI\_EXT\_TF\_B\_1729; DAI\_EXT\_TF\_B\_1732; DAI\_EXT\_TF\_B\_1733; DAI\_EXT\_TF\_B\_1737; DAI\_EXT\_TF\_B\_1738; DAI\_EXT\_TF\_B\_2010; DAI\_EXT\_TF\_B\_2011; DAI\_EXT\_TF\_B\_2015; DAI\_EXT\_TF\_B\_2016 |
| ARCH\_SW\_CIL\_0300 | Corresponding side for the ECU according to Steering vehicle position will be read from NVP from Vehicle Equipment: NVP\_stVehicleEquipmentData | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2357; |
| ARCH\_SW\_CIL\_0010 | Signals from frame **RBTM\_FL/FR\_Stat\_ST3** shall be written with information from application.  *Note : ECU Location : FL – Front Left & FR – Front Right.* | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1741; DAI\_EXT\_TF\_B\_1742; DAI\_EXT\_TF\_B\_1744; DAI\_EXT\_TF\_B\_1747; DAI\_EXT\_TF\_B\_1748; DAI\_EXT\_TF\_B\_1752; DAI\_EXT\_TF\_B\_1753; DAI\_EXT\_TF\_B\_1757; DAI\_EXT\_TF\_B\_1758; DAI\_EXT\_TF\_B\_1797; DAI\_EXT\_TF\_B\_1798; DAI\_EXT\_TF\_B\_1799; DAI\_EXT\_TF\_B\_1803; DAI\_EXT\_TF\_B\_1804; DAI\_EXT\_TF\_B\_1809; DAI\_EXT\_TF\_B\_1810; DAI\_EXT\_TF\_B\_1815; DAI\_EXT\_TF\_B\_1816; DAI\_EXT\_TF\_B\_2143; DAI\_EXT\_TF\_B\_2147; |
| ARCH\_SW\_CIL\_0014 | Signals from frame **BeltAdj\_FL/FR\_Stat\_ST3** shall be written with information from application.  Note : ECU Location : FL – Front Left & FR – Front Right. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1761; DAI\_EXT\_TF\_B\_1762; DAI\_EXT\_TF\_B\_1763; DAI\_EXT\_TF\_B\_1764; DAI\_EXT\_TF\_B\_1766; DAI\_EXT\_TF\_B\_1767; DAI\_EXT\_TF\_B\_1825; DAI\_EXT\_TF\_B\_1826; DAI\_EXT\_TF\_B\_1827; DAI\_EXT\_TF\_B\_2148; DAI\_EXT\_TF\_B\_2358 |
| ARCH\_SW\_CIL\_0030 | Frame **Impact3\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1864; DAI\_EXT\_TF\_B\_1866; DAI\_EXT\_TF\_B\_1900; DAI\_EXT\_TF\_B\_1901; DAI\_EXT\_TF\_B\_1906; DAI\_EXT\_TF\_B\_1907; DAI\_EXT\_TF\_B\_1886; DAI\_EXT\_TF\_B\_2360 |
| ARCH\_SW\_CIL\_0039 | Frame **Impact2\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1838; DAI\_EXT\_TF\_B\_1840; DAI\_EXT\_TF\_B\_1886; DAI\_EXT\_TF\_B\_2360; |
| ARCH\_SW\_CIL\_0261 | CIL component will handle HWAx configured with fixed duration with execute the Vibration phase according to NVP\_u16DurationHapticX  Note x = 1,2,3,4 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2925; DAI\_EXT\_TF\_R\_2928; DAI\_EXT\_TF\_R\_2931; DAI\_EXT\_TF\_R\_2934; DAI\_EXT\_TF\_R\_2937; |
| ARCH\_SW\_CIL\_0262 | CIl component will handle HWAx configured with non-fixed duration with execution of the Vibration phase until the HWAx request is removed from the request source PRE-SAFE or API or the Vibration Phase is completely executed according to NVP\_u16DurationHapticX.  Note x = 1,2,3,4 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2926; DAI\_EXT\_TF\_R\_2929; DAI\_EXT\_TF\_R\_2932; DAI\_EXT\_TF\_R\_2935; DAI\_EXT\_TF\_R\_2938; |
| ARCH\_SW\_CIL\_0047 | CIL component shall ensure repetition of vibration phase (cycle 19) of HWA 1 for NVP\_u16DurationHaptic1 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2512; DAI\_EXT\_TF\_R\_2845; DAI\_EXT\_TF\_R\_2691; DAI\_EXT\_TF\_R\_2913; DAI\_EXT\_TF\_R\_2915 |
| ARCH\_SW\_CIL\_0252 | CIL component shall ensure repetition of vibration phase (cycle 21) of HWA 2 for NVP\_u16DurationHaptic2 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2916; DAI\_EXT\_TF\_R\_2894 |
| ARCH\_SW\_CIL\_0253 | CIL component shall ensure repetition of vibration phase (cycle 23) of HWA 3 for NVP\_u16DurationHaptic3 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2917; DAI\_EXT\_TF\_R\_2895 |
| ARCH\_SW\_CIL\_0254 | CIL component shall ensure repetition of vibration phase (cycle 25) of HWA 4 for NVP\_u16DurationHaptic4 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2918; DAI\_EXT\_TF\_R\_2896 |
| ARCH\_SW\_CIL\_0050 | Frame **SBeltTens\_SP\_Lvl\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1913; DAI\_EXT\_TF\_B\_1919; DAI\_EXT\_TF\_B\_1923; DAI\_EXT\_TF\_B\_1915; |
| ARCH\_SW\_CIL\_0065 | Signals from frame **RBTM FL/FR\_Tens\_ST3** shall be written with information from application.  Note : ECU Location : FL – Front Left & FR – Front Right. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1927; DAI\_EXT\_TF\_B\_1928; DAI\_EXT\_TF\_B\_1929; DAI\_EXT\_TF\_B\_1933; DAI\_EXT\_TF\_B\_1940; DAI\_EXT\_TF\_B\_2187 |
| ARCH\_SW\_CIL\_0079 | If any cycle is requested on Presf Lvl ST3 signal any API\_interface request will be inhibited. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2584 |
| ARCH\_SW\_CIL\_0700 | Measurement frame should be computed and send to CAN when it is requested by tester. |  | DAI\_EXT\_TF\_B\_2387; DAI\_EXT\_TF\_B\_2388 |
| ARCH\_SW\_CIL\_0703 | Signals Meas\_RBTM\_FL/FR\_x\_ST3 from frame **Meas8\_RBTM\_FL/FR\_ST3** shall be written with information from application.  Note: ECU Location: FL – Front Left & FR – Front Right.  Note1: Meas\_RBTM\_FL/FR\_x\_ST3: where x takes values from 1 to 8. | CIL\_ManageMFTransmission() | DAI\_EXT\_TF\_B\_2387; DAI\_EXT\_TF\_B\_2388 |
| ARCH\_SW\_CIL\_0094 | Frame **BeltAdj\_UI\_Set\_Rq\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2027; DAI\_EXT\_TF\_B\_2029; DAI\_EXT\_TF\_B\_2021; |
| ARCH\_SW\_CIL\_0150 | Frame **PT4\_PTCoor4\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2218; DAI\_EXT\_TF\_B\_2228; DAI\_EXT\_TF\_B\_2303 |
| ARCH\_SW\_CIL\_0153 | Frame **PT4\_PTCoor\_DrvPosn\_Stat\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2236; DAI\_EXT\_TF\_B\_2242 |
| ARCH\_SW\_CIL\_0157 | Frame **BeltHdOvr\_FL\_State\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2247; DAI\_EXT\_TF\_B\_2249; DAI\_EXT\_TF\_B\_2253 |
| ARCH\_SW\_CIL\_0159 | Frame **BeltHdOvr\_FR\_State\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2258; DAI\_EXT\_TF\_B\_2260; DAI\_EXT\_TF\_B\_2264 |
| ARCH\_SW\_CIL\_0161 | Frame **EVC\_CfgList\_01\_08\_Pr5\_ST3** shall be manipulated to read all it’s signals and send the values through application. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2269; DAI\_EXT\_TF\_B\_2275 |
| ARCH\_SW\_CIL\_0400 | This function shall be called by Com when the signal group for Buckle is received on Can. | CIL\_ComNotification\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3\_dihag5a55iw4h5qk539fx0kup\_4c948f24\_Rx() |  |
| ARCH\_SW\_CIL\_0401 | This function shall be called by Com when the signal group for Ignition is received on Can. | CIL\_ComNotification\_Ign\_Stat\_Pr5\_ST3\_csgs1dv6drms80o1i9p49677w\_7bdae87d\_Rx() |  |
| ARCH\_SW\_CIL\_0402 | This function shall be called by Com when the signal group for Impact2 is received on Can. | CIL\_ComNotification\_ORC\_Impact2\_Pr5\_ST3\_b9l09rrslyv7vj3o92j69irnd\_2f5ae8ac\_Rx () |  |
| ARCH\_SW\_CIL\_0403 | This function shall be called by Com when the signal group for Impact3 is received on Can. | CIL\_ComNotification\_ORC\_Impact3\_Pr5\_ST3\_c4pqnkonfjwv3uiohsxhe9dwu\_1bc89a3a\_Rx () |  |
| ARCH\_SW\_CIL\_0404 | This function shall be called by Com when the signal group for Presafe is received on Can. | CIL\_ComNotification\_PresfAct\_Adj\_Pr5\_ST3\_2joar1a41xrgjqab60epnbplm\_25141edc\_Rx () |  |
| ARCH\_SW\_CIL\_0405 | This function shall be called by Com when the signal group for API is received on Can. | CIL\_ComNotification\_SBeltTens\_SP\_Lvl\_Pr5\_ST3\_4tqpkri37441o5ht9g9ekmyzh\_4719328f\_Rx () |  |
| ARCH\_SW\_CIL\_0406 | This function shall be called by Com when the signal group for PT Coor 4 is received on Can. | CIL\_ComNotification\_PT4\_PTCoor4\_Pr5\_ST3\_af4fxb1ykieox3itqdfzs0kpb\_2277a854\_Rx () |  |
| ARCH\_SW\_CIL\_0407 | This function shall be called by Com when the signal for Belt Handover Stat Front Right is received on Can. | CIL\_ComNotification\_BeltHdOvr\_FR\_Stat\_ST3\_0eefd507\_Rx () |  |
| ARCH\_SW\_CIL\_0408 | This function shall be called by Com when the signal for Belt Handover Stat Front Left is received on Can. | CIL\_ComNotification\_BeltHdOvr\_FL\_Stat\_ST3\_3489841d\_Rx () |  |
| ARCH\_SW\_CIL\_0409 | This function shall be called by Com when the signal group for EVC Config List 01-08 is received on Can. | CIL\_ComNotification\_EVC\_CfgList\_01\_08\_Pr5\_ST3\_co3q1mwsf7pwxo2ix5jryc04x\_3a43a00a\_Rx () |  |
| ARCH\_SW\_CIL\_0258 | CIL component should ensure that if a profile is requested on PRE\_SAFE or API and it is executed completely (maximum duration REACHED) and the request is still active on signal the profile will be RESTARTED until signal change to NO action or another profile.  Exception:   * LEVEL 2 – HAPTIC; LEVEL 8 on PRE\_SAFE; * LEVEL 8 on ORC * LEVEL 2 – HAPTIC; HWA 2/3/4; BSR1/2/3 * BSR by Algo | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2889; DAI\_EXT\_TF\_R\_2878; DAI\_EXT\_TF\_R\_2902; DAI\_EXT\_TF\_R\_2888; DAI\_EXT\_TF\_R\_2881; DAI\_EXT\_TF\_R\_2890; DAI\_EXT\_TF\_R\_2893; DAI\_EXT\_TF\_R\_2905; DAI\_EXT\_TF\_R\_2886 |
| ARCH\_SW\_CIL\_0420 | This function shall be called by Com when the signal for DI\_Odo\_Pr5\_ST3 is received on Can. | CIL\_ComNotification\_DI\_Odo\_Pr5\_ST3\_e68xmtlkywxgxsdwekdjjhw3t\_eb760b63\_Rx |  |
| **ARCH\_SW\_CIL\_0210** | CIL component should ensure that if a profile is requested on PRE\_SAFE or API and the execution is inhibitted, it will be postponed until all starting conditions will be fulfilled as long as the request is still active. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2876; DAI\_EXT\_TF\_R\_2879 |
| **ARCH\_SW\_CIL\_0211** | CIL component should ensure that if a profile is requested on PRE\_SAFE or API and the execution is aborted, it will be restarted after the abortion conditions disappear as long as the request is still active. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2877; DAI\_EXT\_TF\_R\_2880 |
| **ARCH\_SW\_CIL\_0212** | CIL component should ensure that if a BSR is request by ALGO ( on Buckle Switch / BeltSlackMode Switch) and it is inhibitted by :   * **Measured KL30 battery voltage** is outside *Normal Operating Range or* * value received on CAN for signal **PT4\_PTCoor\_PT\_Rdy\_ST3(only for buckle switch) or** * **timeout DTC powertrain KU32\_AEC\_GROUP\_MASK\_TIMEOUT\_POWERTRAIN** * value received on CAN for corresponding belt for signal **BeltHdOvr\_FL\_Stat\_ST3 or BeltHdOvr\_FR\_Stat\_ST** if enabled in the coding * timeout DTC KU32\_AEC\_GROUP\_MASK\_TIMEOUT\_BH\_R/L * value received on CAN for for signal **PT4\_PTCoor\_DrvPosn\_Stat\_ST**   execution of BSR will be postponed until all starting conditions will be fulfilled. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2943 |
| **ARCH\_SW\_CIL\_0213** | Frame **ECU\_Stat\_RBTM\_xy\_ST3** will be computed to be send to CAN.  Signal **ECU\_Id\_RBTM\_xy\_ST3** will be written with *0x1A4 for Left side and*  *0x1A for Right Side.*  *0xFFF = SNA (Signal not Available)* |  | DAI\_EXT\_TF\_B\_2420; DAI\_EXT\_TF\_B\_2423; DAI\_EXT\_TF\_B\_2424; DAI\_EXT\_TF\_B\_2425; DAI\_EXT\_TF\_B\_2426; |
| **ARCH\_SW\_CIL\_0264** | There are no other inhibition conditions for any other profiles then the ones described in this document. |  | DAI\_EXT\_TF\_R\_2954;  DAI\_EXT\_TF\_R\_2952; DAI\_EXT\_TF\_R\_2948 |
| **ARCH\_SW\_CIL\_0265** | There are no other abortion conditions for any other profiles then the ones described in this document. |  | DAI\_EXT\_TF\_R\_2922; DAI\_EXT\_TF\_R\_2953; DAI\_EXT\_TF\_R\_2948 |
| **ARCH\_SW\_CIL\_0423** | For the following autotests *ERH\_runGetAecStatus* shall be called to read the AEC status:   * CIL\_Autotest\_Presafe\_CheckTimeoutError; * CIL\_Autotest\_Buckle\_CheckTimeoutError; * CIL\_Autotest\_CheckTimeoutError\_BelthandoverL; * CIL\_Autotest\_CheckTimeoutError\_BelthandoverR; * CIL\_Autotest\_CheckTimeoutError\_Powertrain |  |  |
| **ARCH\_SW\_CIL\_0424** | For the following COM notifications a counter shall start for deskill of timeout erros:   * CIL\_ComNotification\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3\_dihag5a55iw4h5qk539fx0kup\_4c948f24\_Rx; * CIL\_ComNotification\_PresfAct\_Adj\_Pr5\_ST3\_2joar1a41xrgjqab60epnbplm\_25141edc\_Rx * CIL\_ComNotification\_PT4\_PTCoor4\_Pr5\_ST3\_af4fxb1ykieox3itqdfzs0kpb\_2277a854\_Rx * CIL\_ComNotification\_BeltHdOvr\_FR\_Stat\_ST3\_0eefd507\_Rx * CIL\_ComNotification\_BeltHdOvr\_FL\_Stat\_ST3\_0eefd507\_Rx |  |  |
| **ARCH\_SW\_CIL\_0425** | For the following autotests a counter shall start for deskill of timeout erros:   * CIL\_Autotest\_Presafe\_CheckTimeoutError; * CIL\_Autotest\_Buckle\_CheckTimeoutError; * CIL\_Autotest\_CheckTimeoutError\_BelthandoverL; * CIL\_Autotest\_CheckTimeoutError\_BelthandoverR; * CIL\_Autotest\_CheckTimeoutError\_Powertrain   If deskill counter is equal to notification counter and qualification threshold, then autotest is passed. |  |  |

