



DEVELOPMENT SPRINT REVIEW

CALENDAR WEEK 06.22

GENERAL (1/3)

HIGHLIGHTS:

- Infotainment: sourcing decision on e-Call button → DONE
- Position VCM in the new location → DONE
- Chassis: front brake hose routing to be updated to remove/reduce clash to WAL → DONE
- Chassis: serviceable parts - EBOM update → DONE
- Body electronics and interior interfaces are solved (data, support, CAD)
- SCCM: supplier will send a quote on 18.02.
- Powertrain: standard VCU comes for SVC3 in CW 15
- Bi-directional: new design for charging interface with male type 2 and schuko socket confirmed; V2H works via male type 2 and wallbox, no adapter needed; V2V function to be done over female type 2 adapter.

IN PROGRESS:

- E/E: PDC sensor integration is still ongoing
- E/E: Steering wheel buttons layout: discussion to be done more frequently in order to accelerate. → It is progressing.
- Powertrain: Misuse events show higher shock load than target → design review with PT mounts supplier in progress
- Design and E/E: sleeker rear design to include rear-view camera and more half cells. No small rear wiper confirmed.

LOWLIGHTS:

- Unsourced SSCM holding up I/P, shroud, steering wheel and driver airbag
- Unsourced E/E multimedia-ADAS switches holding up steering wheel
- E/E: Headcount: DVP and testing engineers missing

BODY STRUCTURE

HIGHLIGHTS:

- SVC3 PO (standard parts & sleeves part 2)
- SVC3 PO (trailer hitch)

IN PROGRESS: None

LOWLIGHTS: None

INFOTAINMENT (1/5)

HIGHLIGHTS:

SVC3

- working with supplier to audio sound quality set-up
- POs for all infotainment parts sent to suppliers (final SVC3 PO for antennas sent out this sprint) → DONE

Infotainment Head Unit

- IC controller/CANbus monitor module/phone projection module proposal submitted for review → DONE

INFOTAINMENT (2/5)

VCM

- Supplier pre-release version received & delivered to Supplier2 Drive for final test.
- eSIM samples to be delivered to the team for final eSIM trial & team for V3 build.

Everything else

- Continuing to purchase test bench & components (submitted requests for):
- Working with supplier to equip audio sound quality test setting
- IC controller/CANbus monitor module/phone projection module proposal review → DONE
- Provide EE team IHU device transmittal information → DONE
- Deliver HU CAE data to Interiors → DONE
- Coordination with WireHarness team for display's schematic and cabling → DONE



INFOTAINMENT (3/5)

- CAN.dbc for IHU → DONE
- Deliver VCM CAE data to Interiors → DONE
- Confirm screw length and torque for VCM → DONE
- Quotation for CAE data for displays from supplier → DONE
- CAE data of Instrument Cluster Display for crash analysis → DONE
- CAN details for all the tell tales list → DONE
- Sourcing decision on eCall button → DONE
- Create decisions documentation for eCall sourcing decision → DONE
- Deliver microphone CAE data to Interiors → DONE
- Deliver audio system CAE data to Interiors → DONE
- Deliver USB CAE data to Interiors → DONE

INFOTAINMENT (4/5)

- Position VCM in the new location → DONE
- Discuss with Interiors to shorten eCall brackets by (3mm on both sides) 6mm → DONE
- Resolve clash between HVAC and VCM CAD data → DONE
- Team's test bench components to source → DONE
- Create plan for Infotainment team head count → DONE
- Overview of ordered SVC3 Parts → DONE
- Complete parking aid item definition → DONE
- eSIM Activation on Hologram → DONE

INFOTAINMENT (5/5)

IN PROGRESS:

- SVC3
 - Incomplete antenna DTs
- Infotainment head unit
 - Currently waiting for supplier side testing to be completed on alpha boards
- VCM
 - VCM functional requirement still WIP

LOWLIGHTS: None

CHASSIS (1/5)

HIGHLIGHTS:

