What Is It Chinese MB STAR Diagnosis System (SDS) C3 BenzWorld Member: ricebubbles

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1. Revisions

Version 01: 19th July 2012 (Original document.)

2. Acknowledgement

Benz World Members, especially MBSL550, Noodles, eric242340, Ne3M, Okiebenz, bhatt, Mackhack, Diesel_Benz, grinich, robledoch, BenzModz et alia and Taztheman at JCRecordings Software Forum.

http://www.benzworld.org/forums/r230-sl-class/1573730-chinese-mb-star-scanners.html http://www.jcrecordings.com/index.php?option=com_kunena&func=view&catid=3&id=9201&It emid=571#9201

3. Introduction

This document is part of my SDS quartet of documents which I produced after months of research and experimentation with a Chinese SDS.

- SDS What is it.
- SDS Instructions For Connecting and Using
- SDS Software Installation Instructions
- SDS Transfer From External HDD to Internal HDD

I do not profess to be an expert in SDS, far from it, but I do find that keeping the important information in one or two documents in as simple a form as possible helps me in future when I

have a need to revisit the subject. It may therefore be of use to other BenzWorld members. As always any feedback is much appreciated.

I purchased a Chinese MB STAR Diagnosis System (SDS) Compact3 (C3) on the Internet purely for educational purposes and so that I could experiment with some of the settings in my W220 S500, especially to do with my pet subject, the Automatic Climate Control (ACC).

Mercedes Benz MB STAR C3 new version 11/201	1	×
	Price: Availability: Model: Average Rating:	\$398.00 In Stock V-249

Figure 1 As Purchased MB STAR C3 11/2011

What I received was:

- 1x MULTIPLEXER
- 1x 16pin OBD II cable
- 1x 4pin cable
- 1x 38 pin cable
- 1x 14pin track cable
- 1x COM cable
- 1x RS232 to RS485 Cable
- 1x Serial adapter cable
- 1x PCMCIA RS232 Cardbus Adapter Card and Pamphlet.
- 1x Hard Drive Disc for DAS, EPC and WIS V2011.11, FINDER V2011.11.

Purchasing, owning, setting up and using a SDS has turned out to be an extremely difficult project and one not to be undertaken lightly. There is a plethora of information available on SDS on the Internet but unfortunately it is mostly non constructive, quite often abusive, and fairly often not available without paying a fee to some very enterprising people.

My SDS as supplied **came without any installation instructions** other than a couple of crude videos and an out of date pamphlet for the RS232 Card.

After a lot of assumptions and several emails to the supplier, I eventually got connected and began cautiously testing the various functions and capabilities of SDS. I particularly like the Workshop Information System and the StarFinder and have used them several times to date. I have yet to have a real need to use DAS but began self training just in case, and progressed to the point where I could exercise the cabin lights (easy to watch from outside the vehicle) and got to the stage of opening and closing various flaps on the ACC. I was able to read out the list of fault codes stored in my vehicle and was surprised to find a transmission issue which has been there for several years.

In this document I have tried to summarise in simple terms what a SDS is. It took weeks of research to work this out. If I have got anything terribly wrong please let me know.

4. SDS Outline

Star Diagnosis System (SDS) is the MB specific diagnosis system. In addition to On-Board Diagnosis (OBD) it can perform comprehensive system diagnosis on all vehicle systems (eg engine control, suspension, audio systems, climate control). It also contains detailed fault descriptions and trouble shooting information for all individual fault codes.

5. SDS C3 Functions

- 1. Car, Bus, Truck, Sprint, Smart 1989~up to 2011
- 2. All electric system Diagnostic (Does not include flash code)
- 3. Reading trouble code
- 4. Erasing trouble code
- 5. Live-data
- 6. Adaptation
- 7. Component testing
- 8. Maintenance
- 9. Information consultation
- 10. Component location diagram
- 11. Wiring diagram

