



TECHNICAL FEATURE

SOPs WITHIN EACH DEPARTMENT

Vehicle repairs are becoming more and more difficult as OEMs design and build more electronics into vehicles that are constructed from advanced materials. These vehicles will take longer to repair due to the construction processes, repair procedures and (of course) parts procurement. Unfortunately, some would have you believe that vehicle repairs can be completed quickly, which is not the case. In fact, it is the complete opposite. Vehicle repairs are now inherently very complex and time-consuming to do properly. If all procedures are not followed, multiple frustrating issues can occur, such as delays, re-work (re-dos), customer frustration or the dreaded post-repair inspection that winds up not in your favor. How do we prevent this from happening? It may sound hard, but it really can be as easy as we describe.

We have helped numerous shops prevent mistakes during the repair process by having a system of checks and balances, commonly referred to as Standard Operating Procedures (SOPs). We will cover each department to keep everyone accountable. In this sometimes selfish, elitist and self-entitled world we live in now, we must stop the placation of people's feelings and start instilling some pride and accountability into our workforce.



The first department after the CSR area (which will be covered in another article) is the teardown department.

This is where it all begins. This is like the players meeting prior to the World Series or Super Bowl. This is where the entire repair plan is set up. If problems occur later during the repair process, this is most often the department to blame. Over the past eight years, we have worked with over 400 repair facilities. We have seen what works, what doesn't work, what was good and what was bad. We have compiled a few items from each department to ensure the repair moves smoothly.

These key items are the most forgotten or overlooked in the teardown department:

- Vehicle washed and degreased
- Photos of vehicle taken with height measurements
- Vehicle pre-measured
- All damaged components accounted for, including structural and bolt-on components
- All parts, materials and fasteners/hardware listed (rivets, adhesives, foams, etc.)
- All undamaged parts wrapped/protected and secured
- Vehicle has been blueprinted/triaged/x-rayed
- OEM repair procedures and information reviewed and printed
- Work order is attached
- Radio pre-sets marked down
- Damage report (estimate) peer-reviewed for accuracy
- AC system evacuated and sealed
- Seat, steering wheel covers and floor mat installed
- All openings masked/covered/sealed
- Photos of disassembled vehicle have been taken



The next department the vehicle generally moves to is the structural department.

However, before the vehicle is moved into the repair process cycle, you must ensure that all parts have been received. No vehicle repairs should begin until all parts are there.

Here are the commonly overlooked procedures for this department:

- | | |
|---|--|
| <input type="checkbox"/> All parts are in and any damage has been corrected | <input type="checkbox"/> STRSW tips are dressed/changed? Yes/No |
| <input type="checkbox"/> A preliminary measurement is in the system | <input type="checkbox"/> Is Structural Adhesive required? Yes/No |
| <input type="checkbox"/> The OEM procedures have been reviewed | <input type="checkbox"/> Brand _____ |
| <input type="checkbox"/> Test Welds? | <input type="checkbox"/> Exp. Date _____ |
| <input type="checkbox"/> Yes/No MAG | <input type="checkbox"/> Yes/No MIG ALU |
| <input type="checkbox"/> Yes/No STRSW | <input type="checkbox"/> Yes/No MIG BRONZE |
| <input type="checkbox"/> Visually Pass? | <input type="checkbox"/> Is foam required? Yes/No |
| <input type="checkbox"/> Yes/No MAG | <input type="checkbox"/> Brand _____ |
| <input type="checkbox"/> Yes/No STRSW | <input type="checkbox"/> Exp. Date _____ |
| <input type="checkbox"/> Destructively tested? | <input type="checkbox"/> Weld-through primer required? Yes/No |
| <input type="checkbox"/> Yes/No MAG | <input type="checkbox"/> Applied? Yes/No |
| <input type="checkbox"/> Yes/No STRSW | <input type="checkbox"/> Are all welds dressed? Yes/No |
| <input type="checkbox"/> Yes/No MIG ALU | <input type="checkbox"/> Backsides? Yes/No |
| <input type="checkbox"/> Yes/No MIG BRONZE | <input type="checkbox"/> Corrosion resistance primers applied |
| | <input type="checkbox"/> Photos taken |

