Assessment Requirements

Unit VF01K – Knowledge of Monitoring and Solving Customer Service Problems

Content

Types of tyre construction to include:
a. radial
b. cross ply
c. bias belted
d. directional
e. asymmetric

Main purpose of tyres
a. Interaction between tyres, other components and vehicle handling
b. Steering, drive and suspension
c. Passenger comfort

Types of standard light vehicle wheel and rim construction
a. Light alloy, pressed steel and wire wheels
b. Standard and safety rims

Markings on standard light vehicle tyres.

a. Speed rating
b. Size Markings
c. Aspect ratio
d. Load handling
e. Ply rating
f. Tread wear indicators
g. EC markings and specialist application markings e.g. 'M&S'

Inspection and fault identification methods and procedures

a. Inspection:
    i. on the rim visual (external)
    ii. removed from wheel (internal)
b. Use of tread depth indicators, tyre probes and pressure gauges
c. Information sources including tyre and vehicle manufacturers' technical data

Limits of standard light vehicle tyre wear and serviceability.

a. Tread depth and tyre damage
b. Limitations under BS159 and Construction & Use Regulations
c. Tyre pressure and maintenance requirements
d. Suitability for minor repairs

Common faults associated with standard light vehicle tyres and wheels.
a Excessive tyre wear and abnormal tread wear patterns (centre, outer edges, worn patches)
b Damage to tread or side walls
c Bulging, separation of tread, carcass distortion,
d Impact damage, wheels running out of true, buckled wheels
e Incorrect tyre pressure
f Wrong tyre for vehicle or run flat

Methods and materials used in the repair of standard light vehicle tyres.

a. Tyre inspection
b. Damage limitation
c. Accurate measurement
d. Repair techniques and methods:
    i. preparation of tyre
    ii. mechanical and chemical buffing
e. Repair materials:
    i. plug patch
    ii. patch and filler
    iii. solutions and chemicals.
e. Economic use of materials
f. Correct storage of materials (including shelf life)
g. Repair Materials:
    i.rubber only plug patch
    ii.rubber only patch and filler material
    iii.solutions and chemicals

Tools and equipment used to include:
a. lifting and supporting equipment
b. tyre fitting and removal tools and machinery
c. hand tools
d. tyre repair tools
e. measuring equipment
f. wheel balancing equipment
g. tyre inflation equipment

Principles of interchanging tyres/wheels
a. Over sizing tyre/wheel fitment
b. Longitudinal and diagonal
Mixing radial, cross-ply and bias-belted tyres on same axle or different axles

Removal and fitting methods to include:

a. tyre sidewall fitting instructions
b. vehicle protection
c. use of hand and impact tools
d. correct tyre inflation
e. final inspection

Dealing with waste materials including:
a. scrapped tyres
b. repair materials
c. wheel weights

Legal Requirements to include:
a. tread depth
b. tyre wall and casing damage
c. tyre pressure
d. mixing of tyre types
e. re-grooving legislation