

# 5.0.4 Initiation of the drive controller 1491.15

- Software update
- Parametrizing
- Drive calibration



The drive control is a Bosch-Rexroth system. To diagnose, parameterize and also for the software update Bodas Version 3.5 (04039640000) is needed. For the communication between machine (controller) and computer with diagnose software the Hako Interface is needed, either the Sontheim CAN-USB (03501750), or the Sontheim CAN-FOX (03502430) and the OBD II cable (03502750). To Bodas belongs a dongle. This one have to be plugged in an USB-Port of the computer. If the drive controller is changed or a software update is availible, an implementing procedure have to be carried out. To this procedure belongs a drive controller adjustment. Therefore the hydraulic oil temperature have to be at least 40°C (check with Hako-Diagnose). Furthermore the CM1600 have to be jacked at one side (recommended is the right side, cause the wheels have to be seen during the machine is operated with the drive pedal). For save conditiones use the lock-pin at the articulated joint and secure the machine against rolling away (parking brake need to be open!). The engine have to be stopped!



















BODAS-service 3.5 (BOSCH Rexroth AG)		– ¤ ×
<u>File Actions View Tools H</u> elp		
Scan Open Save Preview Print Break Get data Password	PAR->PC EPR->ECU Save Default Reinit Reset Compare	(?) Help
Scan Open Save Preview Print Break Get data Password Available ECUs RC12-10/30 HAK08878 V4.01 SN: 00102924 HwCode: 0002D6 No errors detected No errors detected	PAR→PC EPR→PC EPR→ECU       Save       Default       Reinit       Reset       Compare         Image: BODAS-service 3.5       Image: Source 3.5	Help Recroth Bosch Group
	I decline I accept	
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BODAS-service 3.5 (BOSCH Rexroth AG)		– 🗆 X
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Scan Open Save Preview Print Break Get data Password P	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	(7) Help
Available ECUs	Diagnosis	Rexroth Bosch Group
RC12-10/30       St: 00102924         HAK08878 V4.01       No errors detected         Parameter       Processdata         I/O Status view       Custom view         Custom view       Error messages         Active connection with controller (green hook).         Activate Bodas by a click on the controller button.	Available ECUs Select an ECU to communicate with!	HAKO8878 V4.01



BODAS-service 3.5 (BOSCH Rexroth AG)

<u>File Actions View Tools H</u> elp			
Scan Open Save Preview Print Break Get data Password P	R→PC FPR→PC FPR→ECU Save Default	Image: Compare	(?) Help
Available ECUs	Dave param file	Diagnosis RC12-10/30 (SN: 00102924) + HAKO8878 V4.01	Rexroth Bosch Group
RC12-10/30       SN: 00102924         HAK08878 V4.01       HwCode: 0002D6         No errors detected       No errors detected         Parameter       I/O Status view         Custom view       Error messages	Device info	Controller type: Operation time: Reset counter: Voltage: Connection mode: Application name: Last reprogrammed on:	RC12-10/30 72:52 658 12 Volt CAN @250 kBaud HAKO8878 V4.01 2019-06-13 by: BR
Save the existing parameters to the computer. They are needed later partly for the new configuration.	Information Hardware version: R91 Serial number: 001 BIOS / API / Firmware: - software information: R91 - date of installation: 201 - installer identification: BR - API/Library/Module information - P30-Basic 01.63 - RC30-00D6 01.05 - P30-EepRC 01.40 - P30-Diag 02.21 - P30-InExt 01.08 - P30-J1939 01.18 - P30-RTS 01.42 - P30-CO_RCE 01.03 - P30-UDS 01.07	.7008181 102924 17007887 V01.05 19-06-13 on:	
	Version information ECU info text		
Connected with:		RC	12-10/30 + HAKO8878 V4.01 + Sontheim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)  $\times$ File Actions View Tools Help EPR PAR ? PAR→PC\_EPR→PC\_EPR→ECU Scan Open Save Preview Print Break Get data Password Save Default Reinit Reset Compare Help Save param file Rexroth Diagnosis Available ECUs **Bosch Group** RC12-10/30 (SN: 00102924) + HAKO8878 V4.01 SN: 00102924 Device info RC12-10/30 HwCode: 0002D6 RC12-10/30 Controller type: HAKO8878 V4.01 No errors detected 72:52 Operation time: Parameter 658 Reset counter: Processdata Voltage: 12 Volt Save parameter and processdata  $\times$ I/O Status view CAN @250 kBaud Connection mode: Custom view -Parameterfile HAKO8878 V4.01 Application name: Error messages Last reprogrammed on: 2019-06-13 by: BR Save learning curves? Information Curve 1 Curve 2  $\wedge$ Hardware Serial Confirme with "OK" Save processdata? BIOS / - soft .05 – date OK - ins Cancel - API - P30-Basic 01.63 - RC30-00D6 01.05 - P30-EepRC 01.40 - P30-Diag 02.21 - P30-InExt 01.08 - P30-CANOPN 01.12 - P30-J1939 01.18 01.42 - P30-RTS - P30-CO RCE 01.03 - P30-UDS 01.07 v Version information ECU info text Connected with: RC12-10/30 + HAKO8878 V4.01 + Sontheim CANfox







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Scan Open Save Preview Print Break Get data	Password P	PAR → PC EPR → PC EPR → PC	Save Defa	ult Reinit	<b>()</b> Reset	Compare	(? Help	)
Available ECUs				RC	12-10/30 (	Diagnosis SN: 00102924) + HAKO8878 V4.01	Rexroth Bosch Group	
RC12-10/30       SN: 00         HAK08878 V4.01       HwCod         No error       No error         Parameter       I/O Status view         Custom view       Custom view         Error messages       I/O Status view	102924 le: 0002D6 ors detected	Device info				Controller type Operation time Reset counter Voltage Connection mode Application name Last reprogrammed on	RC12-10/30         72:52         658         12 Volt         CAN @250 kBaud         HAKO8878 V4.01         2019-06-13 by: BR	
		Information						-
Activate the "flash symbol" 'by a click with the mouse.	with	<pre>BIOS / API / Firmw - software infor - date of instal - installer iden - API/Library/Mo - P30-Basic - RC30-00D6 - P30-EepRC - P30-Diag - P30-InExt - P30-InExt - P30-J1939 - P30-RTS - P30-CO_RCE - P30-UDC</pre>	vare: mation: lation: utification ol.63 01.05 01.40 02.21 01.08 01.12 01.18 01.12 01.18 01.42	R917008 0010292 R917007 2019-06 : BR mation:	4 887 V0J -13	1.05		
	<b>)()</b> ,	Version information ECU info	o text				¥	
Connected with:	Flash Tool						RC12-10/30 + HAKO8878 V4.01 + Sontheim CANfo	x



