IMIARPDRCR02

Remove dents and creases from motor vehicle body panels through swage lines using PDR techniques

Overview

This standard is about the removal of dents and creases from motor vehicle body panels using Paintless Dent Removal (PDR) techniques where the damage is through a swage line. It is also about checking the integrity of the panel prior to repair and the condition of the panel after the repair has been completed.

Note: For the purpose of this standard, drilling to gain access to effect a repair is not acceptable.

Performance criteria

You must be able to:

P1 use the appropriate personal protective equipment when carrying out PDR operations

P2 protect the vehicle and its contents effectively when carrying out PDR operations

P3 refer to appropriate sources of information when carrying out vehicle damage assessment and PDR operations

P4 identify where ADAS systems are present and may be affected by the damage and/or repair

P5 assess the area for repair to ensure that a repair can be effected to a safe and acceptable standard using PDR techniques, without compromising the integrity of the vehicle

P6 identify additional distortion on a panel caused by a primary impact

P7 assess the potential access routes in order to carry out a PDR in a safe and appropriate manner without interference with ADAS system or sensors or high voltage components

P8 select and use the appropriate tools and equipment for the panel area to be repaired

P9 ensure that your tools and equipment are in a safe working condition

P10 carry out a PDR repair on motor vehicle panels through a swage line, selecting the technique(s) most appropriate to the type, size and location of the damage and the material being worked on

P11 avoid damaging other components and units on the vehicle whilst carrying out the repair

P12 store all removed components safely in an appropriate location

P13 check that all relevant components and vehicle systems operate correctly following the manufacturer's specification after you have completed your repairs

P14 promptly report any potential or additional faults you find during or prior to the course of your work to the relevant person(s)

P15 promptly report any delays in completing your work to the relevant person(s)

P16 carry out your repair within the agreed timescale

P17 promptly complete work records accurately, in the format required and pass them to the relevant person(s)

P18 ensure that all areas used to gain access are treated for corrosion inhibition where appropriate

Knowledge and understanding

You need to know and understand:

K1 the health, safety and legal requirements relating to the removal of cosmetic vehicle damage using PDR techniques

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
- K2.4 the use of personal protection

K3 the hazards associated with working on or near high energy electrical vehicle components

K4 how to assess the size, depth and plane of damage and recognise any additional damage

K5 how to identify the best course of action to carry out a repair to the standard required

K6 how the panel material affects the complexity of the repair

K7 the action you need to take if the repair cannot be carried out to the required standard by using PDR techniques

K8 the requirements for protecting the vehicle and contents from damage before, during and after repairing panels using PDR techniques

K9 the requirements for protecting the vehicle being repaired from cross contamination including metallurgy and electrolysis

K10 the importance of selecting, using and maintaining the appropriate personal protective equipment when repairing panels using PDR techniques

K11 how to find, interpret and use sources of information applicable to the safe repair of panels using PDR techniques

K12 how to select, check and use all the tools and equipment required to assess and repair panels effectively using PDR techniques

K13 the different types of PDR techniques and methods used for repairing swage lines in panels

K14 the need for correct choice of tools to carry out a suitable repair and the methods used to achieve this

K15 the different types of PDR techniques and methods used for repairing swage lines in panels

K16 how to use glue type pulling/repair kits

K17 why drilling is not acceptable when carrying out a PDR repair

K18 the faults that can occur when repairing panels using Paintless Dent Removal (PDR) techniques and the causes of these faults

K19 the implications of affecting or damaging vehicle safety systems during the repair process and how this can be avoided

K20 the types of quality control checks that can be used to ensure a correct repair has been achieved

K21 the need for correct alignment of components and the methods used to achieve this

K22 the types of quality checks that can be used to ensure correct alignment and operation of components to manufacturer's specification and their purpose

K23 the importance of a robust handover procedure where ADAS systems are present

Do we need to add something about 'push to paint' or is that just in Cosmetic Repair?

Scope/range

1. PDR **tools and equipment** include:

1.1. specialist PDR tooling and accessories

1.2. heating equipment

1.3. reflection or line board

2. PDR **techniques** include:

2.1. tensioning/de-tensioning

2.2. pulling

2.3. pushing

2.4. striking

Additional Information

Glossary

This section contains examples and explanations of some of the terms used but does not form part of the standard.

Acceptable Repair

The panel is returned to original condition without any visible sign that a repair has been carried out, as would meet the expectations of a customer.

Cosmetic vehicle damage

Non-structural damage to the bodywork of a vehicle that does not affect the car's safety or functionality but detracts from its appearance and can reduce its resale value.

Damage

Likely to be one point of impact per damage area, although there may be more than one area of damage.

Faults that can occur include…

Paintless Dent Removal

PDR is a fast, cost-effective dent repair technique that retains the original paint finish. To achieve this, the paint surface of the damaged vehicle panel needs to be unbroken so the resulting repair will not need to be painted. However, PDR techniques may also be used to repair a panel in readiness for refinishing, rather than the panel being prepared using filler.

Swage line

This is a contour line pressed into a panel at the manufacturing process, to include soft body lines.

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