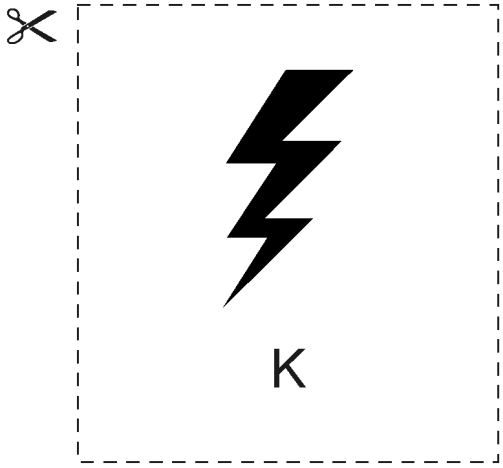


Electrical System

TGS/TGX
06S-1580, 06S-1581
89S-0161, 89S-0162
26X-0150, 28X-0006, 30X-0273

Copy deadline: 03.2010

Wiring Diagrams
K100

81.99298-6602

2nd edition

MAN Nutzfahrzeuge Aktiengesellschaft
Dachauer Str. 667
80995 MÜNCHEN
oder
Postfach 50 06 20
80976 MÜNCHEN

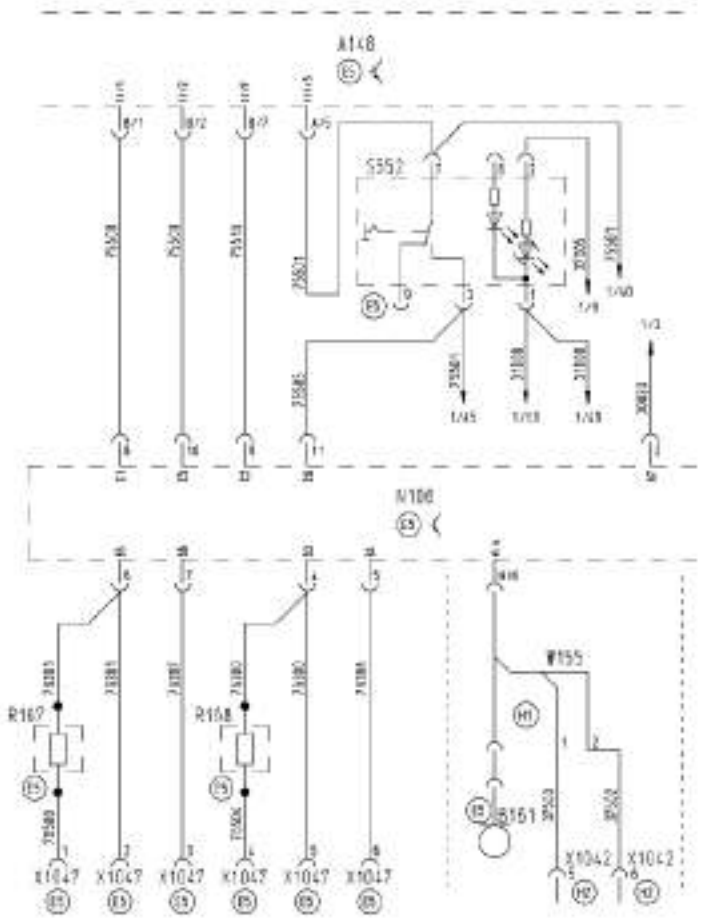
Schaltpläne K100, 2. Ausgabe
Elektrische Anlage
TGS/TGX
- Englisch -
Printed in Germany

Wiring Diagrams K100

2nd edition

Electrical System

TGS/TGX
06S-1580, 06S-1581
89S-0161, 89S-0162
26X-0150, 28X-0006, 30X-0273



81.99298-6602

PREFACE

The "Wiring Diagrams" manual documents the entire scope of series standard and additional wiring diagrams.

The **series standard wiring diagrams** and the **additional wiring diagrams** are illustrated with a detailed key and current path designations.

This manual is based on wiring diagrams created using CAD. This means the manual is quick and easy to update.

This manual describes the standard production version of your vehicle as at the copy deadline.

CAUTION
Type and source of danger
- Refers to working and operating procedures which must be followed exactly in order to avoid exposing people to risk.

WARNING
Type and source of danger
- Refers to working and operating procedures which must be followed exactly in order to avoid serious or irreparable damage to property.

Note
An explanatory note which is useful for understanding the working or operating procedure to be performed.

Comply with general safety regulations when performing any repair work.

Best wishes from

MAN Nutzfahrzeuge Aktiengesellschaft

Munich Plant

PRINTER’S IMPRINT

We reserve the right to make modifications in the course of further development.

2010 MAN Nutzfahrzeuge Aktiengesellschaft

Reprinting, copying or translation, even of extracts, is not allowed without the written approval of MAN Nutzfahrzeuge AG.

All rights under the copyright law are strictly reserved by MAN Nutzfahrzeuge AG.

If any changes are made without the written approval of MAN Nutzfahrzeuge AG then MAN Nutzfahrzeuge AG shall not be liable for any warranty or guarantee claims arising from damage and defects attributable to the unauthorised modification. Furthermore, MAN Nutzfahrzeuge AG shall not be liable for any damage resulting from the unapproved modification.

Redaktion: SAWET-Y / HA 03.2010

Satz: SAWET-Y

Druck: MAN-Werksdruckerei

Content **Chapter/Page**

Index 7

Abbreviations 9

Introduction

Safety instructions 15
Overview of models 20
Explanatory notes to the wiring diagrams 23

Series standard wiring diagram

wiring diagram No. 81.99192.3079 26
A = Voltage supply, starting system..... sheet 1 of 22..... 26
A = On-board computer voltage supply / B = EBS voltage supply / C = Vehicle management computer voltage supply..... sheet 2 of 22..... 28
A = Chassis earth distributor..... sheet 3 of 22..... 30
A = On-board diagnosis (OBD) diagnosis socket / B = ZDR interface (FFR) (MDB, HGB)..... sheet 4 of 22..... 32
A = Flame start system / B = Fan clutch / C = EDC coolant temperature / D = Coolant level / E = Air filter pressure sensor / F = Power steering oil level..... sheet 5 of 22..... 34
A = Probe for clutch fluid level / B = Multifunctional steering wheel / C = Steering column stalk / D = Sustained-action brake / E = Distributor, line 60028..... sheet 6 of 22..... 36
A = Air dryer/brake circuit monitoring / B = Cab lock check / C = Fuel gauge . sheet 7 of 22..... 38
A = Signal horn / B = Fuel filter heater preparation / C = Engine brake / D = Oil level sensor / E = M-CAN / F = Outside temperature ..... sheet 8 of 22..... 40
A = Heater blower/air-conditioning system ..... sheet 9 of 22..... 42
A = Washers and wipers..... sheet 10 of 22 44
A = Immobiliser / B = Gear selector lever / C = Vehicle management computer diagnosis / D = Accelerator pedal unit..... sheet 11 of 22 46
A = Voltage supply +15 / B = Instrumentation/tachograph ..... sheet 12 of 22 48
A = Lighting learning routine / B = Light circuit / C = Fog lamp/rear fog lamp circuit / D = Cigarette lighter / E = Ashtray lighting..... sheet 13 of 22 50
A = Parking lights, left / B = Parking lights, right..... sheet 14 of 22 52
A = Headlight flash / B = Headlight low beam, headlight high beam, daytime driving lights / C = Headlight beam regulator ..... sheet 15 of 22 54
A = Rear fog lamps / B = Fog lamps, additional high beam headlights, cornering light, left / C = Fog lamps, additional high beam headlights, cornering light, right..... sheet 16 of 22 56
A = Brake light / B = Parking brake / C = Reversing light..... sheet 17 of 22 58
A = Pushbutton unit illumination / B = Permanent load voltage supply / C = Entrance lighting / D = Interior lights..... sheet 18 of 22 60
A = Turn indicators..... sheet 19 of 22 62
A = Spare lines / B = Spare lines for trailer socket / C = Spare lines for engine start/stop..... sheet 20 of 22 64
A = Gearbox / B = T-CAN network..... sheet 21 of 22 66
A = Intarder, retarder / B = Power take-off..... sheet 22 of 22 68

Additional wiring diagrams

wiring diagram No. 81.99192.2496 72
Trailer socket 24V 7-pole ..... sheet 1 of 1 72
wiring diagram No. 81.99192.2498 74
Trailer socket 24V 7-pole/7-pole ..... sheet 1 of 1 74
wiring diagram No. 81.99192.1358 76
ASR check lamp..... sheet 1 of 1 76
wiring diagram No. 81.99192.3222 78

ASR slip thresholds button ..... sheet 1 of 1 78
wiring diagram No. 81.99192.2495 80
Battery master switch, mechanical ..... sheet 1 of 1 80
wiring diagram No. 81.99192.3235 82
Interaxle and transverse differential lock, rear axle (3-axle vehicle) ..... sheet 1 of 1 82
wiring diagram No. 81.99192.3233 84
Transverse differential lock, rear axle (2-axle vehicle) ..... sheet 1 of 1 84
wiring diagram No. 81.99192.3246 86
Electronic Brake System EBS 5 (2-axle vehicle) ..... sheet 1 of 3 86
Electronic Brake System EBS 5 (2-axle vehicle) ..... sheet 2 of 3 88
Electronic Brake System EBS 5 (2-axle vehicle) ..... sheet 3 of 3 90
wiring diagram No. 81.99192.3247 92
Electronic Brake System EBS 5 (3-axle vehicle) ..... sheet 1 of 4 92
Electronic Brake System EBS 5 (3-axle vehicle) ..... sheet 2 of 4 94
Electronic Brake System EBS 5 (3-axle vehicle) ..... sheet 3 of 4 96
Electronic Brake System EBS 5 (3-axle vehicle) ..... sheet 4 of 4 98
wiring diagram No. 81.99192.3250 100
ECAS 2 (4x2) ..... sheet 1 of 2 100
ECAS 2 (4x2) ..... sheet 2 of 2 102
wiring diagram No. 81.99192.3248 104
ECAS 2 (4x2 - semitrailer) ..... sheet 1 of 2 104
ECAS 2 (4x2 - semitrailer) ..... sheet 2 of 2 106
wiring diagram No. 81.99192.3253 108
ECAS 2 (6x2 optionally with ALM/crane) ..... sheet 1 of 2 108
ECAS 2 (6x2 optionally with ALM/crane) ..... sheet 2 of 2 110
wiring diagram No. 81.99192.3624 112
EDC7 Euro 3 D20... ..... sheet 1 of 3 112
EDC7 Euro 3 D20... ..... sheet 2 of 3 114
EDC7 Euro 3 D20... ..... sheet 3 of 3 116
wiring diagram No. 81.99192.3625 118
EDC7 Common Rail Euro 3 D2676 LF, E-EGR ..... sheet 1 of 4 118
EDC7 Common Rail Euro 3 D2676 LF, E-EGR ..... sheet 2 of 4 120
EDC7 Common Rail Euro 3 D2676 LF, E-EGR ..... sheet 3 of 4 122
EDC7 Common Rail Euro 3 D2676 LF, E-EGR ..... sheet 4 of 4 124
wiring diagram No. 81.99192.3617 126
Electric cab tilt mechanism ..... sheet 1 of 1 126
wiring diagram No. 81.99192.3260 128
EVB, controlled ..... sheet 1 of 1 128
wiring diagram No. 81.99192.3173 130
Cab, T-CAN, standard ..... sheet 1 of 1 130
wiring diagram No. 81.99192.3267 132
Window lifter, button in shift console ..... sheet 1 of 1 132
wiring diagram No. 81.99192.3276 134
Gearbox / manual gearbox ..... sheet 1 of 2 134
Gearbox / manual gearbox ..... sheet 2 of 2 136
wiring diagram No. 81.99192.3748 138
Gearbox / manual gearbox ..... sheet 1 of 2 138
Gearbox / manual gearbox ..... sheet 2 of 2 140
wiring diagram No. 81.99192.1374 142
Seat belt indicator, driver ..... sheet 1 of 1 142
wiring diagram No. 81.99192.3292 144
Trailer charge, 24V ..... sheet 1 of 1 144
wiring diagram No. 81.99192.3237 146
I-CAN cab (standard) ..... sheet 1 of 1 146
wiring diagram No. 81.99192.3405 148
I-CAN roof (standard) ..... sheet 1 of 1 148
wiring diagram No. 81.99192.3293 150
Interior lighting, roof, white/red ..... sheet 1 of 1 150
wiring diagram No. 81.99192.3461 152
Interior lights with ambient light ..... sheet 1 of 1 152
wiring diagram No. 81.99192.3295 154

Intarder ..... sheet 1 of 1 154
wiring diagram No. 81.99192.3043 156
Tachograph check lamp ..... sheet 1 of 1 156
wiring diagram No. 81.99192.3304 158
Fuel filter heater ..... sheet 1 of 1 158
wiring diagram No. 81.99192.3305 160
Fuel filter heater, Separ ..... sheet 1 of 1 160
wiring diagram No. 81.99192.3300 162
Customer-specific control module (KSM) ..... sheet 1 of 2 162
Customer-specific control module (KSM) ..... sheet 2 of 2 164
wiring diagram No. 81.99192.3314 166
Headlight beam regulator ..... sheet 1 of 1 166
wiring diagram No. 81.99192.3120 168
Fan clutch with speed feedback ..... sheet 1 of 1 168
wiring diagram No. 81.99192.1656 170
Engine brake ..... sheet 1 of 1 170
wiring diagram No. 81.99192.3316 172
Engine brake, automatic, off ..... sheet 1 of 1 172
wiring diagram No. 81.99192.3501 174
Multifunctional steering wheel ..... sheet 1 of 1 174
wiring diagram No. 81.99192.3366 176
Fog lamps/additional high beam headlights and cornering light ..... sheet 1 of 1 176
wiring diagram No. 81.99192.3337 178
Pritarder/Intarder, automatic, off ..... sheet 1 of 1 178
wiring diagram No. 81.99192.3134 180
Basicline radio ..... sheet 1 of 1 180
wiring diagram No. 81.99192.3490 182
Topline radio ..... sheet 1 of 2 182
Topline radio ..... sheet 2 of 2 184
wiring diagram No. 81.99192.3349 186
Bunk light, bottom ..... sheet 1 of 1 186
wiring diagram No. 81.99192.2592 188
Side marker lights ..... sheet 1 of 1 188
wiring diagram No. 81.99192.3298 190
Seat heating, driver ..... sheet 1 of 1 190
wiring diagram No. 81.99192.3313 192
Voltage transformer, 12V ..... sheet 1 of 1 192
wiring diagram No. 81.99192.3317 194
START/STOP device on engine ..... sheet 1 of 1 194
wiring diagram No. 81.99192.3395 196
Storage locker lighting, rear left ..... sheet 1 of 1 196
wiring diagram No. 81.99192.3396 198
Storage locker lighting, rear right ..... sheet 1 of 1 198
wiring diagram No. 81.99192.3350 200
Storage locker lighting, top (left, middle) ..... sheet 1 of 1 200
wiring diagram No. 81.99192.3351 202
Storage locker lighting, top (left, middle, right) ..... sheet 1 of 1 202
wiring diagram No. 81.99192.3367 204
Sockets in cab, 12V and 24V ..... sheet 1 of 1 204
wiring diagram No. 81.99192.3082 206
Anti-jackknife brake for EBS5 ..... sheet 1 of 1 206
wiring diagram No. 81.99192.3221 208
T-CAN terminating resistor in cab ..... sheet 1 of 1 208
wiring diagram No. 81.99192.3174 210
T-CAN standard/ECAS ..... sheet 1 of 1 210
wiring diagram No. 81.99192.3175 212
T-CAN standard/ECAS/Intarder ..... sheet 1 of 1 212
wiring diagram No. 81.99192.3178 214
T-CAN standard/Intarder ..... sheet 1 of 1 214
wiring diagram No. 81.99192.3180 216
T-CAN (KSM) ..... sheet 1 of 1 216

wiring diagram No. 81.99192.3077 218
Door module ..... sheet 1 of 5 218
Door module ..... sheet 2 of 5 220
Door module ..... sheet 3 of 5 222
Door module ..... sheet 4 of 5 224
Door module ..... sheet 5 of 5 226
wiring diagram No. 81.99192.3303 228
Preparation, transverse differential lock, rear axle (2-axle vehicle) ..... sheet 1 of 1 228
wiring diagram No. 81.99192.3379 230
Preparation, central lubrication system ..... sheet 1 of 1 230
wiring diagram No. 81.99192.3352 232
Central lubrication system ..... sheet 1 of 1 232

Catchword **Page**

Numeric/Symbols

81.99192.1358 76
81.99192.1374 142
81.99192.1656 170
81.99192.2495 80
81.99192.2496 72
81.99192.2498 74
81.99192.2592 188
81.99192.3043 156
81.99192.3077 218
81.99192.3079 26
81.99192.3082 206
81.99192.3120 168
81.99192.3134 180
81.99192.3173 130
81.99192.3174 210
81.99192.3175 212
81.99192.3178 214
81.99192.3180 216
81.99192.3221 208
81.99192.3222 78
81.99192.3233 84
81.99192.3235 82
81.99192.3237 146
81.99192.3246 86
81.99192.3247 92
81.99192.3248 104
81.99192.3250 100
81.99192.3253 108
81.99192.3260 128
81.99192.3267 132
81.99192.3276 134
81.99192.3292 144
81.99192.3293 150
81.99192.3295 154
81.99192.3298 190
81.99192.3300 162
81.99192.3303 228
81.99192.3304 158
81.99192.3305 160
81.99192.3313 192
81.99192.3314 166
81.99192.3316 172
81.99192.3317 194
81.99192.3337 178
81.99192.3349 186
81.99192.3350 200
81.99192.3351 202
81.99192.3352 232
81.99192.3366 176
81.99192.3367 204
81.99192.3379 230
81.99192.3395 196
81.99192.3396 198
81.99192.3405 148
81.99192.3461 152
81.99192.3490 182
81.99192.3501 174
81.99192.3617 126

81.99192.3624 112
81.99192.3625 118
81.99192.3748 138

Abbreviations

A

a	Acceleration
ABE	General certification
ABS	Anti-lock Braking System
ABV	Anti-skid system
AC	Air Conditioning
ACC	Adaptive Cruise Control
ACK	Acknowledge
ADC	Analogue-Digital Converter
ADR	European agreement for cross-border transport of dangerous goods by road (French title: Accord européen relatif au transport international des marchandises Dangereuses par Route)
AGB	Automatic road speed limiter
AGND	Analogue Ground
AGR	Exhaust gas recirculation
AHK	Trailer coupling
AHV	Trailer brake valve
ALB	Automatic load balancing
ALM	Axle Load Monitoring
AMA	Antenna mast system
AMR	Anisotropic Magneto-Resistance
ANH	Trailer / semitrailer
AS	Automatic gearbox
ASD	Trailer socket
ASM	Trailer control module
ASR	Anti-spin regulator (traction control)
ASV	Trailer control valve
ATC	Automatic Temperature Control
ATF	Automatic Transmission Fluid
AU	Statutory exhaust emission test
AV	Exhaust valve
AVS	Automatic gear preselection

B

BA	Operator's manual
BBA	Service brake system
BBV	Service brake valve
BITE	Built-in test equipment
BKR	Brake power regulator
BUGH	Front heater
BV	Backup valve
BVA	Brake wear indicator
BVS	Brake wear sensor
BVV	Brake wear sensor supply
BW	German Army
BWG	Brake power sensor
BZ	Brake cylinder

C

CAN	Controller Area Network (data bus system with serial bit transmission)
CAN-H	CAN-high data line
CAN-L	CAN-low data line
CATS	Computer-assisted testing and diagnostic system
CBU	Central Brake Unit
CDC	Continuous Damping Control
CCVS	Cruise control vehicle speed
CKD	Completely Knocked Down
CNG	Compressed Natural Gas
CPU	Central Processing Unit
CRT	Continuously Regenerating Trap (exhaust muffler, two-way catalytic converter, diesel particulate filter)

CRC	Cyclic Redundancy Check
CS	Comfort Shift

D

DAHL	Roof ventilator
DBR	Sustained-action brake relay
DCU	Dosing Control Unit (AdBlue dosing)
DF	Speed sensor
DFÜ	Data transmission
DIA	Diagnosis and information display
DIAG	Diagnosis, entire vehicle
DIAG - MUX	Diagnosis, entire vehicle – Multiplex central computer (buses only)
DIAK	Diagnosis, K-line (data line)
DIAL	Diagnosis, L-line (interrogation line)
DIAR	Diagnosis, further interrogation
DIN	German industrial standard
DKE	Throttle valve increase (ASR control)
DKH	Roof duct heating
DKL	Roof flaps
DKR	Throttle valve reduction (reduction request from ASR to EDC / EMS)
DKV	Throttle valve specification (load sensor signal from pedal value sensor, EDC / EMS)
DLB	Compressed air brake system
DM	Diagnostic Message
DNR	Drive Neutral Reverse (selector lever switch for automatic)
DPF	Diesel Particulate Filter
DRM	Pressure control module
DRS	Rotational speed sensor
DS	Pressure sensor
DSV	Pressure control valve
DTC	Diagnostic Trouble Code (OBD fault code)
DTCO	Digital tachograph
DV	Throttle valve
DWA	Anti-theft warning system
DZG	Speed sensor
DZM	Rev counter

E

EBS	Electronic Brake System
ECAM	Electronically Controlled Air Management
ECAS	Electronically Controlled Air Suspension
ECE	Emergency shut-off to ECE 36
ECU	Electronic Control Unit
EDC	Electronic Diesel Control
EDC S	Electronic Diesel Control Slave
EDM	Electronic diesel consumption meter
EDR	Maximum speed governor
EEC	Electronic engine controller
EEPROM	Electrically erasable and programmable read-only memory
EFR	Electronic shock absorber control (ESAC)
EFS	Electric driver's seat
EHAB	Electro-hydraulic shut-off device
ELAB	Electrical shut-off device
ELF	Electronically controlled air suspension
EMS	Electronic throttle control (ETC)
EMV	Electromagnetic compatibility (EMC)
EOL	End-of-line (programming)
EP	Injection pump
ER	Engine retarder (engine brake)
ESAC	Electronic Shock Absorber Control
ESP	Electronic Stability Program

ESR	Electric sun-blind
EST	Electronic control unit
EV	Intake valve
EVB	Exhaust Valve Brake

F

FAP	Driver's area
FAQ	Frequently Asked Questions
FBA	Parking brake system
FBM	Pedal brake module
FDR	Dynamic handling control
FDF	Vehicle data file
FFR	Vehicle management computer
FGB	Road speed limiter (RSL)
FGR	Road speed governor (RSG)
FHS	Cab
FIN	Vehicle identification number (17 digits)
FM	Vehicle management
FMI	Failure Mode Identification
FMS	Fleet Management Standard (global telematics standard)
FMR	Vehicle/engine management
FOC	Front Omnibus Chassis (bus/coach chassis with front-mounted engine)
FSCH	Windscreen heater
FSG	Ground reinforcement system
FSH	Window/mirror heating
FTW	Driver's partition
FUNK	Radio communication unit
FZA	Destination system
FZNR	Vehicle number (7 digits)

G

GDK	Controlled diesel catalytic converter
GEN	Alternator
GET	Gearbox
GGVS	European agreement for cross-border transport of dangerous goods by road (French abbreviation: ADR)
GND	Ground
GP	Gearbox planetary gear group (range-change box)
GS	Gearbox control
GV	Gearbox splitter gear group (splitter box)

H

HA	Rear axle
HBA	Auxiliary brake system
HD-OBD	Heavy Duty On-Board Diagnosis
HDS	Urea dosing system
HGB	Maximum road speed limiter
HGS	Hydraulic gearshift
HLUE	Hydrostatic fan
HOC	Rear Omnibus Chassis (bus/coach chassis with rear-mounted engine)
HSS	Highside switch
HST	Main switch panel
HU	Main inspection
HYD	Hydronic auxiliary heater
HYDRIVE	Hydrostatic front-wheel drive
HYDRO	MAN Hydro Drive
HVA	Hydrostatic front-wheel drive
Hz	Hertz (number of cycles per second)
HZA	Bus stop indicator system
HZG	Auxiliary speed sensor

I

IBEL	Interior lighting
IBIS	Integrated on-board information system
IC	Integrated Circuit
ID	Identification
IMR	Integrated Mechanical Relay (starter control)
INA	Information lamp (e.g. check lamp)
INST	Instrumentation
IR	Individual control (ABS)
IRM	Modified individual control (ABS)
ISO	International Standards Organisation
IWZ	Incremental angle/time measuring system

K

KBZ	Combination brake cylinder
KFH	Fuel filter heater
KITAS	Kienzle intelligent tachograph sensor
KLI	Air-conditioning system
KNEEL	Kneeling
KSM	Customer-specified control module (control unit for external data exchange)
KSW	Customer's special request
KWP	Key Word Protocol (protocol for MAN-cats diagnosis)

L

LBH	Air reservoir
LCD	Liquid Crystal Display
LDA	Manifold-pressure compensator (boost control)
LDF	Boost pressure sensor
LDS	Air spring/damper system
LED	Light emitting diode
LF	Air suspension
LGS	Lane Guard System
LL	Idling speed
LLA	Idling speed increase
LLR	Idling speed control
LNA	Steering trailing axle
LNG	Liquefied Natural Gas
LOE	Steering oil monitor
LPG	Liquefied Petroleum Gas
LSVA	Distance-based heavy vehicle toll
LWR	Headlight beam regulator
LWS	Steering angle sensor

M

M-TCO	Modular EU tachograph
MAB	Solenoid valve shut-off (engine shut-off by high-pressure solenoid valve in injection pump)
MAN- cats	MAN computer-assisted testing and diagnostic system
MAR	Solenoid valve shut-off relay (redundant engine shut-off relay)
MDB	Engine speed range
MES	Quantity positioner
MFL	Multifunctional steering wheel
ML	Midline
MMI	Man-machine interface
MOTB	Engine brake
MP	Motor power box (cable duct on engine block)
MR	Engine governor - ASR
MSG	Engine control unit (EDC)
MUX	Multiplex central computer (bus only)
MV	Solenoid valve
MZ	Diaphragm cylinder

N

n	Speed (rpm)
NA	Power take-off
NBF	Needle movement sensor
NES	New Electronic Structure
NFZ	Commercial vehicles
NLA	Trailing axle
NSL	Rear fog lamp
NSW	Fog lamps

O

OBD	On-Board Diagnosis
OBDU	Onboard Diagnostic Unit (subsystem of central on-board computer)
OC	Occurrence Count (frequency counter of an error)
OEAB	Oil separator
OENF	Oil top-up

P

p	Pressure
PBM	Pulse Breadth Modulation (also see PWM)
P-Code	Powertrain code (power pack/powertrain fault code)
PDF	Particulate Diesel Filter
PLM	Programmable Logic Module
PM-Kat	Particulate matter catalytic converter (particulate catalytic converter)
PSG	Pump control unit (EDC)
PTM	Powertrain Manager (replacement for vehicle management computer)
PTO	Power Take-Off
PWG	Pedal value sensor
PWM	Pulse Width Modulation (also see PBM)

R

RA	Repair manual
RAH	Interior heating
RAM	Random Access Memory
RAS	Rear Axle Steering
RAS-EC	Rear Axle Steering with Electronic Control
RDRA	Tyre pressure control system
RDS	Radio Data System
RET	Retarder
RET P	Primary retarder
RET S	Secondary retarder
RKL	Priority vehicle light
RKS	Tyre pressure monitor
RLV	Relay valve
RME	Rape seed oil methyl ester (biodiesel)
ROM	Read Only Memory

S

SA	Special equipment
SAE	Society of Automotive Engineers
SAMT	Semi-automatic mechanical transmission
SB	Service outlet
SBW-RA	Steer By Wire Rear Axle (electronically controlled steering trailing axle)
SCR	Selective Catalytic Reduction
sec	Second
SER	Standard/series production
SG	Control unit
SH	Select-High control (ABS)
SKD	Semi Knocked Down
SL	Select-Low control (ABS)
SML	Side Marker Lights
SPN	Suspect Parameter Number

STA	Engine start/stop
SWR	Headlight cleaning system

T

t	Time
TBM	On-board telematics module
TC	Traction Control
TCM	Trailer Control Module
TCO	Tachograph (MTCO, DTCO, TSU etc.)
TCU	Transmission Control Unit
TEPS	Twin Electronic Platform Systems (bus only)
TGA	Trucknology Generation A
TGL	Trucknology Generation Light
TGM	Trucknology Generation Mid
TKU	Technical customer document
TMC	Traffic Message Channel
TPM	Tyre Pressure Module
TRS	Technical road transport directive
TSC	Torque Speed Control
TSU	Tachograph Simulating Unit (vehicles without MTCO/DTCO)
TUER	Door control

U

U_{Bat}	Battery voltage
UDF	Conversion file
UDS	Crash recorder

V

v	Road speed
VA	Front axle
VDF	Vehicle Data File
VG	Transfer case or according to defence equipment standards
VLA	Leading axle
VSM	Transfer case lock management

W

WA	Maintenance Manual
WAB	Water separator
WaPu	Water pump Intarder
WLE	Swap-body unit
WR	Warning relay
WS	Position sensor
WSK	Torque converter and clutch unit

Z

z	Braking rate/deceleration
ZBR	Central on-board computer
ZBRO	Central on-board bus computer
ZDR	Intermediate speed governor (ISG)
ZE	Central electrical system
ZFR	Auxiliary vehicle computer
ZR	Central computer
ZS	Central lubrication system
ZUSH	Auxiliary heater
ZWS	Time-based maintenance system
λ	Slip
μ	Coefficient of friction
μC	Microcontroller (microprocessor)

INTRODUCTION

SAFETY INSTRUCTIONS

General information
Working with trucks, buses and the accompanying service products should not pose any problems if operators, maintenance personnel and repair staff receive suitable training.

The following sections include **summaries** of important regulations listed according to major topics. The intention is to provide the knowledge needed to avoid accidents which could lead to injury, damage and environmental pollution. **They represent only a small excerpt from the wide range of accident prevention regulations and cannot replace these.** It goes without saying that all other safety regulations must be followed and that the corresponding action must be taken.

Additional direct references to danger are contained in the instructions at points where there is a potential danger.

Accidents may happen in spite of all precautionary measures having been taken. In such an eventuality, obtain immediate medical assistance from a doctor. This is particularly important if the accident involves skin contact with corrosive acid, fuel penetration under the skin, scalding by hot oil, antifreeze spraying into eyes, etc.

1. Regulations for preventing accidents leading to injury to personnel

– Secure units during their removal.
– Support the frame when working on the pneumatic or spring suspension system.
– Keep units, ladders, stairs, steps and the surrounding area free from oil and grease. Accidents caused by slipping can have very serious consequences.

Only authorised technical personnel are entitled to perform inspection, adjustment and repair work

Working on the brake system
– Perform visual, function and effectiveness checks on the brake system after carrying out any work on it whatsoever. These checks must be made in accordance with the safety inspection (SP).
– Check the function of ABS/ASR and EBS systems using a suitable test system (e.g. MAN-cats).
– Collect hydraulic oil and brake fluid as it drains out.
– Hydraulic oil/brake fluid is poisonous!
Do not allow brake fluid to come into contact with food or open wounds.
– Treat hydraulic oil/brake fluid as hazardous waste!
Comply with the safety regulations for preventing environmental pollution.

Operating the engine
– Only authorised personnel are permitted to start and operate an engine.
– Do not approach moving parts of a running engine too closely.
Do not wear baggy clothing and tie up or cover long hair.
Ensure adequate ventilation if you are working in enclosed spaces.
– Do not touch units with your bare hands when they are at operating temperature. Danger of burns!
Always wear protective gloves when changing oil (in units at operating temperature) in particular.
– Do not open the coolant circuit unless the engine is cool.

Suspended loads

– No-one is allowed to stand under a unit suspended from a crane hook. - Keep all lifting tackle in good condition -

Working on high-pressure lines

– Do not attempt to tighten or loosen pipe lines and hoses when they are under pressure (e.g. lubrication circuit, coolant circuit and hydraulic oil circuit).
  Fluid spraying out represents an injury hazard!
– Do not hold your hands under the jet of fuel when checking the injector nozzles. Do not inhale fuel vapours.

Working on the vehicle electrical system

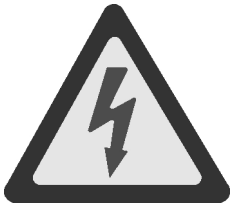
– Always disconnect the batteries before working on the electrical system.
  Disconnect the earth cable first and connect it last when reconnecting.
– Measure voltage only using a suitable measurement device.
  The input resistance of the measurement device must be at least 10 MΩ.
– Tow-start the vehicle only with the batteries connected (minimum charge 40%)! Do not use a boost-charger to jump-start the vehicle! Always disconnect the positive and negative leads before boost-charging batteries.
– Disconnect the batteries and recharge them every 4 weeks if the vehicle is not in use.
– The ignition must be switched off before the wiring harness plugs of the electronic control units are disconnected or connected up.

Important! Battery gases are explosive!

– Oxyhydrogen gas may form in enclosed battery boxes. Take particular care after long journeys and after charging the batteries with a battery charger.
– When the batteries are disconnected this gas may be ignited by sparks produced by other continuously operating consumers, the tachograph etc. that cannot be shut down. Blow compressed air through the battery box before disconnecting the batteries!
– Avoid short circuits caused by polarity reversal or by placing metal objects (spanners, mole grips, etc.) on the battery terminals.

Caution! Battery acid is poisonous and corrosive!

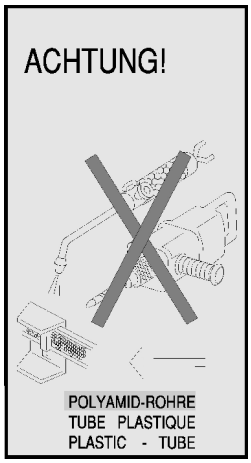
– Wear appropriate protective clothing (gloves, protective apron) when handling batteries.
  Do not tilt batteries, acid may leak out.



Electric welding
- Connect up the "ANTIZAP SERVICE MONITOR" protective device (MAN item number 80.78010.0002) in accordance with the instructions supplied with the device.
- If this device is not available, disconnect the batteries and connect the positive cable to the negative cable in order to make a conductive connection.
- Always earth the welding equipment as close as possible to the welding area. Do not lay the cables to the welding equipment in parallel to electrical cables in the vehicle.
- The chassis is not intended for use as an earth return. If attachments are to be fitted to the vehicle (e.g. a taillift), additional earth (ground) lines with an adequate cross-section must be fitted as well. Otherwise the earth connection may be created along wire cables, wiring harnesses, gearbox shafts, gears etc. Severe damage could result.

Painting
- If paint spraying is to be carried out, do not expose the electronic components to high temperatures (max. 95 °C) for more than brief periods; a time of up to 2 hours is permissible at a maximum of 85 °C. Disconnect the batteries.

Working on plastic tubes - Danger of damage and fire!
- The warning sign opposite is attached to the inside of the diesel fuel or heating oil tank flap. It warns you against welding or drilling near to plastic tubes.



Working with the cab tilted
- Keep the tilting area in front of the cab clear.
- Keep out of the area between the cab and the chassis during the tilting process. This is a danger area!
- Always tilt the cab past the tilting point to its final position.

Working on the air-conditioning system
- Refrigerant fluids and vapours represent a health hazard, avoid contact with them and protect your eyes and hands.
- Do not drain gaseous refrigerants in enclosed rooms.
- Do not mix CFC-free refrigerant R 134a with R 12 (CFC) refrigerant.

2. Notes on preventing damage and premature wear on units
- Only subject units to the load which they have been designed to cope with in accordance with their designated use. Do not overload them.
- If a fault occurs during operation, determine its cause immediately and correct the problem before the fault can get any worse.
- Clean the units thoroughly before repairs. Ensure that no dirt, sand or foreign objects can get into the units whilst carrying out repairs.
- Always use genuine parts. Fitting “equivalent parts” made by other companies can lead to severe damage, and the workshop that did the work will be responsible for it. See the section entitled "Limited liability for accessories and parts".
- Never run a unit dry, in other words always make sure that it has been filled with oil before running it.
- Never run engines without coolant.
- Apply a suitable information sign to units that are not ready to be operated.

– Only use service products (engine and gearbox oil as well as antifreeze and anti-corrosion protection) that have been approved by MAN. Keep your workplace clean.
– Comply with the specified maintenance intervals.
– Do not fill engine/gear oil above the maximum level mark. Do not exceed the maximum permitted operational tilt.
– Severe damage to the unit could result from failure to follow these regulations.

3. Limited liability for accessories and parts

In your own interests, you are recommended to use only accessories expressly approved by MAN and genuine MAN parts. The reliability, safety and suitability of these parts and accessories have been determined specifically for MAN vehicles. Despite constant market observation, we cannot judge the aspects of other products, nor can we accept responsibility for them – even if they have been officially approved by the German TÜV technical inspection authorities or some other official body.

Attachments and special bodies

Comply with the safety instructions and regulations issued by the body builder in question if attachments or special bodies have been fitted. Always follow the instructions in the appropriate MAN Guide to Fitting Bodies (www.manted.de). Written approval/release/confirmation from department TDB is required if the appropriate MAN Guide to Fitting Bodies is not complied with.

Taking out of operation and storing

The special measures described in MAN Works Standard M 3069 Part 3 apply if buses or trucks are to be withdrawn from service or stored for a period longer than 3 months.

4. Handling brake pads and similar components

– Harmful dust may be released when brake pads are machined, in particular during skimming and grinding as well as when wheel brakes are blown out.
– Please take the necessary precautionary measures and observe the following safety advice to avoid possible damage to your health:
– If possible, carry out the work in question in the open or in an area equipped with an efficient ventilation system.
– If possible, use hand-operated or slow-running tools, equipped with a dust-collector if required.
– Fast-running tools should always be fitted with such devices.
– If possible, wet the workpiece prior to cutting or drilling.
– Dispose of brake pads or linings as hazardous waste in an environmentally sound manner.

5. Regulations for avoiding injury and environmental contamination

Coolant

Treat undiluted antifreeze as hazardous waste. Follow the instructions issued by the relevant local authority when disposing of used coolant (mixture of antifreeze and water).

Cleaning the cooling circuit

Do not pour cleaning fluids and rinsing water down the drain if this practice is restricted by specific local regulations. However, the cleaning fluid and rinsing water must in all cases have been passed through an oil trap with a sludge trap.

Cleaning the filter insert

When blowing compressed air through the filter insert, make sure the filter dust is collected by a vacuum or is blown into a dust collection bag. Otherwise, use a respiratory protection mask. Wear rubber gloves or use a skin barrier hand cream when washing out the insert, because cleaning agents have aggressive grease-dissolving characteristics.

Engine/gear oil, filter cartridges, elements and box-type filters, desiccant cartridges

Only dispose of used oil at an approved collection point or depot. It is extremely important that oil is not poured down the drain or onto the ground since it can pollute drinking water! Filter inserts, cartridges and box-type filters (oil and fuel filters, desiccant cartridges for the air dryer) are classified as hazardous waste materials and must be disposed of properly. Please follow the instructions of your relevant local authority.

Used engine/gear oil

Lengthy or repeated skin contact with any type of engine/gear oil removes grease from the skin. This can cause dry skin, irritation or skin inflammation. In addition to these hazards, used engine oil contains dangerous materials which can cause skin cancer.

6. Health protection precautions
– Avoid lengthy, excessive or repeated skin contact with used oils.
– Protect your skin using a suitable skin protection agent or protective gloves.
– Clean areas of skin which have come into contact with engine oil.
– Wash the areas thoroughly with soap and water.
– A nail brush enables more effective cleaning.
– Special cleaning agents make it easier to clean dirty hands.
– Do not use petrol, diesel oil, gas oil, thinners or solvents.
– Apply a greasy skin cream after cleaning your skin.
– Change out of clothing or shoes which have become soaked with oil.
– Never put oil-soaked rags into your clothing pockets.
Take care to dispose of used engine/gear oil properly.

- Oils can damage groundwater quality -

Therefore, never pour used oil onto the ground, into water or down the drains or sewers. Failure to comply with these instructions can lead to prosecution.

Collect and dispose of used oil carefully. Contact the point of sale, supplier or your local authority for information about collection depots.

Extract from "Information on dealing with used engine oil"

The Mineral Oil Traders' Association (MINERALÖLWIRTSCHAFTSVERBAND E.V.) Steindamm 71, D-20099 Hamburg

OVERVIEW OF MODELS

These wiring diagrams - 03.2010 edition - apply to the following vehicles.

Model	Model designation	Model	Model designation
06S - 1580	TGS 18.D20/D26 4X2 BL	26X - 0150	TGX 26/33.D20/D26 6X4 BB
06S - 1581	TGS 18.D20/D26 4X2 BL	28X - 0006	TGX 28 6X4 BB-CKD
89S - 0161	TGS 28.D20/D26 6X2-2 BL	30X - 0273	TGX 26/33.D20/D26 6X4 BL
89S - 0162	TGS 28.D20/D26 6X2-2 BL		

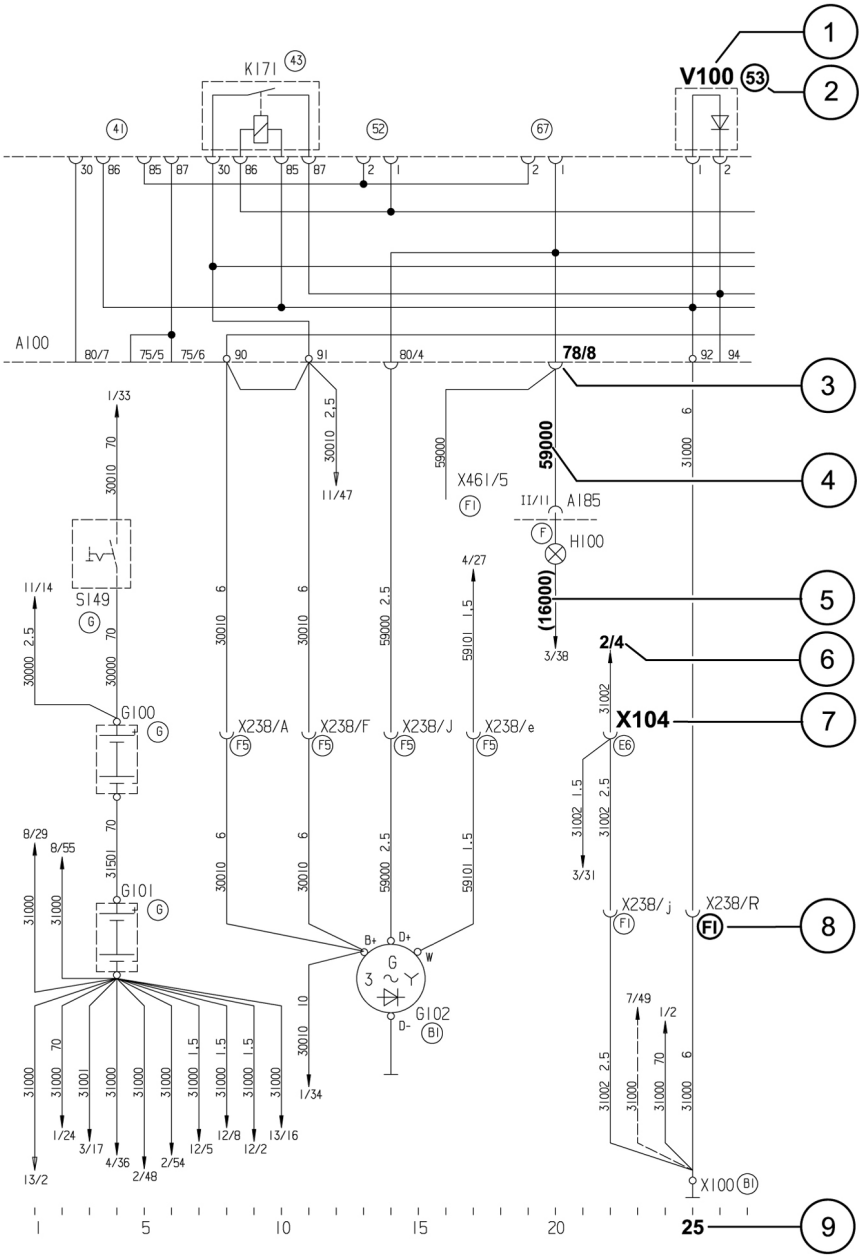
Overview of wiring diagrams classified according to model designation

Name	Item no.:	Model 06S - 1580	Model 06S - 1581	Model 89S - 0161	Model 89S - 0162	Model 26X - 0150	Model 28X - 0006	Model 30X - 0273
ASR check lamp	81.99192.1358	X	X	X	X			
Seat belt indicator, driver	81.99192.1374	X	X	X	X	X	X	X
Engine brake	81.99192.1656	X	X	X	X	X		X
Battery master switch, mechanical	81.99192.2495						X	
Trailer socket 24V 7-pole	81.99192.2496						X	
Trailer socket 24V 7-pole	81.99192.2498	X	X	X	X	X		X
Side marker lights	81.99192.2592			X	X	X	X	X
Tachograph check lamp	81.99192.3043	X	X	X	X	X	X	X
Door module	81.99192.3077	X	X	X	X	X	X	X
Series standard wiring diagram	81.99192.3079	X	X	X	X	X	X	X
Anti-jackknife brake for EBS5	81.99192.3082						X	
Fan clutch with speed feedback	81.99192.3120					X		X
Basicline radio	81.99192.3134	X	X	X	X	X	X	
Cab, T-CAN, standard	81.99192.3173						X	
T-CAN standard/ECAS	81.99192.3174	X	X					
T-CAN standard/ECAS /Intarder	81.99192.3175			X	X			X
T-CAN standard/Intarder	81.99192.3178					X		
T-CAN (KSM)	81.99192.3180	X	X	X	X	X		X
T-CAN terminating resistor in cab	81.99192.3221	X	X	X	X	X	X	X
ASR slip thresholds button	81.99192.3222	X	X	X	X			
Transverse differential lock, rear axle (2-axle vehicle)	81.99192.3233			X	X			
Interaxle and transverse differential lock, rear axle (3-axle vehicle)	81.99192.3235					X	X	X
I-CAN cab (standard)	81.99192.3237	X	X	X	X	X	X	X
Electronic Brake System EBS 5 (2-axle vehicle)	81.99192.3246	X	X					

Name	Item no.:	Model 06S - 1580	Model 06S - 1581	Model 89S - 0161	Model 89S - 0162	Model 26X - 0150	Model 28X - 0006	Model 30X - 0273
Electronic Brake System EBS 5 (3-axle vehicle)	81.99192.3247			X	X	X	X	X
ECAS 2 (4x2 - semitrailer)	81.99192.3248	X	X					
ECAS 2 (4x2)	81.99192.3250							X
ECAS 2 (6x2 optionally with ALM/crane)	81.99192.3253			X	X			
EVB (Exhaust Valve Brake), controlled	81.99192.3260						X	
Window lifter, button in shift console	81.99192.3267	X	X	X	X	X	X	X
Gearbox / manual gearbox	81.99192.3276 replaced by 81.99192.3748	X	X	X	X	X		X
Trailer charge, 24V	81.99192.3292						X	
Interior lighting, roof, white /red	81.99192.3293	X	X	X	X	X	X	X
Intarder	81.99192.3295			X	X	X		X
Seat heating, driver	81.99192.3298					X		X
Customer-specific control module (KSM)	81.99192.3300	X	X	X	X	X		X
Preparation, transverse differential lock, rear axle (2-axle vehicle)	81.99192.3303	X	X		X			
Fuel filter heater	81.99192.3304	X	X	X	X	X	X	X
Fuel filter heater, Separ	81.99192.3305	X	X	X	X	X		X
Voltage transformer, 12V	81.99192.3313	X	X	X	X	X		X
Headlight beam regulator	81.99192.3314	X	X	X	X	X	X	X
Engine brake, automatic, off	81.99192.3316	X	X				X	
START/STOP device on engine	81.99192.3317	X	X	X	X	X	X	X
Pritarder/Intarder, automatic, off	81.99192.3337			X	X	X		X
Bunk light, bottom	81.99192.3349	X	X	X	X	X	X	X
Storage locker lighting, top (left, middle)	81.99192.3350	X	X	X	X			
Storage locker lighting, top (left, middle, right)	81.99192.3351					X	X	X
Central lubrication system	81.99192.3352	X	X	X	X			
Fog lamps/additional high beam headlights and cornering light	81.99192.3366	X	X	X	X		X	
Sockets in cab, 12V and 24V	81.99192.3367	X	X	X	X	X		X
Preparation, central lubrication system	81.99192.3379					X		X

Name	Item no.:	Model 06S - 1580	Model 06S - 1581	Model 89S - 0161	Model 89S - 0162	Model 26X - 0150	Model 28X - 0006	Model 30X - 0273
Storage locker lighting, rear left	81.99192.3395	X	X	X	X	X	X	X
Storage locker lighting, rear right	81.99192.3396	X	X	X	X	X	X	X
Table of contents	81.99192.3400	X	X	X	X	X	X	X
I-CAN roof (standard)	81.99192.3405	X	X	X	X	X	X	X
Interior lights with ambient light	81.99192.3461					X	X	X
Topline radio	81.99192.3490							X
Multifunctional steering wheel	81.99192.3501	X	X					
Electric cab tilt mechanism	81.99192.3617					X		X
EDC7 Euro 3 D20...	81.99192.3624	X	X	X	X			
EDC7 Common Rail Euro 3 D2676 LF, E-EGR	81.99192.3625					X	X	X
Gearbox / manual gearbox	81.99192.3748						X	

EXPLANATORY NOTES TO THE WIRING DIAGRAMS

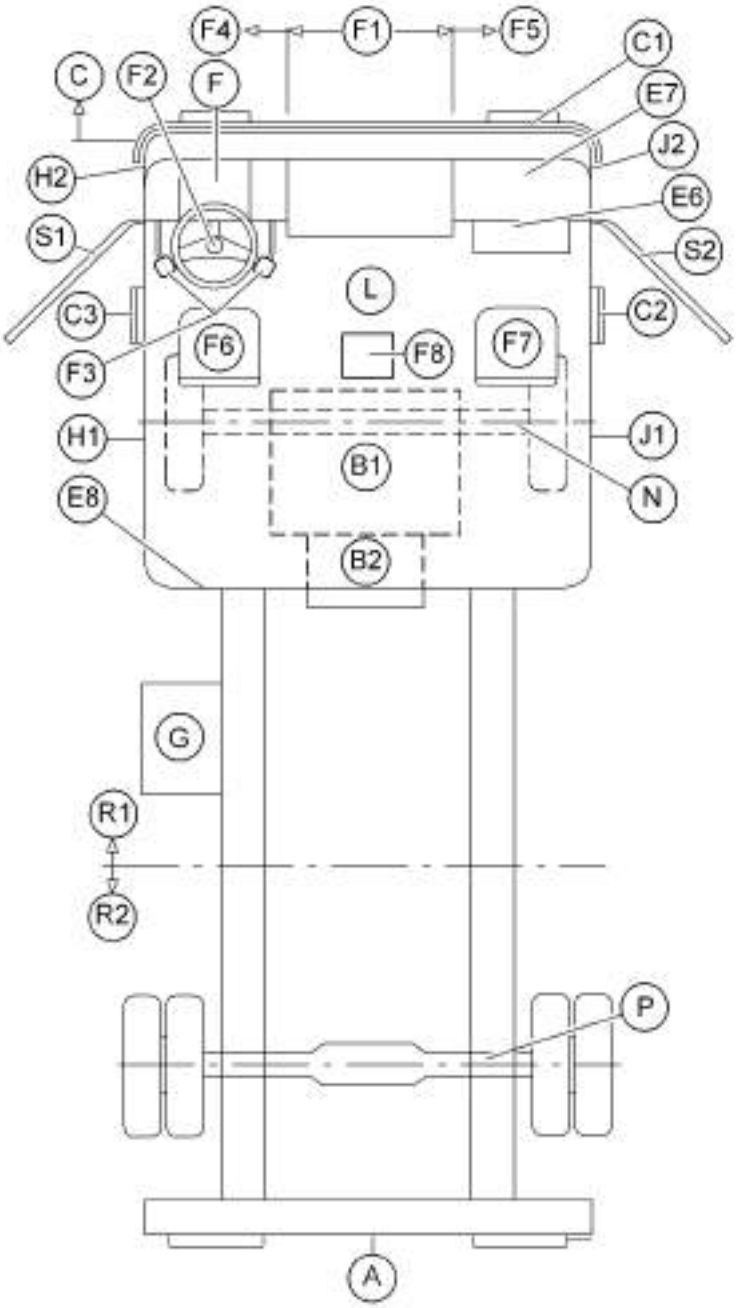


1 Electrical component designation (example: diode V100 on the central electrical system, number 53)
2 Installation position on the front of the central electrical system (here: stamped number 53)
3 Plug connection on the rear of the central electrical system (here: connector 78, connection 8)
4 Cable designation, number, with abbreviated colour name in the case of coloured cables, cross section information only given if different from 1²
5 Cable designation, number in brackets: conductor pathways on a p.c.b.
6 Line interruption with information about where the line continues, with sheet number (here: sheet 2 – not page number) and path number (here: path 4)
7 Plug connection (example: 1-pin plug connection X104)
8 Installation location of the component (see: identifications of installation positions)
9 Current path (numbered from 1 to 55/60 on each diagram)

Note: For cable number or cable name, see MAN-cats®.

