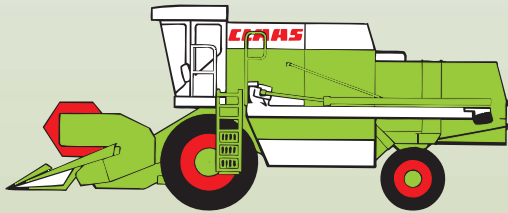


CLAAS



DOMINATOR 140
DOMINATOR 150

Technical Systems

Electric System

SERVICE & PARTS

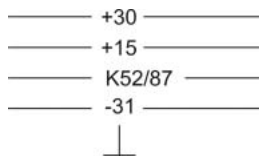
Layout of electric circuit diagrams

Following the circuit diagram layout, all electric circuits are shown in individual circuit diagrams. Some explanations are given below to illustrate the layout.

Numbering of circuit diagrams

DO-e-01a

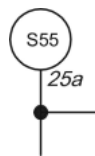
- The respective numbering can be found on the corresponding cover sheet and in the footer.
- Depending on the machine no., the components fitted and the country specification, there may be several individual circuit diagrams 01b, 01c, etc. for a given function.



Potentials

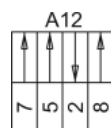
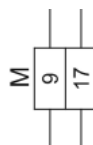
- Main power supply (battery)
- Ignition switch power supply (switched)
- Relay-controlled power supply
- Earth
- Housing earth (external)

Connections



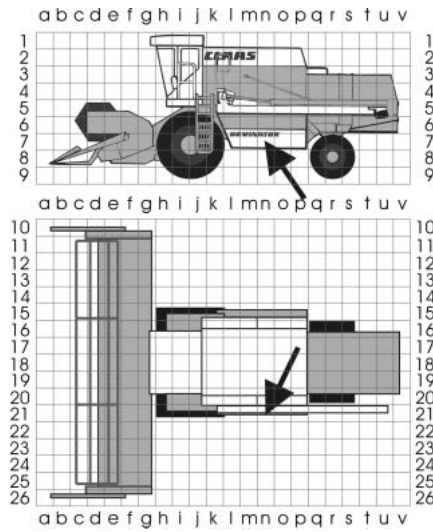
- The description provided **inside** the circle (e.g. „S55”) defines the connection.
- Numbers **next to** the circle (e.g. „25a”) describe the continuation of the cabling in accordance with the circuit diagram numbering. This circuit diagram numbering can be taken among others from the footer.

Designations



- Connectors (e.g. „M”, pin 9 and 17) . Each chapter lists the respective connectors and their pin assignment in the individual connection tables.
- Modules (e.g. „A12 - Speed monitor”) The arrows identify the functional inputs and outputs according to the assignment table provided in chapter **ZE**.

7-n-21 - Position of components according to component grid coordinates



A 1 ... Z 99 - Component designation according to CLAAS standards catalogue

- A- Terminal / Module
- B- Sensor
- E- Lighting
- F- Fuse
- G- Voltage Source
- H- Signalling Device / Lamp
- K- Relay
- M- Electric Motor
- P- Gauge
- R- Potentiometer / Resistor
- S- Switches – Cab Operation
- T- Switches – Terminal Operation
- U- Switches – External Operation
- V- Electronic Component
- W- Antenna
- X- Connector
- Y- Solenoid coil
- Z- Actual Value Function Switch

Interconnection list

- List of connections within the central terminal compartment, stating cross-section (mm²) and colour of cables connected to the machine.

