

Electrical diagrams and schematics - NA version

FENDT 1038 Vario S4

527 24 1001-

FENDT 1042 Vario S4

528 24 1001-

FENDT 1046 Vario S4

529 24 1001-

FENDT 1050 Vario S4

530 24 1001-





**CALIFORNIA
Proposition 65 Warning**

WARNING: Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, or other reproductive harm.

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling.

Subject to changes and additions

IMPORTANT:

This document is valid from the chassis number noted. The last valid chassis number could not be determined at the time of creation. Use AGCONET or contact FENDT technical service to make sure whether a current wiring diagram set is available with an updated chassis number range.

Due to further developments to the vehicle, the content of this document is subject to change.

The relevant accident prevention regulations must be observed, as must as any generally acknowledged safety, industrial medicine and traffic regulations. The manufacturer does not accept liability for damage resulting from unauthorized modifications to the machine.

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Electrical diagrams and schematics

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1. Fuses, central electrical system, component list

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1.1 Fuses, central electrical system, component list

1.1.1 Fuse assignment

Location of the fuses in the cab



Right-hand side of cab



Remove covering

NOTE:

The overview diagram of the fuses and relays can be found in the cover.

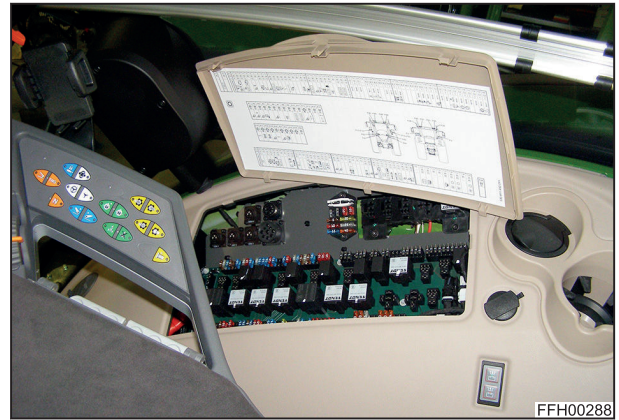


Fig. 1

Overview of the fuses and relay

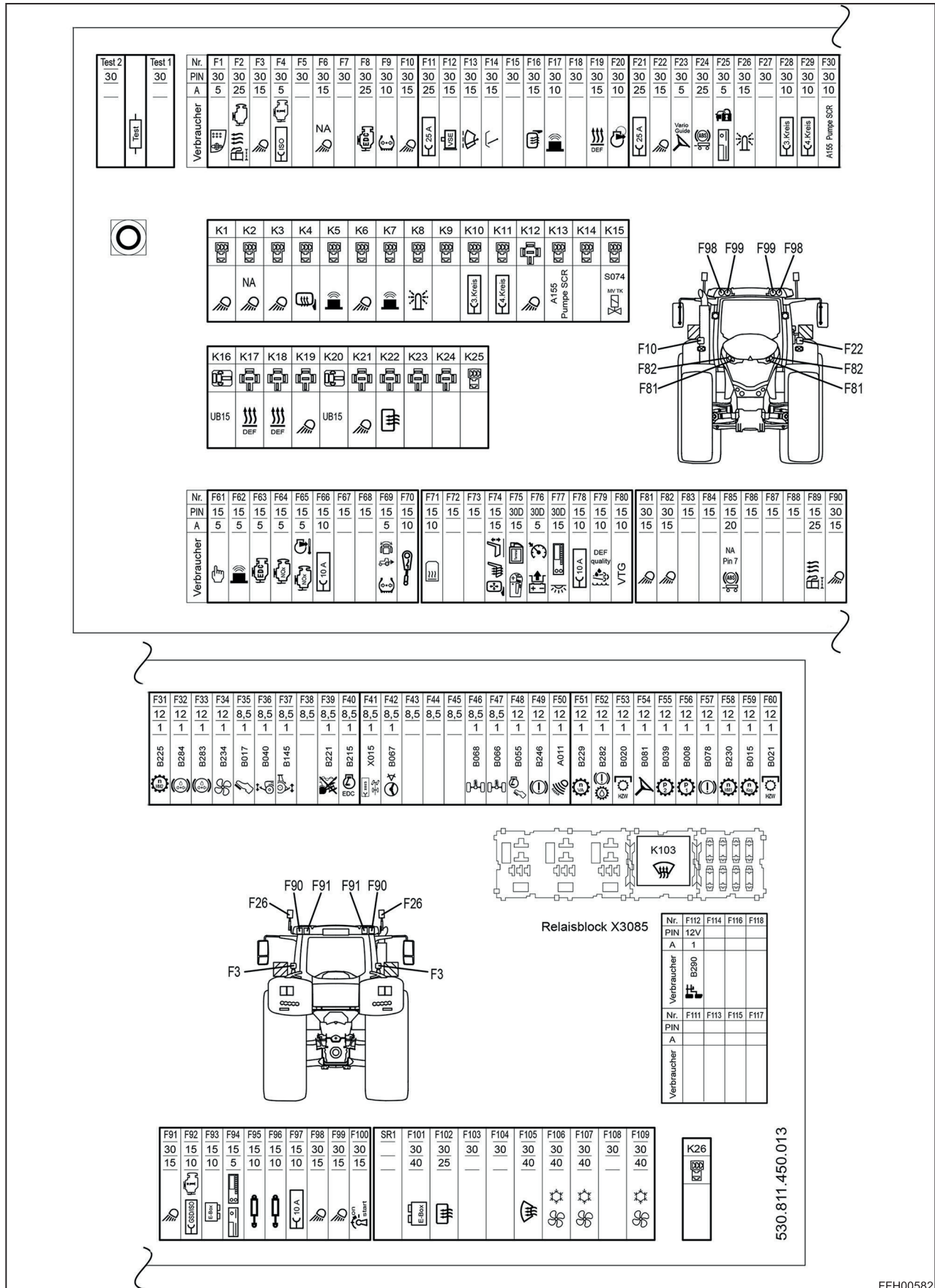


Fig. 2

FFH00582

Fuse carriers F1 to F10 (fuses no. 1 - 10)



DANGER:

Use only genuine fuses! The use of over-rated fuses will destroy the electrical unit! Fire hazard!

Fuse	PIN	Value (A)	Consumer
1	30	5	Control panel
2	30	25	Main fuel filter heater
3	30	15	Work light on rear mudguard
4	30	5	ISO + diag. socket ISO + engine
5	30	-	-
6	30	15	Work light, NA
7	30	-	-
8	30	25	EDC engine control and noise filter
9	30	10	Tire pressure monitoring system
10	30	15	Work light on right A pillar

Fuse carriers F11 to F20 (fuses no. 11 - 20)

Fuse	PIN	Value (A)	Consumer
11	30	25	25 A socket
12	30	15	Actuator unit
13	30	15	LIN, front wiper motor
14	30	15	LIN, side wiper motor
15	30	-	-
16	30	15	Exterior mirror heater
17	30	10	Gateway
18	30	-	-
19	30	15	SCR heater
20	30	10	Motor AGR actuator unit

Fuse carriers F21 to F30 (fuses no. 21 - 30)

Fuse	PIN	Value (A)	Consumer
21	30	25	25 A socket
22	30	15	Work light on left A pillar
23	30	5	VarioGuide + VarioDoc
24	30	25	Trailer ABS

Fuse	PIN	Value (A)	Consumer
25	30	5	Immobiliser + tachograph
26	30	15	Rotating beacon
27	30	-	-
28	30	10	MV 3rd circuit
29	30	10	MV 4th circuit
30	30	10	SCR supply module pump

Fuse carriers F31 to F40 (fuses no. 31 - 40)

