Service & Troubleshooting

RCL 5300

IMT MANUAL # 99905817

IOWA MOLD TOOLING CO., INC.
PO Box 189
Garner, IA 50438
Tel: 641-923-3711 FAX: 641-923-2424
Website: http://www.imt.com

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Programming of Node ID

One or several controllers are included in the RCL 5300 Safety System and on radio remote controlled loaders also PVED-CC electric activations.

The controllers as well as the PVED-CC electric activations communicate in a CAN bus network, where the RCL 5300 is the master unit and the other controllers and electric activations are slave units.

In order for all controllers and electric activations to be able to identify each other in the CAN bus network, they have their own unique Node ID.
Controllers that have a permanent place in the network, are programmed with Node ID.
Controllers that are either supplementary modules or that can have different positions in the network are not programmed with Node ID.

When ordering spare parts for replacing components or when extending the safety system, it may therefore be necessary that the service point has to programme the Node ID .

In the tables below are indicated the Node ID for the individual controllers and electric activations, as well as which of them that require programming.

Programming of Node ID for controllers

The Node ID for controllers is programmed by means of the CGW 5355 service terminal in the menu item 1-2-1-2. “Configure new module”.
Press ENT and the new module is automatically configurated with a Node ID:

Controller	Node ID	Programming of spare part
RCL5300 A	1	Is programmed from HMF.
RCL5300 B	3	Is programmed from HMF.
FJC 5330 A	7	Is programmed from HMF.
FJC 5330 B	9	Is programmed from HMF.
WIC 5333 A	11	Is programmed from HMF.
WIC 5333 B	13	Is programmed from HMF.
SLC 5363 A	15	Is programmed from HMF.
SLC 5363 B	17	Is programmed from HMF.
CIO 5070, controller 1	41	Is programmed from HMF.
CIO 5374, controller 1	45	Programmed by the service point.
CIO 5374, controller 2	47	Programmed by the service point.
ECT 5320, controller 1	51	Programmed by the service point.
ECT 5320, controller 2	53	Programmed by the service point.
ECT 5320, controller 3	55	Programmed by the service point.
ECT 5310, controller 1	61	Programmed by the service point.
ECT 5310, controller 2	63	Programmed by the service point.
ECT 5310, controller 3	65	Programmed by the service point.
CIO 5376 A, controller 1	67	Programmed by the service point.
CIO 5376 B, controller 1	69	Programmed by the service point.
CIO 5376 A, controller 2	71	Programmed by the service point.
CIO 5376 B, controller 2	73	Programmed by the service point.
CIO 5376 A, controller 3	75	Programmed by the service point.
CIO 5376 B, controller 3	77	Programmed by the service point.
Radio Remote Control	100	Is programmed from HMF.

Programming of Node ID for PVED-CC electric activations

If a PVED-CC electric activation is to be replaced and you order a new one, it has a default Node ID with the designation “New”. When mounting the electric activation, the Node ID must be changed to a new in relation to the loader function on which it has to be mounted.

In the table below is indicated the Node ID of the electric activation in question, depending on which loader function it is fitted.

PVED-CC electric activation	Node ID	Programming of spare part
PVED, spare part	New	Default programmed.
PVED, slewing	Slew	Programmed by the service point.
PVED, boom	Boom	Programmed by the service point.
PVED, jib	Jib	Programmed by the service point.
PVED, extension	Ext	Programmed by the service point.
PVED for Fly-Jib	Fly-Jib	Programmed by the service point.
PVED for Fly-Jib extension	FJ Ext	Programmed by the service point.
PVED, winch	Winch	Programmed by the service point.
PVED for rotator	Rotator	Programmed by the service point.
PVED for grab	Grab	Programmed by the service point.
Available	11	Programmed by the service point.
Available	12	Programmed by the service point.
Available	13	Programmed by the service point.
Available	14	Programmed by the service point.
PVED on PVSK change-over valve in valve group 2 (dual circuit system).	Dmp.2	Programmed by the service point.
PVED on PVSK change-over valve in valve group 1 (single and dual circuit system).	Dmp.1	Programmed by the service point.

Example of programming of Node ID for a new PVED-CC electric activation

A PVED-CC electric activation can be programmed by means of the CGW 5355 Service Terminal. The loader function on which it is to be fitted is selected according to a list.

Entry	Indication in display		Explanation
1.2.2.2	CAN-Valves Valves Add new valve	1.2.2.2	CAN electric activation Electric activation. Add new electric activation
ENT	Add new valve Valve ID	1.2.2.2.1 New	 Node ID – new PVED (default).
SET	Add new valve Valve ID	1.2.2.2.1 New	 Node ID – new PVED (default).
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Slew	 PVED, slewing
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Boom	 PVED, boom
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Jib	 PVED, jib
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Ext	 PVED, extension
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Fly-Jib	 PVED, Fly-Jib
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 FJ.Ext	 PVED, Fly-Jib extension
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Winch	 PVED, winch
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Rotator	 PVED, rotator
⇓ (arrow down)	Add new valve Valve Id	1.2.2.2.1 Grab	 PVED grab
⇓ (arrow down)	Add new valve Valve ID	1.2.2.2.1 11	 Available
⇓ (arrow down)	Add new valve Valve ID	1.2.2.2.1 12	 Available
⇓ (arrow down)	Add new valve Valve ID	1.2.2.2.1 13	 Available
⇓ (arrow down)	Add new valve Valve ID	1.2.2.2.1 14	 Available
⇓ (arrow down)	Add new valve Valve ID	1.2.2.2.1 Dmp.2	PVED on PVSK change-over valve in valve group 2 (Dual-circuit system).
⇓ (arrow down)	Add new valve Valve ID	1.2.2.2.1 Dmp.1	PVED on PVSK change-over valve in valve group 1 (Single and dual-circuit system).
Select one of the above-mentioned loader functions (e.g. Slew)			
ENT	Repower		Dismount the plug for the PVED electric activation and mount it again (the power supply is interrupted).
1.2.2.1.2.8	Spool		Press SET and choose spool type.
The PVED electric activation now has a programmed Node ID and is ready for operation.			

Example of changing of Node ID for a PVED-CC electric activation

A Node ID for a PVED-CC electric activation can be changed from one loader function to another by means of the CGW 5355 Service Terminal.
Below is indicated an example where the function is to be changed from “Slewing” (PVED for the slewing function) to “Jib” (PVED for the jib function).

Entry	Indication in display		Explanation
1.2.2.1	CAN-Valves Valves Add new valve	1.2.2.1	CAN electric activation Electric activation. Add new electric activation
ENT	Valves Slew valve	1.2.2.1.2	Electric activation. Electric activation for the slewing function.
ENT	Slew valve Curve A Curve B Sn. Hw Hw.ver Sw	1.2.2.2.1.1	Electric activation for the slewing function. Curve A. Curve B. Serial no. The type number of the electric activation. Hardware version. Software type.
⇑ (arrow up)	Slew valve Hw.ver Sw Sw.ver Spool House Valve Id	1.2.2.2.1.10 Slew	Electric activation for the slewing function. The type number of the electric activation. Software type. Software version. Spool type. Control valve section, type. PVED, slewing
SET	Slew valve Hw.ver Sw Sw.ver Spool House Valve Id	1.2.2.2.1.10 Slew	Electric activation for the slewing function. The type number of the electric activation. Software type. Software version. Spool type. Control valve section, type. PVED, slewing
⇓ (arrow down)	Slew valve Hw.ver Sw Sw.ver Spool House Valve Id	1.2.2.2.1.10 Boom	Electric activation for the slewing function. The type number of the electric activation. Software type. Software version. Spool type. Control valve section, type. PVED, boom
⇓ (arrow down)	Slew valve Hw.ver Sw Sw.ver Spool House Valve Id	1.2.2.2.1.10 Jib	Electric activation for the slewing function. The type number of the electric activation. Software type. Software version. Spool type. Control valve section, type. PVED, jib
ENT	Repower the system		Dismount the plug for the PVED electric activation and mount it again (the power supply is interrupted).
1.2.2.1.2.8	Spool		Press SET and choose spool type.
The function of the PVED electric activation has changed from “slewing” to “jib".			

Set up, 2-stage LMB, NOHY and Danfoss, manually controlled loader

Procedure for setting up 2-stage LMB on a loader with a Nordhydraulic or Danfoss PVG 32 control valve, RCL 5300 and manual control.
Use a CGW 5355 service terminal.
Corresponding electric diagram: 70 20 319.

