| **COMPETENCY BASED LEARNING MATERIAL** | |  |
| --- | --- | --- |
|  | |  |
|  | | | |
| *Sector:* AUTOMOTIVE/LAND TRANSPORT SECTOR | | | |
| *Distinctive Area of Competence and Qualifications:* **Automotive Servicing NC I** | | | |
| *Unit of Competency:* Perform Pre-Delivery Inspection | | | |
| Module Title:  **Performing Pre-Delivery Inspection** | | | |
| C:\Users\AIT\Desktop\logo.jpg | **AUTOHUB INSTITUTE OF TECHNOLOGY** | | |

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**NATIONAL CERTIFICATE LEVEL 1**

**QUALIFICATION LEVEL**

**COMPETENCY-BASED LEARNING MATERIALS**

| **No.** | **Basic Competencies** | **Module Title** | **Code** |
| --- | --- | --- | --- |
|  | Receive and Response to Workplace Communication | Receiving and Responding to Workplace Communication | 500311101 |
|  | Work with Others | Working with Others | 500311102 |
|  | Demonstrate Work Values | Demonstrating Work Values | 500311103 |
|  | Practice Housekeeping Procedures | Practicing Housekeeping Procedures | 500311104 |

| **No.** | **Common Competencies** | **Module Title** | **Code** |
| --- | --- | --- | --- |
|  | Validate Vehicle Specification | Applying Appropriate Sealant/Adhesive | ALT723201 |
|  | Move and Position Vehicle | Moving and Positioning Vehicle | ALT832212 |
|  | Utilize Automotive Tools | Performing Housekeeping | ALT723214 |
|  | Perform Mensuration and Calculation | Performing Mensuration and Calculation | ALT723215 |
|  | Utilize Workshop Facilities And Equipment | Performing Safety Practices | ALT723216 |
|  | Prepare Servicing Parts and Consumables | Reading, Interpreting and Applying Specifications and Manuals | ALT723217 |
|  | Prepare Vehicle For Servicing and Releasing | Using and applying Lubricant/Coolant | ALT723218 |

| **No.** | **Core Competencies** | **Module Title** | **Code** |
| --- | --- | --- | --- |
|  | **Perform Pre-Delivery Inspection** | **Performing Pre-Delivery Inspection** | **ALT723372** |
|  | Perform Periodic Maintenance of Engine | Performing Periodic Maintenance of Engine | ALT723373 |
|  | Perform Periodic Maintenance of Drive Train | Performing Periodic Maintenance of Drive Train | ALT723374 |
|  | Perform Periodic Maintenance of Brake System | Performing Periodic Maintenance of Brake System | ALT723375 |
|  | Perform Periodic Maintenance of Suspension System | Performing Periodic Maintenance of Suspension System | ALT723376 |
|  | Perform Periodic Maintenance of Steering System | Performing Periodic Maintenance of Steering System | ALT723377 |

**HOW TO USE THIS COMPETENCY BASED LEARNING MODULE**

Welcome to the Module: **Performing Pre-Delivery Inspection**. This module contains training materials and activities for you to complete.

The unit of competency ***Perform Pre-Delivery Inspection*** contains the knowledge, skills and attitudes required for ***Automotive Servicing NC I*** . It is one of the Core Modules at ***National Certificate Level I (NC I )***.

You are required to go through a series of learning activities in order to complete each learning outcome of the module. In each learning outcome there are Information Sheets, Resource Sheets and Reference Materials for further reading to help you better understand the required activities. Follow these activities on your own and answer the self-check at the end of each learning outcome. Get the answer key from your instructor and check your work honestly. If you have questions, please don’t hesitate to ask your facilitator for assistance.

**Recognition of Prior Learning (RPL)**

You may already have some or most of the knowledge and skills covered in this module because you have:

* been working for someone
* already completed training in this area

If you can demonstrate to your trainer that you are competent in a particular skill or skills, talk to him/her about having them formally recognized so you won’t have to do the same training again. If you have qualifications or Certificates of Competency from previous trainings, show them to your trainer. If the skills you acquired are still relevant to this module, they may become part of the evidence you can present for RPL.

