Assessment Requirements

Unit AE02K – Knowledge in Enhancing Vehicle Electrical Systems

Content:

The different types of I.C.E. systems and components

a. Systems and components to include:
   i. radio/CD players
   ii. multi-play CD players
   iii. DVD
   iv. MP3 players
   v. speakers
   vi. aerial systems
   vii. amplifiers
   viii. visual display screens
   ix. satellite navigation
   x. mobile communication units

The function of component parts in the I.C.E. systems

a. Components include:
   i. radio
   ii. CD
   iii. video
   iv. DVD players
   v. aerial systems
   vi. speakers
   vii. amplifiers
   viii. visual display screens
   ix. mobile communication systems

The operating principles of I.C.E systems

a. Operation of entertainment systems speaker systems and aerial systems.

The relevant legislation relevant to I.C.E systems

a. Find and apply all relevant legislation for the fitment and use of I.C.E systems.

Basic common faults and testing methods associated I.C.E. systems

a. Test and procedures for the following:
   i. radio/CD players
   ii. speakers
   iii. aerial systems
   iv. amplifiers
   v. wiring
   vi. connections
   vii. relays
   viii. fuses
   ix. removal and refitting procedures

Types of security/warning systems and components

   i. components to include:
   ii. control units
   iii. alarm modules

iv. audible warning units
v. immobiliser units
vi. sensing units
vii. horn
viii. audible warning speakers

The function of component parts in security and warning systems

a. Components to include:
i. control units
ii. alarm modules
iii. audible warning units
iv. interior sensing systems
v. immobiliser units
vi. relays
vii. diodes
viii. horns

The operating principles of security and warning systems

a. Operation of alarm systems and audible warning units.

The relevant legislation relevant to security and warning systems

a. Find and apply all relevant legislation for the fitment and use of security and warning systems.

Basic common faults and testing methods associated security and warning systems

a. Components to include:
i. control units
ii. audible warning units
iii. immobiliser units
iv. horns
v. relays
vi. diodes
vii. wiring
viii. connections and protection devices
ix. removal and refitting procedures

The different types of safety fitment systems and components

a. Components to include:
i. reversing aids and systems
ii. working lamps
iii. driving lamps
iv. additional fog lights
v. fuel cut off switches
vi. engine cut off switches

The function of component parts in safety fitment systems

a. Components to include:

i. reversing aids and systems
ii. working lamps
iii. driving lamps
iv. additional fog lights
v. fuel cut off switches
vi. engine cut off switches

The operating principles of safety fitment systems

a. The following safety fitments:
   i. reversing aids and systems
   ii. working lamps
   iii. driving lamps
   iv. additional fog lights
   v. fuel cut off switches
   vi. engine cut off switches

The relevant legislation relevant to safety fitment systems

a. Find and apply all relevant legislation for the fitment and use of safety fitment systems.

Basic common faults and testing methods associated with safety fitment systems

a. To include the following systems and components:
   i. control units
   ii. components
   iii. horns
   iv. relays
   v. diodes
   vi. wiring
   vii. connections
   viii. protection devices
   ix. removal and refitting procedures

The different types of towing systems and components

a. Components to include:
   i. reversing aids and systems
   ii. towbar mounting systems
   iii. single and double plug wiring systems
   iv. audible warning systems
   v. split charging systems
   vi. trailer lighting board

The function of component parts in towing systems

a. Components must include:
   i. reversing aids
   ii. towbar
   iii. wiring connectors
   iv. audible warning systems
   v. visible warning systems
   vi. split charge control units
   vii. relays
   viii. lighting boards

The operating principles of towing systems

a. Principles to include:
   i. reversing aids
   ii. 7 pin plug systems
   iii. vehicle lighting systems
   iv. audible warning systems
   v. visible warning systems
   vi. split charge systems

The relevant legislation relevant to Towbar systems

a. Find and apply all relevant legislation for the fitment and use of towbar systems.

Basic common faults and testing methods associated with towing systems

a. Basic faults and tests to include:
    i. lighting systems
    ii. split charge systems
    iii. warning systems
    iv. reversing aid systems
    v. earth faults
    vi. voltage test methods
    vii. resistance testing
    viii. functional tests