

# SEMPEO2-72 - SQA Unit Code H2CB 04

## Preparing and Manoeuvring Armoured Fighting Vehicles (AFVs) for Maintenance and Transportation



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### Overview

This NOS identifies the competencies you need to carry out preparation and manoeuvring activities on military Armoured Fighting Vehicles (AFVs) in accordance with approved procedures including the Army Equipment Support Publications (AESPs). You will be required to select the appropriate tools and equipment to use, based on the activities to be carried out, and to check that they are in a safe and serviceable condition. You will be required to prepare and manoeuvre the AFV to the appropriate location, and to prepare the vehicle for maintenance operations or recovery. The manoeuvring activities will involve assisting in vehicle towing, vehicle marshalling, loading onto transport, parking and securing.

Your responsibilities as the Deputy Vehicle Commander will require you to comply with organisational policy and procedures for the activities undertaken, and to report any problems that you cannot personally resolve, or are outside your permitted authority, to the relevant people. You will be expected to work with a minimum of supervision and as part of a team, communicating using hand signals and other communication devices. You must demonstrate a significant personal contribution during the team activities, in order to satisfy the requirements of this standard, and competency in all the areas required by the standard must be demonstrated. You will be expected to take personal responsibility for your own actions and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will be sufficient to provide a sound basis for your work, and will provide an informed approach to applying AFV preparation and manoeuvring techniques and procedures. You will have an understanding of the preparations to be carried out on the AFV, prior to moving and to have an in-depth understanding and knowledge to provide a sound basis for carrying out the activities safely and correctly.

You will understand the safety precautions required when carrying out the preparation and manoeuvring operations. You will be required to demonstrate safe working practices throughout, and will understand the responsibility you owe to yourself and others in the workplace.

### Specific Unit Requirements:

The candidate must hold a full category H Driving Licence.

The candidate must be a fully qualified AFV crewman.

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#### Performance criteria

*You must be able to:*

- P1 Work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines
- P2 Obtain all the information and documentation you require to start the vehicle manoeuvring activities
- P3 Plan the vehicle manoeuvring activities before you start them
- P4 Obtain and prepare any support equipment required to move and secure the vehicle and check that it is in a useable condition
- P5 Prepare the vehicle for the manoeuvring activities to be undertaken
- P6 Start the vehicle following the correct procedures as per vehicle Army Equipment Support Publication (AESPs)
- P7 Carry out the manoeuvring activities using the correct procedures and work instructions
- P8 Carry out the manoeuvring activities within the limits of your personal authority
- P9 Deal promptly and effectively with problems within your control and seek help and guidance from the relevant people if you have problems that you cannot resolve
- P10 Report any instances where the vehicle securing and/or manoeuvring activities cannot be fully met
- P11 Leave the work area in a safe and tidy condition on completion of the manoeuvring activities
- P12 Dispose of waste materials in line with organisational and environmentally safe procedures
- P13 Ensure that the vehicle is left in a safe and secure condition on completion of activities
- P14 Complete relevant documentation on completion of the manoeuvring activities

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#### Knowledge and understanding

*You need to know and understand:*

- K1. The specific health and safety requirements, precautions, and safe working practices and procedures to be observed whilst preparing and manoeuvring AFVs for maintenance and transportation.
- K2. The types of protective equipment (PPE) you need to use for both personnel protection and protection of the AFV
- K3. The importance of wearing appropriate protective clothing and equipment
- K4. The procedures to be followed to evacuate personnel from AFVs. Including fire evacuation
- K5. The hazards associated with driving and manoeuvring AFVs on the public highway
- K6. The procedures to be followed if AFV breaks down
- K7. The procedures to be followed in the event of an accident/incident
- K8. The authorisation process and documentation required to prepare and manoeuvre the AFV
- K9.** The AFV system isolation procedures to be followed to secure the vehicle weapons systems and adherence to Army Equipment Support Publication (AESPs)
- K10. The methods used to secure components such as hatches, turret and other unsecured items
- K11. The checks to be carried out on the AFV before it is started and manoeuvred including leaks, damage, wear and deterioration or missing parts
- K12. The AFV system “start up” and “run down” procedures to be followed before and after use
- K13. How to obtain and interpret manuals and other documents needed in the manoeuvring operation for AFVs
- K14. The principles of how the AFV functions, its operating sequence, controls, the working purpose of individual units/components and how they interact
- K15. How to operate and secure the vehicles communication system on AFVs.
- K16. The hazards associated with driving, marshalling, parking AFVs especially in confined area/spaces, and how these hazards can be minimised.
- K17. The hazards associated with towing AFVs and how these hazards can be minimised.
- K18. The hazards associated with tow starting AFVs and how these hazards can be minimised.
- K19. The hazards associated with AFVs recovery and how these hazards can be minimised.
- K20. The importance of checking that the recovery equipment used to assist in the manoeuvring of AFVs is in a usable and safe condition and the specific checks that need to be made