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#### BODAS-service 3.5 (BOSCH Rexroth AG)

#### File Actions View Tools Help

Available ECUs       Filash Tool       Recurrence         Serial Protocol       CAN Standard Protocol       Sector ECUs         CAN Special Protocol       CAN Special Protocol       Sector ECUs         CAN Special Protocol       No errors detected       Sector ECUs         MAXOB878 V4.01       No errors detected       Sector ECU to comunicate withit         Choose the controler       No errors detected       Sector ECUs	Scan Preview Print			(7) Help
Serial Protocol   CAN Standard Protocol CAN Special Protocol RC12-10/30 Wite Code: 000224 Wite Code: 00024 Wite Code: 00	Available ECUs	_	Flash Tool	Rexroth Bosch Group
	Serial Protocol CAN Standard Protocol CAN DI3 Protocol CAN Special Protocol RC12-10/30 HAK08878 V4.01 Choose the controler	SN: 00102924 HwCode: 0002D6 No errors detected	Available ECUs Select an ECU to communicate with!	



#### BODAS-service 3.5 (BOSCH Rexroth AG)

File Actions View Tools Help

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Scan Preview <u>P</u> rint		(?) Help
Available ECUs	Flash Tool RC12-10/30 (SN: 00102924) + HAKO8878 V4.	01 Rexroth Bosch Group
Serial Protocol CAN Standard Protocol CAN DI3 Protocol CAN Special Protocol RC12-10/30 HAKO8878 V4.01 No errors detected	Configurate flashing Selected Hex File: hex file Flashing Erase flash Reset after flashing Start Clear Messages Flash Status Information To select the the flash file, use this button	
Selected interface:		RC12-10/30 + HAKO8878 V4.01 + Sontheim CANfox



#### You will find the Hex-file in the path: Hard Disc (C:) -> MDT -> CM1650 -> Flasher

🔊 Hex-Datei:				×	Hex-Datei:				×	Hex-Datei:					×
Suchen in:	data		<ul> <li>Ø</li> </ul>	• 📖 📰	Suchen in:	Dieser	PC	v 🧊 🖻		Suchen in:	L Windows	; (C:)		~ 🧊 📂	
Zuletzt verwendet					Zuletzt verwendet	Big Windo Deskto Dokum Downlo	ows (C:) ojekte op mente loads			Zuletzt verwendet	SWINDO Bodas Lo DVK ET-Katalo	)WS.~BT ogfile og aktuell ten	MATS MDT MSOCache PerfLogs Programme	vtilMká VCRedi VM Log wabco Windov	st64 files vs
Desktop					Decktop	Musik				Docktop	hakodate	en_bis_03.01.2019	Program Files (x86)		
Dokumente					Desktop	Videos Projekt	s cte (\\odrzlx07) (G:) (\\odrzlx07) (W:)			Dokumente	hakodate hakodate hakodate hakodate	en_bis_08.01.2019 en_bis_17.12.2018 en_bis_21.12.2018 en_bis_26.06.2018	RA Consulting Recovery Sven Pr		
Dieser PC					Dieser PC	Transformed School (\)	lke (\\hako.isilon.hako.local) (X:) \\hako.isilon.hako.local) (Z:)			Dieser PC	HakoDiag HakoUpo Intel	ignose date	temp Benutzer utilMk1		>
۲	Datei <u>n</u> ame:			Öffnen	<b></b>	Dateiname:			Öffn <u>e</u> n	<b>I</b>	Datei <u>n</u> ame:				Öffn <u>e</u> n
Netzwerk	Da <u>t</u> eityp:	HEX-Dateien (.hex)	$\sim$	Abbrechen	Netzwerk	Da <u>t</u> eityp:	HEX-Dateien (.hex)	$\sim$	Abbrechen	Netzwerk	Da <u>t</u> eityp:	HEX-Dateien (.hex)	)	$\sim$	Abbrechen
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Hex-Datei: Suchen in:			~ 🖻 🛤	×	Hex-Datei: Suchen in:	CM165	50	~ 🌶 🏞	×	B Hex-Datei: Suchen in:	Flasher			~ 🌶 🖻	×
Hex-Datei: Suchen in: Zuletzt verwendet	MDT B115R B75R B90CL CM1600		- <b>)</b>	×	Hex-Datei: Suchen in Suchen in Zuletzt verwendet	CM165	50 kation er	v 🛊 🖻	×	Hex-Datei: Suchen in: Suchen in: Zuletzt verwendet	Flasher Flash_Dis MRS CM1600_ HAK088	splay _V1491.00.002.004.0 78_V4.00_RUN.HEX	005.hex	v 👌 🖻	×
Hex-Datei: Suchen in: Eiler Zuletzt verwendet	MDT B115R B75R B90CL CM1600 CM1650 CM2000 CM2000		v 🏚 🗗	×	Hex-Datei: Suchen in Quett Zulett verwendet	CM165	sso kation er	v 🌶 🖻		Hex-Datei: Suchen in: Zuletzt verwendet	Flasher Flash_Dis MRS CM1600_ HAK088	splay _V1491.00.002.004.0 x78_V4.00_RUN.HEX	005.hex	× 🖻 🖻	×
Hex-Date:  Suchen in:  Suchen in:  Zuletat verwendet  Desktop  Dokumente	MDT B115R B75R B90CL CM1600 CM600 Hako HakoDiag J1500 Multicar	,		×	Hex-Datei: Suchen in: Suchen in: Zuletzt verwendet Desktop	CM165	50 kation er	v 🏂 🖻		Hex-Date: Suchen in: Suchen in: Zuletzt verwendet Desktop Desktop	Flasher Flash_Dis MRS CM1600_ HAKO88	splay _V1491.00.002.004.0 778_V4.00_RUN.HEX	005.hex	v 🏚 🗗	×
Hex-Datei: Suchen in: Zuletzt verwendet Desktop Dokumente	MDT B115R B75R B90CL CM1600 CM1600 CM600 Hako HakoDiag J1500 Multicar	ners	v 🏚 🖻	×	Hex-Datei: Suchen in Zuletzt verwendet Desktop Dokumente	CM165 Applik Ooku Flashe	50 kation er	v 🏚 🖻		Hex-Datei: Suchen in: Suchen in: Zuletzt verwendet Desktop Desktop Dokumente	Flasher Flash_Dis MRS CM1600_ HAK088	splay _V1491.00.002.004.0 778_V4.00_RUN.HEX	005.hex	× 🕯 🅬	
Hex-Datei: Suchen in: Suchen in: Culett verwendet Desktop Desktop Dokumente Dieser PC	MDT B115R B75R B90CL CM1600 CM2000 Hako Hako Hako Multicar Multicarar	, ners	v 🏚 🗗	X	Hex-Datei: Suchen in Suchen in Zuletzt verwendet Desktop Dokumente Deser PC	CM 165	50 kation er	✓ Ø Ø	X The second sec	Hex-Datei: Suchen in: Suchen in: Zuletzt verwendet Desktop Desktop Dokumente	Flasher Flash_Dis MRS CM1600_ HAK088	splay _V1491.00.002.004.0 78_V4.00_RUN.HEX HAK08878_V4.00	005.hex	× 🕯 🆻	X