Installation positions for location identifiers

Installation positions for left-hand-drive vehicles (TGS/TGX)



(A) Rear of vehicle
(B1) Engine
(B2) Gearbox
(C) Front of vehicle
(C1) Bumper
(C2) Entrance, right
(C3) Entrance, left
(E6) Area of central electrical system
(E7) Control unit plug-in modules
(E8) Back wall of cab
(F) Instrument panel
(F1) Mid-section
(F2) Steering column / steering wheel
(F3) Pedals
(F4) Front wall inside left
(F5) Front wall inside right
(F6) Driver’s seat
(F7) Co-driver’s seat
(F8) Shift console
(G) Battery box
(H1) B-pillar, driver’s side
(H2) A-pillar, driver’s side
(J1) B-pillar, co-driver's side
(J2) A-pillar, co-driver’s side
(L) Ceiling/roof
(N) Front axle
(P) Rear axle
(R1) Front frame sections
(R2) Rear frame section
(S1) Door, left
(S2) Door, right

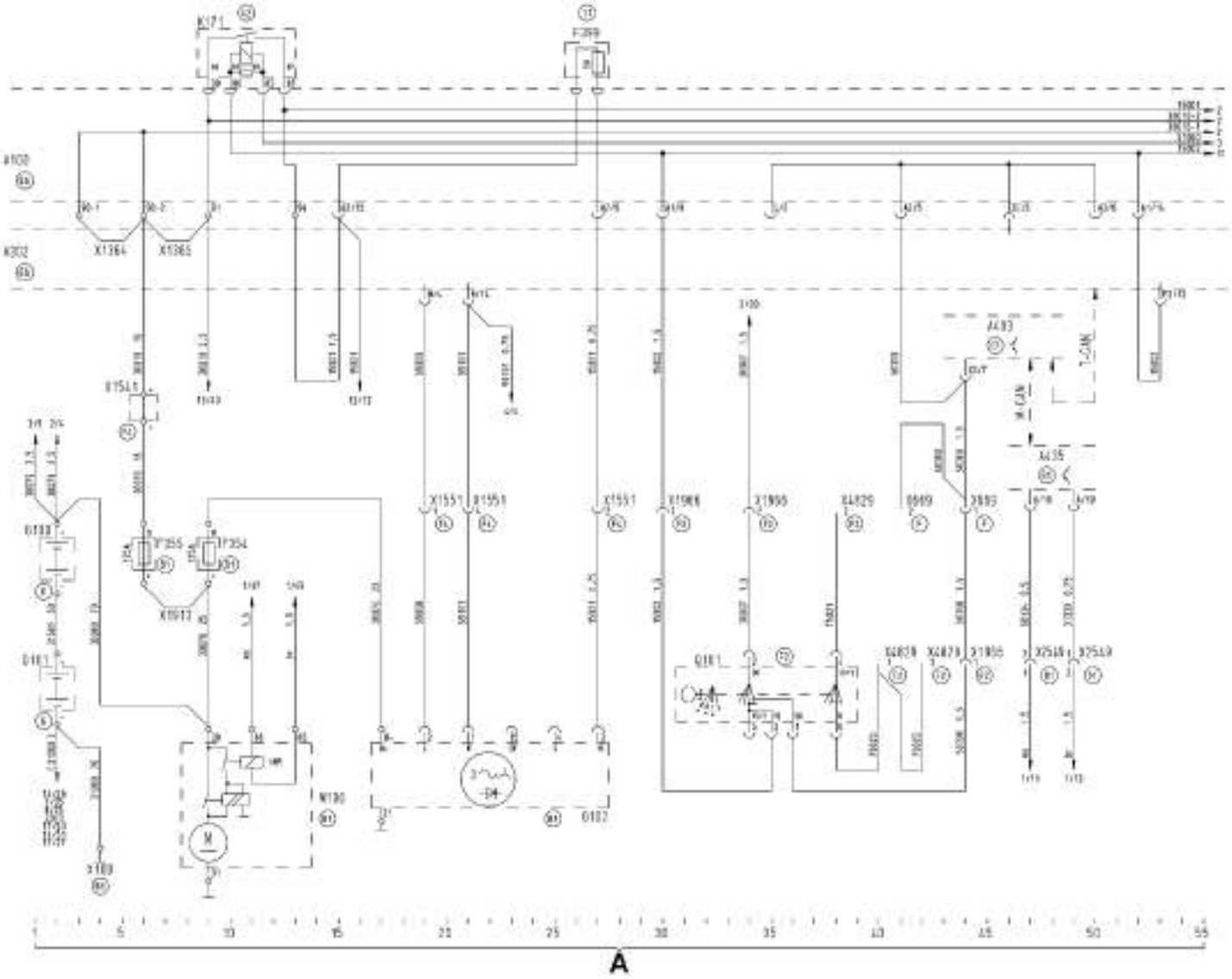
WIRING DIAGRAM NO. 81.99192.3079

A = Voltage supply, starting system sheet 1 of 22
Date: 09.2007

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A435	Control unit, EDC
F354	Main fuse (terminal 30-1)
F355	Main fuse (terminal 30-2)
F399	Fuse, alternator (terminal 15)
G100	Battery 1
G101	Battery 2
G102	Alternator 1
K171	Relay, consumers (terminal 15)
M100	Starter
Q101	Steering lock
X100	Ground connection, engine
X669	Plug conn., starter interlock
X1364	Jumper, central electrical system (central on-board computer) 90/1-90/2
X1365	Jumper, central electrical system (central on-board computer) 90/2-91
X1541	Plug conn., potential bushing +
X1551	Plug conn., engine/EDC/gearbox II
X1913	Jumper, line 30076 (motor power box)
X1966	Plug conn., ignition lock
X2549	Plug conn., IMR (starter)
X4829	Plug conn., ignition lock (terminal R)

A = Voltage supply, starting system sheet 1 of 22



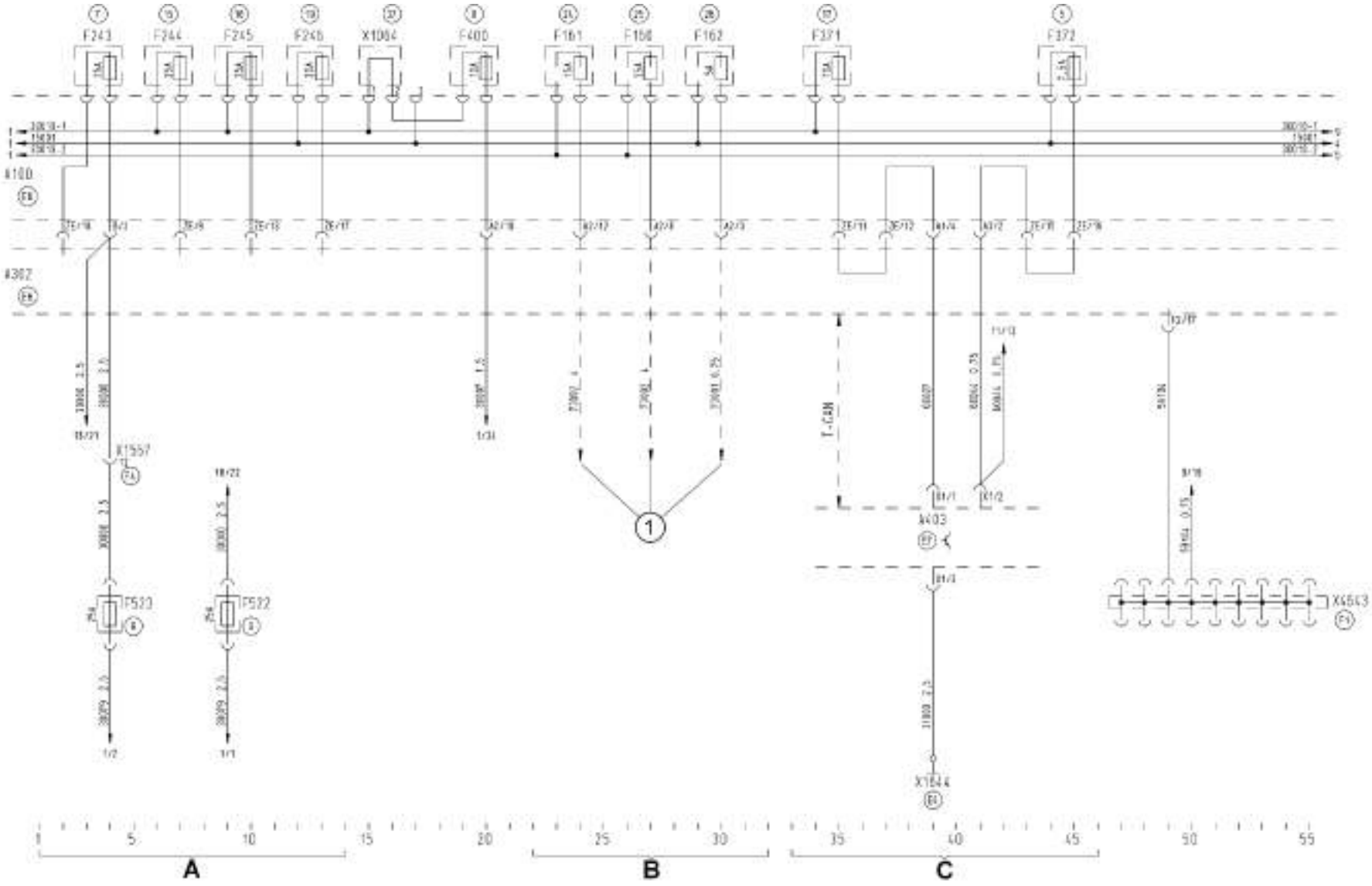
WIRING DIAGRAM NO. 81.99192.3079

A = On-board computer voltage supply / B = EBS voltage supply / C = Vehicle management computer voltage supply sheet 2 of 22
Date: 03.2005

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
F160	Fuse, EBS (ABS), trailer voltage supply
F161	Fuse, EBS (ABS), pressure control valve voltage supply
F162	Fuse, EBS (ABS), control
F243	Fuse, central on-board computer continuous positive
F244	Fuse, central on-board computer (terminal 30-1)
F245	Fuse, central on-board computer (terminal 30-2)
F246	Fuse, central on-board computer (terminal 15)
F371	Voltage supply, vehicle management computer (terminal 30)
F372	Voltage supply, vehicle management computer (terminal 15)
F400	Fuse, steering lock
F522	Fuse, line 30000
F523	Fuse, line 30000
X1064	Jumper on central electrical system, item 37 (pin1-2)
X1557	Plug conn., frame, left
X1644	Earthing point, cab, next to central electrical system
X4643	Potential distributor, line 59104
1	EBS

A = On-board computer voltage supply / B = EBS voltage supply / C = Vehicle management computer voltage supply sheet 2 of 22



WIRING DIAGRAM NO. 81.99192.3079

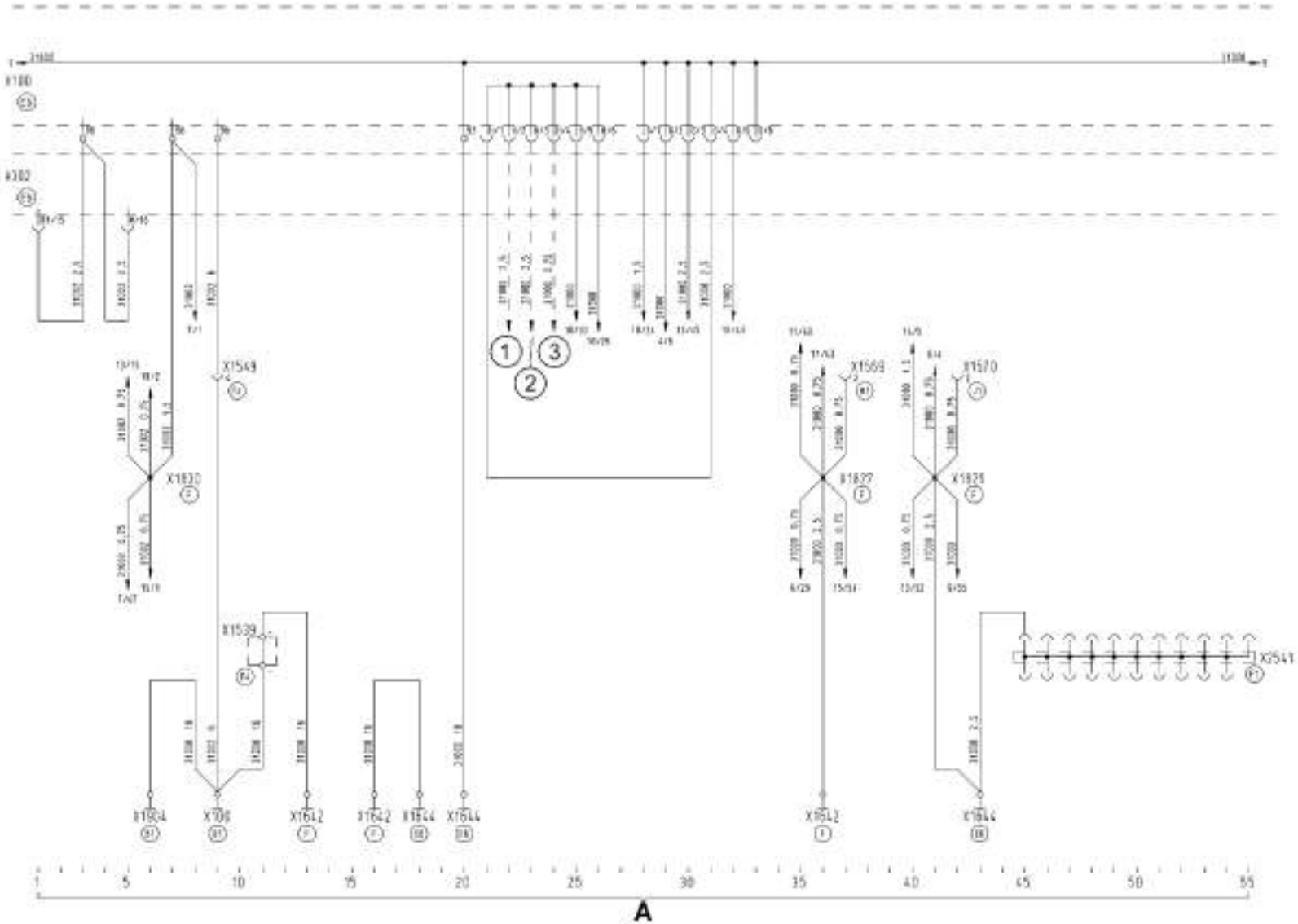
A = Chassis earth distributor sheet 3 of 22
Date: 03.2005

Legend

A100	Central electrical system
A302	Central computer 2
X100	Ground connection, engine
X1539	Plug conn., potential bushing -
X1549	Plug conn., engine/EDC/gearbox I
X1569	Plug conn., storage locker lighting
X1570	Plug conn., storage locker lighting
X1642	Earthing point, cab, behind instrument panel
X1644	Earthing point, cab, next to central electrical system
X1827	Crimped connector, line 31000
X1829	Crimped connector, line 31000
X1830	Crimped connector, line 31002
X1904	Threaded pin M6 (motor power box)
X2541	Potential distributor, 21-pin, line 31000

1	Door module driver's side
2	Door module, co-driver side
3	Door Module

A = Chassis earth distributor sheet 3 of 22



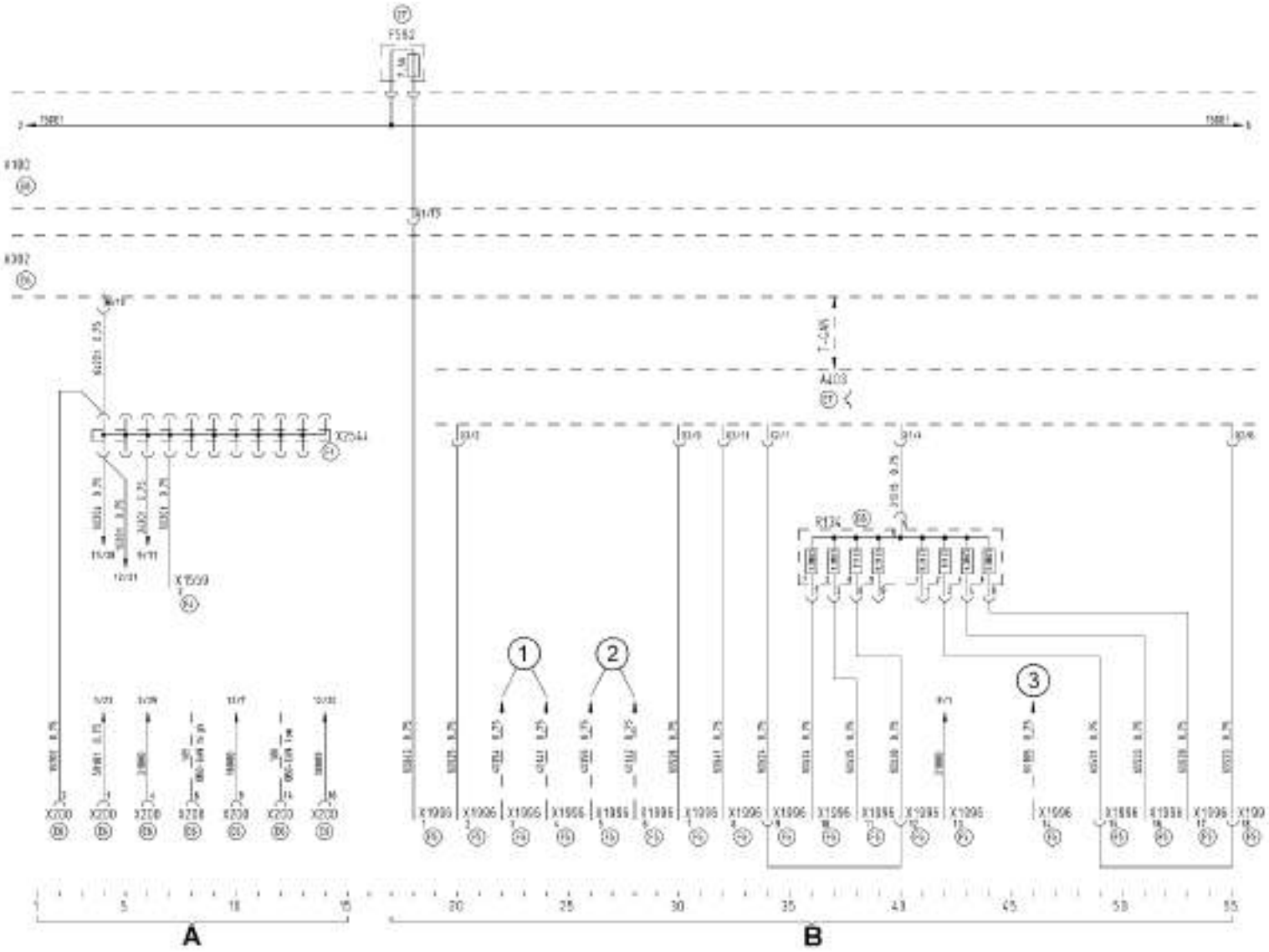
WIRING DIAGRAM NO. 81.99192.3079

A = On-board diagnosis (OBD) diagnosis socket / B = ZDR interface (FFR) (MDB, HGB) sheet 4 of 22
Date: 04.2006

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
F582	Fuse, vehicle management computer (terminal 15), ZDR/interface
R134	Resistor bank, EDC
X200	Connector, diagnosis
X1559	Plug conn., engine/EDC/gearbox IV
X1996	Plug conn., intermediate speed governor-interface (vehicle management computer)
X2544	Potential distributor 21-pin K-line
1	Power take-off I
2	Power take-off II
3	Customer-specified control module (control unit for external data exchange)

A = On-board diagnosis (OBD) diagnosis socket / B = ZDR interface (FFR) (MDB, HGB) sheet 4 of 22



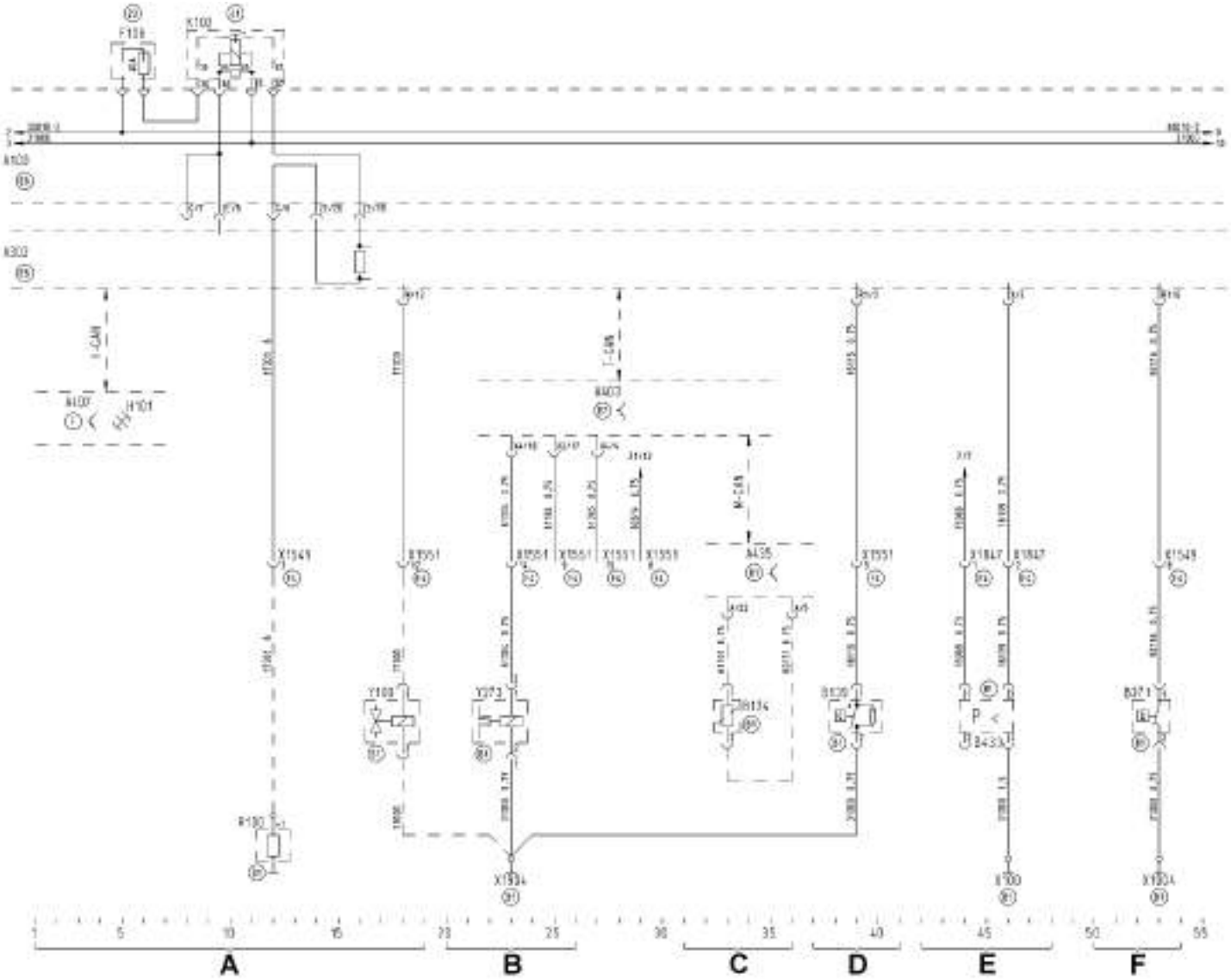
WIRING DIAGRAM NO. 81.99192.3079

A = Flame start system / B = Fan clutch / C = EDC coolant temperature / D = Coolant level / E = Air filter pressure sensor / F = Power steering oil level sheet 5 of 22
Date: 09.2007

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A407	Instrumentation
A435	Control unit, EDC
B124	Temperature sensor, coolant
B139	Coolant level probe
B371	Switch, steering oil reservoir
B433	Pressure transmitter, air filter
F106	Fuse, flame start system
H101	Check lamp, flame start system
K102	Relay, flame start system
R100	Flame glow plug 1
X100	Ground connection, engine
X1549	Plug conn., engine/EDC/gearbox I
X1551	Plug conn., engine/EDC/gearbox II
X1847	Plug conn., pressure transmitter, air filter
X1904	Threaded pin M6 (motor power box)
Y100	Solenoid valve, flame start system
Y273	Magnetic clutch, fan

A = Flame start system / B = Fan clutch / C = EDC coolant temperature / D = Coolant level / E = Air filter pressure sensor / F = Power steering oil level sheet 5 of 22



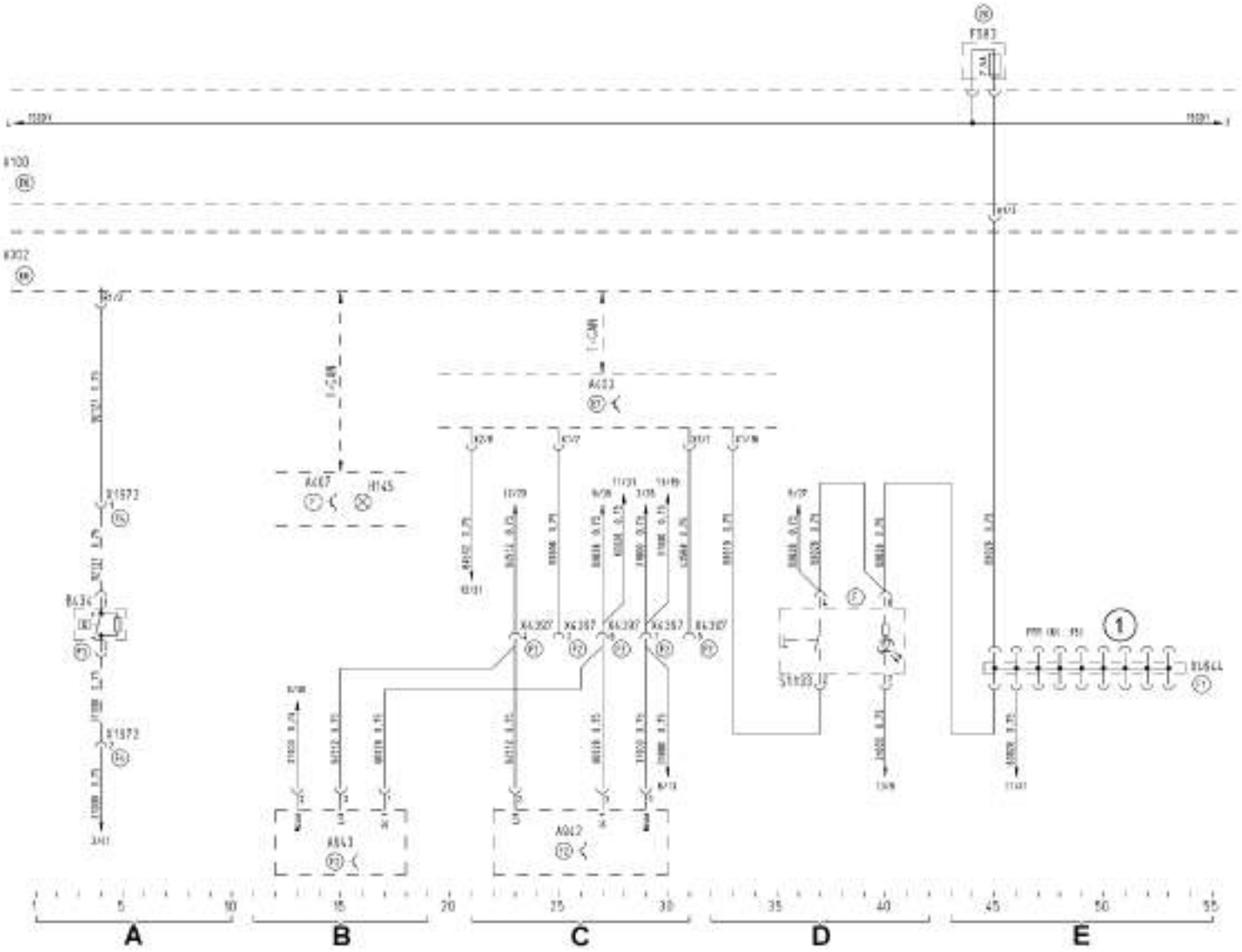
WIRING DIAGRAM NO. 81.99192.3079

A = Probe for clutch fluid level / B = Multifunctional steering wheel / C = Steering column stalk / D = Sustained-action brake / E = Distributor, line 60028 sheet 6 of 22
Date: 09.2006

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A407	Instrumentation
A942	Steering column stalk, retarder/gearbox
A943	Multifunctional steering wheel
B434	Clutch fluid level probe
F583	Fuse, vehicle management computer (terminal 15), switches / sensors
H145	Check lamp, retarder
S1133	Button, sustained-action brake
X1972	Plug conn., pedals, outside
X4397	Plug conn., multifunctional steering wheel
X4644	Potential distributor, line 60028
1	Vehicle management computer (terminal 15), switches / sensors

A = Probe for clutch fluid level / B = Multifunctional steering wheel / C = Steering column stalk / D = Sustained-action brake / E = Distributor, line 60028 sheet 6 of 22



WIRING DIAGRAM NO. 81.99192.3079

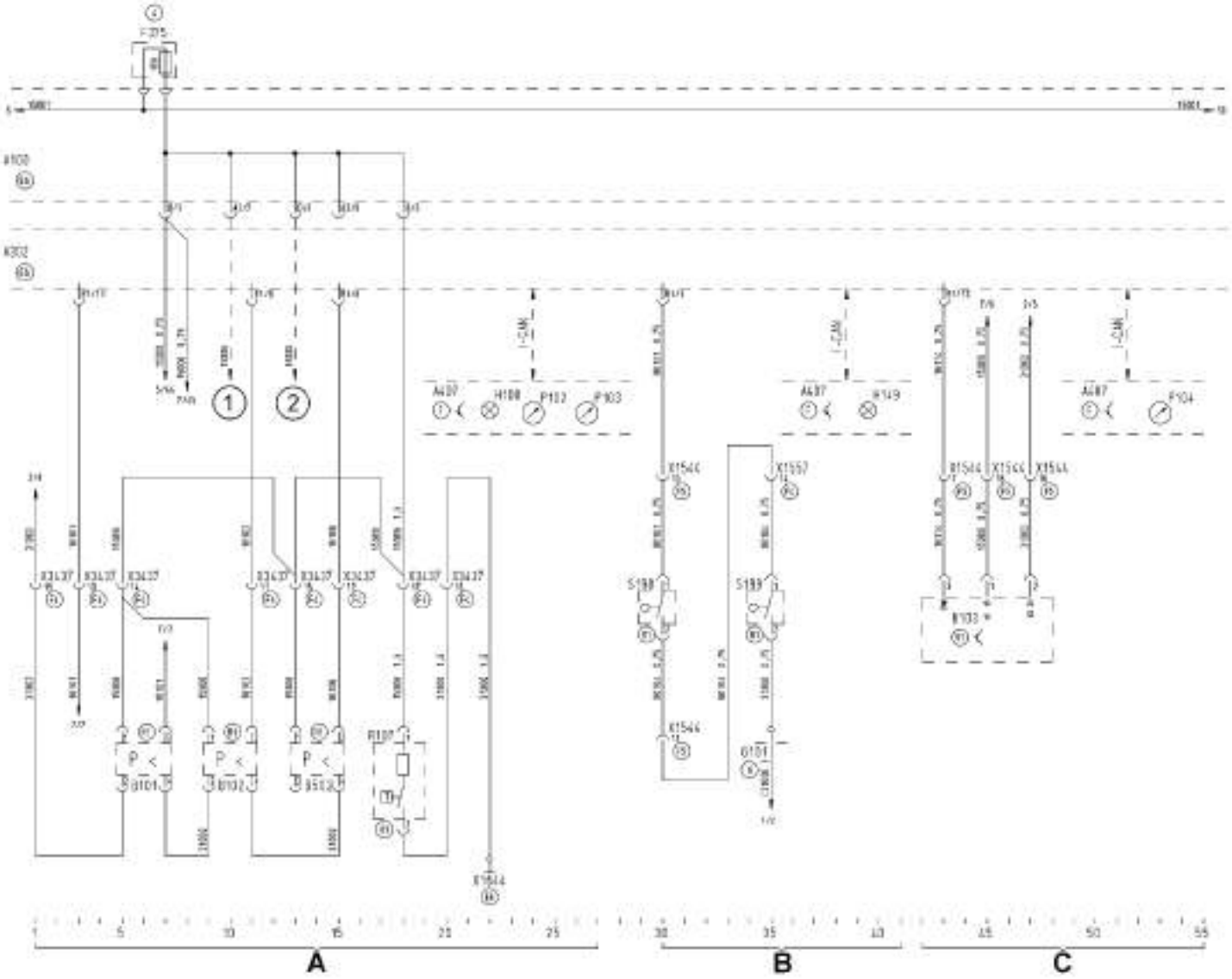
A = Air dryer/brake circuit monitoring / B = Cab lock check / C = Fuel gauge sheet 7 of 22
Date: 09.2006

Legend

A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
B101	Sensor, reservoir pressure, brake circuit 1
B102	Sensor, reservoir pressure, brake circuit 2
B103	Sensor, fuel level 1
B502	Sensor, reservoir pressure, brake circuit 3
F375	Fuse (terminal 15), cab, outside
G101	Battery 2
H108	Check lamp, reservoir pressure
H149	Check lamp, cab lock
P102	Indicating instrument, reservoir pressure, brake circuit 1
P103	Indicating instrument, reservoir pressure, brake circuit 2
P104	Indicating instrument, fuel level
R107	Air dryer
S198	Switch, cab lock, right
S199	Switch, cab lock, left
X1544	Plug conn., frame III
X1557	Plug conn., frame, left
X1644	Earthing point, cab, next to central electrical system
X3437	Plug conn., frame II

1	TPM
2	ECAS

A = Air dryer/brake circuit monitoring / B = Cab lock check / C = Fuel gauge sheet 7 of 22



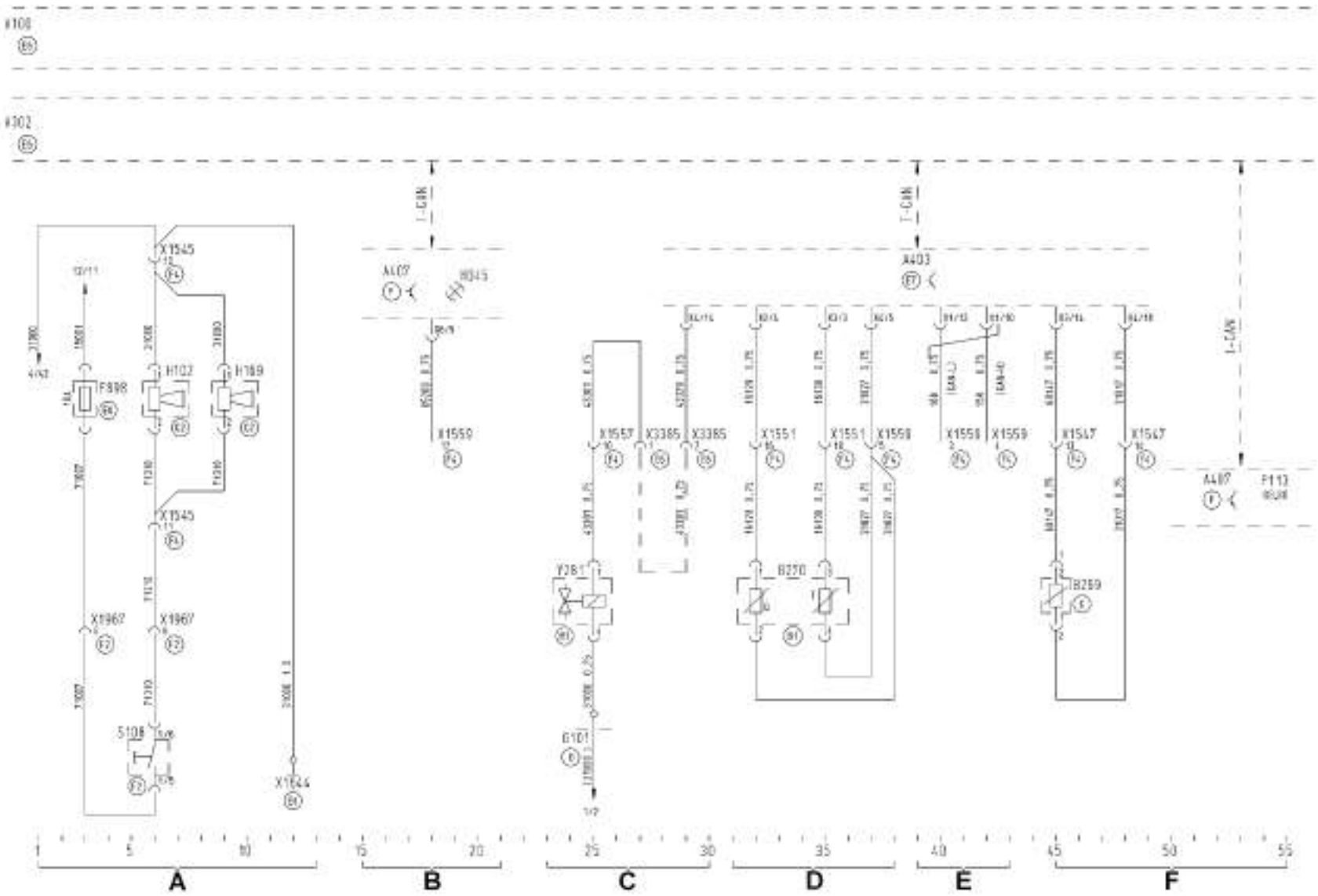
WIRING DIAGRAM NO. 81.99192.3079

A = Signal horn / B = Fuel filter heater preparation / C = Engine brake / D = Oil level sensor / E = M-CAN / F = Outside temperature sheet 8 of 22
Date: 01.2008

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A407	Instrumentation
B269	Temperature sensor, outside air
B270	Oil level sensor
F898	Fuse, signal horn
G101	Battery 2
H102	Signal horn
H169	Horn (two-tone)
H345	Check lamp, fuel filter heater
P113	Gauge, outside temperature
S108	Steering column stalk (turn indicators, wipers, headlights)
X1545	Plug conn., front end, left
X1547	Plug conn., door, left
X1551	Plug conn., engine/EDC/gearbox II
X1557	Plug conn., frame, left
X1559	Plug conn., engine/EDC/gearbox IV
X1644	Earthing point, cab, next to central electrical system
X1967	Plug conn., 1, combination steering column stalk
X3385	Plug conn., engine brake/EVB
Y281	Solenoid valve, engine brake/EVB

A = Signal horn / B = Fuel filter heater preparation / C = Engine brake / D = Oil level sensor / E = M-CAN / F = Outside temperature sheet 8 of 22



WIRING DIAGRAM NO. 81.99192.3079

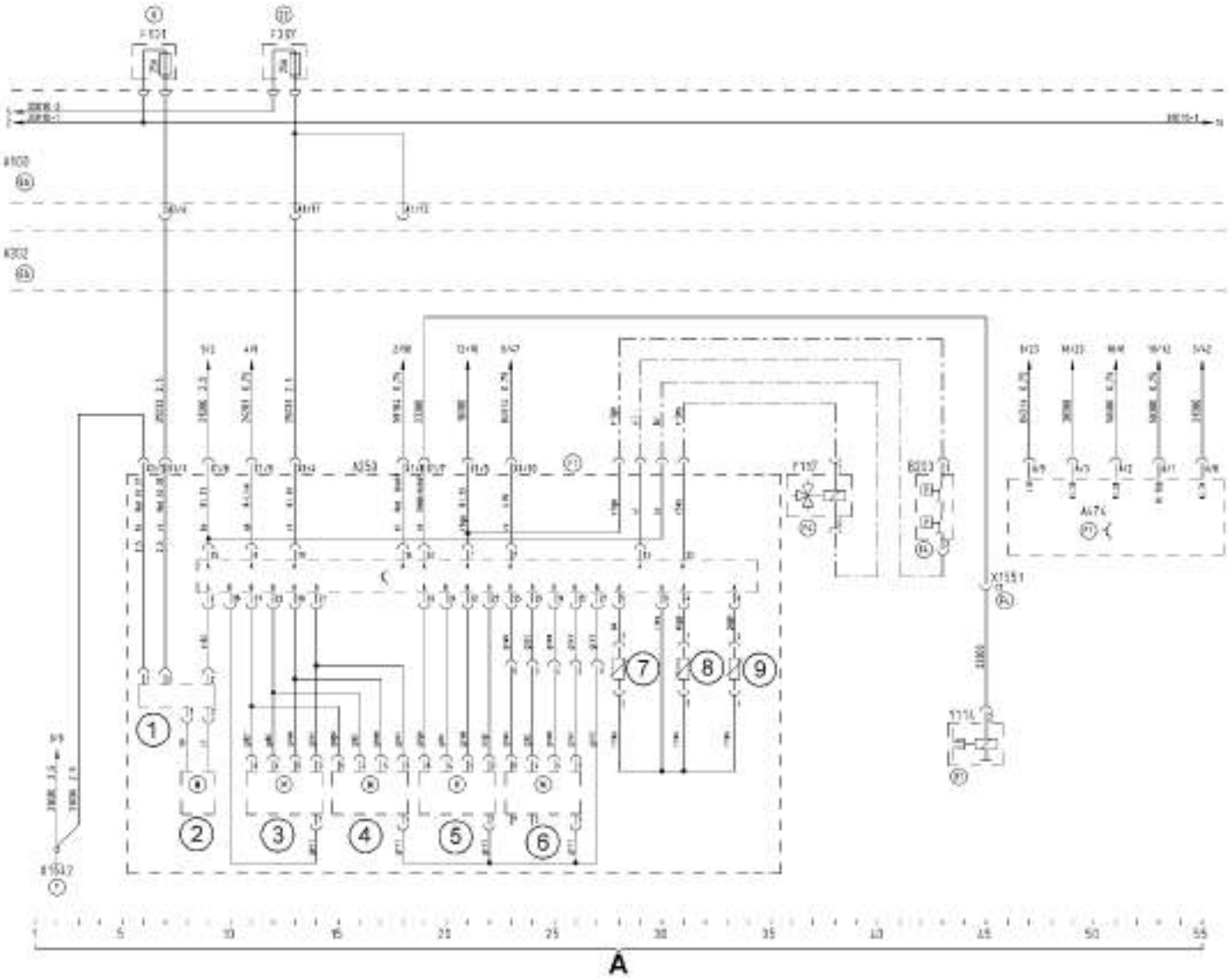
A = Heater blower/air-conditioning system sheet 9 of 22
Date: 09.2007

Legend

A100	Central electrical system
A250	Control unit, heater/air conditioner
A302	Central computer 2
A474	Controls, cab heating without/with air conditioner
B203	Coolant tank with high/low-pressure switch
F131	Fuse, heater blower
F397	Fuse, front end heater, air-conditioning system
X1551	Plug conn., engine/EDC/gearbox II
X1642	Earthing point, cab, behind instrumentation
Y114	Magnetic clutch, compressor
Y117	EP valve, front air-conditioning system

1	Blower regulator
2	Blower
3	Temperature
4	Air distribution
5	Side nozzles
6	Fresh/recirculating air
7	Heat exchanger sensor
8	Outside temperature sensor
9	Evaporator sensor

A = Heater blower/air-conditioning system sheet 9 of 22



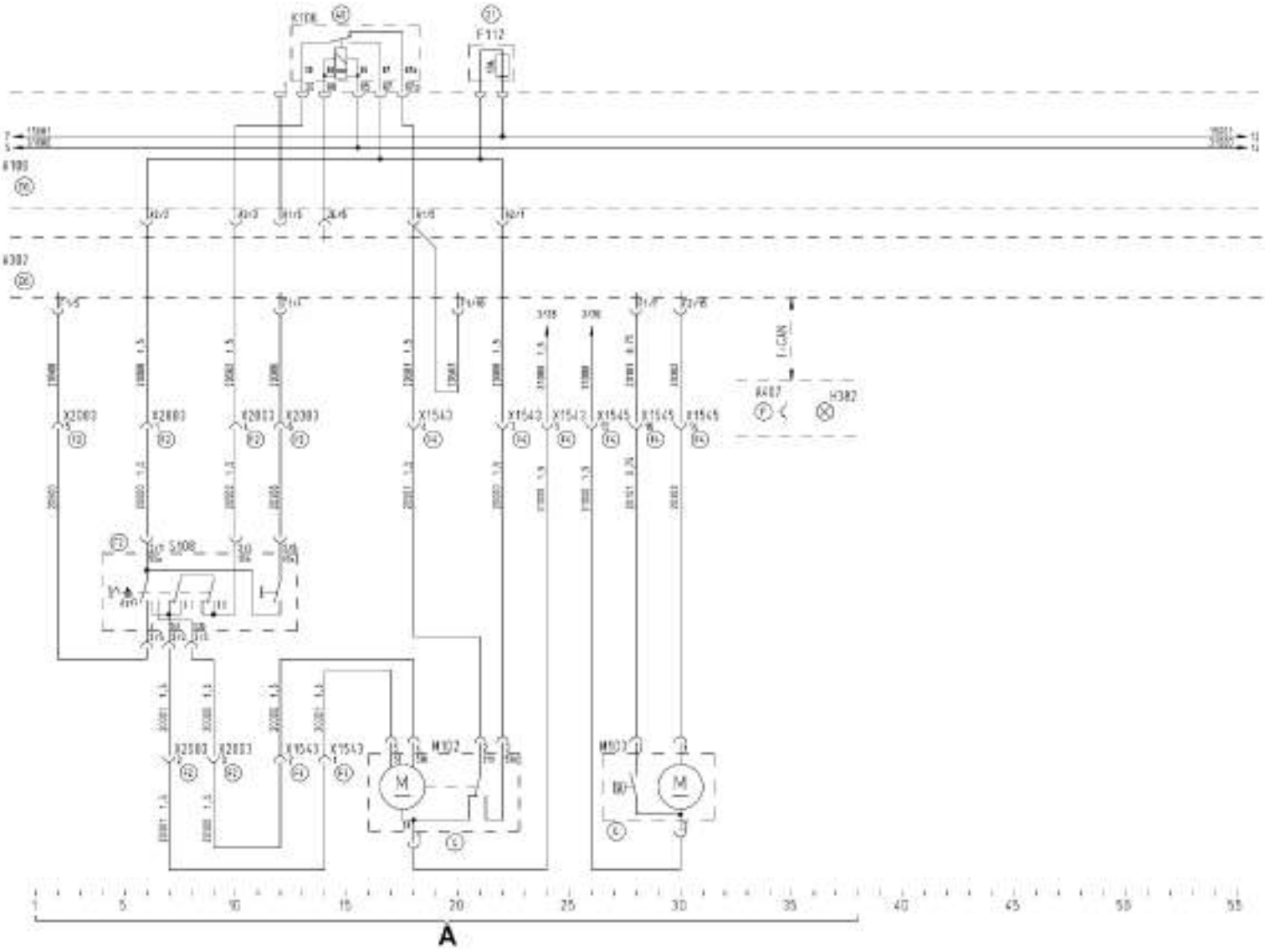
WIRING DIAGRAM NO. 81.99192.3079

A = Washers and wipers sheet 10 of 22
Date: 03.2005

Legend

A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
F112	Fuse, windscreen washers and wipers
H382	Check lamp, cleaning water level
K106	Relay, wiper interval
M102	Windscreen wiper motor
M103	Windscreen washer pump
S108	Steering column stalk (turn indicators, wipers and headlights)
X1543	Plug conn., wiper motor
X1545	Plug conn., front end, left
X2003	Plug conn., 2nd combination steering column stalk