Step	Menu item	Explanation	Comment
			Activation of the 2-stage LMB
1	1.1.1.1.3.2	Activate: Two-zone LMB	Press ENT, ESC
			Setting up sensor at the cam disc
1	1.1.1.1.2.3.2.6	Activate: Slew sensor	Press ENT
2	1.1.1.1.2.3.2.6.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT
3	1.1.1.1.2.3.2.6.2	Select: Input	Press SET, 2 x ↓ (input K356 (AD2)), ENT
4	1.1.1.1.2.3.2.6.3	Invert	No cross in the box (not invert)
5	1.1.1.1.2.3.2.6.4	NPN	No cross in the box (= PNP), ESC
			Setting up spool sensor, slewing
			Setting up spool sensor, slewing, CW
1	1.1.1.1.2.3.3	Activate: Valvesensors	Press ENT
2	1.1.1.1.2.3.3.1	Select: Slew CW	Press ENT
3	1.1.1.1.2.3.3.1.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT
4	1.1.1.1.2.3.3.1.2	Select: Input	Press SET, 5 x ↓ (input K387 (D5)), ENT
5	1.1.1.1.2.3.3.1.3	Invert	Cross in box (invert)
6	1.1.1.1.2.3.3.1.4	NPN	Cross in box (= NPN)
			Setting up spool sensor, slewing, CCW
1	1.1.1.1.2.3.3	Activate: Valvesensors	Press ENT
2	1.1.1.1.2.3.3.2	Select: Slew CCW	Press ENT
3	1.1.1.1.2.3.3.2.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT, ESC
4	1.1.1.1.2.3.3.2.2	Select: Input	Press SET, 6 x ↓ (input K388 (AD7)), ENT
5	1.1.1.1.2.3.3.2.3	Invert	Cross in box (invert)
6	1.1.1.1.2.3.3.2.4	NPN	Cross in box (= NPN)
			Setting up activation
1	1.1.1.1.2.8.3.1	Select: Sensor	Press SET, ↑ (Sensor), ENT
			Setting of reduced load moment in front of the vehicle
1	1.1.1.1.1.2.1	Reduced Load Level	Press SET, enter the value (%) of the reduced load moment in front of the vehicle, ENT
			Save the set up in the RCL 5300
1	1.1.2	Update controller	Press ENT
			Interruption of the power
		The power supply for the RCL 5300 is interrupted for a few seconds.	Reconnect the power supply - the RCL 5300 safety system is ready for starting up.

Set up, 2-stage LMB, Danfoss PVG 32 radio remote control (RC)

Procedure for setting up 2-stage LMB on a loader with a Danfoss PVG 32 control valve, RCL 5300 and radio remote control (RC).

Use a CGW 5355 service terminal.
Corresponding electric diagram: 70 20 321.

Step	Menu item	Explanation	Comment
			Activation of the 2-stage LMB
1	1.1.1.1.3.2	Activate: Two-zone LMB	Press ENT, ESC
			Setting up sensor at the cam disc
1	1.1.1.1.2.3.2.6	Activate: Slew sensor	Press ENT
2	1.1.1.1.2.3.2.6.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT
3	1.1.1.1.2.3.2.6.2	Select: Input	Press SET, 2 x ↓ (input K356 (AD2)), ENT
4	1.1.1.1.2.3.2.6.3	Invert	No cross in the box (not invert)
5	1.1.1.1.2.3.2.6.4	NPN	No cross in the box (= PNP), ESC
			Setting of reduced load moment in front of the vehicle
1	1.1.1.1.1.2.1	Reduced Load Level	Press SET, enter the value (%) of the reduced load moment in front of the vehicle, ENT
			Save the set up in the RCL 5300
1	1.1.2	Update controller	Press ENT
			Interruption of the power
		The power supply for the RCL 5300 is interrupted for a few seconds.	Reconnect the power supply - the RCL 5300 safety system is ready for starting up.

Set up, Stand-up controls (HS), NOHY and Danfoss, manually controlled loader

Procedure for setting up stand-up controls (HS) on a loader with a Nordhydraulic or Danfoss PVG 32 control valve, RCL 5300 and manual control.
Use a CGW 5355 service terminal.
Corresponding electric diagram: 70 20 315.

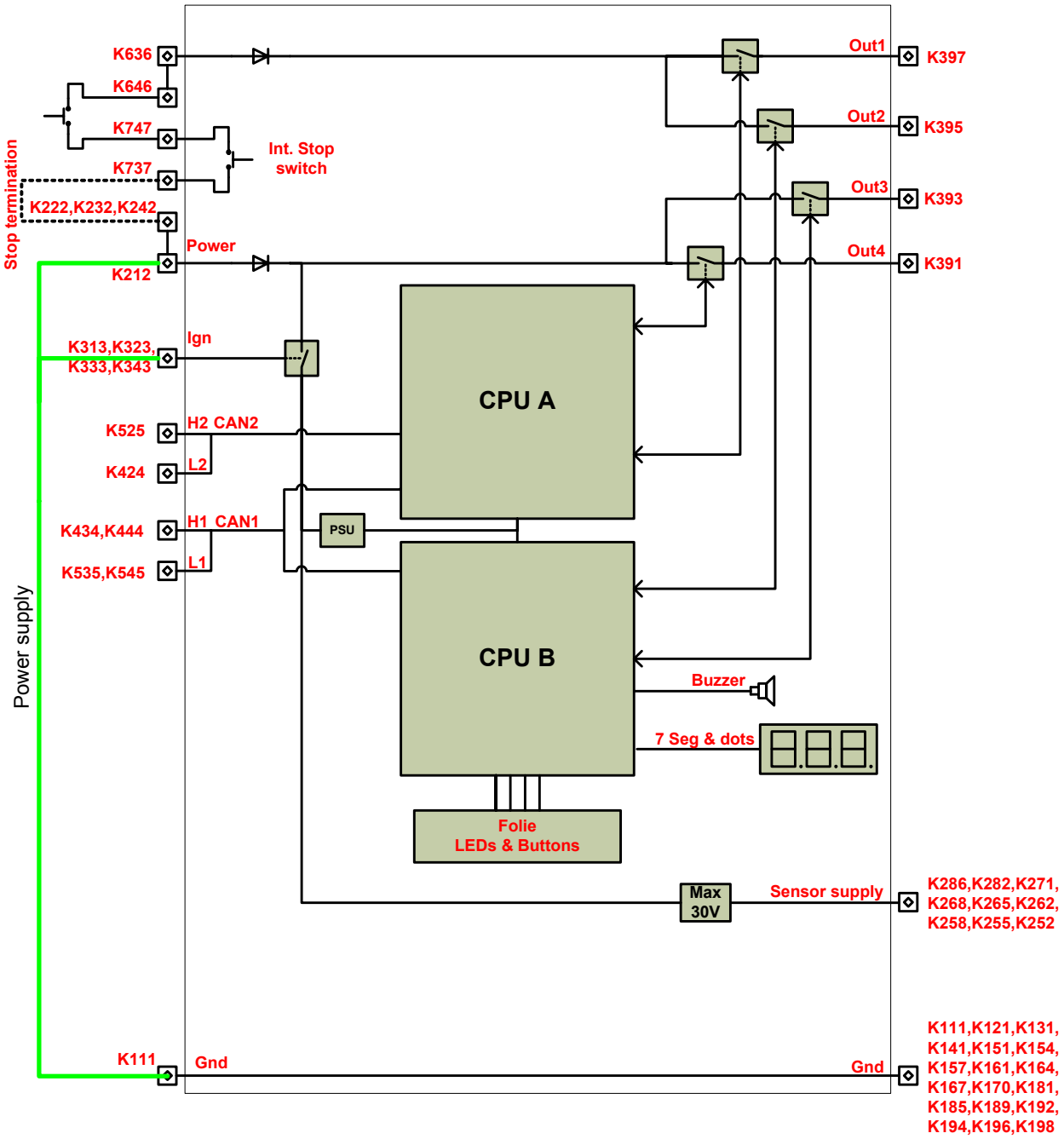
Step	Menu item	Explanation	Comment
			Activation of stand-up controls (HS)
1	1.1.1.1.3.1	Activate: High operation	Press ENT, ESC
2	1.1.1.1.1.1.3	Select: Slew stop	Press SET, ↑ (cross in box), ENT, ESC
			Setting up sensor on stand-up controls (HS)
1	1.1.1.1.2.3.2.8.	Activate: HS active	Press ENT
2	1.1.1.1.2.3.2.8.1	Select: Module	Press SET, ↓ (RCL 5300 A), ENT
3	1.1.1.1.2.3.2.8.2	Select: Input	Press SET, 6 x ↓ (input K372 (D2)), ENT
4	1.1.1.1.2.3.2.8.3	Invert	No cross in the box (not invert)
5	1.1.1.1.2.3.2.8.4	NPN	No cross in the box (= PNP), ESC
			Setting up sensor at the cam disc
1	1.1.1.1.2.3.2.6	Activate: Slew sensor	Press ENT
2	1.1.1.1.2.3.2.6.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT
3	1.1.1.1.2.3.2.6.2	Select: Input	Press SET, 2 x ↓ (input K356 (AD2)), ENT
4	1.1.1.1.2.3.2.6.3	Invert	No cross in the box (not invert)
5	1.1.1.1.2.3.2.6.4	NPN	No cross in the box (= PNP), ESC
			Setting up spool sensor, slewing
			Setting up spool sensor, slewing, CW
1	1.1.1.1.2.3.3	Activate: Valvesensors	Press ENT
2	1.1.1.1.2.3.3.1	Select: Slew CW	Press ENT
3	1.1.1.1.2.3.3.1.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT
4	1.1.1.1.2.3.3.1.2	Select: Input	Press SET, 5 x ↓ (input K387 (D5)), ENT
5	1.1.1.1.2.3.3.1.3	Invert	Cross in box (invert)
6	1.1.1.1.2.3.3.1.4	NPN	Cross in box (= NPN)
			Setting up spool sensor, slewing, CCW
1	1.1.1.1.2.3.3	Activate: Valvesensors	Press ENT
2	1.1.1.1.2.3.3.2	Select: Slew CCW	Press ENT
3	1.1.1.1.2.3.3.2.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT, ESC
4	1.1.1.1.2.3.3.2.2	Select: Input	Press SET, 6 x ↓ (input K388 (AD7)), ENT
5	1.1.1.1.2.3.3.2.3	Invert	Cross in box (invert)
6	1.1.1.1.2.3.3.2.4	NPN	Cross in box (= NPN)
			Setting up activation
1	1.1.1.1.2.8.3.1	Select: Sensor	Press SET, ↑ (Sensor), ENT
			Save the set up in the RCL 5300
1	1.1.2	Update controller	Press ENT
			Interruption of the power
		The power supply for the RCL 5300 is interrupted for a few seconds.	Reconnect the power supply - the RCL 5300 safety system is ready for starting up.