Connector	mm ²	Colour
E -1	1.5	gr
M - 4	1	gr/rd

- rd-red
- bk-black
- br-brown
- wh-white
- bl-blue
- gr-grey
- ye-yellow
- gn-green
- pi-pink
- or–orange
- vi–violet

CONTENTS

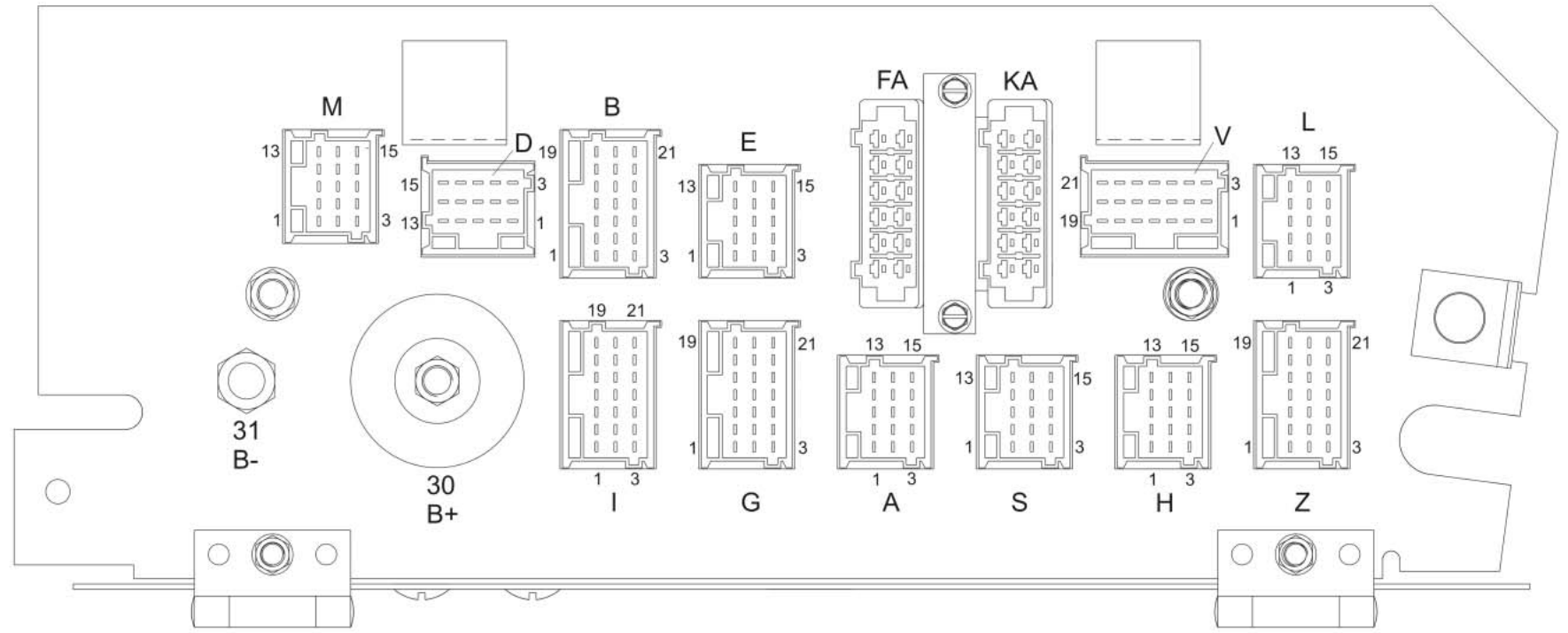
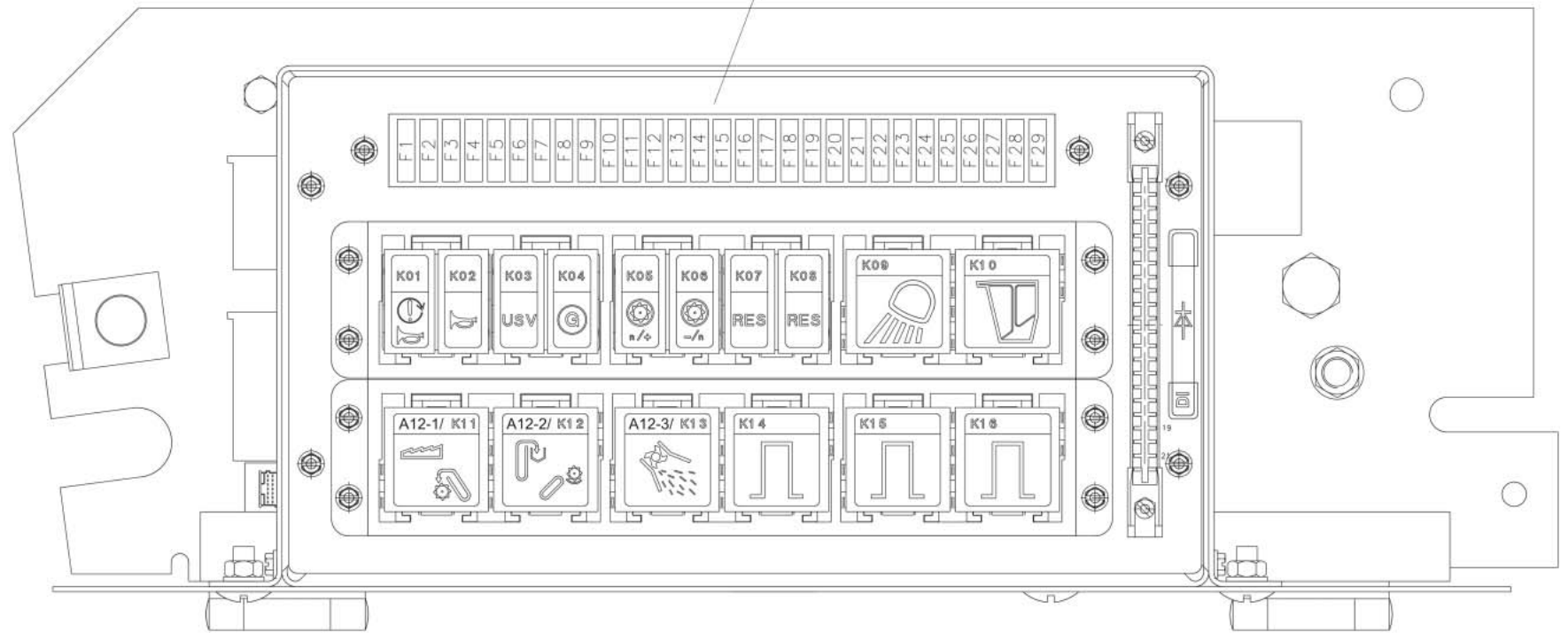
Central terminal compartment	ZE-2
Pin assignment in modules.....	ZE-6
Module A12-1 - Speed monitor Straw walker / Returns speed monitor	ZE-7
Module A12-2 - Speed monitor Feed rake conveyor / Elevator speed monitor	ZE-7
Module A12-3 - Speed monitor Chopper speed monitor.....	ZE-7
Module A15 - Electronic engine control module CATERPILLAR - CAT-3056	ZE-8
Module A15 – Electronic Engine Control CATERPILLAR - C 6.6	ZE-8
01a Main power supply, diesel engine electric starting motor - for electronic engine control CAT-3056.....	01a-2
01b Main power supply, diesel engine electric starting motor - for electronic engine control CAT C 6.6	01b-2
02a Starting the diesel engine and engine control - for electronic engine control CAT-3056	02a-2
02b Starting the diesel engine and engine control - for electronic engine control CAT C 6.6.....	02b-2
03a Diesel engine cut-off system CAT-3056.....	03a-2
03b Diesel engine cut-off system CAT C 6.6	03b-2
04a Road travel circuit, Master valve	04a-2
06a Terminal power supply / Hour meter	06a-2
08a Threshing drum variable-speed drive.....	08a-2
12a Performance monitor	12a-2
13a Straw collector / Reversing horn.....	13a-2
14a Grain tank unloading tube swing	14a-2
17a Front attachment drive, Reverser drive	17a-2
20a Raise/lower front attachment.....	20a-2
21a Reel adjustment.....	21a-2
22a Reel variable-speed drive.....	22a-2
25a Speed monitor	25a-2
26a Machine monitor	26a-2
30a Grain tank full indicator / Warning beacon	30a-2

