17 Evaluation of the systems and measures put in place by the truck manufacturers

17.1 Evaluation for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

17.1.1 Registration and Access

Access to technical repair information is provided via Internet-based systems, CD/DVD's, paper or a combination of these media. All truck manufacturers have made information available for independent repairers relating to all their models produced within the last 10 years. On the other hand this information is not always available on a single information source. DAF, Iveco, MAN, Mercedes, Renault and Volvo provide nearly 100 % of their information on a single medium, but for Scania (40 % Internet/paper, 85 % CD) different media are used, which leads to additional costs. For an effective and economic access to technical repair information, independent repairers require all information on a single information system.

Independent workshops, operators who offer inspection and testing services and, to some degree, roadside assistance operators[27] require immediate access especially if they are about to repair a specific vehicle, for which technical information is needed. If the repair information is mainly available on CD or paper (all truck manufacturers except Volvo), immediate access is not possible since the delivery of such media takes several days. The delivery times for the non-Internet media used by DAF (15 min. - 30 days), Renault Trucks (45 - 55 days) and MAN (Italy: 5 weeks, UK: 3 months, other: on demand) are extraordinarily long and the Internet systems of Scania (5 days) and in particular Volvo (> 60 days) also only grant access after an unacceptable delay. For this reason the systems provided are not in line with the requirement for instant access and do not even fit the requirements of those operators, who do not require such an immediate access (automobile clubs and spare part distributors).

All groups of independent operators have an interest in obtaining very specific information for a single repair or a maintenance job and should not be obliged to buy the complete repair information for a single brand. This requirement is also set out in the Regulation, which stipulates that independent operators should not be obliged to buy more than the information, which is necessary to carry out the work in question. In addition the possibility to subscribe for a very short period of time should be possible.

[27]Roadside assistance operators often use their own technical information systems which are purchased from an independent publisher or from a multi-brand diagnostic tool.

Although Scania offers an Internet-based solution, the requirements of independent operators are, due to the inflexible cost models and the necessity to purchase the whole information content, not satisfied. In addition the website contains only 40 % of the total technical repair information (other information on CD). The necessity to purchase the whole information content is also valid for the Volvo Trucks website; Volvo also provides a paper-on-demand system, but information is delivered not before 3 days after payment. In the truck repair sector only the paper-on-demand system provided by MAN in Denmark, France, Germany and Poland grants access to small information packages. The systems put in place by DAF (paper-on-demand, but the delivery time could take several days) Mercedes (CD for all models), MAN (I and UK) Renault (books for a range of models), Iveco (books for a specific system) do also not fulfil this requirement. MAN also developed an Internet solution, but this is only used for spare parts and special tools information, whereas all other technical repair information is provided on paper.

17.1.2 Prices for technical repair information

17.1.2.1 Minimum Prices

The minimum price for technical information (see Fig. 17-1) is related to the possibility of only purchasing the relevant information for a certain repair and for the minimum subscription periods, which are offered.

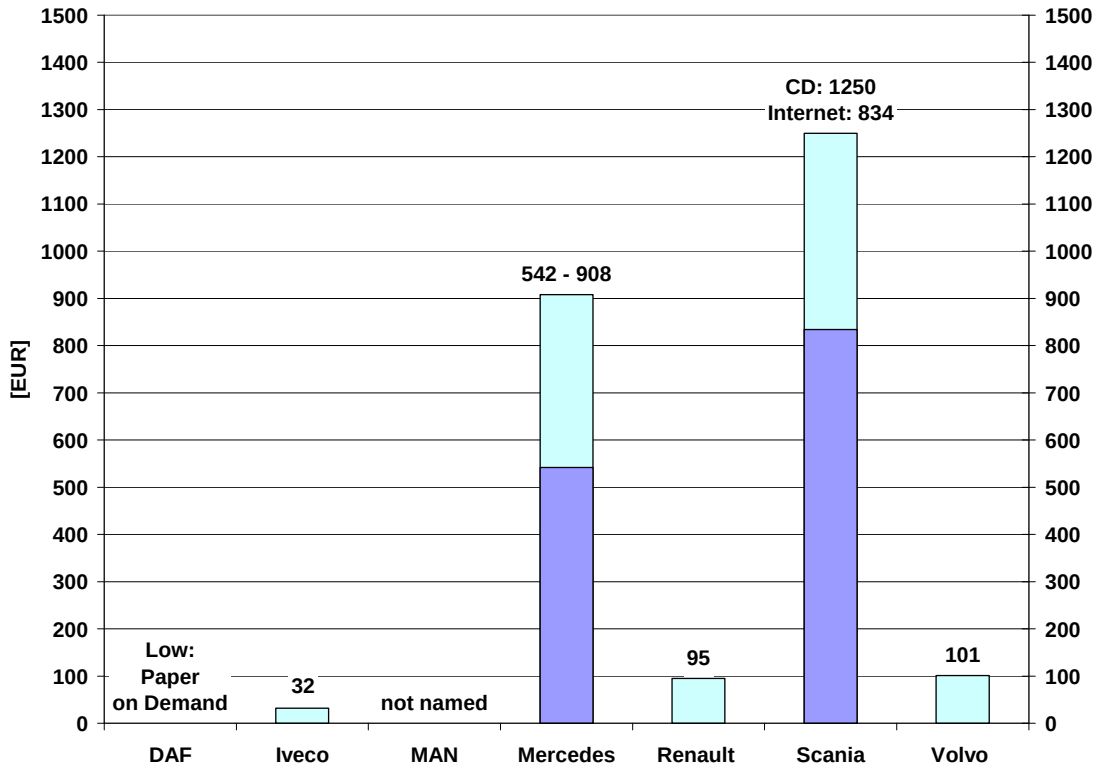

Fig. 17-1: Minimum prices for access to technical repair information (all information systems)

The minimum prices of the Internet systems vary between EUR 101,- for Volvo Trucks and EUR 834,- for Scania. Those manufacturers, whose technical information is mainly available on CD (Iveco, Mercedes, Scania), have a bottom prices of EUR 32,- for Iveco, EUR 1.250,- for Scania and from EUR 542,- to EUR 908,- for Mercedes. In addition, the Mercedes prices show a significant difference in different countries (from EUR 542,- for GER and NL to EUR 908,- for PL). DAF, MAN and Renault Trucks provide their technical information mainly on paper. The bottom prices for Renault are EUR 95,- whereas DAF and MAN did not provide any bottom prices.

For independent operators, who want to have access to technical repair information for single repair jobs, only the paper-on-demand models of Iveco and DAF show competitive prices. If one considers the total repair costs, the repair cannot be performed under competitive conditions with the minimum prices of Iveco, MAN, Mercedes, Renault Trucks, Scania and Volvo Trucks.

17.1.2.2 Subscription Prices

With a larger customer basis of a certain brand the costs can be spread over many consumers. These repair shops might subscribe to the whole technical information for one year. The costs for a one-year subscription are shown in Fig. 17-2. Due to the relatively small number of different truck manufacturers it is more likely that a repair shop has a significant number of repairs for a certain brand.

The costs range from EUR 542,- to EUR 908,- for Mercedes up to approx. EUR 9.000,- for MAN (only one model), which is enormous. MAN shows the highest prices, which is in addition only valid for one model. Other models are charged separately. Also the prices for DAF, Scania (CD) and Volvo are quite large. Regardless to the total number of repairs in a workshop it is hard to believe that these prices are affordable for independent repairers. Only Mercedes and Renault offer a price model, which might be acceptable for large repair shops or those repairers, who are specialised on specific brands. Iveco did not provide any figures for the complete model range, but for a price of EUR 32,- workshop books for different vehicle systems are offered. Based on this figure it is likely that the Iveco technical information is on the bottom of the above mentioned price range.