# Runnables

## CIL\_runCANToAppli

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_runCANToAppli (void) | | | |
| **Object** | | | |
| This function shall handle all CAN signals received from CAN. The objective is to provide the received information but reformatted to the rest of the SW application. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Periodic 10 ms  Not reentrant | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0002; ARCH\_SW\_CIL\_0022; ARCH\_SW\_CIL\_0023; ARCH\_SW\_CIL\_0024; ARCH\_SW\_CIL\_0003; ARCH\_SW\_CIL\_0025; ARCH\_SW\_CIL\_0004; ARCH\_SW\_CIL\_0026; ARCH\_SW\_CIL\_0006; ARCH\_SW\_CIL\_0027; ARCH\_SW\_CIL\_0008; ARCH\_SW\_CIL\_0028; ARCH\_SW\_CIL\_0009; ARCH\_SW\_CIL\_0029; ARCH\_SW\_CIL\_0351; ARCH\_SW\_CIL\_0352; ARCH\_SW\_CIL\_0353; ARCH\_SW\_CIL\_0354; ARCH\_SW\_CIL\_0355; ARCH\_SW\_CIL\_0001; ARCH\_SW\_CIL\_0005; ARCH\_SW\_CIL\_0007; ARCH\_SW\_CIL\_0030; ARCH\_SW\_CIL\_0031; ARCH\_SW\_CIL\_0032; ARCH\_SW\_CIL\_0033; ARCH\_SW\_CIL\_0034; ARCH\_SW\_CIL\_0035; ARCH\_SW\_CIL\_0036; ARCH\_SW\_CIL\_0037; ARCH\_SW\_CIL\_0038; ARCH\_SW\_CIL\_0039; ARCH\_SW\_CIL\_0042; ARCH\_SW\_CIL\_0043; ARCH\_SW\_CIL\_0044; ARCH\_SW\_CIL\_0045; ARCH\_SW\_CIL\_0046; ARCH\_SW\_CIL\_0048; ARCH\_SW\_CIL\_0049; ARCH\_SW\_CIL\_0050; ARCH\_SW\_CIL\_0051; ARCH\_SW\_CIL\_0052; ARCH\_SW\_CIL\_0053; ARCH\_SW\_CIL\_0054; ARCH\_SW\_CIL\_0055; ARCH\_SW\_CIL\_0056; ARCH\_SW\_CIL\_0057; ARCH\_SW\_CIL\_0058; ARCH\_SW\_CIL\_0059; ARCH\_SW\_CIL\_0060; ARCH\_SW\_CIL\_0061; ARCH\_SW\_CIL\_0062; ARCH\_SW\_CIL\_0063; ARCH\_SW\_CIL\_0064; ARCH\_SW\_CIL\_0077; ARCH\_SW\_CIL\_0078; ARCH\_SW\_CIL\_0079; ARCH\_SW\_CIL\_0080; ARCH\_SW\_CIL\_0081; ARCH\_SW\_CIL\_0094; ARCH\_SW\_CIL\_0268 | | | |

### Data flow / Parameters

#### Signal Presf\_Lvl\_ST3 (PRE-SAFE Request)

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0002** | Signal Presf\_Lvl\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1697; DAI\_EXT\_TF\_B\_1698; DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_B\_1702; DAI\_EXT\_TF\_B\_2210 |
| **ARCH\_SW\_CIL\_0022** | If signal is received with value 1, then tensioning cycle 0 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_R\_2380; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2210 |
| **ARCH\_SW\_CIL\_0023** | If signal is received with value 2, then cycle 18,19(HWA) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_R\_2507; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2210 |
| **ARCH\_SW\_CIL\_0042** | If signal is received with value 3, then tensioning cycle 1 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_R\_2549; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2210 |
| **ARCH\_SW\_CIL\_0043** | If signal is received with value 4, then tensioning cycle 2 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_R\_2552; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2210 |
| **ARCH\_SW\_CIL\_0044** | If signal is received with value 5, then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_R\_2553; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2210 |
| **ARCH\_SW\_CIL\_0119** | If signal is received with value 6, then tensioning cycle 4 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2210; DAI\_EXT\_TF\_R\_2710 |
| **ARCH\_SW\_CIL\_0241** | If signal is received with value 6 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2210; DAI\_EXT\_TF\_R\_2856 |
| **ARCH\_SW\_CIL\_0120** | If signal is received with value 7, then tensioning cycle 5 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2210; DAI\_EXT\_TF\_R\_2860 |
| **ARCH\_SW\_CIL\_0242** | If signal is received with value 7 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2210; DAI\_EXT\_TF\_R\_2857 |
| **ARCH\_SW\_CIL\_0121** | If signal is received with value 8, then tensioning cycle 6 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2210; DAI\_EXT\_TF\_R\_2859 |
| **ARCH\_SW\_CIL\_0243** | If signal is received with value 8 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested for **NVP\_u16TimeoutPresafe5** time | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2210; DAI\_EXT\_TF\_R\_2858 |
| **ARCH\_SW\_CIL\_0122** | SNA value for this signal is 0x0F, and for this no cycle should de played and already played cycles on PRE-safe should be aborted. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2210; DAI\_EXT\_TF\_R\_2768; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_B\_2211; |
| **ARCH\_SW\_CIL\_0024** | If any other value than 1,2,3,4,5,6,7,8 is received for signal Presf\_Lvl\_ST3 then no cycle should be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_B\_1702; DAI\_EXT\_TF\_R\_2382; DAI\_EXT\_TF\_B\_2210 |

#### Signal Presf\_Enbl\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0003** | Signal Presf\_Enbl\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1704; DAI\_EXT\_TF\_B\_1705; DAI\_EXT\_TF\_B\_1706; DAI\_EXT\_TF\_B\_1707 |
| **ARCH\_SW\_CIL\_0025** | If value for Signal Presf\_Enbl\_ST3 is not 1 (is 0 or 3) then cycle request coming from PRE-SAFE or ORC should be inhibitted/aborted | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1706; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2613; DAI\_EXT\_TF\_R\_2403; DAI\_EXT\_TF\_R\_2532; DAI\_EXT\_TF\_R\_2662; DAI\_EXT\_TF\_R\_2765; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2812 |

#### Signal PresfAct\_TensSupp\_Rq\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0048** | Signal PresfAct\_TensSupp\_Rq\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1709; DAI\_EXT\_TF\_B\_1710; DAI\_EXT\_TF\_B\_1711; DAI\_EXT\_TF\_B\_1712 |
| **ARCH\_SW\_CIL\_0049** | If value for PresfAct\_TensSupp\_Rq\_ST3 is not 0 on ECU’s current side (is 1,2,3) then cycle request coming from PRE-SAFE or ORC should be inhibitted/aborted | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1711; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2402; DAI\_EXT\_TF\_R\_2511; DAI\_EXT\_TF\_R\_2531; DAI\_EXT\_TF\_R\_2663; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2794; DAI\_EXT\_TF\_R\_2809 |
| **ARCH\_SW\_CIL\_0182** | Value for PresfAct\_TensSupp\_Rq\_ST3 SNA is 7 and should not inhibit anything | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1711; DAI\_EXT\_TF\_R\_2795; DAI\_EXT\_TF\_R\_2750 |

#### Signal PresfAccelReset\_NotExcd\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0004** | Signal PresfAccelReset\_NotExcd\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1954 |
| **ARCH\_SW\_CIL\_0026** | If value for PresfAccelReset\_NotExcd\_ST3 is not 2 (is 0 or ,1) the the release cycle will not be executed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1955; DAI\_EXT\_TF\_R\_2613; DAI\_EXT\_TF\_R\_2587 |
| **ARCH\_SW\_CIL\_0117** | If value for PresfAccelReset\_NotExcd\_ST3 is 3 = SNA then value will be interpreted as 2 , as Release allowed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2300 |
| **ARCH\_SW\_CIL\_0118** | If timeout is present for Presafe frame then value for PresfAccelReset\_NotExcd\_ST3 will be interpreted as 2 , as Release allowed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2299 |
| **ARCH\_SW\_CIL\_0184** | EXCEPTION: PRE-SAFE8 profile is ending when it’s maxim profile duration has been reached, regardesless of value for this signal. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2800; DAI\_EXT\_TF\_R\_2799; |

#### Signal ISw\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0006** | Signal ISw\_Stat\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1722; DAI\_EXT\_TF\_B\_1723; DAI\_EXT\_TF\_B\_1724; DAI\_EXT\_TF\_B\_1725 |
| **ARCH\_SW\_CIL\_0027** | If value for ISw\_Stat\_ST3 is not 4 (is 0,1,2,5 or 7 ) then cycle request should be inhibitted/aborted. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1724; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2400; DAI\_EXT\_TF\_R\_2511; DAI\_EXT\_TF\_R\_2529; DAI\_EXT\_TF\_R\_2661; DAI\_EXT\_TF\_R\_2762; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2791; DAI\_EXT\_TF\_R\_2808; DAI\_EXT\_TF\_R\_2835 |
| **ARCH\_SW\_CIL\_0123** | A NEW IGNITION RUN CYCLE happens when trasiition from any value to 0 – IGN\_LOCK; | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2352 |

#### Signal Bckl\_Sw\_D\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0008** | Signal Bckl\_Sw\_D\_Stat\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1732; DAI\_EXT\_TF\_B\_1733; DAI\_EXT\_TF\_B\_1734; DAI\_EXT\_TF\_B\_1735; DAI\_EXT\_TF\_B\_2141 |
| **ARCH\_SW\_CIL\_0028** | If value for Bckl\_Sw\_D\_Stat\_ST3 is not 0 (is 1,2,3) then cycle request should be inhibitted/aborted | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1734; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2401; DAI\_EXT\_TF\_R\_2511; DAI\_EXT\_TF\_R\_2493; DAI\_EXT\_TF\_R\_2530; DAI\_EXT\_TF\_R\_2588; DAI\_EXT\_TF\_R\_2659; DAI\_EXT\_TF\_R\_2758; DAI\_EXT\_TF\_R\_2759; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2789; DAI\_EXT\_TF\_R\_2803; DAI\_EXT\_TF\_R\_2756; DAI\_EXT\_TF\_R\_2757; DAI\_EXT\_TF\_R\_2835; DAI\_EXT\_TF\_R\_2816; DAI\_EXT\_TF\_R\_2831 |
| **ARCH\_SW\_CIL\_0045** | If value for Bckl\_Sw\_D\_Stat\_ST3 is transitioning from 1 to 0 then cycle 26 (BSR1) shall be executed after NVP\_u8AfterBuckle\* 5 time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2477; DAI\_EXT\_TF\_R\_2870 |

#### Signal Bckl\_Sw\_FP\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0009** | Signal Bckl\_Sw\_FP\_Stat\_ST3shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1737; DAI\_EXT\_TF\_B\_1738; DAI\_EXT\_TF\_B\_1739; DAI\_EXT\_TF\_B\_1740; DAI\_EXT\_TF\_B\_2141 |
| **ARCH\_SW\_CIL\_0029** | If value for Bckl\_Sw\_FP\_Stat\_ST3 is not 0 (is 1,2,3) then cycle request should be inhibitted/aborted | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1739; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2401; DAI\_EXT\_TF\_R\_2511; DAI\_EXT\_TF\_R\_2494; DAI\_EXT\_TF\_R\_2588; DAI\_EXT\_TF\_R\_2659; DAI\_EXT\_TF\_R\_2758; DAI\_EXT\_TF\_R\_2759; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2789; DAI\_EXT\_TF\_R\_2803; DAI\_EXT\_TF\_R\_2756; DAI\_EXT\_TF\_R\_2757; DAI\_EXT\_TF\_R\_2835; DAI\_EXT\_TF\_R\_2816; DAI\_EXT\_TF\_R\_2831 |
| **ARCH\_SW\_CIL\_0046** | If value for Bckl\_Sw\_FP\_Stat\_ST3 is transitioning from 1 to 0 then cycle 26 (BSR1) shall be executed after NVP\_u8AfterBuckle\* 5 time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2478; DAI\_EXT\_TF\_R\_2870 |

#### Signal Impact\_RO\_type1\_ST3 ( ORC request)

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0031** | Signal Impact\_RO\_type1\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1900; DAI\_EXT\_TF\_B\_1901; DAI\_EXT\_TF\_B\_1902; DAI\_EXT\_TF\_B\_1903 |
| **ARCH\_SW\_CIL\_0032** | If value for Impact\_RO\_type1\_ST3 is 1 then ORC PRE-SAFE 8 (cycle 6) should be executed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2464; DAI\_EXT\_TF\_B\_1902; DAI\_EXT\_TF\_B\_1903; DAI\_EXT\_TF\_B\_2232; DAI\_EXT\_TF\_R\_2726 |
| **ARCH\_SW\_CIL\_0244** | If value for Impact\_RO\_type1\_ST3 is 1 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested for **NVP\_u16TimeoutPresafe5** time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1902; DAI\_EXT\_TF\_B\_1903; DAI\_EXT\_TF\_B\_2232; DAI\_EXT\_TF\_R\_2861 |
| **ARCH\_SW\_CIL\_0181** | After ORC Request no profile will be executed until **a new ignition cycle happens.** | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2780; DAI\_EXT\_TF\_R\_2779; DAI\_EXT\_TF\_R\_2812; DAI\_EXT\_TF\_R\_2781; DAI\_EXT\_TF\_R\_2817 |

#### Signal Impact\_RO\_type2\_ST3 (ORC request)

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0033** | Signal Impact\_RO\_type2\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1906; DAI\_EXT\_TF\_B\_1907; DAI\_EXT\_TF\_B\_1908; DAI\_EXT\_TF\_B\_1909 |
| **ARCH\_SW\_CIL\_0034** | If value for Impact\_RO\_type2\_ST3 is 1 then ORC PRE-SAFE 8 (cycle 6) should be executed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2464; DAI\_EXT\_TF\_B\_1908; DAI\_EXT\_TF\_B\_1909; DAI\_EXT\_TF\_B\_2233; DAI\_EXT\_TF\_R\_2726 |
| **ARCH\_SW\_CIL\_0245** | If value for Impact\_RO\_type2\_ST3 is 1 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested for **NVP\_u16TimeoutPresafe5** time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1908; DAI\_EXT\_TF\_B\_1909; DAI\_EXT\_TF\_B\_2233; DAI\_EXT\_TF\_R\_2861 |
| **ARCH\_SW\_CIL\_0183** | After ORC Request no profile will be executed until **a new ignition cycle happens.** | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2780; DAI\_EXT\_TF\_R\_2779; DAI\_EXT\_TF\_R\_2812; DAI\_EXT\_TF\_R\_2781; DAI\_EXT\_TF\_R\_2817 |

#### Signal Impact\_X\_ST3 (CRASH)

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0035** | Signal Impact\_X\_ST3 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1869; DAI\_EXT\_TF\_B\_1870; DAI\_EXT\_TF\_B\_1871; DAI\_EXT\_TF\_B\_1876 |
| **ARCH\_SW\_CIL\_0036** | If Impact\_X\_ST3 is 1 then CRASH occurs and all profiles(including release) are aborted/inhibited until **a new ignition cycle** | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2611; DAI\_EXT\_TF\_B\_1871; DAI\_EXT\_TF\_B\_1876; DAI\_EXT\_TF\_R\_2694; DAI\_EXT\_TF\_R\_2790; DAI\_EXT\_TF\_R\_2797; DAI\_EXT\_TF\_R\_2813; DAI\_EXT\_TF\_R\_2844; DAI\_EXT\_TF\_R\_2818; DAI\_EXT\_TF\_R\_2828; DAI\_EXT\_TF\_R\_2831 |