Set up, Stand-up controls (HS), Danfoss PVG 32 radio remote control (RC)

Procedure for setting up stand-up controls on a loader with a Danfoss PVG 32 control valve, RCL 5300 and radio remote control (RC).
Use a CGW 5355 service terminal.
Corresponding electric diagram: 70 20 316.

Step	Menu item	Explanation	Comment
			Activation of stand-up controls (HS)
1	1.1.1.1.3.1	Activate: High operation	Press ENT, ESC
2	1.1.1.1.1.1.3	Select: Slew stop	Press SET, ↑ (cross in box), ENT, ESC
			Setting up sensor on stand-up controls (HS)
1	1.1.1.1.2.3.2.8.	Activate: HS active	Press ENT
2	1.1.1.1.2.3.2.8.1	Select: Module	Press SET, ↓ (RCL 5300 A), ENT
3	1.1.1.1.2.3.2.8.2	Select: Input	Press SET, 6 x ↓ (input K372 (D2)), ENT
4	1.1.1.1.2.3.2.8.3	Invert	No cross in the box (not invert)
5	1.1.1.1.2.3.2.8.4	NPN	No cross in the box (= PNP), ESC
			Setting up sensor at the cam disc
1	1.1.1.1.2.3.2.6	Activate: Slew sensor	Press ENT
2	1.1.1.1.2.3.2.6.1	Select: Module	Press SET, 2 x ↓ (RCL 5300 B), ENT
3	1.1.1.1.2.3.2.6.2	Select: Input	Press SET, 2 x ↓ (input K356 (AD2)), ENT
4	1.1.1.1.2.3.2.6.3	Invert	No cross in the box (not invert)
5	1.1.1.1.2.3.2.6.4	NPN	No cross in the box (= PNP), ESC
			Save the set up in the RCL 5300
1	1.1.2	Update controller	Press ENT
			Interruption of the power
		The power supply for the RCL 5300 is interrupted for a few seconds.	Reconnect the power supply - the RCL 5300 safety system is ready for starting up.

Block Diagram, RCL 5300



Black box registering of data in the RCL 5300

By means of the CGW 5355, it is possible to read black box registrations from the RCL 5300 controller.

Black box registrations

The black box registrations are divided in three categories (1-3 etc. indicates the current menu item in the CGW 5355):

1-3	Main Menu\Online\Blackbox	
1-3-1	Error log	Registration of errors
1-3-2	Operation log	Registration of operation

Registration of errors

System errors are indicated in the following way:
- An error code is indicated (Error no.).
- A counter indicates the number of times the error has been registered as from the first date till the last date the error has occurred (Error count).
- Date and time are indicated for the first time the type of error concerned was registered (First).
- Date and time are indicated for the last time the type of error concerned was registered (Last).

1-3-1-1	Main Menu\Online\Blackbox\Error log\Error 1	Example
1-3-1-1-1	Error no.	121
1-3-1-1-2	Error count.	5
1-3-1-1-3	First	30/05/2007 - 15:32
1-3-1-1-4	Last	31/05/2007 - 11:43
1-3-1-2	Main Menu\Online\Blackbox\Error log\Error 2	
1-3-1-2-1	Error no.	
1-3-1-2-2	Error count.	
1-3-1-2-3	First	
1-3-1-2-4	Last	
Etc.		

Up to 50 error codes are registered (1-3-1-1…….1-3-1-50).

Registration of operation

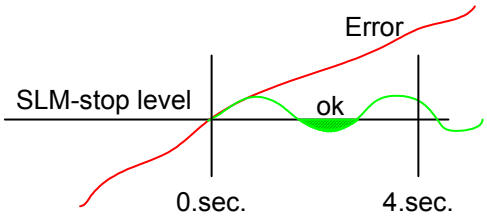
Operational data are registered during loader operation.
These operational data are divided into the following categories:

1-3-2	Main Menu\Online\Blackbox\Operation log	
1-3-2-1	General timer	Recording of time in hours and minutes (hhhh:mm) for general functions.
1-3-2-2	General counter	Registering of activity on different loader functions.
1-3-2-3	Crane overload	The number of times and the length of time the loader has been overloaded.
1-3-2-4	Fly-jib overload	The number of times and the length of time the Fly-Jib has been overloaded.
1-3-2-5	Crane in service	Date of putting into service.
1-3-2-6	EVS stop	Registering of heel at EVS stop.

1-3-2-1	Main Menu\Online\Blackbox\Operation log\General timer	
1-3-2-1-1	Run	The time the RCL 5300 has been turned on (when the RUN diode is lit).
1-3-2-1-2	Crane load	The average load on the loader during the time the RCL 5300 has been turned on (when the RUN diode is lit).
1-3-2-1-3	Winch load	The average load on the winch during the time the RCL 5300 has been turned on (when the RUN diode is lit).
1-3-2-1-4	Crane activity	The time a loader function [the Σ of all functions] has been activated.
1-3-2-1-5	Boom activity	The time the boom function has been activated.
1-3-2-1-6	Ext activity	The time the extension function has been activated.
1-3-2-1-7	Winch activity	The time the winch function has been activated.
1-3-2-1-8	FJ activity	The time the ”Fly-Jib - jib” function has been activated.
1-3-2-1-9	FJ Ext activity	The time the ”Fly-Jib - extension” function has been activated.
1-3-2-1-10	Override	The time the loader has been in override mode after a loader stop in case of a load moment of 100%.
1-3-2-1-11	EMC operation	The time the loader has been working in emergency mode as the consequence of a system error and the control valve has been activated.
1-3-2-1-12	Load test	The time the loader has been in stability test mode, and the control valve has been activated.
1-3-2-1-13	Transducer fixed	The time the boom function has been activated without any activity on the signal from the MP1 pressure transducer on the boom cylinder.
1-3-2-1-14	High oil temp	The time the temperature of the hydraulic oil has exceeded 80°C.
1-3-2-1-15	Over voltage	The time the voltage of the power supply has exceeded 32 volt.

1-3-2-2	Main Menu\Online\Blackbox\Operation log\General counter	
1-3-2-2-1	Dump fixed ***)**	The number of times an error has occurred on the dump valve function.
1-3-2-2-2	High oil temp	The number of times the temperature of the hydraulic oil has exceeded 80°C.
1-3-2-2-3	Over voltage	The number of times the voltage of the power supply has exceeded 32 volt.

***)** Re.: Dump fixed:



When working with a loader that has the RCL 5300 SLM System, a dump period occurs (SLM stop) at a load moment of 100%.

When the dump valve opens, the load gets to oscillate with a variation in pressure as a consequence of this.

It is presumed that during the dump period, the pressure (because of the pressure variations) will get below the pressure (LMB-pressure = SLM stop level) where the dump valve opened.

If this is not the case, the ”Dump fixed” counter counts 1. This is valid for the dump period concerned.