With respect to the prices offered by Mercedes, Renault Trucks and Scania (Internet), the one-year costs of DAF, MAN, Scania (CD) and Volvo Trucks are quite expensive and it depends on the number of repairs to evaluate, whether these prices are affordable for an independent repairer. In fact such a subscription is only acceptable for very large repair shops or those repairers, who are specialised on a specific brand and are therefore comparable to a franchised workshop.

In addition the questionnaire has asked the truck manufacturers for discounts and rebates for authorised repairers. Although MAN has answered in the questionnaire not to offer special price discounts and rebates for authorised repairers, the attached extract of a MAN service

contract diverges from this answer. As official MAN service contractor, a workshop can get a price reduction of 38,40% on all special tools and a price reduction of 60,00% for all spare parts and repair manuals. According to the provided answers, the other manufacturers do not offer price discounts and rebates for authorised repairers.

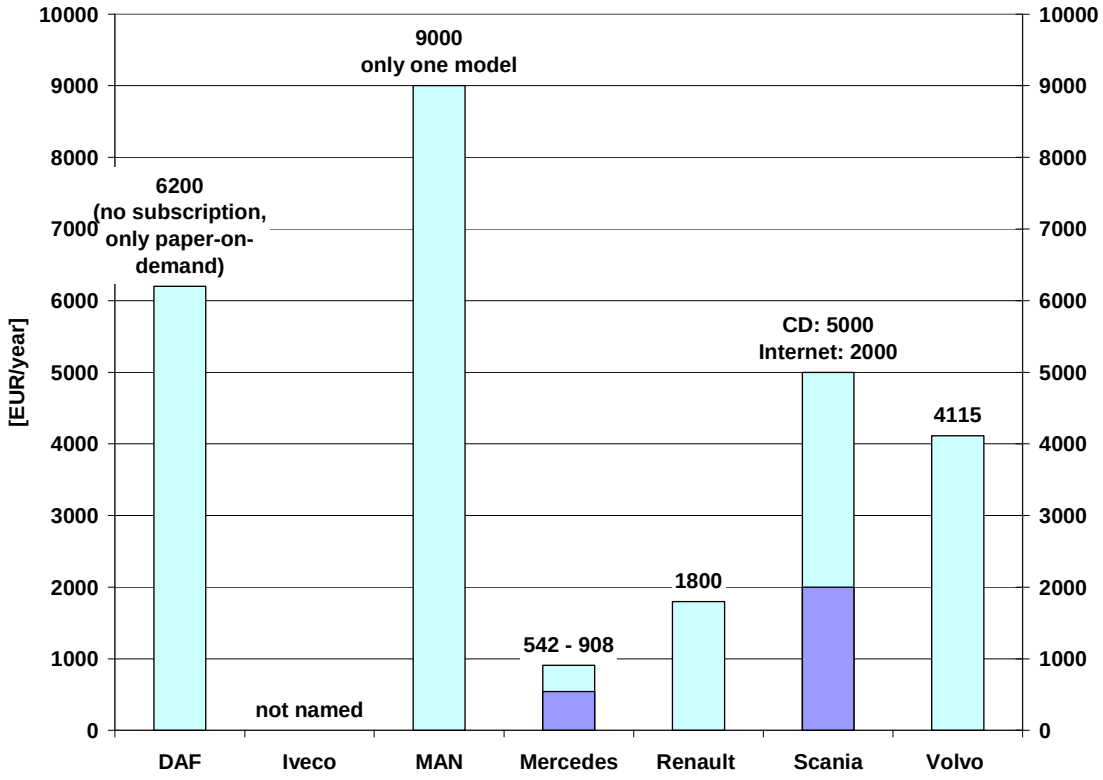

Fig. 17-2: Subscription for all models and one year (all information systems)

17.1.2.3 Test Cases

For a comparison of different motor vehicle manufacturers on certain repairs, two different test cases have been developed[28]. Test case 1 describes the replacement of an engine ECU, whereas test case 2 asks for the technical information to perform a standard maintenance or service job. Both test cases enquire the minimum price of all required information for a single repair.

The replacement of an engine ECU involves the vehicles security or anti-theft system. For DAF, Iveco and MAN security devices or re-programming devices are not available for independent operators. Therefore test case 1 is not possible or cannot be completed. For those manufacturers no costs have been identified. For Mercedes the access to theft relevant functions and information is restricted. Based on the information given in part A of the ques-

[28] The description of the two test cases can be found in chapter 14.

tionnaire it is with regard of the limited ECU operations also unlikely that such a repair can be performed for Scania and Renault Trucks. Since no information is given an independent operator could not complete that test case 1, the prices for Mercedes, Scania and Renault Trucks are still considered.

DAF explained that the diagnostic tool (DAVIE XD) provided for independent operators could not be used to enable theft of the vehicle or the re-calibration or tampering with the engine or other vehicle systems. The putting in place of alternative techniques to prevent this, such as pass-through programming, would require unreasonable product development and financial investments from DAF, in particular considering the fact that DAF so far has only sold three DAVIE XD's to independent operators since the new Block Exemption came into effect.

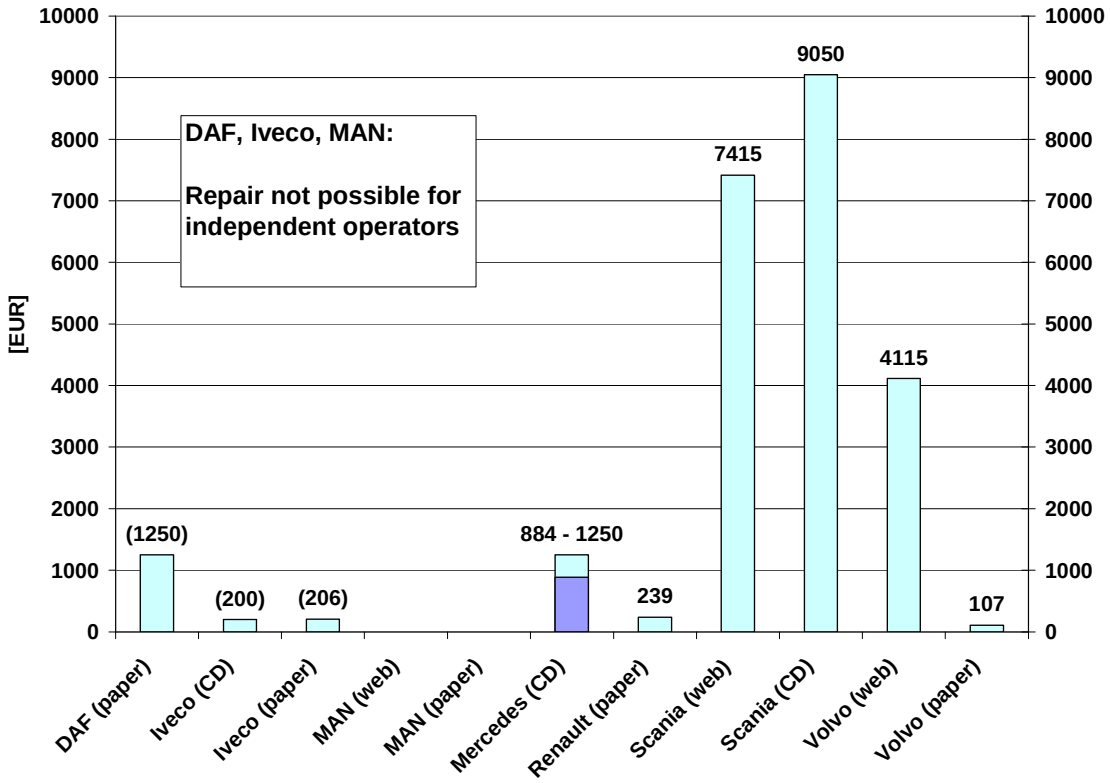

Fig. 17-3: Bottom prices for technical repair information in test case 1

Apart from DAF, Iveco and MAN the minimum technical information prices for test case 1 are displayed in Fig. 17-3[29]. The systems of Mercedes, Scania and Volvo Trucks (website) show the highest costs. Scania is on top with a price of EUR 9.050,- for the CD version and even the Internet-based variant is extremely costly (EUR 7.415,-). Also the Internet system of Volvo is due to a minimum subscription period of one year very expensive (EUR 4.115,-).

