

**Overview**

This standard is about the identification and realignment of vehicle distortion using body alignment jigs.

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## Performance criteria

- You must be able to:
- P1 use the appropriate personal protective equipment when carrying out all rectification activities
  - P2 protect the vehicle, its contents and systems effectively when carrying out all rectification activities
  - P3 support vehicle misalignment rectification activities by reviewing vehicle data from manufacturers and technical data specific to the vehicle
  - P4 prepare, test and setup all the tools and equipment required, following equipment manufacturers' instructions, prior to use
  - P5 load and secure the vehicle to the body jig correctly following the equipment manufacturer's instructions and health and safety requirements
  - P6 establish the extent of the vehicle misalignment accurately and completely
  - P7 align and anchor areas adjacent to the damage correctly, in a way that prevents further damage to the vehicle
  - P8 attach the pulling system securely to the damaged components and operate it correctly to achieve the realignment required
  - P9 operate the pulling system in a way that minimises the risk of injury to yourself and others
  - P10 ensure your rectification activities restore the vehicle to the correct specification and tolerances
  - P11 complete all rectification activities within the agreed timescale
  - P12 promptly report any anticipated delays in completion to the relevant person(s)

## Knowledge and understanding

You need to know and understand:

- K1 the safety requirements specific to vehicle misalignment rectification
- K2 the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection
- K3 the vehicle work specification agreed
- K4 the requirements of manufacturers' warranty agreements.
- K5 your workplace procedures for
  - K5.1 the referral of problems
  - K5.2 reporting of delays to the completion of the work
  - K5.3 personal protection
- K6 the importance of working to agreed timescales and keeping others informed of progress
- K7 the relationship between time, cost and profitability
- K8 your workplace requirements for keeping records
- K9 the importance of promptly reporting anticipated delays to the relevant person(s)
- K10 the constraints of the type of materials used in vehicle construction places on the choice of repair equipment
- K11 how to prepare, test and setup all equipment required for misalignment rectification
- K12 how to install vehicles on misalignment rectification equipment, including the use of lifting equipment
- K13 how to use rectification equipment including hand and powered tools, safety chains (safety measure), hydraulic push and pull, and body alignment jigs (bracket system and/or measuring system)
- K14 the correct use of clamps, restraints and supports to minimise additional damage during repair
- K15 the principles of chassis frame and monocoque vehicle construction
- K16 the principles of damage assessment and identification of direct and indirect damage
- K17 the function of the pulling system and the criteria for selection – vector, pull

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- arm, and tower systems, both floor mounted and bench mounted
  - K18 how to use geometric principles of alignment in the absence of a data sheet
  - K19 the properties of vehicle body construction materials
  - K20 how to find, interpret and use sources of information relevant to the rectification of vehicle misalignment
  - K21 how to establish the extent of misalignment using measuring equipment and/or measuring system
  - K22 how to realign vehicles to the manufacturer's original specification
  - K23 how to work safely avoiding damage to vehicles, personal injury and injury to colleagues
  - K24 the importance of following manufacturers' and/or approved research repair methods (including use of materials and equipment)
  - K25 the consequences of failing to follow manufacturers' and/or research repair methods or instructions and data sheets

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**Scope/range**

*All of the items listed below form part of this National Occupational Standard.*

**1. Rectification activities** are:

- 1.1. visual examination
- 1.2. setting up
- 1.3. measurement in conjunction with alignment measuring equipment
- 1.4. realignment using pulling equipment

**2. Tools and Equipment** are:

- 2.1. workshop equipment
- 2.2. generic hand tools
- 2.3. manufacturer's specified and specialist tools
- 2.4. digital tooling

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