12. MB Star C3 can perform the coding of Software Calibration Number (SCN) online on ECM program.

6. SDS C3 Terminology

- ASRA: is an electronic catalog of work units and flat rates that facilitates the fast and reliable search for operation items, working hours and damage codes. ASRA also includes additional operations, included work texts, notes and graphics of vehicle parts.
- C3: Version of SDS
- C4: Version of SDS. Has same software as C3 but has better anti electromagnetic interference properties and smaller hardware. Is required for SDConnect (wireless MUX)
- DAS: Diagnosis Assistance System.
- EPC.net: Electronic Parts Catalog: enter part numbers, get prices and information.
- Mux: Electronic Multiplexer used to connect laptop to vehicle via a cable.
- SDConnect: Wireless version of Mux. It is more convenient to use because it does not need a cable between the computer and the Mux as it works over a wireless connection.
- SDMedia: Contains Video and PDF lessons on MB vehicles.
- Smart TAN Code: Opened special function in DAS program with Smart cars.
- STFinder: Part location finder.
- StarUtilities: The movement management system and self-test software.
- TIPS: Media Library and Knowledge Base.
- WIS.net: Workshop Information System.
- Xentry: also called Xentry Diagnostics (XD) is new software released by Benz Company after 04/2009 for diagnosis of new MB vehicles. Xentry gives direct access to four applications; DAS (for newer models), TIPS, WIS/ASRA, EPC. The identity of vehicle is automatically transferred between applications.

7. SDS Hardware

Mostly plagiarised from jcrecordings with a little editing.

Reference:

http://www.jcrecordings.com/index.php?option=com_content&view=article&id=101&Itemid=5 34

While the hardware used to run a SDS (Star Diagnosis System) has changed over the years, the purpose is the same: ie to run Xentry DAS and connect to a vehicle through a multiplexer.



Figure 2 Laptop & SDS to MUX to W220

7.1. PC or Laptop Version

SDS can also be installed on a normal PC or Laptop running Windows XP. A special conversion cable is required to attach the Multiplexer to the serial port of the Laptop or PC. If a serial port is not available, a PCMCIA to serial converter, or a USB to serial converter must also be used.

7.2. Multiplexer

The Multiplexer or MUX is a box of electronics that is required to connect the PC system to the Vehicle. Its job is to convert PC Language to Car Language and vice versa. There are numerous types of Muxes but only two types really need to be mentioned:

7.2.1. Type D Multiplexer



This type of Multiplexer is the most common type in use outside the Mercedes dealerships. It is wired directly to the car and to the PC. The Chinese manufactured these in masses, of which the bulk were very poor quality and would not last long if they worked at all. Good quality ones are hard to find, even more so now, as the Chinese manufacturers turn their attention to the new Wireless Multiplexer.

7.2.2. SDConnect (Wireless Mux)

The SDConnect Multiplexer broke the need for a cable connection between the car and the PC with its wireless capabilities. It can also be hard wired to the vehicle using a LAN cable (recommended when doing one off programming of ECU's). Chinese Manufacturers have now moved from the Type D Mux to produce SDConnects. However, these units are proving extremely difficult to configure, unreliable (overheating etc) and can be blocked permanently.

7.3. SDS C3

Explained previously.

7.4. SDS C4

The Star Diagnosis System Compact4 (C4) system fits seamlessly into the established SDS product family. The C4 works with the modern wireless multiplexer SDConnect. The built-in WLAN function provides wireless access to the IT network in the workshop.



Figure 3 SDS Compact4

8. SDS C3 Software Applications/Programs

My Chinese SDS C3 as purchased contained these applications/programs:

- SDMedia: Contains Video and PDF lessons on MB vehicles.
- StarFinder: Shows photographic location of vehicle parts using MB part number.
- Xentry: Gives direct access to four applications; DAS TIPS

WIS/ASRA EPC.

- Xentry SIM: Runs Xentry in simulation mode without a vehicle connected and is useful for training pruposes.
- EWAnet: Accesses the Electronic Parts Catalogue (EPC) via a local intranet connection.
- Star Utilities: Program containing utility programs for setting up and testing status of SDS.
- PL65: Parts price List in Euros.
- StarBrowser: Opens iDaimler Logon Home Page.
- Team Viewer: Allows access by others via the Internet.