Electric System	Dominador 140 - 150	TIC
31a	Indicators, Hazard warning flasher	31a-2
32a	Main lighting circuit, Position light.....	32a-2
34a	Work lights, Inside lighting, Instrument lighting	34a-2
35a	Brake light	35a-2
37a	Windscreen wiper	37a-2
38a	Compressor-type air conditioner.....	38a-2
40a	Additional sockets (connection).....	40a-2
Component grid		R-2
Index		index-3

Central terminal compartment

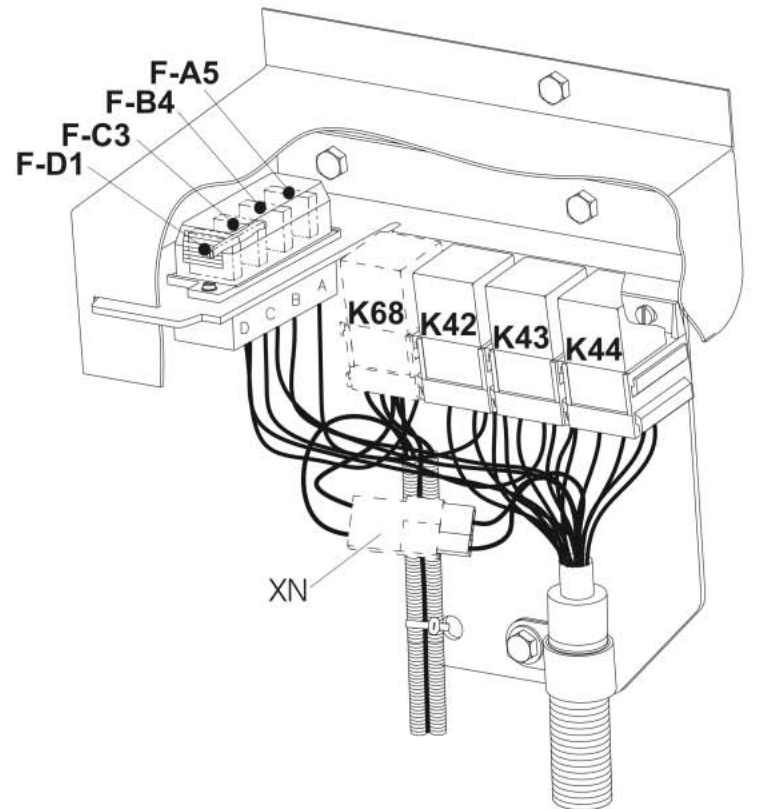
Central terminal compartment

F01 3A	F02 10A	F03 7.5A	F04 10A	F05 10A	F06 10A	F07 10A	F08 10A	F09 10A	F10 7.5A	F11 7.5A	F12 30A	F13 10A	F14 10A	F15 3A	F16 10A	F17 15A	F18 10A	F19 10A	F20 10A	F21 10A	F22 10A	F23 10A	F24 7.5A	F25 10A	F26 10A	F27 10A	F28 10A	F29 10A



400912

CATERPILLAR 3056 E



Key to diagram:

	Modules	Circuit diagram no.
A12-1	Speed monitor (DZW) / straw walker, returns module	25
A12-2	Speed monitor (DZW) / feed rake conveyor, grain elevator module	25
A12-3	Speed monitor (DZW) / chopper module	25
	Electronic components	
DI/DO	Warning device diode PCB	25
	Fuses	
F01	Instrument lighting	26
F02	Hazard warning flasher	31
F03	Indicator / vehicle information unit	1, 3, 26, 30, 31, 36, 38
F04	Cab lighting	32
F05	Low beam, right	32
F06	Low beam, left	32
F07	Side light, left	32
F08	Side light, right	32
F09	Spare	
F10	Work light	34
F11	Work light	34
F12	Cab fan	38
F13	Warning buzzer / performance monitor	12, 17, 26
F14	Horn	2, 3
F15	Cutterbar spring pre-stress, cutting height preselection indicator instrument	26
F16	Brake light	35
F17	Warning beacon	30
F18	Threshing drum adjustment	7
F19	Reversing horn	13
F20	Straw collector	13
F21	Speed indicator	4, 22
F22	Operating hours meter / performance monitor	6, 12
F23	Grain tank tube work light	34
F24	Master valve	4
F25	Windscreen wiper	37
F26	Spare	-
F27	Spare	-
F28	Spare	-
F29	Spare	-
F-A5	Engine control battery plus	2b
F-B4	Diesel fuel injection On relay	2b
F-C3	Cold start relay (preheating)	2b
F-D1	Compressor-type air conditioner	38

