Vehicle Body Repairing and Painting

NTQF Level II

Learning Guide -#25

Unit of Competence: - Carry-out Panel Repairs to Pre-paint Condition

Module Title: - Carrying-out Panel Repairs to Pre-paint Condition

LG Code: EIS VRP2 M08 LO3-25

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LO 3: Complete Work Processes

Instruction Sheet	Learning Guide - #25

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics:–

- Making final inspection
- Cleaning work area
- Checking and storing tools and equipment
- Processing documentation

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- Make final inspection of repaired body panel to ensure work meets task instructions, workplace standards, and ready for painting
- Clean work area waste and dispose non-recyclable materials, collect and store recyclable material is according to environmental requirements and workplace procedures
- Check and store tools and equipment according to workplace procedures, or tag and report as required
- Process workplace documentation according to workplace procedures

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in **number 3 to 21**.
3. Read the information written in the "**Information Sheets 1**". Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the "Self-check 1" **in page 5.**
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to "**Information Sheet 2**". However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning "**Information Sheets 1**".
7. Read the information written in the "**Information Sheets 2**". Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
8. Accomplish the "Self-check 2" **in page 11**.

9. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).
10. If you earned a satisfactory evaluation proceed to "**Information Sheet 3**". However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning "**Information Sheets 2**".
11. Read the information written in the "**Information Sheets 3**". Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
12. Accomplish the "Self-check 3" **in page 15.**
13. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 3).
14. If you earned a satisfactory evaluation proceed to "**Information Sheet 4**". However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning "**Information Sheets 3**".
15. Read the information written in the "**Information Sheets 4**". Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
16. Accomplish the "Self-check 4" in **page 19.**
17. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 4).
18. If you earned a satisfactory evaluation proceed to "**Operation Sheet-1 up to 2**". However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning "**Information Sheets 4**".
19. Read and understand the information written in the "**Operation Sheet-1 up to 2"** Try to understand what are being discussed and make a practice with the help of the teacher. Ask you teacher for assistance if you have hard time understanding when doing a practical.
20. Accomplish the "LAP test" in **page 23.**
21. Submit your accomplished Self-check. This will form part of your training portfolio.

Information Sheet-1	Making Final Inspection

1. Making Final Inspection

1.1. Final Inspection

Vehicles which have been in accidents should have a Post Repair inspection to insure that the repairs were done correctly. This evaluation is performed by a qualified third-party who is tasked with examining the repairs to ensure that the proper parts were used and the proper procedures were followed. During a post repair inspection the vehicle is assessed to ensure that no safety problems exist.

Post Repair Inspections are an important component in vehicle safety. They add a second layer of protection to vehicle repairs which can save time, money and human life.

As more and more insurance companies engage in Direct Repair Programs, auto body repair shops are evaluated on how quickly and inexpensively repairs can be made. Rushing through a repair or using aftermarket parts on repairs can jeopardize a vehicle's performance and the safety of drivers and passengers.

Industry statistics have reported that over sixty percent (60%) of vehicles that were repaired have been found to have inadequate repairs that could affect the value, operation and/or safety of the vehicle and its occupants. Would it be wise to assume that the repair facility and/or the insurance company beat the odds on your vehicle's repair? Do not gamble with the safety of you and your family, know if your vehicle has remaining damage and/or was properly and thoroughly repaired.

Inspect Your Car's Repaired Area

Let's say for illustration purposes that your car sustained some major front-end damage. That means not only were body panel replacements and painting required, but also repairs to the suspension, frame and engine components. Inspect the following:

- The body panel seams for uneven gaps
- Open and close the doors, hood and trunk to notice the fit while listening for strange rubbing sounds. Make sure they open easily and close securely.
- If an air bag was deployed was it replaced?
- Check the distance between the tires and fenders and compare those from side to side
- Ensure that all hoses and wires are connected
- Turn on your headlights and inspect the beam alignment
- If the frame needed straightening request a copy of the frame spec printout and have the before and after numbers explained to you

Vehicle inspection and delivery is the last step in the long, careful process of getting your car back to like-new condition after it has been involved in a collision.