1-3-2-3-1	Main Menu\Online\Blackbox\Operation log\Crane overload\Counter	
1-3-2-3-1-1	110	The number of times the loader has had a load moment of 110%.
1-3-2-3-1-2	120	The number of times the loader has had a load moment of 120%.
1-3-2-3-1-3	130	The number of times the loader has had a load moment of 130%.
1-3-2-3-1-4	140	The number of times the loader has had a load moment of 140%.
1-3-2-3-1-5	150	The number of times the loader has had a load moment of 150%.
1-3-2-3-1-6	160	The number of times the loader has had a load moment of 160%.

1-3-2-3-2	Main Menu\Online\Blackbox\Operation log\Crane overload\Time	
1-3-2-3-2-1	110	The time the loader has had a load moment between 110% and 119%.
1-3-2-3-2-2	120	The time the loader has had a load moment between 120% and 129%.
1-3-2-3-2-3	130	The time the loader has had a load moment between 130% and 139%.
1-3-2-3-2-4	140	The time the loader has had a load moment between 140% and 149%.
1-3-2-3-2-5	150	The time the loader has had a load moment between 150% and 159%.
1-3-2-3-2-6	160	The time the loader has had a load moment between 160% and 169%.

1-3-2-4-1	Main Menu\Online\Blackbox\Operation log\Fly jib overload\Counter	
1-3-2-4-1-1	110	The number of times the Fly-Jib has had a load moment of 110%.
1-3-2-4-1-2	120	The number of times the Fly-Jib has had a load moment of 120%.
1-3-2-4-1-3	130	The number of times the Fly-Jib has had a load moment of 130%.
1-3-2-4-1-4	140	The number of times the Fly-Jib has had a load moment of 140%.
1-3-2-4-1-5	150	The number of times the Fly-Jib has had a load moment of 150%.
1-3-2-4-1-6	160	The number of times the Fly-Jib has had a load moment of 160%.

1-3-2-4-2	Main Menu\Online\Blackbox\Operation log\Fly jib overload\Time	
1-3-2-4-2-1	110	The time the Fly-Jib has had a load moment between 110% and 119%.

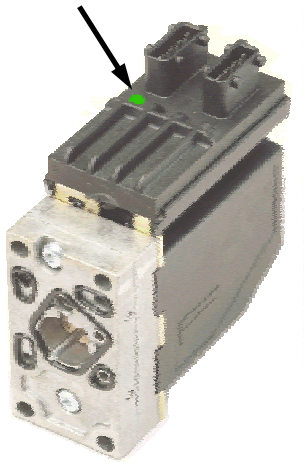
1-3-2-4-2-2	120	The time the Fly-Jib has had a load moment between 120% and 129%.
1-3-2-4-2-3	130	The time the Fly-Jib has had a load moment between 130% and 139%.
1-3-2-4-2-4	140	The time the Fly-Jib has had a load moment between 140% and 149%.
1-3-2-4-2-5	150	The time the Fly-Jib has had a load moment between 150% and 159%.
1-3-2-4-2-6	160	The time the Fly-Jib has had a load moment between 160% and 169%.

1-3-2-5	Main Menu\Online\Blackbox\Operation log\Crane in service	
1-3-2-5-1	Date	Date of putting into service. The date where the loader has had a load moment exceeding 50% for the first time.

1-3-2-6	Main Menu\Online\Blackbox\Operation log\EVS stop	
1-3-2-6-1	Max level X	The average value of the max. X-heel after an EVS stop in the X-direction. The value is measured during 4 seconds.
1-3-2-6-2	Max level Y1	The average value of the max. Y1-heel after an EVS stop in the Y1-direction. The value is measured during 4 seconds.
1-3-2-6-3	Max level Y2	The average value of the max. Y2-heel after an EVS stop in the Y2-direction. The value is measured during 4 seconds.
1-3-2-6-4	Average level X	The average value of the X-heel after an EVS stop in the X-direction. The value is measured during 4 seconds.
1-3-2-6-5	Average level Y1	The average value of the Y1-heel after an EVS stop in the Y1-direction. The value is measured during 4 seconds.
1-3-2-6-6	Average level Y2	The average value of the Y2-heel after an EVS stop in the Y2-direction. The value is measured during 4 seconds.
1-3-2-6-7	Number X	The number of times there has been an EVS stop in the X-direction.
1-3-2-6-8	Number Y1	The number of times there has been an EVS stop in the Y1-direction.
1-3-2-6-9	Number Y2	The number of times there has been an EVS stop in the Y2-direction.

Indication, PVED-CC

A diode on the PVED-CC electric activation indicates as follows:



Diode	Condition
Green	Normal operation.
Yellow	Stand-by. If there is no activity for more than 1 second.
Yellow	If the spool is not in neutral position in case of electric activation (error).
Red	Internal error in the module. The CAN transceiver is interrupted.

PVEO-DI

The PVEO-DI electric activation (on the PVSK-module) has no indication.

Error codes, RCL 5300

Errors in the safety system are indicated by an error code on the display of the RCL 5300.

The error codes are grouped within the numbers 0 through 999:

Codes	Description
Error codes 0-499	Indicate general component errors as well as communication failures between the components.
Error codes 500-599	Indicate errors in connection with analogue sensors (pressure transducers, temperature sensors).
	An analogue sensor can be connected to different input terminals. Push the red press button on the RCL 5300 indicator panel, and a code for the applied input terminal is indicated in the display. The terminal code is indicated within the 600-699 group.
Terminal codes 600-699	The terminal codes are indicated for the error group 500-599. For each code is indicated the input of the concerned sensor.
Error codes 700-799	Indicate errors (below the marginal value) in connection with digital components (solenoid valves, engine control etc.).
	A digital sensor can be connected to different output terminals. Push the red press button on the RCL 5300 indicator panel, and a code for the applied output terminal is indicated in the display. The terminal code is indicated within the 900-999 group.
Error codes 800-899	Indicate errors (above the marginal value) in connection with digital components (solenoid valves, engine control etc.).
	A digital sensor can be connected to different output terminals. Push the red press button on the RCL 5300 indicator panel, and a code for the applied output terminal is indicated in the display. The terminal code is indicated within the 900-999 group.
Terminal codes 900-999	The terminal codes are indicated within the error code groups 700-799 and 800-899. For each code is indicated the output of the concerned component.

In the tables below is indicated:
- Error code/terminal code,
- Description of error,
- Cause of error,
- Suggestion for how to remedy the error,
- Error level, e.g. interference from the safety system in case of errors:
  - Warning: An error is indicated, but the loader can continue to work.
  - Error: An error is indicated, but the loader's performance is reduced.
  - Panic: An error is indicated, and the loader is stopped.

Error codes 0-499

Indicate general component errors as well as communication failures between the components.

Error code	Description	Cause	Remedy	Error level
001	Stop button pushed.	One or several stop buttons have been pushed.	All stop buttons must be pulled out.	Error
		The stop button connection from the RCL 5300 through all modules and back to the RCL 5300 again has been disconnected.	Check that there is power all the way through the stop button circuit. It must be possible to measure power supply on the K737 in the RCL 5300.	
002	Communication failure internally in the RCL 5300.	The B-processor does not receive data from the A-processor.	Check the CAN communication and the CAN termination on the CAN 1.	Panic
003	No transmission from the RCL to the ECT 5320.	The ECT 5320 does not receive data from the RCL 5300.	Check that the RCL 5300 is turned on and that there is CAN communication between the two modules.	Warning
		The software versions in the ECT 5320 and the RCL 5300 are not compatible.	Contact HMF for updating of software.	
004	RAM error.	The RCL 5300 has an internal RAM error.	Change the RCL 5300.	Panic
005	Internal Real Time Clock, communication failure.	The RCL 5300 does not communicate with the internal Real Time Clock.	Restart the RCL 5300. If the failure continues, change the RCL 5300.	Warning
006	Real Time Clock, battery.	The back-up battery for the Real Time Clock has low battery voltage.	Warning for 20 seconds. The RCL 5300 functions normally except from certain black box registrations.	Warning
010	Proximity switch at top seat not activated	When activating the loader functions, the proximity switch at the top seat is not activated.	The proximity switch of the seat must be activated. There is a failure in the proximity switch, the cable or the plug.	Panic
011	Internal data communication failure RCLB system 1.	There is a failure in the internal communication between the A-processor and the B-processor.	Restart the RCL 5300.	Panic
		The software versions in the two processors are not compatible.	Download compatible software.	
012	Internal data communication failure RCLB system 2.	There is a failure in the internal communication between the A-processor and the B-processor.	Restart the RCL 5300.	Panic
		The software versions in the two processors are not compatible.	Download compatible software.	
013	Internal data communication failure RCLB	There is a failure in the internal communication between the A-processor and the B-processor.	Restart the RCL 5300.	Panic

