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DRAFT IN-PROCESS

Calibration Process Workflow

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Executive Summary

Calibration Process Workflow

Matching Calibration Document (Word)

- What we started with
- What we found
- What parts we replaced
- What parts we repaired
- What we flashed/reset/programmed
- What parts we removed and re-installed
- OEM service information documentation
- Diagnostic procedures performed
- Calibrations performed
- Functional QC test results
- What we did not do (pre-existing and non-related)

It is recognized documentation noted below will vary for each OEM.

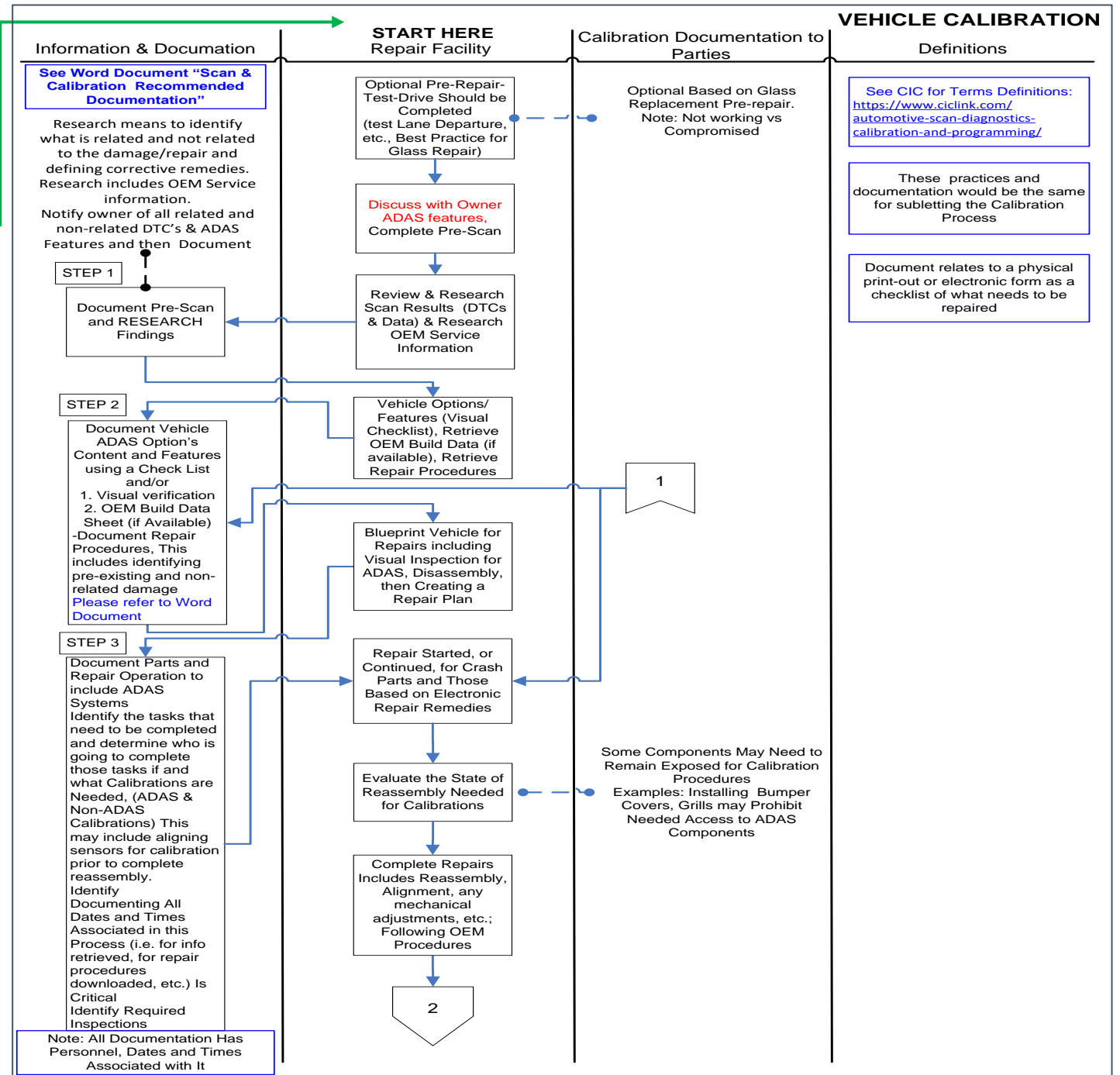
It is important to note: Other repair, servicing or maintenance tasks may also affect the functions of the vehicle's ADAS sensors. These calibration procedures should then be followed to ensure a safe vehicle's operation.