8.1. SDMedia

This program is an add on for Xentry DAS. It includes a mass of videos and PDFs on common Mercedes repairs and faults. Updates for SDMedia are included automatically in the Xentry DAS disc, but you must have the latest SDMedia master disc installed for the update to be successful. SDMedia master discs are released about twice a year.

SDMedia is the Media Library on Star DAS. The SDMedia Media Library is your Knowledge Base on Star Diagnosis systems. Video, animation and audio files support you in the repair, maintenance and service of vehicles. You open SDMedia by clicking on an icon on your SDS desktop, or you can access it directly from the Xentry DAS application/program.

SDMedia is the bridge between the WIS workshop systems, the diagnostic systems on SDS's and the Xentry TIPS media library and knowledge base on the SDS. Video, animation and audio files support you in the repair, maintenance and service of vehicles. This media is designed as a useful addition to the workshop systems, with most of it having been initiated by Service AET, Warranty and Goodwill, and the Fixed First Visit project. Multimedia presentations are intelligently used to illustrate complex procedures or procedures that cannot be demonstrated by conventional media. They serve to sustainably reduce the number of follow-up repairs, and they are a cost-effective way for technicians to refresh and solidify their knowledge of particular topics.

Print products such as Introduction into Service Manuals, System and Function Descriptions, and Technology and Diagnosis Guides are available in SDMedia in electronic form.



8.2. StarFinder

Not an official release from Mercedes, but rather a collection of web pages full of wiring diagrams.



The real bonus of StarFinder is the ability to click on an item or junction in the wiring diagram, and see an actual photo of its location.

(IMHO it is worth having a SDS just for this capability.)

8.3. Xentry

The Xentry application/program in SDS gives direct access to four applications;

- DAS (for newer models),
- TIPS,
- WIS/ASRA, and
- EPC.

The identity of the vehicle is automatically transferred between these applications.

8.3.1. DAS via Xentry

According to jcrecordings, this is where the confusion really begins. DAS (Diagnosis Assistance System) via Xentry is the program used to talk to a vehicle. If you wish to program ECU's, clear fault codes, diagnose electronic faults, clear service lights etc, you would use this program. Not only can you read and clear error information, Xentry, DAS also give you further steps, to diagnose the cause of the fault.

Originally there was just DAS.



Also included in DAS is the software from the original Hand Held Tester (HHT), which is used on older vehicles. The HHT opens up automatically within DAS when an older vehicle is detected. The HHT is much more limited than DAS.

Around 2007 Mercedes decided to build new software to supersede DAS, the software was called Xentry but was not officially launched until 2009. During this interim period Mercedes changed the opening splash screen of DAS to show the word XENTRY across the screen. This was very

confusing, as people thought they must already have Xentry (which they did not). When Xentry was eventually launched in 2009, the new style program was used just for the later models on the market, mainly the 204, 207 and 212. If you selected any other vehicles, Xentry would automatically open DAS.

In 2011, Mercedes removed the desktop icon for DAS, meaning DAS could only be accessed via Xentry.



8.3.2. WIS

WIS stands for "Workshop Information System", and is basically all the Mercedes/Smart workshop manuals in a program. If you want to know how to change a clutch, or replace brake pads etc, this is where you would look.

Its more common name is Wisnet, and it comes in two varieties, 'Wisnet Standalone' and 'Wisnet Ewanet'.

Both are installed from the same discs, and contain the same information. Wisnet Standalone is the version that would be installed into a PC along with, and linked to DAS/Xentry. Wisnet Ewanet is installed into a PC and linked to the EPC (Electronic Parts Catalogue). So you would normally find Wisnet Standalone in the Workshop and Wisnet Ewanet in the Parts Department. Wisnet Standalone is far easier to install than Wisnet Ewanet, so unless you also wish to install the EPC, the standalone installation is the preferred option.

8.4. EPC



Electronic Parts Catalogue. A large program that can be installed in a server program called Ewanet. This allows it to be directly linked to WIS (Ewanet version). This Program is awkward to install and configure. Mercedes offers the EPC online for less than 30 Euros a year, which is excellent value for money and will save you a lot of installation headaches.