[29] If job times are charged separately these prices have been neglected because job times are not required by the BER. Prices for the software of diagnosis tools have been added to the tool costs.

Compared to those manufacturers the system of Mercedes is already significantly cheaper (EUR 884,- – 1.250,- depending on the country were the technical information is sold). The minimum prices have to be paid in Germany and the Netherlands (both EUR 884,-) whereas the maximum prices are in Denmark (EUR 965,-) and Poland (EUR 1.250,-). Since the same media are sold in all countries, such differences are implausible.

Country	DK	F	GER	IRE	I	NL	PL	UK
Mercedes	965,-	932,-	884,-	910,-	942,-	884,-	1.250,-	910

Tab. 17-1: Bottom prices for technical repair information in test case 1 (Mercedes)

Distinctly cheaper are those paper based systems, where specific information and not a complete package for all models can be purchased (Renault Trucks) and the paper-on-demand system of Volvo Trucks. Here the prices vary between EUR 107,- for Volvo Trucks and EUR 239,- for Renault Trucks, but even for those manufacturers it is doubtful, whether these prices are affordable based on the amount a customer shall pay in test case 1.

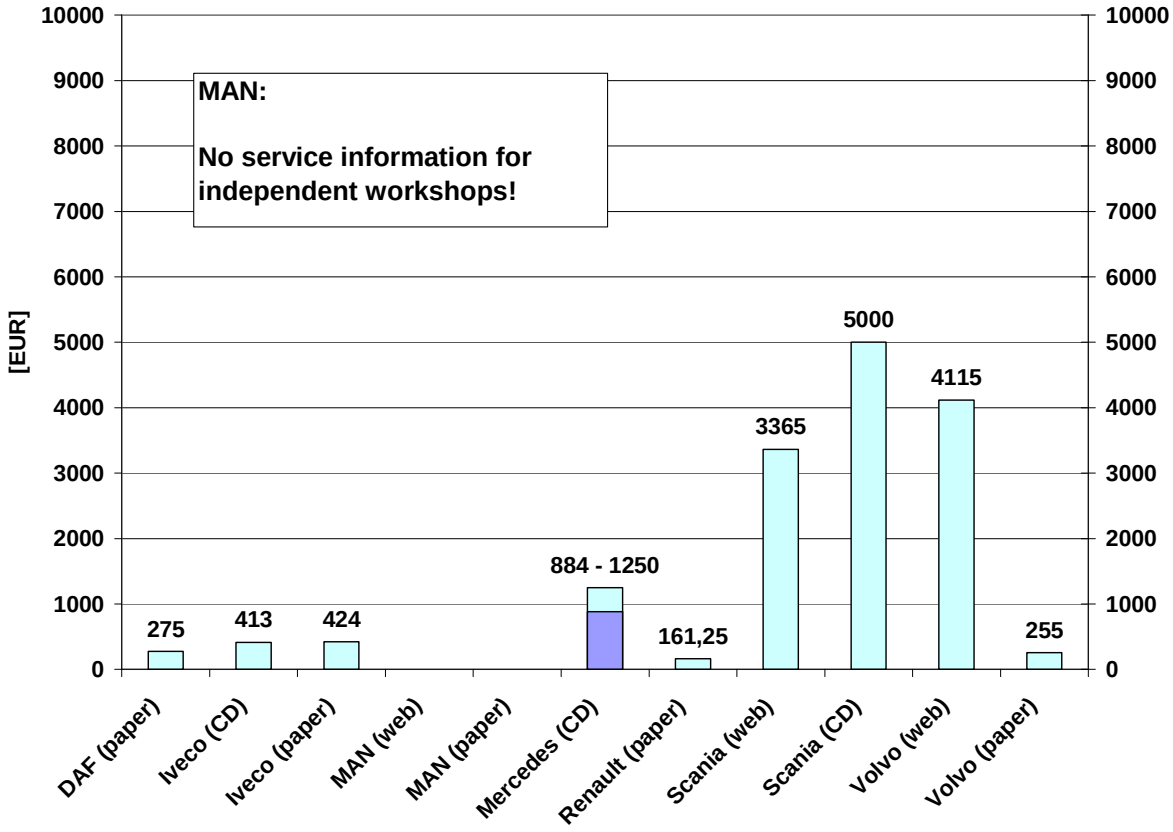

Fig. 17-4: Bottom prices for technical repair information in test case 2

The bottom prices for test case 2 are displayed in Fig. 17-4. Test case 2 (maintenance and service) can be completed with all brands except MAN. MAN does not provide any service

information to independent workshops and did not provide any figures. Again, the costs are not related to the information medium, on which they are provided. High prices can be found for Mercedes (same price structure than test case 1), Scania and Volvo. All other manufacturers vary between a range of EUR 161,- for Renault and EUR 424,- for Iveco. But even these minimum prices are quite high related to the repair job.

17.1.3 Availability and prices for spare parts information

As described in Tab. 17-2 access to spare parts information is provided by the standard technical information system itself (Volvo Trucks) or on a separate medium (all other manufacturers except DAF). In general, an Electronics Parts Catalogue (EPC) is offered on a separate CD for additional costs. The price range varies from included on the standard information medium or EUR 8,10 per day for MAN, to EUR 342,- for the Mercedes and EUR 600,- for Renault Trucks. The offers of Mercedes and Renault are not satisfactory for any group of independent operators.

Company	Brand	Medium	Price
DAF	DAF	Not available	-
Iveco	Iveco	Separate CD	Not named
DC	Mercedes	Separate CD	EUR 342,-
MAN	MAN	Separate website	EUR 8,10 per day
Renault Trucks	Renault	Separate CD	EUR 600,-
Scania	Scania	Separate CD	Not named
Volvo Trucks	Volvo	Standard website	Included

Tab. 17-2: Provision of spare parts information

Part distributors rely very much on spare part information to develop a cross-reference table from the parts they sell to the spare parts sold by the vehicle manufacturer. From their point of view a separate information medium (e.g. CD) without the necessity to buy any other repair information is favourable, but not provided by Volvo. On the other hand independent workshops need this kind of information. They are in favour of getting all necessary technical information on a single medium, which is fulfilled by Volvo only.

For automobile clubs, roadside assistance operators, operators offering inspection and testing services spare parts are of minor importance.

17.1.4 Scope of the information systems

The following six subchapters evaluate the scope and the content of the different information systems, which have been put in place for independent operators. The systems are designed with regard to the requirements of independent repairers, automobile clubs, roadside assistance operators and operators offering inspection and testing[30]. The analysis is based on vehicle identification options, search options, technical content, languages, usability and any differences to the systems of the authorised workshops.

17.1.4.1 Vehicle Identification

Since vehicles are delivered in different configurations and variants it is absolutely necessary to be able to identify a given vehicle in order to obtain the correct and relevant technical information. Therefore vehicle identification is not only important for repairers but also for roadside assistance operators and operators offering inspection and testing. Especially in the commercial vehicle sector vehicle identification is a significant requirement, perhaps even more important as in the passenger car sector. Scania for example has a theoretical possibility to build approximately 8 billion different variants of trucks, based on a modular system and approximately 90 % of the production is unique.