For term definitions, view the CIC WIKI at:

<https://www.ciclink.com/automotive-scan-diagnostics-calibration-and-programming/>

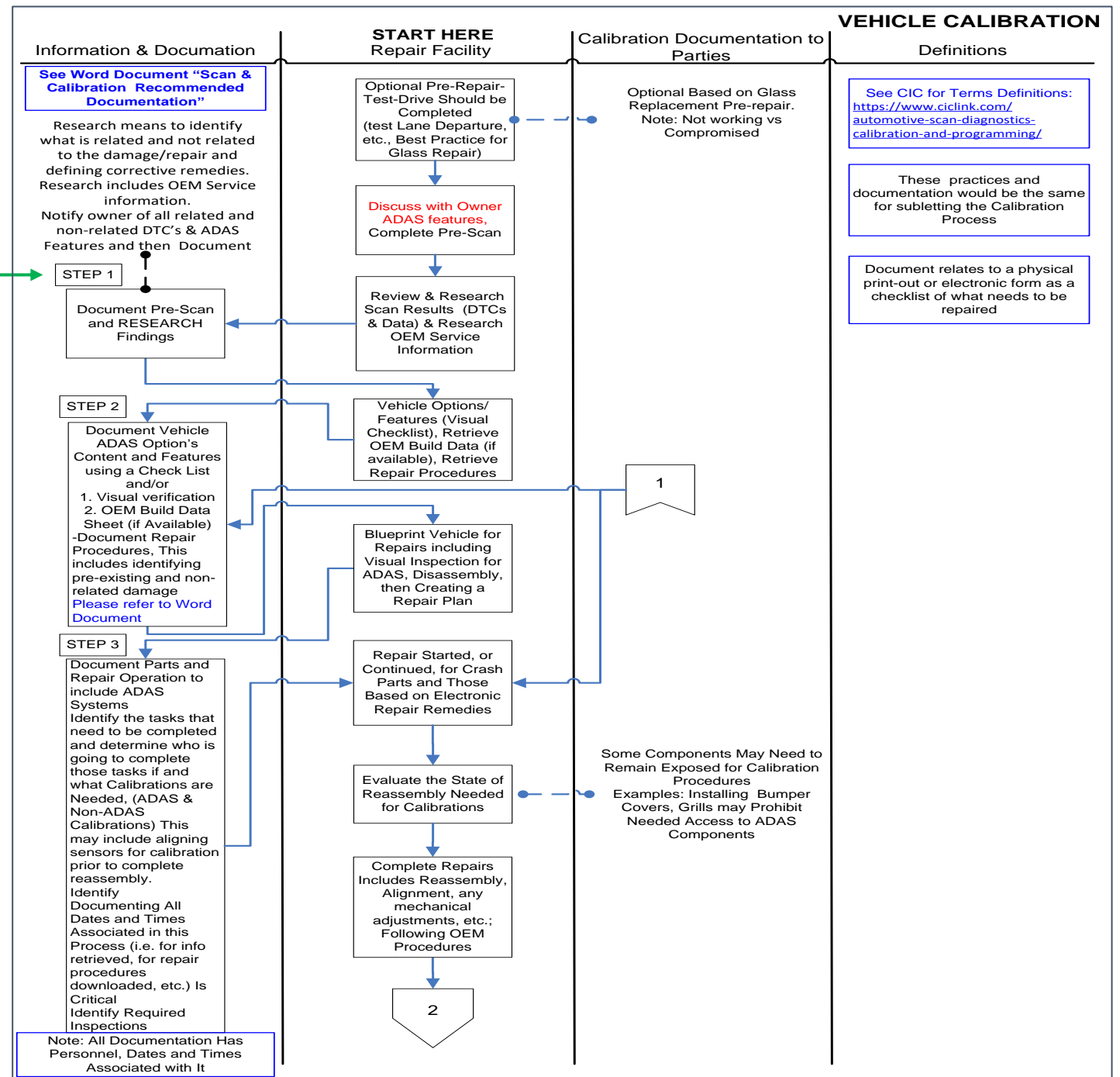
Workflow

- **Start Here:** For ease of understanding, follow **Repair Facility** column
- **Information & Documentation:** column provides information as to what information is recommended and what to document
- **Calibration Documentation to Parties:** Information, options, and tips of what has a high likely hood to be shared or obtained via other parties
- **Definitions:** are found in CIC Glossary of terms section for Automotive Scan, Diagnostics, Calibrations and programming
- www.ciclink.com/automotive-scan-diagnostics-calibration-and-programming/