- Get brake lines ready for sourcing → DONE
- Calipers → DONE
- Front brake hose routing to be updated to remove/reduce clash to WAL → DONE
- Add brake line split near firewall → DONE
- Front left brake line to battery + powertrain mount → DONE
- Position brake pipe crawfoot tool → DONE
- DT data from supplier → DONE
- Supplier ESC proposal initial discussion → DONE
- Booster feasibility study for SVC 3 → DONE
- Disc design freeze → DONE
- To get quote from supplier → DONE

CHASSIS (2/5)

- Pedal interface alignment → DONE
- SVC3 releases - 2 → DONE
- SVC3 steering vehicle DVP → DONE
- Fastener spec → DONE
- Ergonomics & safety alignment → DONE
- Interfaces - clashes → DONE
- Adjustment lever design - inc. lever sweep zones → DONE
- CEPS 3D model update - design freeze → DONE
- CEPS mechanical - 1I → DONE
- Intermediate shaft fastening strategy → DONE
- Nominate supplier for brackets → DONE
- Get quote and timing from supplier → DONE

CHASSIS (3/5)

- Wrap-up technical alignment with supplier → DONE
- Anti roll bar development → DONE
- Brackets supplier strategy → DONE
- Send RFQ to supplier for ARB → DONE
- Send RFQ to supplier for drop link → DONE
- Get spindle hard quotes → DONE
- Suspension dynamics sheet → DONE
- Wrap-up tech alignment → DONE
- Droplinkhard quotes → DONE
- ARB hard quotes → DONE
- CAE mesh of parts → DONE
- Weekly follow-up with supplier → DONE

CHASSIS (4/5)

- Chassis test validation timeplan template → DONE
- Body block test part of ECE R12 → DONE
- Homologation drawings → DONE
- CEPS draft drawing review → DONE
- SVC3 quantities → DONE
- Kick-off PO for parts → DONE
- Preliminary quote for brackets → DONE
- BWI internal gap analysis workout → DONE
- DT document updation → DONE
- Serviceable parts - EBOM update → DONE
- Finalize rear hose/pipe bracket design → DONE

CHASSIS (5/5)

IN PROGRESS:

- Steering fasteners
- Nominate autoline for brackets
- Define test method for rear twist beam
- Rear twist beam development
- Front subframe development
- Suspension commercials
- Chassis test validation
- MSG - 3
- Sign-off list - steering
- General steering - 3
- CEPS mechanical - 2

LOWLIGHTS: None

E/E (1/5)

HIGHLIGHTS:

- E/E integration
 - Body electronics:
 - Body electronics and Interior interfaces are solved (data, support, CAD)
 - Brake light switch with chassis team solved
 - HVAC controlling and feedback strategy defined (thermal, powertrain, Sono Digital and supplier)
 - Roadmap (timing, software release plan) for BCM created
 - Item definition vehicle start finished (review next week) → All item definitions are done
 - LabCar: Confluence page for technical update of LabCar (newsletter) → Useful for PM
 - SCCM: supplier will send a quote on 18.02. (hardware for SVC3 with 90 % functionality possible)

E/E (2/5)

- ADAS:
 - Supplier ADAS GSR component: Dev. kick off
 - Start development of main ADAS components
 - Map Data: possibility to compare two quotes
 - Two offers for test & validation engineers
- Wiring harness:
 - Complete timing for SVC4 roadmap.
- CAD integration:
 - OBC design job ongoing
- Overall:
 - Good progress in SVC4 roadmap
 - Good progress in receiving and creating DTs (no missing, but still incomplete)

E/E (3/5)

IN PROGRESS:

- E/E integration:
 - Body electronics:
 - PDC sensor integration is on going
 - Cross functional work doesn't work via Jira (more slack) → Prioritization is not possible
 - ADAS:
 - E/E: steering wheel buttons layout: discussion to be done more frequently in order to accelerate. → Progressing.
- CAD Integration:
 - We were not able to release all parts of E/E
 - Updated schuko socket for series needed (SVC3 fixed)

LOWLIGHTS:

- E/E integration:
 - Body electronics:
 - Headcount: DVP and testing engineers missing;
 - Testing and commissioning of SVC3 while developing SVC4? → More capacity needed
 - SCCM: Dynamic movements have to be aligned with interior team
 - ADAS:
 - For now no PO for ADAS option 4 possible at the moment

- Overall:
 - Delayed delivery supplier hardware (receiver, antennas) because of separate quote
 - Delay in nomination of supplier for IBS & rainlight sensor, traffic horn - new round next sprint
 - Still missing (0 %) and incomplete (17 %) DTs from powertrain (supplier), thermal (supplier), exterior, infotainment (supplier) and E/E (supplier).