Such identification could be performed by different means. The best and easiest method to identify a vehicle is by using its vehicle identification number (VIN). An identification by VIN is possible for Iveco (only manually), MAN (on website portal), Mercedes, Scania (only CD) and Volvo Trucks, but not for DAF and Renault Trucks.

A second method to identify a vehicle is by using a selective list with several attributes (model, model year, engine, transmission, body style). Since this is the only way to identify a vehicle, which is not in the workshop and therefore a vehicle identification number is not known, this feature is also absolutely necessary. All manufacturers provide this method of identification.

With respect to vehicle identification by VIN the requirements of the above named independent operators are not addressed by DAF and Renault Trucks and to some extent also not by Iveco (only manually).

The vehicle identification provided by Ford, Jaguar and Volkswagen is not able to name all original spare parts of a given vehicle definitely. This of course hampers the process of finding the correct spare parts.

[30] Spare part distributors would also like to redistribute some of the manufacturer's repair information to independent repairers (enriched with additional information on the parts they sell), but in this context they are a sort of basic publisher and the evaluation in this chapter is also relevant for them.

17.1.4.2 Information Search

To find the necessary technical information different and efficient search criteria should be provided. In this context the most important criteria are search by components and systems (provided by all manufacturers)[31]. An additional option, which is especially required by independent repairers and roadside assistance operators, is search by symptoms. This option, which could also be realised by a symptom chart, is important to identify faulty components and/or to detect faults, which could not be precisely described by the customer. Only DAF provides fault identification by symptoms.

17.1.4.3 Content

The content or scope of technical information systems is substantial in many cases, but for some manufacturers important information is missing. Since maintenance and servicing are one of the main jobs in an independent repair shop, a lack in service information is hardly acceptable (MAN).

Other relevant documents are missing for MAN (emission related information, wheel/tyre combinations, diagnostic information), Iveco (emission-related information, body repair & welding information), Scania (welding instructions), Renault (welding instructions, limited diagnostic information) and Volvo (operating fuels, special tools). Diagnostic information is also quite important for roadside assistance operators and operators offering inspection and testing services (not provided by MAN). Emission related information is also relevant for operators who offer inspection services (not provided by MAN and Iveco).

It is a prerequisite, that free operators get information on common faults, recall campaigns or technical bulletins (refer to updates of and supplements to the existing workshop manuals), because otherwise well-known issues and/or safety related problems of specific vehicles could not be adequately considered. No manufacturer delivers the same information at the same time to independent operators than to its authorised network. Apart from DAF and Mercedes all vehicle manufacturers withhold information on recall campaigns, for instance. Each manufacturer provides common faults whereas technical bulletins are missing for Iveco and MAN.

17.1.4.4 Languages

Technical repair information is provided in different languages. All manufacturers provide their information at least in Dutch, English, Finnish (except DAF), French, German, Italian, Portuguese (except DAF), Swedish (except DAF and Renault Trucks) and Spanish. Therefore the largest European markets are covered.

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[31] It depends also on the structure and the usability of the information system itself to evaluate whether the provided search criteria are sufficient (see chapter 15.1.4.5).

17.1.4.5 Usability of the information systems

Apart from the quantity and quality of the technical content, the usability of the information systems is quite different amongst certain manufacturers. In case of the Internet-based system of Scania each document is a PDF version of paper based repair manuals. For that reason and also due to the unclear structure it is extensive to find the relevant documents. The usability of the website provided by Volvo Trucks could not be evaluated, because it was impossible to get access to the system.

No figures concerning the data amount, which has to be downloaded from a website were given by Scania and Volvo Trucks. Whereas Scania did not provide any explanation, Volvo answered that their system is based on a permanent online connection with the VTC server located in Sweden and it is therefore not possible to determine the required data amount for specific information contained in the database.

The usability of the CD based system is also different. Iveco provides a CD with a single PDF file, which contains the complete repair manual. Due to the well-defined structure all information can be found within a reasonable amount of time. Mercedes provides the same system as for the authorised repairers. The structure is practical and the usability of this system is good. The Scania CD contains the same PDF documents as the Internet, but requires a very time-consuming installation process. Due to the good overview and the well-defined structure of the investigated paper based systems (DAF, MAN, Renault Trucks), the information can be found within reasonable amount of time.

17.1.4.6 Differences between the systems for authorised and independent operators

Independent and authorised operators should have access to the same scope of technical repair information for comparable conditions. MAN describes significant differences, where the web-based system is a reduced version to those of the authorised workshops, with a reduced model range, different content and also limited capabilities.

As already described before, no manufacturer delivers the same information on common faults or recall campaigns to the independent operators.

17.1.5 Prices and capabilities of manufacturer specific diagnostic tools

The evaluation of the capabilities and prices for special manufacturer specific tools is divided into two subchapters: an analysis of diagnostic tools and one subchapter for other special tools. For a better comparison of the different tool costs amongst certain manufacturers, the costs are investigated on basis of the two test cases, which are described in chapter 14.

17.1.5.1 Prices and capabilities of manufacturer specific diagnostic tools

For an increasing number of repairs special diagnostic tools are needed. Truck manufacturers offer different diagnostic tools to independent operators. Even in this sector it is unlikely, that due to the high prices, a multi-brand workshop will purchase different manufacturer specific tools. For those workshops multi-brand diagnostic tools are needed.

Therefore the manufacturer tools are only useful for independent repair shops, which are specialised on a specific brand or for independent diagnostic tool manufacturers, who want to implement the functionalities in their multi-brand tools.