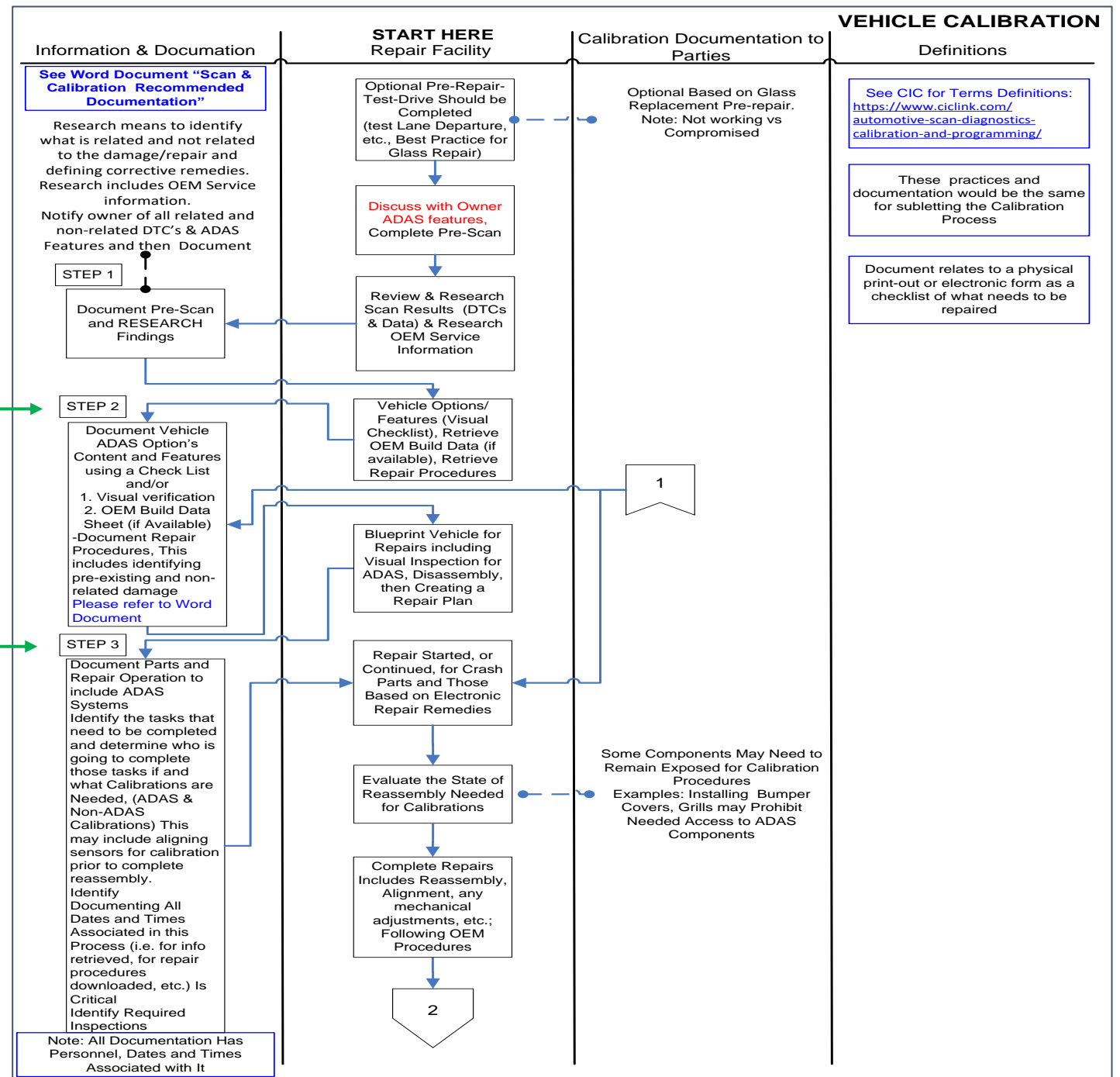
Workflow Step 1

- STEP 1 - Document DTCs (Document Scan Results) - Virtual Printout (*.pdf, *.jpg, etc.) of all the DTCs and all the modules tested and must include the valid VIN number associated with the scanned vehicle**
 - Notify owner of known ADAS Systems and update them on these features being returned to OEM specifications
 - Refer owner to the owner's manual the factors that can impact their ADAS Systems operation (e.g., weather, tires, etc.)
 - Note: Calibration or re-learn may or may not be reported via DTCs (vehicle specific)
 - Research means to identify what is related and not related to the damage/repair, and to define corrective remedies
 - Research includes OEM service information (If OEM Procedures are Available)
 - Date, Time, Personnel, Source for Download Documented
 - Evaluate if vehicle has been altered, see STEP 9
 - Notify all parties involved (e.g., owner and insurance carrier) of all related and non-related ADAS research findings and then document



