

AVA BENELUX BV
Slibbroek 15
5081 NR-HILVARENBEEK
THE NETHERLANDS



Dear Readers,

As an AVA-Haugg Group shareholder I would like to further inform our customers about our products of the Engine Cooling and Air Conditioning lines, and their relative markets.

The new AVA newsletter is the first important step in this direction. Therefore I am pleased to present our first issue.

We believe that everybody will find something useful and of interest – distributors or spare parts dealers, general garages and air conditioning specialists. Subsequently, in every issue we will be publishing the following sections:

- ◇ An editorial with general information regarding the market
- ◇ AVA's latest products
Technical information:
engine cooling and air conditioning maintenance and repair
- ◇ Our Marketing information (Advertising, Motor Racing Sponsorships and Trade Fairs)

You have probably noticed that our logo has changed. In recent months we have modified our Company brand placing particular attention on the quality of our cooling products - "AVA QUALITY COOLING (by Haugg Germany)" demonstrating their quality. So our trademark promises you both quality and strategic attention.

Reference to "by Haugg

Germany" in our logo underlines the close relationship with the Haugg Group which has been producing and developing new products for over a century, principally in Germany and for important customers such as Daimler, Fendt and Man.

The focus of the distribution of AVA products is high technology, especially so in motor-racing, where the requirements of performance and reliability are at their highest for every component. Our products equip cars in various motor sports, partly with serial products, partly with custom-made products. Our flag-bearer is the Team Engstler which participates in the WTCC World Championship. We also pay special attention to the promotion of "young promises" in motor sports. We are a sponsor of the Rally driver Patrick Anglade, 21 years old, who made his debut in 2008 participating in the Fiesta Sport International Trophy.

2009 is a year in which the general economy is presented with great challenges. The AVA Group is taking the necessary measures to overcome this crisis by guaranteeing an even more efficient organization. The on-going consolidation of distribution will be faster as more and more small- and medium-sized Companies will join large groups. I suspect there will also be further concentration on the part of suppliers given that many suppliers are having difficulty in facing a reduction in sales and credit facilities.

I wish you every success in spite of the current global situation.

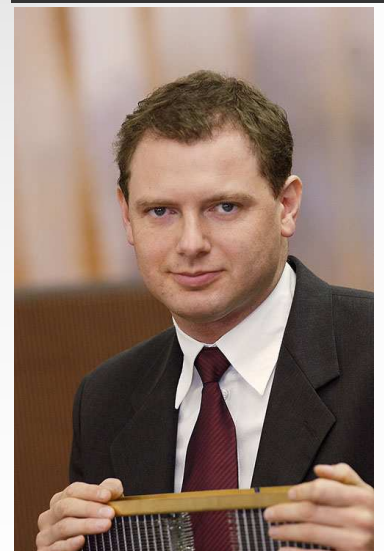
Until the next newsletter!
Your sincerely

Wolfgang Haugg

NEWS

- > [Editorial: Wolfgang Haugg presents Ava Newsletter](#)
- > [Technical Info: OPEL Astra H](#)
- > [New Ava P/ns.: OL2460 Radiator Zafira—B 1.9 etc..](#)
- > [Ava News: website restyling](#)
- > [Marketing: Motorsports](#)

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OPEL Astra H:

.....Low pressure service connection and muffler.....

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source: Automotive A/C Reporter

The Opel Astra has been produced since 2004 and is one of the car types which will soon be found in the independent workshop in larger quantities. During a visual inspection of the engine bay I noticed the following issues:

Low pressure service connection and muffler

A muffler is located on the suction side of the refrigerant loop (fig. 1). The low pressure valve can be accessed easily.

Refrigerant lines and hoses

The Opel Astra H's refrigerant loop has been equipped with a lot of line- and hose connections and there are many changes from rigid line to flexible hose and vice versa (ill. 2). This increases the risk of refrigerant leakages. Part of the high pressure refrigerant line is positioned underneath the engine's air filter housing. It is recommended to remove this air filter before starting a leakage check.

High pressure service valve

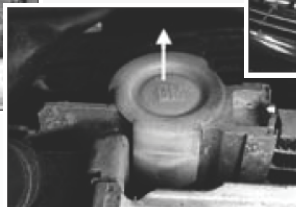
At first glance the high pressure service valve cannot be seen and some de-installation work is required to get access to it. From a driver's perspective this valve is located on the right side of the engine compartment, in front of the condenser and behind the radiator grille (ill. 3, pos. A). In order to take this grill out, 4 plastic rivets (Ill. 3, Pos. B) need to be removed first. The grille can then be taken out in an upward direction. With this, the high pressure service valve has become freely accessible (Ill. 4, pos. 1) and also the upper side of the filter-dryer is now visible (ill. 4, pos. 2).

Dryer cartridge

Astra models with the engine types Z13DTH, Z19DT, Z19DTH allow renewing the dryer cartridge without the need to take out the condenser first. In all other models this is not possible. The cartridge's fixation bolt becomes visible after removing the top cover (Ill. 5). In case of a condenser with a reduced height, the original cartridge must be shortened at the notch near the bottom side, before installing it.