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- K21. The range and types of equipment to be used when towing or recovering AFVs to include “A” frames, Straight Bar, Wire Tow Rope, Kinetic energy Rope and “D” Shackles.
- K22. The factors to take into account when deciding which of the following should be used and why, A frame, straight bar, wire tow rope, kinetic energy rope and D shackles
- K23. The importance of ensuring that the AFV is secured correctly when being prepared for onward transportation and the implications if this is not carried out correctly
- K24. The methods used to position and secure the AFV to transport the vehicle by rails, road, air and sea
- K25. The problems that can occur with the AFV preparation and manoeuvring activities and how these can be overcome
- K26. The duties and responsibilities of the personnel used in the preparation and manoeuvring activities including the driver, controller and marshaller
- K27. The AFV driving and control procedures to be used when manoeuvring across country
- K28. The AFV driving and control procedures to be used when manoeuvring over obstacles.
- K29. The procedures to be followed to identify and log faults found on the AFV.
- K30. The different methods of communication used when manoeuvring and obstacle crossing for AFVs to include hand signals, torch signals and verbal orders.
- K31. The procedure to be used to dispose of any waste materials safely and in an environmentally friendly manner
- K32. The importance of leaving AFVs in a safe condition on completion of the manoeuvring activities, and the correct after use procedures.
- K33. The extent of your own responsibility and whom you should report to if you have problems that you cannot resolve.

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#### Additional Information

#### Scope/range related to performance criteria

*You must be able to:*

- 1 Carry out all of the following prior to commencing the manoeuvring of AFV vehicles
  - 1.1 ensure the appropriate authorisation to carry out the manoeuvring activities is obtained
  - 1.2 adhere to procedures or systems in place for risk assessment, COSHH, personal protective equipment (PPE) and other relevant safety regulations
  - 1.3 check the immediate work area is free from hazards or obstructions
  - 1.4 check the vehicle is free from hazards or obstructions
  - 1.5 provide and maintain safe access and working arrangements for the work to be completed
  - 1.6 position relevant warning signs in a secure and visible location (where applicable)
- 2 Prepare the AFV for movement by carrying out all of the following:
  - 2.1 visually check the vehicle for signs of leakage, damage, missing parts and wear/deterioration
  - 2.2 remove excessive dirt and grime
  - 2.3 check the fire warning system is operating correctly
  - 2.4 check lighting systems are operational
  - 2.5 check fuel levels
  - 2.6 check fluid levels (such as cooling system, hydraulic fluid reservoirs, oil levels for gearbox, steering unit and final drive)
  - 2.7 check hull drain plugs
  - 2.8 complete operational checks on blackout switches, convoy lights, and infrared lights where fitted
  - 2.9 check gauges and warning lights are operating correctly
  - 2.10 carry out press to test functions to check protected systems are operating correctly
  - 2.11 locate covers/bungs in the appropriate locations to protect components/systems from the ingress of foreign objects or other substances
- 3 Prepare the AFV for movement by securing three of the following components/systems:
  - 3.1 hatches
  - 3.2 weapon systems
  - 3.3 turret/cupola

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- 3.4 road wheels
- 3.5 other items relevant to the vehicle (such as external tool bins, engine covers, mirrors, external light guards)
- 4 Manoeuvre the AFV in all of the following situations
  - 4.1 by day (using hand & verbal communication)
  - 4.2 by night (using torch signals)
  - 4.3 abnormal weather conditions
  - 4.4 in confined spaces
- 5 Manoeuvre, position and secure the AFV onto one of the following methods of transportation
  - 5.1 lorry/low loader
  - 5.2 train
  - 5.3 aircraft
  - 5.4 boat
- 6 Carry out AFV Manoeuvring Procedures - to include all of the following:
  - 6.1 recovery (un ditching or de bogging)
  - 6.2 prepare for towing cross country
  - 6.3 prepare for tow starting
- 7 Use one of the following when manoeuvring the AFV
  - 7.1 A" Frame
  - 7.2 straight bar
  - 7.3 wire tow rope
  - 7.4 kinetic energy rope
  - 7.5 D shackles
- 8 Simulate carrying out all of the following emergency procedures :
  - 8.1 fire fighting on an AFV
  - 8.2 evacuating casualties from an AFV
  - 8.3 road traffic accident/incident
  - 8.4 vehicle breakdown procedures
- 9 Carry out two of the following roles when manoeuvring the AFV
  - 9.1 driver
  - 9.2 controller
  - 9.3 marshaller

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### Preparing and Manoeuvring Armoured Fighting Vehicles (AFVs) for Maintenance and Transportation

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**Relevant occupations** Maintenance Fitter; Deputy Vehicle Commander; Mechanical Fitter

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**Suite** Performing Engineering Operations Suite 2

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