Inspect the vehicle thoroughly post-repair to make sure that it is properly put-together and everything works as it should. Often, we'll take your vehicle for a test drive just to make sure that everything is functioning properly, there are no squeaks or rattles, and all trim pieces and body panels are properly assembled and joined.

1.2. Inspection of a repaired or replaced rear body panel

Inspect a repaired or replaced rear body panel for these conditions:

- dimensional alignment
- weld quality
- proper finish appearance and film thickness
- proper application of corrosion protection
- proper alignment and operation of the deck lid or hatch
- proper alignment and operation of the rear lamps
- proper installation of all required labels
- correct routing of any wiring harnesses or operating cables
- correct position and sealing of any weather strips
- correct any defects

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is Post Repair Inspection and why it is Necessary?(2 point)
2. What are you inspecting after body repaired? (4 point)
3. What condition consider when repair/replace a rear body panel? (4 point)

Note: Satisfactory rating - 7 points **Unsatisfactory - below 7 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

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Information Sheet-2	Cleaning Work Area

2. Cleaning Work Area

2.1. Removing Body Shop Dust

The light dust is created from sanding away at the body filler during the repairs and even if the body shop does wash the car before returning it, the chances are there will still be dust deposits in a number of areas in and around the car. Body shop dust will accumulate in door shuts, on all interior surfaces if a door or window has been left open slightly during the repairs and even in and around the engine bay.

Door shuts can be pre sprayed with a diluted all-purpose cleaner or simply cleaned with a wash mitt and normal shampoo solution then lightly rinsed off, being careful not to wet the interior by aiming the flow of water away from the car. Soft bristled detailing brushes can be used to access tight, awkward areas and to help remove more stubborn accumulated dust.

To remove body shop dust that has settled in the interior all surfaces must first be thoroughly vacuumed. Carpets and upholstery should be lightly pre sprayed with either designated upholstery cleaning product or a diluted all-purpose cleaner and then vacuumed off. It is important to do this as the body shop dust can smell quite strongly and pre spraying before vacuuming will help to eliminate the smell.

2.2. Shop Floor Maintenance

Proper procedures for keeping your store clean.

We all know that a clean facility is better than a dirty one. Clean facilities generate more repeat traffic as well as providing a safer working environment. We also know that very few of us enjoy cleaning. We tend to put it off as long as we can and then complain about how hard it was to clean. By following Oil Eater's "Clean as You Go" procedures, your floor will always be relatively clean, your customers will see a neat and polished facility & you will reduce the amount of water, chemical & labor needed to maintain your shop's floors.

"Clean as You Go" simply REQUIRES employees to be responsible for their own drips & spills as they occur. "We don't have time" is not an excuse. Taking the few seconds to do this will save hours a month while limiting the possibility of these soils being tracked through your shop or onto your customer's vehicle. Having a clean facility and presenting a customer with a staff well trained in shop maintenance will drive customers back to your facility. If you are following "Clean as You Go" at your facility, floor mopping should only need to be done once or twice a day, usually at the end of each shift.

Equipment needed: (All equipment should be clean to start every day)

- Broom.
- Dustpan.
- Putty Knife.
- Shop rags.
- Mops. Using a linen service to rent your shop towels & mops.
- Wet Floor Signs.
- A spill kit, such as the Oil Eater Spill Kit.
- Universal absorbents, such as Oil Eater Universal Absorbents.

In high traffic areas an Oil Eater Tuff Rug will prevent tracking of oil and dirt while providing the tech a slip free surface to work on.

- Mop Handles.
- Mop Bucket and Wringer.

A double bucket system works great. This has a second compartment to collect dirty solution when you wring out the mop, keeping your cleaning solution from being contaminated.

- Properly labeled spray bottles filled with water and Oil Eater solution.
- Oil Eater Cleaner/Degreaser or Oil Eater Pouch Packs.

Floor Cleaning Do's & Don'ts

Do:

- Provide all employees with clean shop towels at the start of their shift.
- Clean up drips and spills immediately to prevent tracking thru your shop.
- Put the minimum amount of solution needed in the mop bucket.
- Change your solution after mopping each bay.
- Hang mops when not in use.
- Empty and clean mop buckets after each use.