Fuse	PIN	Value (A)	Consumer
31	12	1	Hydraulic motor 2 sensor
32	12	1	Compressed air supply sensor circuit 2
33	12	1	Compressed air supply sensor circuit 1
34	12	1	Fan speed (motor)
35	8.5	1	Clutch pedal sensor
36	8.5	1	Front power lift position sensor
37	8.5	1	Rear power lift position sensor
38	8.5	-	-
39	8.5	1	Rear power lift load detection sensor
40	8.5	1	Air filter contamination sensor

Fuse carriers F41 to F50 (fuses no. 41 - 50)

Fuse	PIN	Value (A)	Consumer
41	8.5	1	External control socket
42	8.5	1	Steering angle sensor
43	8.5	-	-
44	8.5	-	-
45	8.5	-	-
46	8.5	1	Right wheel position sensor
47	8.5	1	Left wheel position sensor
48	12	1	Foot throttle sensor
49	12	1	Hand brake lever position sensor
50	12	1	Radar sensor

Fuse carriers F51 to F60 (fuses no. 51 - 60)

Fuse	PIN	Value (A)	Consumer
51	12	1	4-wheel drive clutch sensor
52	12	1	Front axle lubrication pressure monitoring sensor
53	12	1	Rear PTO sensor
54	12	1	Steering wheel sensor
55	12	1	High pressure 2 sensor
56	12	1	High pressure 1 sensor
57	12	1	Hand brake sensor
58	12	1	Hydrostatic sensor
59	12	1	Bevel pinion sensor
60	12	1	Rear PTO sensor

Fuse carriers F61 to F70 (fuses no. 61 - 70)

Fuse	PIN	Value (A)	Consumer
61	15	5	Emergency mode
62	15	5	Gateway
63	15	5	EDC engine control
64	15	5	Engine - NOx
65	15	5	SCR NOx + exhaust temperature
66	15	10	10 A socket
67	15	-	-
68	15	-	-
69	15	5	Tire pressure monitoring system + reverse drive control actuation
70	15	10	Steering column switch

Fuse carriers F71 to F80 (fuses no. 71 - 80)

Fuse	PIN	Value (A)	Consumer
71	15	10	Air dryer heating unit
72	15	-	-
73	15	-	-
74	15	15	Mirror + seat
75	30 D	15	Multifunction armrest + terminal
76	30 D	5	Instrument panel + battery isolation switch

Fuse	PIN	Value (A)	Consumer
77	30 D	15	Radio + interior lighting
78	15	10	10 A socket
79	15	10	AdBlue quality
80	15	10	Turbocharger VTG actuator

Fuse carriers F81 to F90 (fuses no. 81 - 90)

Fuse	PIN	Value (A)	Consumer
81	30	15	Inside engine cover work light
82	30	15	Outside engine cover work light
83	15	-	-
84	15	-	-
85	15	20	Trailer ABS/PIN 7 NA
86	15	-	-
87	15	-	-
88	15	-	-
89	15	25	Fuel pre-filter heater
90	30	15	Rear external roof work lights

Fuse carriers F91 to F100 (fuses no. 91 - 100)

Fuse	PIN	Value (A)	Consumer
91	30	15	Rear inner work lights on roof
92	15	10	GSD + ISO socket, engine diagnostics
93	15	10	Electronics supply
94	15	5	Radio + tachograph
95	15	10	Electrical valves
96	15	10	Electrical valves
97	15	10	10 A socket
98	30	15	Front outer work lights on roof
99	30	15	Front inner work light in roof
100	30	15	Ignition switch

Fuse carriers F101 to F109 (fuses no. 101 - 109)

Fuse	PIN	Value (A)	Consumer
101	30	40	E-Box (EXT)
102	30	25	Rear window heater
103	30	-	-
104	30	-	-
105	30	40	Heated windscreen
106	30	40	Right air conditioning regulator
107	30	40	Left air conditioning regulator
108	30	-	-
109	30	40	Primary fan