A = Washers and wipers sheet 10 of 22



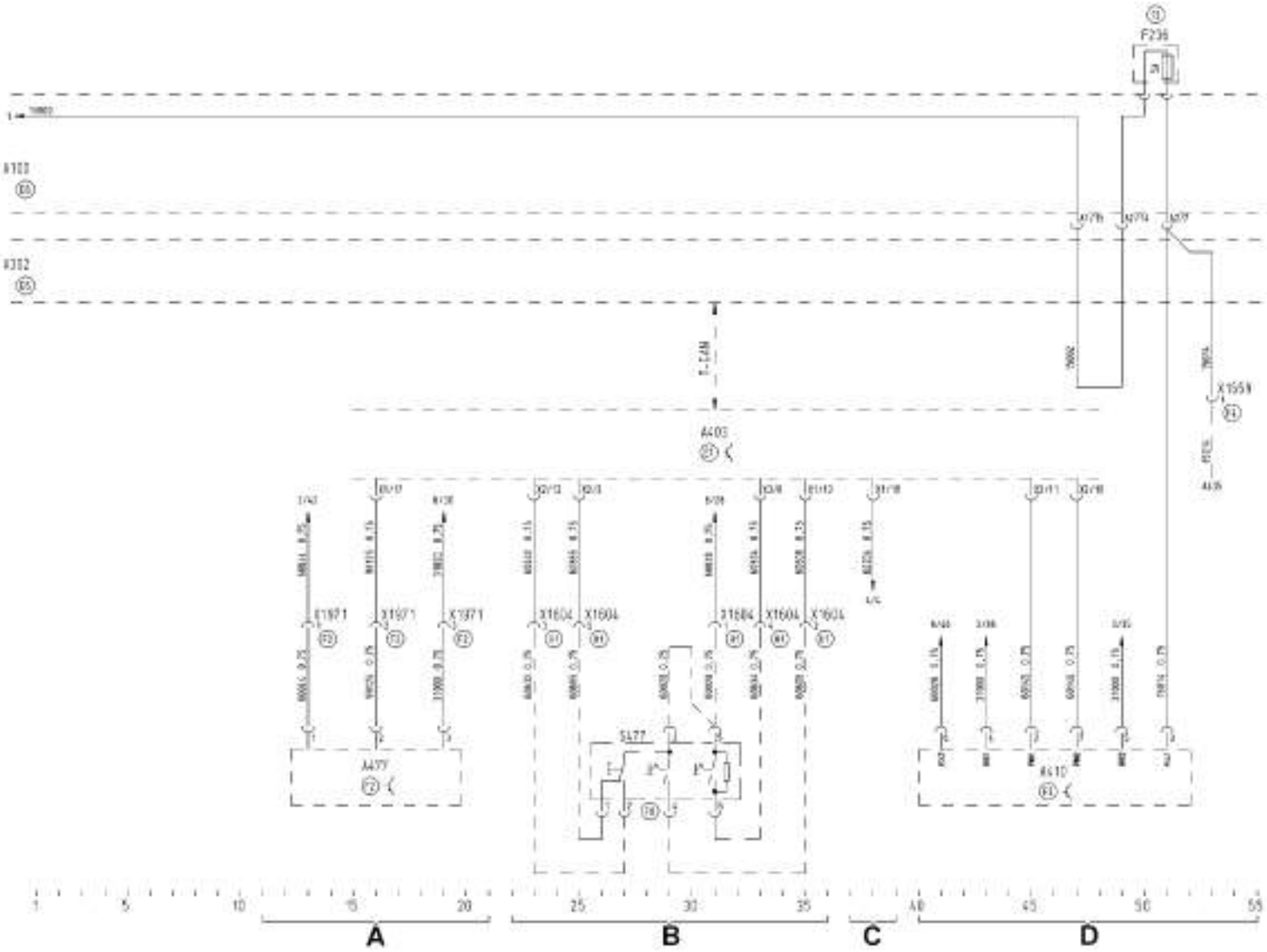
WIRING DIAGRAM NO. 81.99192.3079

A = Immobiliser / B = Gear selector lever / C = Vehicle management computer diagnosis / D = Accelerator pedal unit sheet 11 of 22
Date: 09.2006

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A410	Accelerator pedal unit
A477	ECU, immobiliser
F236	Fuse, engine control (terminal 15)
S477	Switch, gear selector lever
X1559	Plug conn., engine/EDC/gearbox IV
X1604	Plug conn., switch in gearshift knob
X1971	Plug conn., immobiliser

A = Immobiliser / B = Gear selector lever / C = Vehicle management computer diagnosis / D = Accelerator pedal unit sheet 11 of 22



WIRING DIAGRAM NO. 81.99192.3079

A = Voltage supply +15 / B = Instrumentation/tachograph sheet 12 of 22
Date: 09.2007

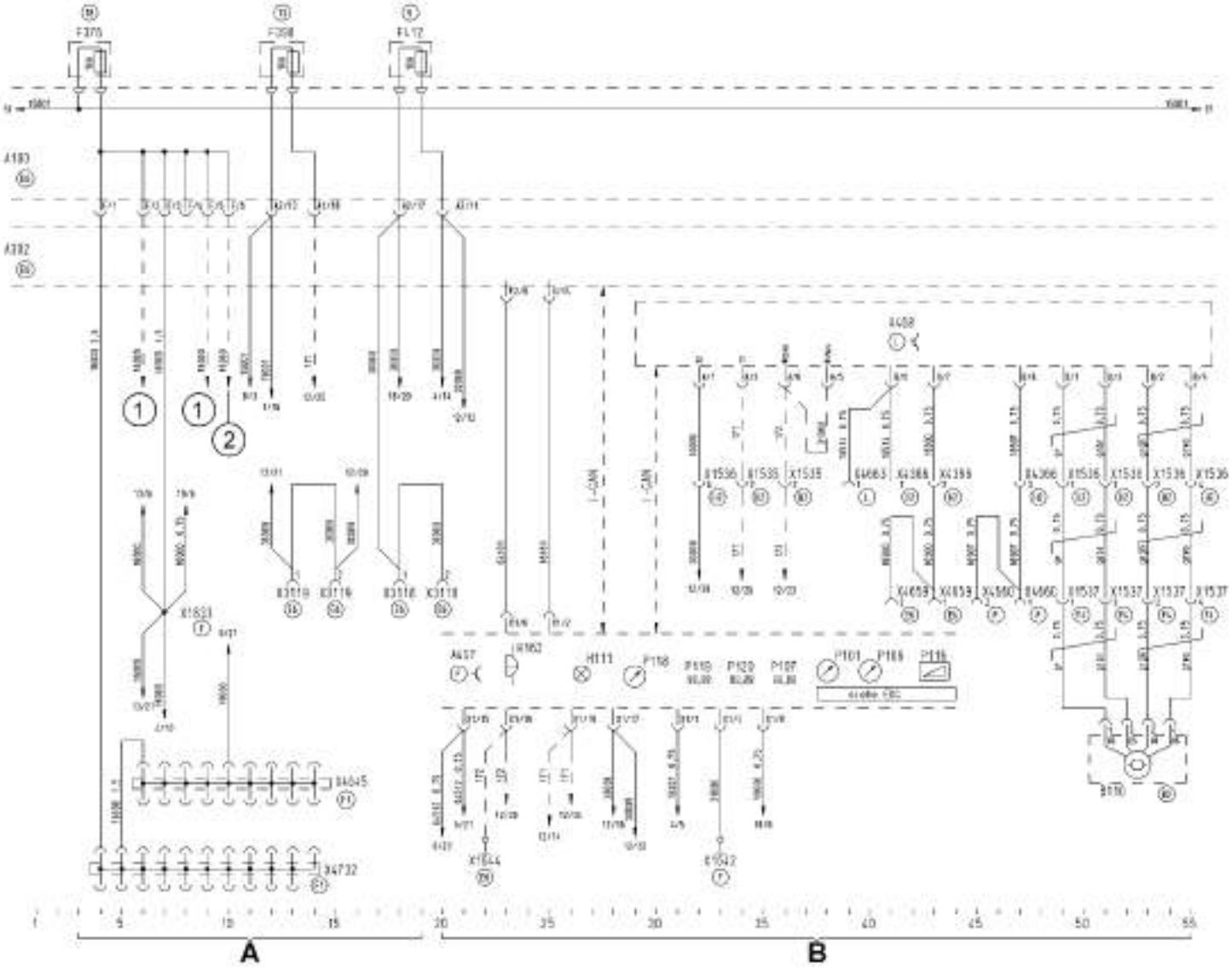
Legend

A100 Central electrical system
A302 Central computer 2
A407 Instrumentation
A408 Tachograph
B110 Pulse generator, tachograph
F376 Fuse, cab, inside (terminal 15)
F398 Fuse, instrumentation, tachograph (terminal 15)
F412 Fuse, instrumentation, tachograph (terminal 30)
H111 Central warning light STOP
H162 Warning buzzer
P101 Rev counter
P106 Cooling water temperature gauge
P107 Clock
P116 Charge pressure indicator
P118 Speedometer
P119 Mileage indicator
P120 Display, trip mileage indicator
X1535 Plug conn., Tachograph
X1536 Plug conn., tachograph
X1537 Plug conn., speedometer sensor
X1642 Earthing point, cab, behind instrument panel
X1644 Earthing point, cab, next to central electrical system
X1833 Crimped connector, line 16000
X3118 Plug conn., distributor, line 30000
X3119 Plug conn., distributor, line 30009
X4366 Plug conn., pulse distributor - tachograph
X4645 Potential distributor, line 16000
X4659 Plug conn., V-signal, line 16500
X4660 Plug conn., 4 pulses/meter, line 16507
X4663 Plug conn., adaptation, V-signal, line 16514
X4732 Potential distributor, line 16000, switch lighting

1 Auxiliary heater

2 Door module

A = Voltage supply +15 / B = Instrumentation/tachograph sheet 12 of 22



WIRING DIAGRAM NO. 81.99192.3079

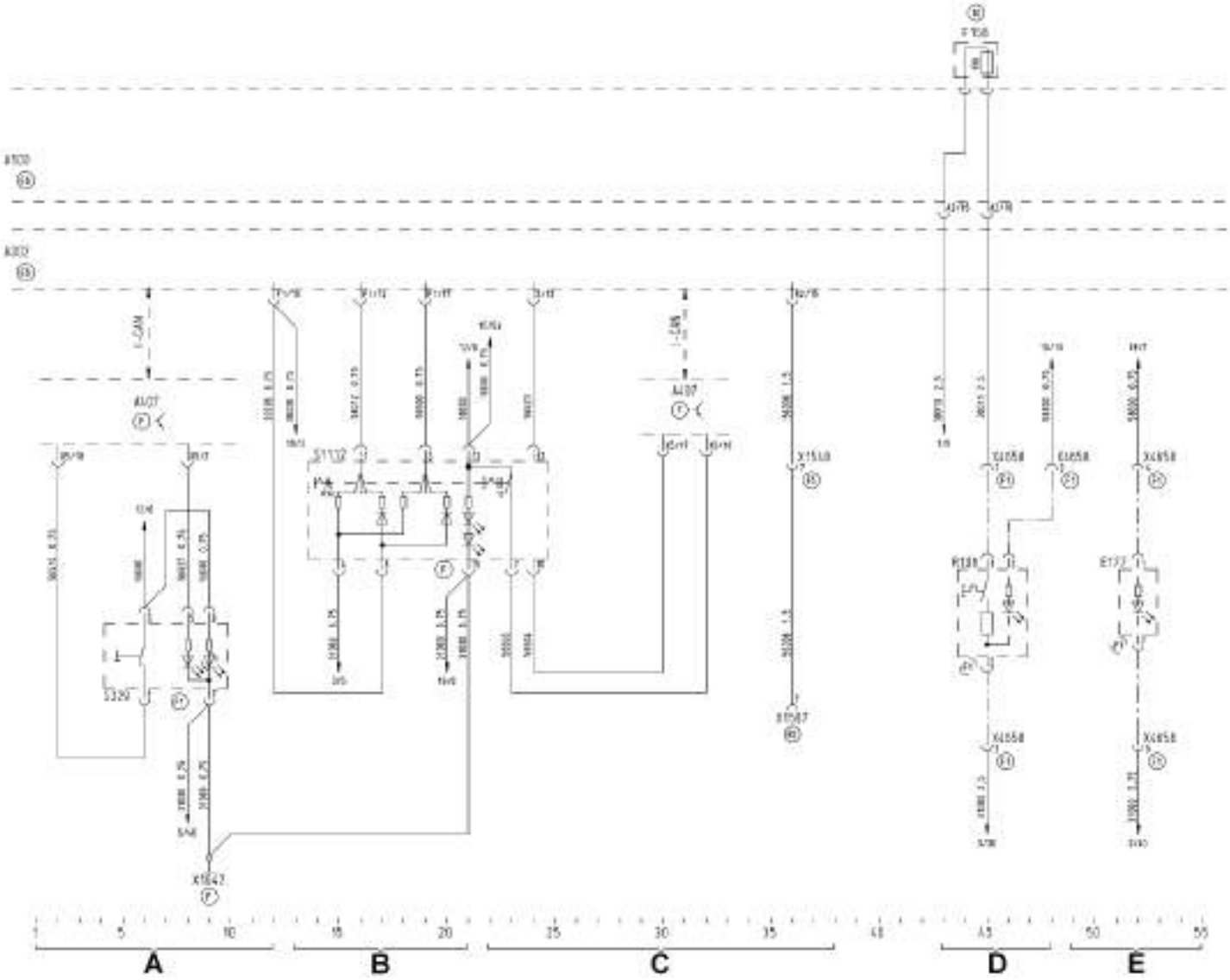
A = Lighting learning routine / B = Light circuit / C = Fog lamp/rear fog lamp circuit / D = Cigarette lighter / E = Ashtray lighting sheet 13 of 22
Date: 09.2007

Legend

A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
E177	Lighting, ashtray, left
F158	Fuse, cigarette lighter
R108	Cigarette lighter
S329	Button, lighting learning routine
S1112	Rotary light switch with rear fog lamp
X1540	Plug conn., frame I
X1587	Plug conn., connection, trailer socket 2
X1642	Earthing point, cab, behind instrumentation
X4658	Plug conn., cigarette lighter/ashtray lighting

Note
Installation position of X1587 for semitrailer is E8!

A = Lighting learning routine / B = Light circuit / C = Fog lamp/rear fog lamp circuit / D = Cigarette lighter / E = Ashtray lighting sheet 13 of 22



WIRING DIAGRAM NO. 81.99192.3079

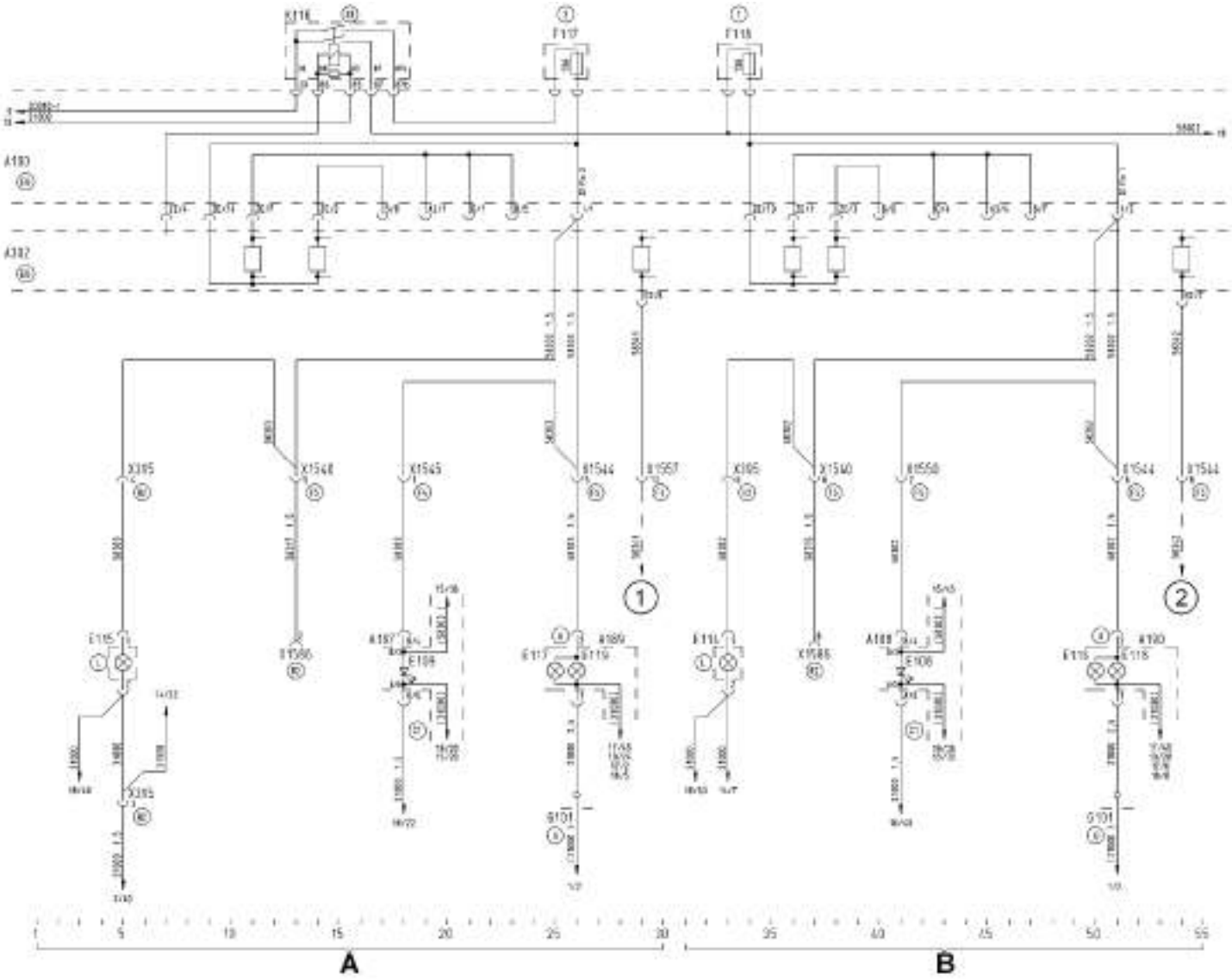
A = Parking lights, left / B = Parking lights, right sheet 14 of 22
Date: 10.2007

Legend

A100	Central electrical system
A187	Headlight, left
A188	Headlight, right
A189	Tail light, left
A190	Tail light, right
A302	Central computer 2
E108	Parking light, right
E109	Parking light, left
E114	Outline light, front right
E115	Outline light, front left
E116	Outline light, rear right
E117	Outline light, rear left
E118	Tail light, right
E119	Tail light, left
F117	Fuse, parking/tail light, left
F118	Fuse, parking/tail light, right
G101	Battery 2
K116	Relay, parking/tail light
X395	Plug conn., outline light and interior light, left and right
X1540	Plug conn., frame I
X1544	Plug conn., frame III
X1545	Plug conn., front end, left
X1550	Plug conn., front end, right
X1557	Plug conn., frame, left
X1586	Plug conn., connection, trailer socket 1
1	Side marker lights, left
2	Side marker lights, right

Note
Installation position of X1586 for semitrailer is E8!

A = Parking lights, left / B = Parking lights, right sheet 14 of 22



WIRING DIAGRAM NO. 81.99192.3079

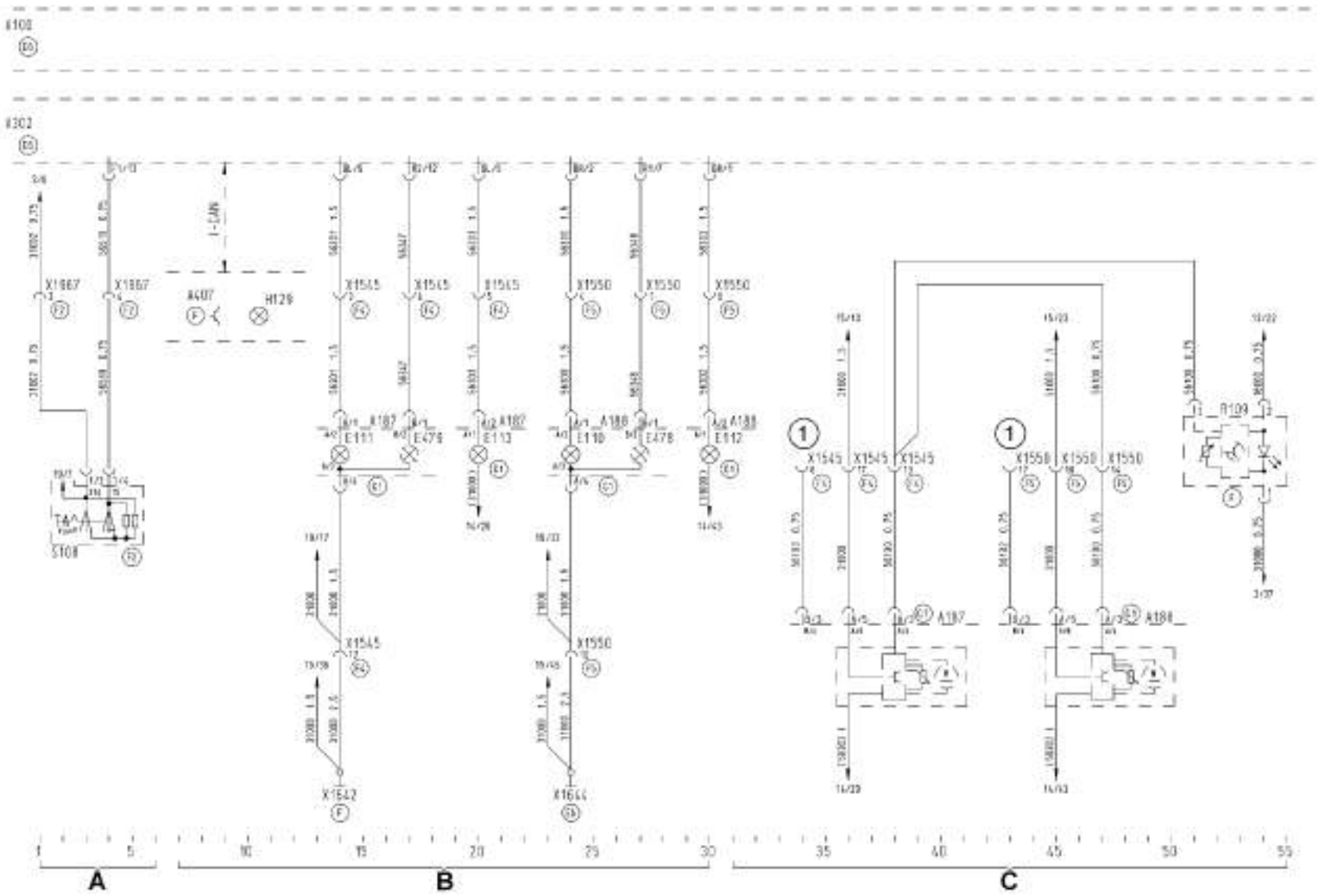
A = Headlight flash / B = Headlight low beam, headlight high beam, daytime driving lights / C = Headlight beam regulator sheet 15 of 22
Date: 09.2007

Legend

A100	Central electrical system
A187	Headlight, left
A188	Headlight, right
A302	Central computer 2
A407	Instrumentation
E110	Headlight low beam, right
E111	Headlight low beam, left
E112	Headlight high beam, right
E113	Headlight high beam, left
E478	Daytime driving lights, right
E479	Daytime driving lights, left
H129	Check lamp, headlight high beam
R109	Potentiometer, headlight beam regulator
S108	Steering column stalk (turn indicators, wipers and headlights)
X1545	Plug conn., front end, left
X1550	Plug conn., front end, right
X1642	Earthing point, cab behind instrument panel
X1644	Earthing point, cab, next to central electrical system
X1967	Plug conn., 1 combination steering column stalk

1 for headlights

A = Headlight flash / B = Headlight low beam, headlight high beam, daytime driving lights / C = Headlight beam regulator sheet 15 of 22



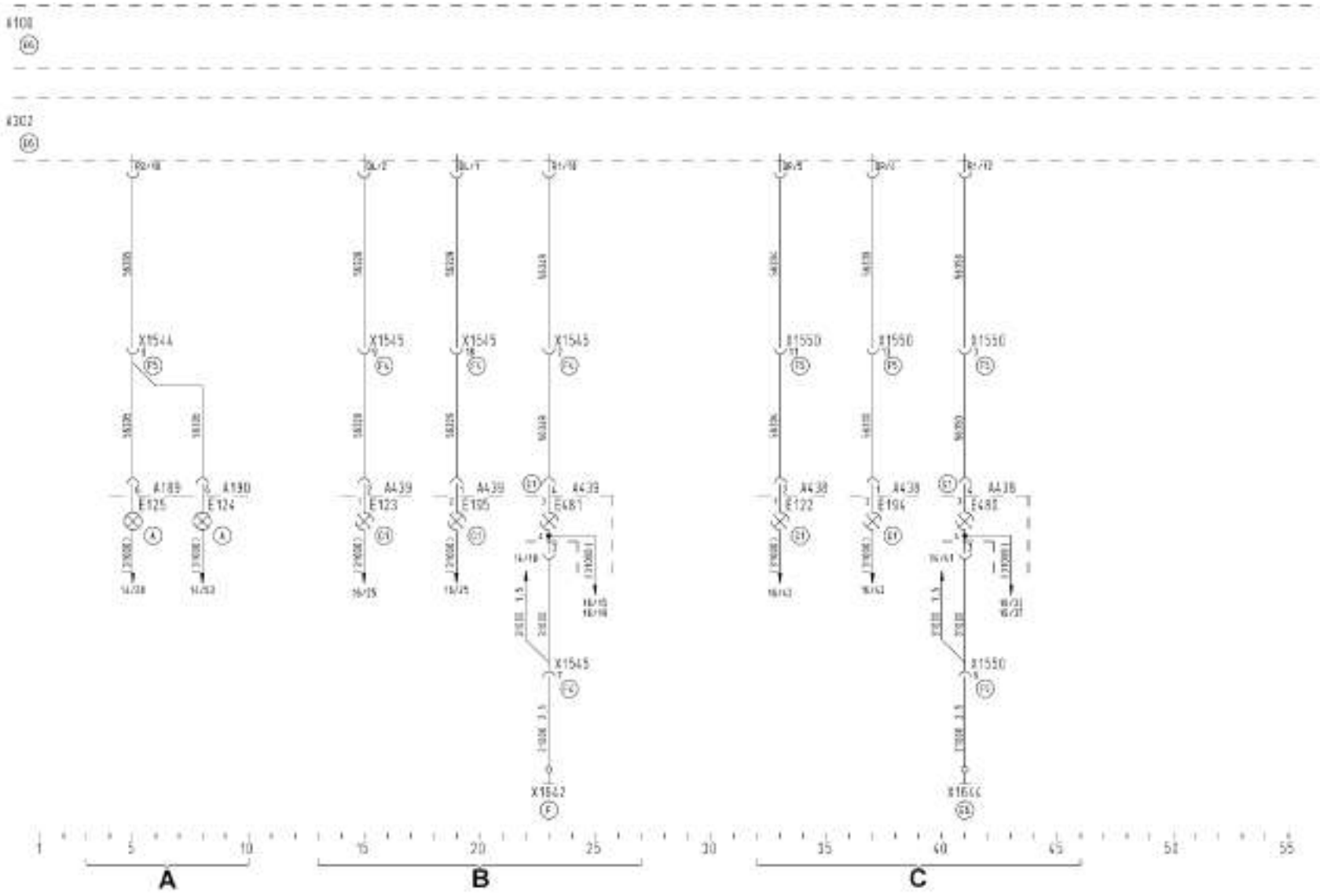
WIRING DIAGRAM NO. 81.99192.3079

A = Rear fog lamps / B = Fog lamps, additional high beam headlights, cornering light, left / C = Fog lamps, additional high beam headlights, cornering light, right sheet 16 of 22
Date: 03.2005

Legend

A100	Central electrical system
A189	Tail light, left
A190	Tail light, right
A302	Central computer 2
A438	Light surround, right
A439	Light surround, left
E122	Fog lamp, right
E123	Fog lamp, left
E124	Rear fog lamp, right
E125	Rear fog lamp, left
E194	High beam headlight, right
E195	High beam headlight, left
E480	Cornering light, right
E481	Cornering light, left
X1544	Plug conn., frame III
X1545	Plug conn., front end, left
X1550	Plug conn., front end, right
X1642	Earthing point, cab behind instrument panel
X1644	Earthing point, cab, next to central electrical system

A = Rear fog lamps / B = Fog lamps, additional high beam headlights, cornering light, left / C = Fog lamps, additional high beam headlights, cornering light, right sheet 16 of 22



WIRING DIAGRAM NO. 81.99192.3079

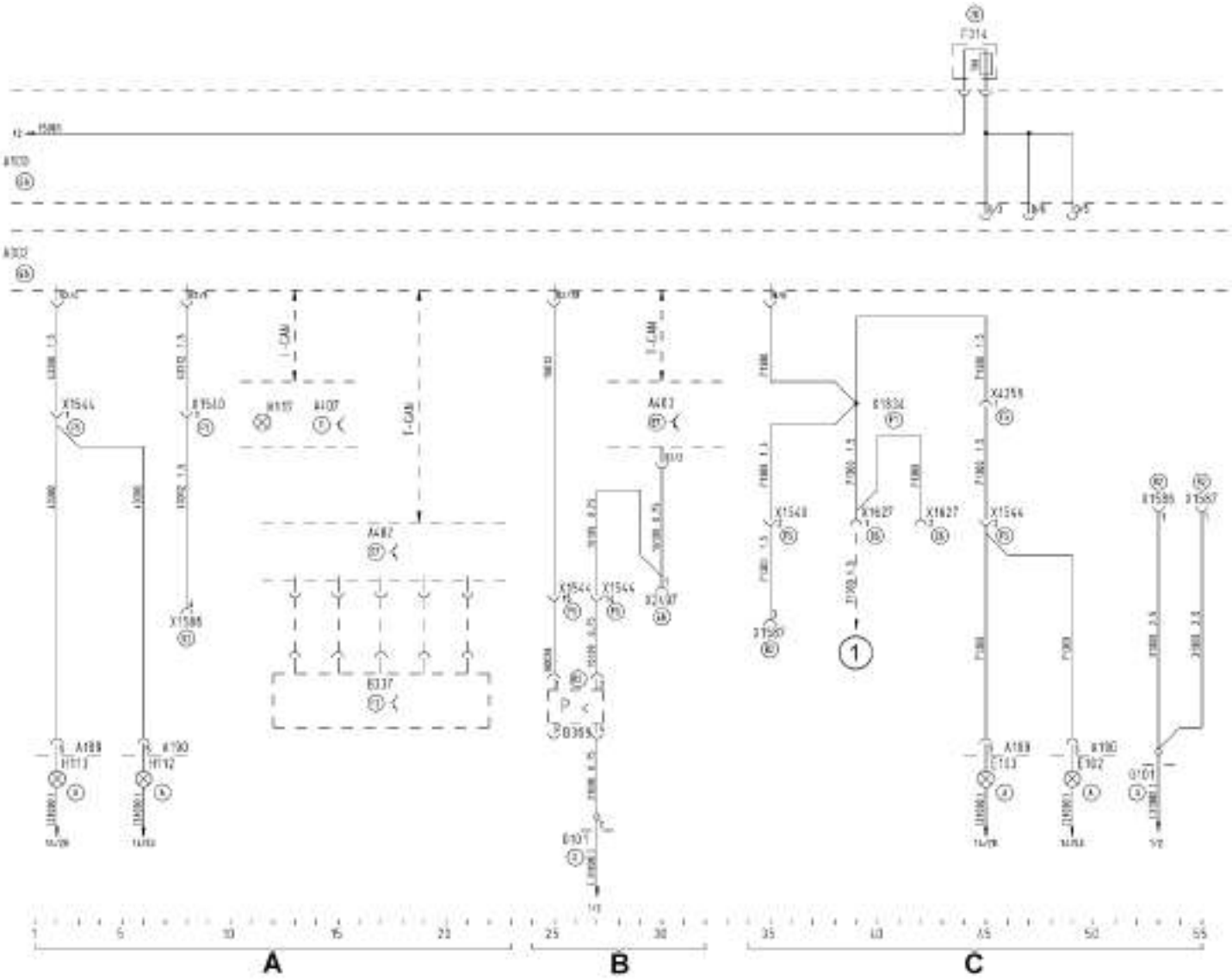
A = Brake light / B = Parking brake / C = Reversing light sheet 17 of 22
Date: 03.2005

Legend

A100	Central electrical system
A189	Tail light, left
A190	Tail light, right
A302	Central computer 2
A402	Control unit, EBS
A403	Vehicle management computer
A407	Instrumentation
B337	Brake power sensor, EBS
B369	Electrical switch, check lamp, parking brake
E102	Reversing light, right
E103	Reversing light, left
F314	Fuse, reversing light
G101	Battery 2
H112	Brake lamp, right
H113	Brake lamp, left
H117	Check lamp, parking brake
X1540	Plug conn., frame I
X1544	Plug conn., frame III
X1586	Plug conn., connection, trailer socket 1
X1587	Plug conn., connection, trailer socket 2
X1627	Plug conn., reversing lights
X1834	Crimped connector, line 71300
X2497	Plug conn., distributor, line 16109
X4259	Adaptation, reversing buzzer in rear light
1	Switch, reverse gear

Note
Installation position of X1586 and X1587 for semitrailer is E8!

A = Brake light / B = Parking brake / C = Reversing light sheet 17 of 22



WIRING DIAGRAM NO. 81.99192.3079

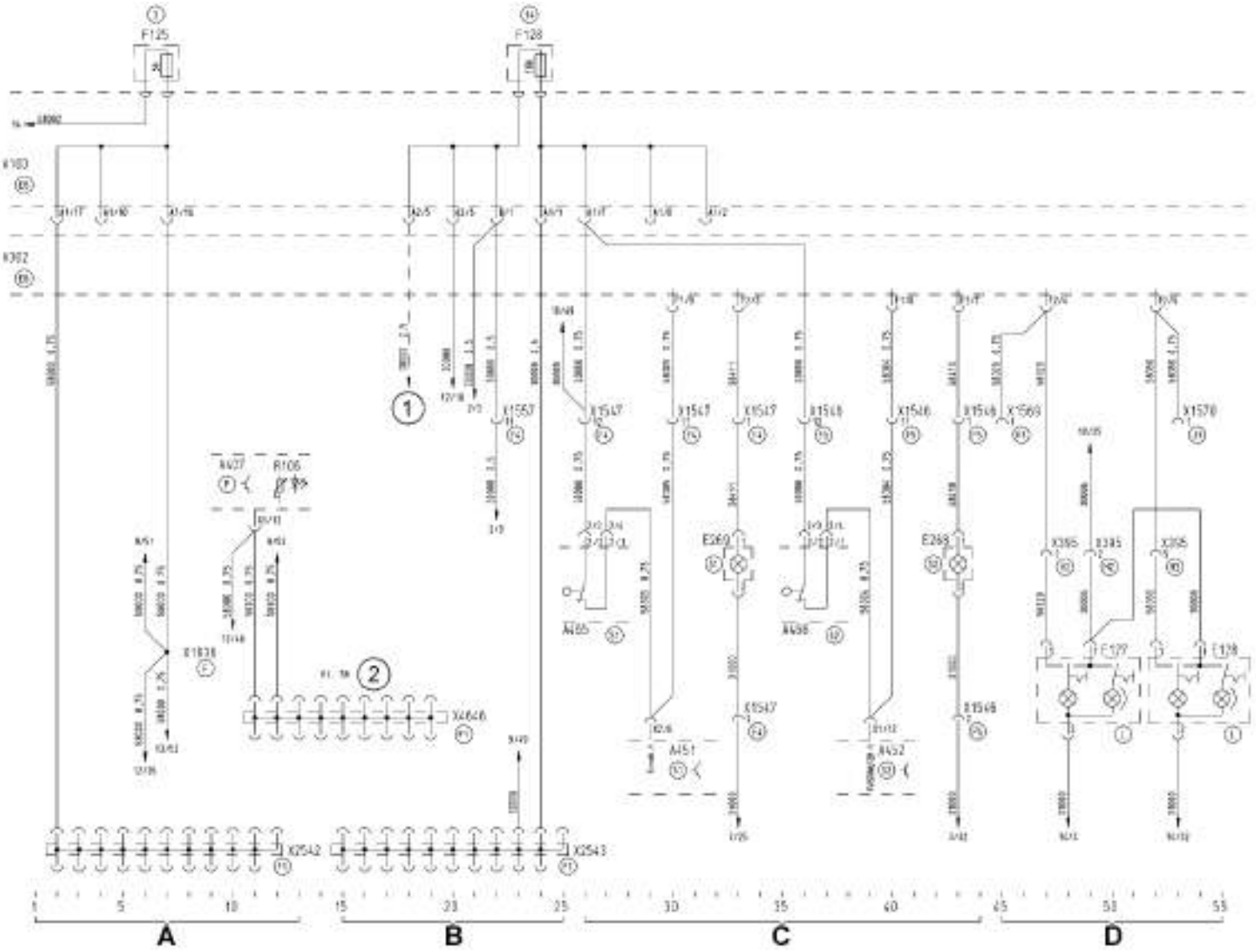
A = Pushbutton unit illumination / B = Permanent load voltage supply / C = Entrance lighting / D = Interior lights sheet 18 of 22
Date: 09.2006

Legend

A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A451	Door module, left
A452	Door module, right
A465	Door lock, left
A466	Door lock, right
E127	Interior light, left
E128	Interior light, right
E268	Entrance lighting, right
E269	Entrance lighting, left
F125	Fuse, pushbutton unit illumination
F128	Fuse, permanent load
R106	Potentiometer, instrument lighting
X395	Plug conn., outline light and interior light, left and right
X1546	Plug conn., door, right
X1547	Plug conn., door, left
X1557	Plug conn., frame, left
X1569	Plug conn., storage locker lighting
X1570	Plug conn., storage locker lighting
X1836	Crimped connector, line 58000
X2542	Potential distributor, 21-pin, line 58000
X2543	Potential distributor, 21-pin, line 30006
X4646	Potential distributor, line 58300

1	Door module
2	Terminal 58, dimmed

A = Pushbutton unit illumination / B = Permanent load voltage supply / C = Entrance lighting / D = Interior lights sheet 18 of 22



WIRING DIAGRAM NO. 81.99192.3079

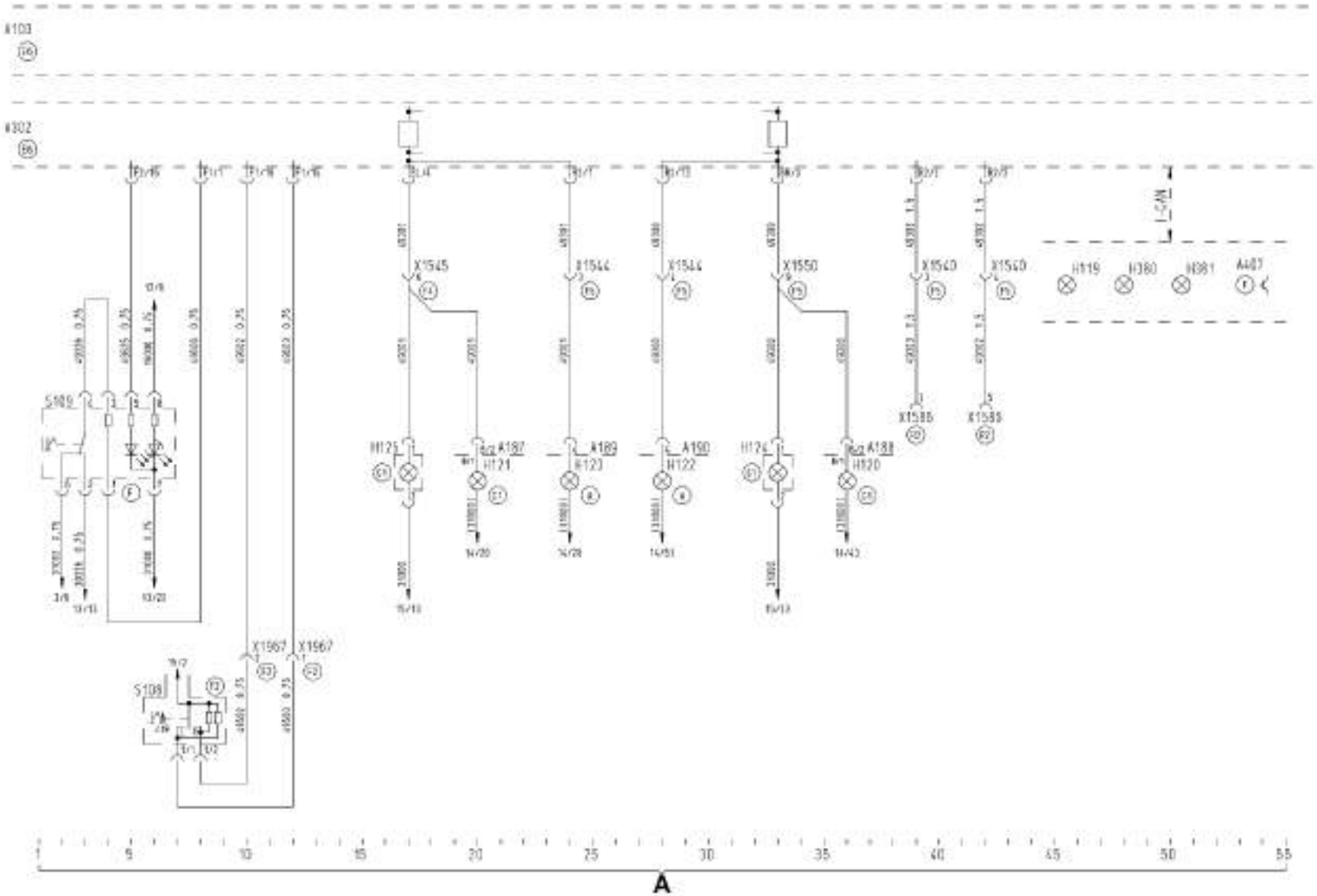
A = Turn indicators sheet 19 of 22
Date: 04.2006

Legend

A100	Central electrical system
A187	Headlight, left
A188	Headlight, right
A189	Tail light, left
A190	Tail light, right
A302	Central computer 2
A407	Instrumentation
H119	Check lamp, turn indicators, trailer
H120	Turn indicator, front right
H121	Turn indicator, front left
H122	Turn indicator, rear right
H123	Turn indicator, rear left
H124	Turn indicator, side right
H125	Turn indicator, side left
H380	Check lamp, turn indicator, tractor, right
H381	Check lamp, turn indicator, tractor, left
S108	Steering column stalk (turn indicators, wipers and headlights)
S109	Switch, hazard warning lights
X1540	Plug conn., frame I
X1544	Plug conn., frame III
X1545	Plug conn., front end, left
X1550	Plug conn., front end, right
X1586	Plug conn., connection, trailer socket 1
X1967	Plug conn., 1 combination steering column stalk

Note
Installation position of X1586 for semitrailer is E8!

A = Turn indicators sheet 19 of 22



WIRING DIAGRAM NO. 81.99192.3079

A = Spare lines / B = Spare lines for trailer socket / C = Spare lines for engine start/stop sheet 20 of 22
Date: 03.2005

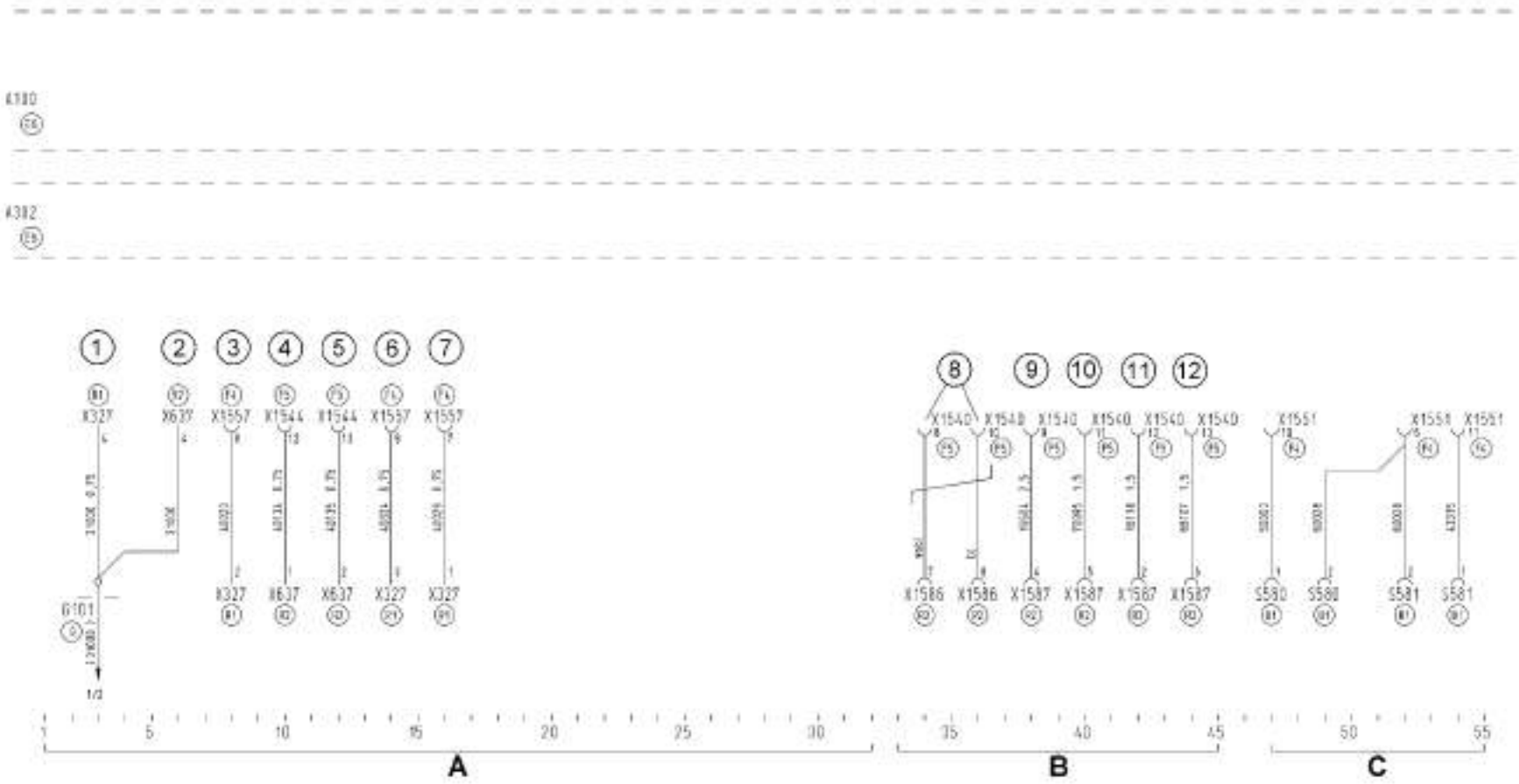
Legend

A100	Central electrical system
A302	Central computer 2
G101	Battery 2
S580	Button, engine start (MP box)
S581	Button, engine stop (MP box)
X327	Plug conn. to solenoid valves in frame
X637	Plug conn., differential lock, rear axle
X1540	Plug conn., frame I
X1544	Plug conn., frame III
X1551	Plug conn., engine/EDC/gearbox II
X1557	Plug conn., frame, left
X1586	Plug conn., connection, trailer socket 1
X1587	Plug conn., connection, trailer socket 2

1	Solenoid valve, transverse differential lock, rear axle
2	Switch for indicator, transverse differential lock
3	Solenoid valve, transverse differential lock, rear axle
4	Check lamp, transverse differential lock, rear axle
5	Check lamp, interaxle differential lock
6	Solenoid valve, interaxle differential lock
7	Solenoid valve, power take-off I
8	Data line
9	Supply, trailer (overfill shut-off device)
10	Control, trailing axle or leading axle, trailer
11	Pressure switch, check, parking brake, trailer
12	Check lamp, brake wear indicator, trailer

Note
Installation position of X1586 and X1587 for semitrailer is E8!