	system 3.	The software versions in the two processors are not compatible.	Download compatible software.	
014	Internal data communication failure RCLB system 4.	There is a failure in the internal communication between the A-processor and the B-processor.	Restart the RCL 5300.	Panic
		The software versions in the two processors are not compatible.	Download compatible software.	
015	Internal data communication failure RCLB system 5.	There is a failure in the internal communication between the A-processor and the B-processor.	Restart the RCL 5300.	Panic
		The software versions in the two processors are not compatible.	Download compatible software.	
016	Internal data communication failure RCLB system 6.	There is a failure in the internal communication between the A-processor and the B-processor.	Restart the RCL 5300.	Panic
		The software versions in the two processors are not compatible.	Download compatible software.	
080	Failure on output in the RCL 5300 for sensors.	Overloading or short circuit in the outputs for the power supply to the sensors (K2xx).	Check the sensors as well as the cable connections and the plug and socket-outlets for the K2xx terminals for short circuits.	Warning
081	Failure on output in the RCL 5300 for sensors.	Overloading or short circuit in the outputs for the power supply to the sensors (K2xx).	Check the sensors as well as the cable connections and the plug and socket-outlets for the K2xx terminals for short circuits.	Panic
091	CAN bus error when starting up.	The RCL 5300 is in CAN Open start up mode. It is inactive and does not transmit data.	Restart the RCL 5300.	Panic
		Incorrect software.	Download the most recent software.	
092	CAN bus interrupted	The RCL 5300 is in CAN Open interrupted mode. It does not communicate with other CAN modules.	Disconnect the service terminal (or the PC). Restart the RCL 5300. Contact HMF if this does not help.	Panic
		Incorrect software.	Download the most recent software.	
093	Can-Bus boot up condition.	The RCL 5300 remains in boot up mode (start up).	Disconnect the service terminal (or the PC). Restart the RCL 5300. Contact HMF if this does not help.	Panic
		Incorrect software.	Download the most recent software.	
099	Several system errors.	Several errors have occurred at one time during configuration of the controller.	Correct the profile and save it in the controller, which has to be restarted.	Panic
100	Internal PDO configuration error (System 1).	There is an internal software configuration error.	Contact HMF for updating of software.	Panic
101	CIO5399, communication failure.	There is no CAN-communication with the A processor in the CIO 5399 controller (RCL 5300 used as an extra in-out controller).	Check the power supply and the ignition for the controller. Check the CAN connection and the	Panic

			termination to the controller. Change the controller.	
102	CIO 5399, communication failure.	There is no CAN-communication with the B processor in the CIO 5399 controller (RCL 5300 used as an extra in-out controller).	Check the power supply and the ignition for the controller. Check the CAN connection and the termination to the controller. Change the controller.	Panic
103	CIO 5070/5071, communication failure.	There is no CAN-communication with the CIO 5070/5071 controller.	Check the power supply and the ignition for the controller. Check the CAN connection and the termination to the controller. Change the controller.	Panic
104	FJC 5330, communication failure.	There is no CAN-communication with the A processor in the FJC 5330 controller.	Check the power supply and the ignition for the controller. Check the CAN connection and the termination to the controller. Change the controller.	Panic
105	FJC 5330, communication failure.	There is no CAN-communication with the B processor in the FJC 5330 controller.	Check the power supply and the ignition for the controller. Check the CAN connection and the termination to the controller. Change the controller.	Panic
106	WIC 5333, communication failure.	There is no CAN-communication with the A processor in the WIC 5333 controller.	Check the power supply and the ignition for the controller. Check the CAN connection and the termination to the controller. Change the controller.	Panic
107	WIC 5333, communication failure.	There is no CAN-communication with the B processor in the WIC 5333 controller.	Check the power supply and the ignition for the controller. Check the CAN connection and the termination to the controller. Change the controller.	Panic
108	RC-electronic box, communication failure	There is no CAN-communication with the processor in the electronic box of the radio remote control system.	Check the power supply and the ignition for the controller. Check the CAN connection and the termination to the controller. Change the controller.	Panic
118	AIC 5062 controller, communication failure	There is no CAN-communication with the processor in the AIC 5062 controller for the standard EVS system.	Check the power supply and the ignition for the AIC 5062 controller.	Panic
119	AIC 5062 controller, internal communication failure	There is a failure in the communication between the internal heel sensors and the processor in the AIC 5062 controller for the standard EVS system.	Check the cable connection between the sensors and the print in the AIC 5062 controller.	Panic
120	AIC 5062/2 controller,	There is no CAN-communication with the processor in the AIC	Check the power supply and the	Panic

	communication failure	5062/2 controller for the extended EVS system in connection with personnel basket.	ignition for the AIC 5062/2 controller.	
121	AIC 5062/2 controller, internal communication failure	There is a failure in the communication between the internal heel sensors and the processor in the AIC 5062 controller for the standard EVS system.	Check the cable connection between the sensors and the print in the AIC 5062/2 controller.	Panic
150	RCL 5301, EVS, internal communication failure.	The cable for the AIC-controller in the RCL 5301 has come loose.	Connect the cable.	Panic
		Internal error in the RCL 5301 module.	Change the RCL 5301.	
151	EVS error	Configuration of EVS is incorrect.	Check the configuration by means of a CGW 5355 service terminal.	Panic
180	CAN-RC, no radio communication.	There is no radio connection between the radio remote control box and the radio receiver.	Restart the remote control box. Check the transmitter and receiver units for failures.	Warning
181	CAN-RC, start up error.	Communication failure between the RCL 5300 and the electronic box of the radio remote control system.	Restart the remote control box.	Panic
		The configurated type of radio remote control is wrong.	Check the configuration.	
		Wrong software version in the RCL 5300.	Download the most recent software.	
182	CAN-RC, error	Communication failure between the RCL 5300 and the electronic box of the radio remote control system.	Restart the remote control box.	Panic
		The configurated type of radio remote control is wrong.	Check the configuration.	
		Wrong software version in the RCL 5300.	Download the most recent software.	
183	CAN-RC, stop button, error.	The stop button of the radio remote control box is pushed.	Pull out the stop button.	Panic
		The configurated type of radio remote control is wrong.	Check the configuration.	
184	CAN-RC, Wire security 1, error.	No Wire security input signal (0 volt).	Check the cable connection from the electronic box to the RCL 5300 for short circuit or interrupted connection.	Panic
		The input signal is not received on the correct terminal.	Connect the input signal to the correct terminal or configurate the terminal again.	
185	CAN-RC, Wire security 2, error.	The Wire security input signal (system voltage) is received, but the CAN bus communication informs that there should not be any signal.	Check the cable from the electronic box to the RCL 5300.	Panic
186	CAN-RC, stop	The stop button circuit on the	Pull out the stop button. Check the stop button and its wire connection to	Panic

	button - RUN, error.	remote control box is interrupted.	the printed circuit board.	
187	CAN-RC, unknown type	The configurated type of radio remote control is wrong.	Configurate the type of radio remote control used.	Panic
		The radio remote control system fitted is unknown to the RCL 5300.	Check the type of radio remote control. Check the software of the radio remote control.	
192	Modul Time Out configuration error	The RCL 5300 B-processor does not receive data from the RCL 5300 A-processor.	Check the CAN termination on the CAN 1 plug.	Panic
		There is no CAN bus communication with the Scanreco electronic box.	Check the power supply and/or the CAN bus connection (the cable) for the Scanreco electronic box.	
201	PVED, output error, slewing	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the loader's slewing function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
202	PVED, output error, boom	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the loader's boom function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
203	PVED, output error, jib	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the loader's jib function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
204	PVED, output error, extension	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the loader's extension function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
205	PVED, output error, Fly-Jib	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the Fly-Jib function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
206	PVED, output error, Fly-Jib extension	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the "Fly-Jib-extension" function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset,	Panic

			when pushing the red press button.	
207	PVED, output error, winch	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the winch function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
208	PVED, output error, rotator	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the rotator function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
209	PVED, output error, grab	The RCL 5300 indicates errors in connection with the output for the PVED electric activation for the grab function.	When pushing and holding down the red press button, a new error code appears, indicating the specific error (221-228). If the cause of the error is no longer present, the error indication is reset, when pushing the red press button.	Panic
221	PVED, internal error	Internal error in the PVED.	Interrupt the power supply for the PVED and re-connect it. Check the diode of the PVED. If the diode shows a red light, change the PVED.	Panic
223	PVED, configuration error	There are incorrect or missing data for the setup of the PVED.	Check the setup of the PVED in “CAN Valves” by means of the CGW 5355.	Panic
224	PVED, incorrect voltage	The power supply for the PVED electric activations is too high or too low.	Check the power supply. It must be between 11-32 volt.	Panic
225	PVED, wrong spool position	The spool does not return into neutral or returns too slowly into neutral, when the control levers of the remote control box are moved into neutral position.	Check by means of the control valve lever that the spool can move completely back into neutral position. Interrupt the power supply for the PVED and re-connect it.	Panic
		The spool data in the PVED are incorrect.	Check the spool data by means of the CGW 5355 service terminal in the menu item “Spool”.	
226	PVED, spool is stuck in neutral position	The PVED does not move the spool away from neutral position or the spool moves too slowly, when the control levers of the remote control box are activated.	Check by means of the control valve lever that the spool can be moved completely away from neutral position. An internal hydraulic error in the PVED may be the reason for the spool not moving.	Panic
		There is not enough hydraulic pressure for activating the PVED.	Check the oil flow and the pressure.	