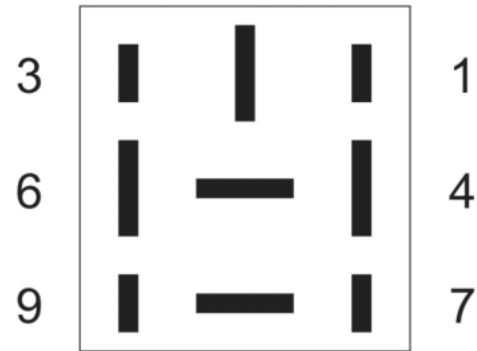
Key to diagram:

	Relays	Circuit diagram no.
K01	Warning buzzer relay	26
K02	Horn relay	3
K03	Master valve relay	4
K04	Road travel main relay	4
K05	Reel speed + relay	22
K06	Reel speed - relay	22
K09	Work light relay	34
K09	Work light relay	34
K10	Cab relay	38
K10	Cab fan relay	38
K14	Spare	-
K15	Transducer (indicator system)	31
K16	Ignition relay (+15)	1
K42	Electronic engine control relay (preheating)	2
K43	Electronic engine control relay	2
K44	Start relay	1
K68	Cooling compressor relay	38
K69	Transducer / Straw collector	13

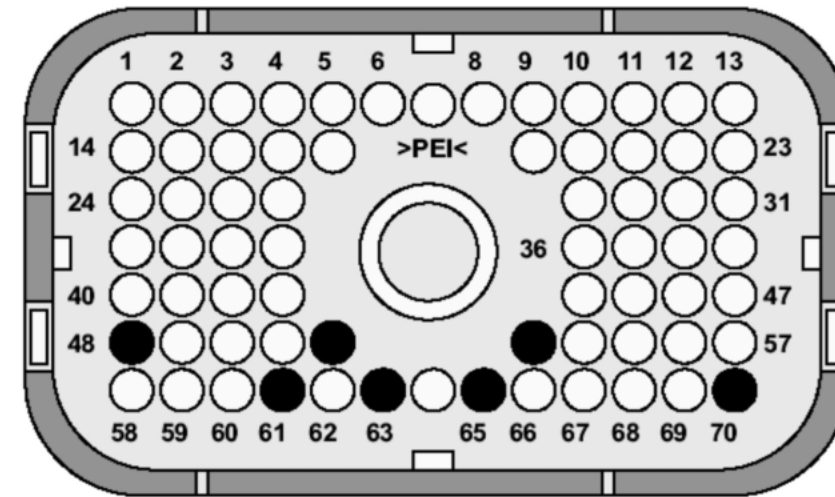
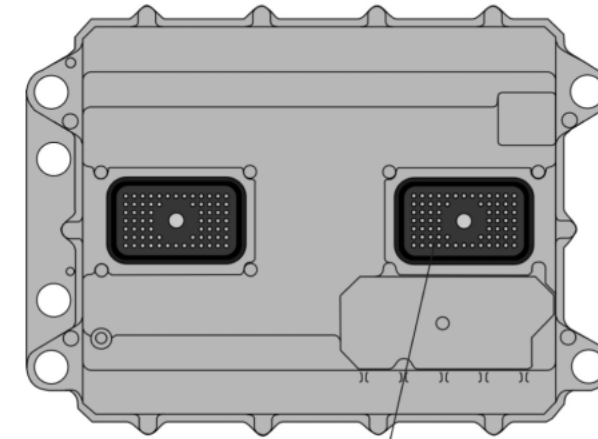
Pin assignment in modules