Problems and possible causes

- ◇ Clacking noises during idling may occur in vehicles with the engine types Z20LEL and Z20LER and can be caused by cutting in and out of the compressor. If this should be the case, the problem can only be solved by updating the engine control unit's software.
- ◇ Compressor problems are also known from the engines Z19DT, Z19DTL and Z19DTH. If the compressor suffers from a lack of capacity or has no capacity at all - sometimes also the error code P0530 is indicated- excessive high pressure may be the cause. This problem especially occurs at ambient temperatures above 30°C. In such cases the refrigerant charge quantity has to be reduced to 430 grams and a pressure and function test must be performed.



- ◇ 2004 Astra models may be affected by excessive noise from the engine compartment during acceleration and deceleration. These noises mostly occur at rpms between 2500 and 3000. The cause of the problem is in many cases a missing or faulty-installed damping element (ill. 6) between the refrigerant line and longitudinal girder. In that case the positions of the damping element and the refrigerant hose need to be checked. If the damping element misses, a new one must be installed.
- ◇ A software update through the a/c control unit is the only solution for compressor noise problems in vehicles types with the engine codes Z14XEP, Z16XEP and Z18XE and an automatic climate control system. This concerns the model years 2004 and 2005 only.
- ◇ High engine temperatures in vehicles from the years 2004-2006 can be the effect of failed fuses. In most cases this concerns the fuses 5 and 6 (both 40 Amps) which are located in the fuse box inside the engine compartment. The root cause of this problem however is a faulty wiring loom. It is best to contact your local Opel dealer to solve this problem as it requires an adaptation to the wiring loom and/or fuse box.

Refrigerant- and lubricant quantities

Refrigerant Qty. R134a

Modelljahr / MY	Motorcode/ Engine code	Füllmenge/ Qty
< 2006	Z20LEH, Z20LEL, Z20LER, Z17DTH, Z17DTL	500
	Z14XEL, Z14XEP, Z16XEP, Z18XE, Z13DTH, Z19DT, Z19DTH, Z19DTL	475
	Motorcode/ Engine code	Füllmenge/Qty
> 2006	Z20LEL, Z20LER, Z13DTH, Z17DTH, Z17DTL	475
	Z14XEL, Z14XEP, Z16XEP, Z18XE, Z18XER, Z20LEH, Z19DT, Z19DTH, Z19DTL	450

Modelljahr / MY	Motorcode	Füllmenge/ Qty
Alle / all	Z17DTH, Z17DTL	120 ml
Alle/ all	Z14XEL, Z14XEP, Z16XEP, Z18XE, Z18XER, Z20LEH, Z20LEL, Z20LER, Z13DTH	150 ml
Alle/ all	Z19DT, Z19DTH, Z19DTL	135 ml

Oil Qty ISO46



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PEK317	Compressor 107 1.0 i * 04/05-	883100H010
PEK318	Compressor 107 1.4 HDi * 04/05-	883100H020
MSK437	Compressor C 180 1.8 i * W204 02/07-	22304911
MSK438	Compressor C 200 2.2 CDi * W204 02/07-	22305011
RTK392	Compressor Laguna III 2.0 i 09/07-	8200720780
RTK389	Compressor Trafic VI 2.0 DCi 08/06-	8200454172
IVK093	Compressor Eurostar E38* '91-	98462948
REK072	Compressor Premium 250D * 06/96-	5010240457
REK071	Compressor Premium 320D * 01/00-	5010483099
FTK363	Compressor Croma III 2.4 MJTD 06/05-	55189005
REK073	Compressor Magnum DXi 10/04-04/06	5010563567
LC5090	Condenser Lybra All 07/02-10/05	51708843
RT5391	Condenser Trafic V 2.0 i *+/+ rear AC04/01-	2765000QAJ
ALD108	Drier Alfa 147 / 156 * 02/01-	71737165
OL1461	Expansion Valve Astra - H 02/04-	1618314
PE7539	Fan 207 * + / + AC 02/02-	1253H5
RT7544	Fan Clio II 1.2 i +/+AC 06/01-	7701051483
PE7543	Fan Expert 1.6 i * - /+AC'94-'06	1308J1
PE7540	Fan Expert 1.9 D * -/AC '95-'01	1308J1
PE7541	Fan Expert 1.9 D * +/+AC '95-'01	1308J1
PE7544	Fan Expert 1.9 TD * - /+AC'94-'06	1308J1
PE7542	Fan Expert 2.0 Hdi * +/+AC'94-'06	1308J1
VO7511	Fan S40 / V40 1.9TD +/+ AC 10/99-07/00	ETP8475
VW7527	Fan VW Caddy / Seat Inca '97-	6K0959455B
RT4390	Intercooler Vel Satis 3.0 DCi 06/06-	8200301884
HD2216	Radiator Civic VI Type R Alluminium 04/01-	19010PRA003
HD2215	Radiator CR-V 2.2 CDTi *10/04-	19010RMAE01
IS2025	Radiator D-Max 2.5 DiTD 10/02-	8973333512
PE2319	Radiator J5/C25/ Ducato Dies. '85-'94	1300J9
BW2335	Radiator M3 3.2 i (E46) '00-'06	1300K3
MS2436	Radiator ML 350 * (W164) 08/05-	2515000003
DN2316	Radiator Terrano I 2.7 TD * '87-'02	21410G9900
TO2482	Radiator Yaris 1.5 i 09/05-	1640021270
OL2460	Radiator Zafira - B 1.9 CDTi * 07/05-	1300275

