



# **DEVELOPMENT SPRINT REVIEW**

## **CALENDAR WEEK 20.22**

### HIGHLIGHTS:

- Torque value definition →Done
- Customs clearance of battery components for assembly of 3 packs →Done
- Align virtual vehicle simulation strategy →Done
- New bump stop integration →Done
- Head unit (HU) detailed design document →Done
- Moss testing and geometric change for future SVCs/series
- Preparing electronic drive unit (EDU) 19 for shipment

## GENERAL (2/2)

### IN PROGRESS:

- Aero results from CAD updates at DR not available. Part releases blocked
- Deviation training for all squads

### LOWLIGHTS:

- Defoboxes front CMS elongated by 30mm, shape of beam changed
- Investigate new shield to reduce the amount of water in the rear undertray
- Ongoing investigation of potential design optimizations of body structure for industrialization, cost down program and tolerance concept → potentially impact costs and/or timing

## BODY CLOSURE (1/2)

### HIGHLIGHTS:

- Nomination supplier door parts
- Complete project engineer onboarding page
- Coordination market vehicle part approval
- SVC3-10 build planning
- Fastener review
- Body closures split structure
- SVC3 seal optimization
- SVC4 device transmittals (DT) information provided
- New bump stop integration
- Front seal move inside

## BODY CLOSURE (2/2)

### IN PROGRESS:

- Change management meeting
- SVC4 new bump stop design
- Tolerance Chain Calculations
- Charger lid series quote
- Body in White (BiW) SVC3 affected areas > requirements for rework
- Front end tolerance strategy
- Bracket & panel optimization
- Body in White (BiW) upper cross member
- New Schuko integration

**LOWLIGHTS:** None

## EXTERIOR (1/3)

### HIGHLIGHTS:

- Create deviation requests
- Assembly instructions
- Geometric dimensioning and tolerancing (GD&T) of cantrail reviewed and aligned with supplier
- AB-line condition body vs cantrail checked
- Received feedback from supplier for cantrail optimizations
- Seal profile in windshield assy replaced
- Assembly instructions for Bertrandt created
- Headlamp & tail lamp: connector / harness- terminal updated
- Rocker - new feasibility points before tooling kick off
- Locator foams in rocker (3x) corrected
- Create proposals for new rear under body protection (UBP)

## EXTERIOR (2/3)

- Inspect SVC3 parts at Bertrandt
- Front & rear bumper of SVC3 data reviewed by supplier

### IN PROGRESS:

- Investigate new shield to reduce the amount of water in the rear undertray
- Review geometric dimensioning and tolerancing (GD&T) input on windscreen cover assembly
- Provide all parts for batch 1 general assembly (GA)
- Definition of measurement equipment in review
- SVC3 - system maturity levels



### LOWLIGHTS:

- Perform release management for rear bumper fascia
- Finalize fixation concept of front bumper & CL
- EDS Requirements for the body exterior parts
- Create assembly structure for supplier- SVC4 lamps
- Finalize windscreen cover assy design

## BODY STRUCTURE (1/4)

### HIGHLIGHTS:

- Remove cutout and CLOSING PLATE front lower CROSSMEMBER only left hand side → Done
- Remove weld seam A-pillar to shotgun → Done
- Update SVC4 fastening assy with M6 bolts → Done
- Remove mounting points of hood strut bracket → Done
- Firewall changes for thermal requirements → Done
- Correct assembly level of health and safety commission (HSC) assembly → Done
- Adapt hole for fixing latch wiring harness → Done
- Fixing for bracket air conditioning (AC) filler hose → Done
- Adapt firewall / floor panel front to requirements of HVAC drain hose → Done
- Adapt firewall / brackets to requirements of HVAC → Done

## BODY STRUCTURE (2/4)

- Adapt firewall to requirements of HVAC air inlet → Done
- Adapt firewall to requirements of HVAC piping → Done
- Crash management system front lower plate as equal part → Done
- Crash change: health and safety commission needs additional (HSC) front beads → Done
- Move and change connection in Body in White for interior carrier → Done

