



## Tooling and Resource List

### Workshop equipment

#### General

- Waste disposal and recycling facilities
- Exhaust extraction equipment
- Vehicle lift, column lifts or pit
- Vehicle jacking and supporting equipment
- Working surface / bench with fixed vice
- Engine lifting and support equipment
- Transmission support stands
- Injector tool(s)
- Mechanical measuring equipment to i.e. vernier, micrometer, feeler gauges, DTI
- Electrical measuring equipment i.e. volt meter, ohm meter, ammeter
- Torque wrench
- Inspection lamp
- Hand tools to include spanners, sockets/ ratchets, hammers, screwdrivers, prybars etc.

#### Specialised

- Brake roller tester (not essential)
- Diagnostic equipment capable of reading fault codes
- Oscilloscope (if not within scan/ diagnostic tool capabilities)
- Wheel alignment equipment
- Oil pressure gauge
- Manufacturer's specialist tools for engine, chassis, transmission and electrical diagnostic and repairs (if required).

#### Technical data required for all vehicles and rigs within the workshop

- Manuals or technical data to cover all tolerances, adjustments and manufacturer's specifications
- Wiring diagrams
- Service / inspection schedules

#### **Vehicles and rigs** (rigs are only permitted to be used on certain engine tasks in observation B(iv))

##### Observation A

- An up to date heavy vehicle (in excess of 7.5 Tonnes) with loose, worn, damaged or dangerous components in each of the following areas:
  - General vehicle safety
  - Basic mechanical systems
  - Basic electrical systems
  - Basic chassis systems, set up underneath the vehicle



### Observation B

- An up to date heavy vehicle(s) (in excess of 7.5 Tonnes) with the following:
  - ABS with a working dashboard warning light
  - Suspension warning light(s) on dashboard
  - Diff lock
  - PTO (Power Take-Off)
  - Manual gearbox
  - Night heater
  - Auxiliary/retro lights (beacons or trailer lights)
  - SCR (Selective Catalytic Reduction) with dashboard warning light
  - Coded injectors
  
- If using a rig(s) for Observation B(iv) this must be a diesel engine as fitted to a heavy vehicle (in excess of 7.5 Tonnes) which:
  - Is capable of starting and running
  - Has access to remove/replace an injector
  - Has access to remove a cylinder head and piston/liner (this is likely to be a different rig and is not required to start and run)

### Other requirements

- Have sufficient workspace, workshop and candidate facilities which are clean, tidy and well maintained
- Have private and quiet breakout areas
- Maintain a full set of tools and resources as defined above
- Facilities to conduct online assessments in-line with IMI Operating Manual  
<http://awarding.theimi.org.uk/Portals/0/Documents/Operating%20Manual%20and%20of%20orms/3.1%20Using%20IMI%20Online%20Iss3%20Jul16.pdf?ver=2016-07-22-160001-523>