Don't:

- Leave mop buckets filled with dirty solution.
- Leave the mop in the mop bucket in the dirty solution.
- Leave drips and spills for clean up later, or the next person.

2.3. Keeping the service shop clean

Members of the Mobile Air Conditioning Society (MACS) Worldwide receive a member discount on cleaning supplies, first aid supplies, uniforms and parts washers from Cintas. They have offered us this information on maintaining a clean service and repair shop.

Clean up with Cintas: 10 Tips for a Pristine Auto Shop Tips to keep the shop clean from top to bottom

To help automotive shops improve cleanliness and productivity, Cintas Corporation (NASDAQ: CTAS) today announced 10 tips for maintaining a clean shop environment. From auto body shops to quick lube stations, these tips help owners and operators maintain their facility, enhance image and increase customer satisfaction.

“Auto shops often don’t realize the impact that cleanliness has on business and customer satisfaction,” said Dave Mesko, Senior Marketing Manager, Cintas Corporation. “Through a comprehensive approach, shop owners can keep their facilities clean and truly differentiate themselves from the competition.”

Cintas recommends the following tips to maintain a clean auto shop:

1. **Plan daily floor maintenance**: Shop floor cleanliness is increasingly important as many technicians take customers into the service area to discuss their vehicle’s condition. To keep floors in the service area clean, develop daily floor cleaning protocols to remove any debris accumulated throughout the day. Create cleaning schedules based on peak business times and train employees in proper techniques. In addition to sweeping and mopping, use agitation tools such as brushes and auto scrubbers to keep fluids and oils

from building up on flooring surfaces. Maintain cleanliness by stocking important supplies such as oil containment products to handle unsightly and dangerous spills.

2. **Provide effective cleaning tools**: To guarantee effectiveness of cleaning programs, equip the shop with proper chemicals and supplies. Chemical dispensing units guarantee that solutions are mixed correctly each time to boost effectiveness of cleaning programs and employee safety. These units also save time by eliminating manual mixing and providing quick access to properly diluted chemicals. Microfiber mops and dual chamber mopping buckets reduce the spread of contaminants from the service area to customer facilities.
3. **Implement matting systems**: Mats capture shop lubricants and fluids and prevent their spread into customer areas. Combine scraper and carpet mats at all entrances to prevent the spread of debris throughout the shop. Place anti-fatigue mats in high-productivity zones to catch any spills and reduce worker injury. In addition to placement, make sure that mats remains clean and functional by partnering with a professional mat laundering service.
4. **Schedule deep cleanings**: While daily cleanings remove dirt and debris, they aren't always sufficient in the total removal of buildup from lubricants, antifreeze, brake and power-steering fluids. Schedule periodic deep cleanings through the entire shop to remove grime and ease daily cleaning duties. A combination of temperature, agitation, chemicals and extraction effectively removes chemical residue, oil and dirt from all shop surfaces. Partner with an automotive facility services provider to ensure deep cleanings are performed efficiently with minimal business interruption.
5. **Improve employee appearance**: Ensure that personnel look and feel their best by implementing a uniform program. Partner with an apparel rental service to make sure that employees consistently greet customers with a freshly-laundered uniform. Provide scratches belts to ensure that customer vehicles stay in top condition while employees execute services. Promote the shop's image with uniforms that display company logos and employee names to personalize the guest experience and boost employee morale.
6. **Promote clean hands**: Since technicians are constantly working with harsh oils and liquids, ensure they are greeting customers with clean hands.

   Provide hand washing stations supplied with heavy-duty soaps to cut harsh grease and oil. Make sure that clean paper towels are readily available and employees aren't wiping freshly-cleaned hands on soiled shop towels. Additionally, provide protective gloves for employees performing more intensive services.
7. **Provide clean towels**: Prevent the accumulation of unsightly soiled shop towels throughout the shop by partnering with a laundry service provider.

   Service providers will deliver laundered shop towels based on individual shop needs so a constant supply is available for employees. Since professionals handle the removal of shop towels, employees and shops remain clean and productive.
8. **Provide a safe parts washer**: Refrain from using solvent-based parts cleaners as inhalation can cause nervous system damage, lung injury and death. To keep employees safe, make sure that the washer uses bio-based and pH-neutral cleaning solutions to reduce hazards and improve indoor air quality throughout the shop.