Pin assignment in modules

A12,



A15-CAT



400379

Module A12-1 - Speed monitor Straw walker / Returns speed monitor

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	---	---	---	---	---
2	K 01 Pin 87 (Acoustic alarm)	K01	12 V	Output	25
3	---	---	---	---	---
4	Straw walker signal light	H35	12 V	Output	25
5	Power supply + 15	S55	12 V	Input	25, 17
6	Returns elevator signal light	H36	12 V	Output	25
7	Straw walker speed sensor	B26	1.0 – 1.2 k Ω	Input	25
8	Earth (GND)	-31	Earth	Input	25
9	Returns speed sensor	B29	1.0 – 1.2 k Ω	Input	25

Module A12-2 - Speed monitor Feed rake conveyor / Elevator speed monitor

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Earth (GND)	-31	Earth	Input	25
2	K 01 Pin 87 (Acoustic alarm)	K01	12 V	Output	25
3	---	---	---	---	---
4	Feed rake conveyor signal light	H27	12 V	Output	25
5	Power supply + 15	S55	12 V	Input	25, 17
6	Grain elevator signal light	H32	12 V	Output	25
7	Feeder housing speed sensor	B12	1.0 – 1.2 k Ω	Input	25
8	Earth (GND)	-31	Earth	Input	25
9	Grain elevator speed sensor	B21	1.0 – 1.2 k Ω	Input	25

Module A12-3 - Speed monitor Chopper speed monitor

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	---	---	---	---	---
2	K 01 Pin 87 (Acoustic alarm)	K01	12 V	Output	25
3	Earth (GND)	-31	Earth	Input	25
4	Straw chopper signal light	H34	12 V	Output	25
5	Power supply + 15	Z59/S55	12 V	Input	25, 17
6	---	---	---	---	---
7	Straw chopper speed sensor	B28	1.0 – 1.2 k Ω	Input	25
8	Earth (GND)	-31	Earth	Input	25
9	---	---	---	---	---

Note: The modules A12-1, A12-2 and A12-3 are identical. They perform different functions, depending on their connector pin assignment.

Module A15 - Electronic engine control module CATERPILLAR - CAT-3056

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
11	3rd gear not engaged signal	Z41	---	---	2
12	Engine pre-heating signal light (diagnosis)	P2	0 V	Output	3
19	Engine speed supply voltage	Z41	---	---	2
20	Idle speed signal	S35	---	---	2
23	Stop warning light (diagnosis)	P2	0 V	Output	3
28	Full throttle signal	S35	---	---	2
37	Engine speed 25 km/h signal	Z41	---	Input	2
42	Injection release	K43	Earth	Output	2
43	Cold start / engine pre-heating	K42/R15	0 V	Earth	2
48	Power +30 (Injection On)	K43/F4	12 V/30 A	Input	2
56	Power +30	F5	12 V/10 A	Input	2
57	Power +30	F5	12 V/10 A	Input	2
58	Earth	-31	Earth	Input	2
59	Earth	-31	Earth	Input	2
68	Earth	-31	Earth	Input	2
70	Power +15	F a1	12 V/10 A	Input	2