BODAS-service 3.5 (BOSCH Rexroth AG)		– 🗆 X
<u>File Actions View Tools H</u> elp		
Scan Preview Print		() Help
Available ECUs	Flas RC12-10/30 (SN: 0010	sh Tool Rexroth 12924) + HAKO8878 V4.01
Serial Protocol	Configurate flashing	Communication
CAN Standard Protocol	Selected Hex File: Date: 2018.03.20 - 10:13:06	Interface settings
CAN DI3 Protocol	C:\MDT\CM1650\Flasher\HAKO8878_V4.00_RUN.HEX	Sontheim CANfox 🗸
CAN Special Protocol	~	Chnl 1 v
	● Flashing ○ Erase flash ☑ Reset after flashing	250 kBaud 🗸
RC12-10/30 HwCode: 0002D6	Start Clear Messages	
No errors detected	Flash Status Information	
	<ul> <li>Begin flash process by pressing "Start"</li> <li>Note: <ol> <li>During the running flash process in the 1.7.0.3 and the beeper is ON</li> <li>During the flash process all parameters parametrized manually</li> <li>After ending of the flash process: Switc</li> <li>Reconnect the communication</li> </ol></li></ul>	display is shown the service message are resetted to default. They need to be h ignition to OFF and directly again to ON.
Selected interface:		RC12-10/30 + HAK08878 V4.01 + Sontheim CANfox



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Scan Open Save Preview Print Break Get data Password	AR → PC EPR → PC EPR → ECU Save Default Reinit Reset Compare	() Help
Available ECUs	Parameter Parameter values are displayed and can be edited.	Rexroth Bosch Grou
RC12-10/30         SN: 00102924 HwCode: 0002D6           HAK08878 V4.01         No errors detected           Parameter         Value	Parameter Learning curves 1 Menu 1	
Processdata     I/O Status view     Custom view     Error messages	1.1 Konfiguration I 1.2 Dieselbegr / Freigabe Auto	_
After the flash process some parameters need to be calibrated manually.	1.3 Ströme / Charak AFM         1.5 Deak. Arbeithyd./ Konfig. II	_
Therefore activate the menu Parameter	1.7 Konfiguration II  1.8 Diag Geschw Sensoren  3 Menu 3	_
	3.4 Endgeschwindigkeitsregler 3.7 Einstellungen 1	=
	4 Menu 4	_
	4.4 Lüfter 3 5 Menu 5	
	5.1 Stromabgleich I	
<b>2</b> 30,	Show only menues         Show groups         Show all parameters         Write for filtering         Update interval           <	i ms 🛱 🔪
Connected with:	RC12-10/30 + HAKO8878 V4.01 -	Sontheim CANfox

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BODAS-service 3.5 (BOSCH Rexroth AG)							- 0	×
<u>F</u> ile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp								
Scan Open Save Preview Print Break	Get data Password	PAR → PC EPR → PC EPR → ECU	Save Default	Image: ResetReinitReset	Compare			(?) Help
Available ECUs			Î	Parameter va	Parameter alues are displayed and can be ed	ted.	Re) Bosc	<b>(roth</b> h Grou
RC12-10/30	SN: 00102924 HwCode: 0002D6	Parameter Learning curves						
Parameter     Processdata     I/O Status view     Custom view     Error messages	No errors detected	1.1 Konfiguration I	_	_			_	
In the menu "1.1 Konfiguration I" Activate the options according to the configuration with the tick in the error	he vehicle mpty box.	1.1.5 Anzeige Batterietren	inschalter				1	STD
1.1.5 Battery main switch 1.1.6 Cruise control always togeth	er with 1.1.7	1.1.6 Tempomat					1	STD
1.1.7 Working speed limiter 1.1.8 Always activated		1.1.7 Pumpenlimitierung Ai	FM				1	STD
Press "Save" to transfer the values control unit.	s into the	1.1.8 Freigabe Gang 2 TFM	и				1	STD
		<						>
	000,	Show only menues S	how groups S	how all parameters	Write for filtering	Upo	date interval	ms 😥
Connected with:		<				RC12-10/30 + HAKO88	378 V4.01 + Sonthein	> n CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)	-	
Eile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp		
Scan Open Save Preview Print Break Get data Password P	Image: Image	Help
Available ECUs	Parameter Parameter values are displayed and can be edited.	Rexroth Bosch Grou
RC12-10/30       SN: 00102924         HakC08878 V4.01       No errors detected         Parameter       Processdata         I/O Status view       Custom view         Custom view       Error messages	Parameter       Learning curves	
Confirm with "OK"	1.1.5       Save actual parameters (to EEPROM)       ×       1         1.1.6       Save actual parameters (to EEPROM)?       OK       1         1.1.6       Cancel       1	STD STD STD
	1.1.7 Pumpenlimitierung AFM     1       1.1.8 Freigabe Gang 2 TFM     1	STD STD STD
	1.2 Dieselbegr / Freigabe Auto      Show only menues     Show groups     Show all parameters     Write for filtering	>
Connected with:	C     C	Sontheim CANfox