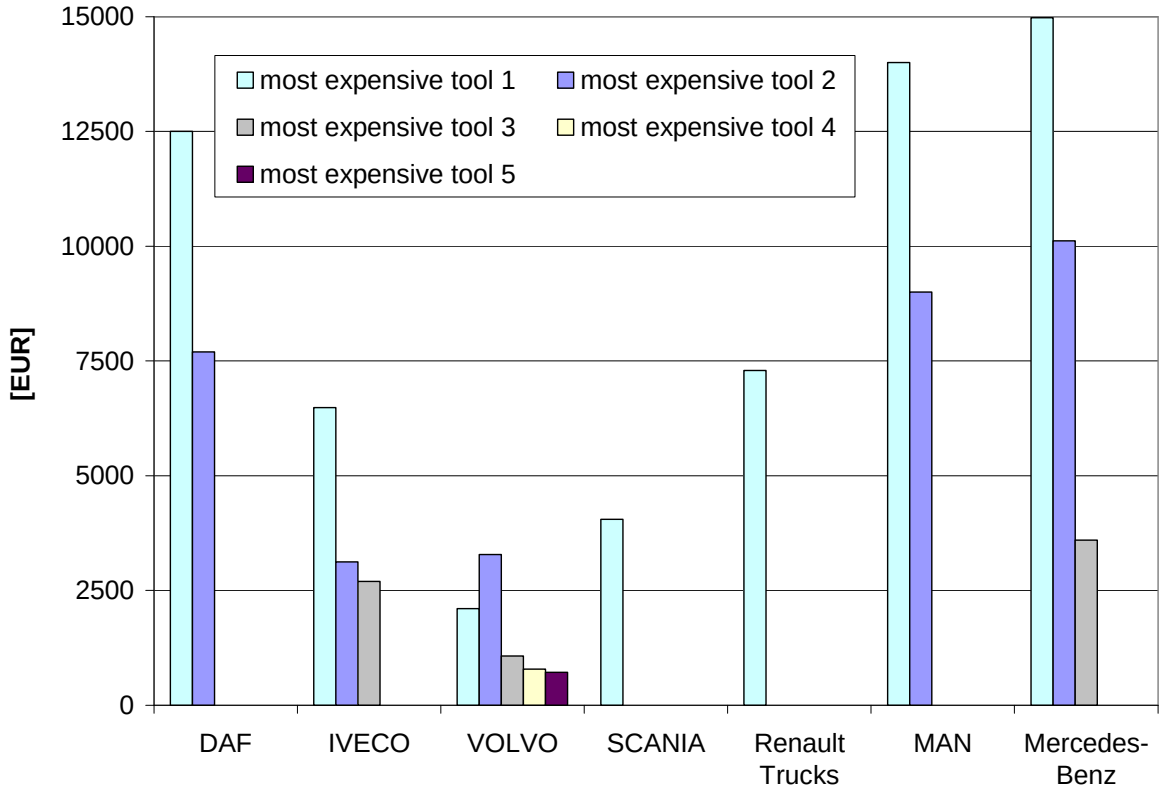

Fig. 17-5: Five most costly diagnosis tools

The top-level diagnostic tools vary in a price range from EUR 3.000,- to EUR 15.000,-[32] with an average of EUR 8.500,- (see Fig. 17-5). Besides reading the fault code memory, these diagnosis tools usually also provide profound repair information. The prices for the tools from Mercedes (EUR 14.474,- to EUR 17.222,-), MAN (EUR 14.000,-) and DAF (EUR 12.500,-) are outstanding.

[32] plus annual software and license costs

All manufacturers offer the diagnostic tools at the same price to independent operators in comparison to their own network.

The possibility to provide operations to ECU's, is prerequisite for the independent operators to guarantee their competitiveness vis-à-vis the authorised network. Relevant operations are software updating, variant coding, initialisation/reinitialisation and resetting of the security system[33]: Assuming that an independent operator is able to afford expensive manufacturer specific diagnostic tools it is possible to execute the necessary ECU operations (apart from resetting the security system) for trucks from Iveco and Mercedes (see Fig. 17-6)[34].

Whereas the Regulation stipulates that suppliers should be obliged to grant access to the technical information necessary for re-programming electronic devices in a motor vehicle, DAF (no ECU operations), Volvo Trucks (only variant coding and reinitialisation), Scania (only variant coding), Renault Trucks (no ECU operations), and MAN (no ECU operations) either provide limited ECU operations or none of the necessary operations (see Fig. 17-6). For those manufacturers certain repairs could not be performed in an independent workshop.

		DAF	IVECO	VOLVO	SCANIA	Renault Trucks	MAN	Mercedes-Benz
1.3.1	**poss. for ind.op to update software/reprog.**	**no**	yes	**no**	**no**	**no**	**no**	yes
1.3.2	**can ind. op. carry out variant coding**	**no**	yes	yes	yes	**no**	**no**	yes
1.3.3	**can ind. op. carry out initialisation/reinit.**	**no**	yes	yes	**no**	**no**	**no**	yes
1.3.4	**can ind. op. carry out pass-through prog.**	**no**	**no**	yes	**no**	**no**	**no**	**no**
1.3.5	**can ind. op. reset security systems**	**no**	**no**	**no**	**no**	**no**	**no**	**no**

Fig. 17-6: Possible ECU operations

As an exception of the general rule it is legitimate and proper for a manufacturer to withhold access to technical information, which might allow a third party to bypass or disarm on-board anti-theft devices. However, other possibilities exist, which allow resetting the security system without allowing a third party to "crack" anti-theft devices. The facility "Pass-Through Programming" is one device, which is able to program manufacturer specific electronic control modules using a standard PC connected to the Internet. Free operators are in favour of this approach. Only Volvo provides this tool.

[33] For a description of the relevant operations see chapter 6.2

[34] Based on the answers given in the questionnaire.

17.1.5.2 Prices of manufacturer specific special tools (excluding diagnostic tools)

In order to clarify, at what price the independent operators have to purchase special tools (excluding diagnosis tools) to enable an appropriate repair, the truck manufacturers have been asked to deliver specific information on the workshop equipment in use. As the five most used special tools, the manufacturers mainly enumerate releasing tools, gauges, removers, alignment kits or tensioning devices. The majority of the mentioned tools vary in a price range from EUR 150,- to EUR 500,-. Above average are some special tools from Volvo Trucks, Renault Trucks, MAN and Mercedes.

Furthermore, the vehicle manufacturers have been asked to enumerate the five most expensive special tools. Here, in particular the prices of Renault Trucks are outstanding, e.g. the “Front Axle Tester” for EUR 23.553,17 in Italy and are not affordable for an independent operator.

17.1.6 Test cases

Based on the two test cases, which are described in chapter 14, the necessary special tool prices have been acquired. Test case 1 describes the replacement of an engine ECU, whereas test case 2 requires technical information, in order to perform a standard maintenance or service job.

Besides Renault Trucks (1: EUR 7.290,- / 2: EUR 20.528,-) the minimum tool prices are identical for test case 1 and 2 (see Fig. 17-7). As already described before, the replacement of an engine ECU is not possible for an independent operator on a DAF, Iveco and MAN. For those manufacturers the minimum tool prices are shown for test case 2 only.

In general a diagnostic scan tool is needed and therefore these costs are quite high. The most expensive tools are sold by Renault, which lists approximately 50 special tools for test case 2. Assuming that some of these tools can be replaced by standard multi-brand tools the costs are still extraordinarily and unacceptable for independent operators.

The Mercedes tool is the same as those used for passenger cars, but additional software has to be purchased. Scania and Volvo do not require a special tool for an ECU replacement.

Again, Mercedes provides different prices for different countries (see Tab. 17-3).

Country	DK	F	GER	IRE	I	NL	PL	UK
Mercedes	5.837,-	5.482,-	5.304,-	6.061,-	5.544,-	5.304,-	5.572,-	5.388,-

Tab. 17-3: Minimum tool prices in test case 1 (Mercedes)

