

Overview

This standard is about the removal and fitting of complex mechanical, electrical and trim (MET) components to vehicles whilst carrying out a cosmetic repair. It also includes verifying the operation and carrying out adjustments to components once fitted.

These panels may contain safety/ADAS related components.

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Performance criteria

You must be able to

- P1. use the appropriate personal protective equipment when removing and fitting complex MET components and non-welded non-structural body panels
- P2. protect the vehicle and its contents effectively when removing and fitting complex MET components and non-welded non-structural body panels
- P3. accurately assess the vehicle for pre-existing damage and serviceability of systems and components prior to work commencing
- P4. isolate/disarm complex MET components prior to removal from the vehicle in accordance with vehicle manufacturer's procedures and in line with any appropriate legislation and legal requirements (where applicable)
- P5. select, check and use the correct tools and equipment for the panels or components you are going to remove or fit
- P6. remove and fit complex MET components and non-welded non-structural body panels following:
 - P6.1. removal and fitting instructions
 - P6.2. manufacturer's instructions
 - P6.3. your workplace procedures
 - P6.4. health, safety and legal requirements
- P7. protect other components, units and panels on the vehicle whilst carrying out the removal and fitting activity
- P8. store all removed panels and components safely in the correct location
- P9. realign the panels and components you have fitted correctly in a way which regains their original manufactured gaps and manufacturer's specification
- P10. check that the components you have fitted operate correctly following the manufacturer's specification
- P11. check there are no faults stored in any system control units following the refitting activity (where applicable)
- P12. programme the relevant vehicle system(s) following the fitting activity
- P13. report any additional faults you find during the course of your work to the relevant person(s) promptly
- P14. complete all removal and fitting activities within the agreed timescale
- P15. complete work records accurately, in the format required and pass them to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

- K1 the health, safety, environmental and legal requirements relating to the removal and fitting of complex MET components and non-welded non-structural body panels
- K2 your workplace procedures for:
 - K2.1 the referral of problems
 - K2.2 reporting of delays to the completion of work
 - K2.3 completion of work records
- K3 the work that needs to be done and the standard required
- K4 the requirements for protecting the vehicle and contents from damage before, during and after removing and fitting activities
- K5 the importance of selecting, using and maintaining the appropriate personal protective equipment when removing and fitting complex MET components and non-welded non-structural body panels

Removing and fitting complex MET components

- K6 how to find, interpret and use sources of information applicable to the removal and fitting of complex MET components and non-welded non-structural body panels
- K7 how to select, check and use all the tools and equipment required to remove and fit complex MET components and non-welded non-structural body panels
- K8 the correct procedures for removing and fitting complex MET components and non-welded non-structural body panels
- K9 the correct procedures for working with supplementary safety systems when removing and fitting complex MET components and non-welded non-structural body panels
- K10 the correct procedures for working with Gas Discharge headlight systems and when removing and fitting complex MET components and non-welded non-structural body panels
- K11 the methods of storing removed panels and components, including supplementary safety system components, and the importance of storing them correctly

- K12 the different types of vehicle systems and the affects an incorrect repair could have on their operation
- K13 the different types of fastenings and fixings and the reasons for their use
- K14 the need for correct alignment of panels and components and the correct methods used to achieve this
- K15 the importance of carrying out the correct programming procedure/method to vehicle systems following removal and fitting of complex MET components and non-welded non-structural body panels
- K16 the types of quality checks that can be used to ensure correct alignment of panels and operation of components and systems to manufacturer's specification and their purpose
- K17 the implications of rectification work highlighted during the quality check process

Scope/range

- 1. Complex MET components include:**
 - 1.1. bumpers containing proximity sensors
 - 1.2. gas discharge headlamp units
 - 1.3. SRS airbags
 - 1.4. SRS air curtains
 - 1.5. SRS passenger restraints
 - 1.6. key reading/detecting sensors
 - 1.7. panels and trims containing cameras
 - 1.8. panels and trims containing infrared and radar equipment
- 2. Non welded non-structural body panels are:**
 - 2.1. wings
 - 2.2. doors
 - 2.3. bonnets
 - 2.4. boot lids and tailgates
 - 2.5. bumper bars, covers and components
- 3. Tools and equipment are:**
 - 3.1. spanners
 - 3.2. socket set
 - 3.3. screwdrivers
 - 3.4. manufacturer's special tools
 - 3.5. pliers and self-locking grips
 - 3.6. power drill and drill bits
 - 3.7. vehicle lifting equipment
 - 3.8. axle stands
 - 3.9. torque wrench
 - 3.10. diagnostic scan tool/code reader
- 4. Systems are:**
 - 4.1. lane departure warning systems
 - 4.2. rear view cameras
 - 4.3. reverse backup sensors

- 4.4. automatic braking
- 4.5. forward collision avoidance system
- 4.6. adaptive cruise control
- 4.7. side view assist
- 4.8. parking assist
- 4.9. airbag systems
- 4.10. enhanced visibility systems (infrared night vision, adaptive headlights)

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