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BODAS-service 3.5 (BOSCH Rexroth AG)								- 0	×
<u>File Actions View Tools H</u> elp									
Scan Open Save Preview Print Break	Get data Password PAF	R→PC EPR→PC EPR→ECU	Save Default	🤣 🥑 Reinit Reset	Compare				(?) Help
Available ECUs				Parameter va	Parameter	nd can be edited.		Re	<b>xroth</b> h Grou
RC12-10/30 HAK08878 V4.01	SN: 00102924 HwCode: 0002D6 No errors detected	Parameter Learning curves	onfig. II				_		
<ul> <li>Parameter</li> <li>Processdata</li> <li>I/O Status view</li> <li>Custom view</li> <li>Error messages</li> <li>In the menu "1.5 Deak. Arbeitshyo Konfig.II"</li> </ul>	d./								
In the field "1.5.5 Druckschalterau choose the "600bar-sensor". Press "Save" to transfer the value	uswahl"	1.5.5 Drucksensorauswahl	600 ba	9 <b>7</b>			~	Value: 2	STD
control unit.		1.5.6 Fahrpedal im Fehlerfa	ı					0	STD
		1.5.7 Blinkzeit Bremsleuchte	e I 0	I 3000	6000 90	I I 000 12000	I 15000	5,000 🔺 ms	STD >
	<b>290</b> ,	Show only menues Sh	ow groups Sh	ow all parameters	Write for filtering	]	] .	Jpdate interval	ms 😥
Connected with:						RC1	2-10/30 + HAKO	08878 V4.01 + Sonthei	m CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)						- 0	×
<u>File Actions View Tools H</u> elp							
Scan     Open     Save     Preview     Print     Break     Get data     Password     I	AR→PC EPR→PC EPR→ECU Save Defa	ult Reinit R	eset Compare				Help
Available ECUs		Param	Para neter values are dis	meter played and can be e	dited.	Re	x <b>roth</b> ch Grou
RC12-10/30 SN: 00102924 HwCode: 0002D6	Parameter Learning curves						
HAK08878 V4.01     No errors detected     Parameter	1.7 Konfiguration II						
<ul> <li>Processdata</li> <li>I/O Status view</li> <li>Custom view</li> </ul>	1.7.1 Fahrpedalauswahl	Pedal ohne Mikros.			~	Value: 2	STD
Error messages In the menu "1.7 Konfiguration II"	1.7.2 Bremspedalauswahl	1.7.2 Bremspedalauswahl Pedal ohne Mikros.					
In the field "1.7.1 Fahrpedalauswahl" choose "Pedal ohne Mikro Schalter"	1.7.3 Fahrpedal 1 - K1 Min-Max	Minimum 0.51 V	Maximum 4.50 V	Current	Accept	Calibrate	STD
In the field 172 Bremspedalauswahl"	1.7.4 Fahrpedal 1 - K2 Max-Min	Minimum 0.52 V	Maximum 4.51 V	Current	Accept	Calibrate	STD
choose "Pedal ohne Mikro Schalter".	1.7.5 Eahroedal 2 - K1 Rückw. Min-Max	Minimum	Maximum	Current	Accept	Calibrate	<u> </u>
Press "Save" to transfer the values into the		0.52 V	4.51 V				STD
control unit.	1.7.6 Fahrpedal 2 - K2 Rückw.Max-Min	Minimum 0.51 V	Maximum 4,50 V	Current	Accept	Calibrate	STD
		Minimum	Maximum	Current		- 11	
	1.7.7 Bremspedal	0.53 V	3.65 V		Accept	Calibrate	STD >
	Show only menues Show groups	Show all param	eters Write fo	r filtering		Update interval	ms 😭
	<						>

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BODAS-service 3.5 (BOSCH Rexroth AG)						— C	א נ <u>א</u>
<u>F</u> ile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp							
Scan     Open     Save     Preview     Print     ■ <ul> <li>Action 1</li> <li>Break</li> <li>Get data</li> <li>Password</li> <li>PAR→</li> </ul>	PC EPR→PC EPR→ECU Save Defa	ault Reinit R	Image: Section of Comparison	re			(?) Help
Available ECUs		Param	Pa leter values are e	rameter displayed and can be	e edited.	Re Bos	xroth ch Grou
RC12-10/30 SN: 00102924 HwCode: 0002D6 P4	arameter Learning curves						
Parameter     From detected	1.7 Konfiguration II	_	_	_			
<ul> <li>Processdata</li> <li>I/O Status view</li> <li>Custom view</li> </ul>	Value: 2	STD					
Error messages In the menu "1.7 Konfiguration II"	1.7.2 Bremspedalauswahl	~	Value: 2	STD			
In the field "1.7.3 Fahrpedalauswahl 1 – K 1"	1.7.3 Fahrpedal 1 - K1 Min-Max	Minimum 0.51 V	Maximum 4.50 V	Current 4.50 V	Set max value	Cancel	STD
2. Forward pedal in neutral postition	1.7.4 Ephroadal 1. K2 May Min	Minimum	Maximum	Current	Accept	Calibrate	
Press the button " <b>Set min. value"</b>		0.25 V	4.73 V		Accept	Calibrate	STD
3. Forward pedal fully pushed down.		Minimum	Maximum	Current	Arrest	Calibrata	
Press the button "Set max. value"	1.7.5 Fanrpedal 2 - K1 Ruckw.Min-Max	0.25 V	4.73 V		Accept	Calibrate	STD
	1.7.6 Eskanadal 2. K2 Düsları Marı Mir	Minimum	Maximum	Current	Accort	Calibrata	
	1.7.6 Fanrpedal 2 - K2 Ruckw.Max-Min	0.25 V	4.73 V		Ассерс	Calibrate	STD
	1.7.7 Brownoodel	Minimum	Maximum	Current	Accept	Calibrata	
	1.7.7 bremspeudi	0.20 V	3.78 V		Ассерс	Calibrate	STD -
	Show only menues Show groups	Show all param	eters Write	for filtering		Update interval	ms 😥
							>
Connected with:					RC12-10/30 + HA	K08878 V4 01 + Sonthe	im CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)							—				
<u>File Actions View Tools H</u> elp											
Scan Open Save Preview Print Break	Get data Password PAF	R→PC EPR→PC EPR→ECU Save Defa	ault Reinit F	Compare				🕜 Help			
Available ECUs			Parar	Para neter values are dis	<b>meter</b> played and can be ec	dited.	Re	exroth sch Grou			
KC12-10/30	SN: 00102924 HwCode: 0002D6	Parameter Learning curves									
HAKO8878 V4.01	Errors detected	1.7 Konfiguration II									
<ul> <li>Parameter</li> <li>Processdata</li> <li>I/O Status view</li> <li>Custom view</li> </ul>		1.7.1 Fahrpedalauswahl	Pedal ohne Mikros	i.		~	Value: 2	STD STD			
Error messages In the menu "1.7 Konfiguration II"		1.7.2 Bremspedalauswahl Pedal ohne Mikros.				~	Value: 2	STD			
In the field "1.7.4 Fahrpedalauswa	ahl 1 – K 2"	Minimum     Maximum     Current       1.7.3 Fahrpedal 1 - K1 Min-Max     0.51 V     4.50 V					Calibrate	STD			
<ol> <li>Activate calibration.</li> <li>Forward pedal in neutral postit</li> </ol>	ion	1.7.4 Eabroedal 1 - K2 Max-Min	Minimum	Maximum	Current	Set min value	Cancel	۲			
Press the button "Set max. va	lue"		0.52 V	4.50 V	0.52 V			STD			
3. Forward pedal fully pushed do	wn.	1.7.5 Fahrpedal 2 - K1 Rückw.Min-Max	Minimum	Maximum	Current	Accept	Calibrate	۲			
Press the button "Set min. va	liue		0.25 V	4.73 V				STD			
			Minimum	Maximum	Current	A name to	Calibrata				
		1.7.6 Fanrpedal 2 - K2 Ruckw.Max-Min	0.25 V	4.73 V		Accept	Calibrate	STD			
		1.7.7 Bremspedal	Minimum	Maximum	Current	Accept	Calibrate	()			
		<	0.20 V	3.78 V				STD >			
		Show only menues Show groups	Show all parar	neters Write for	filtering		Update interval	ms 😭			
		c						>			
Connected with:						RC12-10/30 + HA	KO8878 V4.01 + Sonth	eim CANfox			



