
Overview

This standard is about the removal, renewal and refitting of mechanical components within vehicle mechanical systems where the procedure is straightforward and where items are not directly linked to vehicle safety systems. Disconnection or removal of vehicle safety systems is not expected in this standard.

Performance criteria

You must be able to:

1. use the appropriate personal protective equipment when removing and refitting **mechanical** components
2. protect the vehicle and its contents effectively when removing and refitting mechanical components
3. support your removal and replacement activities by referring to:
 - 3.1 vehicle technical data
 - 3.2 removal and replacement procedures
 - 3.3 legal requirements
4. ensure that the **tools and equipment** you require are calibrated and in a safe working condition to meet manufacturer's and legal requirements
5. select and use the correct tools and equipment for the components you are going to remove or fit
6. carry out an initial four wheel alignment diagnostic check
7. record and report the data to an appropriate person
8. remove and refit mechanical components following:
 - 8.1 recognised research methods
 - 8.2 removal and fitting procedures
 - 8.3 manufacturers' instructions
 - 8.4 your workplace procedures
 - 8.5 health, safety and legal requirements
9. work in a way which reduces the risk of damaging other components and units on the vehicle
10. adapt your work techniques safely to suit the needs of the job when necessary
11. store all removed components safely in the correct location
12. check that the components you have fitted operate correctly following the manufacturer's specification
13. check wheel alignment and adjust if necessary
14. report any additional faults or defects you find during the course of your work to the relevant person(s) promptly
15. report any delays in completing your work to the relevant person(s) promptly in the format required
16. remove and refit mechanical components within the agreed timescale
17. 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: **Legislation and organisation requirements and procedures**

1. the health, safety and legal requirements relating to the removal and refitting of mechanical components
2. how the vehicle is powered and the associated health and safety risks
3. your workplace procedures for:
 - 3.1 referral of problems
 - 3.2 reporting of delays to the completion of work
 - 3.3 completion of work records
4. the work that needs to be done and the standard required
5. the requirements for protecting the vehicle and contents from damage before, during and after removing and refitting activities
6. the importance of selecting, using and maintaining the appropriate personal protective equipment when removing and refitting mechanical components

Equipment

7. how to select, check and use all the tools and equipment required to remove and refit mechanical components

Wheel alignment

8. how to carry out a four wheel alignment diagnostic check
9. how to accurately interpret and record the data and who to report the findings to

Removal, renewal and refitting of mechanical components

10. the types of common vehicle mechanical systems components
11. the construction and operation of common vehicle mechanical systems
12. how mechanical systems and their components work and their function
13. where to find and how to interpret and use sources of information applicable to the removal and fitting of mechanical components
14. the procedures for removing and fitting mechanical components
15. the methods of storing removed parts and the importance of storing

them correctly

16. the different types of fastenings and the reasons for their use

17. the need for correct alignment of components and the methods used to achieve this including adjustment of wheel alignment

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

Scope/range

1. Mechanical Systems can include:

1.1 engine (air, fuel and exhaust)

1.2 transmission

1.3 chassis (covers steering, suspension and brakes)

1.4 Advanced Driver Assistance Systems (passive and active)

2. Tools and equipment required for :

2.1 removal and refitting of engine mechanical systems

2.2 removal and refitting of transmission mechanical systems

2.3 removal and refitting of chassis mechanical systems

2.4 specialist repair

2.5 general workshop activities

2.6 calibration and reinstatement of safety operating systems

Glossary

Vehicles

These can be light vehicles or commercial vehicles

Vehicle Safety Systems

This is a generic term which includes, for example, supplemental restraint systems (SRS), engine managements systems, assisted brake systems (ABS) and any equipment related to safety.

IMIMET01

Remove, Renew and Refit Mechanical Components Following Accident Damage



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Mechanical, Electrical and Trim Technician (Automotive)

Suite Accident Repair - Mechanical, Electrical and Trim

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