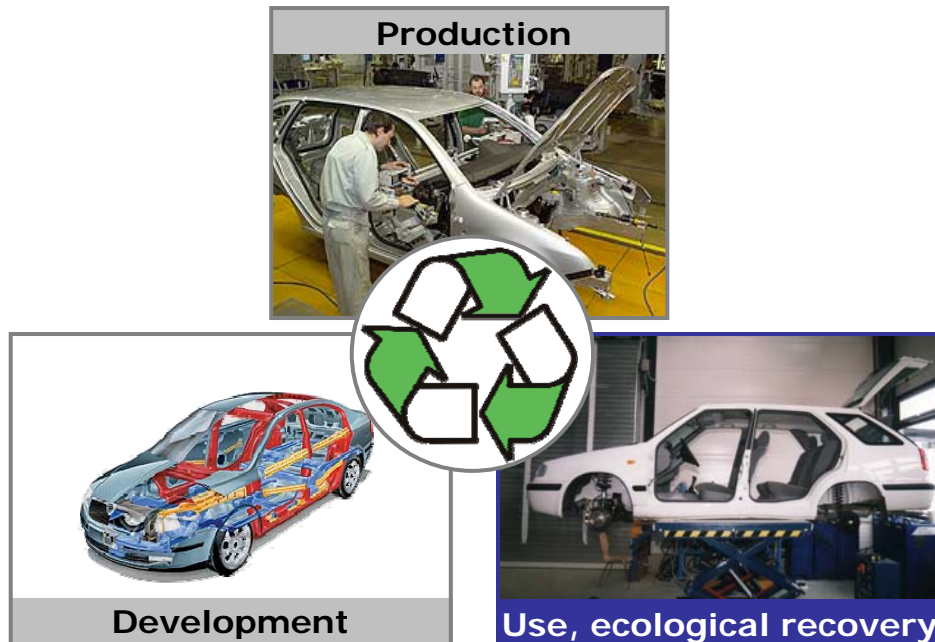




SUSTAINABLE DEVELOPMENT

Recycling of End of Life Vehicles (ELV)



1. European Directive on End of Life Vehicles (ELV)

In compliance with the Directive on End of Life Vehicles (ELV) (2000/53/ES) adopted on 18 September 2000, the base was created for common all-European conditions for recovery of end of life vehicles. Among the basic points of the directive are:

- Creation, building of systems for collection and recovery of end of life vehicles. The systems must be widespread, which means that they must be accessible to every vehicle owner.
- Bringing used and scrap vehicles to authorized process plants for disposal and the related issue of an evidence of the vehicle disposal.
- Free liquidation of the vehicle for the owner assuming that the significant components are not missing.
- Laying down a vehicle disposal process in order to reach valuation up to a high environmental standard. At the latest by 1 January 2015, 95 % of the vehicle weight must be reused or recovered.
- In order to reduce the production of dangerous automotive waste, it is essential already at the design stage to reduce the use of dangerous substances to a minimum. Special mean values and prohibitions apply to heavy metals - lead, cadmium, hexavalent chrome and mercury.

The full text of the European Directive on End of Life Vehicles (ELV) 2000/53/EG is available in several languages on the Internet portal European Union.



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2. Collection and liquidation of selected end of life vehicles in the Czech Republic

Since February 2005, the amendment of the Act on wastes is in force in the Czech Republic. The amendment encumbers the manufacturers to secure liquidation of a vehicle for the owner free of charge in the authorised treatment network.

Management and coordination of the processing network for selected car wrecks of the VW concern including Škoda Auto was assigned to the German firm Callparts System.

The duty to liquidate vehicles free of charge applies to vehicles made after 1 July 2002 and from 1 January 2007 on all vehicles, regardless of age.

The car wreck can be collected free of charge on condition that it contains all necessary parts of the vehicle, especially the engine-gearbox assembly, body, catalytic converter, and bumpers, but does not contain any parts not approved by the manufacturer as well as any waste that does not come from the vehicle.

3. Collection of selected products from the service centres

One of the further duties of Škoda Auto under the Act "on wastes" is to secure the collection of selected products, which the company imports and supplies to the market. This mainly concerns **car batteries, tyres and oils**, which the owner may (after they lose their utility value) surrender to the [sales network](#). Above this framework, Škoda in co-operation with the manufacturer and supplier of car glass will secure the collection of waste glass from the production plants and Škoda service centres for the purpose of recycling. In 2005, 390 tons of glass was processed in this way.

The whole process from collection to usage of the given products runs on the basis of contractual relations between Škoda Auto and the firms, which secure such collection.

Informations for used vehicle collection and disposal in the respective EU countries can be found at the Škoda importer's web site.

4. Use and recovery of end of life vehicles

- The first step in the process of end of life vehicle recovery is surrender of an end of life vehicle to an authorised dismantling plant.



Evidence, issue liquidation document



Storage of vehicles destined for liquidation



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The list of the authorised establishments in the network is available at the web address www.skoda-auto.cz

After entry of vehicle data, the battery is removed first and the airbags are deactivated/triggered. This is followed by removal of the tyres and all operating fluids (fuel, engine, gearbox oil, oil from the steering mechanism and oil from the shock absorbers, air-conditioning fluid, brake fluid and coolant).



Drain of operating fluids



Drain of oil from the shock absorbers

The vehicle treatment process includes disassembly of parts and assemblies, which are later sold either as used spare parts or reconditioned ones. Catalytic converters are disassembled in order to recover precious metals such as platinum, rhodium or palladium. For reason of demand for recyclable parts, the plastic parts and glass are dismantled.