BODAS-service 3.5 (BOSCH Rexroth AG)					- 0	×
<u>File Actions View Tools H</u> elp						
Scan Open Save Preview Print Break Get data Password PAR-	AP IP →PC EPR→PC EPR→PC EPR→PC EPR→PC EPR→PC EPR→PC EPR→PC EPR→PC EPR→PC EPR→ECU	ault Reinit Reset	Compare			Help
Available ECUs		Parameter	Parameter	edited.	Rez	<b>kroti</b> h Grou
RC12-10/30 SN: 00102924 HwCode: 0002D6	Parameter Learning curves					
HAK088/8 V4.01 Errors detected	1.7 Konfiguration II					
Processdata     I/O Status view     Custom view	1.7.1 Fahrpedalauswahl	Pedal ohne Mikros.		~	Value: 2	STD
Error messages Im the menu "1.7 Konfiguration II"	1.7.2 Bremspedalauswahl Pedal ohne Mikros.				Value: 2	STD
In the field 1".7.5 Fahrpedalauswahl 2 – K 1"	1.7.3 Fahrpedal 1 - K1 Min-Max	Minimum M 0.51 V	Calibrate	STD		
<ol> <li>Backward pedal in neutral postition</li> <li>Press the button "Set min. value"</li> </ol>	1.7.4 Fahrpedal 1 - K2 Max-Min	Minimum M 0.52 V	aximum Current 4.50 V	Accept	Calibrate	STD
<ol> <li>Backward pedal fully pushed down.</li> <li>Press the button "Set max. value"</li> </ol>	1.7.5 Fahrpedal 2 - K1 Rückw.Min-Max	Minimum Ma 0.51 V	Aximum Current 4.51 V 4.51 V	Set max value	Cancel	STD
	1.7.6 Fahrpedal 2 - K2 Rückw.Max-Min	Minimum M 0.25 V	aximum         Current           4.73 V	Accept	Calibrate	STD
	1.7.7 Bremspedal	Minimum M 0.20 V	aximum         Current           3.78 V	Accept	Calibrate	STD >
	Show only menues Show groups	Show all parameter	write for filtering	(	Jpdate interval	ms 🔁
						>
Connected with:				RC12-10/30 + HAKC	08878 V4.01 + Sontheir	m CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)					– 🗆 ×
<u>F</u> ile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp					
Scan Open Save Preview Print Break Get data Password PAR-	PC EPR→PC EPR→ECU Save Defa	ault Reinit Reset	Compare		Help
Available ECUs		Parameter valu	Parameter ues are displayed and can be ec	dited.	Rexroth Bosch Grou
RC12-10/30         SN: 00102924 HwCode: 0002D6         P           HAK08878 V4.01         Errors detected         P           Parameter         From the second se	arameter Learning curves				
<ul> <li>Processdata</li> <li>I/O Status view</li> <li>Custom view</li> </ul>	1.7.1 Fahrpedalauswahl	Pedal ohne Mikros.		∼ Val	ue: 2 STD
Error messages In the menu "1.7 Konfiguration II"	1.7.2 Bremspedalauswahl	Pedal ohne Mikros.		√ Val	ue: 2 STD
In the field "1.7.6 Fahrpedalauswahl 2 – K 2" 1. Activate calibration.	1.7.3 Fahrpedal 1 - K1 Min-Max	Minimum Maximu 0.51 V 4	um Current 4.50 V	Accept Calibra	ate 🕥 STD
2. Backward pedal in neutral postition Press the button " <b>Set max. value"</b>	1.7.4 Fahrpedal 1 - K2 Max-Min	Minimum Maximu 0.52 V 4	um Current 4.50 V	Accept Calibra	ate 🕥
3. Backward pedal fully pushed down. Press the button " <b>Set min. value</b> "	1.7.5 Fahrpedal 2 - K1 Rückw.Min-Max	Minimum Maximu 0.51 V 4	um Current 4.51 V	Accept Calibra	ate 🕥 STD
Press "Save" to transfer the values into the control unit.	1.7.6 Fahrpedal 2 - K2 Rückw.Max-Min	Minimum Maximu 0.51 V 4	um Current 4.50 V 0.51 V	Set min value Cance	el 🕥
	1.7.7 Bremspedal	Minimum Maximu 0.20 V 3	um Current 3.78 V	Accept Calibra	ate
	Show only menues Show groups	Show all parameters	Write for filtering	Update inte	rval 🔤 ms 😭
					>
Connected with:				RC12-10/30 + HAKO8878 V4.0	1 + Sontheim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)							-	
<u>File Actions View Tools H</u> elp								
Scan Open Save Preview Print Break	Get data Password PAR-	R EPR ↔	ault Reinit I	Compare				(?) Help
Available ECUs			Para	Para meter values are dis	ameter splayed and can be	edited.		Rexroth Bosch Grou
KC12-10/30	SN: 00102924 HwCode: 0002D6	Parameter Learning curves						
<ul> <li>HAK08878 V4.01</li> <li>Parameter</li> <li>Processdata</li> </ul>	Errors detected	1.7.2 Bremspedalauswahl	Pedal ohne Mikros	s.		~	Value:	2 (S) STD
I/O Status view			Minimum	Maximum	Current		C. Handa	
Custom view Frror messages		1.7.3 Fahrpedal 1 - K1 Min-Max	0.51 V	4.50 V		Accept	Calibrate	STD
In the menu "1.7 Konfiguration II"		1 7 4 Eahroedal 1 - K2 Max-Min	Minimum	Maximum	Current	Accept	Calibrate	
<i>"</i>			0.52 V	4.50 V		neepr	Calibrate	STD
In the field "1.7.7 Bremspedal"			Minimum	Maximum	Current	1 and 1	California	
1. Activate calibration.		1.7.5 Fahrpedal 2 - K1 Ruckw.Min-Max	0.51 V	4.51 V		Accept	Calibrate	STD
2. Break pedal in neutral. Press the button Set min val	uo"		Minimum	Maximum	Current		- H - I	
3. Break pedal pedal fully pushed	d down.	1.7.6 Fahrpedal 2 - K2 Rückw.Max-Min	0.51 V	4.50 V		Accept	Calibrate	STD
Press the button <b>"Set max. va</b>	lue"		Minimum	Maximum	Current			
If the message "Voltage to hig	h" occurs	1.7.7 Bremspedal	0.52 V	4. 19 V	4. 19 V	Set max value	Cancel	STD
=> carry out procedur on next (in 1.7.8)	page 26	1.7.8 Auflösung Kalib Bremspedal	I I 2000 2500	l 3000	I I 3500 4000	4500 5000	4,511 ★ m\	r STD
Otherwise save it by clicking the "	Save"	1.8 Diag Geschw Sensoren						
button		<						>
	000	Show only menues Show groups	Show all para	write fo	or filtering		Update interval	ms 🔁
	200							>
Connected with:						RC12-10/30 + H/	KO8878 V4.01 + 9	Sontheim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)							_	
<u>F</u> ile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp								
Scan Open Save Preview Print Break Get d	ata Password PAR-	PC EPR→PC EPR→ECU Save Defa	ult Reinit F	O Compare				Help
Available ECUs			Parar	Para neter values are dis	<b>meter</b> played and can be edi	ted.	Re	exroth sch Grou
RC12-10/30 BN	I: 00102924 wCode: 0002D6	Parameter Learning curves						
Parameter     Processdata	rors detected	1.7.2 Bremspedalauswahl	Pedal ohne Mikros			~	Value: 2	STD
I/O Status view			Minimum	Maximum	Current			
<ul> <li>Custom view</li> <li>Error messages</li> </ul>		1.7.3 Fahrpedal 1 - K1 Min-Max	0.51 V	4.50 V		Accept	Calibrate	STD
Only if calibration failure "voltage to hi	iah" !!!	1 7 4 Eshroedal 1 - K2 Max-Min	Minimum	Maximum	Current	Accept	Calibrate	
····;	<b>9</b>		0.52 V	4.50 V		Accept	Calibrate	STD
In the field "1.7.8 Auflösung Kalib Brer	mspedal"	1.7.5 Sekredel 2. K1 Düden Mir Men	Minimum	Maximum	Current	Accept	Calibrata	
change the value to 5000 setzen and	press	1.7.5 Pari pedal 2 - K1 Ruckw.Mini-Max	0.51 V	4.51 V		Accept	Calibrate	STD
the button "Save		1.7.6 Esbroodsl 2. K2 Dödau May Min	Minimum	Maximum	Current	Accent	Calibrate	
Then reset controller by the button "Re	eset"		0.51 V	4.50 V		Accept	Calibrate	STD
		(222	Minimum	Maximum	Current	å renn h	Calibrate	
After it carry out procedure on		1.7.7 Bremspedal	0.52 V	4.19 V		Ассерт	Calibrate	STD
Page 25 ( 1.7.7 Kalibrieren) again		1.7.8 Auflösung Kalib Bremspedal 2	I I 2000 2500	l 3000 3	I I 500 4000	4500 5000	4,500 🛖 mV	STD
		1.8 Diag Geschw Sensoren						>
	[	Show only menues Show groups	Show all paran	Write for	filtering		Update interval	ms 😥
	()() <							>
Connected with:						RC12-10/30 + HA	K08878 V4.01 + Sonth	eim CANfor