## BODY STRUCTURE (3/4)

### IN PROGRESS:

- Cooling intake interface
- Remove BRN on frontend
- Tighten right hand side deflector plate front upper crash management system (CMS)
- Changes at fixing points for wiper/washer hoses
- Integrate a new brake booster with an additional fixing point
- Adapt locator CD-pillar to sill
- Strengthen upper B-pillar connection plate
- Additional weld connections between B-pillar lower patch and sill
- B-pillar cover change diameter of fixing points
- Water channel panel upper inner - due to supplier change

## BODY STRUCTURE (4/4)

### LOWLIGHTS:

- Headliner attachment at rear roof crossmember
- Rear quarter trim fixing to Body in White
- Omit part in the heel plate (Fersenblech) area
- New position at A-pillar for fixing cross car beam (CCB)
- Noise vibration harshness (NVH) improvement of wiper brackets ongoing
- Fixing / locating cross car beam (CCB) with locator pins
- Bead in firewall to increase stiffness
- Ongoing investigation of potential design optimizations of body structure for industrialization, cost down program and tolerance concept → potentially impact costs and timing

# INTERIOR

**HIGHLIGHTS:** None

**IN PROGRESS:**

- Body closures tolerances of interface parts are required
- SVC3 part robustness
- Boundary books including calculated status are created
- Instrument panel
- SVC3 provision of assembly instructions

**LOWLIGHTS:** None

### HIGHLIGHTS:

- eSIM shipping to hangsheng → Done
- Head unit (HU) detailed design document → Done
- Microphone device transmittals (DT) updated → Done
- Vehicle access & start workshop → Done
- Sprint cross-functional: Recognise the current status of descriptions that can be used for the development handbook → Done
- Change action for parent BOM items (for fasteners) → Done
- SVC3 expected delivery date → Done

### IN PROGRESS:

- Add supplier to Jira/PMCS + make project/board for infotainment dev → In progress
- Over the air (OTA) self update testing → In progress
- Create inventory for vehicle control module (VCM) hardware → In progress
- Define SYS.2 vehicle control module (VCM) requirement for rear windshield & exterior side mirror defroster I/O interaction → In progress
- Flash all vehicle control modules (VCM) → In progress
- Provide new eCall drawing with updated details → In progress
- Update vehicle preconditioning SIONREQ → In progress

### LOWLIGHTS:

- Beta unit bring-up delayed due to “difference” between alpha and beta in the eMMC chip: parts on beta units do not support the CQHCI commands. In addition, there are some other issues with the NXP MMC drivers.
- Low fidelity display prototypes are presenting difficulties when bringing-up the head unit hardware and displays
- Ambiguity and delays with head unit development is blocking CES + ADAS team from receiving platform to develop rear view camera

## THERMAL (1/2)

### HIGHLIGHTS:

- Moss testing and geometric change for SVC4/5/Series
- Software released for SVC3
- SCV4/5 purpose of built vehicles
- SVC3 - Design validation process (DVP) responsibilities
- Virtual build
- Budget review - CV "testing & validation"

## THERMAL (2/2)

### IN PROGRESS:

- HVAC-water management issue -> manufacturing change
- System 1 thermal requirements
- Timeplan thermal regarding supplier lead times for SVC4 and series
- Alignments with interior and Body in White team
- Update logistic costs
- Provide all parts for batch 1 general assembly (GA)
- Measurement equipment

**LOWLIGHTS:** None

# CHASSIS

## HIGHLIGHTS:

- Vertical damping (VD) Inputs for rear axle latest results
- Chassis budget update
- Decision for steering gear 3mm movement

## IN PROGRESS:

- Vertical damping (VD) inputs from chassis engineering and simulation partner
- Movement of holes for coolant pump bracket