Module A15 – Electronic Engine Control CATERPILLAR - C 6.6

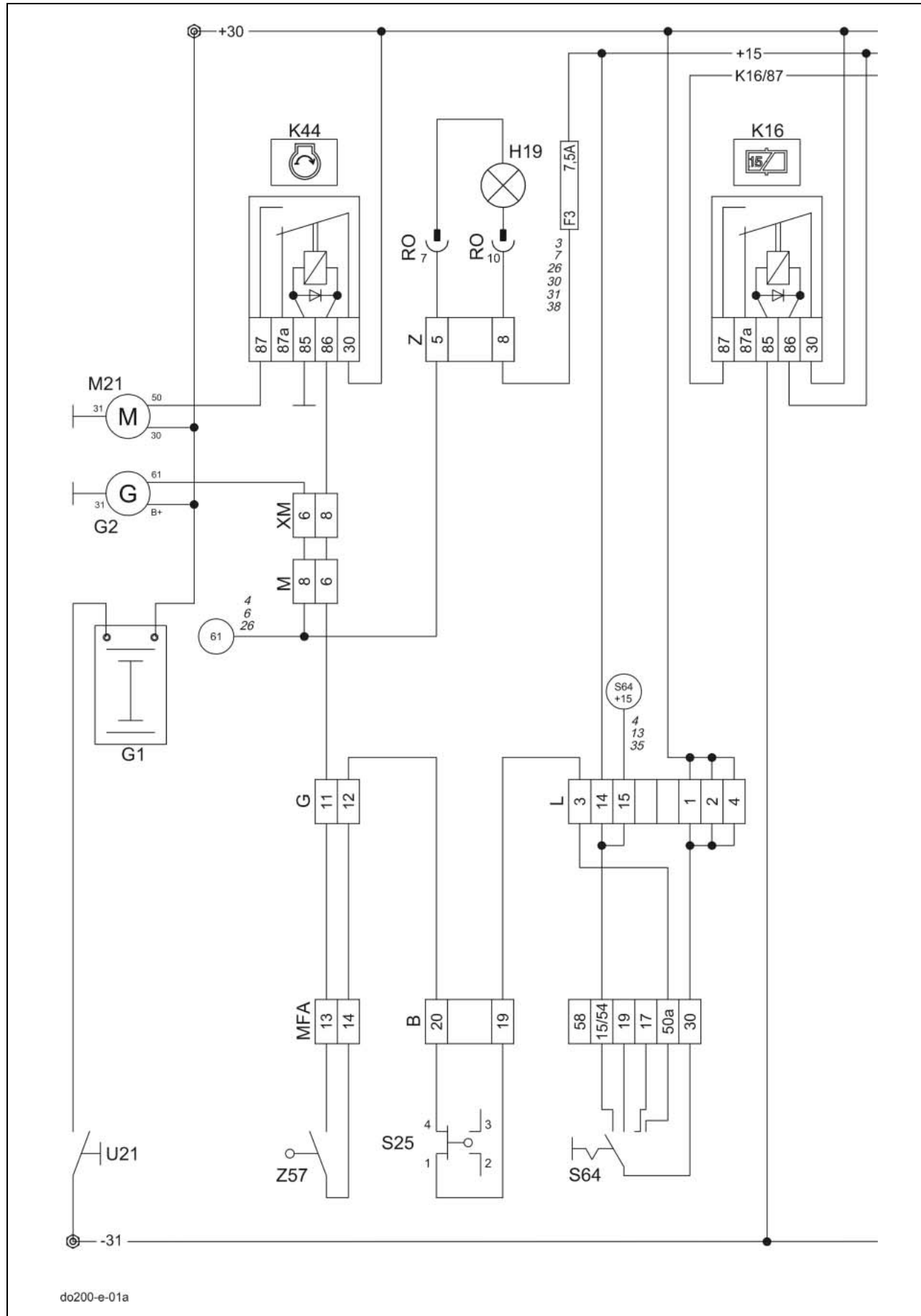
Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Earth	-31	Earth	Input	2
2	Earth	-31	Earth	Input	2
3	Earth	-31	Earth	Input	2
7	Power +30	F5	12 V/25 A	Input	2
8	Power +30	F5	12 V/25 A	Input	2
9	Earth	-31	Earth	Input	2
10	Earth	-31	Earth	Input	2
15	Power +30	F5	12 V/25 A	Input	2
16	Power +30	F5	12 V/25 A	Input	2
35	Engine speed power supply	Z41	---	---	2
40	Power +15	F 14	12 V/10 A	Input	2
49	Full throttle signal	S35	---	---	2
50	Idle speed signal	S35	---	---	2
51	3 rd gear not engaged signal	Z41	---	---	2
52	Engine speed 25 km/h signal	Z41	---	Input	2
57	Cold start / Engine pre-heating	K77/R54	0 V	Earth	2
59	Engine pre-heating signal light (Diagnosis)	P2	0 V	Output	3
60	Stop warning light (Diagnosis)	P2	0 V	Output	3