POWERTRAIN (1/2)

HIGHLIGHTS:

- Standard VCU comes in CW 15 (11. April 2022)
- Miss use simulations results received (PT system strength)
- PT crash CAE BOM updated with materials
- VCU DT is complete and VCU hardware can be released for SVC3

POWERTRAIN (2/2)

IN PROGRESS:

- Misuse events show different shock load than target → Design review with PT mounts supplier in progress
- Catia license in 3Dx is slowing progress with CAD and BOM updates

LOWLIGHTS:

- Headcount (PT and HV battery)
- Standing in for HV battery is taking up time
- Recruitment for powertrain and HV battery taking up a significant amount of time -> HV battery recruitment should complete this week.

BI-DIRECTIONAL

HIGHLIGHTS:

- Meeting with suppliers for the bi-directional charging is planned.
- New design for charging interface with male type 2 and schuko socket confirmed; V2H works over male type 2 and wallbox, no adapter needed; V2V function to be done over female type 2 adapter.

IN PROGRESS:

- Type 2 female socket from charging interface will be removed.
- Improvements of DC charging for SVC3 needed.

LOWLIGHTS:

- No requirements for diagnostic system on vehicle level available.
- No requirements for cyber security on vehicle level available.

HV BATTERY (1/2)

HIGHLIGHTS:

- Supplier proposed suitable timing + solution for SVC3 pack delivery despite corona lockdown
- A-sample installed on lab car and CAN signals being received and interpreted with the correct dbc file.
- Tear down of A-sample showing BMS, contactor relays, pyro fuse.
- Cell testing at test facilities progressing (dimensions, capacity, charge times).

HV BATTERY (2/2)

IN PROGRESS:

- Welding process causing tab over temperature and currently the same issue would be seen on B sample → could impact thermal performance → further improvements planned.
- Current pack cell temperature delta during fast charging and heating above target (target should be < 5 degC)

LOWLIGHTS:

- Not enough headcount.
- Internal / external support for defining BMS Hardware / software functionalities → BMS contractor search in progress.
- Diagnostic topics critical for SVC3 (DTC definition to supplier shall be provide by Sono).

SIMULATION (1/2)

HIGHLIGHTS:

- Solver defined
- Purchased: yes
- Runnable: aimed for February
- HVB simulation loop decision
 - Define ESP for HVB simulation loop → Decision taken
 - Quotes to compare available → minor alignments to go
- Modeling of weld lines:
 - perform investigation to compare several possibilities of modeling
 - Decision: how to model weld lines
 - Decision shared with main stakeholder (body structure) and main ESP
 - Additional: open question marks and issues-to-solve detected

SIMULATION (2/2)

IN PROGRESS:

- Complete vehicle bracket status
- Creating a list contains all brackets to simulate
- Gather current simulation status

LOWLIGHTS:

- HV-simulation loop → no results received due to holidays
- Chassis: alignment on load cases
- Simulation content for SVC3 confirmation run defined → content not defined

HIGHLIGHTS:

- Series-validation vehicles build planning alignment for NVH
- Procuring of dedicated materials in progress (PO will be out next sprint)
- Infotainment package alignment
- Sound designers audited, decision and PO next sprint
- Recruitment closed, new starter next sprint, PO support signed
- SVC2 NVH reports officially closed
- Interior support for NVH package series-validation vehicles and series

IN PROGRESS:

- Jira link to requirement - WIP
- DVP update with new vehicle planning
- Most cards have been created this week

LOWLIGHTS: None

HIGHLIGHTS:

- Steering wheel switch alignment → DONE
- Update steering shroud cover → DONE

IN PROGRESS:

- Update IP to new steering shroud + lever task → IN REVIEW

LOWLIGHTS: None