



## TOOLING AND RESOURCE LIST

### WORKSHOP EQUIPMENT

#### General

- Waste disposal and recycling facilities
- Exhaust extraction equipment
- Vehicle lift – 2 or 4 post with wheel free capability
- Tyre removal and wheel balancing equipment
- Working surface/bench with fixed vice
- Hydraulic press
- Engine lifting and supporting equipment
- Mechanical measuring equipment to include a vernier, micrometer, feeler gauges and DTI
- Electrical measuring equipment to include volt meter, ohm meter, ammeter
- Torque wrench
- Inspection lamp
- Hand tools to include spanners, sockets/ratchets, hammers, screwdrivers etc.
- Pry bars
- Basic engineering tools to support cutting, filing, joining and drilling tasks

#### Specialised

- Emission analysis equipment (petrol only)
- Diagnostic equipment capable of reading fault codes and providing live data
- Oscilloscope (if not within scan/diagnostic tool capabilities)
- Four wheel alignment equipment
- Manufacturer's specialist tools for engine, chassis, transmission and electrical diagnostic and repairs (if required)
- Refrigerant recovery equipment (F-gas)

#### 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

- 1.6V DOHC Petrol or Diesel (non-running) engine that must have one of the following:
  - a damaged, cracked or warped head/engine block
- Manual gearbox (minimum 5 speed)
- A range of vehicles with braking systems that include:
  - Discs and drums
  - Hydraulic systems
  - ABS/EBS
  - Manual handbrake
- A range of vehicles or rigs with serviceable hydraulic power steering systems
- A range of vehicles or rigs with serviceable suspension systems which must include:
  - Coil springs
  - McPherson strut
- A range of vehicles or rigs with modern engine management which must include:
  - Multi point petrol injection
  - Common rail diesel
  - Emission reduction catalyst systems
  - Exhaust gas recirculation systems
  - Diagnostic plug in
- A range of vehicles or rigs with electrical systems which must include:
  - Manual or automatic wiper systems
  - Electrically controlled mirrors
  - Safety Restraint Systems (SRS)
  - Lighting systems
  - Starting systems
  - Charging systems
  - Comfort and convenience systems which must include air conditioning
  - Diagnostic plug in

## 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/Centres/Operating-Manuals>