At the end of this learning material is a Learner’s Diary, use this diary to record important dates, jobs undertaken and other workplace events that will assist you in providing further details to your trainer or assessors. A Record of Achievement is also provided for your trainer to complete once you completed the module.

This learning material was prepared to help you achieve the required competency, in **Performing Pre-Delivery Inspection NC I**. This will be source of information for you to acquire the knowledge and skills in this particular trade independently and your own pace with minimum supervision or help from your instructor.

In doing the activities to complete the requirements of this module, please be guided by the following:

* Talk to your trainer and agree on how you will both organize the training under this module. Read through the module carefully. It is divided into sections that cover all the skills and knowledge you need to successfully complete.
* Work through all information and complete the activities in each section. Read the information sheets and complete the self-checks provided in this module.
* Most probably your trainer will also be your supervisor or manager. He/She is there to support you and show you the correct way to do things. Ask for help.
* Your trainer will tell you about the important things you need to consider when you are completing the activities and it is important that you listen and take notes.
* You will be given plenty of opportunities to ask questions and practice on the job. Make sure you practice your new skills during regular work shifts. This way you will improve both your speed and memory and also your confidence.
* Talk to more experienced work mates and ask for their guidance.
* Use self-check questions at the end of each section to test your own progress.
* When you are ready, ask your trainer to watch you perform the activities outlined in this module.
* As you work through the activities, ask for written feedback on your progress. Your trainer keeps feedback/pre-assessment reports for this reason. When you have completed this learning material and feel confident that you have had sufficient knowledge and skills, your trainer will arrange an appointment with a registered assessor to assess you. The results of the assessment will be recorded in your Competency Achievement Record.

**TABLE OF CONTENTS**

QUALIFICATION : Automotive Servicing NC I

UNIT OF COMPETENCY : Perform Pre-Delivery Inspection

MODULE TITLE : **Performing Pre-Delivery**

**Inspection**

**CORE COMPETENCY**

| **ELEMENTS** | **PERFORMANCE CRITERIA** | **PAGE** |
| --- | --- | --- |
| 1. Prepare for Pre-delivery inspection | * 1. Pre-delivery Checklist is obtain , Vehicle is identify and locate base on the PDI documents. Required Items for PDI are prepared based on the prescribed PDI process, Coordinate transfer of vehicle to the designated/appropriate place for PDI. |  |
| 1. Perform Physical and Functional Inspection | * 1. Walk-around is conducted according to industry practices .Factory-loaded parts are inspected following manufacturer standard procedure. Vehicle is restored following standard operating procedures, Vehicle is checked following standard operating procedures. Minor corrective measures are applied following manufacture’s manual, Inspection Checklist is accomplish based on manufacture’s standards   2. PPEs are worn based on OSHS. |  |
| 1. Complete Work Process | * 1. Injection re-checking timing device is used without error   2. Interpreted result is without error   3. Timing advance operation checked |  |
|  |  |  |
|  |  |  |

QUALIFICATION : Automotive Servicing NC I

UNIT OF COMPETENCY : Perform Pre-Delivery Inspection

MODULE TITLE : Performing Pre-Delivery Inspection

PERFORMANCE CRITERIA:

1. **LO 1: Prepare for pre-delivery Inspection**
   1. Pre - delivery Inspection checklist is obtain from the immediate s following

supervisor

* 1. Vehicle is located based on pre-delivery inspection documents
  2. Required Items are prepared following inspection procedure
  3. Transfer of vehicle to inspection area is coordinated. Following standard

operating procedures

1. **LO 2: Perform physical and functional inspection**

2.1 Walk around is conducted according to industry practice

2.2 Factory-loaded parts are inspected following manufacture’s standard

procedure.