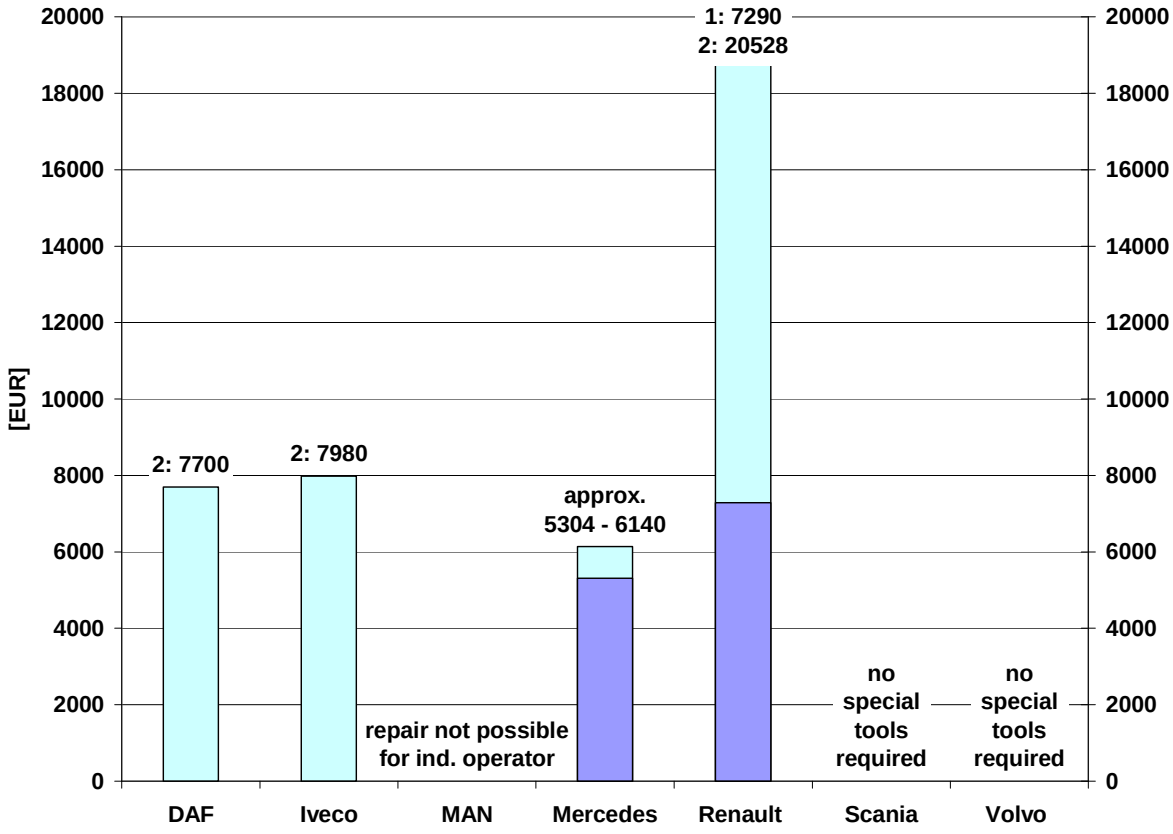

Fig. 17-7: Minimum tool prices in test case 1

It is a prerequisite, that free operators can buy diagnostic tools for a fair price, but for multi-brand repairers the purchase of several manufacturer specific tools is not affordable. Only the Scania and Volvo Trucks who implemented all necessary functionalities on board of the trucks show an option, which is in favour of independent repairers.

With respect to the other prices, the strong need for multi-brand diagnostic tools is obvious. If independent repairers should be able to work in an competitive environment it is essential that diagnostic tool manufacturers get sufficient information to produce multi-brand or universal scan tools.

17.1.7 Training information

All truck manufacturers provide the same classroom training for independent operators at the same price as for the authorised operators. Apart from DAF, they also offer remote training programmes on CD/DVD or via Internet. The prices for an external training on engine management vary in a price range from EUR 150,- to EUR 385,-.

17.2 Evaluation for Manufacturers of Repair Equipment or Tools

According to the New Block Exemption Regulation, it must be possible for independent operators to check all electronic vehicle components. For an independent operator it is rather impossible to purchase all manufacturer specific tools. Therefore, there is a need for diagnostic tools, which covers more than one vehicle manufacturer.

All manufacturers have been asked for the arrangements enabling diagnostic tool manufacturers to produce devices with the same functions as manufacturers, but no truck manufacturer delivers special information to diagnostic tool manufacturers.

DAF explained, that they have not yet developed a general policy on what specific information they will provide to independent tool manufacturers According to DAF, they will deal with the requests from these parties on their individual merits, when these requests will in fact be received. DAF is still in the process of reviewing the only request they have so far received from an independent parts manufacturer.

According to a statement from Volvo, they have almost no experience with demands from diagnostic tool manufacturers. To their knowledge, they have received no more than one or two general requests since the entry into force of the New Block Exemption Regulation. In these instances, Volvo has offered to provide the same information as made available to the authorised repairers and the independent operators. Volvo explains to await further experience with this type of requests in order to decide on any definitive approach in this matter.

All other truck manufacturers have not delivered any further explanations, why they do not provide special information to independent diagnostic tool manufacturers.

The vehicle manufacturers have also been asked, if they provide information enabling tool manufacturers to install test procedures for specific cars in their tools. Only Iveco and MAN have answered these questions, although they do not offer special information for diagnostic tool manufacturers. This means, that these manufacturers deliver these information together with their “regular” information to independent operators.

It is a prerequisite, that independent diagnostic tool manufacturers get information comparable to ISO 15031 to all electronic vehicle components to manufacture brand independent diagnostic tools. Thus, they would have the nomenclature for all vehicle components (names, abbreviations and acronyms), the facilities to be provided by a testing tool, the messages, which should pass between the vehicle and the diagnostic tool, the standard diagnostic facilities and particular vehicle malfunctions, as identified by monitoring facilities within the vehicle.

Only MAN provides limited protocol information within the information for independent operators. They deliver information on fault code reading, resetting the service light and details of the diagnostic connector (see Fig. 17-8).

		DAF	IVECO	VOLVO	SCANIA	Renault Trucks	MAN	Mercedes-Benz
2.3.1	prov. any add. protocol not covered by ISO 15031	n/a	no	n/a	no	no	no	no
2.3.2	prov. inf. on fault code reading/interpretation	n/a	no	n/a	no	no	yes	no
2.3.3	prov. live data parameter incl scale inf.	n/a	no	n/a	no	no	no	no
2.3.4	prov. inf. on funct. tests incl device act./control	n/a	no	n/a	no	no	no	no
2.3.5	prov. details how to obtain component/status inf.	n/a	no	n/a	no	no	no	no
2.3.6	prov. inf. on reset./adapt. learns/variant coding	n/a	no	n/a	no	no	no	no
2.3.7	prov. inf. on ECU identification & variant coding	n/a	no	n/a	no	no	no	no
2.3.8	prov. access to sec. codes req. for rep.funct.	n/a	no	n/a	no	no	no	no
2.3.9	prov. inf. how to re-set service lights	n/a	no	n/a	no	no	yes	no
2.3.10	prov. inf. on diagn. connector details	n/a	no	n/a	no	no	yes	no
2.3.11	prov. inf. for unambiguous veh. identification	n/a	no	n/a	no	no	no	no

Fig. 17-8: Communication protocol information

It can be concluded that all truck manufacturers deliver no or quite insufficient information (MAN). Therefore the needs of the independent tool manufacturers, and as a result those of the independent workshops, are not addressed.

17.3 Evaluation for Publisher of Technical Information and Operators offering Training for Repairers

The New Block Exemption Regulation calls for the supply of fair and indiscriminate information for the independent publishers. Besides publishers spare part distributors, who would like to redistribute repair information to their customers, are sort of a very basic publisher of technical information in this context.

DAF, Iveco and Scania do not offer special information for publishers. For these manufacturers, the information is provided together with the information relevant for the other independent operators. The cover letter from DAF shows that there do not exist many inquiries from publishers. DAF for example explains, that they have not yet developed a general policy on what specific information they will provide to this party. According to DAF, they will deal with the requests on publisher's individual merits, when these requests will in fact be received.

The provided answers from the truck manufacturers show that no specific information and conditions are available, although there has not been a significant demand from publishing companies.

18 Synopsis for each Truck Manufacturer

The following subchapters provide a synopsis and comprehensive presentation for each truck manufacturer. The different criteria only reflect a technical and commercial evaluation, based on chapter 17. These criteria are not those, which would be used to evaluate whether the systems put in place by the manufacturers comply with the competition rules.

The positive (+) and negative (-) sides of the systems used to make the information and tools available, are listed for each manufacturer separately.

18.1 DAF

From time to time DAF will evaluate all aspects of the way it processes the requests for technical information from independent operators, including its general policies on this subject and the case law on the Block Exemption that may be relevant in this respect. If this evaluation would show that DAF should alter the way it deals with these requests, DAF will consider the changes that may then be necessary, or in the opinion of DAF, be appropriate. It may for instance be, that DAF will, because of a sharp increase in the number of these requests in the future, introduce a web enabled pay-per-view system for independent operators.

18.1.1 Synopsis for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

1. Registration and access
   + All technical repair information on one medium (paper).
   + Paper-on-demand option for small or custom-tailored information packages.
   - Technical information only on printouts via Dealer Systems Helpdesk.
   - Various delivery times up to 30 days. Immediate access to all required information.