9. **Maintain waiting areas**: As a customer's first impression of the auto shop occurs in the waiting area, this space should always remain in top condition. Develop daily cleaning schedules to disinfect and sanitize all hard surfaces including chairs, tables and floors. Provide a continuous supply of refreshments to enhance the customer experience and provide added value to services performed.
10. **Focus on restrooms**: Whether the shop has customer-only restrooms or shared facilities, restrooms should always be pristine. Ensure that restrooms have a continuous supply of the essentials including soap, paper towels and toilet paper. At least once a day, all restroom surfaces should be sanitized and disinfected. To keep restrooms smelling fresh and reduce unpleasant odors, use time-release air fresheners and urinal screens. In addition to daily maintenance programs, schedule regular restroom deep cleanings to remove buildup that daily protocols cannot reach.

To Clean Your Industrial Floor You Will Need

- Oil Eater® Cleaner Degreaser
- A source of water
- A mop bucket or autoscrubber
- Wet Floor placards

How to Use Oil Eater Cleaner Degreaser to Clean Floors

Cleaning oil and dirt from industrial floors is best done on a daily basis as part of your regular maintenance schedule.

Cleaning Floors with Oil Eater Floor Cleaner & an Autoscrubber

Oil Eater Cleaner Degreaser is the perfect choice for maintaining your industrial facility's floors with an autoscrubber. Dilute as follows:

Surface	Oil Eater	Water
Raw Concrete / Unsealed Floors	1 part	20 parts
Sealed / Painted Concrete	1 part	40 parts
Waxed Floors	1 part	50 parts

For heavily soiled areas apply Oil Eater® floor cleaner directly to the surface and scrub with the machine until the surface is clean. Be sure to properly mark all areas which are being cleaned with wet floor placards.

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What equipment needed for shop floor cleaning?(2point)
2. What is oil eater? (2point)
3. What Cintas recommends maintaining a clean auto shop? (4point)
4. Explain the ratio of water and oil eater for painting floor. (2point)

Note: **Satisfactory rating - 7 points** **Unsatisfactory - below 7 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

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Information Sheet-3	Checking and storing tools and equipment

3. Checking and storing tools and equipment

3.1. Keeping of Equipment and Tools

a) Equip the workshop with all necessary equipment and facilities required for the workshop's services and always keep them in safe working condition.

b) Equipment and tools should be stored in clearly designated places.

c) Properly plan the placement of hand tools. To avoid hazard, all sharp edges and tips should face down or put into protective sleeves.

d) Lifting appliances, pneumatic tools and devices should be properly stored, maintained and inspected regularly by those competent.

e) All equipment for analysis and testing instruments should be maintained and calibrated in accordance with the manufacturer's instructions

3.2. Store the tools

List of Recommended Equipment and Facilities# for Vehicle Maintenance Workshops

The equipment and facilities listed below are for general guidance and are not meant to be exhaustive. The workshop-in-charge shall provide all necessary equipment and facilities in accordance with relevant legislations and guidelines. The tool lists are organized into three basic categories*:*

i. Hand Tools,

ii. General Lab/Shop Equipment

iii. Specialty Tools and Equipment.

The specialty tools and equipment section is further separated into the four Collision Repair & Refinish Accreditation task categories (see table-1). When referring to the tools and equipment list, please note the following:

A. The organization of the tool list is not intended to dictate how a program organizes its tool crib or student tool sets (i.e., which tools should be in a student set, if utilized, and which should be in the tool crib or shop area).

B. Quantities for each tool or piece of equipment are determined by the program needs; however, sufficient quantities to provide quality instruction should be on hand.

C. For *Specialty Tools and Equipment by Area*, the program need only have those tools for the areas being accredited.

D. Programs may meet the equipment requirements by borrowing special equipment or providing for off-site instruction (e.g., in a dealership or independent repair shop). Use of borrowed or off-site equipment *must* be appropriately documented.

E. No specific brand names for tools and equipment are specified or required.

F. Although the Program Standards recommend that programs encourage students to begin to build their own tool sets, this is not a requirement. However, many employers require an entry-level technician to provide his/her own basic hand tool set.