#### Signal Impact\_Y\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0037** | Signal Impact\_Y\_ST3 shall be removed from application | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1886; DAI\_EXT\_TF\_B\_2360; DAI\_EXT\_TF\_B\_1888; DAI\_EXT\_TF\_B\_1889; DAI\_EXT\_TF\_B\_2231 |
| **ARCH\_SW\_CIL\_0038** | All values for Impact Y shall be ignored. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2612; DAI\_EXT\_TF\_B\_1888; DAI\_EXT\_TF\_B\_1889; DAI\_EXT\_TF\_R\_2694; DAI\_EXT\_TF\_B\_2231 |

#### Signal RBTMFL\_SP\_Lvl\_Rq\_ST35 (API Request)

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0051** | Signal RBTMFL\_SP\_Lvl\_Rq\_ST35 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1919; DAI\_EXT\_TF\_B\_2061 |
| **ARCH\_SW\_CIL\_0052** | If signal is received with value 1, then tensioning cycle 0 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2061; DAI\_EXT\_TF\_R\_2576; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0053** | If signal is received with value 2, then cycle 18-19(HWA) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2061; DAI\_EXT\_TF\_R\_2577; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0054** | If signal is received with value 3, then tensioning cycle 1 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2061; DAI\_EXT\_TF\_R\_2578; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0055** | If signal is received with value 4, then tensioning cycle 2 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2061; DAI\_EXT\_TF\_R\_2579; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0056** | If signal is received with value 5, then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2061; DAI\_EXT\_TF\_R\_2580; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2213 |
| **ARCH\_SW\_CIL\_0124** | If signal is received with value 6, then tensioning cycle 4 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2713; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0247** | If signal is received with value 6 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2853 |
| **ARCH\_SW\_CIL\_0125** | If signal is received with value 7, then tensioning cycle 5 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2714; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0248** | If signal is received with value 7 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2854 |
| **ARCH\_SW\_CIL\_0126** | If signal is received with value 8, then tensioning cycle 6 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2715; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0246** | If signal is received with value 8 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested for **NVP\_u16TimeoutPresafe5** time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2855 |
| **ARCH\_SW\_CIL\_0127** | If signal is received with value 9, then tensioning cycle 7 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2716; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0128** | If signal is received with value 10, then tensioning cycle 8 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2717; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0129** | If signal is received with value 11, then tensioning cycle 9 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2718; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0130** | If signal is received with value 12, then tensioning cycle 10 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2719; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0131** | If signal is received with value 13, then tensioning cycle 11 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2720; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0132** | If signal is received with value 14, then tensioning cycle 12 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2721; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0133** | If signal is received with value 15, then tensioning cycle 13 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2722; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0220** | If signal is received with value 16, then cycle 20-21(HWA2) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2214; DAI\_EXT\_TF\_R\_2894; |
| **ARCH\_SW\_CIL\_0221** | If signal is received with value 17, then cycle 22-23(HWA3) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2214; DAI\_EXT\_TF\_R\_2895; |
| **ARCH\_SW\_CIL\_0222** | If signal is received with value 18, then cycle 24-25(HWA4) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2214; DAI\_EXT\_TF\_R\_2896; |
| **ARCH\_SW\_CIL\_0223** | If signal is received with value 19, then cycle 26(BSR1) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2214; DAI\_EXT\_TF\_R\_2863 |
| **ARCH\_SW\_CIL\_0224** | If signal is received with value 20, then cycle 27(BSR2) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2214; DAI\_EXT\_TF\_R\_2864 |
| **ARCH\_SW\_CIL\_0225** | If signal is received with value 21, then cycle 28(BSR3) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2214; DAI\_EXT\_TF\_R\_2865 |
| **ARCH\_SW\_CIL\_0092** | If signal is received with value 22, then tensioning Presafe curve 1, cycle 14, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2061; DAI\_EXT\_TF\_R\_2657; DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0134** | If signal is received with value 23, then tensioning Presafe curve 2, cycle 15, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2723; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0135** | If signal is received with value 24, then tensioning Presafe curve 3, cycle 16, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2724; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0136** | If signal is received with value 25, then tensioning Presafe curve 4, cycle 17, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2213; DAI\_EXT\_TF\_R\_2725; DAI\_EXT\_TF\_B\_2214 |
| **ARCH\_SW\_CIL\_0057** | If any other value than the ones mentioned above is received for signal RBTMFL\_SP\_Lvl\_Rq\_ST35 then no cycle should be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2061; DAI\_EXT\_TF\_R\_2583; DAI\_EXT\_TF\_R\_2589 |
| **ARCH\_SW\_CIL\_0080** | A requested cycle will end if RBTMFL\_SP\_Lvl\_Rq\_ST35 signal is received on CAN with value 0. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2587 |
| **ARCH\_SW\_CIL\_0078** | If value for Bckl\_Sw\_D\_Stat\_ST3 is trasitioning from 1 to 0 and BSR is being executed than any profile activation on API-interface request will be inhibited for NVP\_u8AfterBuckle\* 5 time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2585; DAI\_EXT\_TF\_R\_2957 |

#### Signal RBTMFR\_SP\_Lvl\_Rq\_ST35 (API Request)

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0058** | Signal RBTMFR\_SP\_Lvl\_Rq\_ST35 shall be send though application when it’s needed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1923; DAI\_EXT\_TF\_B\_2062 |
| **ARCH\_SW\_CIL\_0059** | If signal is received with value 1, then tensioning cycle 0 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2062; DAI\_EXT\_TF\_R\_2576; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0060** | If signal is received with value 2, then cycle 18(HWA) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2062; DAI\_EXT\_TF\_R\_2577; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0061** | If signal is received with value 3, then tensioning cycle 1 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2062; DAI\_EXT\_TF\_R\_2578; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0062** | If signal is received with value 4, then tensioning cycle 2 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2062; DAI\_EXT\_TF\_R\_2579; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0063** | If signal is received with value 5, then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2062; DAI\_EXT\_TF\_R\_2580; DAI\_EXT\_TF\_R\_2707; DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0137** | If signal is received with value 6, then tensioning cycle 4 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2713; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0249** | If signal is received with value 6 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2853 |
| **ARCH\_SW\_CIL\_0138** | If signal is received with value 7, then tensioning cycle 5 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2714; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0250** | If signal is received with value 7 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2854 |
| **ARCH\_SW\_CIL\_0139** | If signal is received with value 8, then tensioning cycle 6 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2715; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0251** | If signal is received with value 8 and group KU32\_AEC\_GROUP\_MASK\_EOL\_MAX is set then tensioning cycle 3 shall be requested for **NVP\_u16TimeoutPresafe5** time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_B\_2215; DAI\_EXT\_TF\_R\_2855 |
| **ARCH\_SW\_CIL\_0140** | If signal is received with value 9, then tensioning cycle 7 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2716; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0141** | If signal is received with value 10, then tensioning cycle 8 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2717; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0142** | If signal is received with value 11, then tensioning cycle 9 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2718; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0143** | If signal is received with value 12, then tensioning cycle 10 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2719; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0144** | If signal is received with value 13, then tensioning cycle 11 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2720; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0145** | If signal is received with value 14, then tensioning cycle 12 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2721; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0146** | If signal is received with value 15, then tensioning cycle 13 shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2722; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0226** | If signal is received with value 16, then cycle 20-21(HWA2) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2215; DAI\_EXT\_TF\_R\_2894; |
| **ARCH\_SW\_CIL\_0227** | If signal is received with value 17, then cycle 22-23(HWA3) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2215; DAI\_EXT\_TF\_R\_2895; |
| **ARCH\_SW\_CIL\_0228** | If signal is received with value 18, then cycle 24-25(HWA4) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2215; DAI\_EXT\_TF\_R\_2896; |
| **ARCH\_SW\_CIL\_0229** | If signal is received with value 19, then cycle 26(BSR1) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2215; DAI\_EXT\_TF\_R\_2863 |
| **ARCH\_SW\_CIL\_0230** | If signal is received with value 20, then cycle 27(BSR2) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2215; DAI\_EXT\_TF\_R\_2864 |
| **ARCH\_SW\_CIL\_0231** | If signal is received with value 21, then cycle 28(BSR3) shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2215; DAI\_EXT\_TF\_R\_2865 |
| **ARCH\_SW\_CIL\_0093** | If signal is received with value 22, then tensioning Presafe curve 1, cycle 14, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2062; DAI\_EXT\_TF\_R\_2657; DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0147** | If signal is received with value 23, then tensioning Presafe curve 2, cycle 15, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2723; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0148** | If signal is received with value 24, then tensioning Presafe curve 3, cycle 16, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2724; DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0149** | If signal is received with value 25, then tensioning Presafe curve 4, cycle 17, shall be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2212; DAI\_EXT\_TF\_R\_2725;  DAI\_EXT\_TF\_B\_2215 |
| **ARCH\_SW\_CIL\_0064** | If any other value than 1,2,3,4,5 and 22 is received for signal RBTMFR\_SP\_Lvl\_Rq\_ST35 then no cycle should be requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2062; DAI\_EXT\_TF\_R\_2583; DAI\_EXT\_TF\_R\_2589 |
| **ARCH\_SW\_CIL\_0081** | A requested cycle will end if RBTMFR\_SP\_Lvl\_Rq\_ST35 signal is received on CAN with value 0. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2587 |
| **ARCH\_SW\_CIL\_0077** | If value for Bckl\_Sw\_FP\_Stat\_ST3 is trasitioning from 1 to 0 and BSR is being executed than any profile activation on API-interface request will be inhibited for NVP\_u8AfterBuckle\* 5 time. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2585; DAI\_EXT\_TF\_R\_2957 |

#### Signal PS\_Curve\_FL\_Rq\_HU\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0095** | Signal PS\_Curve\_FL\_Rq\_HU\_ST3 shall be send though application when it’s needed(0,1,2,3) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2027; DAI\_EXT\_TF\_B\_2028; DAI\_EXT\_TF\_B\_2029; DAI\_EXT\_TF\_B\_2094 |

#### Signal PS\_Curve\_FR\_Rq\_HU\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0096** | Signal PS\_Curve\_FR\_Rq\_HU\_ST3 shall be send though application when it’s needed(0,1,2,3) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2033; DAI\_EXT\_TF\_B\_2034; DAI\_EXT\_TF\_B\_2035; DAI\_EXT\_TF\_B\_2095 |

#### Release Algorithm

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0113** | If **Signal Presf\_Lvl\_ST3** is different than 0 than next cycle release for previous presafe requested profiles is inhibitted. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2684; DAI\_EXT\_TF\_R\_2693; |
| **ARCH\_SW\_CIL\_0114** | If **Presf\_Enbl\_ST3 is** different than 0 (disable) than next cycle release for previous presafe requested profiles is inhibitted. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2684 |
| **ARCH\_SW\_CIL\_0115** | If PresfAccelReset\_NotExcd\_ST3 is "2" - Acceleration low (Release Allowed) for at lest NVP\_u8PRESAFEAccelerationTimeout \* 10 ms than smooth release shall be executed (after each PRESAFE cycle request on PRESAFE source (LEVEL 2 – HWA 1 is an exception) configured with next cycle) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2684; DAI\_EXT\_TF\_R\_2692; DAI\_EXT\_TF\_R\_2693; DAI\_EXT\_TF\_R\_2827; DAI\_EXT\_TF\_R\_2912 |
| **ARCH\_SW\_CIL\_0255** | If PresfAccelReset\_NotExcd\_ST3 is "2" - Acceleration low (Release Allowed) for at lest NVP\_u8Haptic1AccelerationTimeout \* 10 ms then smooth release shall be executed (after each LEVEL 2 – hwa 1 cycle request on PRESAFE source configured with next cycle) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2684; DAI\_EXT\_TF\_R\_2692; DAI\_EXT\_TF\_R\_2693; DAI\_EXT\_TF\_R\_2827; DAI\_EXT\_TF\_R\_2912 |
| **ARCH\_SW\_CIL\_0256** | If PresfAccelReset\_NotExcd\_ST3 is "2" - Acceleration low (Release Allowed) for at lest NVP\_u8APIAccelerationTimeout \* 10 ms then smooth release shall be executed (after each cycle request on API source configured with next cycle) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2684; DAI\_EXT\_TF\_R\_2692; DAI\_EXT\_TF\_R\_2693; DAI\_EXT\_TF\_R\_2827; DAI\_EXT\_TF\_R\_2912 |
| **ARCH\_SW\_CIL\_0257** | If PresfAccelReset\_NotExcd\_ST3 is "2" - Acceleration low (Release Allowed) for at lest NVP\_u8BSR1AccelerationTimeout \* 10 ms then smooth release shall be executed (after each BSR 1 ALGO cycle request configured with next cycle) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2684; DAI\_EXT\_TF\_R\_2692; DAI\_EXT\_TF\_R\_2693; DAI\_EXT\_TF\_R\_2827; DAI\_EXT\_TF\_R\_2912 |
| **ARCH\_SW\_CIL\_0259** | If BSR 1 ALGO is executed and PresfAccelReset\_NotExcd\_ST3 is not "2" for NVP\_u8BSR1AccelerationTimeout \* 10 ms then smooth release shall be executed after 60S as an EMERGENCY RELEASE | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2684; DAI\_EXT\_TF\_R\_2692; DAI\_EXT\_TF\_R\_2693; DAI\_EXT\_TF\_R\_2827; DAI\_EXT\_TF\_R\_2912; DAI\_EXT\_TF\_R\_2883 |
| **ARCH\_SW\_CIL\_0116** | If Signal RBTMFL\_SP\_Lvl\_Rq\_ST35 is different than 0 than next cycle release for previous API requested profiles is inhibitted | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2692; DAI\_EXT\_TF\_R\_2693; |
| **ARCH\_SW\_CIL\_0263** | If release profile is inhibitted then it will be postponed until all inhibition cause will be removed | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2940 |
| **ARCH\_SW\_CIL\_2941** | If release profile is aborted then it will be restarted when abortion conditions disappear. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2941 |
| **ARCH\_SW\_CIL\_0269** | If HW Self Protection autotest is failed then release will be inhibited 1 second after autotest has passed. | CIL\_runCANToAppli() | ALV\_EXT\_TF\_R\_1833; ALV\_EXT\_TF\_R\_1834; ALV\_EXT\_TF\_R\_1836; ALV\_EXT\_TF\_R\_1837; ALV\_EXT\_TF\_R\_1838; |

#### Signal PT4\_PTCoor\_PT\_Rdy\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0151** | Signal PT4\_PTCoor\_PT\_Rdy\_ST3 shall be send though application when it’s needed(0,1,3) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2228; DAI\_EXT\_TF\_B\_2229; DAI\_EXT\_TF\_B\_2230 |
| **ARCH\_SW\_CIL\_0187** | If value for PT4\_PTCoor\_PT\_Rdy\_ST3 has not been 1 (is 0 or 3 ) for NVP\_u8PwtDelay\* 5 ms time , BSR 1 Algo from Buckle switch will be inhibitted. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2824; DAI\_EXT\_TF\_R\_2875 |

#### Signal PT4\_PTCoor\_EngStartPN14\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0152** | Signal PT4\_PTCoor\_EngStartPN14\_Stat\_ST3 shall be send though application when it’s needed (0,1,2,3,7) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2303; DAI\_EXT\_TF\_B\_2304; DAI\_EXT\_TF\_B\_2305 |

#### Signal PT4\_PTCoor\_DrvPosn\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0154** | Signal PT4\_PTCoor\_DrvPosn\_Stat\_ST3 shall be send though application when it’s needed (1,2,3,4, 15) . | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2242; |
| **ARCH\_SW\_CIL\_0155** | Reverse Gear Engaged is value 3 for this signal and BSR profiles shall be inhibited / aborted by this. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2243; DAI\_EXT\_TF\_B\_2244; DAI\_EXT\_TF\_R\_2823; DAI\_EXT\_TF\_R\_2830 |
| **ARCH\_SW\_CIL\_0156** | Reverse Gear Disengaged are values 1, 2,4 or 15 (SNA) and also the considered state when CRC.SQC , timeout occurs on this frame. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2243; DAI\_EXT\_TF\_B\_2306; DAI\_EXT\_TF\_B\_2307 |
|  |  |  |  |