2. Price for technical repair information
   - Expensive prices for complete documentation of one or all models.
   - Expensive prices in test case 2 (EUR 275,-)

3. Availability and prices for spare part information
   - No spare part information available.

4. Scope of the information system
   + Availability of symptom charts.

+ Information on common faults.
+ Information on recalls.
+ Limited number of languages.
- No Vehicle identification by VIN.
- Limited usability because paper-on-demand is the only purchase option (print-outs via Dealer Systems Helpdesk).

5. Prices and capabilities of manufacturer specific tools
   + Independent operators pay the same price for diagnostic tools as authorised operators.
   o The most used special tools have average prices.
   - The diagnostic tools have prices above average.
   - The diagnostic tools enable none of the required ECU operations.

6. Training information.
   + DAF provides the same classroom training for independent operators at the same price as for authorised operators.
   - DAF does not provide remote training for independent operators.

18.1.2 Synopsis for Manufacturers of Repair Equipment or Tools

DAF has not yet developed a general policy, on what specific information it will provide to independent tool manufacturers, about the technical information mentioned above, and under what conditions this will be done. DAF will deal with the requests from these parties on their individual merits, when these requests will in fact be received. DAF is still in the process of reviewing the only request it has so far received from an independent parts manufacturer.

- Special information for manufacturers of repair equipment does not exist.
- Test and diagnosis information are not provided.
- Protocol information is not provided.

18.1.3 Synopsis for Publishers of Technical Information and Operators offering Training for Repairers

DAF has also not yet developed a general policy how it will provide information to publishers and under what conditions this will be done. DAF will deal with the requests from these parties on their individual merits, when these requests will in fact be received.

- DAF does not provide special information for publishers of technical information and operators offering training for repairers.

18.2 Iveco

18.2.1 Synopsis for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

1. Registration and access
   + All technical repair information on one medium (CD).
   + Availability of information packages for single models.
   - No small or custom-tailored information packages available.
   - No immediate access possible.

2. Price for technical repair information
   - Adequate minimum price (EUR 32,-).
   - Expensive prices in test case 2 (EUR 413,-)

3. Availability and prices for spare part information
   + Information on a separate CD is favourable for spare part distributors.

4. Scope of the information system
   + Availability of job times.
   + Sufficient languages.
   + Information on common faults.
   o Ordinary usability.
   - No (automatic) vehicle identification by VIN.
   - No emission-related information.
   - No body repair information.
   - No information on recalls.

5. Prices and capabilities of manufacturer specific tools
   + Independent operators pay the same price for diagnostic tools as authorised operators.
   + The most used special tools have prices under average.
   + The diagnostic tools enable the majority of the required ECU operations.
   o The diagnostic tools have average prices.

6. Training information

+ Iveco provides the same classroom training for independent operators at the same price as for authorised operators.
+ Iveco provides the same remote training for independent operators at the same price as for authorised operators.

18.2.2 Synopsis for Manufacturers of Repair Equipment or Tools

+ Iveco provides the majority of the required diagnosis information.
- Special information for manufacturers of repair equipment does not exist.
- Iveco provides none of the required communication protocol information.

18.2.3 Synopsis for Publishers of Technical Information and Operators offering Training for Repairers

- Iveco does not provide special information for publishers of technical information and operators offering training for repairers.

18.3 MAN

18.3.1 Synopsis for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

1. Registration and access

+ All technical repair information on one medium (paper).
+ Paper-on-demand for immediate access (only DK, F, GER, PL).
+ Small or custom-tailored information packages available (only DK, F, GER, PL).
+ Availability of information packages for single models or systems.
- Internet system is a reduced version of the system for authorised operators.
- No small or custom-tailored information packages available (UK and Italy).
- No immediate access possible (UK and Italy).
- Only spare parts and special tools available via Internet.

2. Price for technical repair information
   - Expensive subscription price (EUR 9.000,- for one model).
   - Price discount for authorised operators up to 60 %

3. Availability and prices for spare part information.
   + Information on a separate website is favourable for spare part distributors.
   + Payment by access time (EUR 9,60 per day)
   - Expensive price if system has to be used often (EUR 9,60 per day).

4. Scope of the information system
   + Vehicle Identification by VIN on website
   + Sufficient languages for paper based information.
   + Information on common faults.
   o Ordinary usability.
   - Only German and English language; other languages under progress (Internet).
   - No emission-related information.
   - No service information (only intervals).
   - No diagnostic information.
   - No information on recalls.

5. Prices and capabilities of manufacturer specific tools
   - The most used special tools have prices above average.
   - The diagnostic tools enable none of the required ECU operations.
   - The diagnostic tools have prices above average.
   - Price discounts for authorised operators exist for all special tools up to 38,4 %.

6. Training information
   + MAN provides the same classroom training for independent operators at the same price as for authorised operators.
   + MAN provides the same remote training for independent operators at the same price as for authorised operators.

18.3.2 Synopsis for Manufacturers of Repair Equipment or Tools

+ MAN provides the majority of the required diagnosis information.
- Special information for manufacturers of repair equipment does not exist.
- MAN only provides little information on communication protocols.

18.3.3 Synopsis for Publishers of Technical Information and Operators offering Training for Repairers

+ MAN provides for 100% of the vehicles produced within the last 10 years special information for publishers of technical information and operators offering training for repairers.
+ Information packages (e.g. for models, technical operations or published exemplars) are available.
- MAN has not answered when publishers of technical information and operators offering training for repairers get the information.

18.4 Mercedes

18.4.1 Synopsis for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

1. Registration and access
   + All technical repair information on one medium (CD).
   - Several days delivery time. No immediate access possible.
   - No small or custom-tailored information packages available.

2. Price for technical repair information
   + Adequate one-year subscription price (EUR 542,- - 908,-).
   - Expensive minimum price (EUR 542,- - 908,-).
   - Expensive prices in test case 1 & 2 (EUR 884,- - 1.250,-).
   - Different prices in different countries.

3. Availability and prices for spare part information
   + Information on a separate CD is favourable for spare part distributors, but for an independent repairer this information should also be implemented or directly accessible from the technical information CD.

- Price of CD: EUR 342,-

4. Scope of the information system
   + Vehicle identification by VIN.
   + Job times available.
   + Comprehensive search criteria.
   + Comprehensive technical information.
   + Sufficient languages.
   + Advanced and well-structured CD.
   + Information on recalls and common faults.
5. Prices and capabilities of manufacturer specific tools
   + Independent operators pay the same price for diagnostic tools as authorised operators.
   + The diagnostic tools enable the majority of the required ECU operations.
   - The diagnostic tools have prices above average.
   - The most used special tools have prices above average.
6. Training information
   + Mercedes provides the same classroom training for independent operators at the same price as for authorised operators.
   + Mercedes provides the same remote training for independent operators at the same price as for authorised operators.

18.4.2 Synopsis for Manufacturers of Repair Equipment or Tools

- Mercedes does not provide diagnosis information.
- Special information for manufacturers of repair equipment does not exist.
- Mercedes only provides little information on communication protocols.

18.4.3 Synopsis for Publishers of Technical Information and Operators offering Training for Repairers

+ Mercedes provides for 100% of the vehicles produced within the last 10 years special information for publishers of technical information and operators offering training for repairers.
+ Information packages (e.g. for models, technical operations or published exemplars) are available.

- The publishers of technical information and operators offering training for repairers get the information too late.

18.5 Renault Trucks

18.5.1 Synopsis for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

1. Registration and access
   + All technical repair information on one medium (paper).
   + Different information packages
   - Long delivery time of 45 – 55 days. No immediate access.
   - No small or custom-tailored information packages available.