227	PVED, position difference	The PVED does not move the spool completely into the position corresponding to the regulation signal coming from the control lever of the remote control box.	Check by means of the control valve lever whether the spool can move freely and without any friction in the entire spool travel. An internal hydraulic error in the PVED may be the reason for the spool not moving into the entire spool travel.	Panic
		The spool curve in the PVED is incorrect.	Program the spool curve 1 both in ”Curve A” and ”Curve B” by means of the CGW 5355.	
228	PVED, communication failure	The RCL 5300 does not communicate with the PVED electric activation.	Check the power supply for the PVED and the status of its diode.	Panic
		Error on the PVED output. The PVED cannot be set for a loader function (Node Id), which is not fitted on the loader.	Check by means of the CGW 5355 that the Node Id of the PVED is correct for the current loader function.	
401	Pressure difference, MP1>MP2.	The highest signal is used by the RCL 5300. If the signal difference between the highest and lowest signal exceeds the fixed value, this error message will occur.	Check the cable connection and the plug and socket-outlet for the two transducers. Change the defective component.	Panic
402	Pressure difference, MP2>MP1.	The highest signal is used by the RCL 5300. If the signal difference between the highest and lowest signal exceeds the fixed value, this error message will occur.	Check the cable connection and the plug and socket-outlet for the two transducers. Change the defective component.	Panic
407	Pressure difference FJP1>FJP2.	The highest signal is used by the RCL 5300. If the signal difference between the highest and lowest signal exceeds the fixed value, this error message will occur.	Check the cable connection and the plug and socket-outlet for the two transducers. Change the defective component.	Panic
408	Pressure difference FJP2>FJP1.	The highest signal is used by the RCL 5300. If the signal difference between the highest and lowest signal exceeds the fixed value, this error message will occur.	Check the cable connection and the plug and socket-outlet for the two transducers. Change the defective component.	Panic
411	Pressure difference, WP1>WP2.	The highest signal is used by the RCL 5300. If the signal difference between the highest and lowest signal exceeds the fixed value, this error message will occur.	Check the cable connection and the plug and socket-outlet for the two transducers. Change the defective component.	Panic
412	Pressure difference, WP2>WP1.	The highest signal is used by the RCL 5300. If the signal difference between the highest and lowest signal exceeds the fixed value, this error message will occur.	Check the cable connection and the plug and socket-outlet for the two transducers. Change the defective component.	Panic
450	EVS, X-axis difference	The signal difference between the two X-axis sensors is larger than the fixed value.	Carry out a basic calibration of the EVS system (absolute horizontal).	Panic
451	EVS, Y-axis difference	The signal difference between the two Y-axis sensors is larger than	Carry out a basic calibration of the EVS system (absolute horizontal).	Panic

		the fixed value.		
460	High pressure level, MCP1	The compensation pressure (MCP1) is too high during a “boom up”-movement.	Hold down the red press button on the RCL 5300 indicator panel, while activating the "boom down”-function and then “boom up" again. The error is thus reset. Check the signal from the pressure transducer. Change the pressure transducer.	Panic
461	Low pressure level, MCP1.	The compensation pressure (MCP1) is too low during a “boom up”-movement.	Hold down the red press button on the RCL 5300 indicator panel, while activating the "boom up”-function and then “boom down" again. This is how to reset the error. Check the signal from the pressure transducer. Change the pressure transducer.	Panic
462	High pressure level, FJCP1	The compensation pressure (FJCP1) is too high during a “boom up”-movement.	Hold down the red press button on the RCL 5300 indicator panel, while activating the "Fly-Jib down”-function and then “Fly-Jib up" again. The error is thus reset. Check the signal from the pressure transducer. Change the pressure transducer.	Panic
463	Low pressure level, FJCP1	The compensation pressure (FJCP1) is too low during a “boom up”-movement.	Hold down the red press button on the RCL 5300 indicator panel, while activating the "Fly-Jib up”-function and then “Fly-Jib down" again. This is how to reset the error. Check the signal from the pressure transducer. Change the pressure transducer.	Panic
466	Pressure transducer MP1, fixed	The signal from the pressure transducer MP1 does not vary when activating the loader's boom function.	Check the signal by means of the CGW 5355 (“Monitor, Loads, Crane”). Check the pressure transducer, the cable connections for the pressure transducer and that the connection in the RCL 5300 is correct.	Panic
467	Pressure transducer FJP1, fixed	The signal from the pressure transducer FKP1 does not vary when activating the Fly-Jib function.	Check the signal by means of the CGW 5355 (“Monitor, Loads, Crane”). Check the pressure transducer, the cable connections for the pressure transducer and that the connection in the RCL 5300 is correct.	Panic
479	PVSK loader mode/dump, malfunction.	Feedback from the PVEO-DI or the PVED-CC electric activation that the activation for the loader operation does not correspond to the signal coming from the RCL 5300.	The pump has not been started, or the oil flow (l/min) from the pump is too low. Check the PVEO-DI / PVED-CC electric activation for faults. Check the output signal from the RCL 5300.	Panic

			Check the spool feedback from the electric activation. Check the input signal from the PVEO-DI to the RCL 5300.	
480	PVSK stabilizer mode/dump, malfunction.	Feedback from the PVEO-DI or the PVED-CC electric activation that the activation for the stabilizer operation does not correspond to the signal coming from the RCL 5300.	The pump has not been started, or the oil flow (l/min) from the pump is too low. Check the PVEO-DI / PVED-CC electric activation for faults. Check the output signal from the RCL 5300. Check the spool feedback from the electric activation. Check the input signal from the PVEO-DI to the RCL 5300.	Panic
485	Spool sensor error, slewing.	Is constantly moved towards A or B, no signal or error in the spool sensor.	Check the cable connection and the plug and socket-outlet. Check the signal from the spool sensor. Check whether the error message stops, when the signal A and B terminals for the RCL 5300 are connected to ground (-).	Panic
486	Spool sensor error, boom.	Is constantly moved towards A or B, no signal or error in the spool sensor.	Check the cable connection and the plug and socket-outlet. Check the signal from the spool sensor. Check whether the error message stops, when the signal A and B terminals for the RCL 5300 are connected to ground (-).	Error
487	Spool sensor error, jib.	Is constantly moved towards A or B, no signal or error in the spool sensor.	Check the cable connection and the plug and socket-outlet. Check the signal from the spool sensor. Check whether the error message stops, when the signal A and B terminals for the RCL 5300 are connected to ground (-).	Error
488	Spool sensor error, extension.	Is constantly moved towards A or B, no signal or error in the spool sensor.	Check the cable connection and the plug and socket-outlet. Check the signal from the spool sensor. Check whether the error message stops, when the signal A and B terminals for the RCL 5300 are connected to ground (-).	Error
489	Spool sensor error, Fly-Jib - jib	Is constantly moved towards A or B, no signal or error in the spool sensor.	Check the cable connection and the plug and socket-outlet. Check the signal from the spool sensor. Check whether the error message	Error

			stops, when the signal A and B terminals for the RCL 5300 are connected to ground (-).	
490	Spool sensor error, Fly-Jib - extension	Is constantly moved towards A or B, no signal or error in the spool sensor.	Check the cable connection and the plug and socket-outlet. Check the signal from the spool sensor. Check whether the error message stops, when the signal A and B terminals for the RCL 5300 are connected to ground (-).	Error
491	Spool sensor error, winch.	Is constantly moved towards A or B, no signal or error in the spool sensor.	Check the cable connection and the plug and socket-outlet. Check the signal from the spool sensor. Check whether the error message stops, when the signal A and B terminals for the RCL 5300 are connected to ground (-).	Error

Error codes 500-599

Indicate errors in connection with analogue sensors (pressure transducers, temperature sensors).

Push the red press button on the RCL 5300 indicator panel, and a code for the applied input terminal is indicated in the display.
The terminal code is indicated within the 600-699 group.