A = Spare lines / B = Spare lines for trailer socket / C = Spare lines for engine start/stop sheet 20 of 22



WIRING DIAGRAM NO. 81.99192.3079

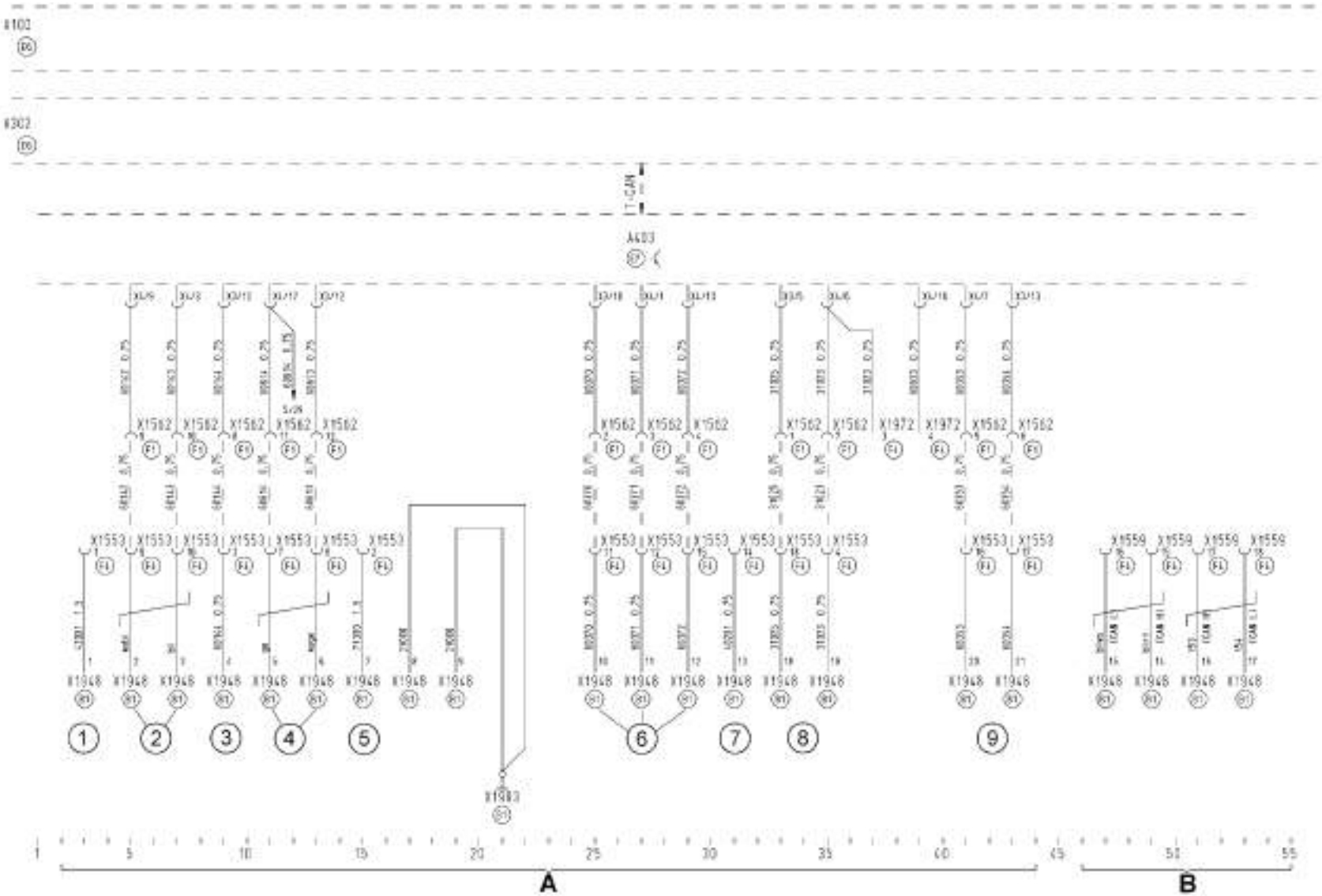
A = Gearbox / B = T-CAN network sheet 21 of 22
Date: 03.2005

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
X1553	Plug conn., engine/EDC/gearbox III
X1559	Plug conn., engine/EDC/gearbox IV
X1562	Plug conn., gearbox
X1948	Plug conn., engine/gearbox
X1972	Plug conn., pedals, outside
X1983	Threaded pin M6 (motor power box)

1	Switch, reverse gear
2	Clutch travel sensor
3	Gearbox neutral
4	Gearbox, input speed
5	Switch, reverse gear
6	Gearbox control module
7	Diagnosis, AS-Tronic
8	Gearbox control module
9	Gearbox control module

A = Gearbox / B = T-CAN network sheet 21 of 22



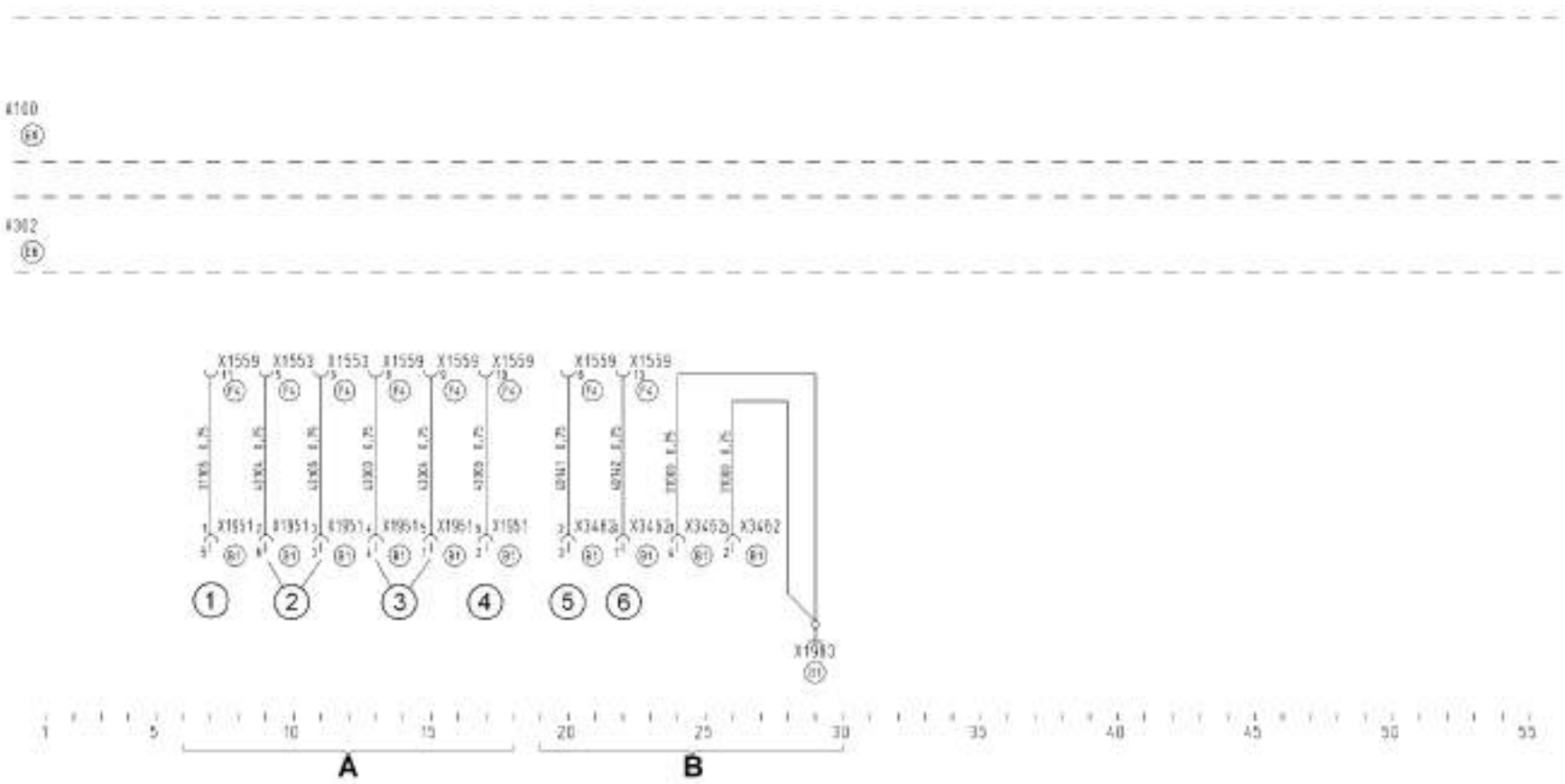
WIRING DIAGRAM NO. 81.99192.3079

A = Intarder, retarder / B = Power take-off sheet 22 of 22
Date: 03.2005

Legend

A100	Central electrical system
A302	Central computer 2
X1553	Plug conn., engine/EDC/gearbox III
X1559	Plug conn., engine/EDC/gearbox IV
X1951	Plug conn., engine/gearbox
X1983	Threaded pin M6 (motor power box)
X3462	Plug conn., engine - power take-off
1	Solenoid valve, accumulator
2	Temperature sensor, Intarder
3	Proportional valve, Intarder
4	Solenoid valve, accumulator/transmitter, actuating pressure
5	Check lamp, power take-off I
6	Check lamp, power take-off II

A = Intarder, retarder / B = Power take-off sheet 22 of 22



WIRING DIAGRAM NO. 81.99192.2496

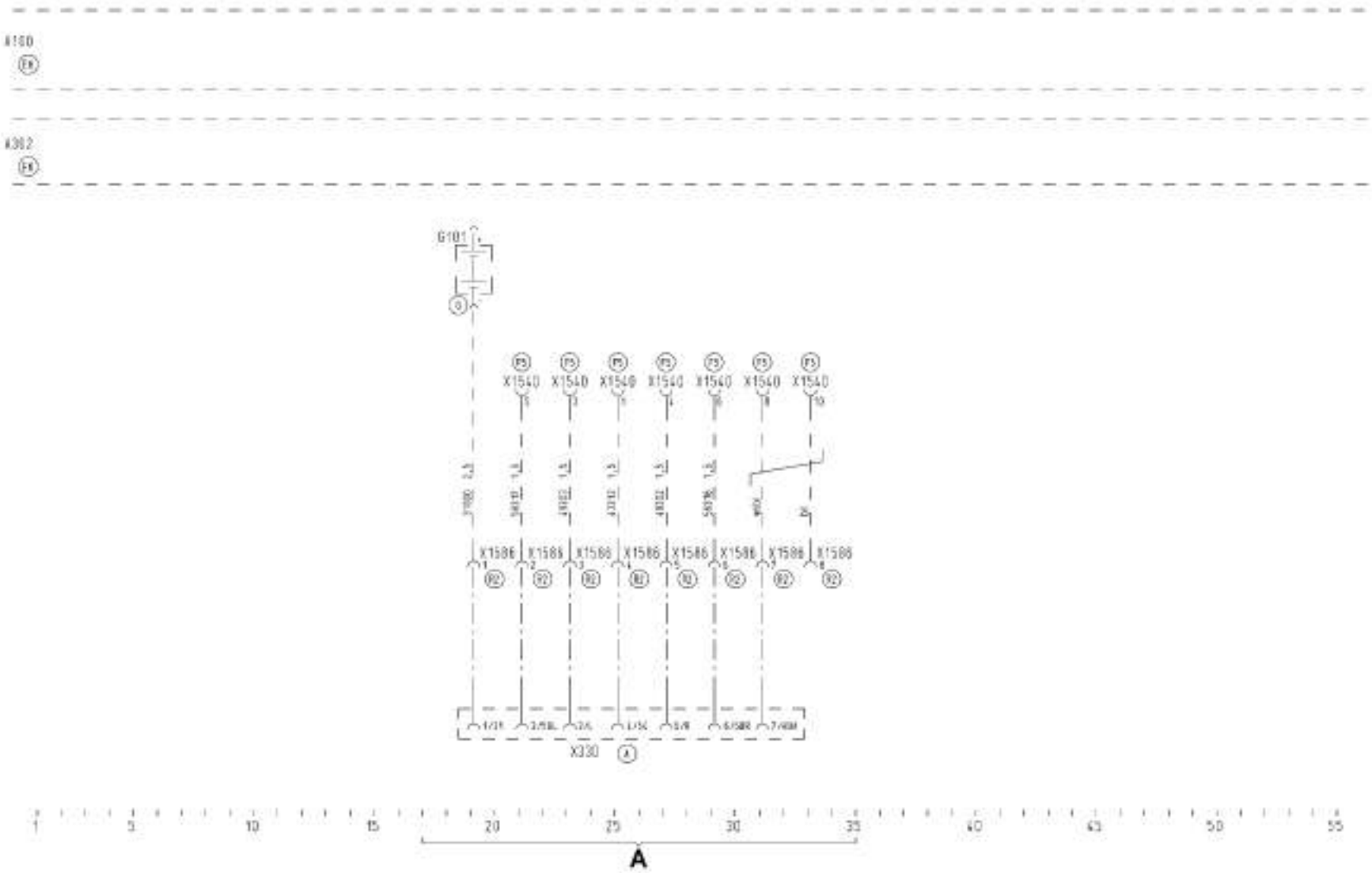
Trailer socket 24V 7-pole sheet 1 of 1
Date: 01.2007

Legend

A	Trailer socket, 24V 7-pin N
A100	Central electrical system
A302	Central computer 2
G101	Battery 2
X330	Socket N 24V
X1540	Plug conn., frame I
X1586	Plug conn., connection, trailer socket 1

Note
Installation position of X1586 for semitrailer E8!

Trailer socket 24V 7-pole sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.2498

Trailer socket 24V 7-pole/7-pole sheet 1 of 1
Date: 01.2007

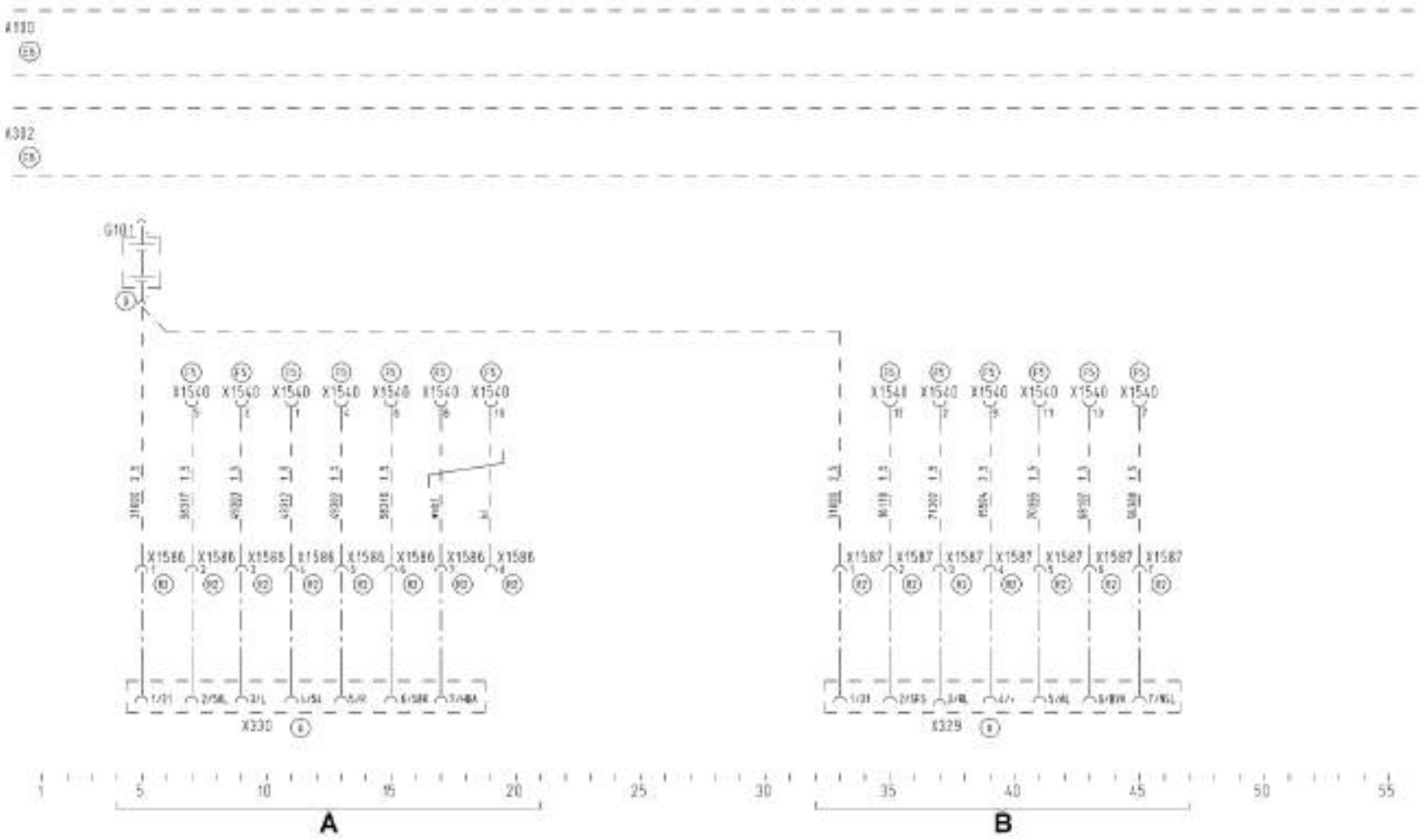
Legend

A	**Trailer socket, 24V 7-pin N**
B	**Trailer socket, 24V 7-pin S**

A100	Central electrical system
A302	Central computer 2
G101	Battery 2
X329	Socket S 24V
X330	Socket N 24V
X1540	Plug conn., frame I
X1586	Plug conn., connection, trailer socket 1
X1587	Plug conn., connection, trailer socket 2

Note
Installation position of X1586 and X1587 for semitrailer is E8!

Trailer socket 24V 7-pole/7-pole sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.1358

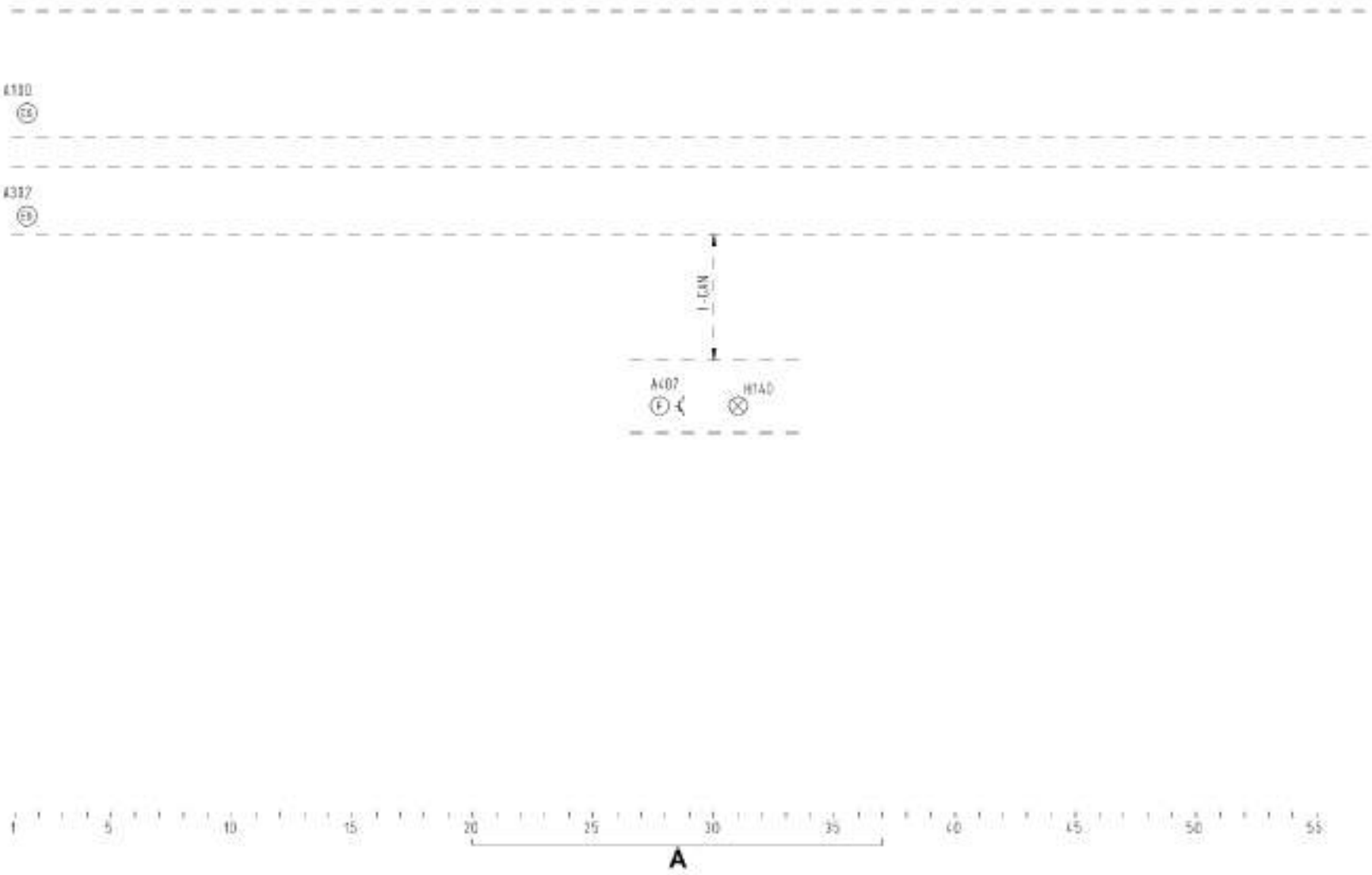
ASR check lamp sheet 1 of 1
Date: 04.2001

Legend

A	ASR check lamp
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
H140	Check lamp, ASR/ESP info.

Note
For basic equipment, see wiring diagram for EBS!

ASR check lamp sheet 1 of 1



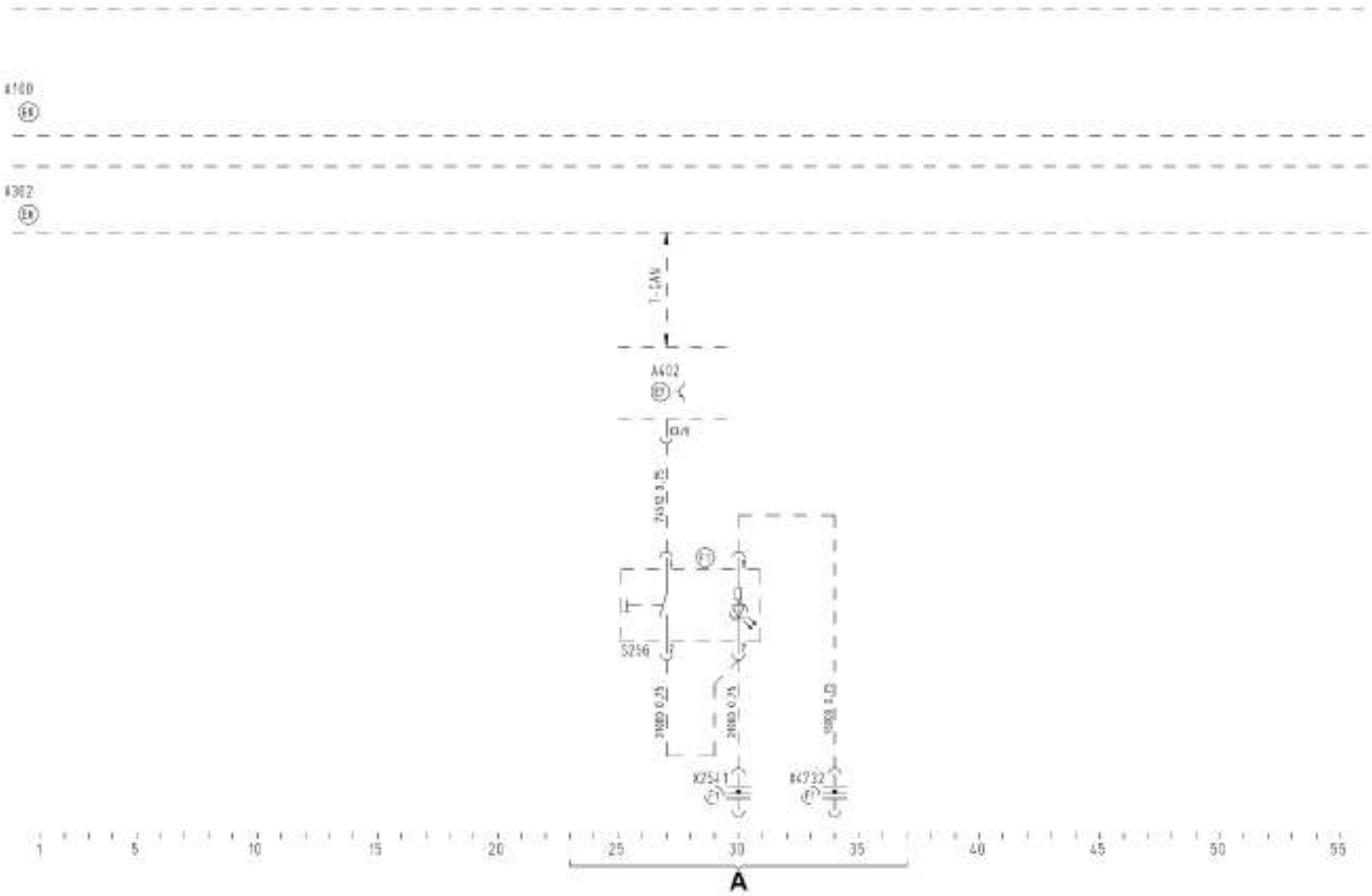
WIRING DIAGRAM NO. 81.99192.3222

ASR slip thresholds button sheet 1 of 1
Date: 09.2006

Legend

A	ASR slip thresholds button
A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
S256	Button, ASR or ASR/ESP spin threshold increase
X2541	Potential distributor, 21-pin, line 31000
X4732	Potential distributor, line 16000, switch lighting

ASR slip thresholds button sheet 1 of 1



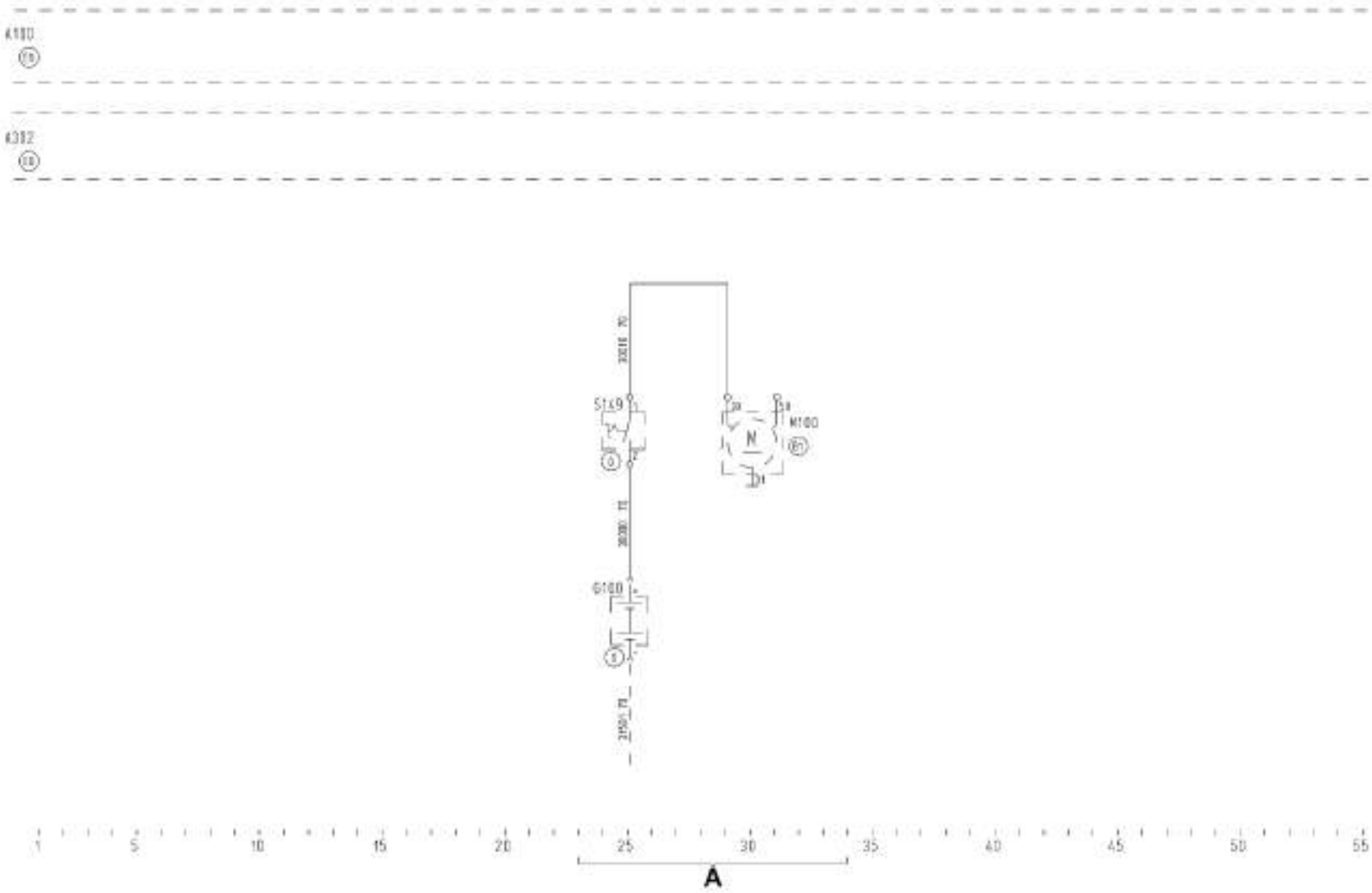
WIRING DIAGRAM NO. 81.99192.2495

Battery master switch, mechanical sheet 1 of 1
Date: 11.2006

Legend

A	**Battery master switch, mechanical**
A100	Central electrical system
A302	Central computer 2
G100	Battery 1
M100	Starter
S149	Isolator switch, battery +

Battery master switch, mechanical sheet 1 of 1



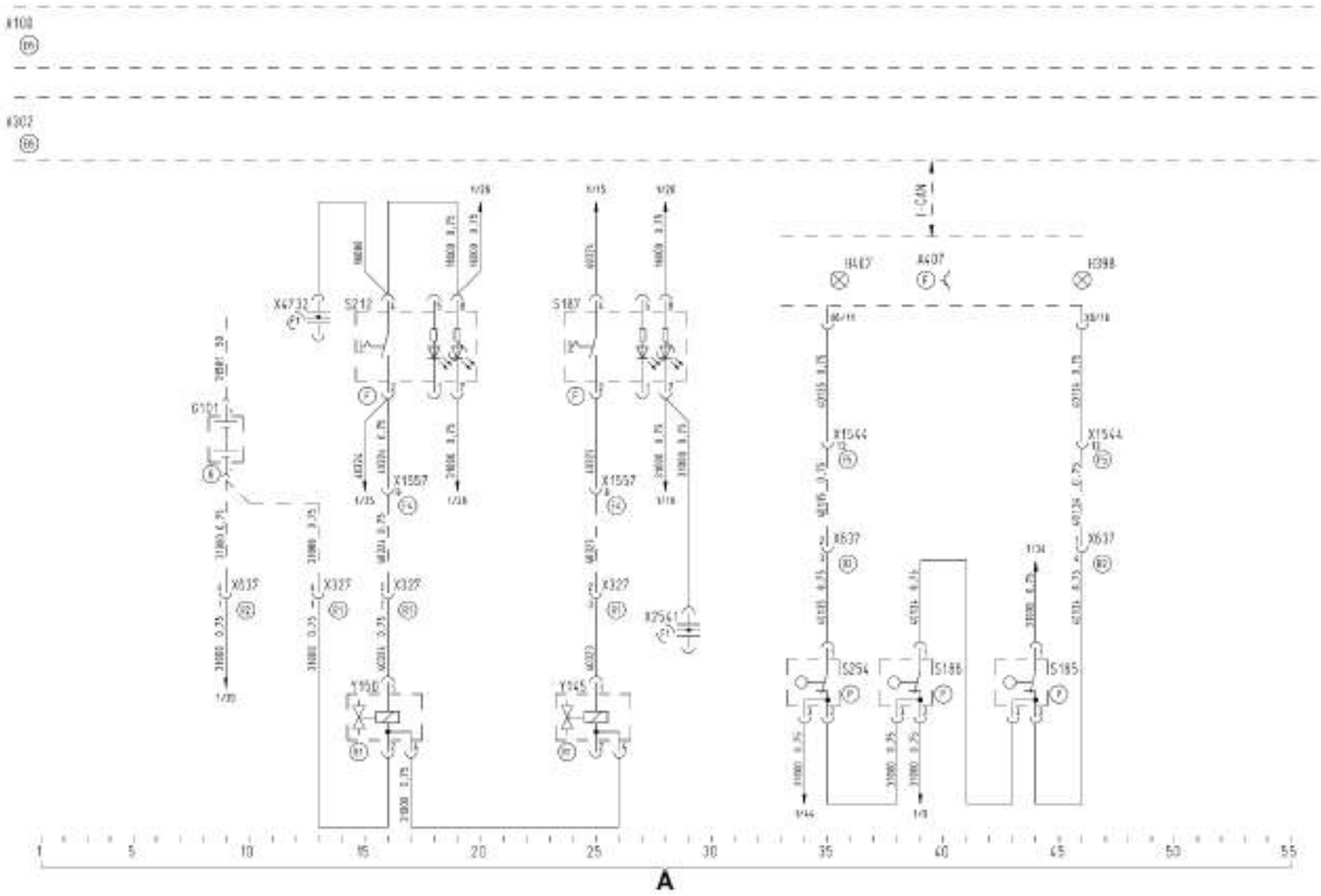
WIRING DIAGRAM NO. 81.99192.3235

Interaxle and transverse differential lock, rear axle (3-axle vehicle) sheet 1 of 1
Date: 11.2005

Legend

A	Interaxle and transverse differential lock, rear axle
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
G101	Battery 2
H398	Check lamp, transverse differential lock, rear axle
H407	Check lamp, interaxle differential lock, rear axle
S185	Switch, indicator, transverse differential lock, rear axle
S186	Switch, indicator, transverse differential lock, 2nd rear axle
S187	Switch, transverse differential lock, rear axle
S212	Switch, interaxle differential lock
S254	Switch, indicator, interaxle differential lock, rear axle
X327	Plug conn. to solenoid valve in frame
X637	Plug conn., differential lock, rear axle
X1544	Plug conn., frame III
X1557	Plug conn., frame, left
X2541	Potential distributor, 21-pin, line 31000
X4732	Potential distributor, line 16000, switch lighting
Y145	Solenoid valve, transverse differential lock, rear axle
Y150	Solenoid valve, interaxle differential lock

Interaxle and transverse differential lock, rear axle (3-axle vehicle) sheet 1 of 1



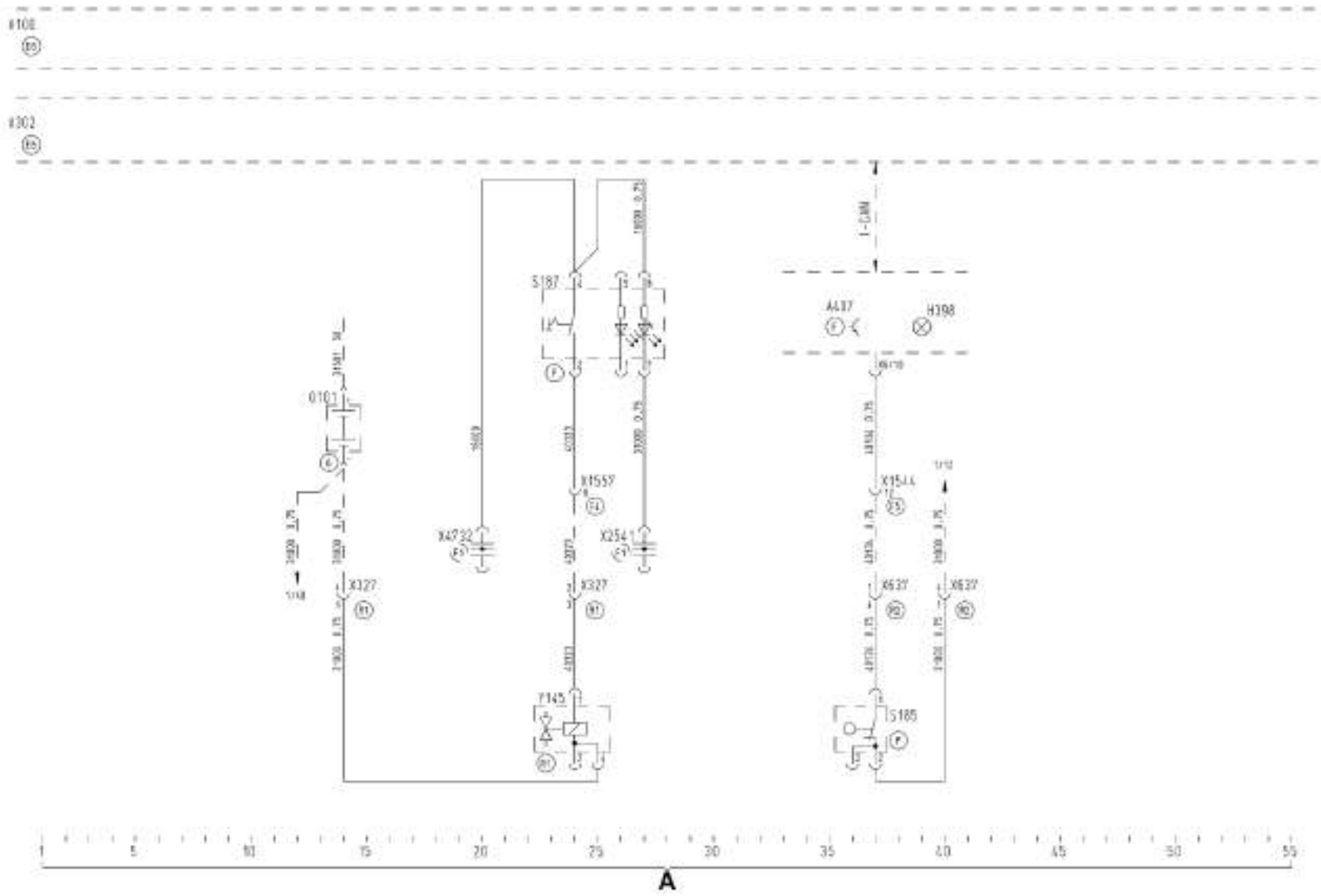
WIRING DIAGRAM NO. 81.99192.3233

Transverse differential lock, rear axle (2-axle vehicle) sheet 1 of 1
Date: 11.2005

Legend

A	Differential lock, transverse, rear axle
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
G101	Battery 2
H398	Check lamp, transverse differential lock, rear axle
S185	Switch, indicator, transverse differential lock, rear axle
S187	Switch, transverse differential lock, rear axle
X327	Plug conn. to solenoid valve in frame
X637	Plug conn., differential lock, rear axle
X1544	Plug conn., frame III
X1557	Plug conn., frame, left
X2541	Potential distributor, 21-pin, line 31000
X4732	Potential distributor, line 16000, switch lighting
Y145	Solenoid valve, transverse differential lock, rear axle

Transverse differential lock, rear axle (2-axle vehicle) sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3246

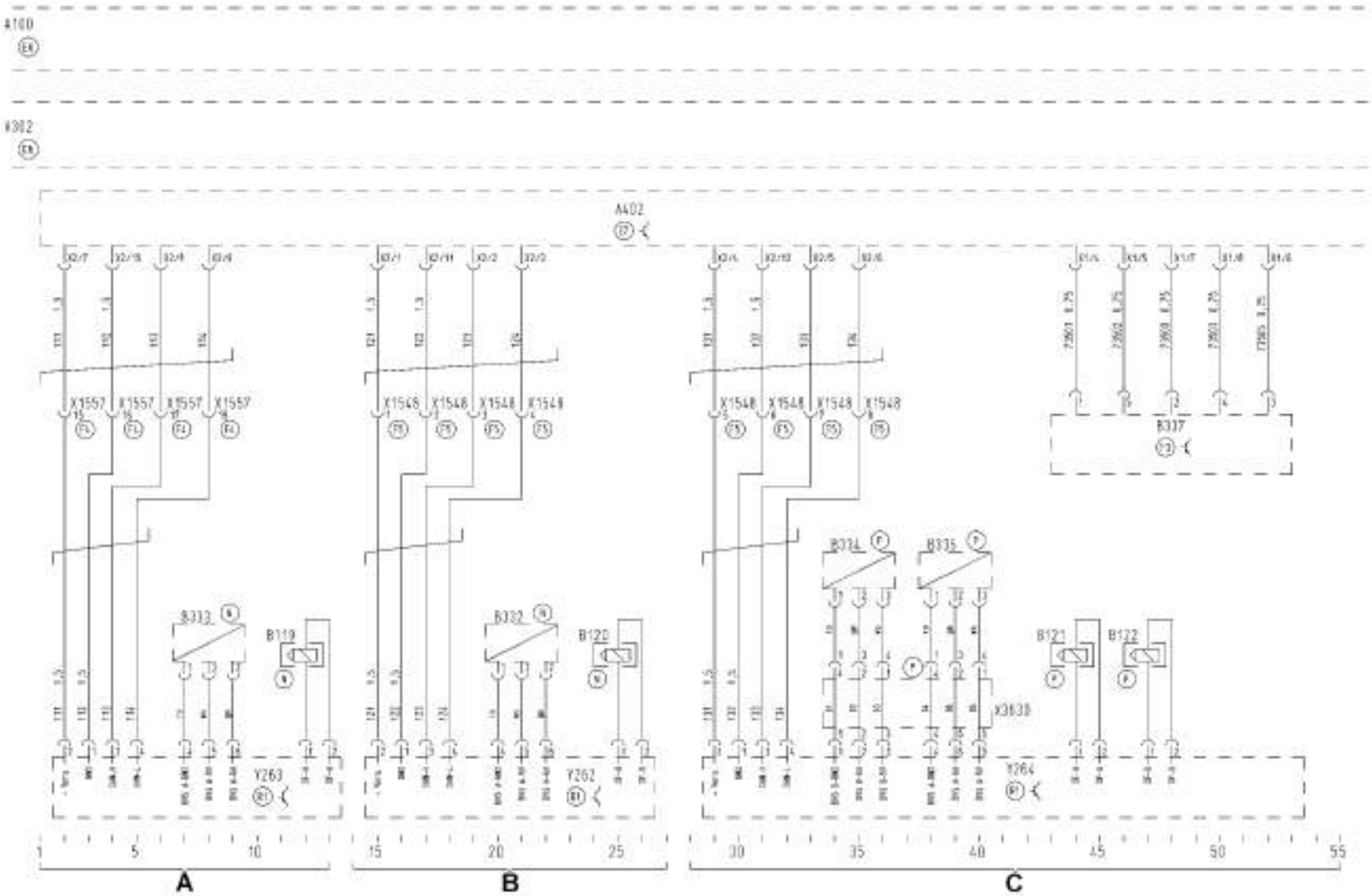
Electronic Brake System EBS 5 (2-axle vehicle) sheet 1 of 3
Date: 11.2005

Legend

A	**Pressure control module, front axle, left**
B	**Pressure control module, front axle, right**
C	**Pressure control module, rear axle**

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
B119	Speed sensor, front axle, left
B120	Speed sensor, front axle, right
B121	Speed sensor, live axle, left
B122	Speed sensor, live axle, right
B332	Sensor, brake pad, front axle, right
B333	Sensor, brake pad, front axle, left
B334	Sensor, brake pad, live axle, right
B335	Sensor, brake pad, live axle, left
B337	Brake power sensor, EBS
X1548	Plug conn., frame IV
X1557	Plug conn., frame, left
X3630	Wiring harness, adapter, sensor, driven axle brake pad/lining
Y262	Pressure control module, front axle, right
Y263	Pressure control module, front axle, left
Y264	Pressure control module, rear axle

Electronic Brake System EBS 5 (2-axle vehicle) sheet 1 of 3



WIRING DIAGRAM NO. 81.99192.3246

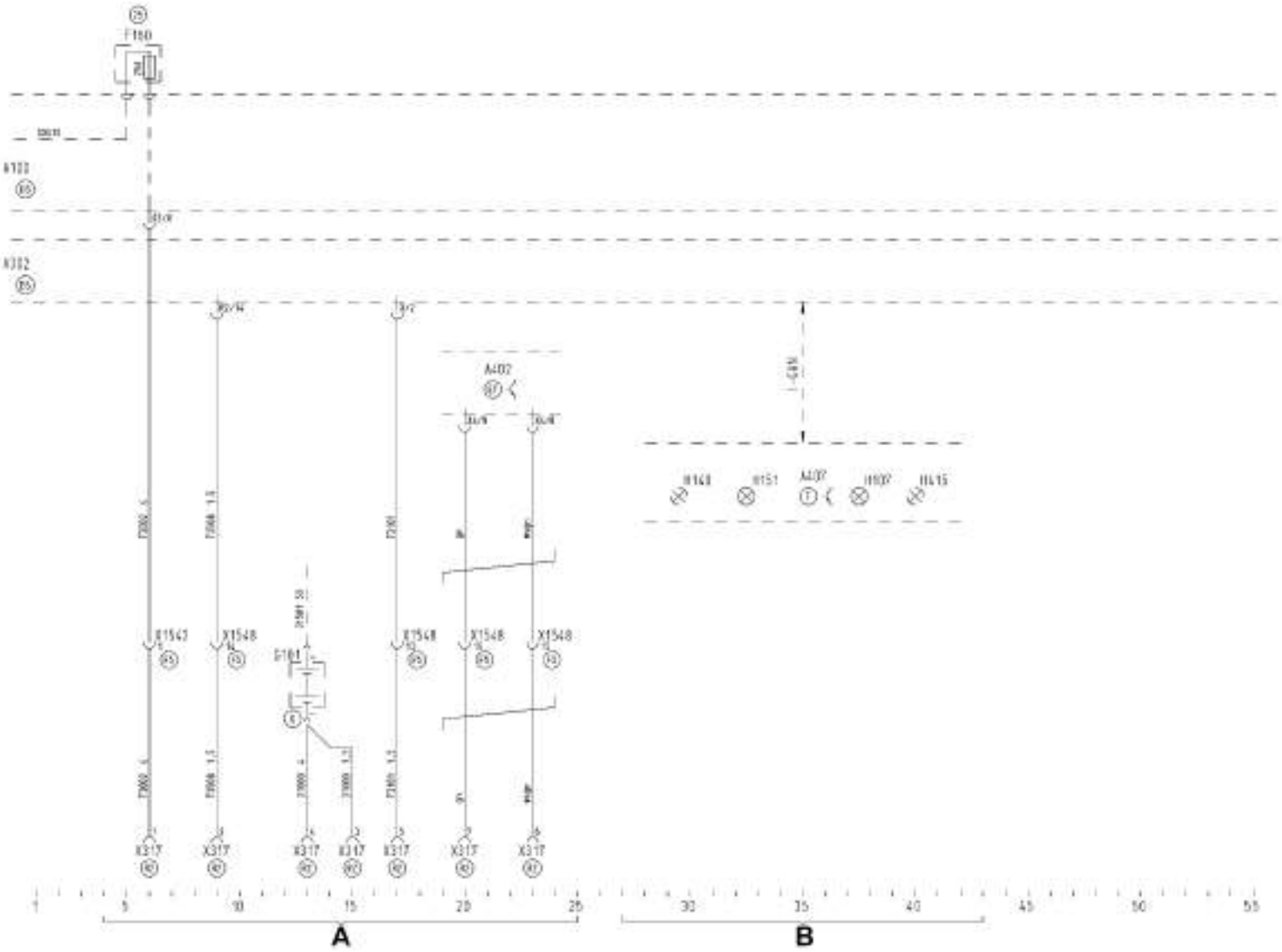
Electronic Brake System EBS 5 (2-axle vehicle) sheet 2 of 3
Date: 11.2005

Legend

A	**Trailer socket**
B	**Check lamps**

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
A407	Instrumentation
F160	Fuse, EBS/ABS, voltage supply, trailer
G101	Battery 2
H107	ABS, tractor/trailer
H140	Check lamp, ASR info
H151	Check lamp, ABS info in trailer
H415	Check lamp, directional stability
X317	Trailer socket, ABS
X1542	Plug conn., frame II
X1548	Plug conn., frame IV

Electronic Brake System EBS 5 (2-axle vehicle) sheet 2 of 3



WIRING DIAGRAM NO. 81.99192.3246

Electronic Brake System EBS 5 (2-axle vehicle) sheet 3 of 3
Date: 09.2006

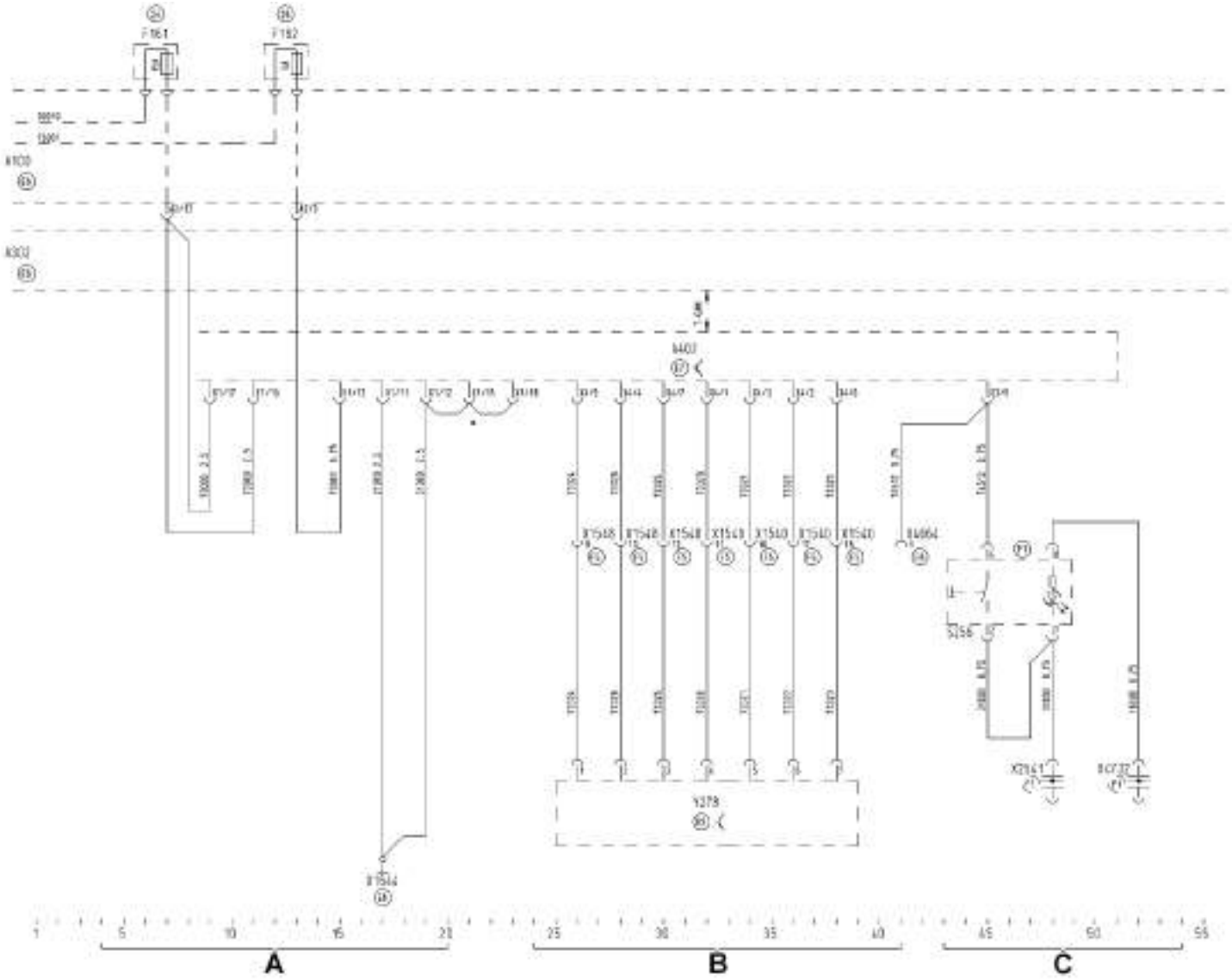
Legend

A	**Voltage supply**
B	**Trailer control module**
C	**ASR slip thresholds**

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
F161	Fuse, EBS (ABS), pressure control valve voltage supply
F162	Fuse, EBS (ABS), control
S256	Button, ASR or ASR/ESP - spin threshold increase
X1540	Plug conn., frame I
X1548	Plug conn., frame IV
X1644	Earthing point, cab, next to central electrical system
X2541	Potential distributor, 21-pin, line 31000
X4664	Plug conn., ASR
X4732	Potential distributor, line 16000, switch lighting
Y278	Trailer control module

Note
***Connector drop-out detection:** Short-circuit spring insulated by control unit cell X1/15 when inserted. PIN X1/12 and pin X1/18 short-circuit if not inserted!

