14 Test Cases (3)

For a comparable analysis of different motor vehicle manufacturers, two different test cases have been developed. From these test cases the minimum price to purchase all the necessary technical information and any costs for special tools could be derived. This information is used for the evaluation in chapter 15. Both test cases require that the repair job has to be completed in the independent workshop, assuming that the repairer uses the most economic solution to obtain the information and tools.

For passenger cars, a midsize vehicle has to be repaired, and in the truck sector, a heavy-duty truck was chosen according to Tab. 14-1 and Tab. 14-2.

Company	**Brand**	**Model**	
BMW	BMW		3 Series
Fiat	Alfa		156
Fiat	Fiat		Stilo
Ford	Ford		Mondeo
Ford	Jaguar		X-Type
Ford	Volvo		V40/S40
DaimlerChrysler	Mercedes		C-Class
DaimlerChrysler	Smart		fortwo coupé
GM	Opel/Vauxhall		Vectra
PSA	Citroën		C5
PSA	Peugeot		406
Renault	Renault		Laguna
Toyota	Toyota		Avensis
Volkswagen	Volkswagen		Passat

Tab. 14-1: Midsize Vehicles for test cases

Company	Brand	Model	
DAF	DAF		XF
DaimlerChrysler	Mercedes		Actros
Iveco	Iveco		Stralis
MAN	MAN		TGA
Renault	Renault		Magnum/Premium
Scania	Scania		R Series
Volvo Trucks	Volvo		FH

Tab. 14-2: Heavy-duty trucks for test cases

14.1 Test Case 1 (3.1) – Replacement of a defective ECU

In the first test case a defective ECU has to be replaced. The following technical information is needed to perform the repair:

- Vehicle identification
- Diagnosis and fault identification
- Fitting and removal process
- Spare parts
- Special tools
- (Job times)
- Reinitialisation, coding and pass-through programming procedures (if necessary)
- Re-mobilisation of vehicle immobiliser (if necessary)
- Reset of fault memory

Necessary special tools are:

- Diagnostic scan tool for fault identification and reset of fault memory
- Diagnostic scan tool for reinitialisation and coding
- Pass-through programming tool (if necessary)
- Tool for re-mobilisation of vehicle immobiliser (if necessary)

14.2 Test Case 2 (3.2) - Maintenance and service instructions

In the second test case a standard maintenance and service job has to be performed, which is very common for independent repair shops. The following technical information is needed to perform the service:

- Vehicle identification
- Fault memory reading
- Oil change
- Filter change (oil/air/petrol/passenger compartment)
- Check of operation fluids
- Brake system check
- Axle system check (tyres, suspension)
- Reset of service interval
- Spare parts
- Special tools
- (Job times)

Necessary special tools are:

- Diagnostic scan tool for fault memory reading and resetting (if necessary)
- Diagnostic scan tool for reset of service interval (if necessary)