



DEVELOPMENT SPRINT REVIEW

CALENDAR WEEK 42.22

GENERAL UPDATE

- DC fast charging successfully tested
- US Tour: 3 weeks in the US to meet investors, media and grow the US community
- Started physical testing on pedestrian protection on the hood with solar body panels. Hood test simulates a crash with a pedestrian's head at 35 kph impact speed
- Fill rate of SVC4 release management decelerated, no impact on general timeline
- Making progress on CapEX within projected timeline, still 15% to be cut to be on target
- Supplier nominations/decisions on track (80% nominated)
- Increasing risk of delaying nomination of series production line builder due to dependency on external financing

BODY CLOSURE (1/2)

HIGHLIGHTS:

- Completion hood strength & stiffness testing
- Start tailgate strength and stiffness testing
- Onboarding extrusion supplier for SVC3.3 & SVC4.1 and technical support
- Direct control established part supply from series supplier for SVC3.3

BODY CLOSURE (2/2)

IN PROGRESS:

- Timing plan needs better alignment for SVC4+
- Risk of supplier issues due to timing constraints
- Challenges with parts for SVC4 > timeline vs cost-down efforts to maintain material required date (MRD)
- SVC3-06, SVC3-07 released without closures approval

LOWLIGHTS:

- SVC3-05 production at lower speed than planned

HIGHLIGHTS:

- Roof brackets - Honeycomb orientation change to improve stiffness of the part and fixing concept
- Redesign of 4 fender metal brackets
- Roof brackets updated, due to the new cross-members

EXTERIOR (2/2)

IN PROGRESS:

- Feasibility check on changes of fender bracket A-pillar based on supplier request
- Add joggle on mounting flange to improve stability on body structure
- Update list of all SVC3 spare parts and respective maturity levels ongoing

LOWLIGHTS:

- Clarification of need for barrier stopper
- Headlamp connector insufficient clearance to body structure
- Glue for the roof panels to be defined (in line with production partner)

BODY STRUCTURE

HIGHLIGHTS:

- CAD data availability 100% - already shared with assembly partner and nominated suppliers
- Supplier nominated for straight profiles
- Weight of SCV3.2 and SVC3.3 below target

IN PROGRESS:

- Improvements on CAD data maturity level

LOWLIGHTS:

- Recruitment behind plan

HIGHLIGHTS:

- Weight almost on target (+1kg)
- 100% CAD data available
- 70% CAD data maturity
- All suppliers nominated

IN PROGRESS:

- Cross functional data status for the completion of interior development
- Overhead console thus headliner design heavily affected by eCall and wiring
- Steering column updates lead to cross car beam (CCB) & instrument panel (I/P) changes post design release (DR)

LOWLIGHTS: None

HIGHLIGHTS:

- Exploration of new supplier for Head Unit opens new cost down potential
- Vehicle connectivity module (VCM) over the air (OTA) Update successful

IN PROGRESS:

- Collaboration of integrated squad need to strengthen results

LOWLIGHTS:

- Supplier nomination on hold

HIGHLIGHTS:

- Heater in SVC3 working

IN PROGRESS:

- Fasteners SVC4/serial design freeze delayed
- Part order for extra vehicles SVC3
- Thermal requirements for SVC4
- Time plan thermal regarding supplier lead times for SVC4 and series

LOWLIGHTS: None

HIGHLIGHTS:

- Supplier delivered SVC3 assembly sequence
- Software maturity and electronic stability control (ESC) timeline plan defined
- Logistics for new brake booster supplier checked
- SVC4 release plan updated
- SVC3 parts delivery date
- Alignment with supplier team for suspension tuning plan

IN PROGRESS:

- Rear shock absorber bottom bush dislocation after assembly on vehicle to be checked
- front coil spring design confirmation suspension supplier

LOWLIGHTS: None

HIGHLIGHTS:

- E/E Integration
 - Vehicle Electronics & Controls: SVC3-06 & SVC3-07 completely finished commissioning
 - Vehicle Electronics & Controls: SVC3-04 finished yellow board commissioning without issues
 - Vehicle Electronics & Controls: SVC3-08 start the commissioning
 - ADAS: front radar bracket - reviewed and approved

IN PROGRESS:

- E/E Integration:
 - Vehicle Electronics & Controls: Window regulators for the passenger doors are not working
 - ADAS: NCAP functions costs above plan
- Wiring Harness:
 - Late introduction of new functions and components for SVC4.1 and beyond. Potential lowlights with new CAN gateway, airbag status indicator, charging inertia switch

LOWLIGHTS:

- E/E Integration:
 - Vehicle Electronics & Controls: infotainment head unit (IHU) Software (SW) is not reliable and slows ADAS down
 - ADAS: not fully defined IHU requirements blocks ADAS progress, delays possible
- Headcount: Constantly overloaded and waiting for new project engineer and system engineers

- **HIGHLIGHTS:**

- DC fast charging tested at assembly partner and now working.
- Coastdown tests to measure vehicle rolling resistance in Spain.
- Technical solution for HV Safety during plugged charging and solar charging defined.
- Fixed and Variable cost save opportunities identified for powertrain.

- **IN PROGRESS:**

- Coastdown measurement data incomplete as GPS equipment not working properly when passing under bridge on test track
- Late design change request delayed powertrain mounts design freeze and SVC4 tooling kick off (still expected to meet SVC4 material required date (MRD))

- **LOWLIGHTS:** None

BIDIRECTIONAL

HIGHLIGHTS:

- Power line connector (PLC) supplier selected
- Feasibility of new connectors in distribution and charging unit (DCU) confirmed
- Feedback from supplier as DC functionality available for SVC3

IN PROGRESS:

- Selection of measuring tools for SVC3 testing ongoing

LOWLIGHTS:

- SVC3: Coordinate testing activities in CW41 with supplier delayed
- Some DCUs are not in working condition and need to be returned to supplier

HV BATTERY (1/2)

HIGHLIGHTS:

- Specification battery management system (BMS) hardware in the loop (HIL)/ test bench & interfaces
- HV commissioning of SVC3 vehicles
- Freeze of battery pack and protection plate (small changes coming in new revision)
- Finalize HV battery goods income checklist & report
- Limits & restrictions for SVC3 defined

IN PROGRESS:

- External isolation monitoring for SVC3
- Release of updated requirements
- Definition of temperature limits for HV battery

LOWLIGHTS:

- Prototype battery contactor & communication issues during US Tour

HIGHLIGHTS:

- Water wading - structural evaluation (ESO-438) done, minimal optimizations needed
- Snow soiling simulation (ESO-406) done, driving in the area of suspension parts detected

IN PROGRESS: None

LOWLIGHTS: None

HIGHLIGHTS:

- Buck SVC3-B-19 - static load results reporting
- NVH testing: wiper noise : additional measurements
- Design support: body structure, wiper bracket, interior package, static load and SVC4 model
- comparisons tests/simulations SVC3 buck
- Sound design progress - Final selection of acoustic vehicle alert system (AVAS) for community survey - preparations for auditory warnings development

IN PROGRESS: None**LOWLIGHTS:** None

HIGHLIGHTS:

- Updated the masses package list for series vehicle, add prognosis results based on SVC3

IN PROGRESS:

- Missing weight attributes in 3DX and some GAPs need to be clarified/checked

LOWLIGHTS: None

HOMOLOGATION AND RECYCLING

HIGHLIGHTS:

- Recycling: Talks with part suppliers and raw material providers for recyclates (= secondary plastics) to evaluate how and where we can enhance the use of recyclate in the Sion
- Homologation: approvals for test & validation vehicles were obtained

IN PROGRESS: None

LOWLIGHTS: None

VIRTUAL VEHICLE COMPETENCE

HIGHLIGHTS:

- Configuration SVC3 Product structure in 3DX
- Build SVC3 and series structure as new
- Better attribute fill rate 3DX and SAP

IN PROGRESS: None

LOWLIGHTS: None

HIGHLIGHTS:

- SVC3: Checking min required requirements

IN PROGRESS: None

LOWLIGHTS:

- Low prio in other squads delays progress

FUNCTIONAL SAFETY

HIGHLIGHTS:

- One pager to FuSa testing
- Initial intro & gathering input
- Driver warning and degradation concept

IN PROGRESS: None

LOWLIGHTS: None

HIGHLIGHTS:

- Spare parts for testing shipped successfully to Italy and arrived
- Hood testing on pedestrian protection started

IN PROGRESS: None

LOWLIGHTS: None