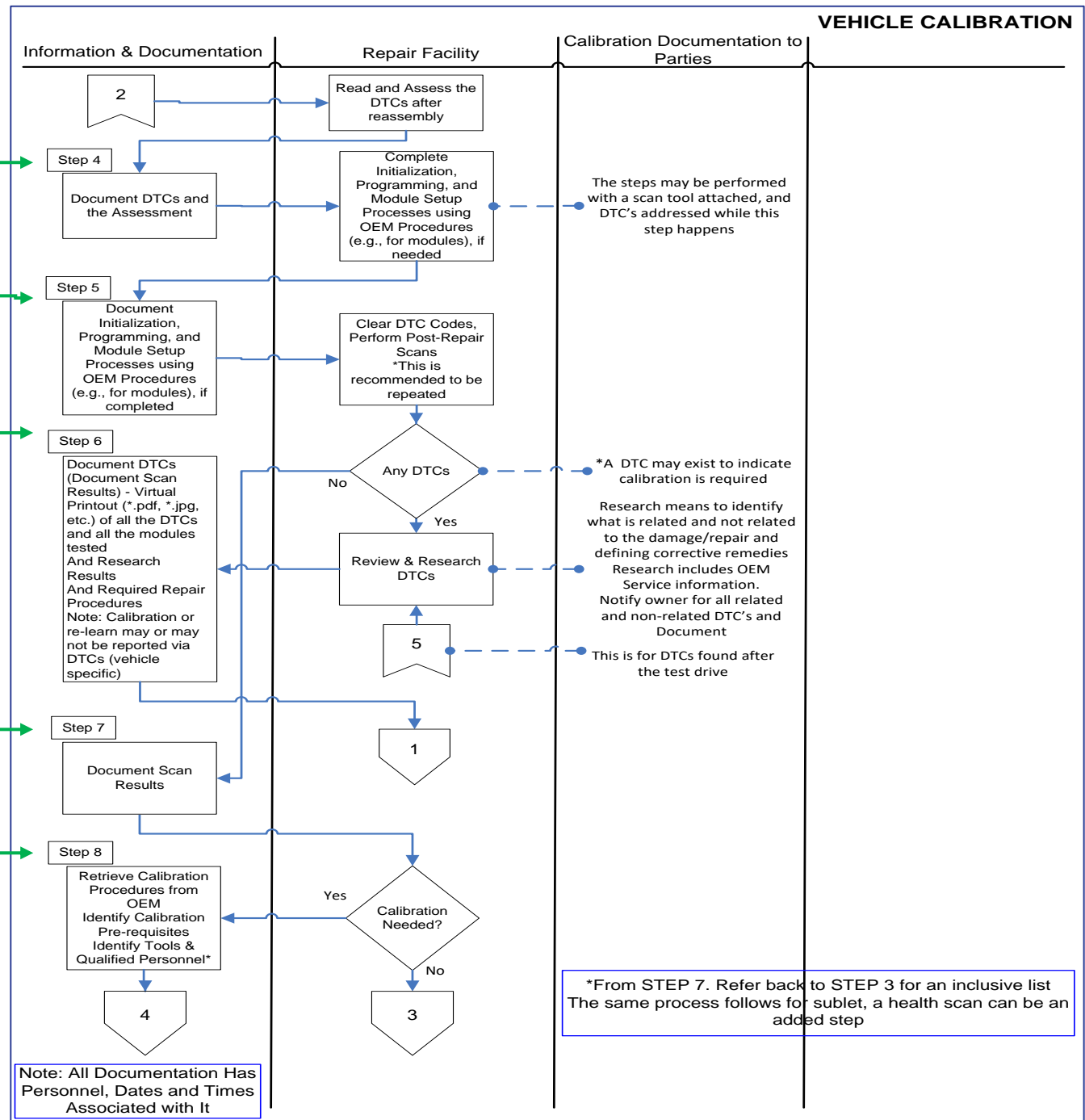
Workflow Steps 2-3

- STEP 2 –**
 - Document Vehicle ADAS Option's Content and Features using a Check List and/or
 - Visual verification
 - OEM Build Data Sheet (if Available)
 - Document Repair Procedures (If OEM Procedures are Available)
 - This includes identifying pre-existing and non-related damage
 - This is critical information that is not easily captured.
- STEP 3 –**
 - Document Parts and Repair Operation to include ADAS Systems
 - Identify the tasks that need to be completed and determine who is going to complete the work
 - Identify if and what Calibrations are Needed, (ADAS & Non-ADAS Calibrations)
 - Evaluate the State of Reassembly Needed for Calibrations and Document
 - Documenting All Dates and Times Associated in this Process (i.e. for info retrieved, for repair procedures downloaded, etc.) Is Critical
 - Identify Required Inspections



Workflow Steps 4-8

- STEP 4 –**
 - Document DTCs and the Assessment
- STEP 5 –**
 - Document Initialization, Programming, and Module Setup Processes using OEM Procedures (e.g., for modules), if needed
- STEP 6 –**
 - Document DTCs (Document Scan Results) - Virtual Printout (*.pdf, *.jpg, etc.) of all the DTCs and all the modules tested
 - Research Results
 - Document Required Repair Procedures
 - Note: Calibration or re-learn may or may not be reported via DTCs (vehicle specific)
- STEP 7 –**
 - Document Scan Results (see above)
- STEP 8 –**
 - Retrieve Calibration Procedures from OEM