8.5. Star Utilities

The Star Utilities Program contains the following Sub-Programs

- Star Pad
- Version Information
- StartKey manager
- Self Diagnosis
- Printer management

- SDexplorer
- Data transfer

DAS_2011.11_6	By_Mark - VMware P	layer File - Virtual N	1achine - Help -			
STAR Utiliti	es					
Programs Options	Window					
STAR Pad	Version Information	A StartKey manager	少 Self Diagnosis	Printer management	SDexplorer	Data transfer
~						
-3						

Figure 4 SDS STAR Utilities

9. Quick Overview of SDS In Operation

My Chinese SDS C3 runs in a Virtual Machine on a Dell D820 Laptop with the MUX connected via a RS232 Cardbus Adapter card plugged into the Laptop PCMCIA slot.

My laptop ONLY communicates to my W220. It does this via the RS232 serial data connection and the vehicle On-Board Diagnosis (OBD) connector (X11/4). The link between may laptop and the Internet has been disabled. During my fault finding activities the most important discovery was that the RS232 data link is temperamental if operated at the suggested baud rate of 115,200 bps. My SDS is now very reliable at 9,600 bps.

I am happy to just use the SDS Workshop Information System (WIS), and the Diagnosis Assistance System (DAS) accessed via the SDS Xentry master application. Another favourite application is StarFinder accessed from the Virtual Desktop, but nothing I use now accesses the Internet.





Figure 5 Virtual Machine Desktop

9.2. Xentry

Open Xentry from the SDS Virtual Machine Desktop.



Figure 6 Xentry Icon

Then select your model in the Product Group Menu. Rather than do this you can enter your vehicle VIN by clicking on the 'Car' icon on the left.

Crea	ated 19 th	Jul 2012	2							Page	e 10 of 1	19
🧐 DA 🖾 Xei	S_2011.11_By	_Mark - VMwa	are Player File	 Virtual Machi 	ine ▼ Help ▼	_	_	_	_			
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	E (210)	124 (124)	S (222)	S (221)	S (220)	S (140)	S (126)	E (207)	CLK (209)	CLK (208)	CLS (218)	
V⊳ ™s	CLS (219)	CL (216)	CL (215)	CL (140)	SLK (172)	SLK (171)	SLK (170)	SL (231)	SL (230)	SL (129)	SL (107)	
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×a	If the model series	eries you are l can then be se	ooking for is no elected there.	ot listed here, s	witch directly t	o your replace	ment parts ord	ering system o	r the Workshop	p Information S	system. Other	~
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To direct	t input to this virtual r	machine, press Ctrl	+G.		k	;					vm ware	

Figure 7 Xentry Product Group

Enter some basic data about your vehicle.

🛙 Xe	ntry			_ 🗆 🔀
	XENTRY			🛞 Mercedes-Benz
	Brand > Product group > Vehicle > engine/transmission > Overview			₿?
-	Identification is complete.			
-	You have made the following selection:			
	Ident. numi	er:		
	Model ser	s: S (220)		
	Vehicle model designat	n: 220.175	1	
	Eng	ie: 113.960		
	Transmiss	in: All		
	Now select an application on the left-hand side to perform diagnosis or search for documents for the se When you have finished, you can select a new vehicle.	ected vehicle	a.	
00				
充	228.175	S (220)	E: 113.960	T: All

Figure 8 Xentry Vehicle Basic Data

Click Xentry DAS button on left. Starts vehicle determination automatically.



Figure 9 Xentry DAS Icon

This usually takes several minutes as the SDS reads data from the vehicle via the MUX.