**LOWLIGHTS:** None

### HIGHLIGHTS:

- Heated seat schematic and design validation process (DVP) report update
- Chassis relay revision for SVC4 to meet new strategy
- Body control module (BCM) setup for E/E computer aided engineering (EECAE) analysis
- Advanced driver assistance systems (ADAS) supplier onboarding
- Making the control of side mirror actuators smooth

## E/E (2/2)

### IN PROGRESS:

- Create a commissioning plan for SVC3
- Yellow board & lab car: Make status quo available to Group Sion
- Vehicle control Unit (VCU) requirements SVC3
- Schematics completeness for SVC3.5
- Ground distribution E/E computer aided engineering (EECAE) setup
- Assembly illustrations for low voltage (LV) harnesses
- Perform checks for low voltage (LV) harnesses
- Assembly illustrations for cabin harnesses
- Deviation request for low frequency (LF) antenna mounting

**LOWLIGHTS:** None

## POWERTRAIN (1/2)

### HIGHLIGHTS:

- Create new CAD package for SVC4
- Attributes check SVC4 in 3Dx
- Preparing electronic drive unit (EDU) 19 for shipment

### IN PROGRESS:

- Optimization of sand casted electronic drive unit (EDU) brackets SVC4
- VCU testing at Bertrandt / supplier
- Define driveshaft warranty period and reliability parts per million (PPM) targets
- Define powertrain mounts warranty period and reliability parts per million (PPM) targets
- First aid training
- RASIC sheet

### LOWLIGHTS:

- CAD endstop - check
- Select test facility provider

## WEIGHT MANAGEMENT (1/2)

### HIGHLIGHTS:

- Update hood and tailgate parts status
- SCV4/5 purpose of built vehicles
- Weight update hood parts\_SV4-status
- Weight update hood parts\_SV3-status
- SVC3 - Design validation plan (DVP) responsibilities

## WEIGHT MANAGEMENT (2/2)

### IN PROGRESS:

- SVC4 weight status report update will be took to CW22.22 due to delay of masses package update;
- Sion weight status report-overview SVC4
- Weight status report spreadsheet overview SVC3
- Sion weight status report CW20.22

**LOWLIGHTS:** None

## HOMOLOGATION (1/2)

### HIGHLIGHTS:

- Prepare control plan for CM1 interface
- Compare certificate management protocol (CMP) with example from supplier
- Field observation/market surveillance (concept description)
- Examples for traceability
- Clarification of responsibility of requirements management
- Set up control plan
- Examples for traceability
- Product integrity: product safety circle + subsequent processes
- Deviation management
- Issue management

## HOMOLOGATION (2/2)

### IN PROGRESS:

- Generate and archive the information document
- Update worklist

**LOWLIGHTS:** None

# FUNCTIONAL SAFETY

## HIGHLIGHTS:

- Reviewing federal transit administration (FTA) kick-off presentation → Done
- Design interface agreement (DIA) alignment with supplier → Done
- Overall FuSa development process presentation → Done

## IN PROGRESS:

- FuSa support request for solar team → In progress
- Solar power / cross-functional Q/A - solar power in crash scenario → In progress

**LOWLIGHTS:** None

## CRASH & SAFETY (1/2)

### HIGHLIGHTS:

- Crash/safety - results to LCO
- Status update with body structures release 0.1
- Keyhole opening for headliner clip in roof header
- Accessibility issue on b-pillar weld
- Side crash - barrier - integrity lower B-pillar patch
- Side Crash - pole - structural integrity of rocker
- Update door-in-white
- Update seatbelt model due model v004
- Headliner clip resistance - evaluation of current development state

## CRASH & SAFETY (2/2)

### IN PROGRESS:

- SVC3 crash/safety status available on confluence
- Crash/safety - SVC3 DR status reporting
- OOP tests airbags requirements
- Material & joining validation
- Pre-simulation of component tests ongoing

**LOWLIGHTS:** None