2.3 Vehicle is restored following standard operating procedure

2.4 Vehicle is check following standard operating procedure

2.5 Minor corrective measure are applied following manufacturer’s manual

2.6 Inspection checklist is accomplished based on manufacture’s standard

2.7 PPEs are worn based on OSHS.

According to

1. **LO 3: Complete work processes**

3.1 Initial quality inspection is performed based on workplace procedure.

3.2 Minor defects are corrected based on manufacturer’s manual.

3.3 Wastes are disposed according to environmental standards

3.4 Vehicle is endorse to immediate supervisor following industry procedure.

3.5 Defects are reported following industry procedures.

3.6 Pre-delivery checklist is accomplished and summited according to industry

procedure

.

**RESOURCES:**

Jack Erjavec & Robert scharff, **Automotive Technology, A system Approach**, 2nd Ed.

Crouse, W.H. and Anglin, D.L., **Automotive Mechanics,** 10th Ed.,

Santos, G.N. and Lebron G.B., **Chemistry.**

Don Kowels, **Basic Automotive Service and Maintenance.**

QUALIFICATION : Automotive Servicing NC I

UNIT OF COMPETENCY : Perform Pre-Delivery Inspection

MODULE TITLE : Performing Pre-Delivery Inspection

**LEARNING OUTCOME 1 : Prepare for Pre-Delivery Inspection**

PERFORMANCE CRITERIA

* 1. Pre –delivery Inspection checklist is obtain from the immediate s following

supervisor

* 1. Vehicle is Located based on pre-delivery inspection documents
  2. Required Items are prepared following inspection procedure
  3. Transfer of vehicle to inspection area is coordinated. Following standard

operating procedures

RESOURCES:

1. Jack Erjavec and Robert scharff, **Automotive Technology, A system Approach**, 2nd Ed.
2. Crouse, W.H. and Anglin, D.L., **Automotive Mechanics,** 10th Ed.,
3. Santos, G.N. and Lebron G.B., **Chemistry.**
4. Don Kowels, **Basic Automotive Service and Maintenance.**

**INFORMATION SHEET : 1**

UNIT OF COMPETENCY : Perform Pre- Delivery Inspection

MODULE TITLE : Performing Pre - Delivery Inspection

**LEARNING OUTCOME 1 : Prepare for Pre-Delivery Inspection**

**Required Items of Vehicle**

Vehicles prepare for moving and servicing are treated with special care at all time . Initial inspection and protective care items are fitted before servicing

**Objectives :**

To learn and apply total car care procedure in preparing the vehicle for further inspection and necessary adjustment

**Tire pressure gauge**

Tire pressure are check and corrected according to specification before moving and or transporting the vehicle.



**Fender Cover**

Fender covers are fitted to protect the body paint and avoid scratches when servicing engine and other components located inside the engine compartment.



**Seat cover**

Seat Cover is use to protect the seat from dirt, grease,other foreign contaminants and scratches specially for those of expensive leather finished.

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**Shifting Knob cover**

Shifting knob cover is use to protect the shift knob from dirt , grease and other foreign contaminants and scratches specially for those of expensive leather finished.

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**Floor mat Cover**

Floor mat cover is employ to protect the matting / carpet finished from dirt, dust and other foreign contaminants resulted from repair and other servicing job.

****

**Factory Loaded Parts:**

Factory loaded parts are parts / tools/ accessories that comes originally with the vehicle as included as whole package.

Common package inclusions are:

Radio/ entertainment system

Wheel Caps

Wheel covers

Spare wheel

Tow hook

Tool kit

Early warning device

Owner’s manual

Spare Key

Floor mats

Jack set

**Pre-Delivery Inspection (PDI)**

Pre-delivery inspection is a crucial task because it helps secure the safety of your customers. It is performed to prevent car manufacturing product recalls and [accidents due to factory defects or damage](https://safetyculture.com/checklists/vehicle-damage-reports/). The following are the basic checks performed during the pre-delivery inspection of a light vehicle. PDI is conducted to inspect if there is any major or minor issue prevailing in the car. Minor problems are fixed right away by the dealer. While the major ones are passed on to the appropriate specialists for solving. This ensures that your car is in perfect order when you take delivery of the same.