Figure 10 Xentry DAS Application Starting

0 11/2011 [20	11-10-20] - AddON @	2161;2165;2173;2178;2185;2193;2195;2208;2210;2217;2222;2	226 @ & ×
Vehicle	221.094	Control unit	
NOTES			
Information - The safety i	on preventing damage to information and description	o electronic components due to electrostatic discharge : ns listed in Help (F6) MUST be observed.	
General test	conditions : able with fuse for bridges.		
 Each time a A component pneumatic) 	after replacing a componer nt test should be carried o	nt, always carry out a component test. ut in order to ensure the correct connection of separated plug connect	tions (electric or
- When proce This step m - Only generation	essing a fault code, a fault ay temporarily result in ott ate counterfault by short c	code may be generated by a test step which is interrogated in a YES/ her fault codes which should be ignored. ircuit and open circuit if this is expressly requested in the decision tree	NO cell.
Safety note - Pay attentio	: on to safety note 'AS 58.40	-Z-0001-01A' on mobile usage of STAR DIAGNOSIS units.	
General Info	ormation :		
 The data re source of th event, locat 	ad out of the control units ne defect. The data may in tion or time.	refer to specific events or system statuses and serve as a basis for na clude a tolerance and it may therefore not necessarily be possible to li	rrowing down the ink them to a certain
~			
	1 +	*	3
Eac	F1 F2		

Figure 11 Xentry DAS Application Safety Warning



Figure 12 Xentry DAS Application Reading Data

Then always perform a "Quick Test".

-	Initial	quick test log		
Model series/Model designation	220.175	Works	hop ID	
VIN	WDB220175	Steerin	g RIGHT	
Total distance drive	n (: : : km	Version	n 7.1.4/11/201 (2011-10-20	11))
Battery voltage	12.62 V			
ETC - Electronic tran	smission control			- F
MB number	HW version	SW version	Diagnosis version	Pir
0335456632	18.2002	03.2004	0/1	10
Serial number Unterfunktion nicht unterstützt oder ungültiges Format	FW number 0004483210	FW number (data)) FW number (bo	ot SW)
Code		Text		Status
200A Compor control	nent Y3/8n4 (Fully integ unit) is defective.	rated transmission con	trol (VGS) Cu	stored
ESM - Electronic sel	ector module			- 1
MB number	HW version	SW version	Diagnosis version	Pi
2205452132	24.2002	25.2002	0/11	9
ME-SFI 2.8 - Motor e	lectronics 2.8			- 1
MB number	HW version	SW version	Diagnosis version	Pi
1131535479	35.2002	12.2003	1/9	7
ESP - Electronic stal	bility program			- √
HID	HW version	SW version	Diagnosis version	Pi
MB number		16 2003	2/01	9
2205453532	16.2003	10.2000		
AIRmatic	16.2003			- √
AlRmatic MB number	16.2003 HW version	SW version	Diagnosis version	- 🗸 Pir

Figure 13 Part of Xentry Quick Test Log

9.2.1. Xentry > DAS Fault and Status Legend

- 'F' means a current fault is present.
- 'f' means a fault that is stored.
- 'i' means that an event is stored.
- ' $\sqrt{}$ ' means that no faults are present.
- $(-\sqrt{-})$ means a fault code has not been checked.

Another version says.

- -0- : The control unit does not have any saved faults or events
- -F- : The control unit has at least one current fault
- -f- : The control unit has just one saved fault
- i : The control unit has an event

-!- : No communication can be established with the control unit

9.3. WIS

Select WIS icon.



Figure 14 Xentry WIS Icon

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Created 19th Jul 2012

S/ASRA - Mercedes-Benz & smart - Sta	ndalone		
ligeur Beilt	0.14		
Vehicle identification number WDB 🖌 220175	*		I 🖗 🍕 🖯
Chassis mode + CAR + 220175 S 500 + 113960 + Ma	jor assembly +		
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Search mode: Standard			
Groups		Information types (ITs)	
Keyword	Group	All information types	
al 05 Engine triming bl 00 Fuel cell system al 07 Muture termation al 08 08 Air stake, hyboid drive al 08 Air stake, turbocharging al 13 Air compressor, bet drives al 14 Extraordispressor, bet drives al 15 Electrical system - engine al 16 Engine lubricition, engine of cooling al 20 Engine suspension al 22 Special engine equipment al 23 Special engine equipment al 23 Special engine equipment al 23 Special engine equipment al 24 Manual transmission al 28 Transfer case al 29 Pedal assembly al 29 Pedal assembly al 24 Engine control, speed control systems al-13 Ensure and on assembly al 24 Engine control, speed control systems <td>oʻ system</td> <td></td> <td></td>	oʻ system		
		И.	