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<u>F</u> ile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp		
🐟 👛 📕 🍳 🛹 🛑 🐟 🔒 🛛	PAR ER 💑 🛷 🥥 🥥 🍊 🚵	0
Scan Open Save Preview Print Break Get data Password	PAR→PC EPR→PC EPR→ECU Save Default Reinit Reset Compare	Help
	Desembles	Povrotk
Available ECUs	Parameter	Bosch Grou
	Parameter values are displayed and can be edited.	
RC12-10/30 SN: 00102924 HwCode: 0002D6	Parameter Learning curves	
HAK08878 V4.01 Errors detected	1 8 Diag Geschw Sensoren	
> Parameter		
Processdata     I/O State and		
Custom view		
Error messages		
In many 17 Kanfiguration II"		
In menu "1.7 Koniiguralion II		
In the field 197 Drehzehleeneerouewehl"		
In the field "1.8.7 Drenzanisensorauswani		
choose the "DSM-Sensor"		
Press "Save" to transfer the values into		
the control unit.		
		Values
	1.8.7 Drenzansensorauswani DSM-Sensor	value: 2 STD
		>
	Show only menues Show groups Show all parameters Write for filtering	Jpdate interval ms 😭
2 ( ) ( ) ·	<	>
Connected with:	RC12-10/30 + HAK0	08878 V4.01 + Sontheim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)													- 0	×
Eile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp														
Scan Open Save Preview Print Break Get d	data Password P	PAR EPR	C EPR→ECU	Save	Default	Reinit	<b>()</b> Reset	Compare						() Help
Available ECUs				Î		Pa	rameter va	Paran alues are displ	<b>teter</b> ayed and car	n be edited.			Re	<b>xroth</b> ch Grou
RC12-10/30       SN         HAK08878 V4.01       Err         Parameter       Processdata         I/O Status view       Custom view         Custom view       Error messages         In the menu "4.4 Lüfter 3"         Activate the option reversing fan accorto to the vehicle configuration with the tig the empty box of the field "4.4.5 Akt.	N: 00102924 wCode: 0002D6 rrors detected	Parameter 4.4 Lüft	Learning curve: er 3	s										
Press "Save" to transfer the values int control unit.	ito the	4.4.5 Ak	t Reversieren										0	STD >
		Show only	/ menues	Show grou	ps S	Show all pa	rameters	Write for f	iltering			Update inte	erval	ms 😭
	<b>•</b> •••••••••••••••••••••••••••••••••••	<												>
Connected with:											RC12-10/30 +	HAK08878 V4.	01 + Sonthei	m CANfox