Dismantling of catalyst



Dismantling of plastic bumper



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The residual body is compressed and transferred to the grinding plant (shredder). This breaks down the residual body in pieces that are several centimetres large and thus make it possible to recycle the rest of the metallic materials. This culminates in recovery of almost 80 % of the end of life vehicle. The remainder, a fraction of about 20 % will be further treated in future using new technologies and also be recycled to a greater extent. In this way, the surrendered end of life vehicle attains a minimum recovery quota of about 95 %, which is from 2015 also stipulated by law.



a shredder

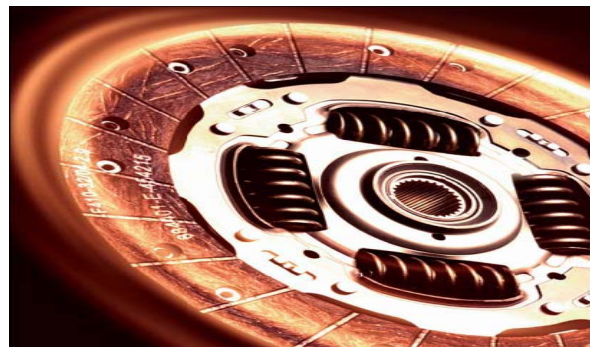


material fraction sorting

4.1. The ŠKODA genuine exchange parts program is more than recycling

The Škoda genuine exchange parts program is friendly to the environment, which in renovation does not burden the environment so much with waste, excess after-heat and contamination of water as applies to the production of new parts. The Škoda genuine exchange parts program is more than recycling. Because the returned aggregates and parts, which it is possible and economically reasonable, are not thrown away or melted down, but modified for reuse, a substantial share of the work and energy invested in the production of these parts is thus reused.

At present, the range of Škoda genuine exchange parts covers more than 800 items. Their number is rising continuously with the launch of new Škoda models in the market and thanks to the use of increasingly newer methods in the renovation of the Škoda genuine parts.



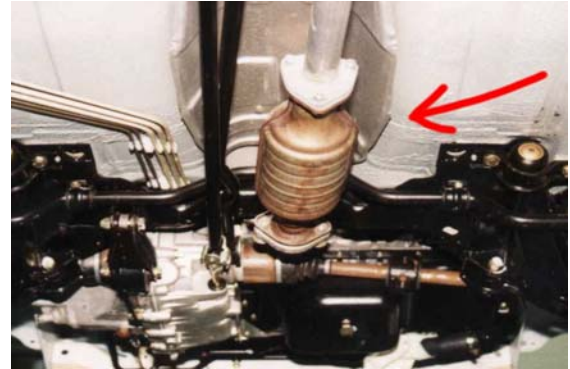
Part of the offered range of genuine exchange parts are the drive shafts and clutch plates



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4.2. Recycling of catalyst

The Volkswagen Group operates its own recycling centre for catalytic converters in Kassel, Germany. Here in the framework of a high quality recycling process for processing of waste from the production of catalysts, further defective and used catalysts. Škoda Auto also supplies them here within the framework of the exchange parts program. Beside the ferrous metals, the precious metals such as platinum, palladium and rhodium are recovered and reused in the production of new catalysts. This process for recovery of precious metals is not only ecological friendly, but also means securing the supply of raw materials within the framework of Volkswagen concern.



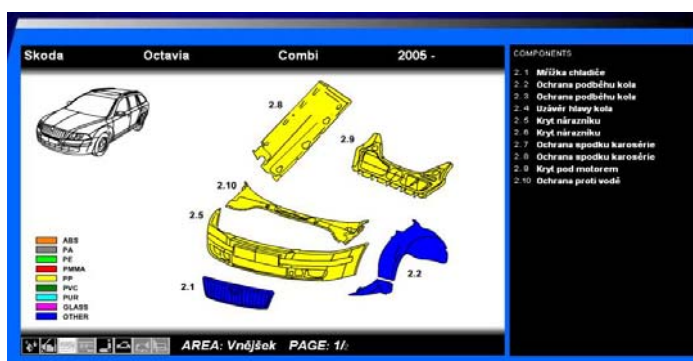
Catalyst

5. Information relating to dismantling of parts for the purpose of usage and recovery

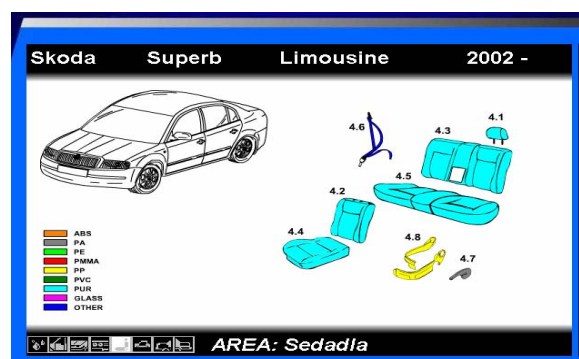
In order to simplify and optimise recycling of end of life vehicles, Škoda and 25 other international carmakers jointly use "IDIS" software ("IDIS" is an abbreviation for "International Dismantling Information System"). IDIS is available in 21 languages and currently covers 46,000 assembly parts for more than 900 types of vehicles.

Beside this extensive database, IDIS also contains dismantling instructions with material specifications, weight information and other information for safe and ecological recovery of end of life vehicles. The involved treatment plants may beside online access also order software from the consortium IDIS. (<http://www.Idis2.com>).

In connection with the recovery of end of life vehicles, for the future, the processing of airbags and safety seat belt tensioners is also counted on. For safe handling of pyrotechnic parts, the major condition beside relevant know-how is also possession of correct tools. The automotive industry for this reason has developed deactivation equipment for pyrotechnic parts. Using this "trigger", they may safely and reliably trigger and thus deactivate all pyrotechnic components. The extensive information for handling airbags and seat belt tensioners is naturally shown in IDIS.



Sample from the IDIS dismantling manual





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**Mladá Boleslav
April 2006**