Figure 16 Xentry WIS Search Items and Information Types Selected

Page 14 of 19

DA5_2011.11	By_Mark - VMware I	Player File • Virtual Machine	- Help -					- D X
WIS/ASRA -	Mercedes-Benz	& smart - Standalor	e					_ 🗆 🔀
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Vehicle identif	fication number WDB	¥ 220175			*		3	9 💊 🖬 🍕
Chassis mod	ie * CAR * 220175 S	500 + 113960 + *****	ē.					
1 Determin	e search criteria 2. Start	search 3. Show documents						
RA		ge width 🔄 🖾 🗐 Continuou	s document	-	Validity off	Bookmarks		Page 1 of 1
Document t	ide .		Gr.	IT =	Status	Document number		
	ressure refer valve, locatio ont passenger side door o eff front door control modul able of contents, automatic Temperature control fun able of contents, automatic able of contents, automatic able of contents, automatic able of contents, function able of contents,	n/purpose/function control module arrangement/purpo le, location/purpose/design/functio air canditioning (AAC) function du cition refor valve, location/purpose/function argrose/function argrose/function pro reforgering shunction preforgering shunction preforgering shunction	83 55 56/07 2 28 1 72 28 55.183 40 83 57 51 83 55 83 55 83 55 83 20 10 20 83 20 80 80 80 80 80 80 80 80 80 8	<u>.</u>		g/63.55-p-2104i g/72.23-p-4106s g/72.23-p-4105s g/93.40-p-0999i g/63.55-p-2100i g/63.55-p-2100i g/63.55-p-2100i g/63.20-p-2107m g/63.20-p-2100-01m g/63.25-p-2100-01m g/63.25-p-2108m g/63.25-p-2108m		
Dec. ee	10.00 C	The Durintia brate	No. 110.61	-		-400 £3 = 0100-		*
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GF83.20-	P-2100-02M	Duo valve, location					F≇GF	0
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		900	Duo valve, I	location/purp	osenun	ction		83.20	gt		g#83.20-p-	210/m 2100.02m			
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	Dac. no.	gf83.2	0-p-2100-	-01m	Tel	e Duova	ive, function								
	Modification	15			Val	idity MODE	L 220 with CO	OE (582)	Rear air	conditioning					
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	Eunction														
	The dum	/alune f	or the re	ear air con	ditionir		ntrolled dire	ethy		Contro	l of duovab	vee by rear a	ir condit	tioning A/C pushbut	ton
	by the re	ar air cr	or the re	ing nushbi	utton c	ing are co control mo	dule and co	ratrol		control	module	ves by rear a	ir conui	uoning Arc pushbut	ton
	the coola	int flow	through	the rear h	heater	core seo	arately for th	16		conuo	module				
	left and r	ight sid	e.	inte real i	rearer	core sep	anatoly for a			Drogram	a cellina	Leffricht	catting I	afficial output	
	The closi	ing and	openin	g times of	the du	ovalves p	er cycle des	pend		Program	in senang	Centright	aening t	cennight output	
	on the te	mperate	ure setti	ing.						202		4		01	
				-						Normal	operation	12 0 3	2 10	regulated	
	Control	princip	le							RECT	oberation	12 0-3	- 32 00	regulated	
	The elec	tro-mag	netic co	alls in the d	duovah	ves are c	ontrolled dig	itally		Loft col	ting	12.0	- 32 0	OEE (la@ duovalua	
	by the re	ar air c	ondition	ing pushb	utton c	control mo	dule. This a	llows		Diable o	attina			OFF (left duovalve	-
		O Vanho			C Incm								EN	Carlos Do Pa	0
- s	tart	m venu	r		Shero										
To direc	t input to this v	intual mac	hine, press	s CH+G.											vinware /

Figure 18 Xentry WIS Showing Duo Valve Function

9.4. StarFinder

StarFinder is my favourite application in SDS. Open StarFinder from SDS Virtual Machine Desktop.