#### Signal BeltHdOvr\_FL\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0158** | Signal BeltHdOvr\_FL\_Stat\_ST3 shall be send though application when it’s needed (0,1,2,3) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2253; DAI\_EXT\_TF\_B\_2254 DAI\_EXT\_TF\_B\_2255; |
| **ARCH\_SW\_CIL\_0186** | If values for this signal are different than 0x00= RETRACT (Belt hand over retracted).Then all BSR cycles are inhibitted/aborted if signal is enabled in the coding | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2820; DAI\_EXT\_TF\_B\_2254; DAI\_EXT\_TF\_R\_2837; DAI\_EXT\_TF\_R\_2829; DAI\_EXT\_TF\_R\_2838; DAI\_EXT\_TF\_R\_2831 |

#### Signal BeltHdOvr\_FR\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0160** | Signal BeltHdOvr\_FR\_Stat\_ST3 shall be send though application when it’s needed (0,1,2,3) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2264; DAI\_EXT\_TF\_B\_2265; DAI\_EXT\_TF\_B\_2266 |
| **ARCH\_SW\_CIL\_0185** | If values for this signal are different than 0x00= RETRACT (Belt hand over retracted).Then all BSR cycles are inhibitted/aborted if signal is enabled in the coding | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2820; DAI\_EXT\_TF\_B\_2265; DAI\_EXT\_TF\_R\_2837; DAI\_EXT\_TF\_R\_2829; DAI\_EXT\_TF\_R\_2838; DAI\_EXT\_TF\_R\_2831 |

#### Signal BltSlckDec\_Md\_Rq\_HU\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0237** | Signal BltSlckDec\_Md\_Rq\_HU\_ST3 shall be send though application when it’s needed (0,1,3) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2292; DAI\_EXT\_TF\_B\_2293; DAI\_EXT\_TF\_B\_2294 |

#### Special Priority

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0188** | Priority for PRE-safe cycles or PRE-safe over API Requests and ORC  1 = Profile1 (PRE-SAFE 1) = prio 2  2 = Profile2 (PRE-SAFE 2 - HAPTIC 1) = prio 1  3 = Profile3 (PRE-SAFE 3) = prio 3  4 = Profile4 (PRE-SAFE 4) = prio 4  5 = Profile5 (PRE-SAFE 5) = prio 5  6 = Profile6 (PRE-SAFE 6) = prio 6  7 = Profile7 (PRE-SAFE 7) = prio 7  8 = Profile8 (PRE-SAFE 8) = prio 8 (the highest)  9 = Profile 9 (PRE-SAFE 9) = prio 0 (the lowest)  ... - || - ...  15 = Profile 15 (PRE-SAFE15) = prio 0 (the lowest)  22 = Profile 22 (CURVE1) = prio 0 (the lowest)  ... - || - ...  25 = Profile 25 (CURVE4) = prio 0 (the lowest) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2804; DAI\_EXT\_TF\_R\_2805; DAI\_EXT\_TF\_R\_2815; DAI\_EXT\_TF\_R\_2814; |
| **ARCH\_SW\_CIL\_0189** | Ending conditions and forces shall be continued when switching from one profile to another | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2806; DAI\_EXT\_TF\_R\_2807 |
| **ARCH\_SW\_CIL\_0190** | Extra prio shall be applied : ORC > PRE-safe> BSR > API | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2832 |

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0351** | Com\_ReceiveSignalGroupArray shall be called to read signals group.  Refer to [A2] for more details. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1690; DAI\_EXT\_TF\_B\_1693; DAI\_EXT\_TF\_B\_1697; DAI\_EXT\_TF\_B\_1698; DAI\_EXT\_TF\_B\_1704; DAI\_EXT\_TF\_B\_1705; DAI\_EXT\_TF\_B\_1709; DAI\_EXT\_TF\_B\_1710; DAI\_EXT\_TF\_B\_1714; DAI\_EXT\_TF\_B\_1716; DAI\_EXT\_TF\_B\_1722; DAI\_EXT\_TF\_B\_1723; DAI\_EXT\_TF\_B\_1727; DAI\_EXT\_TF\_B\_1729; DAI\_EXT\_TF\_B\_1732; DAI\_EXT\_TF\_B\_1733; DAI\_EXT\_TF\_B\_1737; DAI\_EXT\_TF\_B\_1738; DAI\_EXT\_TF\_B\_1866; DAI\_EXT\_TF\_B\_1864; DAI\_EXT\_TF\_B\_1869; DAI\_EXT\_TF\_B\_1870; DAI\_EXT\_TF\_B\_1886; DAI\_EXT\_TF\_B\_2360; DAI\_EXT\_TF\_B\_1838; DAI\_EXT\_TF\_B\_1840; |
| **ARCH\_SW\_CIL\_0352** | Write Rte\_CIL\_prrCrashSeverityLevel\_u8PreCrashSeverityLevel to determine the tensioning cycle requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_R\_2380; DAI\_EXT\_TF\_R\_2381; DAI\_EXT\_TF\_R\_2382; DAI\_EXT\_TF\_R\_2614; |
| **ARCH\_SW\_CIL\_0353** | Write Rte\_CIL\_psrCarAcceleration\_b8IsCarAccelerationLow to permit the release cycle to be executed. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2400; DAI\_EXT\_TF\_R\_2401; DAI\_EXT\_TF\_R\_2402; DAI\_EXT\_TF\_R\_2403; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2611; DAI\_EXT\_TF\_R\_2612; DAI\_EXT\_TF\_R\_2546; DAI\_EXT\_TF\_R\_2547; DAI\_EXT\_TF\_R\_2548; |
| **ARCH\_SW\_CIL\_0354** | Write Rte\_CIL\_psrCustomerSpecific\_b8IsCarCrashDetected to start the tensioning cycle requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2400; DAI\_EXT\_TF\_R\_2401; DAI\_EXT\_TF\_R\_2402; DAI\_EXT\_TF\_R\_2403; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2611; DAI\_EXT\_TF\_R\_2612; |
| **ARCH\_SW\_CIL\_0355** | Write Rte\_CIL\_psrCustomerSpecific\_b8PreCrashRequestEnable to start the tensioning cycle requested. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2400; DAI\_EXT\_TF\_R\_2401; DAI\_EXT\_TF\_R\_2402; DAI\_EXT\_TF\_R\_2403; DAI\_EXT\_TF\_R\_2614; DAI\_EXT\_TF\_R\_2611; DAI\_EXT\_TF\_R\_2612 |
| **ARCH\_SW\_CIL\_0356** | Read Rte\_MMG\_psrEnableCycleX\_b8CycleValidity to check validity of each the cycle. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2458; DAI\_EXT\_TF\_R\_2459; DAI\_EXT\_TF\_R\_2775; DAI\_EXT\_TF\_B\_1945; |
| **ARCH\_SW\_CIL\_0357** | Write Rte\_Write\_psrBuckleDoorSwitch\_u8BuckleSwitch to transmit to application status of buckle switch. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2493; DAI\_EXT\_TF\_R\_2477; DAI\_EXT\_TF\_R\_2494; DAI\_EXT\_TF\_R\_2478; |
| **ARCH\_SW\_CIL\_0358** | Write Rte\_Write\_psrCustomerSpecific\_u8HapticRequest to transmit to application the haptic request. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2512; DAI\_EXT\_TF\_R\_2561; DAI\_EXT\_TF\_R\_2507; |
| **ARCH\_SW\_CIL\_0359** | MMG\_runCheckModeStatus shall be called to get the inhibition conditions for all cycles  All cycles:   * DTC B228B49 - ECU is defective; * B210D00: Local voltage of the power supply is too low; * B210E00: Local voltage of the power supply is too high. * Measured KL30 battery voltage is outside Normal Operating Range range | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2665; DAI\_EXT\_TF\_R\_2667; DAI\_EXT\_TF\_R\_2668; DAI\_EXT\_TF\_R\_2677; DAI\_EXT\_TF\_R\_2696; DAI\_EXT\_TF\_R\_2581; DAI\_EXT\_TF\_R\_2440; DAI\_EXT\_TF\_R\_2482; DAI\_EXT\_TF\_R\_2747; DAI\_EXT\_TF\_R\_2776; |
| **ARCH\_SW\_CIL\_0360** | MMG\_runCheckModeStatus shall be called to get the inhibition conditions for tensioning cycles (and haptic cycle):   * DTC B228B4B: Temperature to high at standby mode or during tensioning. * DTC B228B96: EOL Low&High * DTC B220400:The control unit is incorrectly configured * Implausible data error (SQC/CRC) received on Bckl\_Sw\_Fx\_Stat\_ST3 * DTC B228B71:"Control unit REVAS has a malfunction.The actuator is blocked" * U015187: Communication malfunction of the CAN Message Bckl\_Sw\_Fx\_Stat\_ST3 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2666; DAI\_EXT\_TF\_R\_2526; DAI\_EXT\_TF\_R\_2678; DAI\_EXT\_TF\_R\_2696; DAI\_EXT\_TF\_R\_2582; DAI\_EXT\_TF\_R\_2748; DAI\_EXT\_TF\_R\_2749; DAI\_EXT\_TF\_R\_2777; DAI\_EXT\_TF\_R\_2945 |
| **ARCH\_SW\_CIL\_0372** | ERH\_GetAecGroupsStatus shall be called to get the inhibition for tensioning cycle because of Steering configuration:  - B220400:The control unit is incorrectly configured | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2746; |
| **ARCH\_SW\_CIL\_0361** | MMG\_runCheckModeStatus shall be called to get the inhibition conditions for BSR cycles:   * DTC B228B97: EOL Comfort | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2704; DAI\_EXT\_TF\_R\_2705; DAI\_EXT\_TF\_R\_2868 |
| **ARCH\_SW\_CIL\_0362** | MMG\_runCheckModeStatus shall be called to get the abortion conditions for all cycles  All cycles:   * DTC B228B49 - ECU is defective; | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2674; DAI\_EXT\_TF\_R\_2544; DAI\_EXT\_TF\_R\_2590; DAI\_EXT\_TF\_R\_2496; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2801; DAI\_EXT\_TF\_R\_2835; DAI\_EXT\_TF\_R\_2833 |
| **ARCH\_SW\_CIL\_0363** | MMG\_runCheckModeStatus shall be called to get the abortion conditions for tensioning cycles (and haptic cycle and BSR):   * DTC B228B4B: Temperature to high at standby mode or during tensioning. * DTC 0xB228B16: Terminal 30 measurement undervoltage * DTC 0xB228B17: Terminal 30 measurement overvoltage * Measured KL30 battery voltage is outside Extended Operating Range * Implausible data error (CRC/SQC)received on Bckl\_Sw\_Fx\_Stat\_ST3 * U015187: Communication malfunction of the CAN Message Bckl\_Sw\_Fx\_Stat\_ST3 * B228B71:"Control unit REVAS has a malfunction.The actuator is blocked" | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2672; DAI\_EXT\_TF\_R\_2675; DAI\_EXT\_TF\_R\_2676; DAI\_EXT\_TF\_R\_2545; DAI\_EXT\_TF\_R\_2591; DAI\_EXT\_TF\_R\_2500; DAI\_EXT\_TF\_R\_2755; DAI\_EXT\_TF\_R\_2761; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2802; DAI\_EXT\_TF\_R\_2835;DAI\_EXT\_TF\_R\_2946;  DAI\_EXT\_TF\_R\_2951 |
| **ARCH\_SW\_CIL\_0364** | NVP\_stVehicleEquipmentData shall be read to get the coding configuration:   * Each PRE-SAFE cycle enabling inhibition * PRESAFE2 - Haptik request on left coding enabled on left; * PRESAFE2 Haptic request on right coding enabled on right * ORC request is disabled * API request is disabled * Belt handover availability * BSR enabled | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2783; DAI\_EXT\_TF\_R\_2787; DAI\_EXT\_TF\_R\_2841; DAI\_EXT\_TF\_R\_2784; DAI\_EXT\_TF\_R\_2786; DAI\_EXT\_TF\_R\_2785; DAI\_EXT\_TF\_R\_2788; DAI\_EXT\_TF\_R\_2843; DAI\_EXT\_TF\_R\_2837; DAI\_EXT\_TF\_R\_2819; DAI\_EXT\_TF\_R\_2838; DAI\_EXT\_TF\_R\_2869 |
| **ARCH\_SW\_CIL\_0365** | NVP\_stVehicleEquipmentData shall be read to get the coding configuration:   * PRE-SAFE enabling inhibition | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2787 |
| **ARCH\_SW\_CIL\_0366** | ERH\_runGetAecGroupsStatus shall be called to get the inhibition and abortion conditions for PRE\_SAFE and request tensioning cycles:   * U042708: Implausible data received on IgnStat\_ST * U016887: Communication with the electronic ignition lock has a malfunction. The message is missing. * U041608: Implausible data received on PresfAct\_Adj\_ST3 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2751; DAI\_EXT\_TF\_R\_2752; DAI\_EXT\_TF\_R\_2753; DAI\_EXT\_TF\_R\_2765; DAI\_EXT\_TF\_R\_2764; DAI\_EXT\_TF\_R\_2766; DAI\_EXT\_TF\_R\_2834; DAI\_EXT\_TF\_R\_2763; |
| **ARCH\_SW\_CIL\_0367** | ERH\_runGetAecGroupsStatus shall be called to get the inhibition conditions for PRE-SAFE6/7/8 request cycles:   * B228BFA:"Control unit REVAS has a malfunction. maximum number of Pre-Crash tensionning cycles has been reached | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2741; DAI\_EXT\_TF\_R\_2778; DAI\_EXT\_TF\_R\_2796; DAI\_EXT\_TF\_R\_2745 |
| **ARCH\_SW\_CIL\_0368** | ERH\_runGetAecGroupsStatus shall be called to get the abortion conditions for PRE\_SAFE request tensioning cycles :   * U012287: Communication malfunction of the CAN Message PresfAct\_Adj\_ST3 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2767; DAI\_EXT\_TF\_R\_2834 |
| **ARCH\_SW\_CIL\_0369** | ERH\_runGetAecGroupsStatus shall be called to get the inhibition and abortion conditions for ORC request tensioning cycles:   * U042708: Implausible data received on IgnStat\_ST * U016887: Communication with the electronic ignition lock has a malfunction. The message is missing. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2778; DAI\_EXT\_TF\_R\_2792; DAI\_EXT\_TF\_R\_2793; DAI\_EXT\_TF\_R\_2796; DAI\_EXT\_TF\_R\_2812; DAI\_EXT\_TF\_R\_2810; DAI\_EXT\_TF\_R\_2811 |
| **ARCH\_SW\_CIL\_0370** | ERH\_GetAecStatus shall be called to get the TIMEOUT ERROR ON API frame or U188A08- Implausible data on API frame that will abort/inhibit all profiles requested on API | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2836; DAI\_EXT\_TF\_R\_2835; DAI\_EXT\_TF\_R\_2955; DAI\_EXT\_TF\_R\_2956 |
| **ARCH\_SW\_CIL\_0371** | MMG\_runCheckModeStatus shall be called to get the abortion conditions for tensioning cycles (and haptic cycle and BSR):   * U020187: Communication with control unit ''Left rear door'' has a malfunction. The message is missing * U020287: Communication with control unit ''Right rear door'' has a malfunction. The message is missing. * U0111587: Communication with control unit ''Drivetrain'' has a malfunction. The message is missing. * U044286: Implausible data were received from control unit ''Drivetrain''. There is an incorrect signal. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2821; DAI\_EXT\_TF\_R\_2822; DAI\_EXT\_TF\_R\_2825; DAI\_EXT\_TF\_R\_2826 |
| **ARCH\_SW\_CIL\_0301** | Coding enable or Vehicle Equipment are read from NVP: NVP\_stVehicleEquipmentData | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2837; DAI\_EXT\_TF\_R\_2841; DAI\_EXT\_TF\_R\_2843; DAI\_EXT\_TF\_R\_2783; DAI\_EXT\_TF\_R\_2841; DAI\_EXT\_TF\_R\_2784; DAI\_EXT\_TF\_R\_2785; DAI\_EXT\_TF\_R\_2843; DAI\_EXT\_TF\_R\_2837; DAI\_EXT\_TF\_R\_2819; DAI\_EXT\_TF\_R\_2838 |
| **ARCH\_SW\_CIL\_0302** | Rte\_Write\_psrPreSafeLvl\_u8PreSafeLvl Will be wriiten by CIL in order to inform about the Presafe LEVEL Request (signal Presf\_Lvl) | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2733 |
| **ARCH\_SW\_CIL\_0303** | Read Rte\_BFE\_psrExecutedCycle\_u8CycleNumber shall be read to get executed cycle number. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2804; DAI\_EXT\_TF\_R\_2805; DAI\_EXT\_TF\_R\_2815; DAI\_EXT\_TF\_R\_2814; DAI\_EXT\_TF\_R\_2806; DAI\_EXT\_TF\_R\_2807; DAI\_EXT\_TF\_R\_2832 |
| **ARCH\_SW\_CIL\_0304** | Read Rte\_Read\_prrStepNumber\_u8StepNumber shall be read to get executed cycle number. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1910; DAI\_EXT\_TF\_B\_1702; DAI\_EXT\_TF\_R\_2382; DAI\_EXT\_TF\_B\_2210 |
| **ARCH\_SW\_CIL\_0305** | Rte\_Write\_psrCustomerSpecific\_u8TriggerRequest Will be wriiten by CIL in order to inform about Source of the cycle Request : No request , PRE, API , ORC | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2733 |
| **ARCH\_SW\_CIL\_0306** | Rte\_CIL\_psrCustomerSpecific\_b8SignalRelInhibition will be wriiten by CIL in order to inform about Inhibition of Release profile due to CAN signals or ORC request. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2844; |
| **ARCH\_SW\_CIL\_0307** | Rte\_Write\_psrCANInputBlockStatus\_b8NVMBlockStatus will be written on TRUE to notify MMG that value for BeltslackMode has been updated. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_J\_162; DAI\_EXT\_TF\_B\_2308; DAI\_EXT\_TF\_B\_2310 |
| **ARCH\_SW\_CIL\_0268** | Rte\_Write\_psrCANInputBlockStatus\_b8NVMBlockStatus will be written on TRUE to notify NVM that value for CIL\_u8PSCurve has been updated. |  | DAI\_EXT\_TF\_J\_163;  DAI\_EXT\_TF\_B\_2430;  DAI\_EXT\_TF\_B\_2432 |
| **ARCH\_SW\_CIL\_0308** | NVP\_u8HapticType(8 bits) will be check to get how the requested profile is configured: 0 fixed Duration ; 1 Non fixed Duration.  NVP\_u8HapticType (8 bits):   * HWA1 = bit 0 * HWA2 = bit 1 * HWA3 = bit3 * HWA4 = bit4 | CIL\_runCANToAppli() | DAI\_EXT\_TF\_R\_2927;  DAI\_EXT\_TF\_R\_2930; DAI\_EXT\_TF\_R\_2933; DAI\_EXT\_TF\_R\_2936; DAI\_EXT\_TF\_R\_2939 |
| **ARCH\_SW\_CIL\_0422** | Rte\_Write\_CIL\_AC\_CommunicationInteractionLayer\_psrIgnitionStatus\_b8TriggerIgnitionStatus will send TRUE to notify ERH that signal ISw\_Stat\_ST3 is set to ON and will be written to FALSE if signal is set to OFF |  |  |
| **ARCH\_SW\_CIL\_0428** | Rte\_Write\_CIL\_AC\_CommunicationInteractionLayer\_psrIgnitionStatus\_b8TriggerIgnitionStatusEnableStorageCondition will send TRUE to notify MMG that signal ISw\_Stat\_ST3 is set to ON otherwise will send FALSE. |  |  |
| **ARCH\_SW\_CIL\_0429** | Rte\_Write\_CIL\_AC\_CommunicationInteractionLayer\_psrTransportationModeStatus\_b8TransportationModeStatus will send TRUE if TransMdSwStatSignal is 0x00 or 0x01 to notify ERH for storage condition. |  |  |
| **ARCH\_SW\_CIL\_0530** | Rte\_Write\_CIL\_AC\_CommunicationInteractionLayer\_psrEngStartStatus\_b8EngStartStatus will send TRUE if PT4\_PTCoor\_EngStartPN14\_Stat\_ST3 is 0x00 or 0x03 to notify ERH for storage condition else will send FALSE. |  |  |
| **ARCH\_SW\_CIL\_0431** | Rte\_Write\_CIL\_AC\_CommunicationInteractionLayer\_psrProdModeStatus\_b8TriggerProdModeStatus will send TRUE if PT4\_PTCoor\_EngStartPN14\_Stat\_ST3 is 0x00 to notify ERH for storage condition else will send FALSE. |  |  |
|  |  |  |  |