Electronic Brake System EBS 5 (2-axle vehicle) sheet 3 of 3



WIRING DIAGRAM NO. 81.99192.3247

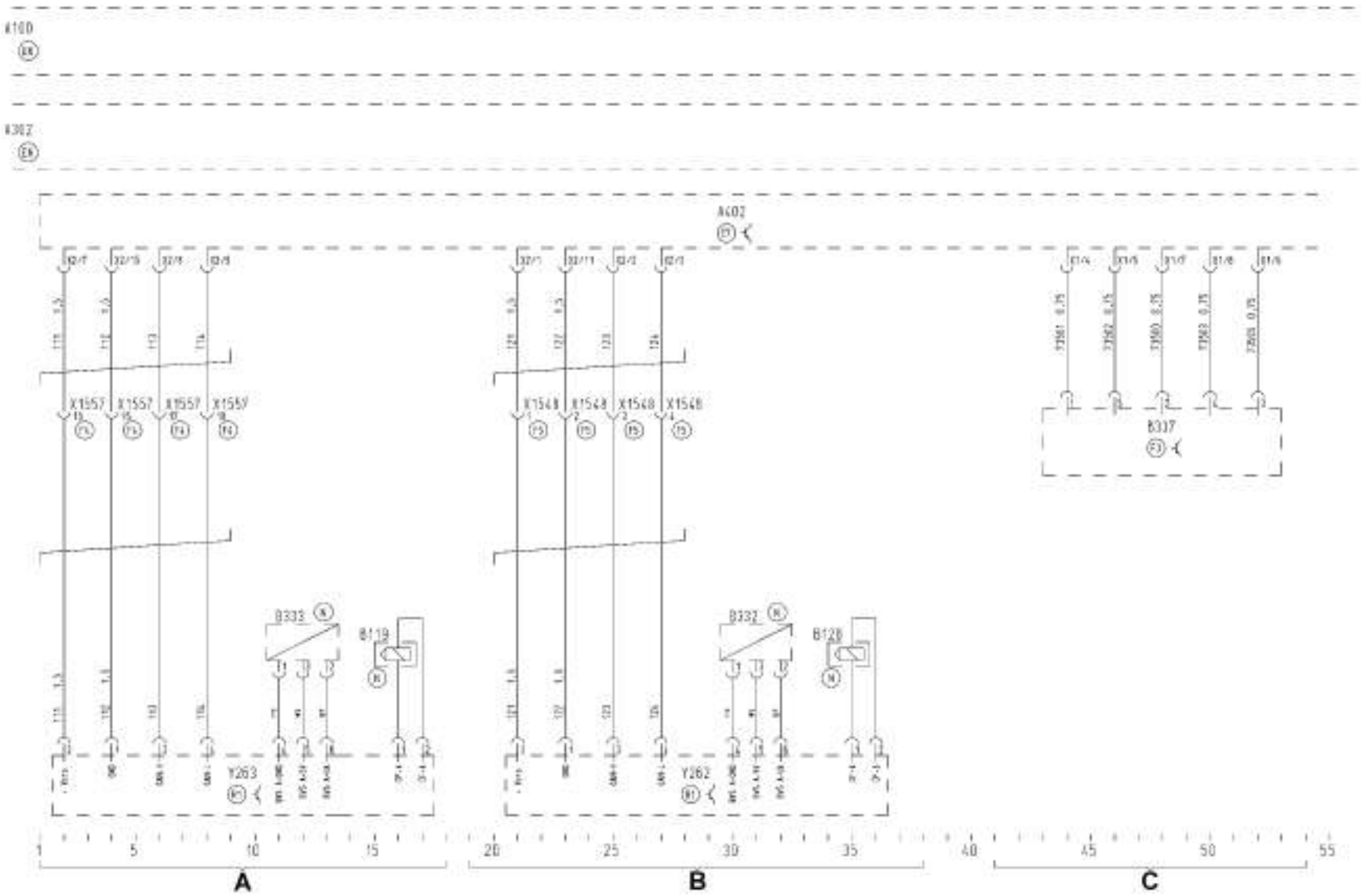
Electronic Brake System EBS 5 (3-axle vehicle) sheet 1 of 4
Date: 11.2005

Legend

A	**Pressure control module, front axle, left**
B	**Pressure control module, front axle, right**
C	**Brake power sensor**

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
B119	Speed sensor, front axle, left
B120	Speed sensor, front axle, right
B332	Sensor, brake pad/lining, front axle, right
B333	Sensor, brake pad/lining, front axle, left
B337	Brake power sensor, EBS
X1548	Plug conn., frame IV
X1557	Plug conn., frame, left
Y262	Pressure control module, front axle, right
Y263	Pressure control module, front axle, left

Electronic Brake System EBS 5 (3-axle vehicle) sheet 1 of 4



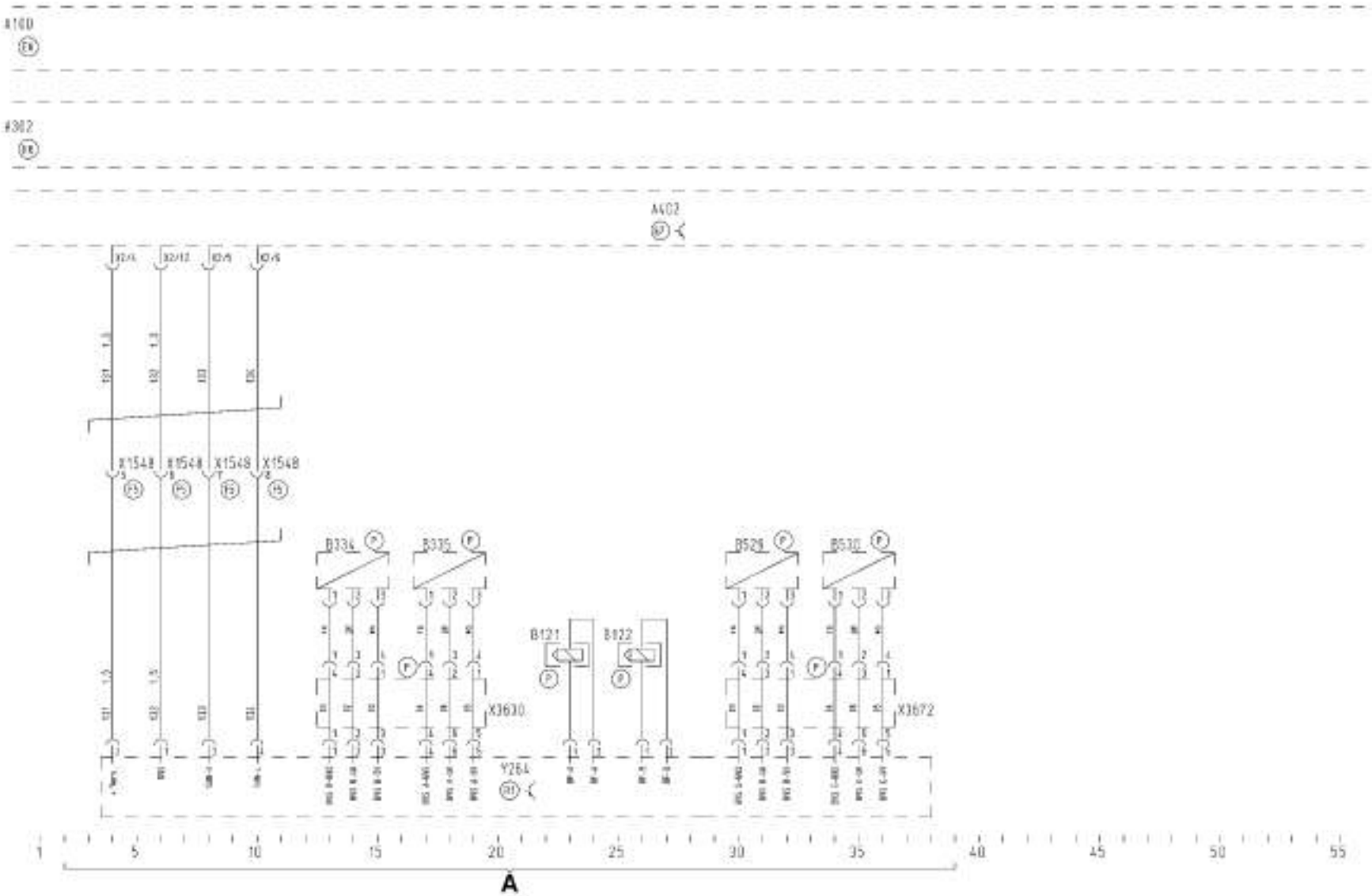
WIRING DIAGRAM NO. 81.99192.3247

Electronic Brake System EBS 5 (3-axle vehicle) sheet 2 of 4
Date: 11.2005

Legend

A	**Pressure control module, rear axle**
A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
B121	Speed sensor, driven axle, left
B122	Speed sensor, driven axle, right
B334	Sensor, brake pad/lining, driven axle, right
B335	Sensor, brake pad/lining, driven axle, left
B529	Sensor, brake pad/lining, auxiliary axle, right
B530	Sensor, brake pad/lining, auxiliary axle, left
X1548	Plug conn., frame IV
X3630	Wiring harness, adapter, sensor, driven axle brake pad/lining
X3672	Wiring harness, adapter, sensor, auxiliary axle brake pad/lining
Y264	Pressure control module, rear axle

Electronic Brake System EBS 5 (3-axle vehicle) sheet 2 of 4



WIRING DIAGRAM NO. 81.99192.3247

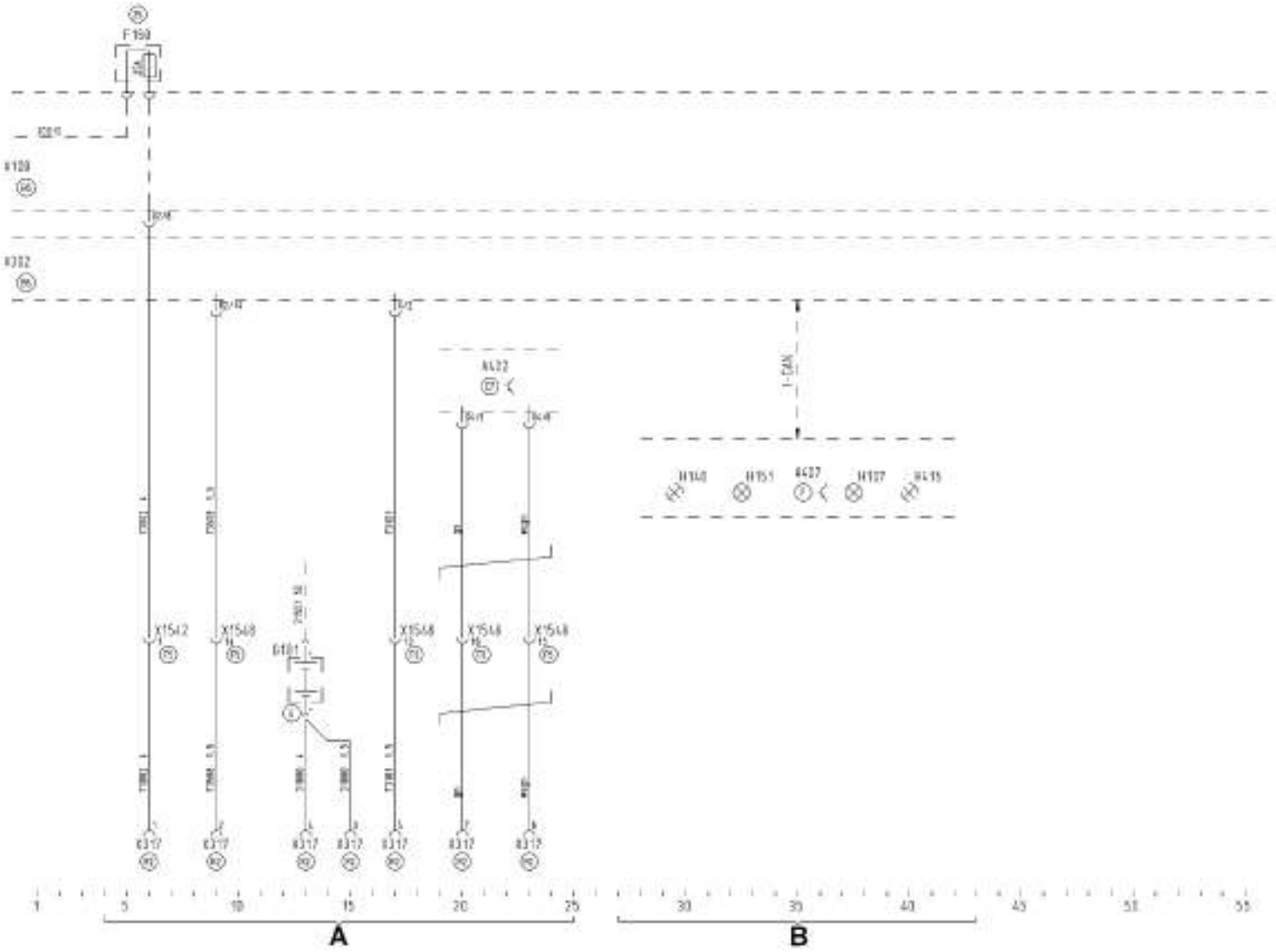
Electronic Brake System EBS 5 (3-axle vehicle) sheet 3 of 4
Date: 11.2005

Legend

A	**Trailer socket**
B	**Check lamps**

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
A407	Instrumentation
F160	Fuse, EBS (ABS), trailer voltage supply
G101	Battery 2
H107	ABS, tractor/trailer
H140	Check lamp, ASR info
H151	Check lamp, ABS info., trailer
H415	Check lamp, directional stability
X317	Trailer socket, ABS
X1542	Plug conn., frame II
X1548	Plug conn., frame IV

Electronic Brake System EBS 5 (3-axle vehicle) sheet 3 of 4



WIRING DIAGRAM NO. 81.99192.3247

Electronic Brake System EBS 5 (3-axle vehicle) sheet 4 of 4
Date: 09.2006

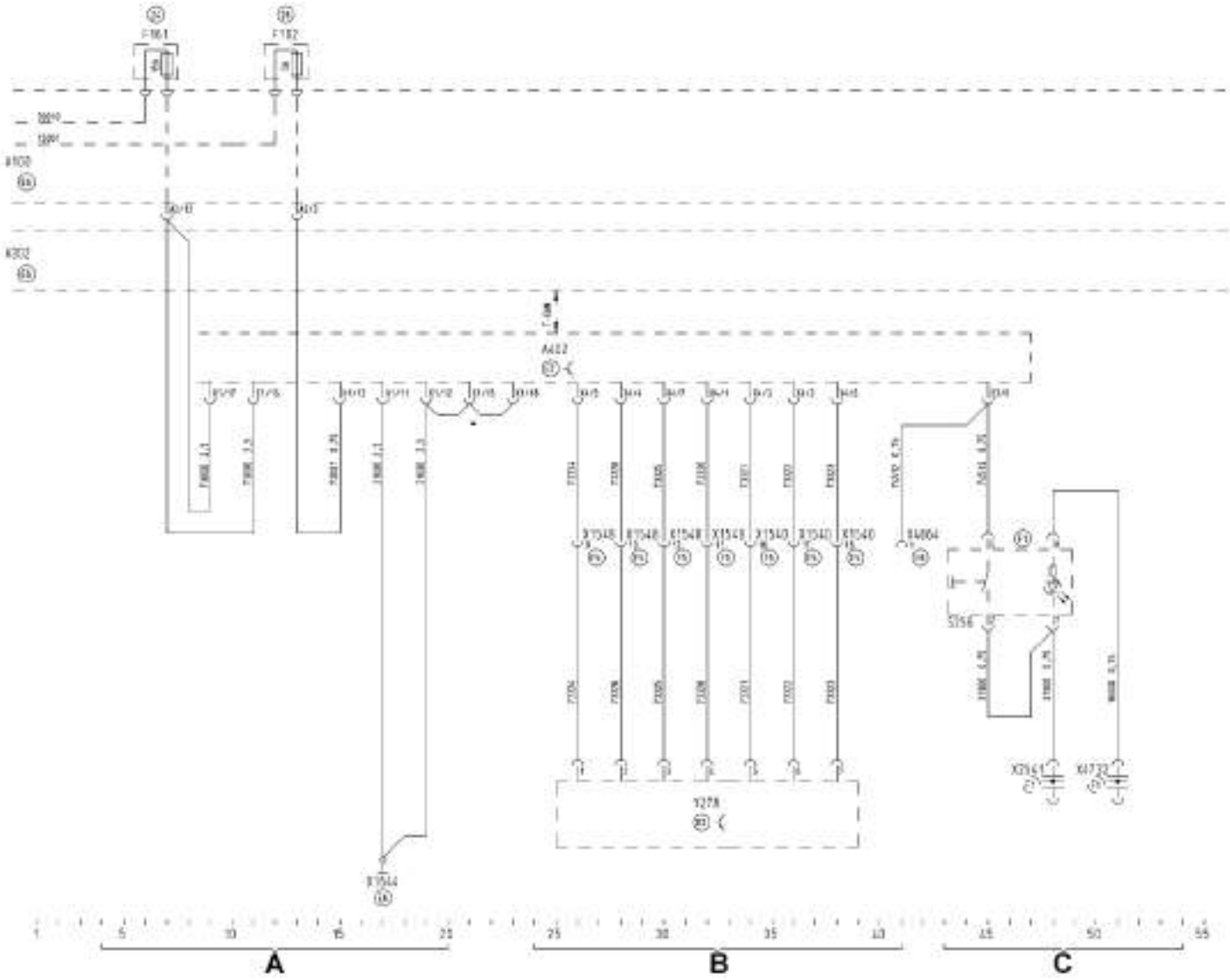
Legend

A	**Voltage supply**
B	**Trailer control module**
C	**ASR slip thresholds**

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
F161	Fuse, EBS (ABS), pressure control valve voltage supply
F162	Fuse, EBS (ABS), control
S256	Button, ASR or ASR/ESP - spin threshold increase
X1540	Plug conn., frame I
X1548	Plug conn., frame IV
X1644	Earthing point, cab, next to central electrical system
X2541	Potential distributor, 21-pin, line 31000
X4664	Plug conn., ASR
X4732	Potential distributor, line 16000, switch lighting
Y278	Trailer control module

Note
***Connector drop-out detection:** Short-circuit spring insulated by control unit cell X1/15 when inserted. PIN X1/12 and pin X1/18 short-circuit if not inserted!

Electronic Brake System EBS 5 (3-axle vehicle) sheet 4 of 4



WIRING DIAGRAM NO. 81.99192.3250

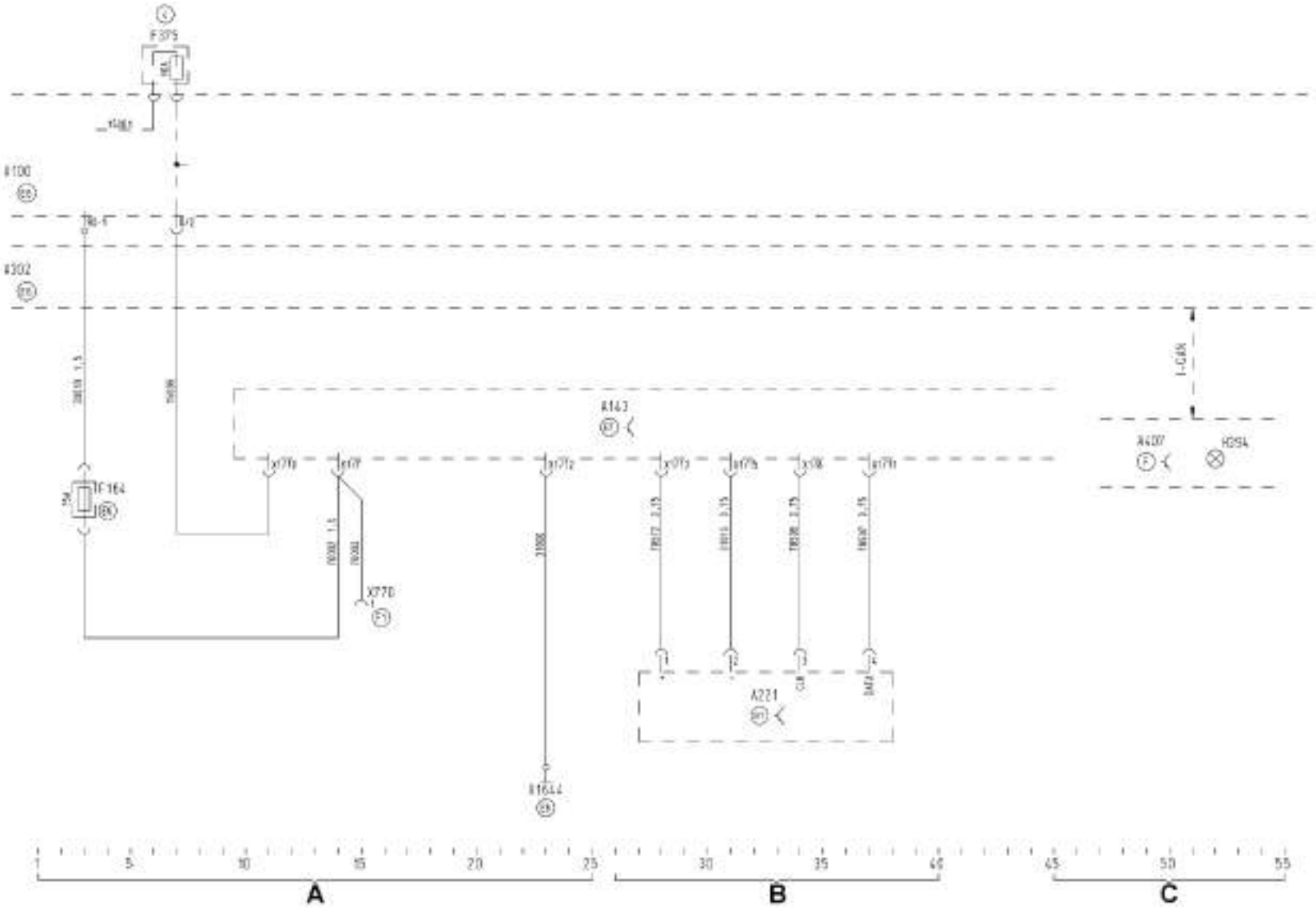
ECAS 2 (4x2) sheet 1 of 2
Date: 09.06

Legend

A	**Voltage supply**
B	**Remote control**
C	**Check lamp**

A100	Central electrical system
A143	Control unit, ECAS
A221	Remote control, ECAS
A302	Central computer 2
A407	Instrumentation
F164	Fuse, ECAS (terminal 30)
F375	Fuse, cab, outside (terminal 15)
H394	Check lamp, ECAS, fault/warning
X770	Plug conn., ECAS ride height II
X1644	Earthing point, cab, next to central electrical system

ECAS 2 (4x2) sheet 1 of 2



WIRING DIAGRAM NO. 81.99192.3250

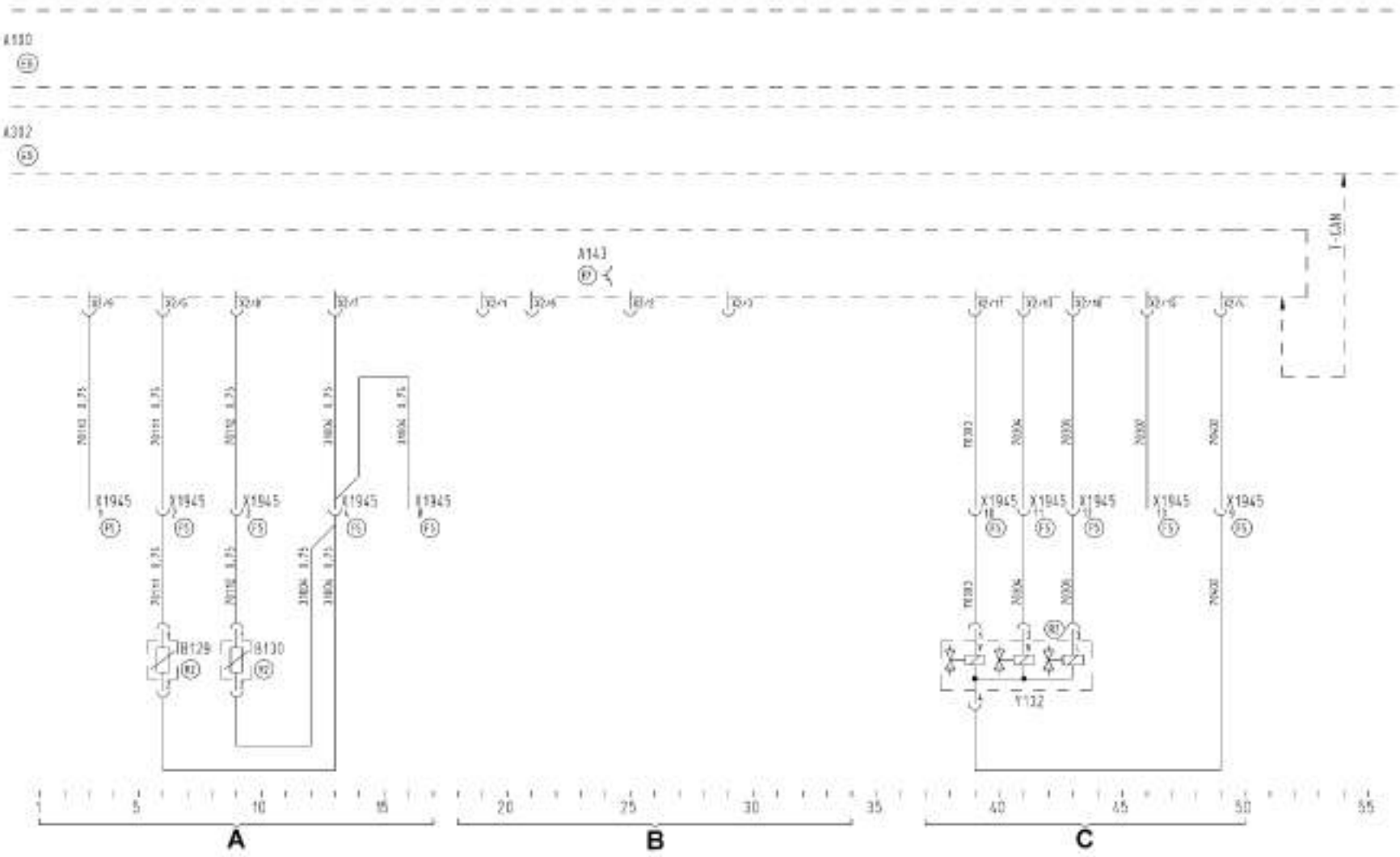
ECAS 2 (4x2) sheet 2 of 2
Date: 11.05

Legend

A	**Position sensors**
B	**Pressure sensors**
C	**Solenoid valves**

A100	Central electrical system
A143	Control unit, ECAS
A302	Central computer 2
B129	Position sensor, rear axle, left
B130	Position sensor, rear axle, right
X1945	Plug conn., ECAS/CDC
Y132	Valve block, ECAS

ECAS 2 (4x2) sheet 2 of 2



WIRING DIAGRAM NO. 81.99192.3248

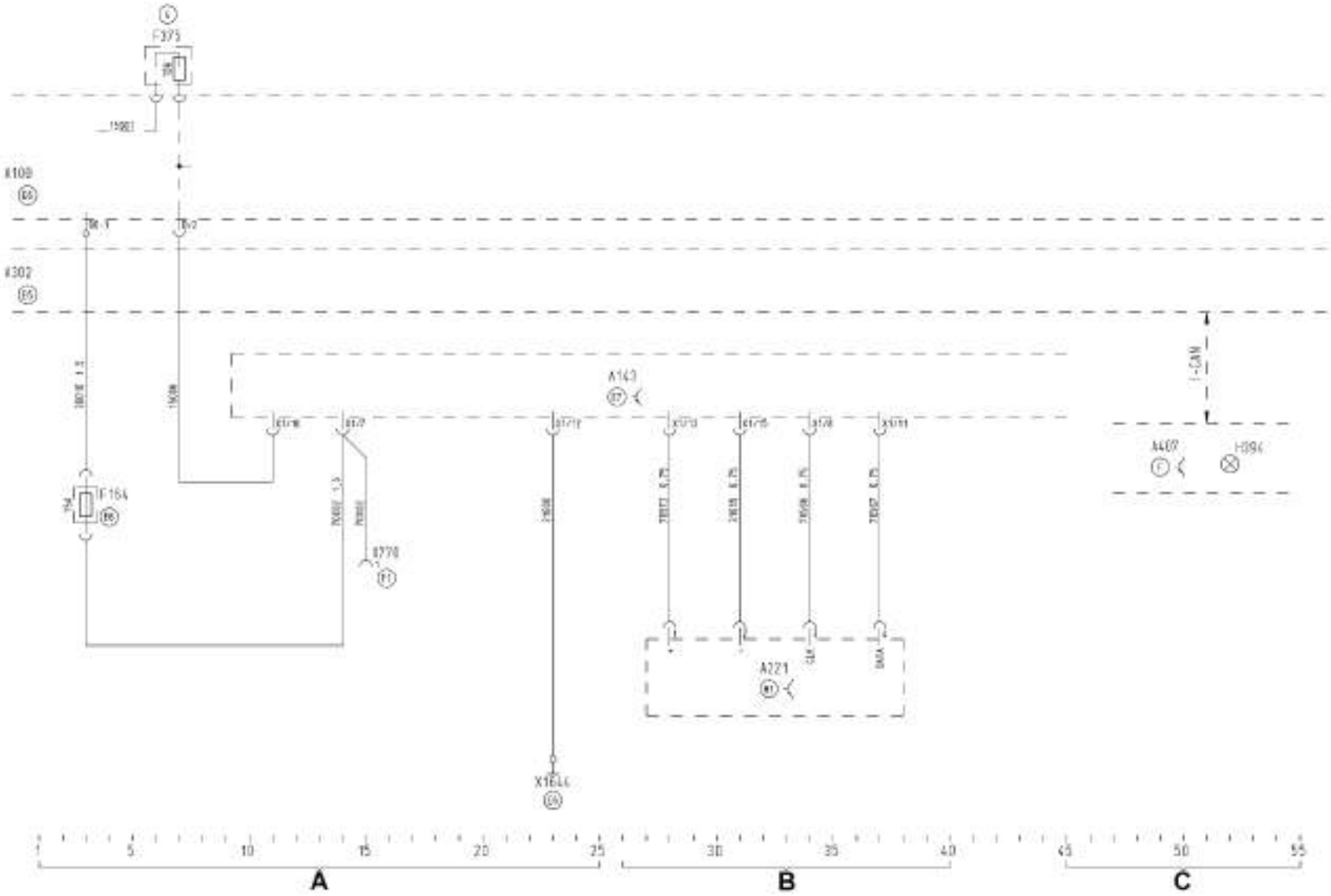
ECAS 2 (4x2 - semitrailer) sheet 1 of 2
Date: 09.06

Legend

A	**Voltage supply**
B	**Remote control**
C	**Check lamp**

A100	Central electrical system
A143	Control unit, ECAS
A221	Remote control, ECAS
A302	Central computer 2
A407	Instrumentation
F164	Fuse, ECAS (terminal 30)
F375	Fuse, cab, outside (terminal 15)
H394	Check lamp, ECAS, fault/warning
X770	Plug conn., ECAS ride height II
X1644	Earthing point, cab, next to central electrical system

ECAS 2 (4x2 - semitrailer) sheet 1 of 2



WIRING DIAGRAM NO. 81.99192.3248

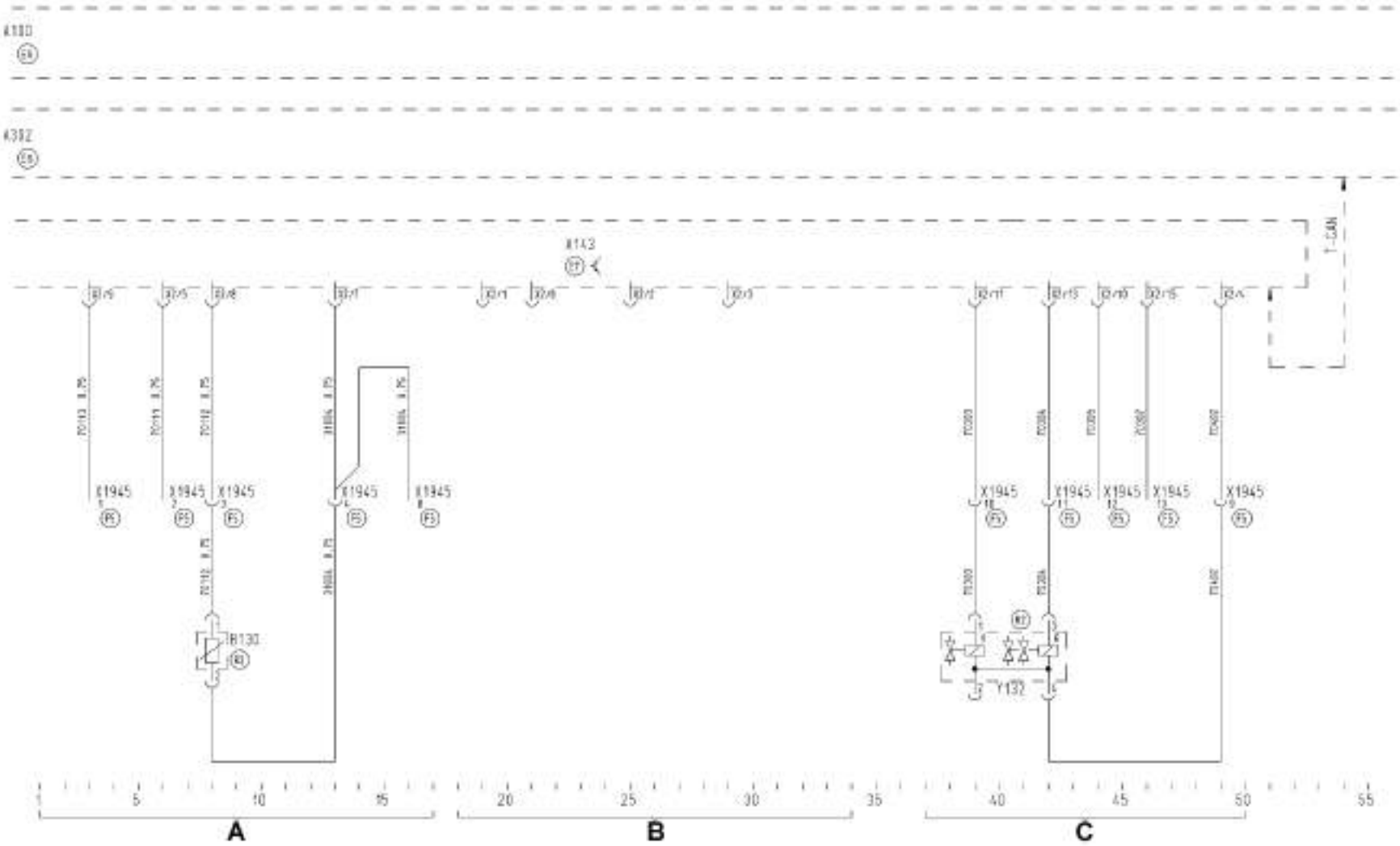
ECAS 2 (4x2 - semitrailer) sheet 2 of 2
Date: 11.05

Legend

A	**Position sensors**
B	**Pressure sensors**
C	**Solenoid valves**

A100	Central electrical system
A143	Control unit, ECAS
A302	Central computer 2
B130	Position sensor, rear axle, right
X1945	Plug conn., ECAS/CDC
Y132	Valve block, ECAS

ECAS 2 (4x2 - semitrailer) sheet 2 of 2



WIRING DIAGRAM NO. 81.99192.3253

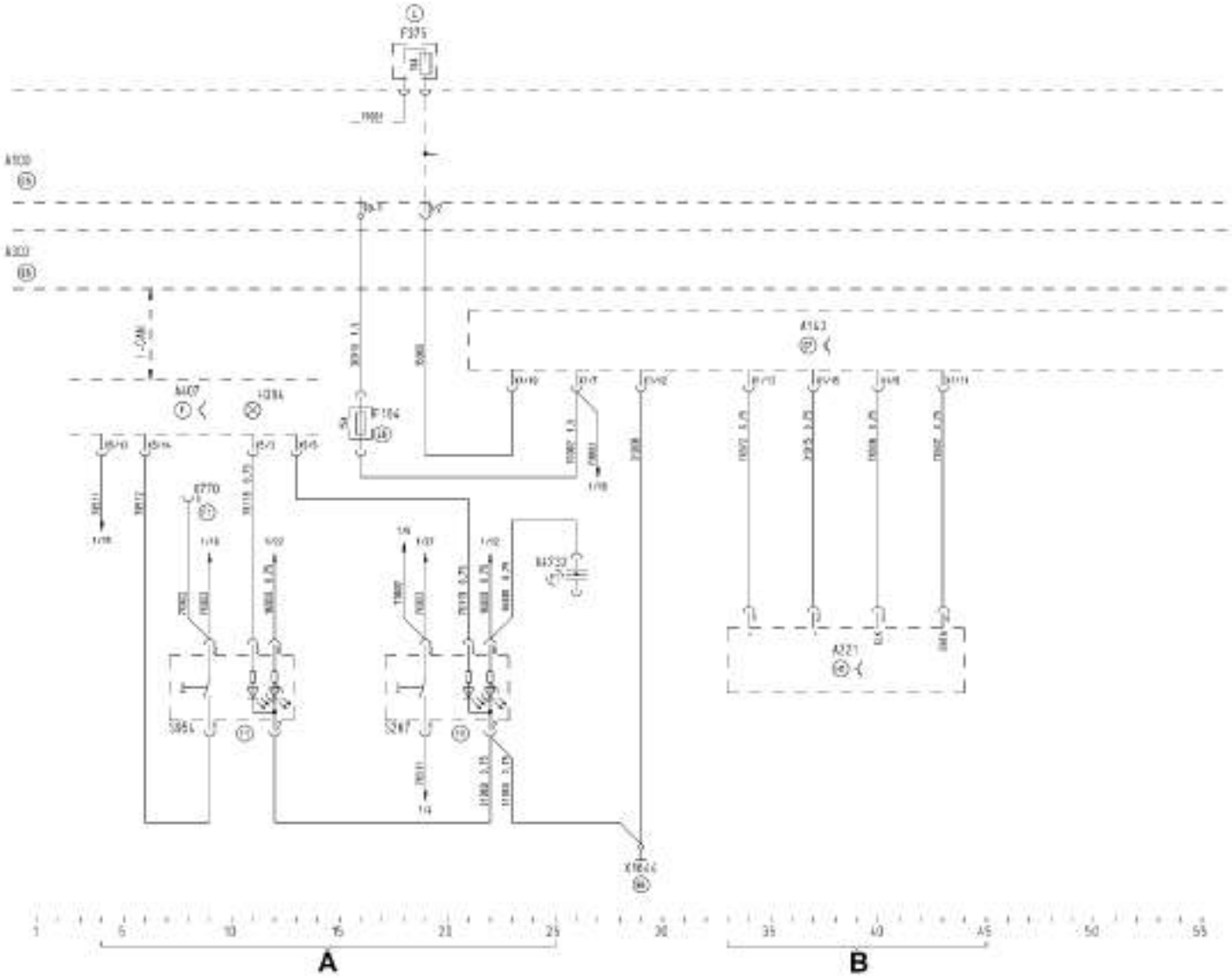
ECAS 2 (6x2 optionally with ALM/crane) sheet 1 of 2
Date: 06.07

Legend

A	**Buttons**
B	**Remote control**

A100	Central electrical system
A143	Control unit, ECAS
A221	Remote control, ECAS
A302	Central computer 2
A407	Instrumentation
F164	Fuse, ECAS (terminal 30)
F375	Fuse, cab, outside (terminal 15)
H394	Check lamp, ECAS, fault/warning
S267	Button, ECAS, starting-traction control
S954	Button, ECAS, trailing axle/leading axle, raise/relieve
X770	Plug conn., ECAS ride height II
X1644	Earthing point, cab, next to central electrical system
X4732	Potential distributor, line 16000, switch lighting

ECAS 2 (6x2 optionally with ALM/crane) sheet 1 of 2



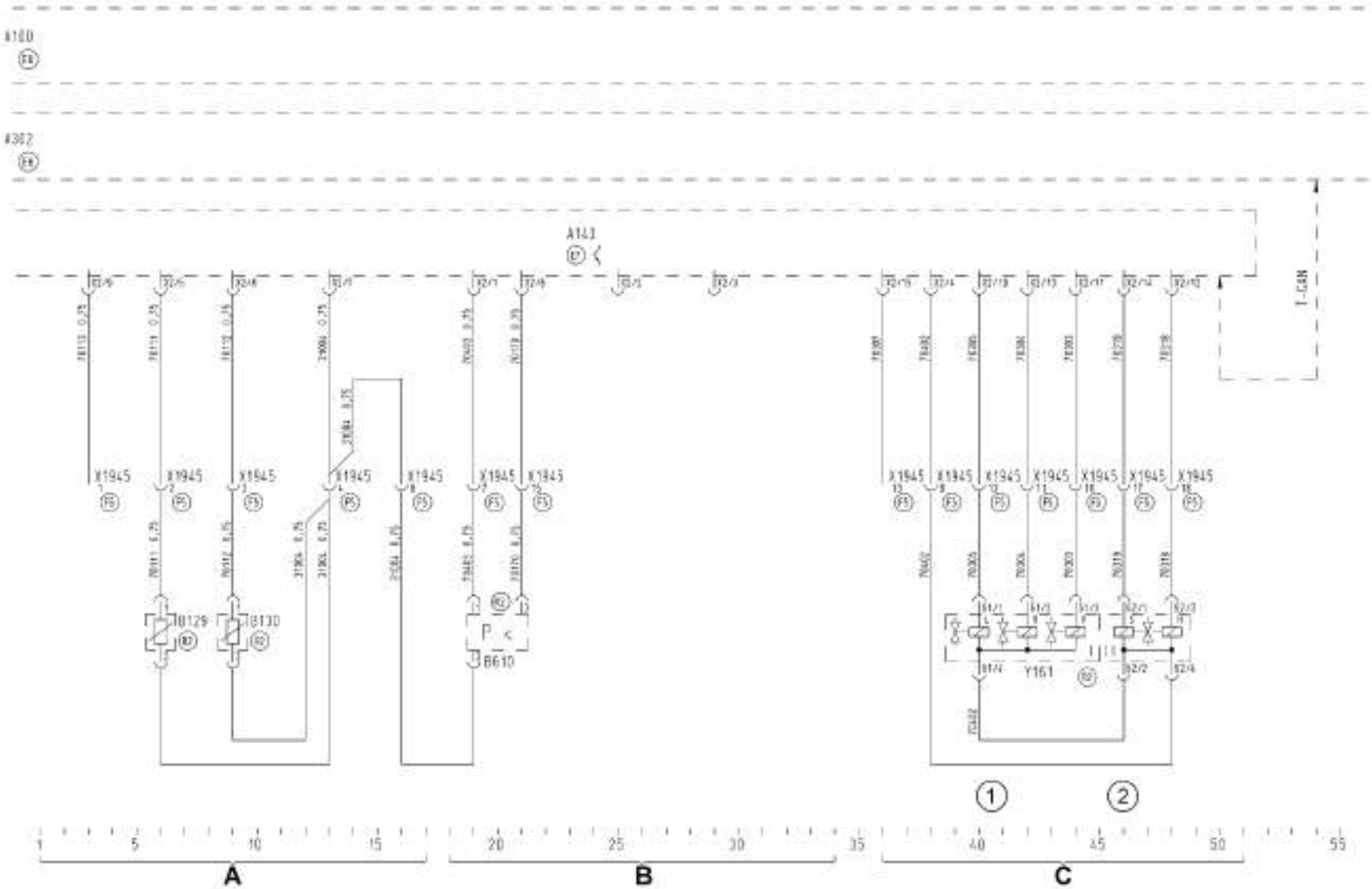
WIRING DIAGRAM NO. 81.99192.3253

ECAS 2 (6x2 optionally with ALM/crane) sheet 2 of 2
Date: 06.07

Legend

A	**Position sensors**
B	**Pressure sensors**
C	**Solenoid valves**
A100	Central electrical system
A143	Control unit, ECAS
A302	Central computer 2
B129	Position sensor, rear axle, left
B130	Position sensor, rear axle, right
B610	Pressure sensor, rear axle, left
X1945	Plug conn., ECAS/CDC
Y161	Solenoid valve block, ECAS, rear axle (II = trailing axle/leading axle)
1	Marking sleeve “1” on connector Y161/61
2	Marking sleeve “2” on connector Y161/62

ECAS 2 (6x2 optionally with ALM/crane) sheet 2 of 2



WIRING DIAGRAM NO. 81.99192.3624

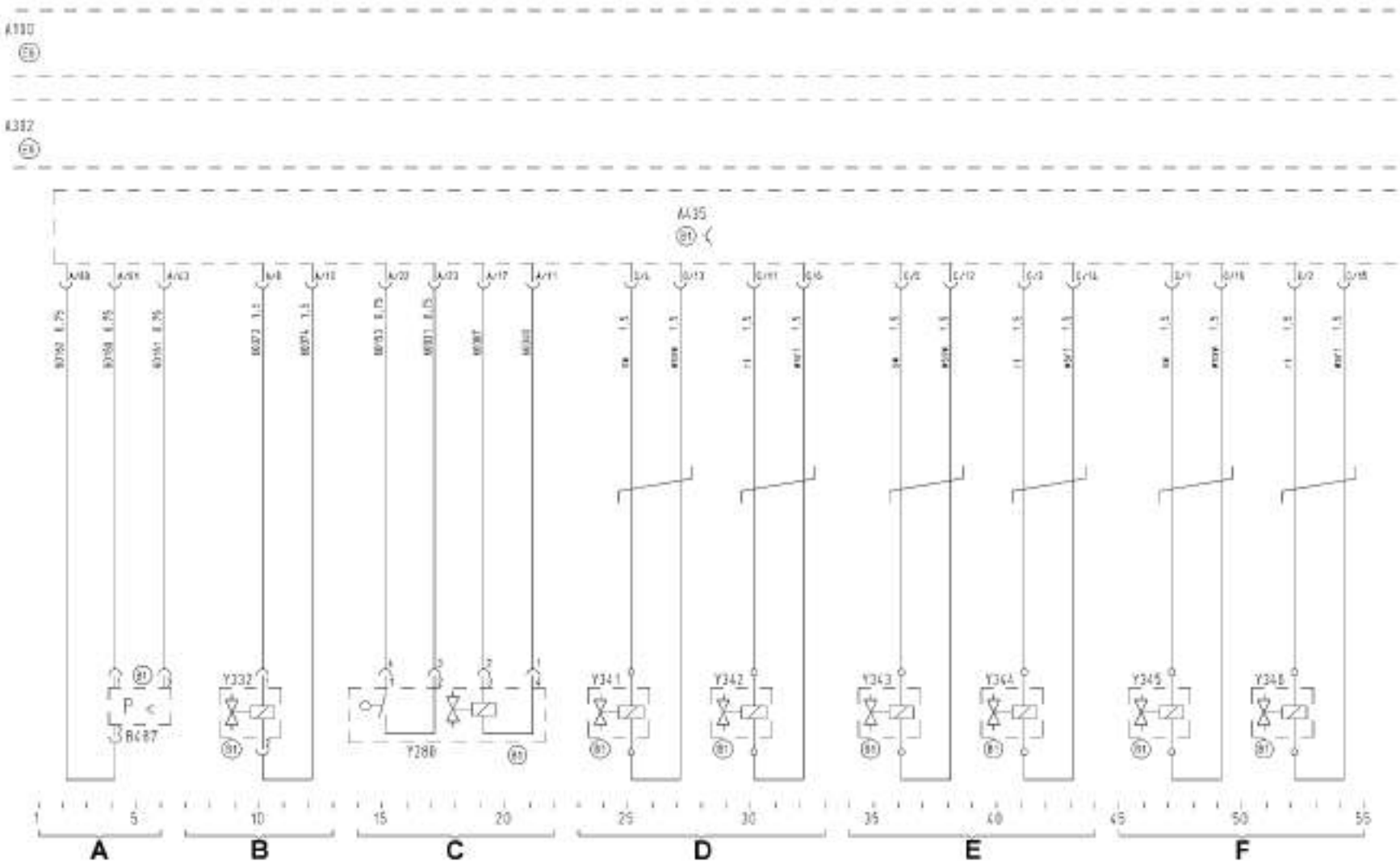
EDC7 Euro 3 D20... sheet 1 of 3
Date: 02.2008