2. Price for technical repair information
   + Reasonable one-year subscription price (EUR 1.800,-)
   - Expensive minimum price (EUR 95,-)
   - Expensive price in test case 1 & 2 (EUR 239,- and EUR 161,-)

3. Availability and prices for spare part information
   + Information on a separate CD and separate website is favourable for spare part distributors.
   + Extraordinary price (EUR 600,-).

4. Scope of the information system
   + Sufficient languages.
   + Job times available.
   + Information on common faults.
   o Ordinary usability.
   - No Vehicle identification by VIN.
   - No welding information.
   - Limited diagnostic information.
   - No information on recalls.

5. Prices and capabilities of manufacturer specific tools

   + Independent operators pay the same price for diagnostic tools as authorised operators.

   o The diagnostic tools have average prices.

   - The most used special tools have prices above average.

   - The diagnostic tools enable none of the required ECU operations.

6. Training information

   + Renault provides the same classroom training for independent operators at the same price as for authorised operators.

   + Renault provides the same remote training for independent operators at the same price as for authorised operators.

18.5.2 Synopsis for Manufacturers of Repair Equipment or Tools

- Renault does not provide diagnosis information.
- Special information for manufacturers of repair equipment does not exist.
- Renault only provides little information on communication protocols.

18.5.3 Synopsis for Publishers of Technical Information and Operators offering Training for Repairers

+ Renault provides for 100% of the vehicles produced within the last 10 years special information for publishers of technical information and operators offering training for repairers.

- Information packages (e.g. for models, technical operations or published exemplars) are not available.
- The publishers of technical information and operators offering training for repairers get the information too late.

18.6 Scania

18.6.1 Synopsis for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

1. Registration and access

   - Information provision through different media (40 % Internet/paper, 85 % CD).
   - Advance payment: EUR 60,-

- Minimum subscription period: 3 months
- No small or custom-tailored information packages available.
- No immediate access possible.
- Time consuming installation procedure (Internet).

2. Price for technical repair information
   + Reasonable one-year subscription price for Internet system(EUR 2.000,-)
   - Expensive minimum price (EUR 834,-).
   - Expensive subscription price for CD (EUR 5.000,-).
   - Expensive price for test case 1 & 2
     (Internet: EUR 7.415,- / EUR 3.365,-. CD EUR 9.050,- / EUR 5.000,-).

3. Availability and prices for spare part information.
   + Information on a separate CD is favourable for spare part distributors.

4. Scope of the information system
   + Vehicle Identification by VIN (CD).
   + Sufficient languages.
   + Bodywork information without registration and free of charge (Internet).
   + Information on common faults.
   - No Vehicle Identification by VIN (Internet).
   - Limited usability.
   - No welding instructions.
   - No special tools lists (Internet).
   - No information on recalls.

5. Prices and capabilities of manufacturer specific tools
   + Independent operators pay the same price for diagnostic tools as authorised operators.
   + The diagnostic tools have prices under average.
   + The most used special tools have prices under average.
   - The diagnostic tools only enables one of the required ECU operations.

6. Training information

+ Scania provides the same classroom training for independent operators at the same price as for authorised operators.

+ Scania provides the same remote training for independent operators at the same price as for authorised operators.

18.6.2 Synopsis for Manufacturers of Repair Equipment or Tools

- Scania does not provide diagnosis information.

- Information for manufacturers of repair equipment does not exist.

- Scania only provides little information on communication protocols.

18.6.3 Synopsis for Publishers of Technical Information and Operators offering Training for Repairers

- Scania does not provide special information for publishers of technical information and operators offering training for repairers.

18.7 Volvo Trucks

18.7.1 Synopsis for Independent Repairers, Automobile Clubs, Roadside Assistance Operators, Operators offering Inspection and Testing services and Spare Part Distributors

1. Registration and access

+ All technical repair information on one medium (Internet).

- Long registration process to website (> 60 days). Paper-on-demand provides information only 3 days after payment. No immediate access.

- The total amount has to be paid in advance (Internet: EUR 4.115,-).

- Minimum subscription period: one year.

- Access is only granted if the user has participated in an Impact training course. The intervals between such training courses depend on the demand of candidate subscribers. It can take up to 45 days before a training course is available.

- Extraordinarily difficult installation procedure. It was not possible to get access to the website.

2. Price for technical repair information
   - Expensive minimum price (EUR 101,-: Paper-on-demand EUR 100,- per request, plus EUR 1,- per printed page).
   - Expensive prices in test case 1 & 2 (EUR 107,- + EUR 205,-).
   - Expensive one-year subscription price (EUR 4.115,-).

3. Availability and prices for spare part information
   + Information on standard website without additional costs for registered users.
   - No separate medium for spare part distributors.

4. Scope of the information system
   + Vehicle identification by VIN.
   + Sufficient languages.
   + Information on common faults.
   - No information on recalls.
   - No special tools information.
   - It was impossible to get access to the website. Therefore the usability is quite poor.

5. Prices and capabilities of manufacturer specific tools
   + Independent operators pay the same price for diagnostic tools as authorised operators.
   + The diagnostic tools enable the majority of the required ECU operations.
   o The diagnostic tools have average prices.
   - The most used special tools have prices above average.

6. Training information
   + Volvo provides the same classroom training for independent operators at the same price as for authorised operators.
   + Volvo provides the same remote training for independent operators at the same price as for authorised operators.

18.7.2 Synopsis for Manufacturers of Repair Equipment or Tools

According to a statement from Volvo, they have almost no experience with demands from diagnostic tool manufacturers. Volvo explains to await further experience with this type of requests in order to decide on any definitive approach in this matter.

- Volvo does not provide diagnosis information.
- Volvo information for manufacturers of repair equipment does not exist.
- Volvo only provides little information on communication protocols.

18.7.3 Synopsis for Publishers of Technical Information and Operators offering Training for Repairers

+ Volvo provides for 100% of the vehicles produced within the last 10 years special information for publishers of technical information and operators offering training for repairers.
+ Information packages (e.g. for models, technical operations or published exemplars) are available.
- The publishers of technical information and operators offering training for repairers get the information too late.

18.8 Overview Truck Manufacturers

Based on the above-described results a matrix is developed, which provides a summarising assessment to each manufacturer's system with regard to the different topics.

18.8.1 Independent repairers, automobile clubs, roadside assistance operators, operators offering inspection and testing services and spare part distributors

	DAF	Iveco	MAN	Mercedes	Renault Trucks	Scania	Volvo Trucks
Quality and usability of the media	-	0	0	+	0	-	--
Quantity of information made accessible	+	-	--	+	-	0	+
Registration and Access Conditions	-	-	0	--	+	-	--
Price for the technical information	-	0	--	-	0	--	-
Capabilities manufacturer specific (scan) tools	--	+	--	+	--	-	0
Prices of manufacturer specific tools	-	0	-	-	0	+	+

Legend: ++: excellent +: good 0: average -: below average --: poor

Tab. 18-1: Assessment manufacturer systems

18.8.2 Manufacturers of repair equipment or tools

	DAF	Iveco	MAN	Mercedes	Renault Trucks	Scania	Volvo Trucks
Information for tool manufacturers	--	-	-	--	--	--	--

Legend: ++: excellent +: good 0: average -: below average --: poor

Tab. 18-2: Assessment manufacturer systems

18.8.3 Publishers of technical information and operators offering training for repairers

	DAF	Iveco	MAN	Mercedes	Renault Trucks	Scania	Volvo Trucks
Information for publishers	--	--	+	+	0	--	+

Legend: ++: excellent +: good 0: average -: below average --: poor

Tab. 18-3: Assessment manufacturer systems