## CIL\_runAppliToCAN

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_runAppliToCAN (void) | | | |
| **Object** | | | |
| This function shall handle all CAN signals to transmit on CAN. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Periodic 10 ms  Not reentrant | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0010; ARCH\_SW\_CIL\_0014; ARCH\_SW\_CIL\_0011; ARCH\_SW\_CIL\_0016; ARCH\_SW\_CIL\_0012; ARCH\_SW\_CIL\_0019; ARCH\_SW\_CIL\_0013; ARCH\_SW\_CIL\_0020; ARCH\_SW\_CIL\_0015; ARCH\_SW\_CIL\_0021; ARCH\_SW\_CIL\_0558; ARCH\_SW\_CIL\_0559; ARCH\_SW\_CIL\_0065; ARCH\_SW\_CIL\_0066; ARCH\_SW\_CIL\_0067; ARCH\_SW\_CIL\_0068; ARCH\_SW\_CIL\_0069; ARCH\_SW\_CIL\_0070; ARCH\_SW\_CIL\_0071; ARCH\_SW\_CIL\_0072; ARCH\_SW\_CIL\_0073; ARCH\_SW\_CIL\_0083; ARCH\_SW\_CIL\_0084; ARCH\_SW\_CIL\_0085; ARCH\_SW\_CIL\_0266; ARCH\_SW\_CIL\_0267 | | | |

### Data flow / Parameters

The table below specifies input / output data related to this runnable.

#### Signal PS\_Curve\_FL/FR\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0011** | Signal **PS\_Curve\_FL/FR\_Stat\_ST3** shall be written and send to CAN | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1747; DAI\_EXT\_TF\_B\_1748; DAI\_EXT\_TF\_B\_1749; DAI\_EXT\_TF\_B\_1750; DAI\_EXT\_TF\_B\_1803; DAI\_EXT\_TF\_B\_1804; DAI\_EXT\_TF\_B\_1805; DAI\_EXT\_TF\_B\_1806; DAI\_EXT\_TF\_B\_1803; |
| **ARCH\_SW\_CIL\_0016** | Signal shall be send with the exact same value read as Input for Curve Signal. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2072; DAI\_EXT\_TF\_B\_2073 |
| **ARCH\_SW\_CIL\_0266** | Signal **PS\_Curve\_FL/FR\_Stat\_ST3** shall be computed based on signal  PS\_Curve\_FL/FR\_Rq\_HU\_ST3 using NVP\_u8PSCurveConfig:   * STAGE\_OFF when Request is STAGE\_OFF (0) * STAGE1 When request is STAGE1 (1). * STAGE2 When request is STAGE2 (2).   Last valid value when request is SNA is received on **PS\_Curve\_FL/FR\_Rq\_HU\_ST3** over the current power cycle | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2430;  DAI\_EXT\_TF\_B\_2432;  DAI\_EXT\_TF\_J\_163 |
| **ARCH\_SW\_CIL\_0267** | Signal PS\_Curve\_FL/FR\_Stat\_ST3 shall be set to ON" in Default ROM | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2429;  DAI\_EXT\_TF\_B\_2431;  DAI\_EXT\_TF\_J\_163 |

*Note: ECU Location : FL – Front Left & FR – Front Right.*

#### Signal RBTM FL/FR Actv\_Lvl\_ST35

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0066** | Signal **RBTM \_FL/FR** **Actv\_Lvl\_ST35** shall be written and send to CAN | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1933; DAI\_EXT\_TF\_B\_2071; DAI\_EXT\_TF\_B\_1943; DAI\_EXT\_TF\_B\_1951; DAI\_EXT\_TF\_B\_1950; DAI\_EXT\_TF\_B\_1949; DAI\_EXT\_TF\_B\_1948; DAI\_EXT\_TF\_B\_1947 |
| **ARCH\_SW\_CIL\_0067** | The signal **RBTM \_FL/FR** **Actv\_Lvl\_ST35** shall be initialized with the value 0x3F(“SNA-Init”). | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1943; DAI\_EXT\_TF\_B\_2188 |
| **ARCH\_SW\_CIL\_0068** | If BSR1(cycle 26) is executed (and his next cycle ) then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x13 = “BSR1” no matter the source of the request: API interface, PRE-SAFE interface. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1951 |
| **ARCH\_SW\_CIL\_0069** | If HAPTIC1(cycle 18 or cycle 19) (and his next cycle ) is executed then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x02 = “HAPTIC1” no matter the source of the request: API interface, PRE-SAFE interface. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1950 |
| **ARCH\_SW\_CIL\_0070** | If PRE-SAFE1 is executed (cycle 0) (and his next cycle ) then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be equal to 0x01=“PRE-SAFE 1” no matter the source of the request: API interface, PRE SAFE interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2139 |
| **ARCH\_SW\_CIL\_0083** | If PRE-SAFE3 is executed (cycle 1) (and his next cycle ) then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be equal to 0x03 = “PRE-SAFE 3” n matter the source of the request: API interface, PRE SAFE interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2139 |
| **ARCH\_SW\_CIL\_0084** | If PRE-SAFE4 is executed (cycle 2) (and his next cycle ) then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be equal to 0x04 = “PRE-SAFE 4” no matter the source of the request: API interface, PRE SAFE interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2139 |
| **ARCH\_SW\_CIL\_0085** | If PRE-SAFE5 is executed (cycle 3) (and his next cycle ) then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be equal to 0x05=“PRE-SAFE 5” no matter the source of the request: API interface, PRE SAFE interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2139 |
| **ARCH\_SW\_CIL\_0164** | If PRE-SAFE6 is executed (cycle 4) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x06=“PRE-SAFE 6” no matter the source of the request: API interface, PRE SAFE interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2189 |
| **ARCH\_SW\_CIL\_0165** | If PRE-SAFE7 is executed (cycle 5) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x07=“PRE-SAFE 7” no matter the source of the request: API interface, PRE SAFE interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2190 |
| **ARCH\_SW\_CIL\_0166** | If PRE-SAFE8 is executed (cycle 6) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x08=“PRE-SAFE 8” no matter the source of the request: API interface, PRE SAFE interface, Diagnostic request , **ORC req.** | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2191 |
| **ARCH\_SW\_CIL\_0167** | If PRE-SAFE9 is executed (cycle 7) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x09=“PRE-SAFE 9” no matter the source of the request: API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2192 |
| **ARCH\_SW\_CIL\_0168** | If PRE-SAFE10 is executed (cycle 8) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x0A=“PRE-SAFE 10” no matter the source of the request: API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2193 |
| **ARCH\_SW\_CIL\_0169** | If PRE-SAFE11 is executed (cycle 9) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x0B=“PRE-SAFE 11” no matter the source of the request: API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2197 |
| **ARCH\_SW\_CIL\_0170** | If PRE-SAFE12 is executed (cycle 10) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x0C=“PRE-SAFE 12” no matter the source of the request: API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2196 |
| **ARCH\_SW\_CIL\_0171** | If PRE-SAFE13 is executed (cycle 11) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x0D=“PRE-SAFE 13” no matter the source of the request: API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2195 |
| **ARCH\_SW\_CIL\_0172** | If PRE-SAFE14 is executed (cycle 12) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x0E=“PRE-SAFE 14” no matter the source of the request: API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2194 |
| **ARCH\_SW\_CIL\_0173** | If PRE-SAFE15 is executed (cycle 13) (and his next cycle ) then RBTM \_FL/FR Actv\_Lvl\_ST35 should be equal to 0x0F=“PRE-SAFE 15” no matter the source of the request: API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2198 |
| **ARCH\_SW\_CIL\_0232** | If PRE-SAFE16 - HAPTIC2(cycle 20 or cycle 21) (and his next cycle) is executed then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x10 = “HAPTIC2” no matter the source of the request: API interface, diagnostic | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2204 |
| **ARCH\_SW\_CIL\_0233** | If PRE-SAFE17 – HAPTIC3 (cycle 22 or cycle 23) (and his next cycle ) is executed then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x11 = “HAPTIC3” no matter the source of the request: API interface, diagnostic | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2205 |
| **ARCH\_SW\_CIL\_0234** | If PRE-SAFE18 – HAPTIC4 (cycle 24 or cycle 25) (and his next cycle ) is executed then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x12 = “HAPTIC4” no matter the source of the request: API interface, diagnostic | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2206 |
| **ARCH\_SW\_CIL\_0235** | If BSR2(cycle 27) is executed (and his next cycle ) then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x14 = “BSR2” no matter the source of the request: API interface, diagnostic | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2202 |
| **ARCH\_SW\_CIL\_0236** | If BSR3(cycle 28) is executed (and his next cycle) then **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x15 = “BSR3” no matter the source of the request: API interface, diagnostic | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2203 |
| **ARCH\_SW\_CIL\_0097** | If PRE-SAFE\_CURVE1 is executed (cycle 14) (and his next cycle) then **RBTM \_FL/FR Actv\_Lvl\_ST35** should be equal to 0x16 no matter the source of the request : API interface,Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1946; |
| **ARCH\_SW\_CIL\_0174** | If PRE-SAFE\_CURVE2 is executed (cycle 15) (and his next cycle) then **RBTM \_FL/FR Actv\_Lvl\_ST35** should be equal to 0x17 no matter the source of the request : API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2199 |
| **ARCH\_SW\_CIL\_0175** | If PRE-SAFE\_CURVE3 is executed (cycle 16) (and his next cycle) then **RBTM \_FL/FR Actv\_Lvl\_ST35** should be equal to 0x18 no matter the source of the request : API interface, Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2201 |
| **ARCH\_SW\_CIL\_0176** | If PRE-SAFE\_CURVE4 is executed (cycle 17) (and his next cycle) then **RBTM \_FL/FR Actv\_Lvl\_ST35** should be equal to 0x19 no matter the source of the request : API interface,Diagnostic request. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2200 |
| **ARCH\_SW\_CIL\_0071** | If a belt profile requested is not programed (cycle or step not valid) **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x3E = “Rejected” no matter the source of the request: API interface, PRE-SAFE interface. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1947; DAI\_EXT\_TF\_B\_1945 |
| **ARCH\_SW\_CIL\_0072** | If a belt profile requested is undefined or not implemented **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x3E = “Rejected” no matter the source of the request: API interface, PRE-SAFE interface. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1948 |
| **ARCH\_SW\_CIL\_0073** | If a belt profile requested can not be executed no matter the inhibition cause the **RBTM \_FL/FR** **Actv\_Lvl\_ST35** should be 0x3E = “Rejected”. “Rejected” will be transmitted as long the request is active. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1949; DAI\_EXT\_TF\_B\_2207 |
| **ARCH\_SW\_CIL\_0177** | If a belt profile requested is aborted the RBTM \_FL/FR Actv\_Lvl\_ST35 should be 0x3E = “Rejected”. “Rejected” will be transmitted as long the request is active. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2349 |
| **ARCH\_SW\_CIL\_0178** | For ORC request or BSR trigger from signal Buckle 0x3e shall not be transmitted. ( 0x00 instead) | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2351 |