PE K317	
Netzmark / Core Size :	
O.E. Nummer / Number :	9463.RJ
Inlet :	Ø 9.37 mm.
Outlet :	Ø 14.3 mm.
Öelkühler / Oilcooler :	R134a
Date / Datum :	30-03-2009

Comp. 107 1.0 i * 04/05-

MS K438	
Netzmark / Core Size :	
O.E. Nummer / Number :	002.230.0011
Inlet :	Ø 9.3 mm.
Outlet :	Ø 13 mm.
Öelkühler / Oilcooler :	R134a
Date / Datum :	25-03-2009

Comp. C 200 2.2 CDi * W204

LC 5090	
Netzmark / Core Size :	505 - 304 - 10
O.E. Nummer / Number :	51708843
Inlet :	Ø 15.5 mm.
Outlet :	Ø 15.5 mm.
Öelkühler / Oilcooler :	R134a
Date / Datum :	25-03-2009

Cond. Lybra All 07/02-10/05

AL D108	
Netzmark / Core Size :	
O.E. Nummer / Number :	71737165
Inlet :	
Outlet :	
Öelkühler / Oilcooler :	
Date / Datum :	02-04-2009

Drier Alfa 147 / 156 * 02/01-

OL 1461	
Netzmark / Core Size :	
O.E. Nummer / Number :	1618314
Inlet :	Ø 7 mm / 14.2 mm
Outlet :	11.9 mm / 17.7 mm
Öelkühler / Oilcooler :	R134a
Date / Datum :	02-04-2009

Exp. Val. Astra - H 02/04-

VW 7518	
Netzmark / Core Size :	
O.E. Nummer / Number :	6K0 959 455 B
Inlet :	
Outlet :	
Öelkühler / Oilcooler :	
Date / Datum :	02-11-2007

Fan VW Caddy / Seat Inca '97-

RT 4390	
Netzmark / Core Size :	600 - 140 - 64
O.E. Nummer / Number :	8200 301 884
Inlet :	50 mm.
Outlet :	50 mm.
Öelkühler / Oilcooler :	
Date / Datum :	30-03-2009

Interco. Vel Satis 3.0 DCi 06/06-

RT5391	
Netzmark / Core Size :	572 - 430 - 16
O.E. Nummer / Number :	8200 073 912
Inlet :	14.5 mm.
Outlet :	14.5 mm.
Öelkühler / Oilcooler :	R134a
Date / Datum :	30-03-2009

Cond. Trafic V 2.0 i *+/+ rear AC04/01-

OL2460	
Netzmark / Core Size :	600 - 410 - 28
O.E. Nummer / Number :	1300275 - 13171432
Inlet :	Ø 34 mm.
Outlet :	Ø 34 mm.
Öelkühler / Oilcooler :	S.K 12.5mm / 255mm
Date / Datum :	30-03-2009

Rad. Zafira - B 1.9 CDTi * 07/05-

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AVA NEWS

WWW. AVA. EU

Our new website is on line since January 2009.

It includes many new features, and is available in nine languages. For the subscribed customers, the AVA webshop is also available through the same portal.



SUPPORTED TEAMS

In motor racing every vehicle must meet particularly high requirements. AVA products are used in different racing series and tested for their reliability and durability in each race. They provide highest performance at minimum weight even under the most severe stresses of intensive driving.

We at AVA QUALITY COOLING have more than 25 years experience in motor racing and know the professional requirements of the drivers and teams. That is why several teams rely on engine cooling from AVA QUALITY COOLING



FRANZ ENGSTLER
Vice Champion 2008

2008 FIA WORLD TOURING CAR CHAMPIONSHIP - YOKOHAMA INDEPENDENTS' TROPHY



FIESTA SPORT TROPHY INTERNATIONAL

After having gained significant experience during the past two years in the HJS Diesel Rallye Masters and several rallies in Germany, Patrick Anglade takes an important step on his way to an international rally career by moving up to the Fiesta SportTrophy International (FSTi). He will take part in six rounds of the World Rally Championship (WRC) in total and will fight to score points in a Ford Fiesta ST. Besides the asphalt rally in Spain, there are also five rounds on gravel to be undertaken in Portugal, Sardinia, Poland, Finland and in Wales. "I have been offered a great chance and I am very happy about the M-Sport program in terms of the FSTi. The support I have received so far from the organizers at M-Sport and from Ford Deutschland, is exemplary and I am really looking forward to working with them," Anglade explains