Table 1: Four Collision Repair & Refinish Accreditation task categories

Body Repair	Body Painting	Body Building Work	Vehicle Accessories Work
• Vehicle Frame Alignment Bench • Transmission Jack • Oxy-acetylene • Welding Machine • Tungsten Inert Gas • Welding Machine • Metal Inert Gas • Welding Machine • Hydraulic Crane • Hydraulic Jacks • Ventilation and • Exhaust System	• Paint Mixing Machine • Spray Guns • Spray Booth or (with air filtering and heating facilities) • Spray Gun Cleaner • Hydraulic Jacks • Ventilation • Exhaust System	• Full Set of Hand Tools • Protective Clothing and Gloves • Sheet Metal Bending/Roll Forming/Cutting Machines* • Jack Stands	• Full Set of Hand Tools • Necessary Tools for Work (depending on the case)

Self-Check -3	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Describe three tool list categories. *(3 point)*
2. How to perform Keeping Equipment and Tools? (3 point)

Note: **Satisfactory rating - 4 points** **Unsatisfactory - below 4 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

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Information Sheet-4	Processing Documentation

4. Process Documentation

In order to understand what Process Documentation is, we also need to understand what is Process'? A **Process** is a series of steps and interrelated work activities, characterized by specific inputs and tasks which add value, and make up a procedure for a set of specific outputs. Thus the word 'Process' refers to the steps and work activities a transaction follows through an organization's systems, applications, and people.

The word **Documentation** – refers to a narrative, or some description of the way the process works. Process Documentation is a systematic way of capturing what happens in a process of change and how it happens, to reflect and analyze why it happens and to organize and disseminate the findings. It helps to reflect, analyze and discover patterns that help or hinder change.

- It analyses significant concerns, questions and issues articulated and addressed at different stages of the study
- It serves as a tool for decision making
- It helps identify problems and bottle necks, identify deviations to tackle corrective action and industry learning.

4.1. Discussion Notes Major steps in Process Documentation

Step 1: Documentation prior to the start of any task: involves documenting the objective of the activity and approach; steps to be taken; why; who will be involved

Step 2: Documenting immediately following the Process task: what was actually done; modifications made on the approach and why; successes; what worked well;

Step 3: Synthesis of findings and insights. Feedback may be obtained from stakeholders involved in the activities to find out factors which determined success; factors leading to failure;

Step 4: Communication of findings and insights to stakeholders for obtaining feedback.

4.2. Manage Process Documentation

A problem with process documentation is that processes tend to change while the documentation remains. One way to maintain a high level of documentation is to evaluate it frequently. Schiesser has come up with a model for evaluating process documentation. The model consists of ten characteristics of quality and five characteristics of value. The characteristics of quality are:

1. **Ownership**: Rates which degree the three key ownership roles are identified, understood and supported. The three roles are process owner, documentation custodian and technical writer. One person can have all roles, the issue is that every role must be identified.
2. **Readability**: This characteristic rates how well the text in the document is written. How well matches the material the audience?
3. **Accuracy**: Rates the technical accuracy of the material.
4. **Thoroughness**: Is all relevant material included in the documentation?

5. **Format**: Rates the overall organization of the material. How well it keeps a consistent level of technical depth, how easy it is to follow.
6. **Accessibility**: Rates the ease of accessibility.
7. **Currency**: Rates to what degree the documentation is up-to-date and the frequency with which it is kept current.
8. **Ease of update**: Rates the ease of updating the documentation, including revision dates and distribution of new version.
9. **Effectiveness**: Rates the usability of the documentation including examples, graphics, color-coding, use on multiple platforms, compliance with existing standards, etc.
10. **Accountability**: Rates how well the documentation is being used by all appropriate users.

Documentary Records

A) Properly keep and update all technical reference materials and maintenance 6 Waste rubber tyres are classified as special waste. In accordance with the "Guidelines for Admission Ticket System", permission shall be granted by the Environmental Protection Department before disposal of special waste at landfill sites. Records relevant to the maintenance and repair of workshop equipment (including lifting appliances, pneumatic tools and air receivers) and customers' vehicles so as to allow easy access by the staff concerned.

