

Identify and rectify motor vehicle body misalignment

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

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)

P13 complete work records accurately, in the format required and promptly pass them to the relevant person(s)

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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 the considerations to be made when loading an electric vehicle onto a jig

- K13 how to install vehicles on misalignment rectification **equipment**, including the use of lifting **equipment** *

- K14 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)

- K15 the correct use of clamps, restraints and supports to minimise additional damage during repair

- K16 the principles of chassis frame and monocoque vehicle construction

- K17 the principles of damage assessment and identification of direct and indirect damage

- K18 the function of the pulling system and the criteria for selection – vector, pull arm, and tower systems, both floor mounted and bench mounted

- K19 how to use geometric principles of alignment in the absence of a data sheet

- K20 the properties of vehicle body construction materials

- K21 how to find, interpret and use sources of information relevant to the rectification of vehicle misalignment

- K22 how to establish the extent of misalignment using measuring equipment and/or measuring system

- K23 how to realign vehicles to the manufacturer's original specification

- K24 how to work safely avoiding damage to vehicles, personal injury and injury to colleagues

- K25 the importance of following manufacturers' and/or approved research repair

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methods (including use of materials and **equipment**)

K26 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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