Legend

A	**Rail-pressure sensor**
B	**Proportional valve, fuel**
C	**Exhaust gas recirculation cylinder**
D	**Cylinder 1+2**
E	**Cylinder 3+4**
F	**Cylinder 5+6**

A100	Central electrical system
A302	Central computer 2
A435	Control unit, EDC
B487	Rail-pressure sensor
Y280	EGR cylinder
Y332	Proportional valve, fuel
Y341	Injector, 1st cylinder
Y342	Injector, 2nd cylinder
Y343	Injector, 3rd cylinder
Y344	Injector, 4th cylinder
Y345	Injector, 5th cylinder
Y346	Injector, 6th cylinder

EDC7 Euro 3 D20... sheet 1 of 3



WIRING DIAGRAM NO. 81.99192.3624

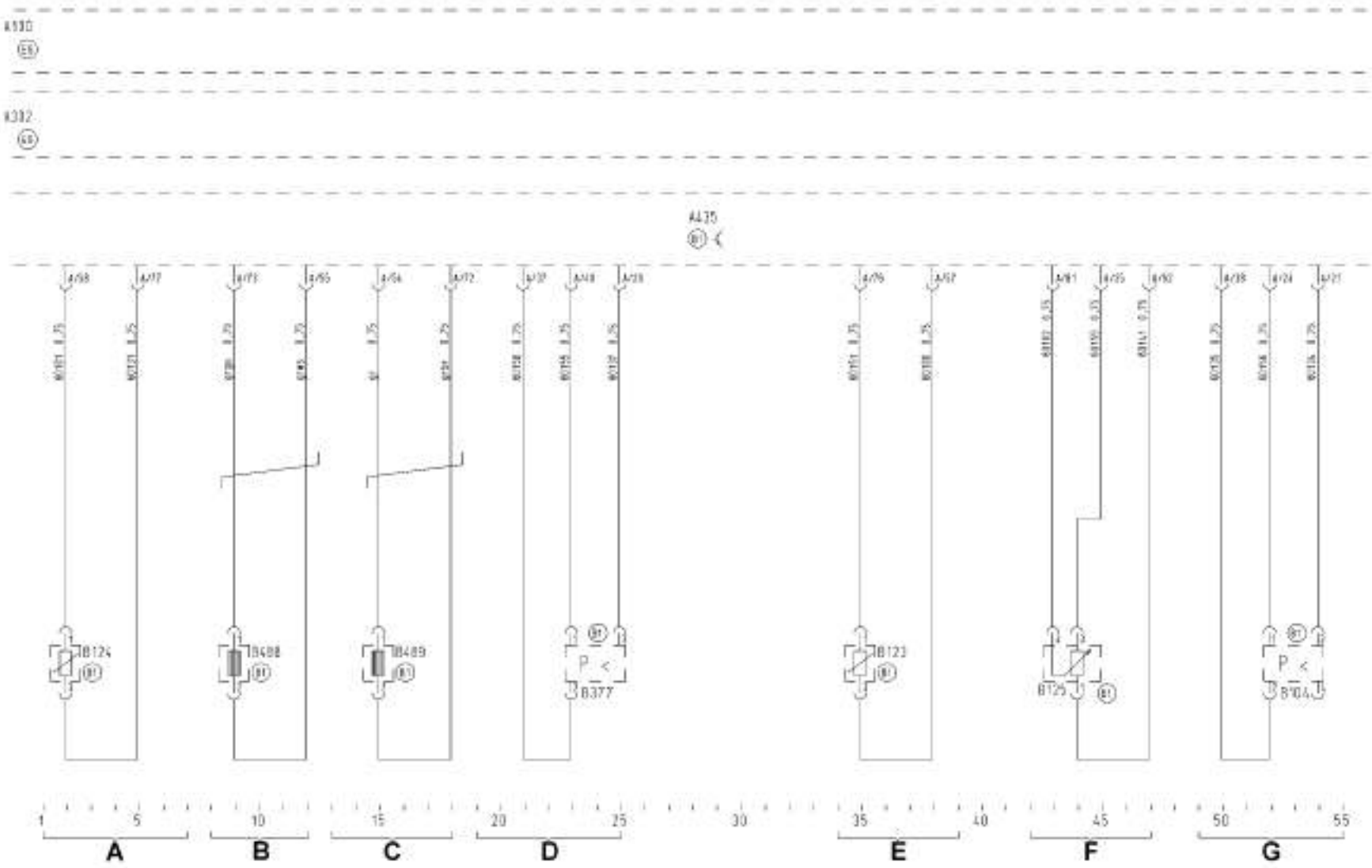
EDC7 Euro 3 D20... sheet 2 of 3
Date: 02.2008

Legend

A	**Water temperature sensor**
B	**Crankshaft**
C	**Camshaft**
D	**Fuel pressure sensor**
E	**Air temperature sensor**
F	**Charge pressure sensor**
G	**Oil pressure sensor**

A100	Central electrical system
A302	Central computer 2
A435	Control unit, EDC
B104	Oil pressure sensor
B123	Temperature sensor, charge air, EDC/CNG
B124	Temperature sensor, coolant
B125	Pressure sensor, charge air
B377	Fuel pressure sensor
B488	Speed increment sensor
B489	Speed segment sensor

EDC7 Euro 3 D20... sheet 2 of 3



WIRING DIAGRAM NO. 81.99192.3624

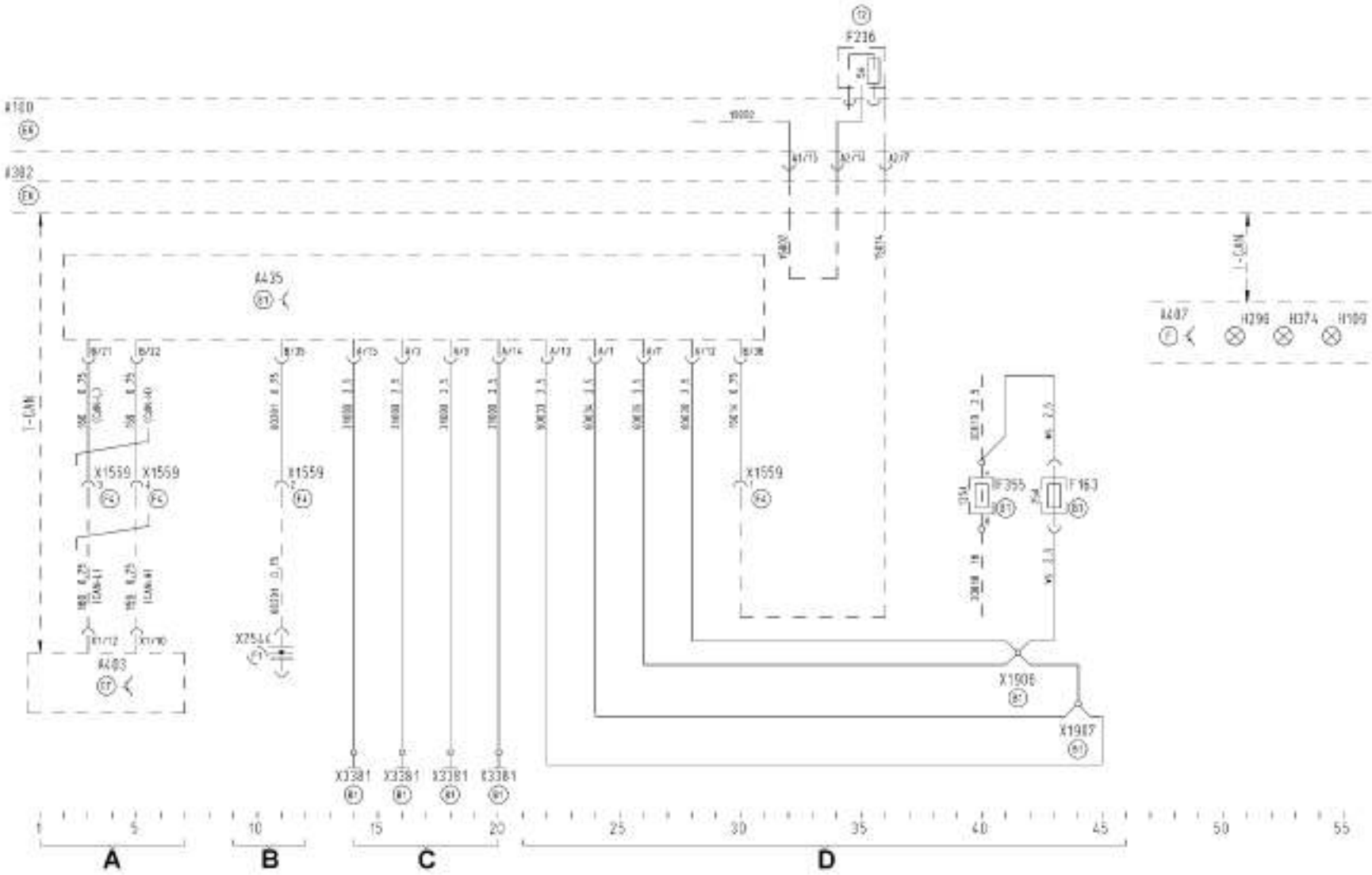
EDC7 Euro 3 D20... sheet 3 of 3
Date: 02.2008

Legend

A	**M-CAN databus**
B	**Diagnosis**
C	**Earthing point, box**
D	**Voltage supply**

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A407	Instrumentation
A435	Control unit, EDC
F163	Fuse, engine control (terminal 30)
F236	Fuse, engine regulation (terminal 15)
F355	Main fuse (terminal 30-2)
H109	Check lamp, oil pressure
H296	Check lamp, EDC (fault)
H374	Check lamp, air cleaner dirty
X1559	Plug conn., engine/EDC/gearbox IV
X1906	Threaded pin M6 (motor power box)
X1907	Threaded pin M6 (motor power box)
X2544	Potential distributor, 21-pin, K-line
X3381	Threaded pin (motor power box)

EDC7 Euro 3 D20... sheet 3 of 3



WIRING DIAGRAM NO. 81.99192.3625

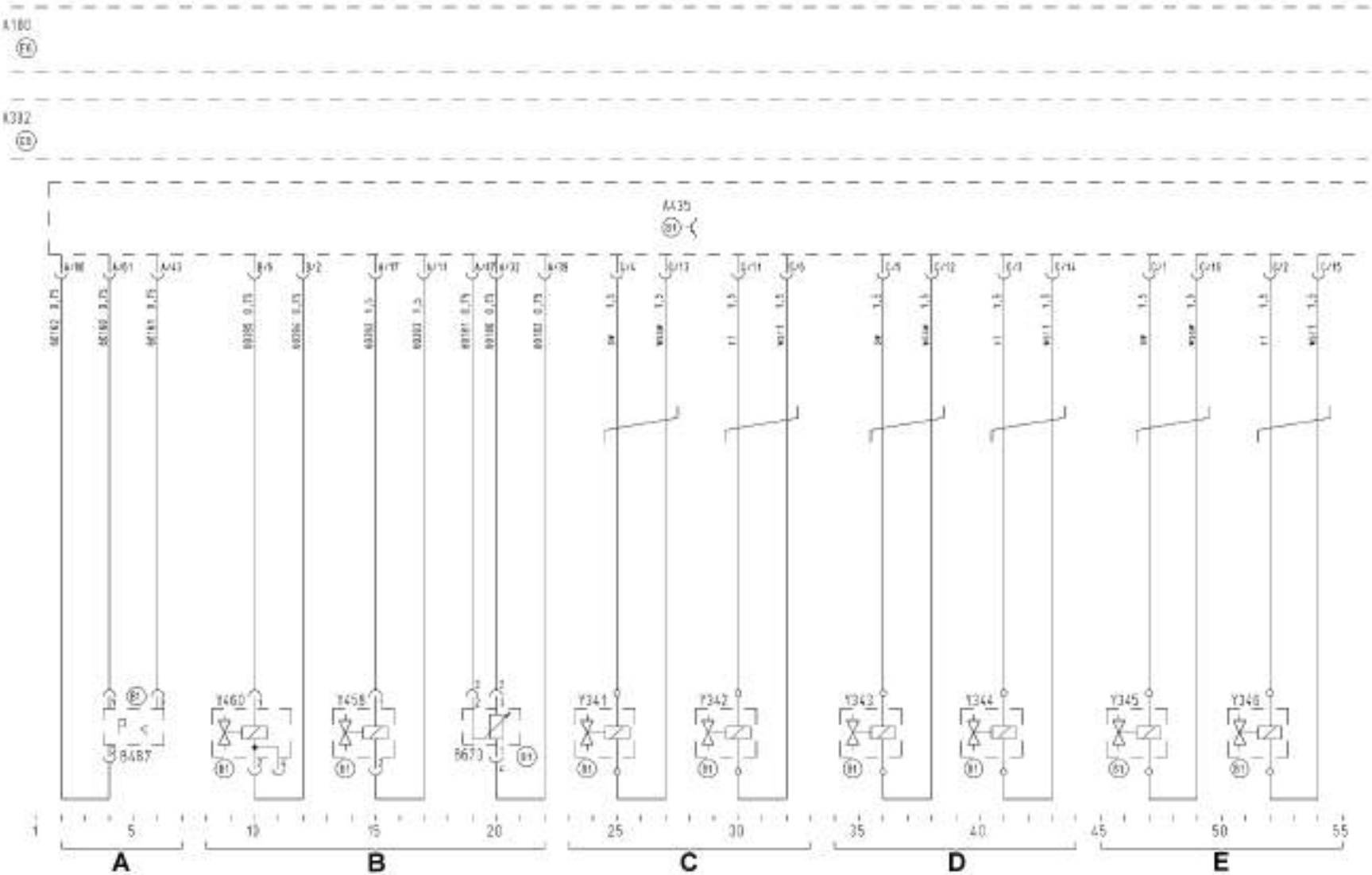
EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 1 of 4
Date: 02.2008

Legend

A	**Rail-pressure sensor**
B	**Controlled exhaust gas recirculation**
C	**Cylinder 1+2**
D	**Cylinder 3+4**
E	**Cylinder 5+6**

A100	Central electrical system
A302	Central computer 2
A435	Control unit, EDC
B487	Rail-pressure sensor
B673	Position sensor, E-EGR, cylinder
Y341	Injector, 1st cylinder
Y342	Injector, 2nd cylinder
Y343	Injector, 3rd cylinder
Y344	Injector, 4th cylinder
Y345	Injector, 5th cylinder
Y346	Injector, 6th cylinder
Y458	Proportional valve, E-EGR
Y460	Shut-off valve - E-EGR/controlled EVB

EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 1 of 4



WIRING DIAGRAM NO. 81.99192.3625

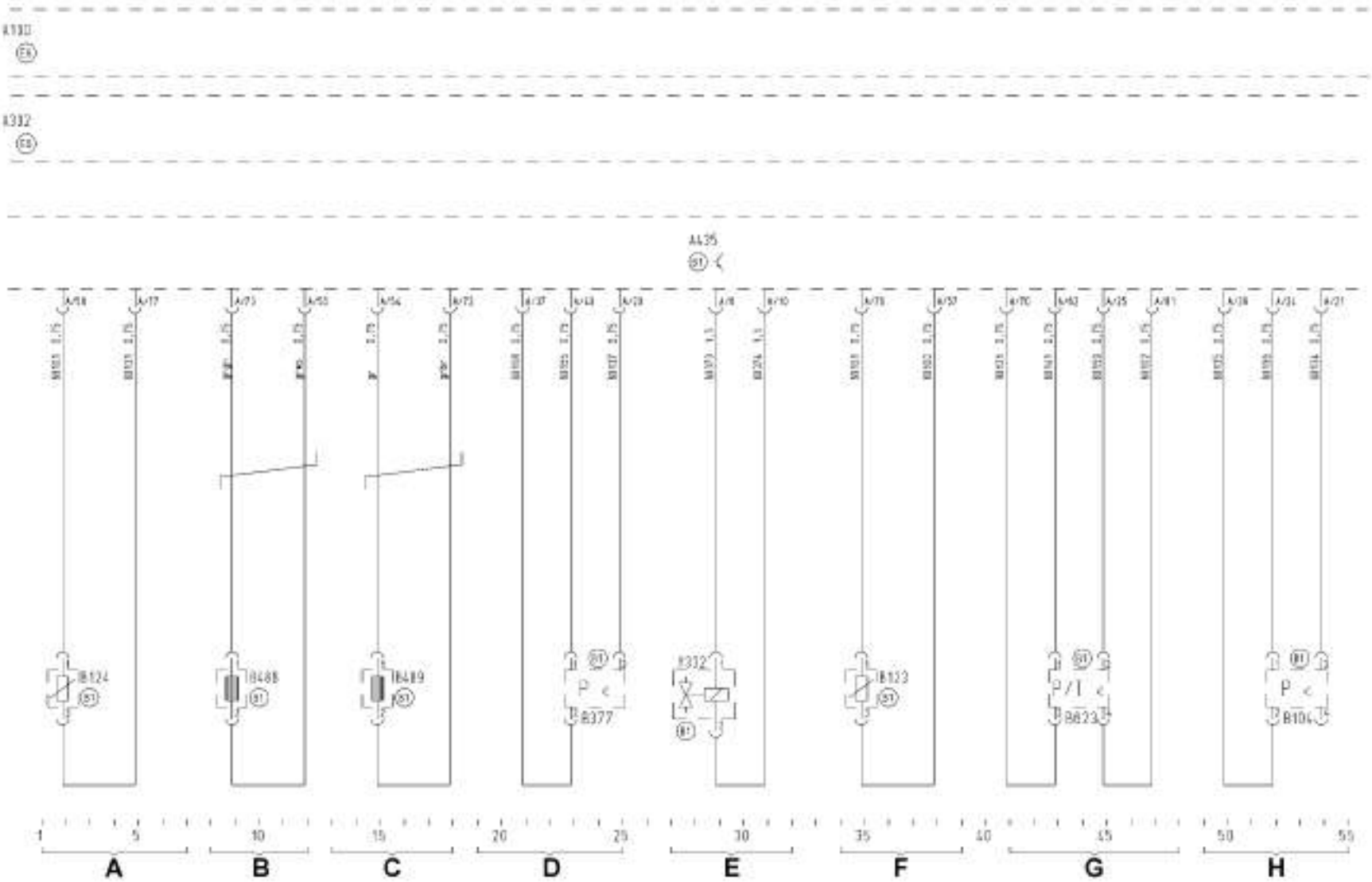
EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 2 of 4
Date: 02.2008

Legend

A	**Water temperature sensor**
B	**Crankshaft**
C	**Camshaft**
D	**Fuel pressure sensor**
E	**Proportional valve, fuel**
F	**Air temperature sensor**
G	**Charge pressure/temperature sensor**
H	**Oil pressure sensor**

A100	Central electrical system
A302	Central computer 2
A435	Control unit, EDC
B104	Oil pressure sensor
B123	Temperature sensor, charge air, EDC/CNG
B124	Temperature sensor, coolant
B377	Fuel pressure sensor
B488	Speed increment sensor
B489	Speed segment sensor
B623	Charge pressure/temperature sensor
Y332	Proportional valve, fuel

EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 2 of 4



WIRING DIAGRAM NO. 81.99192.3625

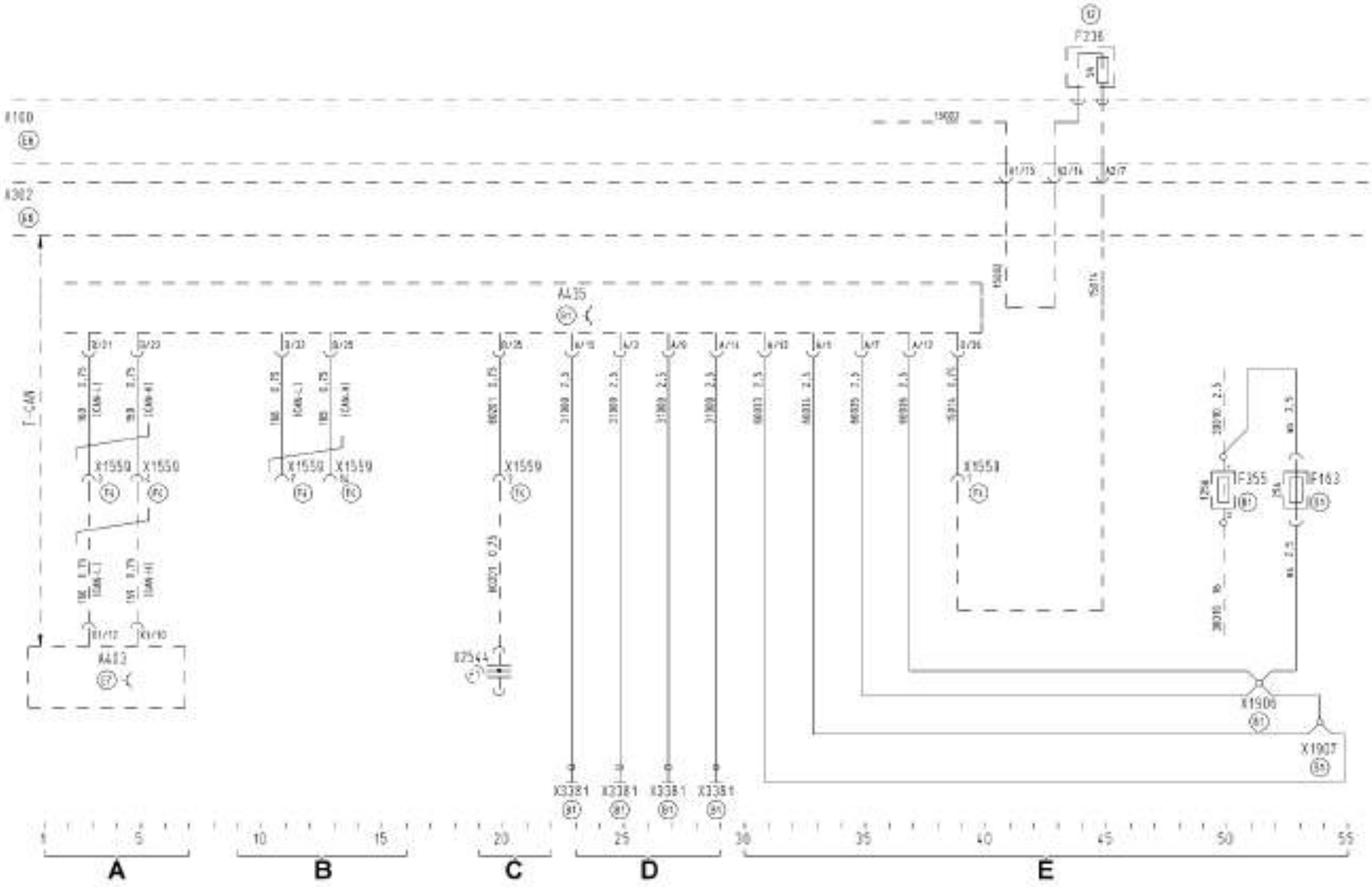
EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 3 of 4
Date: 02.2008

Legend

A	**M-CAN databus**
B	**HD OBD CAN databus**
C	**Diagnosis**
D	**Earthing point, box**
E	**Voltage supply**

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A435	Control unit, EDC
F163	Fuse, engine regulation (terminal 30)
F236	Fuse, engine regulation (terminal 15)
F355	Main fuse (terminal 30-2)
X1559	Plug conn., engine/EDC/gearbox IV
X1906	Threaded pin M6 (motor power box)
X1907	Threaded pin M6 (motor power box)
X2544	Potential distributor, 21-pin, K-line
X3381	Threaded pin (motor power box)

EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 3 of 4



WIRING DIAGRAM NO. 81.99192.3625

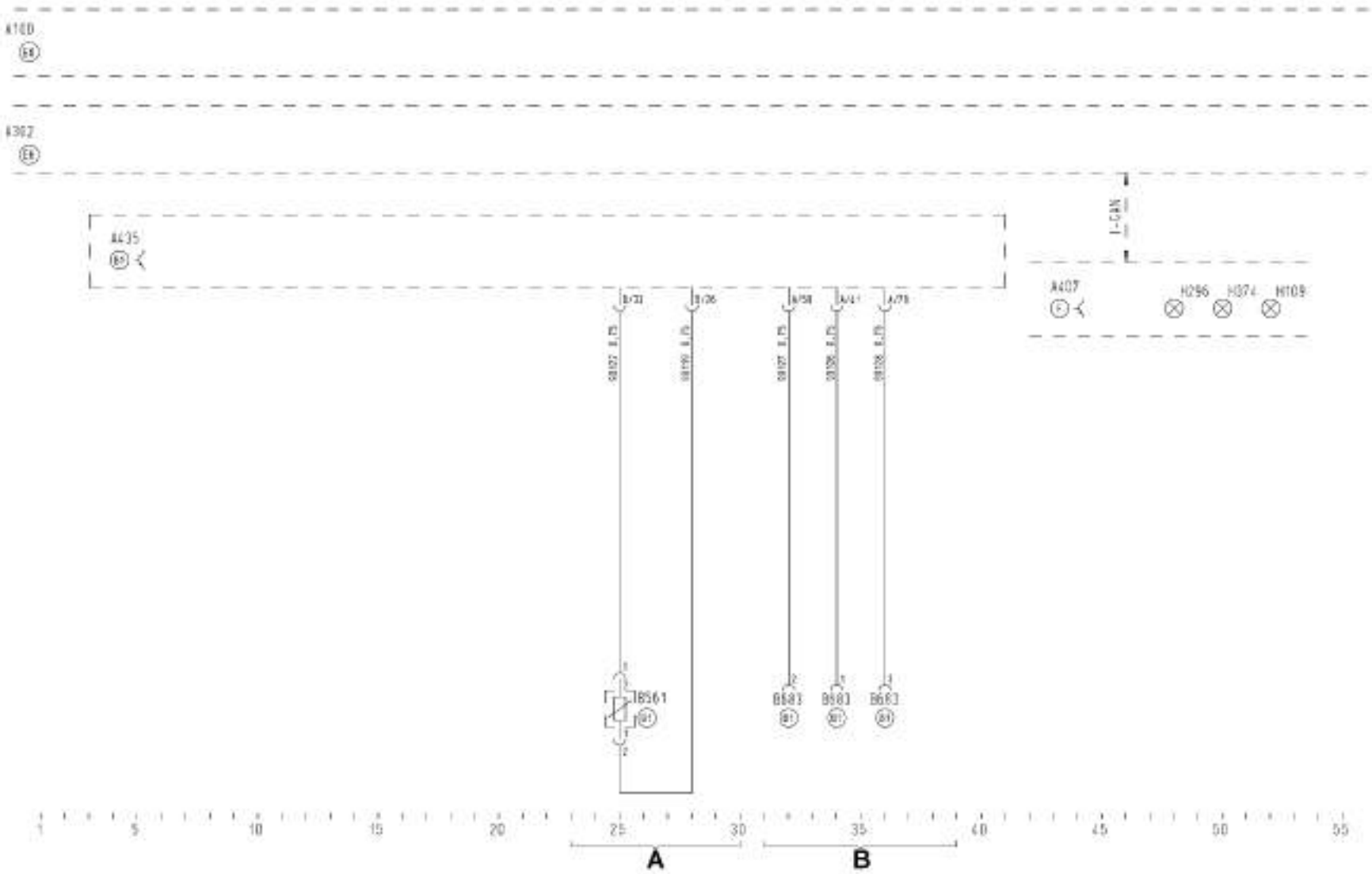
EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 4 of 4
Date: 02.2008

Legend

A	**Exhaust gas temperature sensor 1**
B	**Exhaust gas relative pressure sensor**

A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A435	Control unit, EDC
B561	Exhaust gas temperature sensor 1 (upstream of filter)
B683	Exhaust gas relative pressure sensor
H109	Check lamp, oil pressure
H296	Check lamp, EDC (fault)
H374	Check lamp, air filter contaminated

EDC7 Common Rail Euro 3 D2676 LF, E-EGR sheet 4 of 4



WIRING DIAGRAM NO. 81.99192.3617

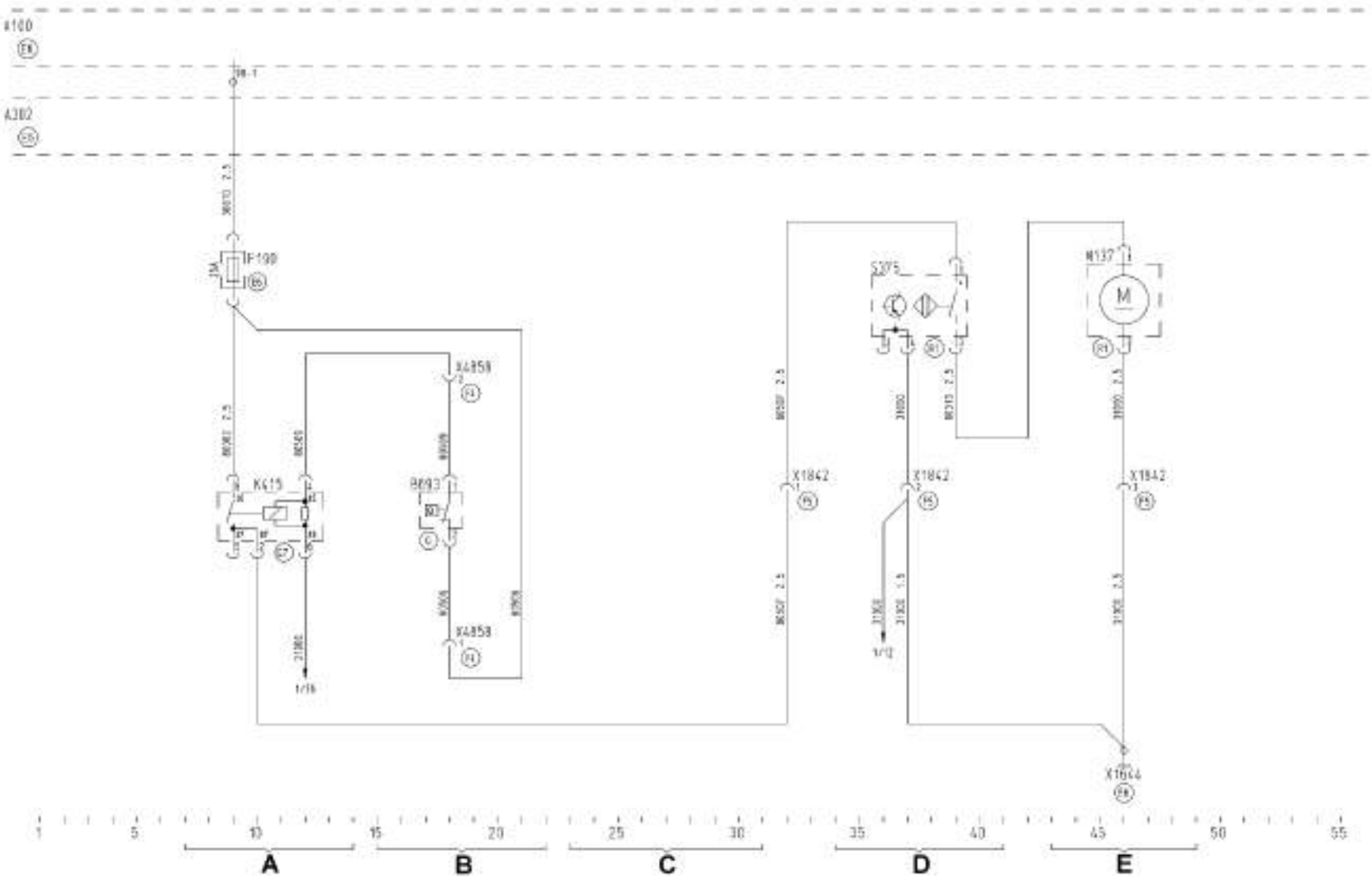
Electric cab tilt mechanism sheet 1 of 1
02.2008

Legend

A	**Voltage supply**
B	**Sensor switch, front flap**
C	**Enable switch**
D	**Tilt buttons**
E	**Tilt pump**

A100	Central electrical system
A302	Central computer 2
B693	Sensor switch, front flap
F190	Fuse, cab tilt mechanism
K415	Relay, cab tilt mechanism
M137	Pump, cab tilt mechanism
S375	Button, cab tilt mechanism actuation
X1644	Earthing point, cab, next to central electrical system
X1842	Plug conn., cab tilt mechanism
X4858	Plug conn., front flap sensing

Electric cab tilt mechanism sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3260

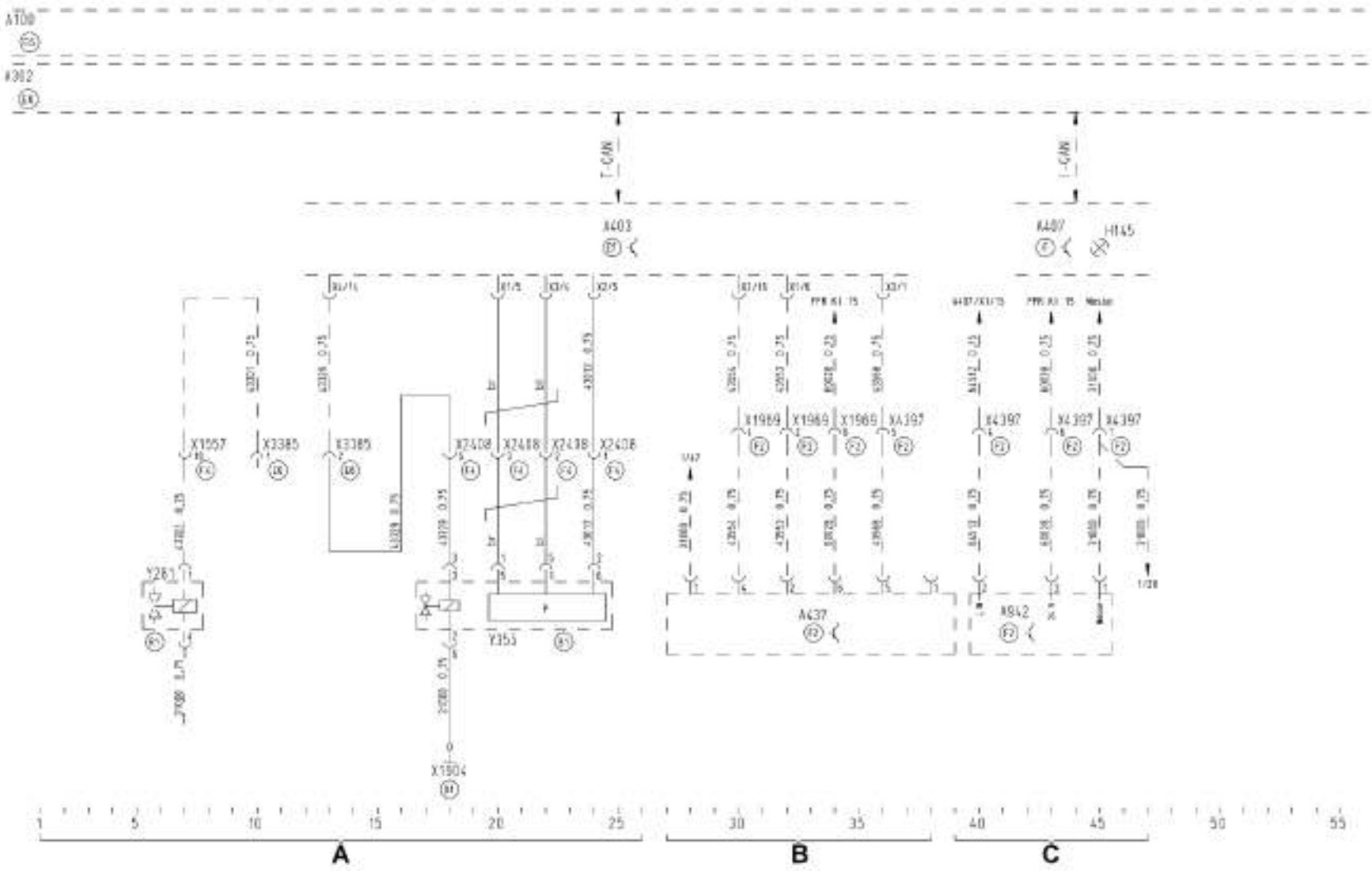
EVB, controlled sheet 1 of 1
Date: 09.2006

Legend

A Engine brake / EVB, controlled
B Sustained-action brake lever without multifunctional steering wheel
C Sustained-action brake lever with multifunctional steering wheel

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
A403	Vehicle management computer
A407	Instrumentation
A437	Sustained-action brake lever
A942	Steering column stalk, retarder/gearbox
H145	Check lamp, retarder
X1557	Plug conn., frame, left
X1904	Threaded pin M6 (motor power box)
X1969	Plug conn., engine brake switch
X2408	Plug conn., EVB module
X3385	Plug conn., engine brake/EVB
X4397	Plug conn., multifunctional steering wheel
Y281	Solenoid valve, engine brake/EVB
Y355	EVB module

EVB, controlled sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3173

Cab, T-CAN, standard sheet 1 of 1
Date: 09.2005

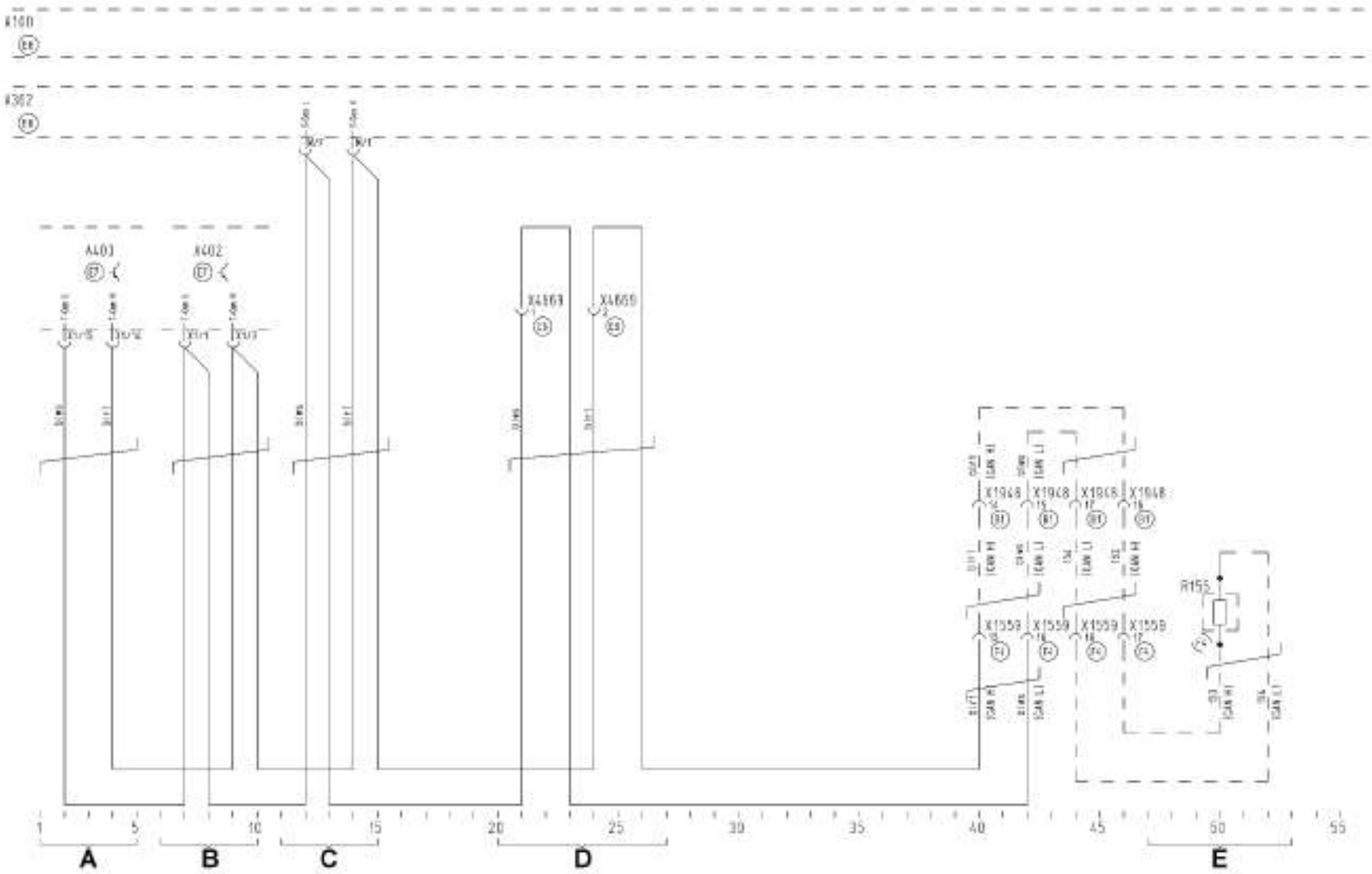
Legend

A	**FFR (vehicle management computer)**
B	**EBS**
C	**ZBR (central on-board computer)**
D	**Adaptation, supplementary equipment**
E	**Terminating resistor**

A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
A403	Vehicle management computer
R155	Terminating resistor, T-CAN
X1559	Plug conn., engine/EDC/gearbox IV
X1948	Plug conn., engine/gearbox
X4669	Adaptation, supplementary equipment

Note
In vehicles with TPM, the T-CAN terminating resistor sits in the frame on the TPM module!

Cab, T-CAN, standard sheet 1 of 1



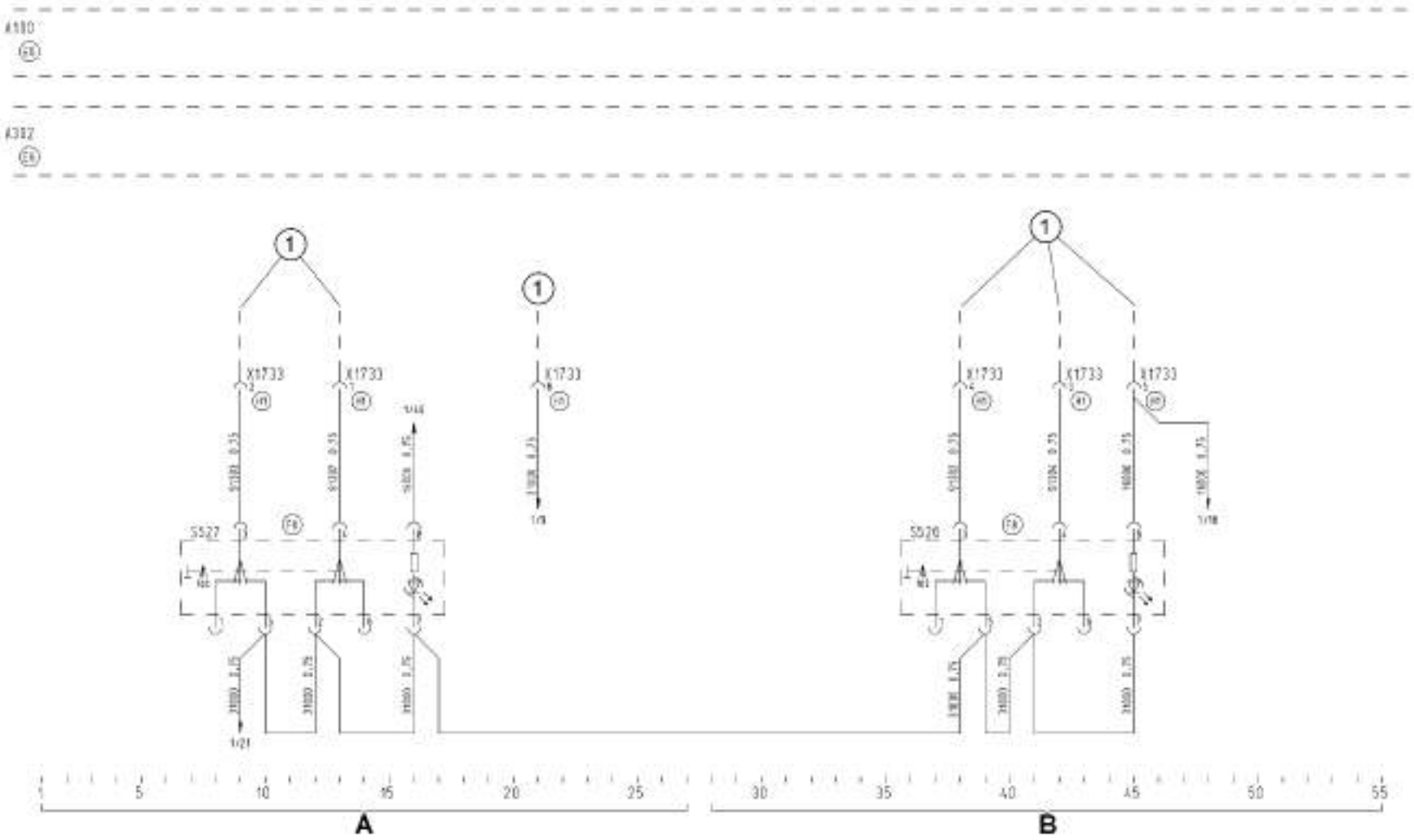
WIRING DIAGRAM NO. 81.99192.3267

Window lifter, button in shift console sheet 1 of 1
Date: 04.2007

Legend

A	**Window lifter, switch console for door, left**
B	**Window lifter, switch console for door, right**
A100	Central electrical system
A302	Central computer 2
S526	Button, window lifter, right
S527	Button, window lifter, left
X1733	Plug conn., switch, window lifters
1	See wiring diagram for door module

Window lifter, button in shift console sheet 1 of 1



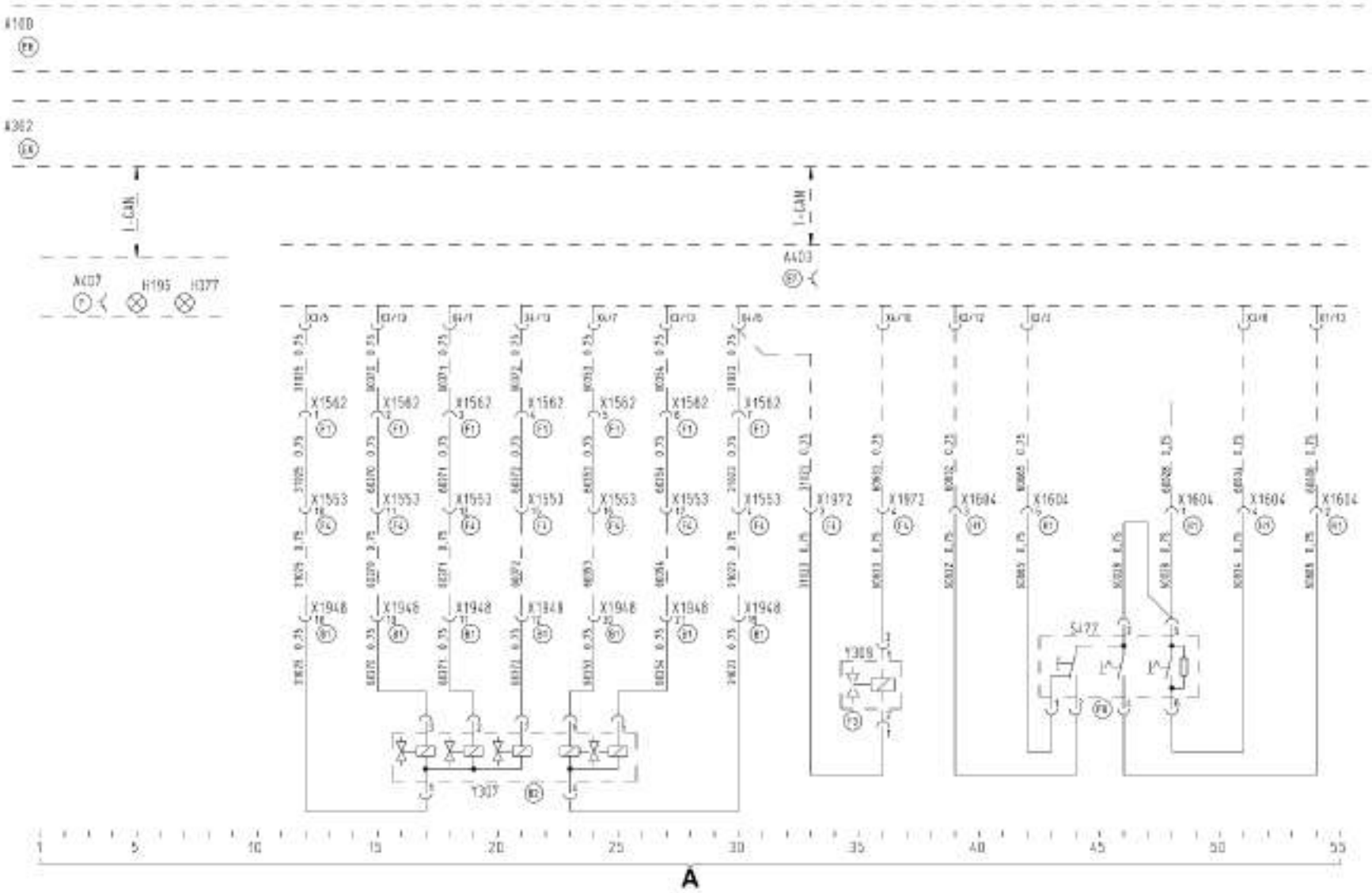
WIRING DIAGRAM NO. 81.99192.3276

Gearbox / manual gearbox sheet 1 of 2
Date: 11.2005

Legend

A	**Splitter, range-change**
A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A407	Instrumentation
H195	Check lamp, splitter
H377	Check lamp, range-change
S477	Switch, gear selector lever
X1553	Plug conn., engine/EDC/gearbox III
X1562	Plug conn., gearbox
X1604	Plug conn., switch in gearshift knob
X1948	Plug conn., engine/gearbox
X1972	Plug conn., pedals, outside
Y307	Solenoid valve, splitter and range-change
Y308	Clutch servo