Error code	Description	Cause	Remedy	Error level
501	Low signal, MP1	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the MP1 Check the signal from the MP1.	Panic
502	Low signal, MP2	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the MP2. Check the signal from the MP2.	Panic
503	Low signal, MCP1	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the MCP1 Check the signal from the MCP1.	Panic
507	Low signal, FJP1	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the FJP1. Check the signal from the FJP1.	Panic
508	Low signal, FJP2	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the FJP2. Check the signal from the FJP2.	Panic
509	Low signal, FJCP1	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the FJCP1. Check the signal from the FJCP1.	Panic
511	Low signal, WP1	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the WP1. Check the signal from the WP1.	Panic
512	Low signal, WP2	The pressure transducer gives a too low signal.	Check the cable connection and the plug and socket-outlet for the	Panic

		The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	WP2. Check the signal from the WP2.	
540	Low signal, temperature sensor.	The pressure transducer gives a too low signal. The signal wire is interrupted or short-circuited to ground. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the temperature sensor. Check the signal from the temperature sensor.	Error
551	High signal, MP1	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the MP1 Check the signal from the MP1.	Panic
552	High signal, MP2	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the MP2. Check the signal from the MP2.	Panic
553	High signal, MCP1	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the MCP1 Check the signal from the MCP1.	Panic
557	High signal, FJP1	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the FJP1. Check the signal from the FJP1.	Panic
558	High signal, FJP2	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the FJP2. Check the signal from the FJP2.	Panic
559	High signal, FJCP1	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the FJCP1. Check the signal from the FJCP1.	Panic
561	High signal, WP1	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the WP1. Check the signal from the WP1.	Panic
562	High signal, WP2	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply.	Check the cable connection and the plug and socket-outlet for the WP2. Check the signal from the WP2.	Panic

		Failure in the pressure transducer.		
590	High signal, temperature sensor.	The pressure transducer gives a too high signal. The signal wire is short-circuited to the power supply. Failure in the pressure transducer.	Check the cable connection and the plug and socket-outlet for the temperature sensor. Check the signal from the temperature sensor.	Error

Terminal codes 600-699

The terminal codes are indicated for the error group 500-599.
For each code is indicated the input of the concerned sensor.

Code	Description	Explanation	Remedy
601	AD1 RCL 5300 B, analogue input error.	Error on the AD1 (analogue/digital 1) input for the B-processor.	Please see the current error code.
602	AD2 RCL 5300 B, analogue input error.	Error on the AD2 (analogue/digital 2) input for the B-processor.	Please see the current error code.
603	AD3 RCL 5300 A, analogue input error.	Error on the AD3 (analogue/digital 3) input for the A-processor.	Please see the current error code.
604	AD4 RCL 5300 A, analogue input error.	Error on the AD4 (analogue/digital 4) input for the A-processor.	Please see the current error code.
605	AD5 RCL 5300 A, analogue input error.	Error on the AD5 (analogue/digital 5) input for the A-processor.	Please see the current error code.
606	AD6 RCL 5300 A, analogue input error.	Error on the AD6 (analogue/digital 6) input for the A-processor.	Please see the current error code.
607	AD7 RCL 5300 B, analogue input error.	Error on the AD7 (analogue/digital 7) input for the A-processor.	Please see the current error code.
608	AD1 FJC 5330 A analogue input error.	Error on the AD1 (analogue/digital 1) input for the A-processor.	Please see the current error code.
609	AD2 FJC 5330 A analogue input error.	Error on the AD2 (analogue/digital 2) input for the A-processor.	Please see the current error code.
610	AD3 FJC 5330 B analogue input error.	Error on the AD3 (analogue/digital 3) input for the B-processor.	Please see the current error code.
611	AD4 FJC 5330 B analogue input error.	Error on the AD4 (analogue/digital 4) input for the B-processor.	Please see the current error code.
612	AD1 WIC 5333 A error on the analogue input.	Error on the AD1 (analogue/digital 1) input for the A-processor.	Please see the current error code.
613	AD2 WIC 5333 A error on the analogue input.	Error on the AD2 (analogue/digital 2) input for the A-processor.	Please see the current error code.
614	AD3 WIC 5333 B error on the	Error on the AD3 (analogue/digital 3) input for the B-processor.	Please see the current error code.

	analogue input.		
615	AD4 WIC 5333 B error on the analogue input.	Error on the AD4 (analogue/digital 4) input for the B-processor.	Please see the current error code.
616	AD1 CIO 5376 A error on the analogue input.	Error on the AD1 (analogue/digital 1) input for the A-processor in the CIO 5376 controller in the EVS system. There is a short-circuit on the input or no communication with the processor.	Please see the current error code.
617	AD2 CIO 5376/2 A error on the analogue input.	Error on the AD2 (analogue/digital 2) input for the A-processor in the CIO 5376/2 controller in the EVS system (an extra controller in connection with personnel basket). There is a short-circuit on the input or no communication with the processor.	Please see the current error code.
618	AD3 CIO 5376 B error on the analogue input.	Error on the AD3 (analogue/digital 1) input for the B-processor in the CIO 5376 controller in the EVS system. There is a short-circuit on the input or no communication with the processor.	Please see the current error code.
619	AD4 CIO 5376/2 B error on the analogue input.	Error on the AD4 (analogue/digital 2) input for the B-processor in the CIO 5376/2 controller in the EVS system. (an extra controller in connection with personnel basket). There is a short-circuit on the input or no communication with the processor.	Please see the current error code.

Error codes 700-799

Indicate errors (below the marginal value) in connection with digital components (solenoid valves, engine control etc.).

Push the red press button on the RCL 5300 indicator panel, and a code for the applied output terminal is indicated in the display.
The terminal code is indicated within the 900-999 group.

Error code	Description	Cause	Remedy	Error level
701	Dump valve, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Panic
703	Stabilizer change-over valve, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
704	HDL-valve, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
705	Regeneration - boom, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
706	Regeneration - jib, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
707	Regeneration - extension, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
708	Regeneration – Fly-Jib - extension, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
709	Engine full RPM, current below level.	The output current is below the marginal value specified. The connection to the component is	Check the cable connection and the plug and socket-outlet for the component, or whether the	Warning

		interrupted.	component is defective.	
710	Engine RPM -, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
711	Engine RPM +, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
712	Spotlight, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
713	PVEO-DI electric activation, PVSK stabilizer mode, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
714	PVEO-DI electric activation, PVSK loader mode, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
715	Horn, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
716	Warning light, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
717	Engine start, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
718	Engine stop, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
733	Stowing of winch, current below level.	The output current is below the marginal value specified. The connection to the component is	Check the cable connection and the plug and socket-outlet for the component, or whether the	Warning

		interrupted.	component is defective.	
734	Change-over valve, Fly-Jib/rotator, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
735	Change-over valve, Fly-Jib/grab, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
736	Stabilizers – low speed, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
737	Stabilizers – high speed, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
738	Stabilizers – direction A, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
739	Stabilizers – direction B, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
740	Stabilizer valve 1, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
741	Stabilizer valve 2, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
742	Stabilizer valve 3, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
743	Stabilizer valve 4, current below level.	The output current is below the marginal value specified. The connection to the component is	Check the cable connection and the plug and socket-outlet for the component, or whether the	Warning

		interrupted.	component is defective.	
744	Stabilizer valve 5, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
745	Stabilizer valve 6, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
746	Stabilizer valve 7, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
747	Stabilizer valve 8, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
748	Stabilizer valve 9, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
749	Stabilizer valve 10, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
750	Stabilizer valve 11, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
751	Stabilizer valve 12, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
752	Lever configuration 1, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
753	Lever configuration 2, current below level.	The output current is below the marginal value specified. The connection to the component is	Check the cable connection and the plug and socket-outlet for the component, or whether the	Warning

		interrupted.	component is defective.	
754	Lever configuration 3, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
755	Lever configuration 4, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
756	Lever configuration 5, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
757	Lever configuration 6, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
758	Lever configuration 7, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
759	Lever configuration 8, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
776	Radio control button 1, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
777	Radio control button 2, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
778	Radio control button 3, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
779	Radio control button 4, current below level.	The output current is below the marginal value specified. The connection to the component is	Check the cable connection and the plug and socket-outlet for the component, or whether the	Warning

		interrupted.	component is defective.	
780	Radio control button 5, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
781	Radio control button 6, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
782	Radio control button 7, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
783	Radio control button 8, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
784	Radio control button 9, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
785	Radio control button 10, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
786	Radio control button 11, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
787	Radio control button 12, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
788	Radio control button 13, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
789	Radio control button 14, current below level.	The output current is below the marginal value specified. The connection to the component is	Check the cable connection and the plug and socket-outlet for the component, or whether the	Warning

		interrupted.	component is defective.	
790	Radio control button 15, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
791	Radio control button 16, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
792	Radio control button 17, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
793	Radio control button 18, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
794	Radio control button 19, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
795	Radio control button 20, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
796	Radio control button 21, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
797	Radio control button 22, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
799	Unknown signal output, current below level.	The output current is below the marginal value specified. The connection to the component is interrupted. One output is permanently set at ”ON”, but no components are connected (not loaded).	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning

Error codes 800-899

Indicate errors (above the marginal value) in connection with digital components (solenoid valves, engine control etc.).

Push the red press button on the RCL 5300 indicator panel, and a code for the applied output terminal is indicated in the display.
The terminal code is indicated within the 900-999 group.

