



## Expert Group meeting, 16 December 2021

Teams meeting

### Participants

- Tuomo Toivanen, Liikennevakuutuskeskus (LVK)
- Jouko Sohlberg, Autoalan keskusliitto (AKL)
- Markus Markkanen, Autotuoajat ja -teollisuus (AT)
- CAB Group:
  - Kristian Révay, Manager Time Standards and BI
  - Timo Ristiniemi, Time Study Technician
  - Johanna Tudeer, Country Manager CAB Group Finland Oy (group coordinator and secretary)

### Meeting agenda

- Status of the sheet alignment time standard's control study in Finland
- Discussion about tin as a repair method
- Reading and erasing error codes
- Other issues
- Next meeting

## Opening of the meeting

Johanna Tudeer opened the meeting in Teams and the agenda was accepted.

## Status of time standards

### Control study for the sheet alignment time standard

Kristian Révay presented the results collected in the control study made in Finland.

See more information in the presentation.

### Questions to CAB:

- How many study minutes in Sweden/Finland, in total? **TO DO CAB**
- What are the differences in the study times compared to the MYSBY6 study? **TO DO CAB**
- How much observed/measured sheet alignment minutes in this study? **TO DO CAB**



- The proportion of independent workshops in comparison to the OEM workshops in the study objects/results? **TO DO CAB**
- Can CAB add in the presentation material the percentage of the swage lines and fittings in the study? **TO DO CAB**

There was a question about the alignment areas and how small, medium and large are defined. CAB answered:

Small = 0-4 dm<sup>2</sup>

Medium = 4-10 dm<sup>2</sup>

Large = 10-18 dm<sup>2</sup>

#### **Kristian Révay explained some differences found compared to MYSBY6:**

- Repair is done from the outside in the majority of repairs. In MYSBY6, the majority of repairs was done with hammer, which seldom is used today.
- New tools used for repairing from outside
- Different time drivers – MYSBY: surface/dm<sup>2</sup>, how well you can reach inside -> not relevant when repairing from the outside.
- New: swage lines and folds; fittings (new time drivers) and position of damage. The modern car design where lines are found in much higher extent and different positions on the car drives time, for instance the dogleg.
- CAB has measured both the old way and the new way: the overall time level goes up 8,7% (if the CABAS estimate is calculated the correct way); the time depends on the type of damage
  - Lots of small damages 0-4 dm<sup>2</sup> – a little bit more time in the new time standard
  - Lots of large damages without swage lines or folds: less time than before
  - Repairs with folds and fittings: more time than before.
- Dismantling times: not studied – the times are from MYSBY6 (screwed parts/welded parts)
  - Only sheet metal repair time was studied
  - What about the alignment's De/Mo check box? Are the internal linings (verhous) removed? -> Yes, because of the paint work they need to be removed but not due to the alignment.
  - What about the paint's De/Mo check box, is it overlapping with the alignment's De/Mo? -> No, the De/Mo and paint eliminate themselves, there will not be any double time.

#### **Discussion about tin as a repair method**

Tin soldering paste (lyijyllinen koritina):



- CAB said that in the study, there were some observations about the usage of tin soldering paste and that since it was found only in a few workshops and not around Finland, it should be studied much more in order to be this work method and observations to be included in the time standard. CAB's question is if it is recommended to continue studies on tin solder paste usage or can the time standard be used without tin soldering?
- Jouko Sohlberg said that he had discussed with some repair shops: it is very rarely used – his point of view is that CAB should move on without tin soldering being taken into account in the time standard.
- Markus Markkanen said that it is not a future repair method and should not be included.
- Tuomo Toivanen said that the method is very rarely used and can be excluded from the time standard.
- Question: in what kind of repairs it was used? -> not found any specific repair type
- CAB: The proper usage of security equipment would also require more attention – currently not enough information whether proper security equipment was used.
- Kristian Røvay said that in the CABAS user instructions can be clearly stated that the new time standard does not cover repair with tin soldering.

## Reading and erasing error codes

Kristian presented the ongoing study on the reading and erasing of the error codes:

- The study focuses on reading and erasing the error codes, not on e.g. calibrations.
  - Calibration is heavily coupled with OEM brand, model and might be even on the specification of the car. Therefore CAB don't see it as a good case for studying a generic time. It might be possible to study specific OEMs but that should then be prioritized by the Expert Group.
  - In case the calibration is done with the reading and erasing of the error code, the calibration time should be manually added to CABAS
- The times are per make, not a generic time for all makes
- Kristian showed, in the presentation, the makes where enough study objects were found to create a time. The makes marked with red "balls" did not provide enough of study data to provide a time, this due to hard to find workshops that actually performs checking and erasing error codes on those OEMs.
- Body workshop layout: how does it affect? -> The distance affects the time (average distance to pick up the reader was 24 m).
  - E.g. OEM times do not have any details at all about what is included in the times; CAB doesn't know if there are recommendations about an optimal workshop layout
- CAB recommends to replace the current OEM times in CABAS for reading and erasing the error codes with the studied times.



- Toivanen said that it may be difficult to compare the OEM time to the studied times since nobody know what the OEM times contain (the information usually is not given by OEMs)
- Markkanen noted that some modern cars may require calibration and in that case the OEM time may work better.
- The group said that it is important to clearly say in CABAS what is included in the times to avoid confusions.

## Other issues

### There were some discussions about electric cars:

- Do they have any relevance for the study? -> not relevant for the time standard of the sheet metal alignment.
  - The car's fuel type is, however, always noted in the study object
  - Handling of the high voltage system is not part of the time study
- Tuomo Toivanen said, that out of general curiosity it would be interesting to hear about CAB's observations in regards to handling of the electric cars in the repair workshops.

### AC filling/emptying:

Kristian said that the AC filling/emptying is also ongoing, but the challenge is to find enough of study objects.

### Four-wheel alignment:

- A prio 2 and done when found time outside the AC study (if there are some cases)
- It is currently not sure yet if a standard process can be found
- Markkanen said that it would be interesting to hear about the findings – the four-wheel alignment usually is a model-specific issue.

A paint study may be started in 2022 and it may also be coupled with the AC Study.

## Launching the new sheet alignment time standard

The new surface alignment time standard was launched in Sweden in the CABAS November 2021 release.

The most likely launch date in Finland is on 11 June 2022.

CAB will keep the Expert group up-to-date about the communication and launch plan.

Subject

MEMO

Expert Group meeting  
Johanna Tudeer

Date

16 Dec 2021



## Next meeting

The next meeting (Teams) will be on 10 February, at 9.30-11.30 Finnish time.

## Attachments:

- Presentation of 16 December 2021

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