Gearbox / manual gearbox sheet 1 of 2



WIRING DIAGRAM NO. 81.99192.3276

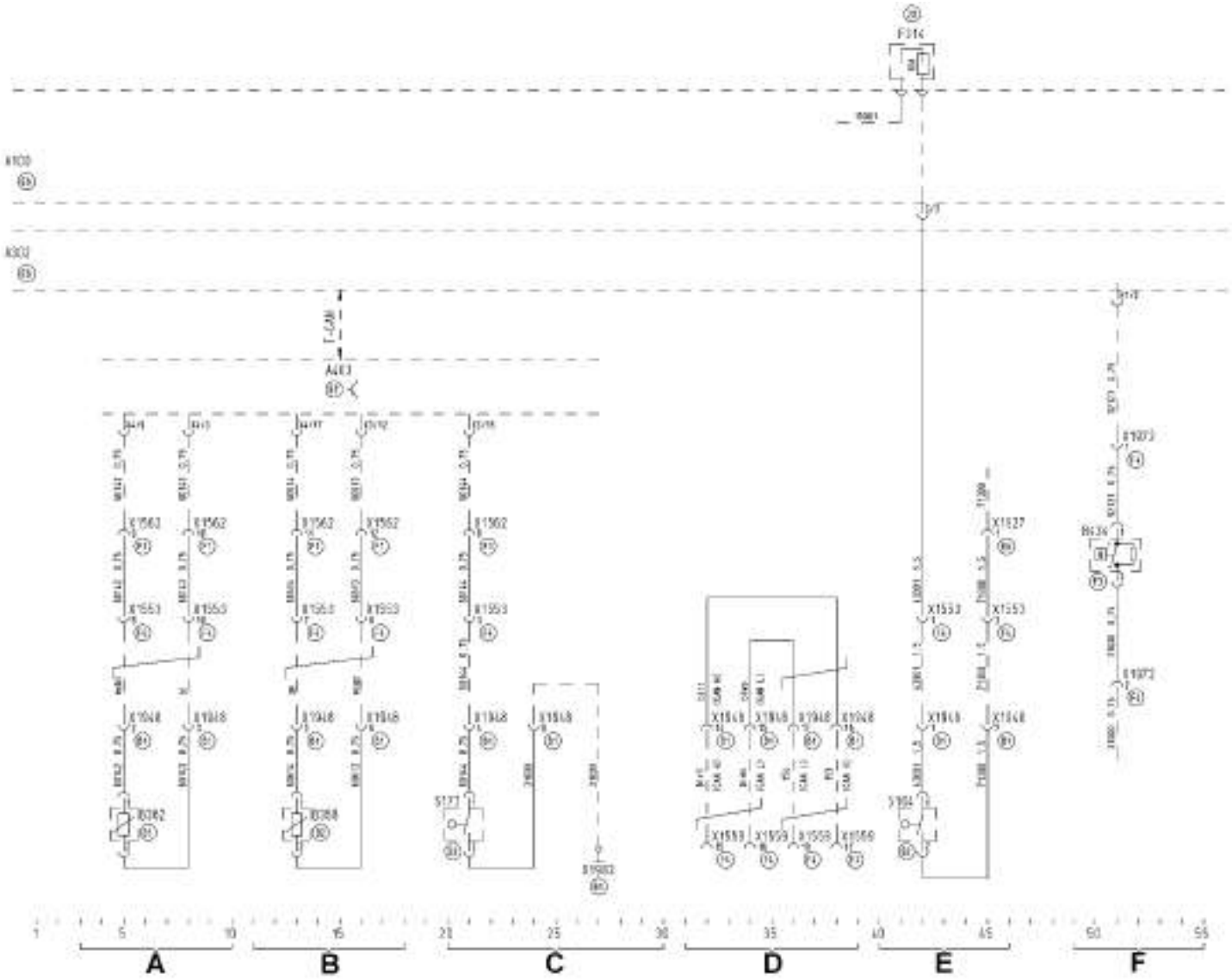
Gearbox / manual gearbox sheet 2 of 2
Date: 09.2006

Legend

A	**Clutch travel sensor**
B	**Gearbox input speed**
C	**Gearbox neutral**
D	**T-CAN network**
E	**Reverse gear switch**
F	**Clutch fluid level probe**

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
B362	Clutch travel sensor
B368	Inductive pickup, gearbox input speed
B434	Clutch fluid level probe
F314	Fuse, reversing light
S104	Switch, reverse gear
S172	Switch, neutral, gearbox
X1553	Plug conn., engine/EDC/gearbox III
X1559	Plug conn., engine/EDC/gearbox IV
X1562	Plug conn., gearbox
X1627	Plug conn., Reversing light
X1948	Plug conn., engine/gearbox
X1972	Plug conn., pedals, outside
X1983	Threaded pin M6 (motor power box)

Gearbox / manual gearbox sheet 2 of 2



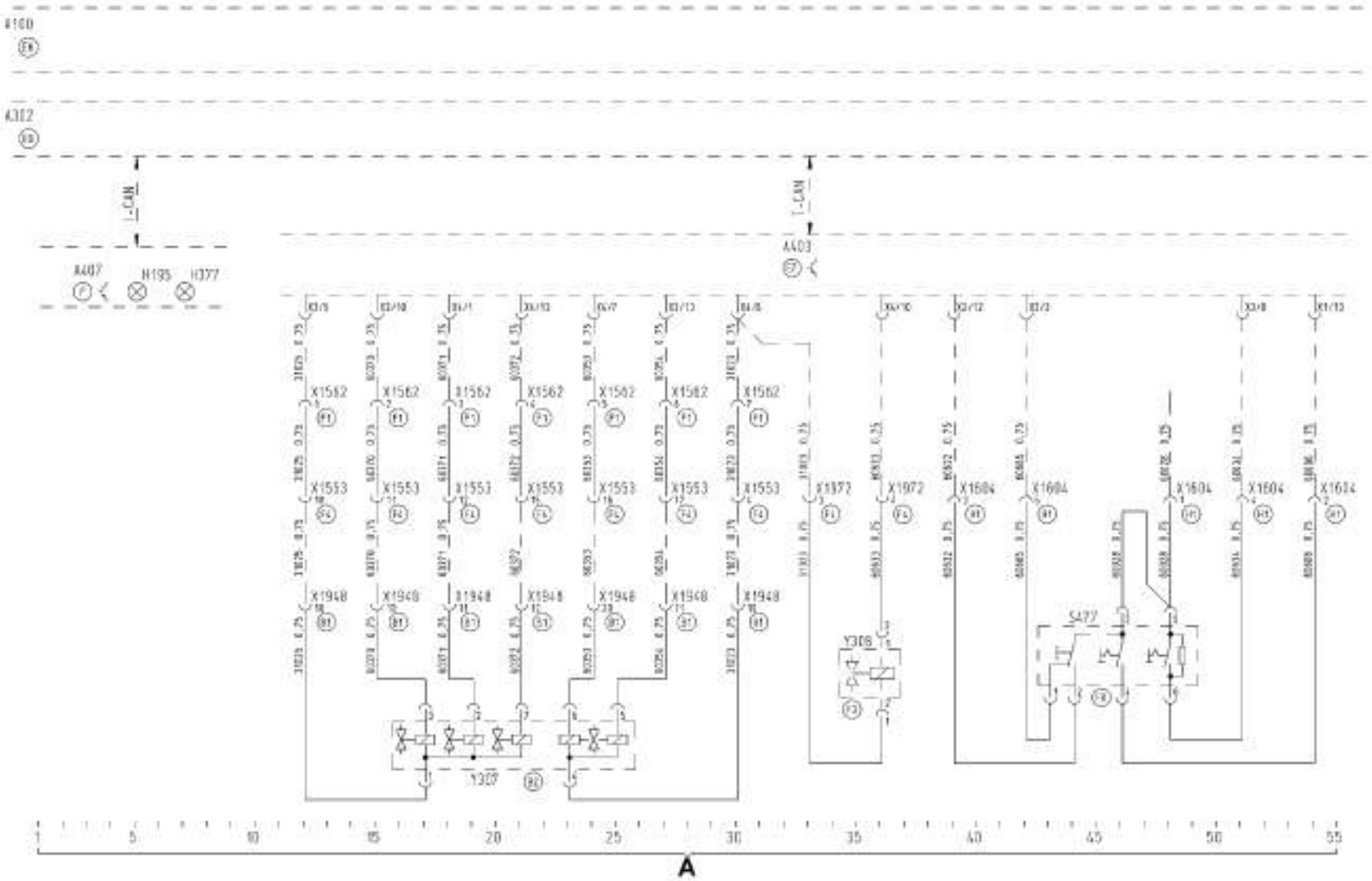
WIRING DIAGRAM NO. 81.99192.3748

Gearbox / manual gearbox sheet 1 of 2
Date: 11.2008

Legend

A	**Splitter, range-change**
A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A407	Instrumentation
H195	Check lamp, splitter
H377	Check lamp, range-change
S477	Switch, gear selector lever
X1553	Plug conn., engine/EDC/gearbox III
X1562	Plug conn., gearbox
X1604	Plug conn., switch in gearshift knob
X1948	Plug conn., engine/gearbox
X1972	Plug conn., pedals, outside
Y307	Solenoid valve, splitter and range-change
Y308	Clutch servo

Gearbox / manual gearbox sheet 1 of 2



WIRING DIAGRAM NO. 81.99192.3748

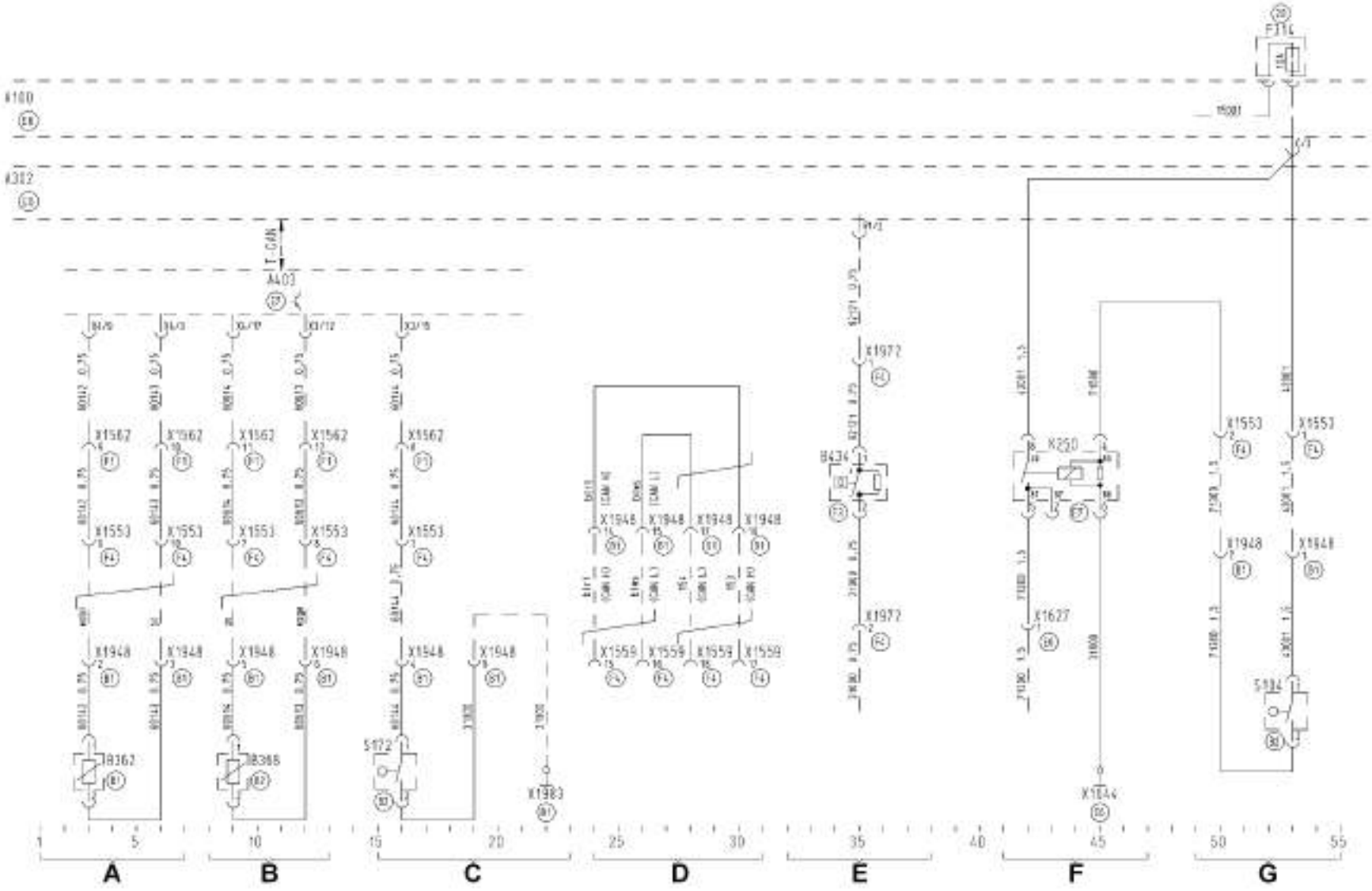
Gearbox / manual gearbox sheet 2 of 2
Date: 11.2008

Legend

A	**Clutch position sensor**
B	**Gearbox input speed**
C	**Gearbox neutral**
D	**T-CAN network**
E	**Clutch fluid level probe**
F	**Control, reversing light**
G	**Switch, reverse gear**

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
B362	Clutch position sensor
B368	Inductive pickup, gearbox input speed
B434	Clutch fluid level probe
F314	Fuse, reversing light
K250	Relay, reversing light
S104	Switch, reverse gear
S172	Switch, neutral, gearbox
X1553	Plug conn., engine/EDC/gearbox III
X1559	Plug conn., engine/EDC/gearbox IV
X1562	Plug conn., gearbox
X1627	Plug conn., reversing light
X1644	Earthing point, cab, next to central electrical system
X1948	Plug conn., engine/gearbox
X1972	Plug conn., pedals, outside
X1983	Threaded pin M6 (motor power box)

Gearbox / manual gearbox sheet 2 of 2



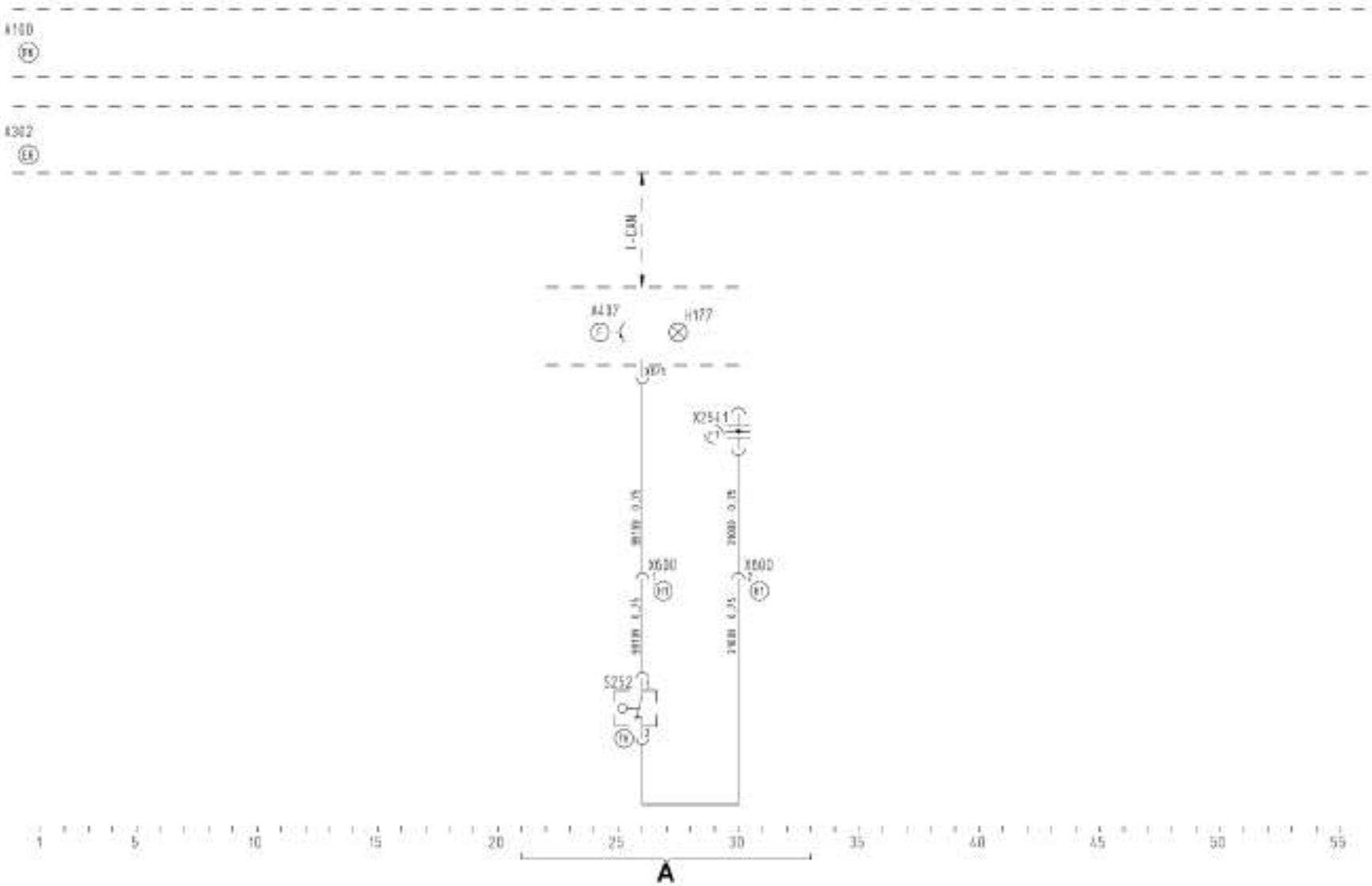
WIRING DIAGRAM NO. 81.99192.1374

Seat belt indicator, driver sheet 1 of 1
Date: 10.2006

Legend

A	Seat belt indicator
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
H177	Check lamp, seat belt
S252	Switch in seat belt buckle, driver
X600	Plug conn., seat belt indicator, driver/centre seat
X2541	Potential distributor, 21-pin, line 31000

Seat belt indicator, driver sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3292

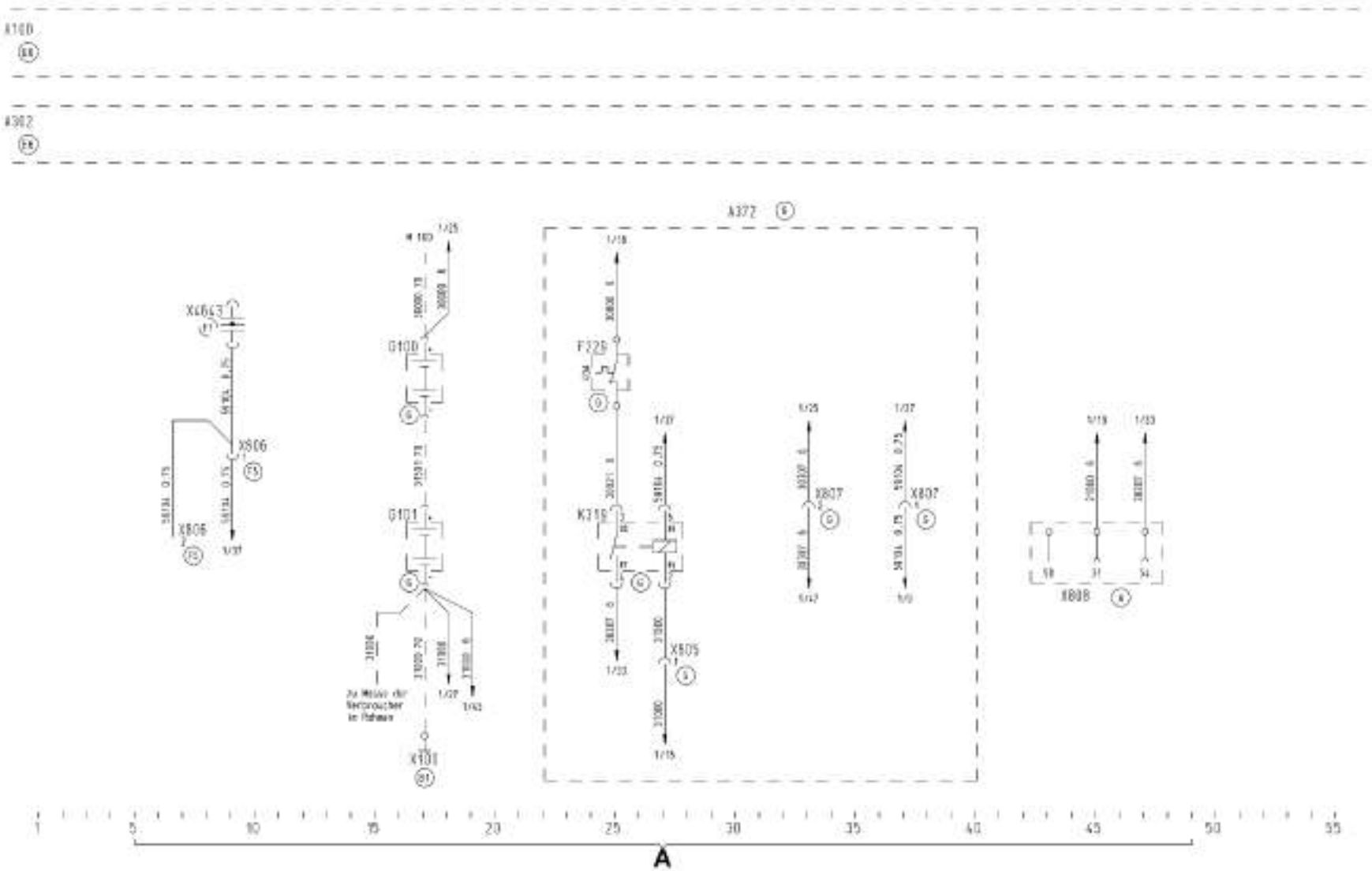
Trailer charge, 24V sheet 1 of 1
Date: 11.2005

Legend

A	Trailer charge
A100	Central electrical system
A302	Central computer 2
A372	Distributor box, trailer charge, 24V
F229	Fuse, trailer charge, 24V
G100	Battery 1
G101	Battery 2
K319	Relay, trailer charge, 24V
X100	Ground connection, engine
X805	Plug connection for trailer charge 24V
X806	Plug connection for trailer charge 24V
X807	Plug connection for trailer charge 24V
X808	Socket, trailer charge, 24V
X4643	Potential distributor, line 59104

Note
Installation position for X808 for semitrailer E8!

Trailer charge, 24V sheet 1 of 1



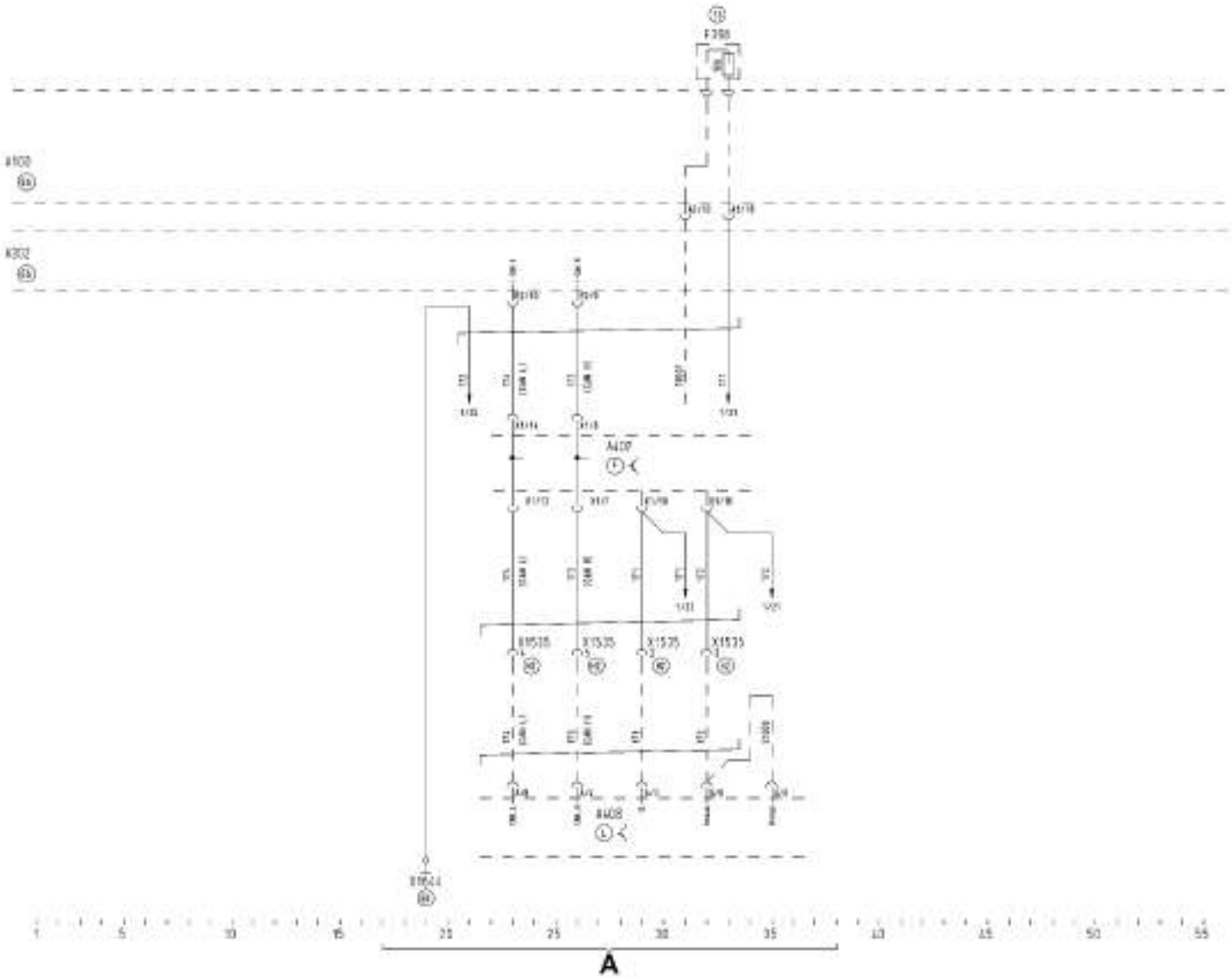
WIRING DIAGRAM NO. 81.99192.3237

I-CAN cab (standard) sheet 1 of 1
Date: 11.2005

Legend

A	I-CAN
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A408	Tachograph
F398	Fuse, instrumentation, tachograph (terminal 15)
X1535	Plug conn., tachograph
X1644	Earthing point, cab, next to central electrical system

I-CAN cab (standard) sheet 1 of 1



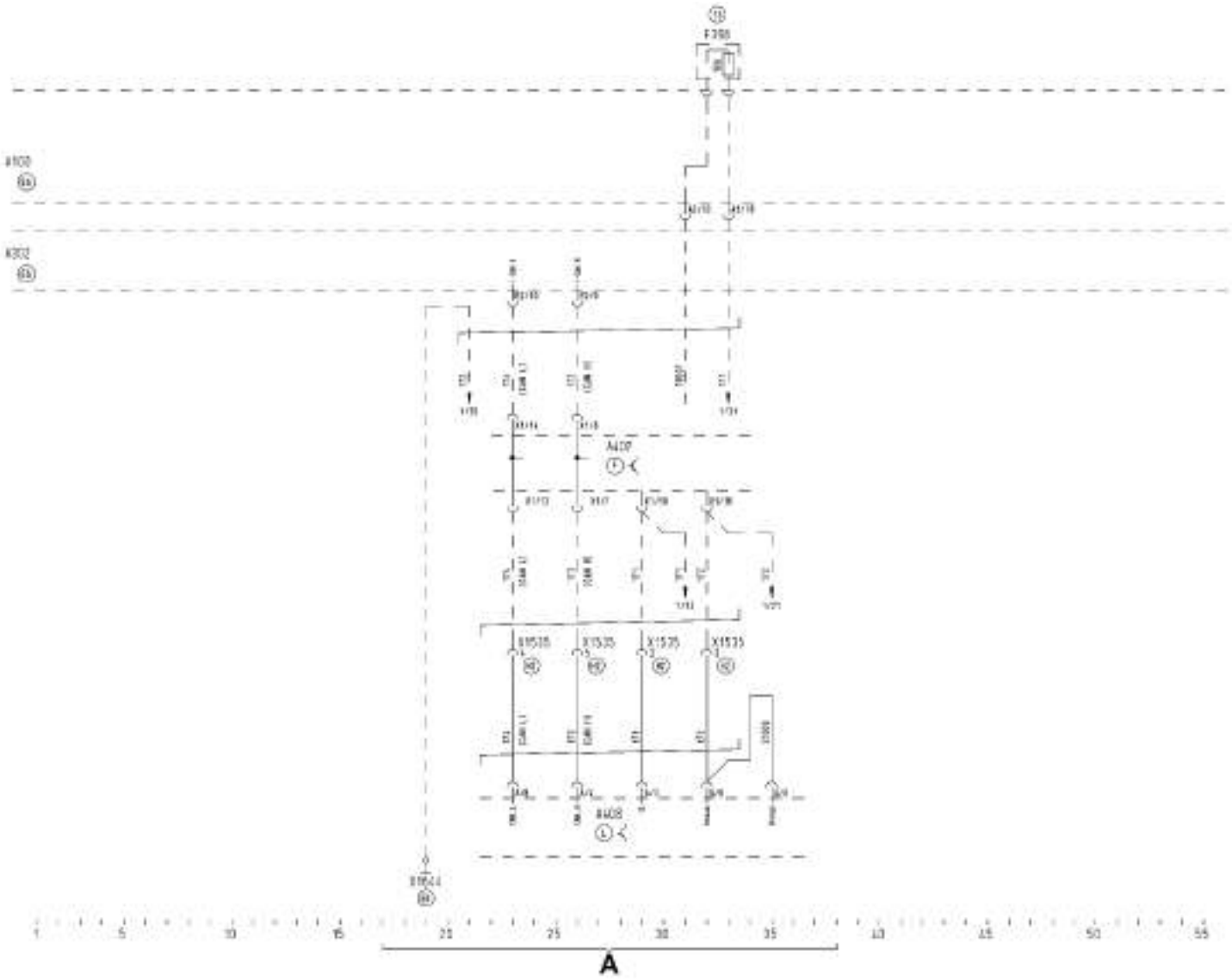
WIRING DIAGRAM NO. 81.99192.3405

I-CAN roof (standard) sheet 1 of 1
Date: 09.2007

Legend

A	I-CAN
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A408	Tachograph
F398	Fuse, instrumentation, tachograph (terminal 15)
X1535	Plug conn., tachograph
X1644	Earthing point, cab, next to central electrical system

I-CAN roof (standard) sheet 1 of 1



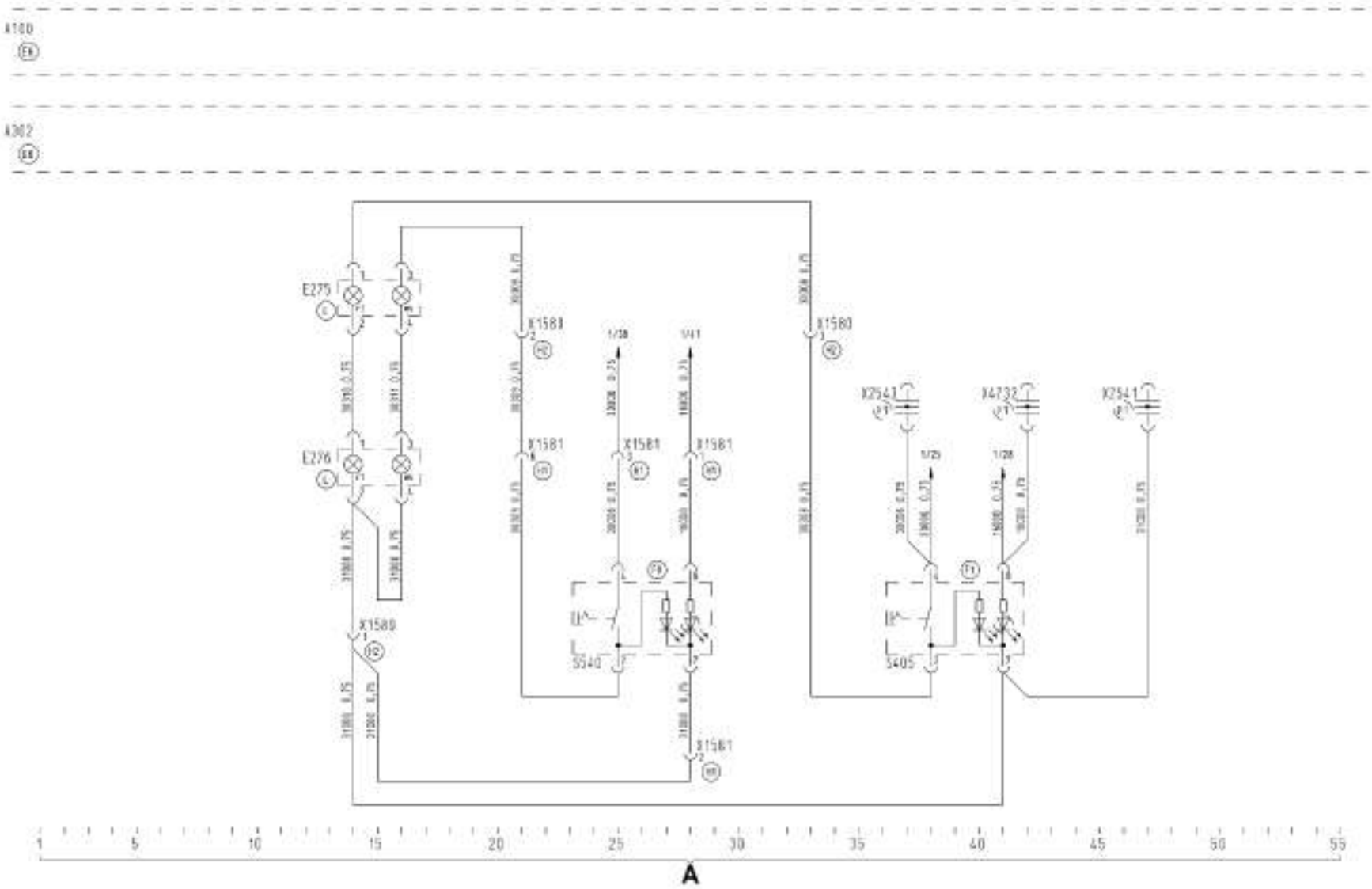
WIRING DIAGRAM NO. 81.99192.3293

Interior lighting, roof, white/red sheet 1 of 1
Date: 04.2006

Legend

A	Interior lighting, roof, white/red
A100	Central electrical system
A302	Central computer 2
E275	Interior light, roof, white/red
E276	Interior light, roof, white/red
S405	Switch, interior lighting, red
S540	Switch, interior lighting, white
X1580	Plug conn., interior lighting
X1581	Plug conn., switch, interior lighting
X2541	Potential distributor, 21-pin, line 31000
X2543	Potential distributor, 21-pin, line 30006
X4732	Potential distributor, line 16000, switch lighting

Interior lighting, roof, white/red sheet 1 of 1



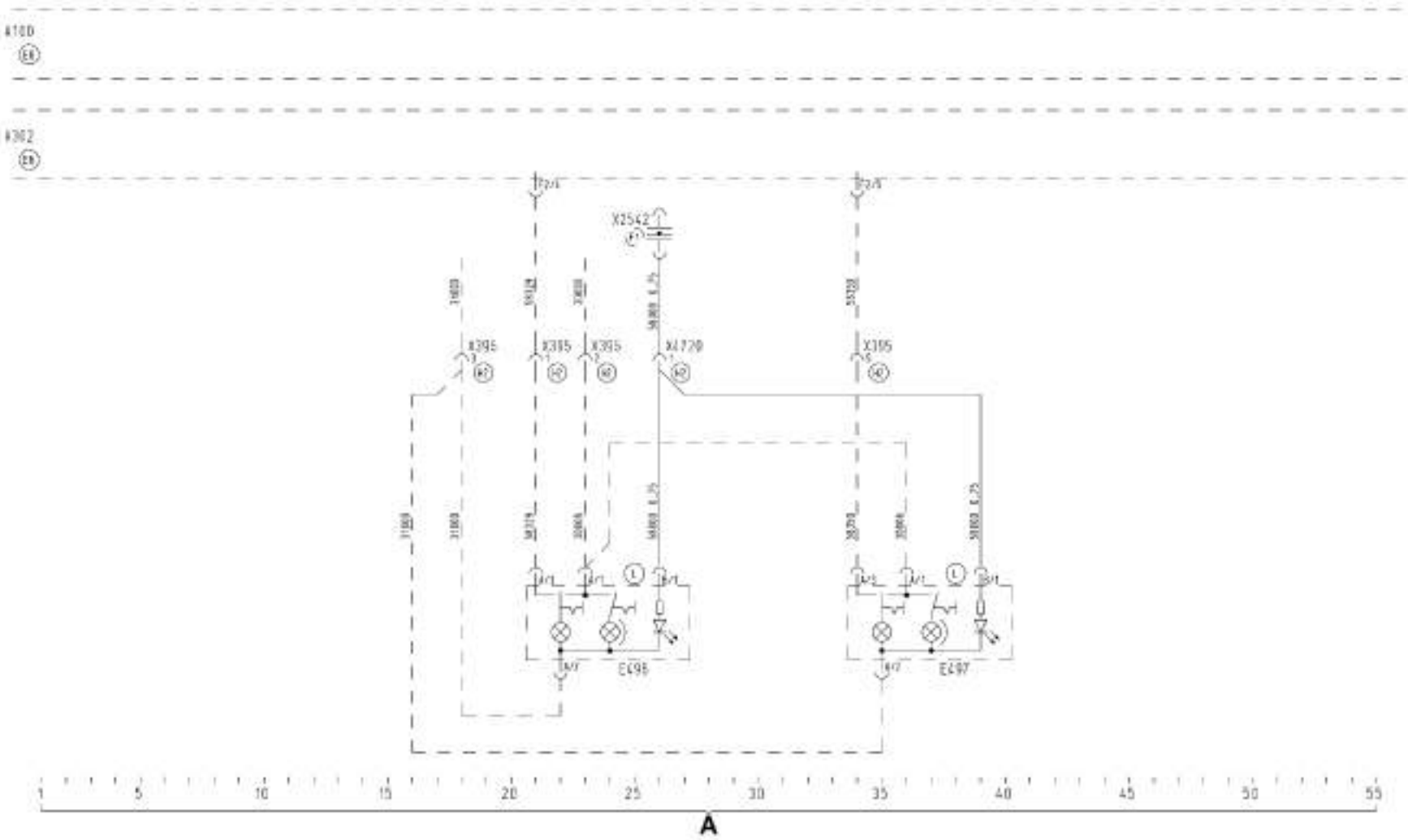
WIRING DIAGRAM NO. 81.99192.3461

Interior lights with ambient light sheet 1 of 1
Date: 03.2006

Legend

A	**Interior lights with ambient light**
A100	Central electrical system
A302	Central computer 2
E496	Interior light / ambient light, left
E497	Interior light / ambient light, right
X395	Plug conn., outline light and interior light, left and right
X2542	Potential distributor, 21-pin, line 58000
X4720	Plug conn., interior light / ambient light

Interior lights with ambient light sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3295

Intarder sheet 1 of 1
Date: 04.2008

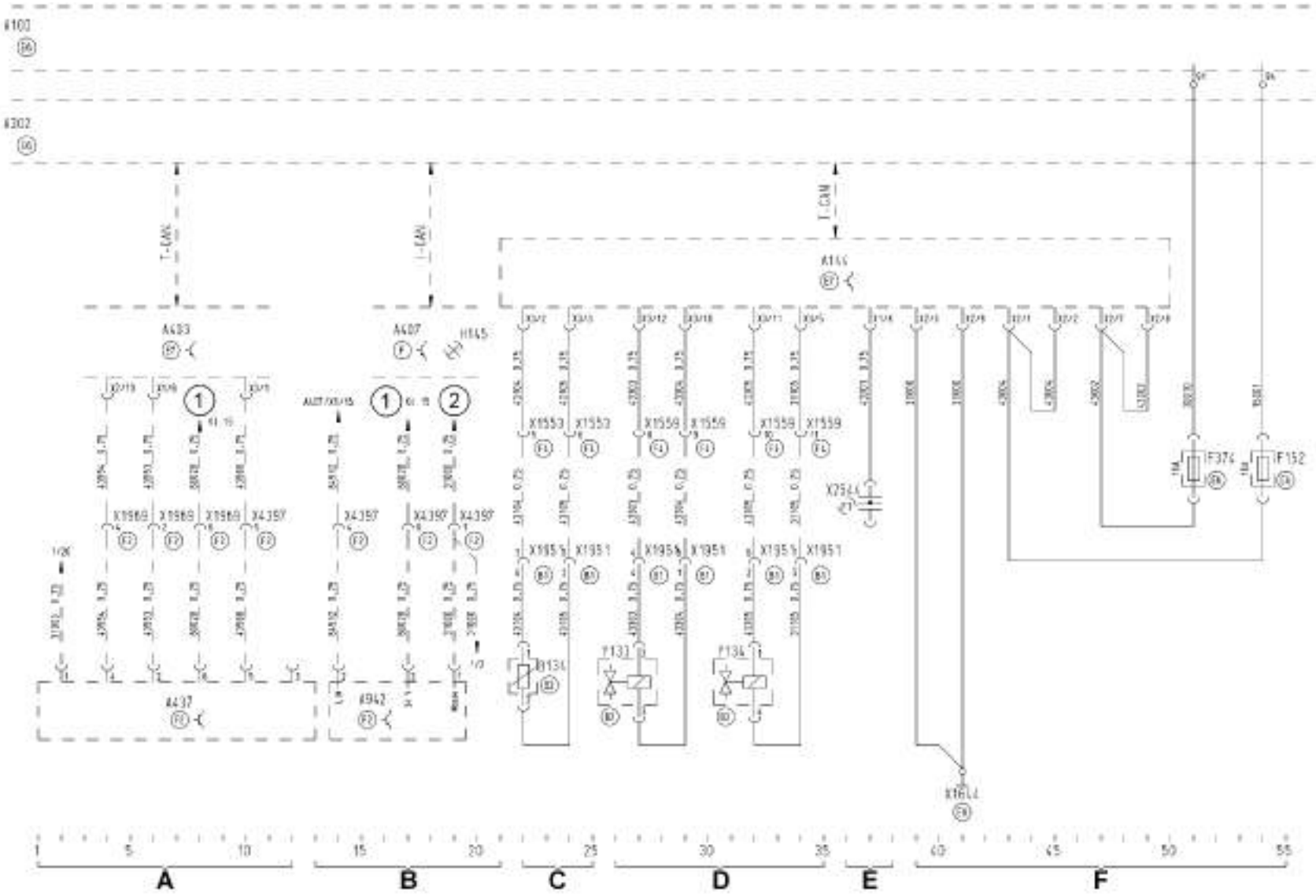
Legend

A	**Sustained-action brake lever without multifunctional steering wheel**
B	**Sustained-action brake lever if multifunctional steering wheel is fitted**
C	**Temperature sensor**
D	**Solenoid valve**
E	**Diagnosis**
F	**Voltage supply**

A100	Central electrical system
A144	Control unit, retarder
A302	Central computer 2
A403	Vehicle management computer
A407	Instrumentation
A437	Sustained-action brake lever
A942	Steering column stalk, retarder/gearbox
B134	Temperature sensor, retarder (cooling water)
F152	Fuse, retarder (terminal 15)
F374	Fuse, retarder (terminal 30)
H145	Check lamp, retarder
X1553	Plug conn., engine/EDC/gearbox III
X1559	Plug conn., engine/EDC/gearbox IV
X1644	Earthing point, cab, next to central electrical system
X1951	Plug conn., engine/gearbox (motor power box)
X1969	Plug conn., engine brake switch
X2544	Potential distributor, 21-pin, K-line
X4397	Plug conn., multifunctional steering wheel
Y133	Proportional valve, retarder
Y134	Solenoid valve, accumulator

1	Vehicle management computer
2	Ground

Intarder sheet 1 of 1



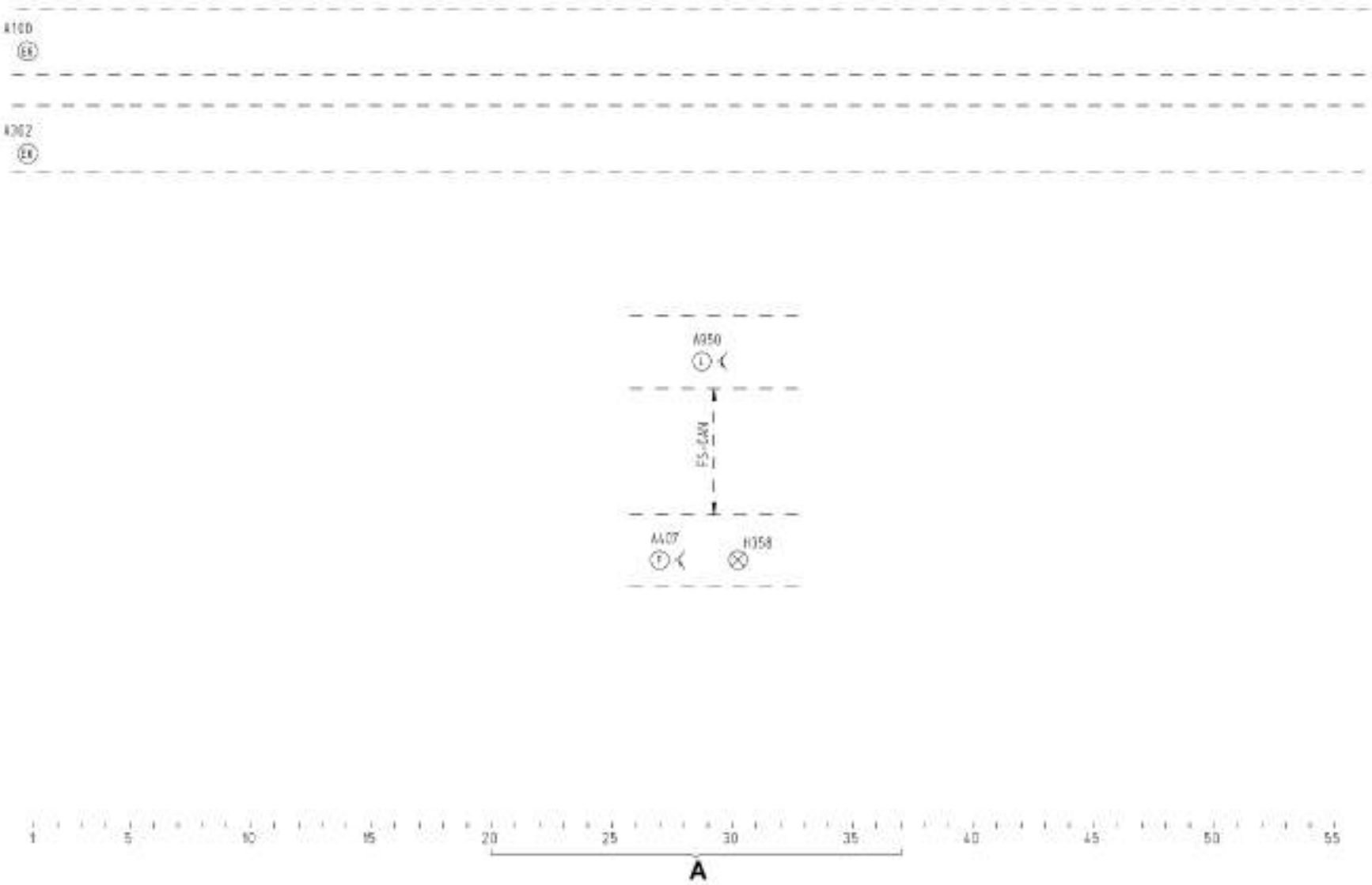
WIRING DIAGRAM NO. 81.99192.3043

Tachograph check lamp sheet 1 of 1
Date: 03.2005

Legend

	A Digital tachograph check lamp
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A950	Digital tachograph
H358	Check lamp, digital tachograph

Tachograph check lamp sheet 1 of 1



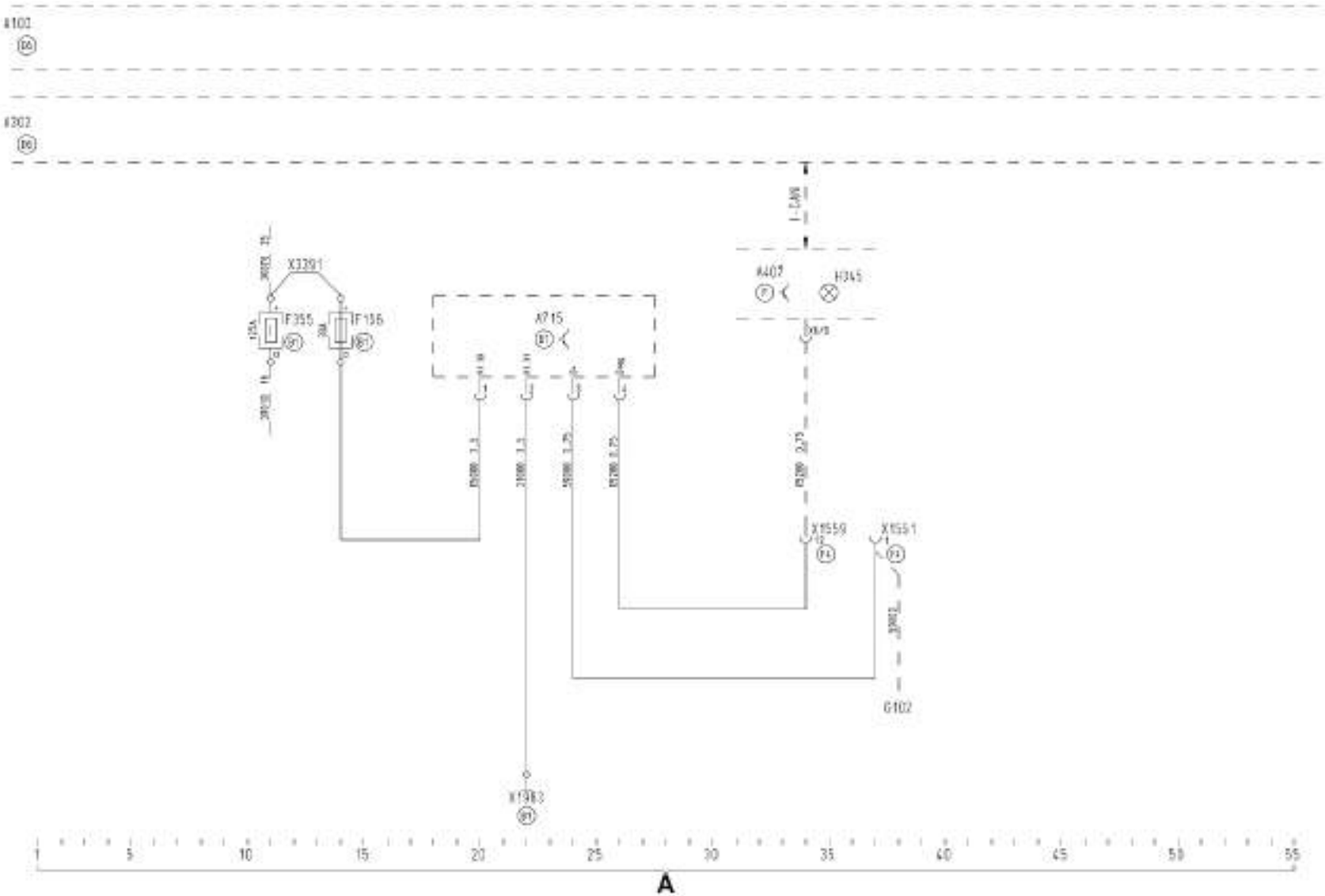
WIRING DIAGRAM NO. 81.99192.3304

Fuel filter heater sheet 1 of 1
Date: 11.2005

Legend

A	Fuel filter heater
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A715	Fuel filter heater - PTC
F156	Fuse, fuel filter heater
F355	Main fuse 30-2
H345	Check lamp, fuel filter heater
X1551	Plug conn., engine/EDC/gearbox II
X1559	Plug conn., engine/EDC/gearbox IV
X1983	Threaded pin M6 (motor power box)
X3391	Jumper, line 30076 (motor power box)