01a

**Main power supply,
Diesel engine electric starting motor**

- with electronic engine control CAT-3056

01a Main power supply, diesel engine electric starting motor - for electronic engine control CAT-3056



Key to diagram:

- G1 Battery
- G2 Generator
- H19 Alternator charging light signalling
- K16 Ignition
- K44 Start relay
- M21 Diesel engine electric starting motor
- S25 Main drive switch (threshing mechanism clutch)
- S64 Ignition lock switch
- U21 Battery isolating switch
- Z57 Ground speed control lever neutral - Safety start switch

Measured value table:

Item	Component	Measured value	Remark
K44	Remote control relay	85±7 Ω 20A 40A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)

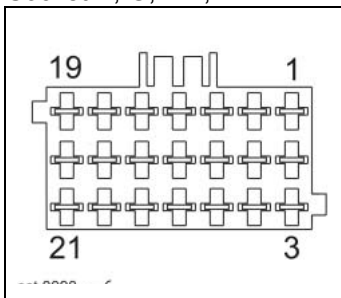
Description of function:

Safety start switch

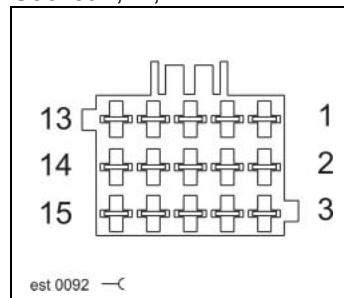
The diesel engine electric starting motor (M21) is controlled by start relay (K44). Relay (K44) can be actuated only via pin +50a of ignition lock (S64) if the ground speed control lever neutral - safety start switch (Z57) is actuated and the threshing mechanism (S25) is disengaged.

Connector pin assignment:

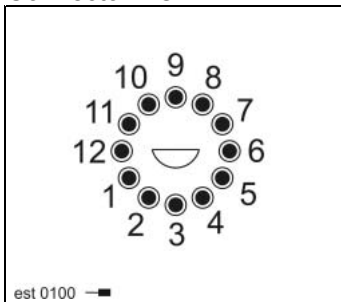
Socket B, G, XM, Z



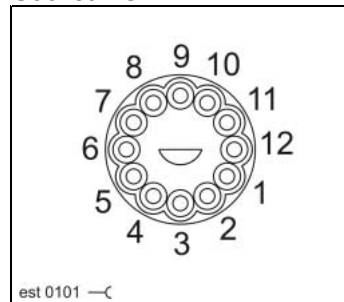
Socket L, M, MFA



Connector RO



Socket RO



Interconnection list:

Connector	mm²	Colour
B-19	0.5	bk-ye
B-20	0.5	bl-br
G-11	0.75	gr-ye
G-12	0.75	wh-ye
L-1	2.5	rd
L-2	2.5	rd
L-3	0.5	bk-ye
L-4	2.5	rd
L-14	2.5	bk
L-15	2.5	bk
M-6	0.75	gr-ye
M-8	0.5	bl
MFA-13	0.75	gr-ye
MFA-14	0.75	wh-ye
RO-10	1.0	bk-bl
RO-7	0.5	bl
S64 – 15/54	2.5	bk
S64 - 30	2.5	rd
S64 - 50	0.5	bk-ye
XM-6	0.5	bl
XM-8	0.5	bl-gr
Z-5	0.5	bl
Z-8	1.0	bk-bl

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