*Note: ECU Location : FL – Front Left & FR – Front Right.*

#### Signal RBTM\_FL/FR\_Disp\_Rq\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0012** | Signal **RBTM\_FL/FR\_Disp\_Rq\_ST3** shall be written and send to CAN | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1752; DAI\_EXT\_TF\_B\_1753; DAI\_EXT\_TF\_B\_1755; DAI\_EXT\_TF\_B\_1809; DAI\_EXT\_TF\_B\_1810 |
| **ARCH\_SW\_CIL\_0019** | Value for signal RBTM\_FL/FR\_Disp\_Rq\_ST3 will be 1 = SRV\_DISP\_RQ for 3s after Rid0302 is requested or if a DTCS with warning indicator is qualified, otherwise will be set to 0 = IDLE.  See MMG and DIA. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1754; DAI\_EXT\_TF\_B\_1755; DAI\_EXT\_TF\_B\_1812; DAI\_EXT\_TF\_B\_1811; DAI\_EXT\_TF\_B\_2145; DAI\_EXT\_TF\_B\_2146;  DAI\_EXT\_TF\_B\_2417;  DAI\_EXT\_TF\_B\_2418 |
| **ARCH\_SW\_CIL\_0209** | If “Display message” is not enabled in Vehicle Equipment 0x311, then Value for signal RBTM\_FL/FR\_Disp\_Rq\_ST3 will be set to 0 = IDLE | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2417; DAI\_EXT\_TF\_B\_2418; |

*Note: ECU Location: FL – Front Left & FR – Front Right.*

#### Signal RBTM\_FL/FR\_Tgl\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0013** | Signal **RBTM\_FL/FR\_Tgl\_ST3** shall be written and send to CAN | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1757; DAI\_EXT\_TF\_B\_1758; DAI\_EXT\_TF\_B\_1759; DAI\_EXT\_TF\_B\_1760; DAI\_EXT\_TF\_B\_1815; DAI\_EXT\_TF\_B\_1816; DAI\_EXT\_TF\_B\_1815; DAI\_EXT\_TF\_B\_1816; |
| **ARCH\_SW\_CIL\_0020** | Value for signal RBTM\_FL/FR\_Tgl\_ST3 will be 0(default) or 1. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1759; DAI\_EXT\_TF\_B\_1760; DAI\_EXT\_TF\_B\_1817; DAI\_EXT\_TF\_B\_1818 |

*Note: ECU Location: FL – Front Left & FR – Front Right.*

#### Signal RBTMxy\_SP\_ActvClient\_ST35

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0098** | Signal **RBTMxy\_SP\_ActvClient\_ST35** shall be written and send to CAN | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1937; DAI\_EXT\_TF\_B\_2063; |
| **ARCH\_SW\_CIL\_0099** | When no profile is executed the signal **RBTMxy\_SP\_ActvClient\_ST35 shall be set to 0.** | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1938 |
| **ARCH\_SW\_CIL\_0100** | When executed cycle is requested on PRESAFE, signal **RBTMxy\_SP\_ActvClient\_ST35 shall be 1,** as long as profile and next cycle is executed. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2096 |
| **ARCH\_SW\_CIL\_0179** | When executed cycle is requested on ORC ( via Impact ro type), signal **RBTMxy\_SP\_ActvClient\_ST35 shall be 2,** as long as profile and next cycle is executed. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2098 |
| **ARCH\_SW\_CIL\_0101** | When executed cycle is requested on API, signal **RBTMxy\_SP\_ActvClient\_ST35 shall be 3,** as long as profile and next cycle is executed. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2097 |
| **ARCH\_SW\_CIL\_0102** | When executed cycle is BSR 1 on Algo, signal **RBTMxy\_SP\_ActvClient\_ST35 shall be 4,** as long as profile and next cycle is executed. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2099; DAI\_EXT\_TF\_B\_2208 |
| **ARCH\_SW\_CIL\_0103** | When executed cycle is requested on another source , signal **RBTMxy\_SP\_ActvClient\_ST35 shall be 6,** as long as profile and next cycle is executed. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2100 |
| **ARCH\_SW\_CIL\_0104** | Signal RBTMxy\_SP\_ActvClient\_ST35 shall be 0x0F dring initialization phase | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2101 |

#### Signal RBTMxy\_SP\_FctPrecond\_Stat\_ST35

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0105** | Signal **RBTMxy\_SP\_FctPrecond\_Stat\_ST35** shall be written and send to CAN | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2067; DAI\_EXT\_TF\_B\_2068; DAI\_EXT\_TF\_B\_2070; |
| **ARCH\_SW\_CIL\_0106** | Signal should be set to 0 if no setting condition is present. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2070; DAI\_EXT\_TF\_B\_2114; |
| **ARCH\_SW\_CIL\_0112** | Bit 1 from signal RBTMxy\_SP\_FctPrecond\_Stat\_ST35 shall be set to 1 if Belt Handover\_extended\_TRUE; Bit 1 will always be 0 because Seatbelt\_Handover\_extended is not a precondition for API | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2115;  DAI\_EXT\_TF\_B\_2103; |
| **ARCH\_SW\_CIL\_0107** | Bit 0 from signal **RBTMxy\_SP\_FctPrecond\_Stat\_ST35 shall be set to 1** if belt is not buckled. (Bckl\_SW\_D/FP\_STAT\_St3) | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2115; DAI\_EXT\_TF\_B\_2102; |
| **ARCH\_SW\_CIL\_0108** | Bit 2 from signal **RBTMxy\_SP\_FctPrecond\_Stat\_ST35 shall be set to 1** if DTC B228B4B is set (Overtemperature group error) | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2115; DAI\_EXT\_TF\_B\_2104; |
| **ARCH\_SW\_CIL\_0180** | Bit 3 from signal **RBTMxy\_SP\_FctPrecond\_Stat\_ST35 shall be set to 1** when DTC B228B49: ECU is defective is qualified. Or ⦁ B228B71: System is defective | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2105; DAI\_EXT\_TF\_B\_2111 |
| **ARCH\_SW\_CIL\_0109** | Bit 4 from signal **RBTMxy\_SP\_FctPrecond\_Stat\_ST35** **shall be set to 1** if DTC:  - KL30 is outside Normal Voltage range  B228B16 - Terminal 30 measurement undervoltage OR  B228B17 -Terminal 30 measurement is set. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2115; DAI\_EXT\_TF\_B\_2416; DAI\_EXT\_TF\_B\_2113; |
| **ARCH\_SW\_CIL\_0110** | Bit 5 from signal **RBTMxy\_SP\_FctPrecond\_Stat\_ST35 shall be set to 1** if DTC:   * U015187 - Communication with the supplemental restraint system (SRS) has a malfunction OR * U045208 - Implausible data were received from the supplemental restraint system is set. * U188987- Timeout of Central Gateway message (0x30E = SBeltTens\_SP\_Lvl\_ST3) * U188A86 - Implausible data has been received from control unit "Central controller of main microcontroller". * wrong value SNA, FLT of Bckl\_Sw\_xy\_Stat\_ST3 signal (see TF\_R) * Wrong value SNA of RBTMxy\_SP\_Lvl\_Rq\_ST35 ignal (see TF\_R) | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2115; DAI\_EXT\_TF\_B\_2413; |
| **ARCH\_SW\_CIL\_0111** | Bit 6 from signal **RBTMxy\_SP\_FctPrecond\_Stat\_ST35 shall be set to 1** if profile requested is not implemente/disabled from variant coding or if EOL high limit or EOL comfort limit or EOL MAX limit has been reched. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2115;DAI\_EXT\_TF\_B\_2108;  DAI\_EXT\_TF\_B\_2109;  DAI\_EXT\_TF\_B\_2113;  DAI\_EXT\_TF\_B\_2435 |
| **ARCH\_SW\_CIL\_0564** | Bit 7 (Other) of **RBTMxy\_SP\_FctPrecond\_Stat\_ST35** signal shall be set to "1=TRUE" if:   * none of the up conditions are detected * profile can not be executed (is inhibited or aborted) * the source of the request is API | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2115; DAI\_EXT\_TF\_B\_2110 |
| **ARCH\_SW\_CIL\_0565** | If an unfulfilled function conditions can only be tested when a belt profile is requested or a belt profile is active then the coresponding bit of RBTMxy\_SP\_FctPrecond\_Stat\_ST35 signal remains set as long as the request is present. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2113 |

#### Signal BltSlckDec\_Md\_FL/FR\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0015** | Signal **BltSlckDec\_Md\_FL/FR\_Stat\_ST3** shall be written and send to CAN | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1766; DAI\_EXT\_TF\_B\_1767; DAI\_EXT\_TF\_B\_1768; DAI\_EXT\_TF\_B\_1769; DAI\_EXT\_TF\_B\_1831; DAI\_EXT\_TF\_B\_1832; DAI\_EXT\_TF\_B\_1833 |
| **ARCH\_SW\_CIL\_0238** | Signal BltSlckDec\_Md\_XX\_Stat\_ST3 shall be computed based on signal  BltSlckDec\_Md\_Rq\_HU\_ST3 using NVP\_u8BeltSlkDecMode:   * Off when Request is OFF (0) * On When request is ON (1).   Last valid value when request is SNA or timeout is received on frame **BeltAdj\_UI\_Set\_Rq\_ST3.** | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1766; DAI\_EXT\_TF\_B\_1767; DAI\_EXT\_TF\_B\_1768; DAI\_EXT\_TF\_B\_1769; DAI\_EXT\_TF\_B\_2149; DAI\_EXT\_TF\_B\_2150; DAI\_EXT\_TF\_B\_2151; DAI\_EXT\_TF\_B\_2159; DAI\_EXT\_TF\_B\_2412; DAI\_EXT\_TF\_B\_2308; DAI\_EXT\_TF\_B\_2310;  DAI\_EXT\_TF\_B\_2158; DAI\_EXT\_TF\_B\_2152; DAI\_EXT\_TF\_B\_2160 |
| **ARCH\_SW\_CIL\_0239** | When signal BltSlckDec\_Md\_XX\_Stat\_ST3 is trasitioning from OFF to ON then cycle 26 (BSR1) shall be executed after NVP\_u8AfterMd \* 5 time. | CIL\_runAppliToCAN()  CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_1768; DAI\_EXT\_TF\_R\_2872; DAI\_EXT\_TF\_R\_2872; DAI\_EXT\_TF\_B\_2294; DAI\_EXT\_TF\_R\_2873 |
| **ARCH\_SW\_CIL\_0260** | If value for BltSlckDec\_Md\_XX\_Stat\_ST3 is not 1 (is 0,3) then BSR1 CYCLE by Algo shall be inhibitted. | CIL\_runCANToAppli() | DAI\_EXT\_TF\_B\_2292; DAI\_EXT\_TF\_B\_2293; DAI\_EXT\_TF\_B\_2294; DAI\_EXT\_TF\_R\_2872; DAI\_EXT\_TF\_R\_2874 |

*Note: ECU Location: FL – Front Left & FR – Front Right.*

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0558** | Com\_SendSignal shall be called to ensure signal IfActive Transmission Type  Refer to [A2] for more details. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1766; DAI\_EXT\_TF\_B\_1767; DAI\_EXT\_TF\_B\_1757; DAI\_EXT\_TF\_B\_1758; DAI\_EXT\_TF\_B\_1752; DAI\_EXT\_TF\_B\_1753; DAI\_EXT\_TF\_B\_1747; DAI\_EXT\_TF\_B\_1748; DAI\_EXT\_TF\_B\_1803; DAI\_EXT\_TF\_B\_1804; DAI\_EXT\_TF\_B\_1809; DAI\_EXT\_TF\_B\_1810; DAI\_EXT\_TF\_B\_1815; DAI\_EXT\_TF\_B\_1816; DAI\_EXT\_TF\_B\_1803; DAI\_EXT\_TF\_B\_1804; DAI\_EXT\_TF\_B\_1809; DAI\_EXT\_TF\_B\_1810; DAI\_EXT\_TF\_B\_1815; DAI\_EXT\_TF\_B\_1816; |
| **ARCH\_SW\_CIL\_0559** | Read Rte\_BFE\_psrExecutedCycle\_u8CycleNumber shall be read to get executed cycle number. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1749; |
| **ARCH\_SW\_CIL\_0560** | Function ERH\_runGetAecGroupsStatus shall be called to get the specific group (DTC) status with warning indicator active.  B228B49 -There is an internal electrical fault.  B228B4B - There is a fault due to overtemperature  B228B71 - The actuator is blocked  B228B96 - There is an internal component fault.  B220400-The control unit is incorrectly configured.  U012287- Timeout of PRE-SAFE message  U041608 - Implausible data of PRE-SAFE message  U015187- Timeout of Buckle message  U045208 - Implausible data of Buckle message / ORC message  U042708- Implausible data of Ignition message | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2107; DAI\_EXT\_TF\_B\_2106; DAI\_EXT\_TF\_B\_2104; DAI\_EXT\_TF\_I\_1940 |
| **ARCH\_SW\_CIL\_0561** | Read Rte\_DIA\_psePresafeDisplay\_b8TriggerPreSafeRequestStatus shall be read to get if Presafe display 0302 is requested and 3s have passed. | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_1812; DAI\_EXT\_TF\_B\_1811 |
| **ARCH\_SW\_CIL\_0562** | Call DIA\_runGetDiagRequestCycle to read if a profile is requested on diagnostic service | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2100 |
| **ARCH\_SW\_CIL\_0563** | NVP\_stVehicleEquipmentData shall be read to get the coding configuration:   * Display message enabled | CIL\_runAppliToCAN() | DAI\_EXT\_TF\_B\_2417; DAI\_EXT\_TF\_B\_2418; |

## CIL\_Autotest\_Presafe\_CheckTimeoutError

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_Presafe\_CheckTimeoutError (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for PRESAFE frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0800; ARCH\_SW\_CIL\_0423; ARCH\_SW\_CIL\_0425 | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0800** | CIL shall check if timeout is present for Presafe frame. | CIL\_Autotest\_Presafe\_CheckTimeoutError () | DAI\_EXT\_TF\_H\_2347; |

## CIL\_Autotest\_Buckle\_CheckTimeoutError

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_Buckle\_CheckTimeoutError (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for BUCKLE frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0801; ARCH\_SW\_CIL\_0423; ARCH\_SW\_CIL\_0425 | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0801** | CIL shall check if timeout is present for Buckle frame | CIL\_Autotest\_Buckle\_CheckTimeoutError () | DAI\_EXT\_TF\_H\_2348; |

## CIL\_Autotest\_CheckImplausibleData\_Presafe

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_Presafe(u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check CRC/SQC errors for PRESAFE frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0086; ARCH\_SW\_CIL\_0087; ARCH\_SW\_CIL\_0001; ARCH\_SW\_CIL\_0088; ARCH\_SW\_CIL\_0089; | | | |

### Data flow / Parameters

#### Signal CRC\_PresfAct\_Adj\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0086** | Signal **CRC\_PresfAct\_Adj\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Presafe () | DAI\_EXT\_TF\_B\_1960; DAI\_EXT\_TF\_B\_1961; DAI\_EXT\_TF\_B\_2086 |

#### Signal SQC\_PresfAct\_Adj\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0087** | Signal **SQC\_PresfAct\_Adj\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Presafe () | DAI\_EXT\_TF\_B\_1975; DAI\_EXT\_TF\_B\_1976; DAI\_EXT\_TF\_B\_2087 |

#### Signal Presf\_Enbl\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0088** | Signal **Presf\_Enbl\_ST3** shall be evaluated (SNA) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Presafe () | DAI\_EXT\_TF\_B\_1706; |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0089** | CIL shall check if CRC or SQC error is present for Presafe frame | CIL\_Autotest\_CheckImplausibleData\_Presafe () | DAI\_EXT\_TF\_H\_2268; DAI\_EXT\_TF\_H\_2280; |

## CIL\_Autotest\_CheckImplausibleData\_Ignition

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_Ignition (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check CRC/SQC errors for Ignition frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0191; ARCH\_SW\_CIL\_0192; ARCH\_SW\_CIL\_0193; ARCH\_SW\_CIL\_0194; ARCH\_SW\_CIL\_0005; | | | |

### Data flow / Parameters

#### Signal CRC\_Ign\_Stat\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0191** | Signal **CRC\_Ign\_Stat \_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Ignition () | DAI\_EXT\_TF\_B\_1981; DAI\_EXT\_TF\_B\_1982; DAI\_EXT\_TF\_B\_2088 |

#### Signal SQC\_PresfAct\_Adj\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0192** | Signal **SQC\_** **Ign\_Stat \_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Ignition () | DAI\_EXT\_TF\_B\_1987; DAI\_EXT\_TF\_B\_1988; DAI\_EXT\_TF\_B\_2089 |