Figure 19 SDS StarFinder Icon on Virtual Machine Desktop

After selecting your model it opens Internet Explorer with a local intranet link on the Virtual Machine drive C:



Figure 21 Xentry StarFinder Home Page for W220

Now select "Web ETM with STAR Finder".

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Figure 22 Xentry StarFinder Web ETM Model W220

As an example, select 'F Fuses' from Main Index.

1 DA5_201	1.11 By Mark	- VMware Player file +	Virtual Machine . Help .				- 🗆 ×
* Web ET	TM Model 2	20 - Windows Inter	net Explorer				- 2 X
00. 4	× e C.Prog	ram Files\(web_etm\)215_220	\220\webetm\webetm\220\ptar	thtml			
🙀 Favorites	With ETM M	lodel 220				SHope	+ = Pcint +
(A) Vierzeiten Berge	4 Home Back		Web	ETM Model 220		• Sitemap	* Help
		Main Index			F Fuses		l l l l l l l l l l l l l l l l l l l
		F Fuses			 List all Fuses 		
		♦ 00.19-0-27105A	Circuit 30 wiring	MODEL 220 Feed of fuses in left fuse box F1, Z4/4, Z7/21			
		00.19-11-271058	Circuit 30 wiring	MODEL 220 Feed at fuses in right fuse box F1/1			
		• 00.19-0-2710SC	Circuit 30 wiring	MODEL 220 Feed of fuses in ruar fuse box F4, 24/3, 74/321, 74/327, 77/74, 27/26, 27/40, 77/4021			
		00.19-0-27205A	Circuit 15 wiring	MODEL 220 Feed of fuses in left fuse box F1			
		00.19-0-272058	Circuit 15 wiring	MODEL 220 Feed of fuses in right fuse box F1/1, 23/29z1, 23/29z2, 23/50, 25/1			
		00.19-0-272050	Orcuit 15 wiring	MODEL 220 Feed of fuses in rear fuse box F4	1		
Dune	-				My Compute	6	S125% ·
1 start	SarFinde	NV3				E C 0 00	APR 13:54
TO Orect apparts 1	This without placture.	press Cal+G. U.U.					VIIIIAUVU

Figure 23 Xentry StarFinder Web ETM Model W220 Main Index Page

Produces Circuit Wiring Diagram of Fuses.

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Figure 24 Xentry StarFinder Web ETM Model W220 Fuses Diagram

After clicking on Legend tab at top of screen.

Home Back	<	Diagram Legend Diagnostic Connector Star Finder	Abbreviation
		ADCDECGH11KLMNOEQBSINV	WXIZ
Iter	n ()	Designation	Coordinates
A1	_	Instrument cluster	±1L
421	6	CD changer (in trunk)	154
620	13	Sound amplifier	27L
621	42	TV tuner	211.
631	(Heating system delivery unit	191_
A31	limit	Circulating pump	18L
A21	bit:	Left duovalve	20.
A31	1/2	Right duovalve	191_
840	10	COMAND operating, display and control unit	521.
11		Left fuse box	58 128 206 278
Ett	9	Fuse 9	9C
Ett	13	Fuse 13	BC .
1.10	22	Fuse 22	11C
Fat	23	Fute 23	17C
Ett	24	Fuse 24	24G
Ent	25	Fuse 25	27G
Ett	26	Fuse 26	7C
E2		Cockpit fuse box	44L
EX	28 *	Fuse 78	44K
93	<u> </u>	Battery	36L
10/	<u>t</u>	Alarm signal hom with additional battery	354.
K40	28	Engine fuse and relay box	394.
10/	10	ME-SFI (ME) control module	47L 49L
	14		

Figure 25 Xentry StarFinder Web ETM Model W220 Fuses Legend

Say we are interested in locating Fuse F3.



Figure 26 Xentry StarFinder Parts Finder Model W220

Shows the general location of Fuse F3.



Figure 27 Xentry StarFinder Web ETM Model W220 Fuse F3 General Location Shows the specific location of Fuse F3.



Figure 28 Xentry StarFinder Web ETM Model W220 Fuse F3 Specific Location

Conclusion: It is worth having SDS for the StarFinder functionality alone.