**Engine Compartment**

* The engine should not produce any growling sounds
* All fluids such as washer, coolant, brake, power steering, transmission, and oil are free from leaks and at their normal levels
* Hood latch should be lubricated to ensure smooth operation
* The battery is tested and fully operational

**Underside**

* There are no visual defects such as tears or holes on hoses, electrical lines, exhaust systems, and suspension components
* Brakes should be tested and checked for damage indicators such as brake lights on, squeaking noises, vibration, and soft brake pedal

**Interior**

* The steering wheel should be aligned
* Locks, latches, and hinges are lubricated and functional
* Fuses are installed for electronic accessories
* No evident damage on car seats
* Seat belt, wheel covers, wheel locks, and airbags are installed properly

**Exterior**

* All lighting should be checked if operational
* Headlights are aligned
* Tire pressure is set to manufacturer-suggested specifications, including the spare tires
* All mirrors should be fixed and clear
* Windshield wipers and washer fluid level are examined
* Paint condition and emblems are damage free

PDI also includes checking of owner’s manual, service passport, warranty booklet, and guides before handing vehicle over to customers. It is also necessary to perform the recommended 10-kilometer road test both on city roads and the highway to check overall car performance.

**Pre-delivery Inspection Checklist**

  A pre-delivery inspection checklist is used by vehicle inspectors to ensure that every aspect of a sold vehicle is in good working condition before handing it over to the customer. Technicians can also use this checklist during the road test. Dealers and quality managers can efficiently monitor pre-delivery inspections and prevent major recall issues by using pre-delivery inspection checklist

Pre-delivery inspection checklist are quality sets of list provided by the manufacturer that serves as guide in inspecting the vehicle before turning is over to the costumer. This ensure that the vehicle functionality , quality of workmanship, and the included factory loaded parts are physically present in the vehicle. This will also ensure the exact identity of the unit being offered and agreed to buy by the client.

This check list should always bear the Vehicle Identification Number (VIN) of the vehicle and I should always compare the and validate with the other sales document such as invoice and or deed of sale.

Sample PDI checklist:

SELFCHECK : 1

UNIT OF COMPETENCY : PERFORM PRE-DELIVERY INSPECTION

MODULE TITLE : Performing Pre-Delivery Inspection

**LEARNING OUTCOME 1 : Prepare for pre-delivery inspection**

ANSWER THE FOLLOWING QUESTIONS:

**ANSWER SHEET : 1**

UNIT OF COMPETENCY : PERFORM DIESEL ENGINE TUNE UP

MODULE TITLE : Tuning Up Diesel Engine

**LEARNING OUTCOME 1 : Set Injection Timing**

1. A
2. C
3. C
4. B

QUALIFICATION : Automotive Servicing NC I

UNIT OF COMPETENCY : Perform Pre- Delivery Inspection

MODULE TITLE : Performing Pre- Delivery Inspection

**LEARNING OUTCOME 2 : Perform Physical And**

**Functional Inspection**

PERFORMANCE CRITERIA

**LO 2: Perform physical and functional inspection**

2.1 Walk around is conducted according to industry practice

2.2 Factory-loaded parts are inspected following manufacture’s standard

procedure.

2.3 Vehicle is restored following standard operating procedure

2.4 Vehicle is check following standard operating procedure

2.5 Minor corrective measure are applied following manufacturer’s manual

2.6 Inspection checklist is accomplished based on manufacture’s standard

2.7 PPEs are worn based on OSHS.

According to

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INFORMATION SHEET : 2

QUALIFICATION : Automotive Servicing NC I

UNIT OF COMPETENCY : Perform Pre-Delivery Inspection

MODULE TITLE : Performing Pre-Delivery Inspection

**LEARNING OUTCOME 2 : Perform Physical and**

**Functional Inspection**

**Physical and Functional Inspection**

**Checklist to conduct during a physical inspection**

* Park the car in an open space with adequate daylight to have a good look at its interior and exterior.
* Inspect the exterior of the car for any dents or marks.
* Try to spot if there is any difference in the shades of the colour on different parts.
* Check the spare tyre and wheel. They should be unused and new.
* Ensure that all the doors open, close and lock smoothly.
* Make sure the bonnet lid and boot lid open and close smoothly.
* Check the remote key locking system is working fine.
* Check if the driver’s control system like Headlamp switches, ignition keyhole, blinkers and vipers control, MID display, etc is working fine.
* Inspect if the windows roll up and down properly.
* Inspect the engine area properly. The engine area of a new car is always clean.
* Open the bonnet and inspect the following; tangled wires, oil spill signs, broken or damaged plastic parts.
* Inspect the boot space to look for the following; broken or damaged plastic parts, toolkit, jack and spanner, spare wheel, cut or re-assembled wires.