#### Signal ISw\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0193** | Signal **ISw\_Stat\_ST3**shall be evaluated (SNA) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Ignition () | DAI\_EXT\_TF\_B\_1724; |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0194** | CIL shall check if CRC or SQC error is present for Ignition frame | CIL\_Autotest\_CheckImplausibleData\_Igniton () | DAI\_EXT\_TF\_H\_2272; DAI\_EXT\_TF\_H\_2281; |

## CIL\_Autotest\_CheckImplausibleData\_Buckle

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_Buckle(u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check CRC/SQC errors for Buckle frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0195; ARCH\_SW\_CIL\_0196; ARCH\_SW\_CIL\_0197; ARCH\_SW\_CIL\_0198; ARCH\_SW\_CIL\_0007 | | | |

### Data flow / Parameters

#### Signal CRC\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0195** | Signal **CRC\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Buckle () | DAI\_EXT\_TF\_B\_2010; DAI\_EXT\_TF\_B\_2011; DAI\_EXT\_TF\_B\_2084 |

#### Signal SQC\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0196** | Signal **SQC\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Buckle () | DAI\_EXT\_TF\_B\_2015; DAI\_EXT\_TF\_B\_2016; DAI\_EXT\_TF\_B\_2085 |

#### Signal Bckl\_Sw\_FP\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0197** | Signal **Bckl\_Sw\_FP\_Stat\_ST3** shall be evaluated (SNA/FLT) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Buckle () | DAI\_EXT\_TF\_B\_1739; |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0198** | CIL shall check if CRC or SQC error is present for Presafe frame | CIL\_Autotest\_CheckImplausibleData\_Buckle () | DAI\_EXT\_TF\_H\_2276; DAI\_EXT\_TF\_H\_2282; |

## CIL\_Autotest\_CheckImplausibleData\_ORC

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_ORC(u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check CRC/SQC errors for the Impact3 ORC frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest (crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0410; ARCH\_SW\_CIL\_0411; ARCH\_SW\_CIL\_500; | | | |

### Data flow / Parameters

#### Signal CRC\_ORC\_Impact3\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0410** | Signal **CRC\_ORC\_Impact3\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_ORC () | DAI\_EXT\_TF\_B\_2039; DAI\_EXT\_TF\_B\_2040; DAI\_EXT\_TF\_B\_2090; |

#### Signal SQC\_ORC\_Impact3\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0411** | Signal **SQC\_ORC\_Impact3\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_ ORC () | DAI\_EXT\_TF\_B\_2045; DAI\_EXT\_TF\_B\_2046; DAI\_EXT\_TF\_B\_2091; |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_500** | CIL module shall check if CRC or SQC error is present for **Impact3\_Pr5\_ST3** | CIL\_Autotest\_CheckImplausibleData\_Buckle () | DAI\_EXT\_TF\_H\_2338; |

## CIL\_Autotest\_CheckTimeoutError\_Ignition

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckTimeoutError\_Ignition (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for IGNITION frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0199; | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0199** | CIL shall check if timeout is present for Ignition frame. | CIL\_Autotest\_CheckTimeoutError\_Ignition () | DAI\_EXT\_TF\_H\_2286; |

## CIL\_Autotest\_CheckTimeoutError\_Powertrain

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckTimeoutError\_Powertrain (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for Pwertrain frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0200; ARCH\_SW\_CIL\_0423; ARCH\_SW\_CIL\_0425 | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0200** | CIL shall check if timeout is present for Powertrain frame. | CIL\_Autotest\_CheckTimeoutError\_Powertrain () | DAI\_EXT\_TF\_H\_2330; |

## CIL\_Autotest\_CheckTimeoutError\_Belthandover\_L

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckTimeoutError\_ Belthandover\_L (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for Belthandover\_L frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0201; ARCH\_SW\_CIL\_0202; ARCH\_SW\_CIL\_0423; ARCH\_SW\_CIL\_0425 | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0201** | CIL shall check if timeout is present for Belthandover\_L frame. | CIL\_Autotest\_CheckTimeoutError\_ Belthandover\_L () | DAI\_EXT\_TF\_H\_2342; |
| **ARCH\_SW\_CIL\_0202** | CIL shall check if BeldHandOver\_Availability is enabled or not | CIL\_Autotest\_CheckTimeoutError\_ Belthandover\_L () | DAI\_EXT\_TF\_H\_2403; |

## CIL\_Autotest\_CheckTimeoutError\_Belthandover\_R

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckTimeoutError\_ Belthandover\_R (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for Belthandover Right frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0203; ARCH\_SW\_CIL\_0204; ARCH\_SW\_CIL\_0423; ARCH\_SW\_CIL\_0425 | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0203** | CIL shall check if timeout is present for Belthandover Right frame. | CIL\_Autotest\_CheckTimeoutError\_ Belthandover\_R () | DAI\_EXT\_TF\_H\_2346; |
| **ARCH\_SW\_CIL\_0204** | CIL shall check if BeldHandOver\_Availability is enabled or not | CIL\_Autotest\_CheckTimeoutError\_ Belthandover\_R () | DAI\_EXT\_TF\_H\_2405; |

## CIL\_Autotest\_CheckTimeoutError\_API

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckTimeoutError\_API (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for API frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0205; | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0205** | CIL shall check if timeout is present for API frame. | CIL\_Autotest\_CheckTimeoutError\_API () | DAI\_EXT\_TF\_H\_2414; |

## CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Rdy

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Rdy(u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check if SNA is received for PT4\_PTCoor\_DrvPosn\_Stat\_ST3; | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0206; ARCH\_SW\_CIL\_0208; | | | |

### Data flow / Parameters

#### Signal Signal PT4\_PTCoor\_PT\_Rdy\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0206** | Signal PT4\_PTCoor\_PT\_Rdy\_ST3 shall be evaluated to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Rdy () | DAI\_EXT\_TF\_B\_2230; DAI\_EXT\_TF\_B\_2229; DAI\_EXT\_TF\_B\_2228; |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0208** | CIL shall check if implausible data error is present for Powertrain frame | CIL\_Autotest\_CheckImplausibleData\_Powertrain () | DAI\_EXT\_TF\_H\_2334; |

## CIL\_Autotest\_CheckImplausibleData\_ORC

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_ORC(u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check CRC/SQC errors for ORC frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0214; ARCH\_SW\_CIL\_0215; | | | |

### Data flow / Parameters

#### Signal CRC \_ORC\_Impact3\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0214** | Signal **CRC \_ORC\_Impact3\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_ORC () | DAI\_EXT\_TF\_B\_2039; DAI\_EXT\_TF\_B\_2040; DAI\_EXT\_TF\_B\_2090; |

#### Signal SQC\_ ORC\_Impact3\_Pr5\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0215** | Signal **SQC\_ ORC\_Impact3\_Pr5\_ST3** shall be evaluated (with help form E2E) to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_ORC () | DAI\_EXT\_TF\_B\_2045; DAI\_EXT\_TF\_B\_2046; DAI\_EXT\_TF\_B\_2091; |

## CIL\_Autotest\_CheckSteeringConfiguration

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckSteeringConfiguration (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check the steering configuration | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0216; | | | |

### Data flow / Parameters

#### Signal EVC\_List03\_StStyle\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0216** | Signal **EVC\_List03\_StStyle\_ST3** shall be evaluated to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckSteeringConfiguration () | DAI\_EXT\_TF\_B\_2275; DAI\_EXT\_TF\_B\_2276; DAI\_EXT\_TF\_B\_2277; DAI\_EXT\_TF\_H\_2409; |

## CIL\_Autotest\_CheckTimeoutError\_ OdoSpeedometer

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckTimeoutError\_ OdoSpeedometer (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for OdoSpeedometer frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0412; | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0412** | CIL shall check if timeout is present for DI\_OdoSpeedometer\_ST3 frame | CIL\_Autotest\_CheckTimeoutError\_ OdoSpeedometer () | DAI\_EXT\_TF\_H\_2455; |

## CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Drv

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Drv(u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check if SNA is received for PT4\_PTCoor\_DrvPosn\_Stat\_ST3; | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0413; ARCH\_SW\_CIL\_0414; | | | |

### Data flow / Parameters

#### Signal Signal PT4\_PTCoor\_DrvPosn\_Stat\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0413** | PT4\_PTCoor\_DrvPosn\_Stat\_ST3 shall be evaluated to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Drv() | DAI\_EXT\_TF\_B\_2243; DAI\_EXT\_TF\_B\_2242; DAI\_EXT\_TF\_B\_2307; |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0414** | CIL shall check if implausible data error is present for Powertrain frame | CIL\_Autotest\_CheckImplausibleData\_Powertrain\_Drv() | DAI\_EXT\_TF\_H\_2471; |

## CIL\_Autotest\_CheckVariantCoding

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckVariantCoding (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check the variant coding values. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0415; | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0415** | VariantCoding values shall be evaluated to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckVariantCoding() | DAI\_EXT\_TF\_H\_2467; |

## CIL\_Autotest\_CheckImplausibleData\_Api

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckImplausibleData\_Api(u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check implausible data for: SBeltTens\_SP\_Lvl\_ST3 | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( crc/sqc error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0416; ARCH\_SW\_CIL\_0417; | | | |

### Data flow / Parameters

#### Signal Signal SBeltTens\_SP\_Lvl\_ST3

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0416** | SBeltTens\_SP\_Lvl\_ST3 shall be evaluated to set the specified autotest to OK/NOK. | CIL\_Autotest\_CheckImplausibleData\_API() | DAI\_EXT\_TF\_B\_2092; DAI\_EXT\_TF\_B\_2093 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0417** | CIL shall check if implausible data error is present for API frame | CIL\_Autotest\_CheckImplausibleData\_API() | DAI\_EXT\_TF\_H\_2463; |

## CIL\_Autotest\_CheckTimeoutError\_ BeltAdj

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_Autotest\_CheckTimeoutError\_ BeltAdj (u8TestResultType \* pu8TestResult) | | | |
| **Object** | | | |
| This function shall be called periodically to check Timeout for BeltAdj frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0430; | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0430** | CIL shall check if timeout is present for BeltAdj\_UI\_Set\_Rq\_ST3 frame | CIL\_Autotest\_CheckTimeoutError\_ BeltAdj () | DAI\_EXT\_TF\_H\_2478; |

## CIL\_ExtTest\_Pres\_TimeoutError

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_ExtTest\_Pres\_TimeoutError(void) | | | |
| **Object** | | | |
| Function called when Timeout Error is received on Diag\_ST3 frame | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pu8TestResult | u8TestResultType | IN/OUT | Test result of autotest ( timeout error) |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by ATM | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0433; | | | |

### Data flow / Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0433** | CIL shall check if timeout is present for Diag\_ST3 frame | CIL\_ExtTest\_Pres\_TimeoutError () | DAI\_EXT\_TF\_B\_2428; |

## CIL\_runManageMeasurementFrame

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| void CIL\_runManageMeasurementFrame(void) | | | |
| **Object** | | | |
| This function shall prepare and request the measurement frame transmition.  Preparation will consist in:   * Selecting the block to sent * Filling in the measurement frame with the information related to the selected block | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Synchronous server operation  Not reentrant | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0700; ARCH\_SW\_CIL\_0711; ARCH\_SW\_CIL\_0712; ARCH\_SW\_CIL\_0713; ARCH\_SW\_CIL\_0714; ARCH\_SW\_CIL\_0715; ARCH\_SW\_CIL\_0716; ARCH\_SW\_CIL\_0717; ARCH\_SW\_CIL\_0718; ARCH\_SW\_CIL\_0719; ARCH\_SW\_CIL\_0720; ARCH\_SW\_CIL\_0721; ARCH\_SW\_CIL\_0722; ARCH\_SW\_CIL\_0723; ARCH\_SW\_CIL\_0724; ARCH\_SW\_CIL\_0725; ARCH\_SW\_CIL\_0726; ARCH\_SW\_CIL\_0727; ARCH\_SW\_CIL\_0728; ARCH\_SW\_CIL\_0729; ARCH\_SW\_CIL\_0750; ARCH\_SW\_CIL\_0751; ARCH\_SW\_CIL\_0752; ARCH\_SW\_CIL\_0753; ARCH\_SW\_CIL\_0754; ARCH\_SW\_CIL\_0755; ARCH\_SW\_CIL\_0756; ARCH\_SW\_CIL\_0757; ARCH\_SW\_CIL\_0758; ARCH\_SW\_CIL\_0759; ARCH\_SW\_CIL\_0760; ARCH\_SW\_CIL\_0761; ARCH\_SW\_CIL\_0762; ARCH\_SW\_CIL\_0763; ARCH\_SW\_CIL\_0764; ARCH\_SW\_CIL\_0765; ARCH\_SW\_CIL\_0766; ARCH\_SW\_CIL\_0767; ARCH\_SW\_CIL\_0768; ARCH\_SW\_CIL\_0769; ARCH\_SW\_CIL\_0770; ARCH\_SW\_CIL\_0771; ARCH\_SW\_CIL\_0772; ARCH\_SW\_CIL\_0701; ARCH\_SW\_CIL\_0702; ARCH\_SW\_CIL\_0703; | | | |

### Data flow / Parameters

The table below specifies input / output data related to this runnable

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0701** | Parameter NVP\_au8MeasFrameBlockConfig shall be read. | CIL\_ManageMFTransmission() | DAI\_EXT\_TF\_B\_2387; DAI\_EXT\_TF\_B\_2388 |
| **ARCH\_SW\_CIL\_0702** | Parameter NVP\_u8MeasFrameTiming shall be read. | CIL\_ManageMFTransmission() | DAI\_EXT\_TF\_B\_2387; DAI\_EXT\_TF\_B\_2388; ALV\_EXT\_TF\_J\_142; ALV\_EXT\_TF\_J\_143 |
| **ARCH\_SW\_CIL\_0711** | If selected, the content of the measurement frame - block #1 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_397; ALV\_EXT\_TF\_B\_399;  ALV\_EXT\_TF\_B\_403; ALV\_EXT\_TF\_B\_405; ALV\_EXT\_TF\_B\_410; ALV\_EXT\_TF\_B\_413; ALV\_EXT\_TF\_B\_414; ALV\_EXT\_TF\_B\_418; ALV\_EXT\_TF\_B\_419 |
| **ARCH\_SW\_CIL\_0712** | If selected, the content of the measurement frame - block #2 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_425; ALV\_EXT\_TF\_B\_426; ALV\_EXT\_TF\_B\_435; ALV\_EXT\_TF\_B\_436; ALV\_EXT\_TF\_B\_441 |
| **ARCH\_SW\_CIL\_0713** | If selected, the content of the measurement frame - block #3 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0714** | If selected, the content of the measurement frame - block #4 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() | . |
| **ARCH\_SW\_CIL\_0715** | If selected, the content of the measurement frame - block #5 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_492; ALV\_EXT\_TF\_B\_493; ALV\_EXT\_TF\_B\_497; ALV\_EXT\_TF\_B\_498; ALV\_EXT\_TF\_B\_502; ALV\_EXT\_TF\_B\_503; ALV\_EXT\_TF\_B\_504; ALV\_EXT\_TF\_B\_505; ALV\_EXT\_TF\_B\_508; ALV\_EXT\_TF\_B\_509; ALV\_EXT\_TF\_B\_510; ALV\_EXT\_TF\_B\_511; ALV\_EXT\_TF\_B\_514; ALV\_EXT\_TF\_B\_515; ALV\_EXT\_TF\_B\_516; ALV\_EXT\_TF\_B\_517 |
| **ARCH\_SW\_CIL\_0716** | If selected, the content of the measurement frame - block #6 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_522; ALV\_EXT\_TF\_B\_523; ALV\_EXT\_TF\_B\_527; ALV\_EXT\_TF\_B\_528; ALV\_EXT\_TF\_B\_529; ALV\_EXT\_TF\_B\_532; ALV\_EXT\_TF\_B\_533; ALV\_EXT\_TF\_B\_535 |
| **ARCH\_SW\_CIL\_0717** | If selected, the content of the measurement frame - block #7 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_540; ALV\_EXT\_TF\_B\_541; ALV\_EXT\_TF\_B\_542; ALV\_EXT\_TF\_B\_545; ALV\_EXT\_TF\_B\_546; ALV\_EXT\_TF\_B\_547; ALV\_EXT\_TF\_B\_548; ALV\_EXT\_TF\_B\_551; ALV\_EXT\_TF\_B\_552; ALV\_EXT\_TF\_B\_553; ALV\_EXT\_TF\_B\_554; ALV\_EXT\_TF\_B\_558 |
| **ARCH\_SW\_CIL\_0718** | If selected, the content of the measurement frame - block #8 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0719** | If selected, the content of the measurement frame - block #9 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0720** | If selected, the content of the measurement frame - block #10 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0721** | If selected, the content of the measurement frame - block #11 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_647; ALV\_EXT\_TF\_B\_648; ALV\_EXT\_TF\_B\_652; ALV\_EXT\_TF\_B\_653; ALV\_EXT\_TF\_B\_657; ALV\_EXT\_TF\_B\_659; ALV\_EXT\_TF\_B\_663; ALV\_EXT\_TF\_B\_664 |
| **ARCH\_SW\_CIL\_0722** | If selected, the content of the measurement frame - block #12 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0723** | If selected, the content of the measurement frame - block #13 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0724** | If selected, the content of the measurement frame - block #14 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0725** | If selected, the content of the measurement frame - block #15 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0726** | If selected, the content of the measurement frame - block #16 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0727** | If selected, the content of the measurement frame - block #17 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0728** | If selected, the content of the measurement frame - block #18 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0729** | If selected, the content of the measurement frame - block #20 shall be encoded and provided to CAN.  Refer to [A2] for more details. | CIL\_ManageMFTransmission() |  |