 - Identify Calibration Prerequisites
 - Identify Tools & Qualified Personnel
 - Refer to STEP 3 for an inclusive list
 - For Sublet, please see bullet at the end of this document



Workflow Steps 9-12

STEP 9 –

- Document Calibration Procedures from OEM and that pre-conditions were met
 - Ensure and document all calibration process pre-conditions have been met, e.g., full fuel tank, check tire pressure, alignment
 - If the vehicle was altered, e.g. larger/high performance tires or modified ride heights, it may not be possible to perform a proper calibration
 - However, some OEMs may have limited procedures for related alterations

If altered, document and advise the owner/driver that the alteration can cause the inability for some ADAS systems to operate correctly and proper calibrations to be performed successfully

STEP 10 –

- Document Completed Proper Calibration Process:
 - Retrieved OEM Calibration Processes, Steps Followed, Photos, Videos & Other Documentation (e.g., screen shots) to Provide Evidence It Was Performed Correctly
 - Again, Personnel, Dates and Times Associated with Each Step
- Insurance Companies and OEMs may require pictures supporting calibrations

STEP 11 –

- Repair facility should have an agreement with the personnel performing the test drive and receive adequate documentation to prove it completed correctly
- Document Personnel and Date & Time of Test Drive and Results

STEP 12 –

- Review ADAS Features with Owner, Document and Inform Owner ADAS Systems set to OEM Specifications