Error code	Description	Cause	Remedy	Error level
801	Dump valve, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Panic
803	Stabilizer change-over valve, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
804	HDL-valve, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
805	Regeneration - boom, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
806	Regeneration - jib, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
807	Regeneration - extension, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
808	Regeneration – Fly-Jib - extension, above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
809	Engine full RPM, current above level.	The output current exceeds the marginal value specified. The connection to the component	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning

		is short-circuited.		
810	Engine RPM −, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
811	Engine RPM +, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
812	Spotlight, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
813	PVEO-DI electric activation, PVSK stabilizer mode, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
814	PVEO-DI electric activation, PVSK loader mode, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
815	Horn, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
816	Warning light, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
817	Engine start, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
818	Engine stop, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
833	Stowing of winch, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning

836	Stabilizers – low speed, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
837	Stabilizers – high speed, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
838	Stabilizers – direction A, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
839	Stabilizers – direction B, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
840	Stabilizer valve 1, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
841	Stabilizer valve 2, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
842	Stabilizer valve 3, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
843	Stabilizer valve 4, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
844	Stabilizer valve 5, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
845	Stabilizer valve 6, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning

846	Stabilizer valve 7, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
847	Stabilizer valve 8, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
848	Stabilizer valve 9, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
849	Stabilizer valve 10, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
850	Stabilizer valve 11, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
851	Stabilizer valve 12, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
852	Lever configuration 1, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
853	Lever configuration 2, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
854	Lever configuration 3, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
855	Lever configuration 4, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning

856	Lever configuration 5, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
857	Lever configuration 6, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
858	Lever configuration 7, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning
859	Lever configuration 8, current above level.	The output current exceeds the marginal value specified. The connection to the component is short-circuited.	Check the cable connection and the plug and socket-outlet for the component, or whether the component is defective.	Warning

Terminal codes 900-999

The terminal codes are indicated within the error code groups 700-799 and 800-899.
For each code is indicated the output of the concerned component.

Code	Description	Cause	Remedy
901	RCL 5300, dig. 1, output error.	Error on digital output O1 in the RCL 5300.	Please see the current error code.
902	RCL 5300, dig. 2, output error.	Error on digital output O2 in the RCL 5300.	Please see the current error code.
903	RCL 5300, dig. 3, output error.	Error on digital output O3 in the RCL 5300.	Please see the current error code.
904	RCL 5300, dig. 4, output error.	Error on digital output O4 in the RCL 5300.	Please see the current error code.
911	FJC 5330, dig. 1, output error.	Error on digital output O1 in the FJC 5330.	Please see the current error code.
912	FJC 5330, dig. 2, output error.	Error on digital output O2 in the FJC 5330.	Please see the current error code.
913	WIC 5333, dig. 1, output error.	Error on digital output O1 in the WIC 5333.	Please see the current error code.
914	WIC 5333, dig. 2, output error.	Error on digital output O2 in the WIC 5333.	Please see the current error code.
921	CIO 5070/5071, dig. 1, output error.	Error on digital output DIG. OUT 1 in the CIO 5070/5071.	Please see the current error code.
922	CIO 5070/5071, dig. 2, output error.	Error on digital output DIG. OUT 2 in the CIO 5070/5071.	Please see the current error code.
923	CIO 5070/5071, dig. 3, output error.	Error on digital output DIG. OUT 3 in the CIO 5070/5071.	Please see the current error code.
924	CIO 5070/5071, dig. 4, output error.	Error on digital output DIG. OUT 4 in the CIO 5070/5071.	Please see the current error code.
925	CIO 5070/5071, dig. 5, output error.	Error on digital output DIG. OUT 5 in the CIO 5070/5071.	Please see the current error code.
926	CIO 5070/5071, dig. 6, output error.	Error on digital output DIG. OUT 6 in the CIO 5070/5071.	Please see the current error code.
927	CIO 5070/5071, dig. 7, output error.	Error on digital output DIG. OUT 7 in the CIO 5070/5071.	Please see the current error code.
928	CIO 5070/5071, dig. 8, output error.	Error on digital output DIG. OUT 8 in the CIO 5070/5071.	Please see the current error code.
929	CIO 5070/5071, dig. 9, output error.	Error on digital output DIG. OUT 9 in the CIO 5070/5071.	Please see the current error code.
930	CIO 5070/5071, dig. 10, output error.	Error on digital output DIG. OUT 10 in the CIO 5070/5071.	Please see the current error code.

931	CIO 5070/5071, dig. 11, output error.	Error on digital output DIG. OUT 11 in the CIO 5070/5071.	Please see the current error code.
932	CIO 5070/5071, dig. 12, output error.	Error on digital output DIG. OUT 12 in the CIO 5070/5071.	Please see the current error code.
933	CIO 5071, dig. 13, output error.	Error on digital output DIG. OUT 13 in the CIO 5071.	Please see the current error code.
934	CIO 5071, dig. 14, output error.	Error on digital output DIG. OUT 14 in the CIO 5071.	Please see the current error code.
935	CIO 5071, dig. 15, output error.	Error on digital output DIG. OUT 15 in the CIO 5071.	Please see the current error code.
936	CIO 5071, dig. 16, output error.	Error on digital output DIG. OUT 16 in the CIO 5071.	Please see the current error code.
937	CIO 5374 (controller 1), dig. 1, output error.	Error on digital output O1 in the CIO 5374 (controller 1 out of two CIO 5374 controllers fitted).	Please see the current error code.
938	CIO 5374 (controller 1), dig. 2, output error.	Error on digital output O2 in the CIO 5374 (controller 1 out of two CIO 5374 controllers fitted).	Please see the current error code.
939	CIO 5374 (controller 1), dig. 3, output error.	Error on digital output O3 in the CIO 5374 (controller 1 out of two CIO 5374 controllers fitted).	Please see the current error code.
940	CIO 5374 (controller 1), dig. 4, output error.	Error on digital output O4 in the CIO 5374 (controller 1 out of two CIO 5374 controllers fitted).	Please see the current error code.
941	CIO 5374 (controller 2), dig. 1, output error.	Error on digital output O1 in the CIO 5374 (controller 2 out of two CIO 5374 controllers fitted).	Please see the current error code.
942	CIO 5374 (controller 2), dig. 2, output error.	Error on digital output O2 in the CIO 5374 (controller 2 out of two CIO 5374 controllers fitted).	Please see the current error code.
943	CIO 5374 (controller 2), dig. 3, output error.	Error on digital output O3 in the CIO 5374 (controller 2 out of two CIO 5374 controllers fitted).	Please see the current error code.
944	CIO 5374 (controller 2), dig. 4, output error.	Error on digital output O4 in the CIO 5374 (controller 2 out of two CIO 5374 controllers fitted).	Please see the current error code.
951	Radio remote control, error on digital output 1.	Error on digital output 1 in the electronic box of the radio remote control system.	Please see the current error code.
952	Radio remote control, error on digital output 2.	Error on digital output 2 in the electronic box of the radio remote control system.	Please see the current error code.
953	Radio remote control, error on digital output 3.	Error on digital output 3 in the electronic box of the radio remote control system.	Please see the current error code.
954	Radio remote	Error on digital output 4 in the	Please see the current error code.

	control, error on digital output 4.	electronic box of the radio remote control system.	
955	Radio remote control, error on digital output 5.	Error on digital output 5 in the electronic box of the radio remote control system.	Please see the current error code.
956	Radio remote control, error on digital output 6.	Error on digital output 6 in the electronic box of the radio remote control system.	Please see the current error code.
957	Radio remote control, error on digital output 7.	Error on digital output 7 in the electronic box of the radio remote control system.	Please see the current error code.
958	Radio remote control, error on digital output 8.	Error on digital output 8 in the electronic box of the radio remote control system.	Please see the current error code.
959	Radio remote control, error on digital output 9.	Error on digital output 9 in the electronic box of the radio remote control system.	Please see the current error code.
960	Radio remote control, error on digital output 10.	Error on digital output 10 in the electronic box of the radio remote control system.	Please see the current error code.
961	Radio remote control, error on digital output 11.	Error on digital output 11 in the electronic box of the radio remote control system.	Please see the current error code.
962	Radio remote control, error on digital output 12.	Error on digital output 12 in the electronic box of the radio remote control system.	Please see the current error code.
963	Radio remote control, error on digital output 13.	Error on digital output 13 in the electronic box of the radio remote control system.	Please see the current error code.
964	Radio remote control, error on digital output 14.	Error on digital output 14 in the electronic box of the radio remote control system.	Please see the current error code.
965	Radio remote control, error on digital output 15.	Error on digital output 15 in the electronic box of the radio remote control system.	Please see the current error code.
966	Radio remote control, error on digital output 16.	Error on digital output 16 in the electronic box of the radio remote control system.	Please see the current error code.