Relay block X3085

Relay	Function
K103	Heated windscreen relay

Fuse	PIN	Value (A)	Consumer
111	-	-	-
112	12 V	1	Sensor, brake pedal lock
113	-	-	-
114	-	-	-
115	-	-	-
116	-	-	-
117	-	-	-
118	-	-	-

Relay assignment

Relay	Function
K1	Rear mudguard work light relay
K2	Relay, work light NA
K3	A-pillar work light relay
K4	Relay, mirror heating
K5	Relay, gateway
K6	A-pillar work light relay

Relay	Function
K7	Relay, gateway
K8	Rotating beacon relay
K10	3rd hydraulic circuit relay;
K11	4th hydraulic circuit relay;
K12	Front work light relay
K13	Relay, SCR pump (supply module)
K15	Relay, emergency mode
K16	Relay, Ub15b
K17	Relay, SCR heater
K18	Relay, SCR heater
K19	Relay, engine cover work light
K20	Relay, Ub15a
K21	Relay, rear work light
K22	Rear window heater relay

Fuse F110 (external)

F110 - UB30d fuse



Right side of tractor, in the battery box



Remove covering



Fig. 3

1.1.2 Component list for electrical circuit diagram set

Drawing number: **530.900.000.004_b**

Abbreviation	Description	Abbreviation	Description
ABS	Anti-lock braking system	HKH	Rear power lift
	Exhaust gas recirculation	HZW	Rear PTO
AS	Work lights	MFA	Multi-function armrest
DEF	Diesel Exhaust Fluid (AdBlue)	MFB	Multifunction control panel
ECU	Electronic control unit	EP	Earth pin

Abbreviation	Description	Abbreviation	Description
EDC	Electronic engine management	MV	Solenoid valve
EPC	Electrohydraulic control	NOx	Nitrogen oxide
Ext.	External	TPMS	Tire pressure monitoring system (VarioGrip)
FKH	Front power lift	SCR	Selective catalytic reduction
FL	Front loader	Sig.	Signal
Front PTO	Front PTO	STVZO	German vehicle licensing regulations
IS	Implement socket	ZE	Central electrics

DIN component designation	Separation point	Circuit diagram sheet no.
A007 - instrument panel	X100, X101	4, 9, 10, 11, 24, 26
A009 - actuator unit	X037	4, 9, 10, 12, 16
A011 - radar sensor	X479	19
A036 - control panel for right/left dashboard	X1357	4, 9, 10, 11, 24
A050 - basic control ECU (EXT)	X1402, X1403	2, 7, 9, 10, 11, 12, 13, 14, 16, 17, 19, 20, 21, 22, 23, 26, 32, 38, 39, 43
A056 - Radio	X1315, X1316	36
A077 - immobilizer ECU	X1852	3, 9, 10, 12
A078 - tachograph ECU	X2025, X2026	5, 9, 12, 43
A087 - tire pressure monitoring system (VarioGrip)	X2134	5, 9, 10, 11
A100 - multifunction armrest (MFA)	X2184	4, 9, 10, 11, 14, 36
A101 - VarioDoc / track guidance ECU	X2192	5, 11, 14, 21
A102 - ECU, Topcon receiver	X2185	5, 11, 13, 14, 21
A103 - NT0x terminal	X2198	4, 9, 10, 11, 14, 24, 37
A145 - left fan regulator	X2761, X2762, X2763	34
A146 - right fan regulator	X2764, X2765, X2766	34