Connected with



BODAS-service 3.5 (BOSCH Rexroth AG)							— r	o x
<u>F</u> ile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp								
Scan Onen Save Preview Print Break Cet data Dacum			Save	Default Rei		Compare		
Stan Open Save Preview Fint Dreak Getudia Passwo			ECO   Save	Default Rei	init Reset	Compare		нер
Available ECUs						Error messages	Rex	roth
				0	overview of curr	rent active and saved error messages	Bosch	Group
RC12-10/30 SN: 00102924 HwCode: 0002	Active	e errors:						
HAKO8878 V4.01 Errors detect	ed Index	c Error Code	Occurrences	Timestamp	Error Mes	ssage		Param
Parameter	1	0xF015	1	73:18	Flag RC	Start		0
Processdata	2	0xA010	1	73:18	Anst. De	eakt. Arbeitshydraulik		0
I/O Status view	3	0x9005	1	73:18	Start: Me	otordrehzahl		0
Custom view	4	0XA007	1	73:25	Anst. Lu	Itterumschaltung		0
calibration. Delete active and saved errors	Saver	d errors:						
	Index	c Error Code	Occurrences	Timestamp	Error Mes	ssage		Param
	1	0xA010	4	73:18	Anst De	eakt. Arbeitsbydraulik		0
	2	0x06D1	1	73:05	menu1:	invalid param corrected		73
	3	0x06D1	1	73:05	menu1:	invalid param corrected		74
	4	0x06D1	1	73:05	menu1:	invalid param corrected		75
	5	0x06D1	1	73:05	menu1:	invalid param corrected		76
	6	0x06D1	1	73:05	menu1:	invalid param corrected		77
		0xA007	1	73:25	Anst. Lu	ufterumschaltung		0
	> Dele	te active errors	Delete save	d errors Ope	eration time: 73	3:27	Update interval	2400 ms
Connected with:							RC12-10/30 + HAK08878 V4.01 + Sonth	eim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)				- 🗆 X
<u>File Actions View Tools H</u> elp				
Scan Open Save Preview Print Break Get data	Password PAR→PC EPR→PC EPR→ECU	J Save Default Reinit R	O Compare	(?) Help
Available ECUs		Paran	Parameter meter values are displayed and can be edited.	Rexroth Bosch Grou
RC12-10/30 SN: 00 HwCod	de: 0002D6 Parameter Learning curve	es		
HAKO8878 V4.01 No erro     Parameter	ors detected 5.1 Stromabgleich I	I		
<ul> <li>Processdata</li> <li>I/O Status view</li> <li>Custom view</li> </ul>	5.1.1 Funktion I	EIN		Value: 1 STD
Error messages Following parameters has to be aktivated	5.1.2 Funktion II	EIN		Value: 1 STD
start the drive calibration				
In the menu "5.1 Stromabgleich I"				
In the field "5.1.1 Funktion I" choose "Ein In the field "5.1.2" Funktion II" choose "E	n". Ein".			
Press "Save" to transfer the values into control unit.	the			
	Chann and manuar	Show groups Show all access	write for filtering	
	3now only mendes	Show groups Show all paran		
Connected with:				RC12-10/30 + HAKO8878 V4.01 + Sontheim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)						-	- 🗆 X
<u>F</u> ile A <u>c</u> tions <u>V</u> iew <u>To</u> ols <u>H</u> elp							
Scan Open Save Preview Print Break	Get data Password P	PAR→PC EPR→PC EPR→ECU	Save Default	Reinit Reset	Compare		(?) Help
Available ECUs			Î	Parameter v	Parameter values are displayed and can be edite	ed.	Rexroth Bosch Grou
RC12-10/30 HAKO8878 V4.01	SN: 00102924 HwCode: 0002D6	Parameter Learning curves					
Parameter	No errors detected	6.1 Stromabgleich St	atz 2 Teil 1				·
<ul> <li>Processdata</li> <li>I/O Status view</li> <li>Custom view</li> </ul>		6.1.1 Datensatz 2					STD
Error messages							
In the menu "6.1 Stromabgleich Sa	atz 2 Teil 1"						
Activate the field "6.1.1 Datensatz hook in the empty box.	2" with a						_
Press "Save" to transfer the values control unit.	s into the						
Turn off and on the ignition. Reconnect Bodas.							
		<					
		Show only menues	Show groups	Show all parameters	Write for filtering	Update interv	ral ms 😭
	<b>230</b> ,	<					>
Connected with:						RC12-10/30 + HAKO8878 V4.01	+ Sontheim CANfox

Connected with



Now the following steps have to be carried out at the machine:

- 1. Start the engine (low idle) ★
- Press the drive pedal to full forward and hold it ,if the engine revolution increasing one of the procedure conditiones (hydraulic oil temperatur, brake activ or controller not correctly switched off) are not correct, or there are still failures in Bodas, => Delete them. After correcting you need to switch of the controller for minium 2 min. [Ignition OFF]. Then restart the procedure.)
- 3. After some time the wheels start to turn in forward direction (first the rear then the front) (if the wheels are not start turning, check for error messages and erase them. After it see above)
- 4. After approx. 1 min. they stop again
- 5. Press further the drive pedal till the revolution increase (plus 100 rpm)
- 6. Release the forward pedal to neutral
- 7. Press the drive pedal to full revers and hold it
- 8. After some time the wheels start to turn in revers direction (first the rear then the front)
- 9. After approx. 1 min. they stop again
- 10. Release the revers pedal to neutral

With the current working hydraulic software the brake must be applied for starting. Release brake immediatly after engine run, cause the adjustment procedure will not start then.



<i>™</i> ∎ 8	ODAS-service 3.5 (BOSCH Rexrot	th AG)																			-		×	
File /	Actions View Tools Help																							
-	Scan for controllers	F2	- <b>- - -</b>	4		RE	a 📥	• 💉	0	0	0	5											?	
Sc	Disconnect		Break	Get data Pass	word PAR	PC EPR		CU Save	Default	Reinit	Reset	Co	ompare										Help	
	Enter password												Deere										rot	
A	Get controller data										_		Para	meter								losch	Gro	u
	PC → Controller	F10								f	Parameter	values	s are disp	played a	and can l	be edit	ted.							
6	Controller -> PC	F11		SN: 0010292 HwCode: 000	4 )2D6	Parameter	Learning cur	rves																
$\bigcirc$	Save param file	F7		No errors det	tected	6.1 5	tromaboleic	h Statz 2 Te	il 1															
	Startup values						,, <b>,</b>			_	_	-	_	-	_	-	-	-	-	_	_	_	-	
	Default values					6.1.1	Datensatz 2														1		6	
1	Save parameters in EEPROM									•			•			•	•		$\mathbf{\nabla}$				510	
1	Reset ECU																							
Nc	w disconnect the co	ontrol	ller																					
со	mputer communicat	tion.																						
Th	erefore open the me	enu																						1
po	int <b>Actions</b> and clic	k																						
Di	sconnect.																							4
																								1
						<																	>	
						Show o	nly menues	Show gr	oups	Show all p	parameters	s V	Vrite for	filtering	g					Update i	nterval		ms	£
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Connected with:

RC12-10/30 + HAKO8878 V4.01 + Sontheim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)	_	$\Box$ $\times$
File Actions View Tools Help		
Scan Open Save Preview Print Break Get data Password	AR→PC EPR→PC EPR→ECU Save Default Reinit Reset Compare	() Help
Available ECUs	Parameter Parameter values are displayed and can be edited.	Rexroth Bosch Grou
RC12-10/30         SN: 00102924 HwCode: 0002D6           HAK08878 V4.01         No errors detected	Parameter Learning curves 6.1 Stromabgleich Statz 2 Teil 1	
Processdata     I/O Status view     Custom view	Itest the connection to the controller:       X         Lost the connection to the controller:       RC12-10/30 + HAKO8878 V4.01	STD
After the disconect press "Rescan system"	Rescan system         Discard all active connections and start a new search for controllers in the system.         Reconnect	_
	Rebuild connection and load all data	
	Discard connection	
	Do not ask again and if possible always perform the selected action.	
	Show only menues Show groups Show all parameters Write for filtering Undate interval	ms @
>	Control only increased when an parameters where not intering optimiter values of the state of	>
Connected with:	RC12-10/30 + HAK08878 V4.01 + S	ontheim CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)								-		×
<u>File Actions View Tools H</u> elp										
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Scan Open Save Preview Print Break	Get data Password PAR	.→PC EPR→PC EPR→ECU	Save Def	ault Reinit	Reset	Compare				Help
			•						-	
Available ECUs						Parameter			Kex	rotr
				Pa	arameter v	alues are displayed and can be edite	:d.		Bosch	Group
RC12-10/30	SN: 00102924	Parameter Learning curve	-							
HAK08878 V4.01	No errors detected	Learning curve								
Parameter		5.1 Stromabgleich	I							
Processdata		E 4 4 Evelvier I		ALIC				Values		
I/O Status view		5.1.1 Funktion I		AUS			~	value;	0	STD
<ul> <li>Error messages</li> </ul>										
		5.1.2 Funktion II		AUS			~	Value:	0	STD
Following parameters has to be de	eaktivated									
after the drive calibration.										
In the menu "5.1 Stromabgleich I"										
In the field "5.1.1 Funktion I" choos	se "AUS".									
In the field "5.1.2" Funktion II" choo	ose "AUS".									-
Press "Save" to transfer the values	s into the									
control unit.										
		<								>
		Show only menues	Show groups	Show all pa	arameters	Write for filtering		Update interval		ms 🔁
Connected with:							RC12-10/30 + F	AK08878 V4.01 +	Sontheim	CANfox



BODAS-service 3.5 (BOSCH Rexroth AG)								-	
<u>F</u> ile A <u>c</u> tions <u>V</u> iew T <u>o</u> ols <u>H</u> elp									
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Scan Open Save Preview Print Break	Get data Password   F	PAR→PC EF	PR→PC EPR→E	CU Save	Default Reini	t Reset	t   Compare		Help
Available ECUs					0.1	on iou of a r	Error messages	Rex	Group
					00	erview of cur	urrent acuve and saved error messages:		
RC12-10/30	SN: 00102924 HwCode: 0002D6	Active e	rrors:						
HAKO8878 V4.01	Errors detected	Index	Error Code	Occurrences	Timestamp	Error Me	1essage		Param
Parameter		1	0xF015	1	73:18	Flag RC	C Start		0
Processdata		2	0xA010	1	73:18	Anst. D	Deakt. Arbeitshydraulik		0
I/O Status view		3	0x9005	1	73:18	Start: N	Motordrehzahl		0
Custom view		4	0xA007	1	73:25	Anst. L	Lüfterumschaltung		0
1. Delete all errors of the hydrostat	t	Saved er	rrors:						
Delete active and saved errors		Index	Error Code	Occurrences	Timestamp	Error Me	lessage		Param
		1	0xA010	4	73:18	Anst. D	Deakt, Arbeitshydraulik		0
		2	0x06D1	1	73:05	menu1	1: invalid param corrected		73
		3	0x06D1	1	73:05	menu1	1: invalid param corrected		74
		4	0x06D1	1	73:05	menu1	1: invalid param corrected		75
		5	0x06D1	1	73:05	menu1	1: invalid param corrected		76
		6	0x06D1	1	73:05	menu1	1: invalid param corrected		- 77
		<u>/</u>	0xA007	1	73:25	Anst. L	Lufterumschaltung		0
	000								
	<b>~</b> ( <b>)</b> ( <b>)</b> ,	Delete	active errors	Delete save	d errors Opera	ation time: 7	73:27	Update interval	2400 ms
Connected with:								RC12-10/30 + HAK08878 V4.01 + Sont	neim CANfox



#### Hatz





HDS <sup>2</sup>		3
Hatz 4H50TICD HDS 1651019000065	Fehlerspeicher	
Ġ Identifikation	Betriebsstd. SPN FMI Zustand Fehlerbeschreibung	
뛽 Aktuelle Werte	In fault memory 2 all errors are displayed after the control unit was switched off (shutdown time approx. 20s). They can be deleted by clicking on the "X".	
\Lambda Fehlerspeicher		
•́ <b>́µ</b> ́- Stellgliedtest		
\Lambda Diagnosetests		10
💆 Datensatz		
Motorprotokoll		
👳 Datenaufzeichnung		
? Hilfe		
铰 Einstellungen		
		•
🔰 🔄 Bilder	9 23 9.0.3 Diagnose - Pow S Hatz Update Tool S HDS 10:44	



CM600 - Ereignisspeicher										
Information Arbeitshydraulik Hydrostat Konfiguration System ? [DE]										
<b></b> 334	5	Level: CM 1600 - Information - Service Info 1 Anzahl Einträge: 6				Hako				
		Speicher löschan		Speicher le	sen	Historie lesen				
Zeile	Intern	Text_1	Datum	Zeit	Anzeige	Text_2 R				
1	412	HS: Fehler Fahrsteuerung	12-08-2016	10:26:11	0	0				
2	418	HS: Fehler Fahrsteuerung	12-08-2016	10:26:11	0	0				
3	415	HS: Fehler Fahrsteuerung	12-08-2016	10:26:16	0	0				
4	412	HS: Fehler Fahrsteuerung	12-08-2016	10:2 <mark>8:5</mark> 4	0	0				
5	415	HS: Fehler Fahrsteuerung	12-08-2016	10:28:54	0	0				
6	418	HS: Fehler Fahrsteuerung	12-08-2016	10:28:54	0	0				
		3. Delete all errors in the Hak	o diagn	ose						
<b>1</b>	۲	🗮 📕 HakoDiagnose - Star 🥼 CM600 - Ereignisspei				A DESCRIPTION OF A DESC	<ul> <li>▲ 10:32</li> </ul>			