Assessment Requirements

Unit VF12K – Knowledge of Inspection, Adjustment and Replacement of Light Vehicle Braking Systems and Components

Content

Tools and equipment

a. hand tools
b. special purpose tools
c. lifting and supporting equipment
d. brake bleeding equipment
e. measuring equipment

Inspection and testing techniques for braking systems

a. visual
b. aural
c. measurement
d. functional

Common Faults with light vehicle braking systems, to include:

a. wear
b. leakage
c. damage
b. corrosion

Removal and replacement of light vehicle braking systems and components, to include:

a. dangers and precaution to be taken when working with brake dust
b. correct disposal of waste
c. working to agreed timescales
d. keeping others informed of progress and

Function and layout of braking systems

a. Hydraulic braking circuit
b. Types of braking systems: disc/pad, drum/shoe, servo assisted, shoe/shoe, twin leading and leading trailing
c. Components: master cylinders, servos, brake pads and shoes, calipers, wheel cylinders and backing plates
d. Pipes, cables and servos
e. Brake fluid (including testing)
f. Equalising valves, load sensing valves and vacuum/pressure pumps
g. Warning lights
h. How to identify ABS braking systems

Hydraulic systems.

a. Single line
b. Multi line (diagonal, triangular and 'H')

Electronic braking systems:

a. Anti-skid (lock) braking systems
b. Electronic brake distribution
c. Parking brakes

Special purpose tools:

a. Piston retracting tools
b. Wind back tools
c. Brake shoe horn (lifter)
d. Brake shoe clip remover
e. Brake fluid testers
f. Brake hose clamps
g. Brake adjusting tools
h. Brake bleeding equipment

Braking system faults

a. Excessive pedal travel
b. Brake judder
c. Excessive pedal pressure
d. Imbalance/pull
e. Premature deterioration
f. Brakes binding
g. Brake fade.
h. Failed servo
i. Air in system

Fault identification

a. Inspection-visual, aural and measurement
b. Test drive/roller brake test
c. Questioning
d. Dismantling
e. Information sources (including manufacturers' technical data)
f. Limits of wear and serviceability