DIN component designation	Separation point	Circuit diagram sheet no.
A147 - central electrical system (ZE) ECU	X2773, X2774, X2775, X2776, X2777, X2778, X2779, X2780	6, 8, 9, 10, 11, 14, 24, 25, 27, 28, 29, 30, 31, 33, 34, 35, 36, 39,
A150 - relay fuse board (RSP)	X2801, X2802, X2805, X4184	7, 8, 9, 14, 16, 18, 19, 20, 21, 22, 23, 25, 26, 27, 29, 30, 31, 34, 35, 36, 38, 39, 41, 42, 43
A151 - nitrogen oxide NOx sensor 2, downstream of SCR	X2817	3, 9, 10, 15
A153 - exhaust gas temperature sensor, upstream/ downstream of SCR catalytic converter	X2819	3, 9, 10, 15
A155 - Supply module (DEF)	X2821	3, 42
A156 - DEF metering valve	X2822	3, 42
A167 - primary fan regulator	X2912, X2913, X2914	34
A169 - engine control unit ECU (EDC 17)	X2978, X2979, X2980, X2981	3, 8, 9, 10, 12, 15, 38, 40, 41, 42
A170 - nitrogen oxide NOx sensor 1, upstream of SCR	X2990	3, 9, 15, 41
A173 - Trimble AG-382 receiver	X3008	5, 43
A174 - Satel EASyProof radio modem	X3009	43
A177 - AGCO Connectivity Modul (ACM)	X3058 X3059	5, 11, 12, 13, 14, 43

DIN component designation	Separation point	Circuit diagram sheet no.
B007 - immersed tube fuel-level sensor	X156	24
B008 - high pressure sensor 1	X157	16
B009 - discharge temperature sensor	X158	16
B013 - hydraulic oil temperature sensor	X162	24
B015 - bevel pinion sensor	X164	16
B017 - clutch pedal sensor	X166	16

DIN component designation	Separation point	Circuit diagram sheet no.
B020 - rear PTO (stub shaft) speed sensor	X169	22
B021 - rear PTO (clutch) speed sensor	X170	22
B039 - high pressure sensor 2	X177	16
B040 - front power lift position sensor	X188	19
B050 - front left loudspeaker	X311, X312	36
B051 - front right loudspeaker	X289, X290	36
B055 - foot throttle sensor	X898	38
B061 - rear right loudspeaker	X1620, X1621	36
B062 - rear left loudspeaker	X1622, X1623	36
B066 - left wheel position (suspension) sensor	X1509	20
B067 - steering angle sensor	X1508	20
B068 - right wheel position (suspension) sensor	X1507	20
B071 - output temperature sensor (HVAC)	X1536	33
B076 - exterior temperature sensor	X1538	33
B078 - hand brake sensor	X1541	23
B081 - steering wheel sensor (360°)	X1519	21
B084 - hydraulic oil level sensor	X860	19
B086 - rail pressure sensor	X1655	40
B087 - fuel low pressure sensor	X1656	40
B090 - oil pressure sensor	X1659	40
B091 - water in fuel sensor	X1660	38
B092 - charge air pressure/temperature sensor	X1661	40
B101 - tachograph sensor (KITAS)	X2136	43
B145 - rear power lift position sensor	X2221	19
B158 - solar thermal radiation sensor (HVAC)	X2253	33
B167 - interior temperature sensor	X2415	33
B187 - evaporator temperature sensor (HVAC)	X2420	34
B195 - AdBlue (DEF) level/temperature/quality sensor	X2619	15, 42
B204 - coolant temperature sensor	X2632	40
B215 - air filter restriction sensor	X2699	38

DIN component designation	Separation point	Circuit diagram sheet no.
B217 - temperature downstream of venturi sensor	X2741	41
B221 - rear power lift load detection sensor	X2756	19
B225 - hydraulic motor 2 (ML transmission) sensor	X2783	16
B226 - air mass (EDC) sensor	X2784	41
B229 - 4WD clutch sensor	X2789	20
B230 - collecting shaft sensor	X2757	16
B233 - coolant level sensor	X2823	38
B234 - fan speed sensor	X2826	39
B235 - external temperature engine sensor	X2827	33
B246 - hand brake lever position 1+2 pressure sensor	X2910	23
B247 - front camera	X2911	37
B248 - terminal NT0x (10.4") loudspeaker	X2928	24
B249 - camshaft speed sensor	X2941	40
B250 - crankshaft speed sensor	X2942	40
B270 - lambda probe	X2962	41
B276 - intake manifold temperature sensor	X2983	40
B277 - speed VGT (turbocharger) sensor	X2984	41
B282 - front axle oil pressure monitoring	X3040	39
B283 - circuit 2 compressed air supply sensor	X168	23
B284 - circuit 1 compressed air supply sensor	X1410	23
B290 - brake pedal lock sensor	X3073	23

