

## Assessment Requirements

### Unit BP18K – Knowledge of Removing and Fitting Basic Light Vehicle Mechanical, Electrical and Trim (MET) Components and Non-Permanently Fixed Vehicle Body Panels

#### Content:

#### **Describe procedures to prevent damage to the vehicle, components and contents when removing, storing and refitting basic MET components**

- a. The methods that can be used to protect undamaged items to ensure they are removed and refitted without causing unnecessary damage:
  - i. bumpers
  - ii. headlamp units
  - iii. road wheels
  - iv. batteries
  - v. bonnet and boot trim
  - vi. interior trim components
  - vii. exterior trim components
- b. The procedures for the correct storage of vehicle contents.
- c. The process for the reporting of extra damage and items that may have broken when removed or refitted.

#### **The processes involved when handling batteries**

- a. The procedure for the removal, storage and refitting of lead acid batteries.
- b. The procedure for the disposal of lead acid batteries.
- c. Battery checks:
  - i. electrolyte
  - ii. discharge
  - iii. specific gravity
- d. The charging process and procedures:
  - i. trickle charge
  - ii. normal charge
  - iii. boost / start
- e. The health and safety issues involved when charging (explosive gasses).

#### **Types of clips and fixings**

- a. The following types of clips and identify reasons and limitations for their use:
  - i. speed
  - ii. 'c'
  - iii. 'd'
  - iv. 'j' type captive nut
  - v. 'r'
  - vi. 'u' type captive nut
  - vii. cable clip
  - viii. trim clips
- b. The following types of fixings and identify reasons and limitations for their use:
  - i. pop rivet
  - ii. plastic rivet
  - iii. plastic capture nut
  - iv. nut and bolt
  - v. soulder bolt
  - vi. 'Nyloc' type nuts

- vii. washers
- viii. 'Spring' type washers
- ix. self tapping screws and bolts
- x. quick release plastic trim fastenings
- xi. trim tapes
- xii. adhesives and sealers

### **The processes involved when carrying out quality checks**

- a. Items that may have been 'workshop' soiled and describe processes for rectifying:
  - i. door cards
  - ii. seats
  - iii. carpets
  - iv. boot and bonnet trims
- b. Methods for checking gaps.
- c. The process for checking and aligning headlamps:
  - i. address handling procedures for halogen bulbs
  - ii. address handling and health and safety issues relating to xenon bulbs and systems
- d. Operational checks and rectification methods to include:
  - i. lights
  - ii. washers and wipers
  - iii. SRS systems (checking not rectification)
  - iv. charging system (checking not rectification)
  - v. horn
  - vi. fluid levels
  - vii. interior switches
  - viii. operation of door lock mechanisms

### **Removing and Fitting Non-Structural Body Panels**

- a. Find, interpret and use sources of information applicable to the removal and fitting of basic non welded non-structural body panels.
- b. Select check and use all the tools and equipment required to remove and fit basic non welded non-structural body panels including:
  - i. hinge pin removers
  - ii. spanners
  - iii. screwdrivers
- c. The different types of mechanical fixings for non welded non-structural body panels and when and why they should be used including:
  - i. bolts
  - ii. self tapping bolts
  - iii. speed nuts
  - iv. washers
- d. The correct procedures and processes for removing and fitting of non welded non-structural body panels.
- e. The need for correct alignment of panels and methods to achieve this:
- f. Aperture gaps
- g. Alignment of panel features
- h. Best fit of components to panels
- i. Vehicle geometry
- j. Operation of openings such as doors, tailgates, bonnets etc.
- k. The types of quality control checks that can be used to ensure correct alignment and contour of panels and operation of components to manufacturer's specification.
- l. The method of storing removed panels and the importance of storing them correctly.