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0750** | [AdcIf\_runGetMotor\_Ip\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448155066) shall be called to get the sampled value of the current provided by the ‘P’ half bridge.  (block 01, 11) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_413; ALV\_EXT\_TF\_B\_414; ALV\_EXT\_TF\_B\_652; ALV\_EXT\_TF\_B\_653 |
| **ARCH\_SW\_CIL\_0751** | [AdcIf\_runGetMotor\_In\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448155114) shall be called to get the sampled value of the current provided by the ‘N’ half bridge.  (block 01, 11) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_418; ALV\_EXT\_TF\_B\_419; ALV\_EXT\_TF\_B\_647; ALV\_EXT\_TF\_B\_648 |
| **ARCH\_SW\_CIL\_0752** | [AdcIf\_runGetKL30\_V\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448156930) shall be called to get the sample value of the battery voltage | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0753** | [AdcIf\_runGetHBS\_A\_V\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448156262) shall be called to get the voltage of the HBS ‘A’ monitoring signal.  (block 07) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_545; ALV\_EXT\_TF\_B\_546; ALV\_EXT\_TF\_B\_547; ALV\_EXT\_TF\_B\_548 |
| **ARCH\_SW\_CIL\_0754** | [AdcIf\_runGetHBS\_B\_V\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448156326) shall be called to get the voltage of the HBS ‘B’ monitoring signal.  (block 07) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_551; ALV\_EXT\_TF\_B\_552; ALV\_EXT\_TF\_B\_553; ALV\_EXT\_TF\_B\_554 |
| **ARCH\_SW\_CIL\_0755** | [AdcIf\_runGetHS1\_V\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448157072) shall be called to get the sampled value of the HS\_SW signal | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0756** | [ATM\_runGetTestResult](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Ref410741888) shall be called to get the status of specific auto-tests.  (block 06 – HES autotest) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_527; ALV\_EXT\_TF\_B\_528; ALV\_EXT\_TF\_B\_529; |
| **ARCH\_SW\_CIL\_0757** | [BMM\_runGetPositionFromT0\_deg](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448155934) shall be called to get the seat belt position since the last ECU start-up.  (block 05;06) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_514; ALV\_EXT\_TF\_B\_515; ALV\_EXT\_TF\_B\_516; ALV\_EXT\_TF\_B\_514; ALV\_EXT\_TF\_B\_532; ALV\_EXT\_TF\_B\_533; ALV\_EXT\_TF\_B\_535 |
| **ARCH\_SW\_CIL\_0758** | [BMM\_runGetPositionFromMinPos\_mm](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Ref410370313) shall be called to get the minimal seat belt position since the last ECU start-up. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0759** | [BMM\_runGetSpeed\_deg\_s](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448156109) shall be called to get the seat belt speed in deg/s.  (block 06 ) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_522; ALV\_EXT\_TF\_B\_523 |
| **ARCH\_SW\_CIL\_0760** | [BMM\_runGetPositionRange\_mm](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448157350) shall be called to get the range of the belt position measured since the last ECU start-up | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0761** | [PAL\_runReadMotorCurrentInA](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk412209573) shall be called to get the motor current in Amps. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0762** | [PAL\_runReadMotorCurrentInmA](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk424738645) shall be called to get the motor current in mAmps.  (block 02;05,11) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_435; ALV\_EXT\_TF\_B\_436; ALV\_EXT\_TF\_B\_497; ALV\_EXT\_TF\_B\_498; ALV\_EXT\_TF\_B\_663; ALV\_EXT\_TF\_B\_664 |
| **ARCH\_SW\_CIL\_0763** | [PAL\_runGetPWMOrder](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk412205833) shall be called to get the current applied motor power order.  (block 05) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_492; ALV\_EXT\_TF\_B\_493 |
| **ARCH\_SW\_CIL\_0764** | [PMP\_runGetBatteryVoltage\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448155343) shall be called to get the battery voltage  (block 02 ) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_425; ALV\_EXT\_TF\_B\_426 |
| **ARCH\_SW\_CIL\_0765** | [PMP\_runGetMotorVp\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448155512) shall be called to get the voltage on the ‘P’ pin of the motor.  (block 05) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_502; ALV\_EXT\_TF\_B\_503; ALV\_EXT\_TF\_B\_504; ALV\_EXT\_TF\_B\_505; |
| **ARCH\_SW\_CIL\_0766** | [PMP\_runGetMotorVn\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448155552) shall be called to get the voltage on the ‘N’ pin of the motor.  (block 05) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_508; ALV\_EXT\_TF\_B\_509; ALV\_EXT\_TF\_B\_510; ALV\_EXT\_TF\_B\_511; |
| **ARCH\_SW\_CIL\_0767** | [PMP\_runGetFilteredTemperature\_deg](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448156155) shall be called to get the filtered value in °C of the temperature  (block 07) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_540; ALV\_EXT\_TF\_B\_541; ALV\_EXT\_TF\_B\_542 |
| **ARCH\_SW\_CIL\_0768** | [PMP\_runGetFilteredTemperature](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk438016318) shall be called to get the value of the low reference voltage in V. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0769** | [PMP\_runGetHS1Level\_(Ext)\*](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448161172) shall be called to get the value of the HS\_SW voltage in V. | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0770** | [PMP\_runGetDeficiencyLevel](file:///C:\Sandboxes\AUDI_TR6\Phase_01\View_Development\Architectures\Application\Description\Associated_Documents\CIL%20-%20Design%20Interface%20Description_AUDI.docx#_Hlk448161172) shall be called to get the calculated deficiency level | CIL\_ManageMFTransmission() |  |
| **ARCH\_SW\_CIL\_0771** | Rte\_BFE\_psrExecutedCycle\_u8CycleNumber shall be read in order to determine the current cycle.  (block 01) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_397; ALV\_EXT\_TF\_B\_398 |
| **ARCH\_SW\_CIL\_0772** | Rte\_BFE\_psrExecutedStep\_u8StepNumber shall be read in order to determine the current step.  (block 01,11) | CIL\_ManageMFTransmission() | ALV\_EXT\_TF\_B\_403; ALV\_EXT\_TF\_B\_405; ALV\_EXT\_TF\_B\_657; ALV\_EXT\_TF\_B\_659; |

## CIL\_runGetInputSignalPresafeRecorderInfo

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, CIL\_AC\_CommunicationInteractionLayer\_CODE) CIL\_runGetInputSignalPresafeRecorderInfo(REC\_PreSafeRecInputType\* pustPreSafeRecInput) | | | |
| **Object** | | | |
| This function shall be called by MMG to compute PRESAFE RECORDER block information. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| pustPreSafeRecInput | REC\_PreSafeRecInputType | IN/OUT | Variable to get the infos for PREsafe Recorder |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
|  | | | |

## CIL\_ComNotification\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3\_dihag5a55iw4h5qk539fx0kup\_4c948f24\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_Bckl\_Sw\_Fx\_Stat\_Pr5\_ST3\_dihag5a55iw4h5qk539fx0kup\_4c948f24\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for Buckle is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0400; ARCH\_SW\_CIL\_0424 | | | |

## CIL\_ComNotification\_Ign\_Stat\_Pr5\_ST3\_csgs1dv6drms80o1i9p49677w\_7bdae87d\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_Ign\_Stat\_Pr5\_ST3\_csgs1dv6drms80o1i9p49677w\_7bdae87d\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for Ignition is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0401; | | | |

### Data flow / Parameters

The table below specifies input / output data related to this runnable

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0450** | cil\_u8NewIgnPowerCycle variable shall be used to detect new ingnition power cycle |  |  |

## CIL\_ComNotification\_ORC\_Impact2\_Pr5\_ST3\_b9l09rrslyv7vj3o92j69irnd\_2f5ae8ac\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_ORC\_Impact2\_Pr5\_ST3\_b9l09rrslyv7vj3o92j69irnd\_2f5ae8ac\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for Impact2 is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0402; | | | |

## CIL\_ComNotification\_ORC\_Impact3\_Pr5\_ST3\_c4pqnkonfjwv3uiohsxhe9dwu\_1bc89a3a\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_ORC\_Impact3\_Pr5\_ST3\_c4pqnkonfjwv3uiohsxhe9dwu\_1bc89a3a\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for Impact3 is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0403; ARCH\_SW\_CIL\_0213 | | | |

## CIL\_ComNotification\_PresfAct\_Adj\_Pr5\_ST3\_2joar1a41xrgjqab60epnbplm\_25141edc\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_PresfAct\_Adj\_Pr5\_ST3\_2joar1a41xrgjqab60epnbplm\_25141edc\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for Presafe is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0404; | | | |

## CIL\_ComNotification\_SBeltTens\_SP\_Lvl\_Pr5\_ST3\_4tqpkri37441o5ht9g9ekmyzh\_4719328f\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_SBeltTens\_SP\_Lvl\_Pr5\_ST3\_4tqpkri37441o5ht9g9ekmyzh\_4719328f\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for API is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0405; | | | |

## CIL\_ComNotification\_PT4\_PTCoor4\_Pr5\_ST3\_af4fxb1ykieox3itqdfzs0kpb\_2277a854\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_PT4\_PTCoor4\_Pr5\_ST3\_af4fxb1ykieox3itqdfzs0kpb\_2277a854\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for PT Coor 4 is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0406; ARCH\_SW\_CIL\_0424 | | | |

## CIL\_ComNotification\_BeltHdOvr\_FR\_Stat\_ST3\_0eefd507\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_BeltHdOvr\_FR\_Stat\_ST3\_0eefd507\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal for Belt Handover Stat Front Right is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0407; ARCH\_SW\_CIL\_0424 | | | |

## CIL\_ComNotification\_BeltHdOvr\_FL\_Stat\_ST3\_3489841d\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_BeltHdOvr\_FL\_Stat\_ST3\_3489841d\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal for Belt Handover Stat Front Left is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0408; ARCH\_SW\_CIL\_0424 | | | |

## CIL\_ComNotification\_EVC\_CfgList\_01\_08\_Pr5\_ST3\_co3q1mwsf7pwxo2ix5jryc04x\_3a43a00a\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_EVC\_CfgList\_01\_08\_Pr5\_ST3\_co3q1mwsf7pwxo2ix5jryc04x\_3a43a00a\_Rx (void) | | | |
| **Object** | | | |
| This function shall be called by Com when the signal group for EVC Config List 01-08 is received on Can. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0409; ARCH\_SW\_CIL\_0419; | | | |

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0419** | Rte\_Write\_psrCANInputBlockStatus\_b8NVMBlockStatus shall be called to save the las valid value of the signal. () |  | DAI\_EXT\_TF\_H\_2474; |

## CIL\_ComNotification\_DI\_Odo\_Pr5\_ST3\_e68xmtlkywxgxsdwekdjjhw3t\_eb760b63\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_DI\_Odo\_Pr5\_ST3\_e68xmtlkywxgxsdwekdjjhw3t\_eb760b63\_Rx | | | |
| **Object** | | | |
| Function called when a new DI\_Odo\_Pr5\_ST3 signal is received. | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0420; | | | |

## CIL\_ComNotification\_BltSlckDec\_Md\_Rq\_HU\_ST3\_64a95ccf\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_BltSlckDec\_Md\_Rq\_HU\_ST3\_64a95ccf\_Rx | | | |
| **Object** | | | |
| Function called when a new BltSlckDec signal is received | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0421; | | | |

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0421** | Rte\_Read\_CIL\_AC\_CommunicationInteractionLayer\_R\_BltSlckDec\_Md\_Rq\_HU\_ST3\_BltSlckDec\_Md\_Rq\_HU\_ST3 | CIL\_ComNotification\_BltSlckDec\_Md\_Rq\_HU\_ST3\_64a95ccf\_Rx() | DAI\_EXT\_TF\_B\_2027; DAI\_EXT\_TF\_B\_2029; DAI\_EXT\_TF\_B\_2021; |

## CIL\_ComNotification\_ProdMd\_Stat\_ST3\_be2b5dfe\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_ProdMd\_Stat\_ST3\_be2b5dfe\_Rx | | | |
| **Object** | | | |
| Function called when a new BltSlckDec signal is received | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0421; | | | |

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0426** | Rte\_Read\_CIL\_AC\_CommunicationInteractionLayer\_R\_PN14\_ProdMd\_Stat\_ST3\_PN14\_ProdMd\_Stat\_ST3 | CIL\_ComNotification\_ProdMd\_Stat\_ST3\_be2b5dfe\_Rx () |  |

## CIL\_ComNotification\_PN14\_TransMd\_Stat\_ST3\_2208da29\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_PN14\_TransMd\_Stat\_ST3\_2208da29\_Rx | | | |
| **Object** | | | |
| Function called when a new BltSlckDec signal is received | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0421; | | | |

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0427** | Rte\_Read\_CIL\_AC\_CommunicationInteractionLayer\_R\_PN14\_TransMd\_Stat\_ST3\_PN14\_TransMd\_Stat\_ST3 | CIL\_ComNotification\_PN14\_TransMd\_Stat\_ST3\_2208da29\_Rx () |  |

## CIL\_ComNotification\_ExtTest\_Pres\_ST3\_7e50ca1d\_Rx

### Definition

|  |  |  |  |
| --- | --- | --- | --- |
| **Prototype** | | | |
| FUNC(void, COM\_APPL\_CODE) CIL\_ComNotification\_ExtTest\_Pres\_ST3\_7e50ca1d\_Rx | | | |
| **Object** | | | |
| Function called when a new ExtTest\_Pres signal is received | | | |
| **Parameters** | | | |
| Name | Type | Direction | Description |
| NA | NA | NA | NA |
| **Returned value** | | | |
| Name | Description | | |
| NA | NA | | |
| **Dynamic aspect** | | | |
| Called by Com | | | |
| **Requirements** | | | |
| ARCH\_SW\_CIL\_0432; | | | |

### Called functions

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Linked Runnable** | **Source** |
| **ARCH\_SW\_CIL\_0432** | Rte\_Write\_CIL\_AC\_CommunicationInteractionLayer\_psrExtTestPres\_b8ExtTesterPresent | CIL\_ComNotification\_ExtTest\_Pres\_ST3\_7e50ca1d\_Rx () |  |

# MCU resources

The following requirements on resource consumption objectives apply to the module/package:

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Criteria** | **Levels/Tolerances** | **Source** |
| ARCH\_SW\_CIL\_9997 | The ROM size consumed by this component shall not exceed 11K bytes. |  |  |
| ARCH\_SW\_CIL\_9998 | The RAM size consumed by this component shall be 100 bytes. |  |  |