B) Promptly record and update all customer complaints and their handling methods.

C) A record of all feedback from staff to the management through the established mechanism and how they have been handled should be kept and updated as soon as possible.

D) Record in detail information about the services provided and the parts replaced. Keep the records for at least three years or based on industry requirement.

Here are some other best practices of document maintenance. Documents should possess the following qualities:

- Be public and visible
- Be centrally stored
- Be easy to edit and searchable
- Include adequate feedback
- Use flowcharts
- Use templates when possible
- Use simple formatting
- Each represents different processes
- Include the date of an update
- Be locally backed up
- Include software documentation
- Have a search feature
- Have an assigned numbering system

Self-Check -4	**Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Describe the process and documentation. (4 point)
2. What are Major steps in Process Documentation? (3 point)
3. What quality fulfill a document?(at least write five) (5 point)

Note: **Satisfactory rating - 8 points** **Unsatisfactory - below 8 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

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Operation Sheet - 1	Post Repair Inspections

Method of final inspection

Step by Step Guide to Post Repair Inspections:

1) Vehicle is evaluated to determine whether a post repair inspection is needed.
2) Obtain a copy of insurance estimate and/or collision shop estimate to compare estimate with actual work performed.
3) Visually check all the repair gaps to see if the car lines up.
4) Check all paint surfaces using a paint thickness meter to ensure an even finish and to mark any problem areas for correction later.
5) Pull back any rugs and unclip panels to inspect for hidden incorrect repairs. Elements such as covered over unrepaired structural panels, open welds which were not properly protected against corrosion, bare metal, missing spot welds, misaligned structural panels and damaged parts that should have been changed are often hidden by rugs and panels. These repair shortcuts can cause vehicle breakdown and jeopardize driver safety.
6) If the initial inspection uncovers cause for concern, we recommend that the customer allow us to do a full post repair inspection.
7) Not every car will require a full post repair inspection, but when one is necessary, we contact the insurance company and provide them the necessary information in order to have them pay for the work that needs to be done in order for the vehicle to be properly repaired.
8) There is no cost to the customer for post repair inspection or repairs resulting from the inspection. The costs of those repairs are borne by the insurance company who has a contractual obligation with the insured to pay for vehicle repairs that are a result of a car accident.

Operation Sheet - 2	Cleaning workplace

Floor Mopping Procedure

1) Prep the area to be mopped.
   a) Place "wet floor" sign to alert coworkers.
   b) Move any equipment or furniture to a safe area where they will not be in the way and can be easily put back in place.
   c) Use your putty knife to remove any stuff like tar or gum stuck to the floor.
2) Sweep the area.
3) Mop the area.
   a) Use a solution of 8 to 10 parts water to one part Oil Eater.
   b) Dip you mop in the solution & wring it out so it is damp. The biggest problem when cleaning is over wetting the surface. A damp mop will allow the oil & dirt to cling to the mop, versus just spreading in around.
   c) Start in the corner the farthest away from where you will finish.
   d) Mop in an "S" motion working back from where you started. Redip your mop in the solution & wring it out frequently.
   e) Change the solution after mopping each bay.
4) Clean up.
   a) Empty and rinse the mop bucket so it will be ready for the next shaft.
   b) Rinse mop completely and hang.
   c) Remove wet floor signs.
   d) Put equipment and furniture back in place.

If you are following "Clean as You Go" at your facility, floor mopping should only need to be done once or twice a day, usually at the end of each shift.

LAP Test	Practical Demonstration

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within 1:30 hour.

Task 1: Perform Post Repair Inspections

Task 2: Cleaning workplace

List of Reference Materials

1- http://www.autobahncollision.com/repair-process/final-inspection-and-vehicle-delivery.htm
2- https://www.vehicleservicepros.com/in-the-bay/tools-equipment/article/10717421/shop-floor-maintenance-101-clean-as-you-go
3- https://macsworldwide.wordpress.com/2012/09/06/keeping-the-service-shop-clean/
4- https://www.automotivemanagementnetwork.com/documents/
5- https://www.barrysautobody.com/what-is-a-post-repair-inspection-and-why-it-is-necessary/