DIN component designation	Separation point	Circuit diagram sheet no.
E023 - rear window heater	X259, X260	35
E037 - seat heater	X830	32
E050 - front left inner roof work light	X1291	29
E051 - front right inner roof work light	X1291	29
E054 - right-hand marker lights for wide vehicle	X2553, X2554	28
E055 - left-hand marker lights for wide vehicle	X2553, X2554	28

DIN component designation	Separation point	Circuit diagram sheet no.
E063 - air-dryer heater element (temperature-controlled)	X2730	23
E064 - rear left direction indicator	X916	27
E065 - rear right direction indicator	X917	27
E066 - left-hand brake and tail lamp	X918	27
E067 - right-hand brake and tail lamp	X919	27
E070 - front right outer roof work light	X1291	29
E071 - front left outer roof work light	X1291	29
E074 - right-hand work light (side light)	X1289	29
E075 - left-hand work light (side light)	X1290	29
E108 - work light on right-hand A-pillar	X1287	30
E109 - work light on left-hand A-pillar	X1288	30
E078 - rear right mudguard work light	X1286	30
E079 - rear left mudguard work light	X1286	30
E086 - front right side light	X1685, X1686	27
E087 - front left side light	X1687, X1688	27
E088 - front right direction indicator	X1689, X1690	27
E089 - front left direction indicator	X1691, X1692	27
E108 - work light on right-hand A-pillar	X1613	30
E109 - work light on left-hand A-pillar	X1614	30
E110 - direction indicator on right-hand A-pillar — NA	X1694	27
E111 - direction indicator on right-hand A-pillar — NA	X1695	27
E122 - right additional headlamp H7	X1845, X2158	28
E123 - left additional headlamp H7	X1846, X2159	28
E128 - rear left engine cover work light (side light)	X2030	29
E129 - rear right engine cover work light (side light)	X2031	29
E130 - rear left LED direction indicator	X916	27
E131 - rear right LED direction indicator	X917	27

DIN component designation	Separation point	Circuit diagram sheet no.
E143 - front right headlamp	X2168, X2170	28
E144 - front left headlamp	X2169, X2171	28
E145 - front right engine cover work light (side light)	X2172	29
E146 - front left engine cover work light (side light)	X2173	29
E158 - right LED cab lighting	X2258	31
E163 - left rear LED brake and tail lamp	X918	27
E164 - right rear LED brake and tail lamp	X919	27
E165 - 2-chamber air dryer (compressed air radiator)	X2, X3	23
E171 - LED license plate light	X2320, X2321	27
E172 - left LED cab lighting	X2322	31
E173 - LED entry lighting	X4458	31
E219 - fuel pre-filter heater	X2585	38
E220 - right-hand rotary beacon	X2599, X2600	31
E221 - left-hand rotary beacon	X2599, X2600	31
E246 - LED work light on rear right mudguard	X1286	30
E247 - LED work light on rear left mudguard	X1286	30
E248 - LED work light on right-hand A-pillar	X1613	30
E249 - LED work light on left-hand A-pillar	X1614	30
E250 - rear right outer roof work light	X2719	30
E251 - rear right inner roof work light	X2720	30
E252 - rear left outer roof work light	X2721	30
E253 - rear left inner roof work light	X2722	30
E254 - rear right outer roof LED work light	X2719	30
E255 - rear right inner roof LED work light	X2720	30
E256 - rear left outer roof LED work light	X2721	30
E257 - rear left inner roof LED work light	X2722	30
E258 - front right BI-LED headlamp	X2723	28
E259 - front left BI-LED headlamp	X2723	28

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