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After the structural department (or if the vehicle was a non-structural repair), the vehicle would move to the metal department:

- Confirm that all parts are in and any damage has been corrected
- Identify the type of substrate and tensile strength (i.e., MS, HSS, Composite, Aluminum).
- Review the OEM procedures
- Is structural adhesive required? Yes/No
 - Brand _____
 - Exp. Date _____
- Is there foam required? Yes/No
 - Brand _____
 - Exp. Date _____
- Repair backside damage, apply corrosion resistant primers, plus topcoats
- No filler applied to mating flanges
- Take photos

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Now, it is time for the vehicle to move to the prep department for preparation of priming and refinishing.

Let's look at the forgotten procedures in the prep department:

- All repaired panels, new panels and areas featheredged and sanded, no peel
- All repaired areas primed
- All primed areas sanded properly with correct grit
- All panels checked for straightness, imperfections and pinholes
- All refinished areas sanded properly and no peel visible
- All plastic parts sanded properly
- All small parts accounted for (door handles, moldings, fuel door, etc.)
- Vehicle washed properly, wet (urethane-based paint) or dry (water-based paint)
- Undercarriage, underhood, trunk gutter, wheelwells and wheels cleaned
- Vehicle crevices and all areas blow dried clean
- All masked areas are properly tape-affixed

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After the vehicle is refinished, it moves to the detail department and reassembly process.

Here are the main issues in the detail department:

- All masking removed and vehicle is blown off and tacked for any debris
- Vehicle checked for runs, sags, dirt, debris and imperfections
- All jambs and recessed areas sanded, buffed and cleaned
- Interior blown out and vacuumed
- Windows cleaned, inside and out
- Radio pre-sets, memories and auto/express features reset
- Trunk/storage areas checked
- All rubber/carpet mats placed back in the vehicle
- All personal belongings placed back in the vehicle
- Check vehicle for any Malfunction Indicator Lamps
- All wheel lugs torqued
- All bolts checked and tightened
- Battery cables checked and tightened
- Vehicle test driven
- Wheel lugs rechecked and torqued

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Aluminum Outer Body Panel Repair Workshop

This workshop consists of a 1 ½ Hour Presentation on the following:

- ✓ Aluminum Usage
- ✓ Aluminum Intensive and Hybrid Construction
- ✓ Aluminum Series and Alloys
- ✓ Repair vs. Replace Decisions
- ✓ Repair Equipment for Outer Panels
- ✓ Heating Techniques
- ✓ Hammer and Dolly Techniques
- ✓ Dent Removal Equipment and Techniques
- ✓ Reshaping Techniques

The Presentation is followed up by 3 ½ Hours of hands-on aluminum repair on hoods, doors and fender panels.

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TECHNICAL FEATURE

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To ensure proper accountability, each technician must sign off on his or her procedures, and the shop foreman must recheck (peer review) and sign off prior to the vehicle moving to the next department. We also have a 50-Point Final Checklist, but that is for another article. Additionally, we have a slightly different checklist for aluminum intensive vehicles, but we restrict its publication. If you are interested, please feel free to contact us. Once we verify your facility is certified for an aluminum repair program, we will be more than willing to share our Aluminum Intensive Departmental Checklist with you.

There are so many more operations to add to the above lists, but because each facility operates slightly differently, we cannot list every one. The checks in this article are the most commonly found to be overlooked and/or forgotten. When we consult for a facility, we generally customize and adjust the list for that individual business.

We hope this article has helped the industry to better understand the importance of keeping track of repairs as they move through each department, what could go wrong with a repair and the ramifications of those mistakes.

Feel free to contact us if you have any questions. **H&D**

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Executive Director's Thoughts

SOPs are the key to peace. I hear so many shop managers say that they much appreciate checklists because it gives them the ability to have minimal oversight with the mutual understanding of the expectation of performance by all employees. Usually, these lists are available from vendors as a tool to customize, or even your association has them!

- Jordan Hendler