**Checklist for checking the car’s interior**

* Check for marks and scratches
* Inspect the Dashboard, roof liner, seats, armrests, doors, and parcel tray
* Check the odometer. Its reading should always be under 100 km.

**Checklist for duplicate key**

Every car is provided with a duplicate key. It is important for you to check if the duplicate key to the car is working fine. Try to lock, unlock and start the car with it.

**Checklist for testing the electrical components**

* Test if the air conditioner is working fine.
* Carry a CD or pen drive to check the Music system. Check all the ports available in the music system.
* Test all the control buttons and speakers as well.
* Test the horns and wipers.
* Test the working of headlights, tail lights, brake lights, fog lights, and parking lights.

QUALIFICATION : Automotive Servicing NC I

UNIT OF COMPETENCY : Perform Pre- Delivery Inspection

MODULE TITLE : Performing Pre- delivery Inspection

**LEARNING OUTCOME 3 : Complete work process**

PERFORMANCE CRITERIA LO 3

3.1 Initial quality inspection is performed based on workplace procedure.

3.2 Minor defects are corrected based on manufacturer’s manual.

3.3 Wastes are disposed according to environmental standards

3.4 Vehicle is endorse to immediate supervisor following industry procedure.

3.5 Defects are reported following industry procedures.

3.6 Pre-delivery checklist is accomplished and summited according to industry

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INFORMATION SHEET : 3

UNIT OF COMPETENCY : Perform Pre- Delivery Inspection

MODULE TITLE : Performing Pre- delivery Inspection

**LEARNING OUTCOME 3 : Complete work process**

**SELF CHECK : 3**

UNIT OF COMPETENCY : PERFORM DIESEL ENGINE TUNE UP

MODULE TITLE : Tuning Up Diesel Engine

**LEARNING OUTCOME 3 : Inspect Injection Timing**

ANSWER THE FOLOWING QUESTIONS:

1. The timer pointer in relation with the timing mark on the timing device hub during injection pump timing procedures should be \_\_\_\_\_\_\_\_\_\_\_\_
2. Near with each other
3. Far from each other
4. In line with each other
5. None of the above
6. Unless injection timing is considered, the engine will\_\_\_\_\_\_\_\_.
7. Still function normally
8. Run the engine but low in power
9. Inefficient in fuel consumption
10. Not operate as it is designed.
11. Which of the following should be done as a preliminary step before attempting an idle adjustment of a fuel injection system?
12. Blocking the drive wheels
13. Connecting the tachometer
14. Checking and adjusting base ignition timing
15. All of the above
16. Bottom-fed injectors are used in \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
17. Throttle body injection system
18. Port injection system
19. Both A and B
20. Neither A nor B

**ANSWER SHEET : LO 3**

UNIT OF COMPETENCY : PERFORM DIESEL ENGINE TUNE UP

MODULE TITLE : Tuning Up Diesel Engine

**LEARNING OUTCOME 1 : Inspect Injection Timing**

ANSWER:

1. The **Throttle Body Injection (TBI)** served as a steeping stone for the carburettors to more advance port fuel injection systems. The throttle body units is similar in size and shape to a carburettor and, like a carburettor, mounts on the intake manifold. The injector(s) spray fuel down into a throttle body chamber leading to the intake manifold. The intake manifold feeds the air/fuel mixture to all cylinders. While the **Port Fuel Injection (PFI)** systems use one injector at each cylinder. They are mounted in the intake manifold near the cylinder head where they can inject the fine, atomized fuel mist as close as possible to the intake valve.
2. D
3. D
4. B