Fuel filter heater sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3305

Fuel filter heater, Separ sheet 1 of 1
Date: 11.2005

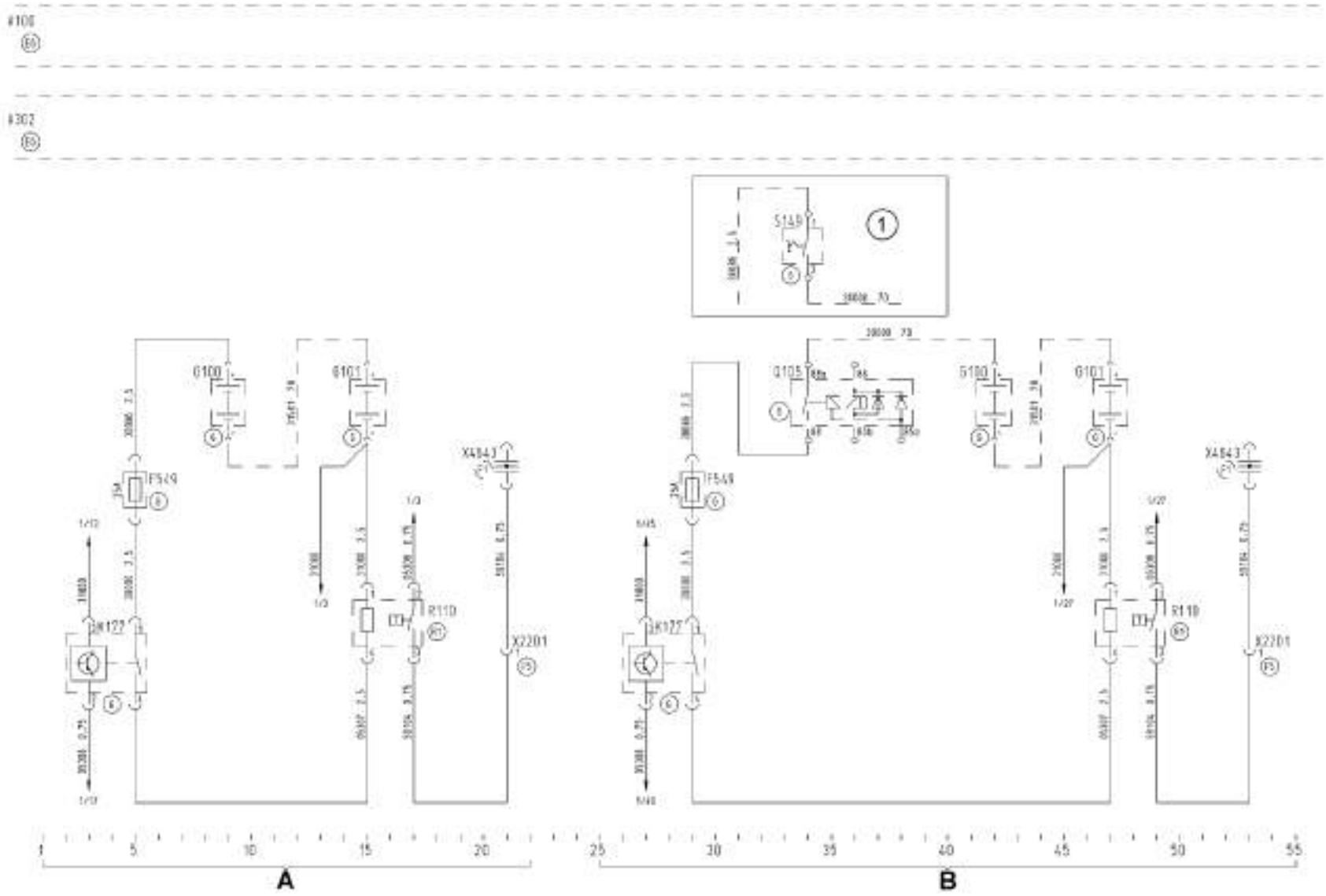
Legend

A Fuel filter heater, Separ
B Separ fuel filter heater in case of electrical and mechanical battery master switch

A100	Central electrical system
A302	Central computer 2
F549	Fuse, line 30000
G100	Battery 1
G101	Battery 2
K177	Relay, fuel filter heater
Q105	Isolator switch, battery +
R110	Fuel filter heater 1
S149	Isolator switch, battery +
X2201	Plug conn., fuel filter heater, Separ
X4643	Potential distributor, line 59104

1 In case of mechanical battery master switch

Fuel filter heater, Separ sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3300

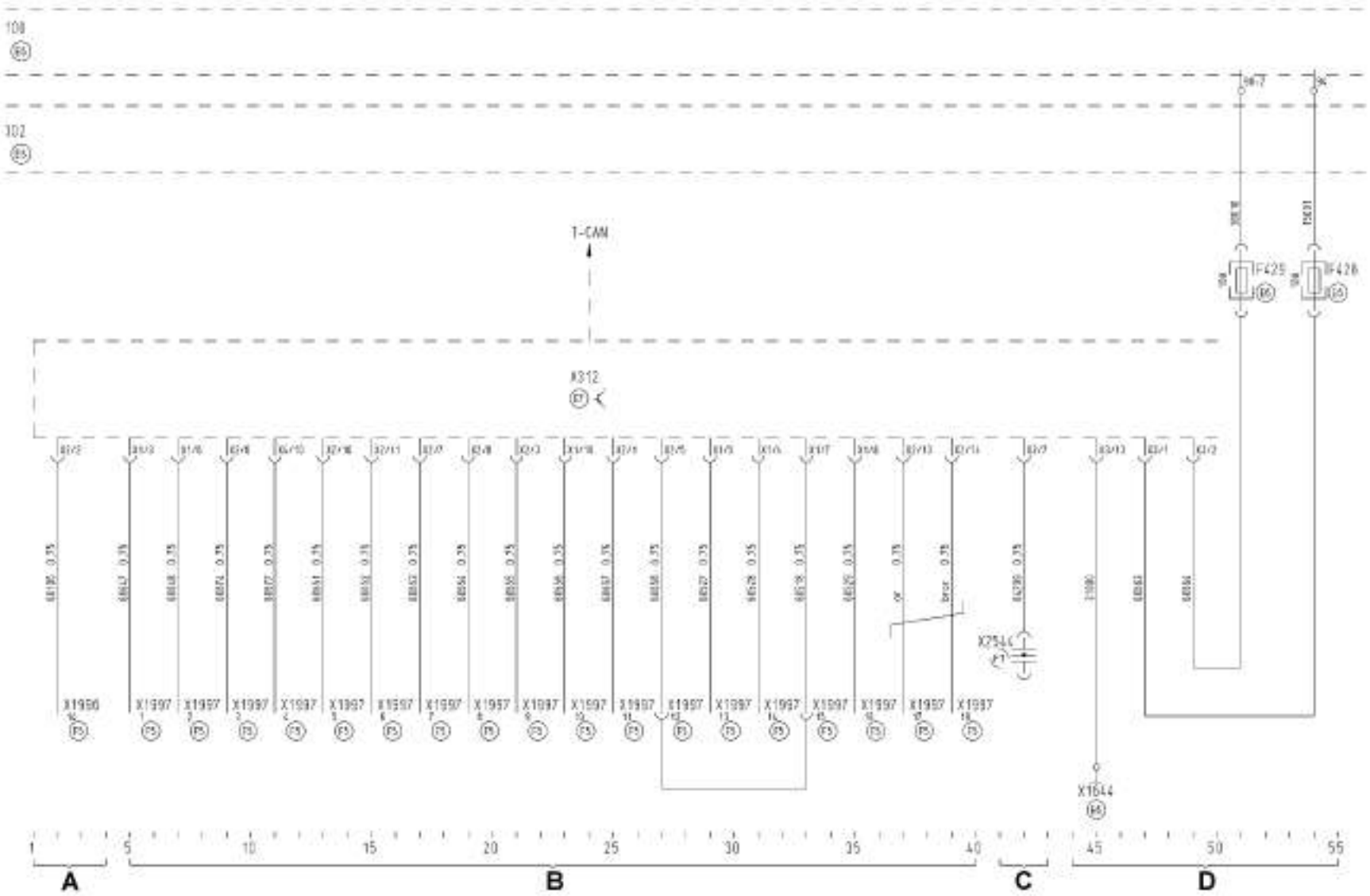
Customer-specific control module (KSM) sheet 1 of 2
Date: 02.2008

Legend

A	**ZDR interface (FFR)**
B	**ZDR interface (KSM)**
C	**Diagnosis**
D	**Voltage supply**

A100	Central electrical system
A302	Central computer 2
A312	Customer-specific control module
F428	Fuse, KSM (terminal 15)
F429	Fuse, KSM (terminal 30)
X1644	Earthing point, cab, next to central electrical system
X1996	Plug conn., ZDR interface (vehicle management computer)
X1997	Plug conn., ZDR interface (KSM)
X2544	Potential distributor, 21-pin, K-line

Customer-specific control module (KSM) sheet 1 of 2



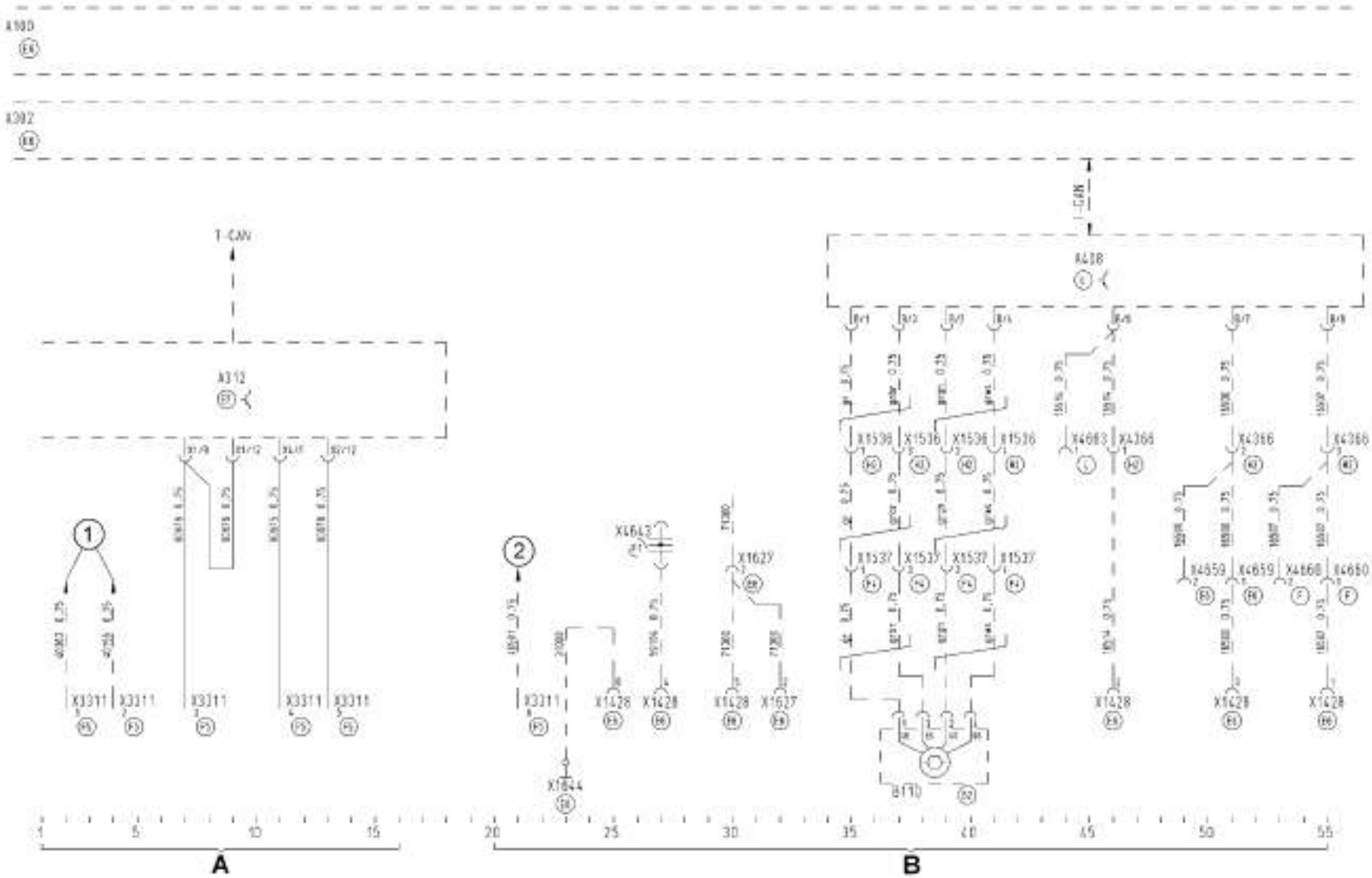
WIRING DIAGRAM NO. 81.99192.3300

Customer-specific control module (KSM) sheet 2 of 2
Date: 02.2008

Legend

A	**ZDR interface (KSM)**
B	**Scope, preparation, body manufacturer, travel/road speed signal**
A100	Central electrical system
A302	Central computer 2
A312	Customer-specified control module
A408	Tachograph
B110	Pulse generator, tachograph
X1428	Plug conn., travel pulse, body manufacturer
X1536	Plug conn., tachograph
X1537	Plug conn., speedometer sensor
X1627	Plug conn., reversing light
X1644	Earthing point, cab, next to central electrical system
X3311	Plug conn., ZDR interface 2 (KSM)
X4366	Plug conn., Pulse generator, tachograph
X4643	Potential distributor, line 59104
X4659	Plug conn., V-signal, line 16500
X4660	Plug conn., 4 pulses/meter, line 16507
X4663	Plug conn., adaptation, V-signal, line 16514
1	Power take-off, engine-dependent, installed on front of gearbox (NMV)
2	Gearbox, automatic

Customer-specific control module (KSM) sheet 2 of 2



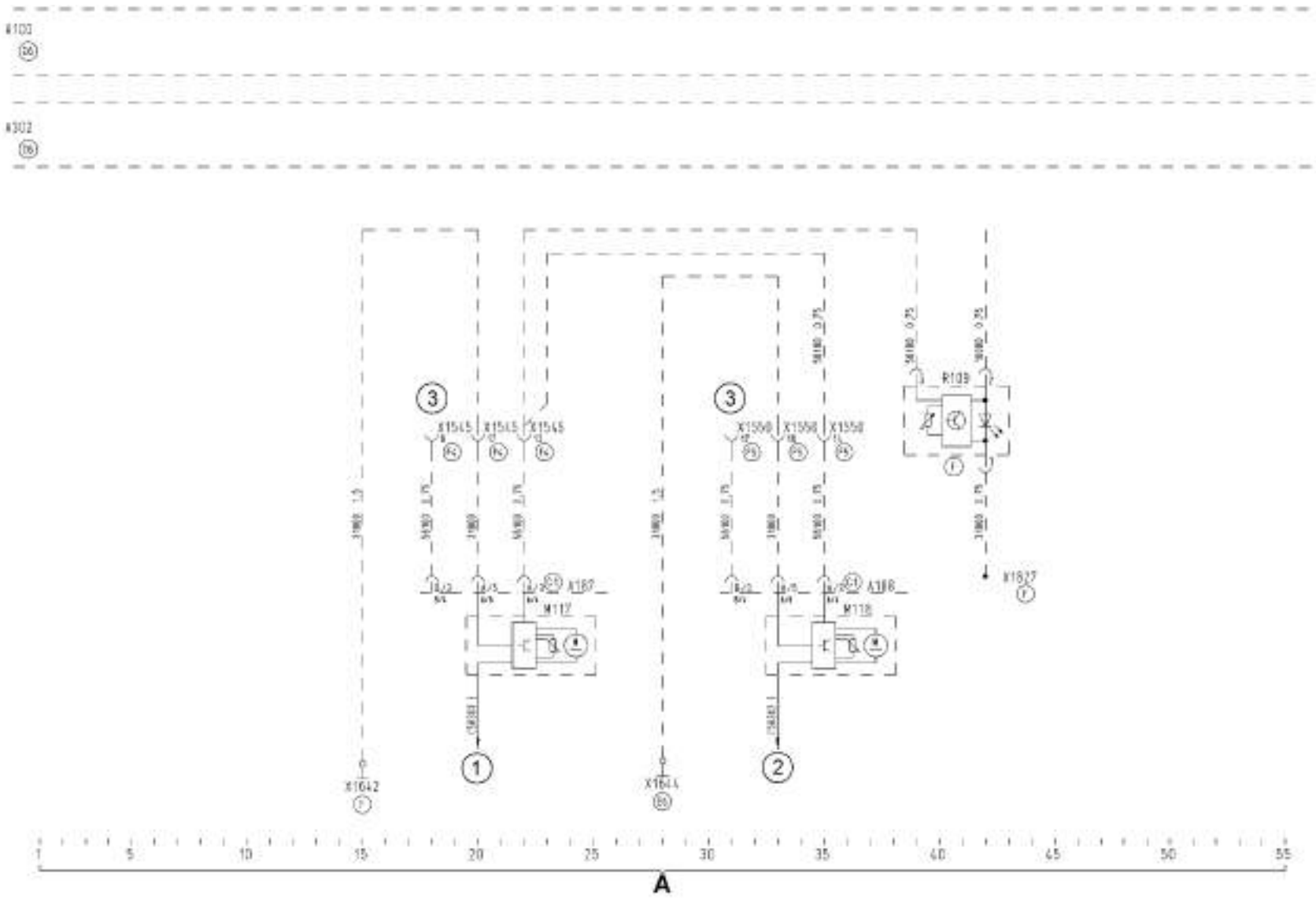
WIRING DIAGRAM NO. 81.99192.3314

Headlight beam regulator sheet 1 of 1
Date: 05.2006

Legend

A	**Headlight beam regulator**
A100	Central electrical system
A187	Headlight, left
A188	Headlight, right
A302	Central computer 2
M117	Servomotor, headlight beam regulator, left
M118	Servomotor, headlight beam regulator, right
R109	Potentiometer, headlight beam regulator
X1545	Plug conn., front end, left
X1550	Plug conn., front end, right
X1642	Earthing point, cab behind instrument panel
X1644	Earthing point, cab, next to central electrical system
X1827	Crimped connector, line 31000
1	Parking light, left
2	Parking light, right
3	for headlights

Headlight beam regulator sheet 1 of 1



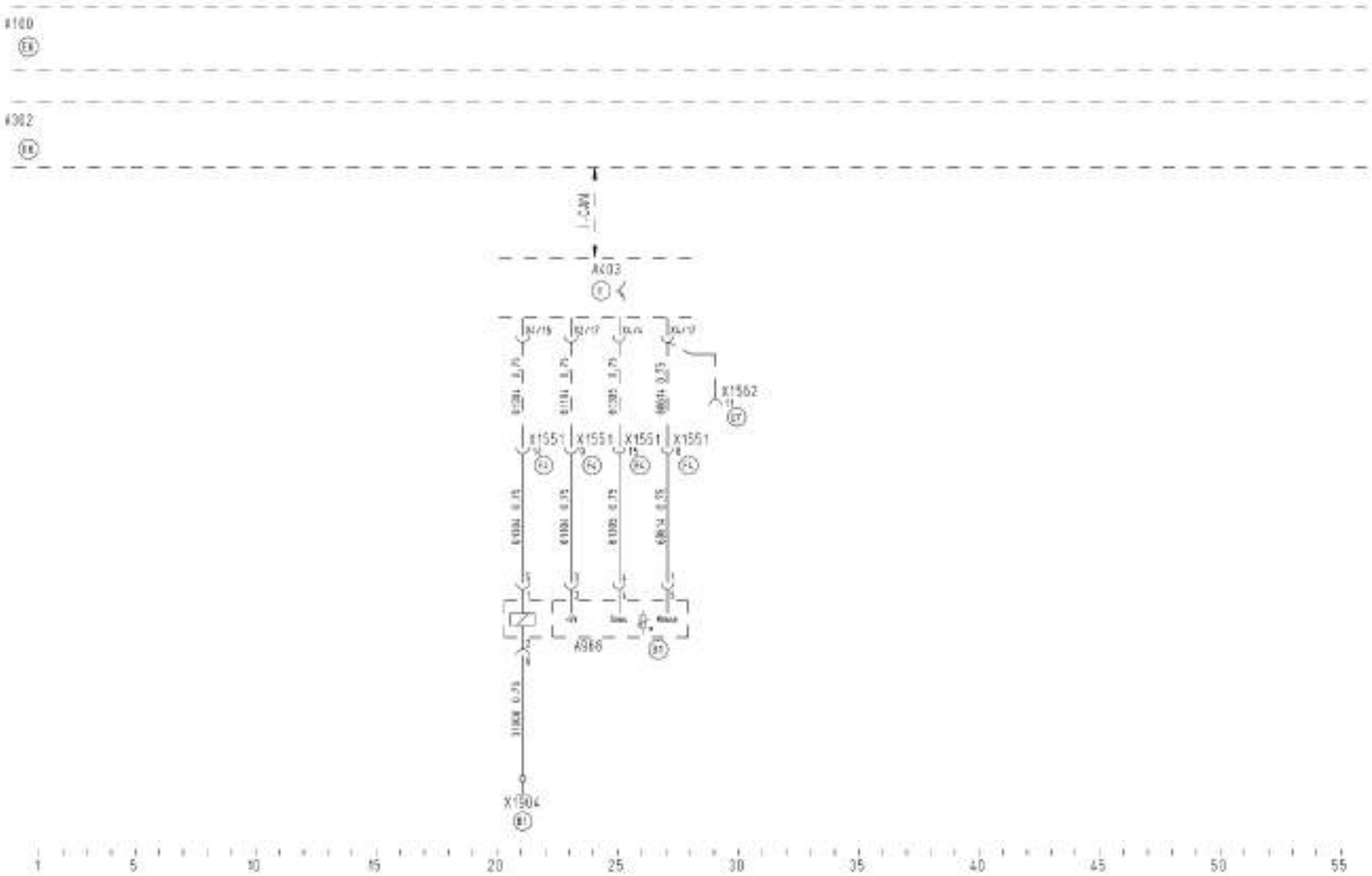
WIRING DIAGRAM NO. 81.99192.3120

Fan clutch with speed feedback sheet 1 of 1
Date: 07.2005

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A968	Fan clutch with speed sensor
X1551	Plug conn., engine/EDC/gearbox II
X1562	Plug conn., gearbox
X1904	Threaded pin M6 (motor power box)

Fan clutch with speed feedback sheet 1 of 1



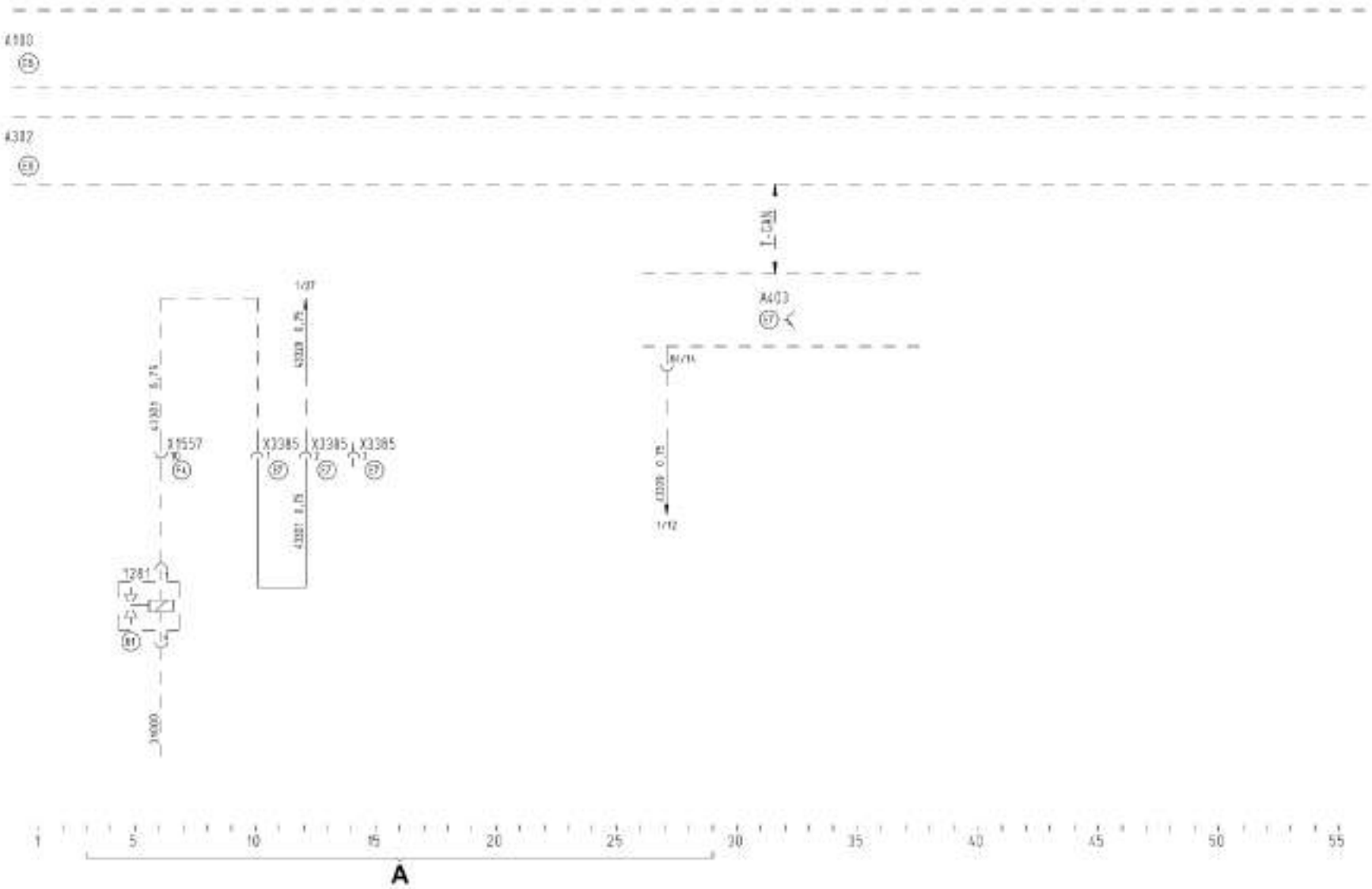
WIRING DIAGRAM NO. 81.99192.1656

Engine brake sheet 1 of 1
Date: 07.2002

Legend

A	Engine brake
A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
X1557	Plug conn., frame, left
X3385	Plug conn., engine brake/EVB
Y281	Solenoid valve, engine brake/EVB

Engine brake sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3316

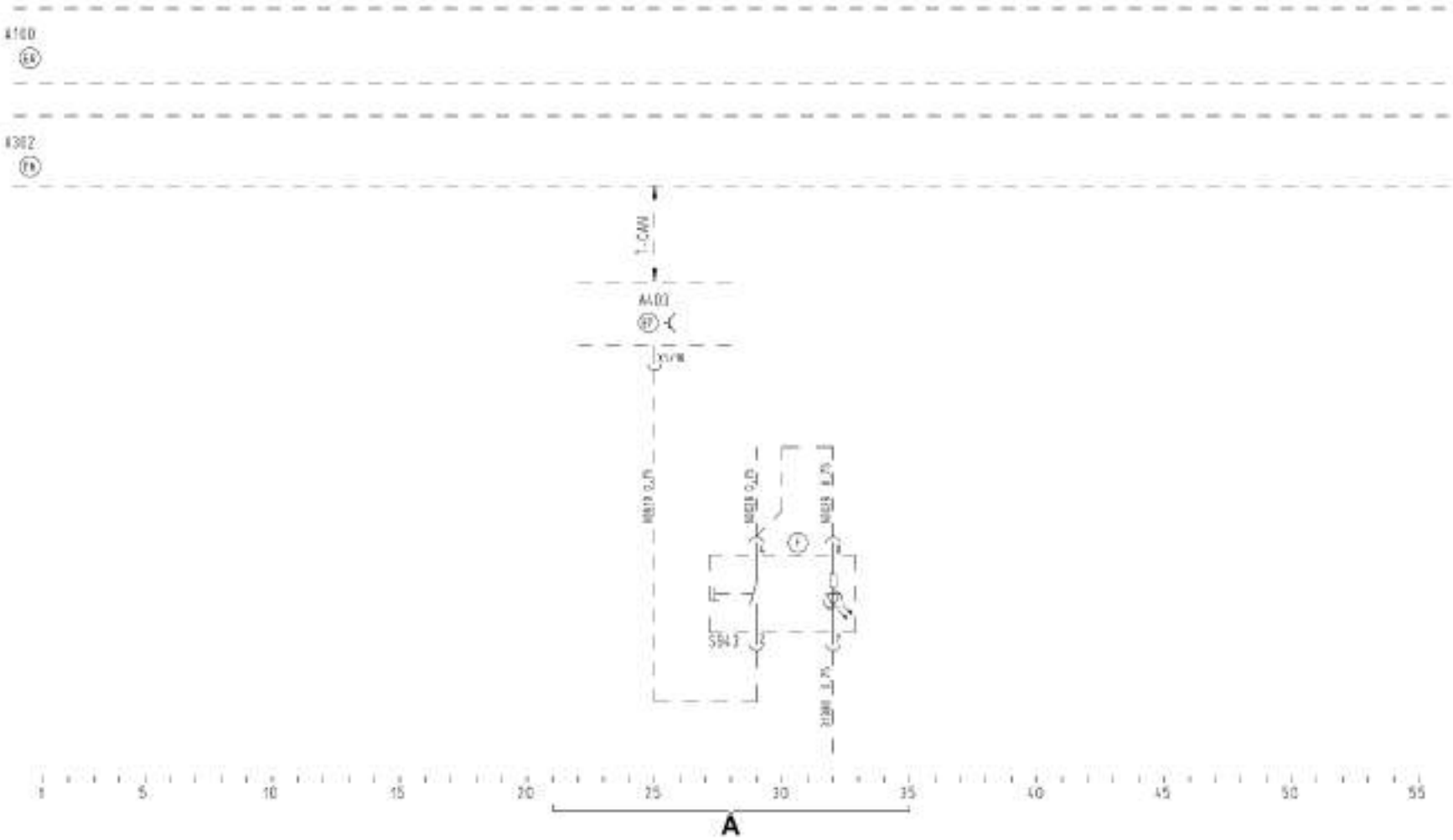
Engine brake, automatic, off sheet 1 of 1
Date: 09.2006

Legend

A	**Engine brake, automatic**
A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
S943	Button, engine brake

Note
Engine brake button S943 is plugged at switch socket S1133!

Engine brake, automatic, off sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3501

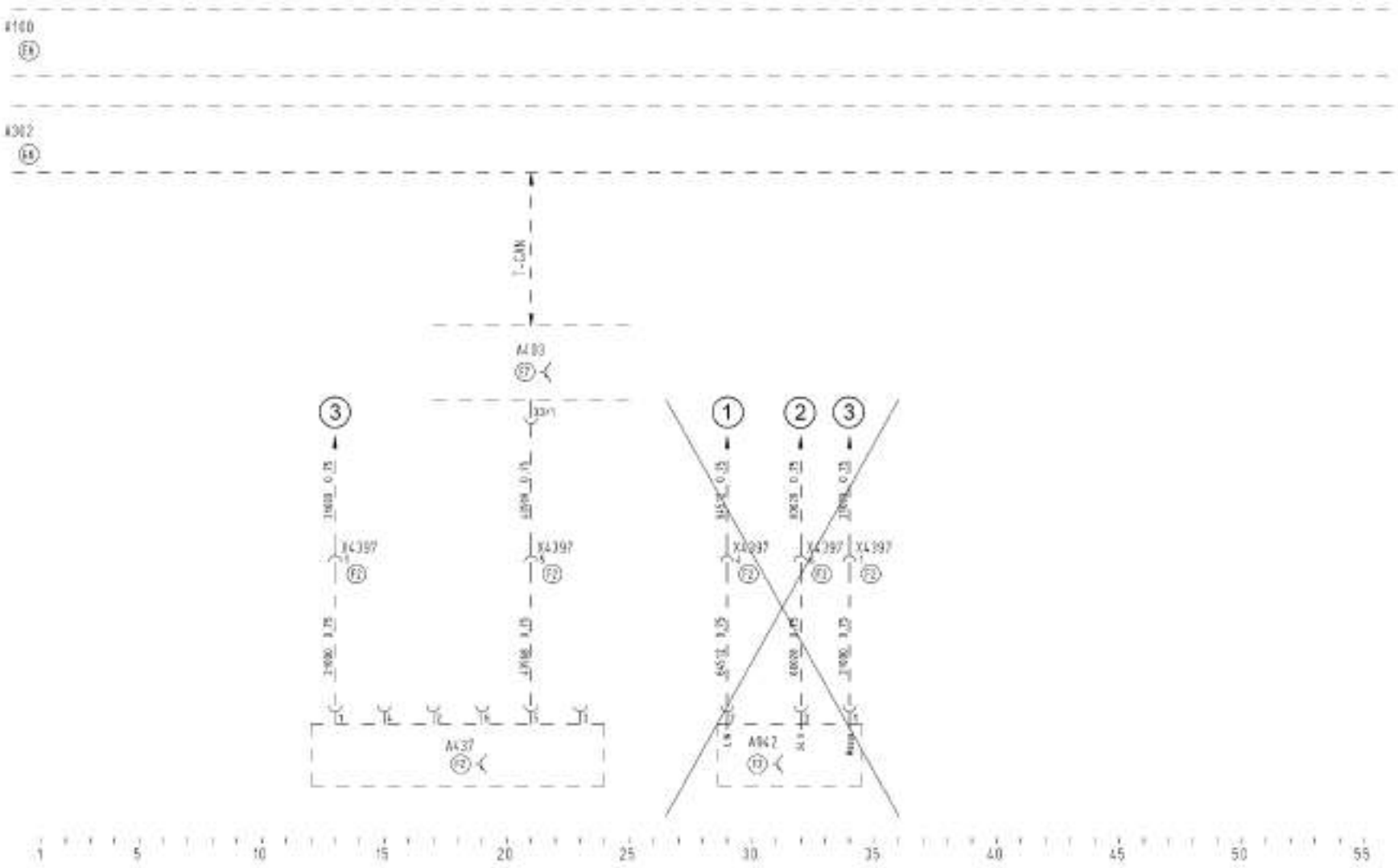
Multifunctional steering wheel sheet 1 of 1
Date: 09.2006

Legend

A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A437	Sustained-action brake lever
A942	Steering column stalk, retarder/gearbox
X4397	Plug conn., multifunctional steering wheel
1	A407 / X1/15
2	Vehicle management computer (terminal 15)
3	Ground

Note
In the case of the digital engine brake switch, A942 (steering column stalk, retarder/gearbox) is not part of standard specification!

Multifunctional steering wheel sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3366

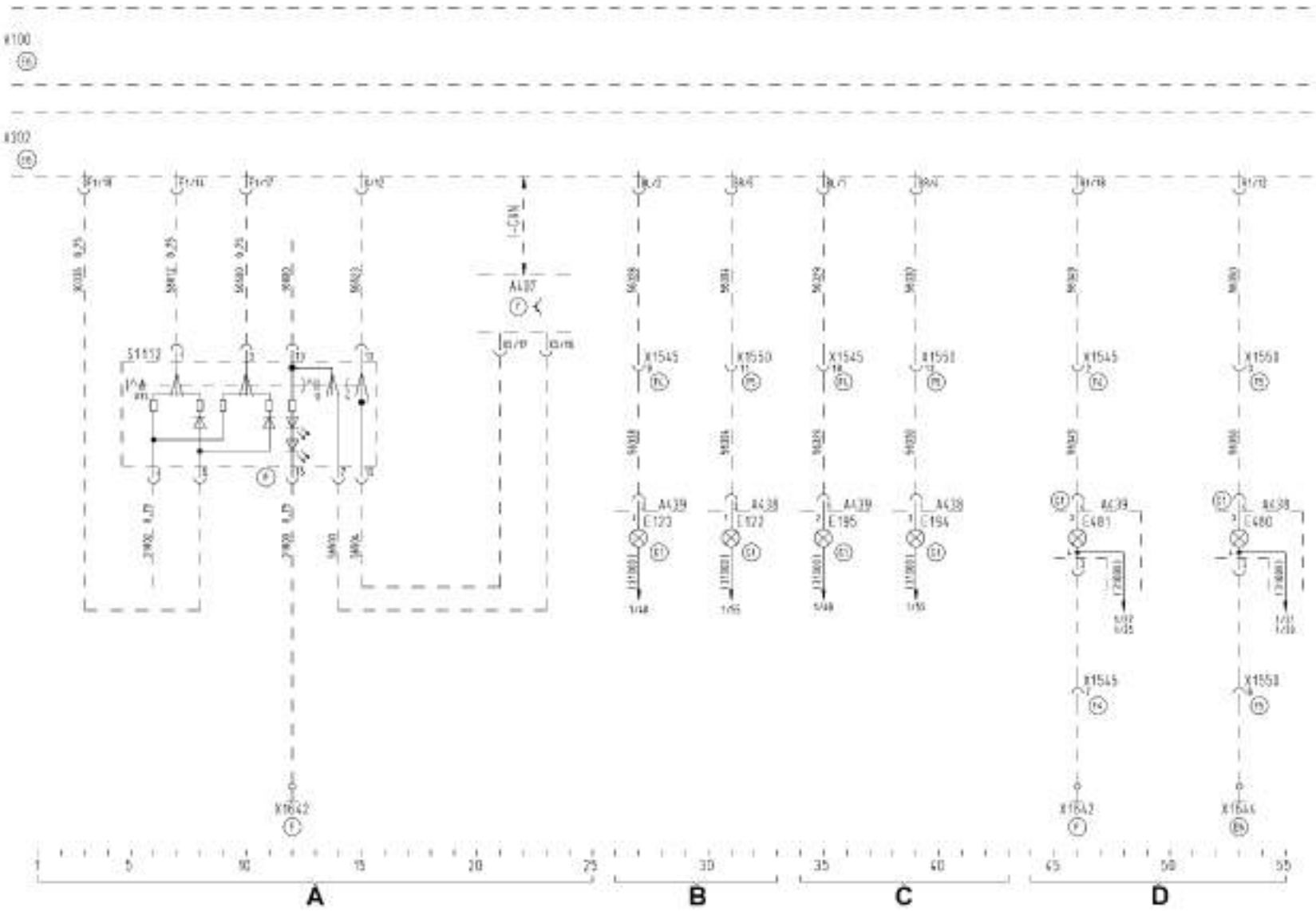
Fog lamps/additional high beam headlights and cornering light sheet 1 of 1
Date: 10.2007

Legend

A	**Rotary light switch**
B	**Fog lamps**
C	**Additional high beam headlights**
D	**Cornering light**

A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A438	Light surround, right
A439	Light surround, left
E122	Fog lamp, right
E123	Fog lamp, left
E194	High beam headlight, right
E195	High beam headlight, left
E480	Cornering light, right
E481	Cornering light, left
S1112	Rotary light switch with rear fog lamp
X1545	Plug conn., front end, left
X1550	Plug conn., front end, right
X1642	Earthing point, cab behind instrument panel
X1644	Earthing point, cab, next to central electrical system

Fog lamps/additional high beam headlights and cornering light sheet 1 of 1



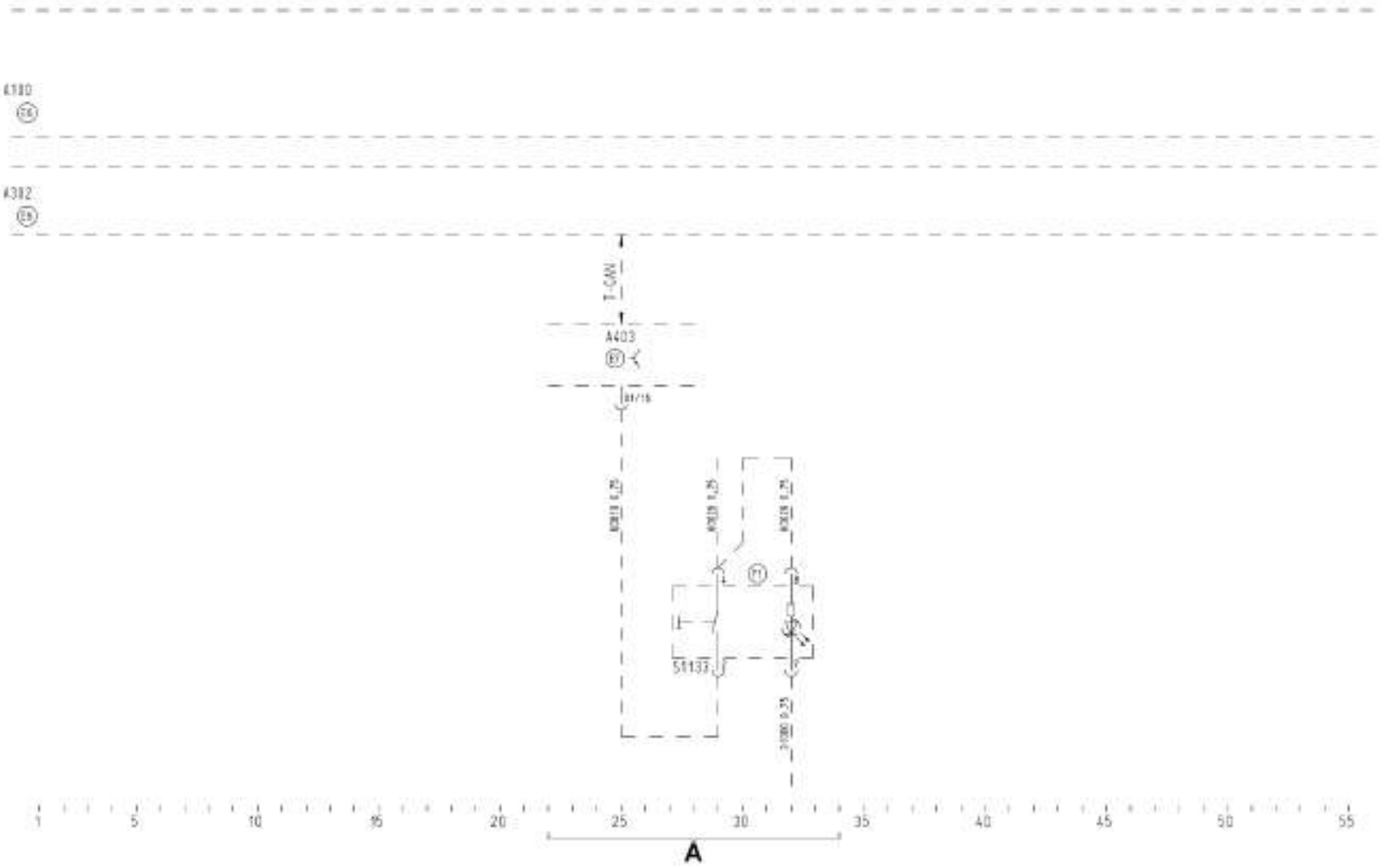
WIRING DIAGRAM NO. 81.99192.3337

Pritarder/Intarder, automatic, off sheet 1 of 1
Date: 11.2005

Legend

A	**Pritarder/Intarder, automatic**
A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
S1133	Button, sustained-action brake

Pritarder/Intarder, automatic, off sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3134

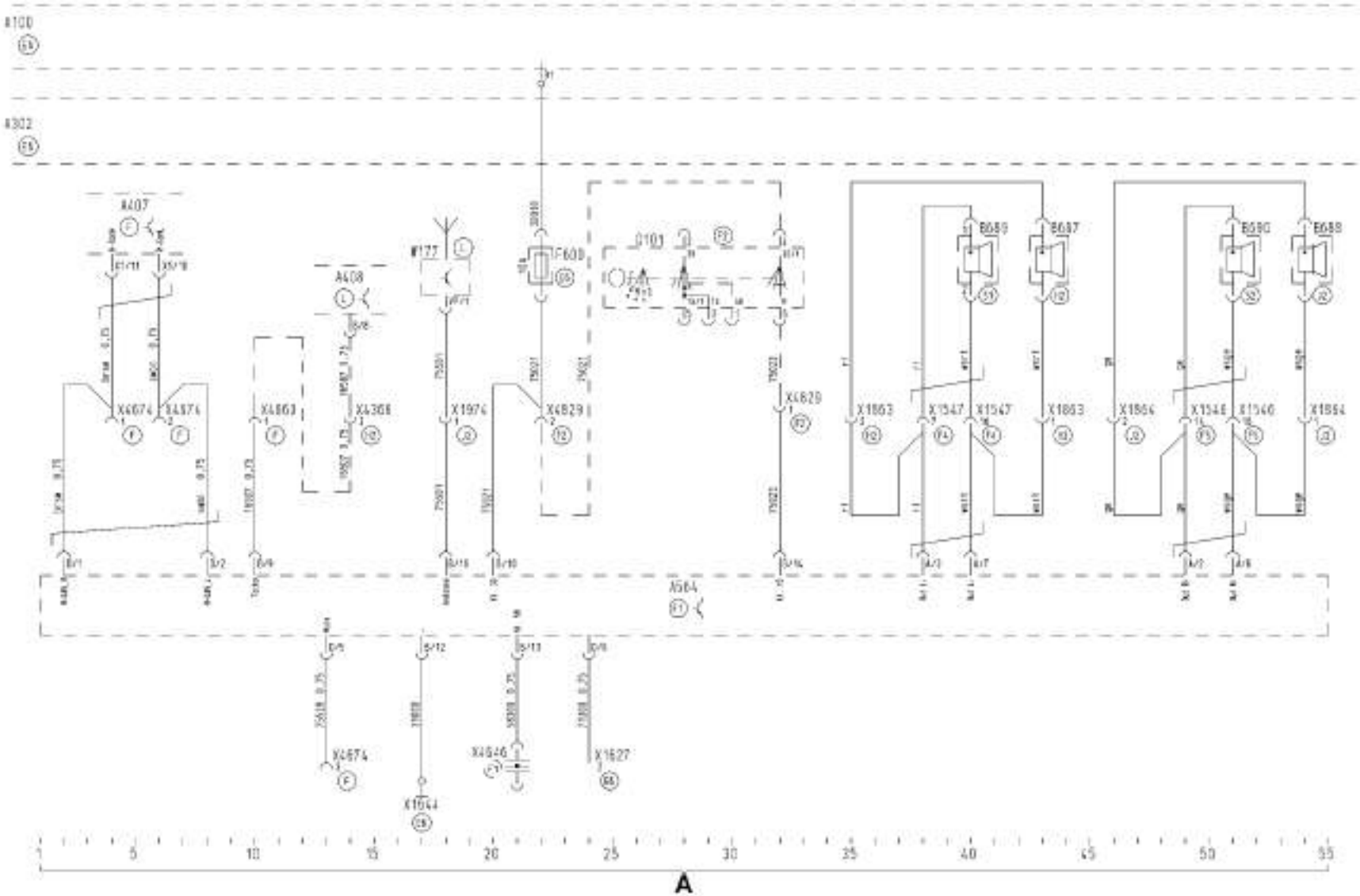
Basicline radio sheet 1 of 1
Date: 01.2007

Legend

A	Basicline radio
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A408	Tachograph
A564	Radio with CD
B687	Loudspeaker, tweeter, left
B688	Loudspeaker, tweeter, right
B689	Loudspeaker, wide-band, left
B690	Loudspeaker, wide-band, right
F600	Fuse, radio (terminal 15)
Q101	Steering lock
W177	Combination aerial, radio, D/E network, GPS
X1546	Plug conn., door, right
X1547	Plug conn., door, left
X1627	Plug conn., reversing light
X1644	Earthing point, cab, next to central electrical system
X1863	Plug conn., loudspeaker
X1864	Plug conn., loudspeaker
X1974	Plug conn. for active aerial
X4366	Plug conn., pulse distributor - tachograph
X4646	Potentiometer, line 58300
X4660	Plug conn., 4 pulses/meter, line 16507
X4674	Plug conn., H-CAN/Mute signal
X4829	Plug conn., ignition lock (terminal R)

Note
If the vehicle is equipped with a telephone/mobile, wide-band loudspeaker B690 is replaced by B691!

Basicline radio sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3490

Topline radio sheet 1 of 2
Date: 01.2007

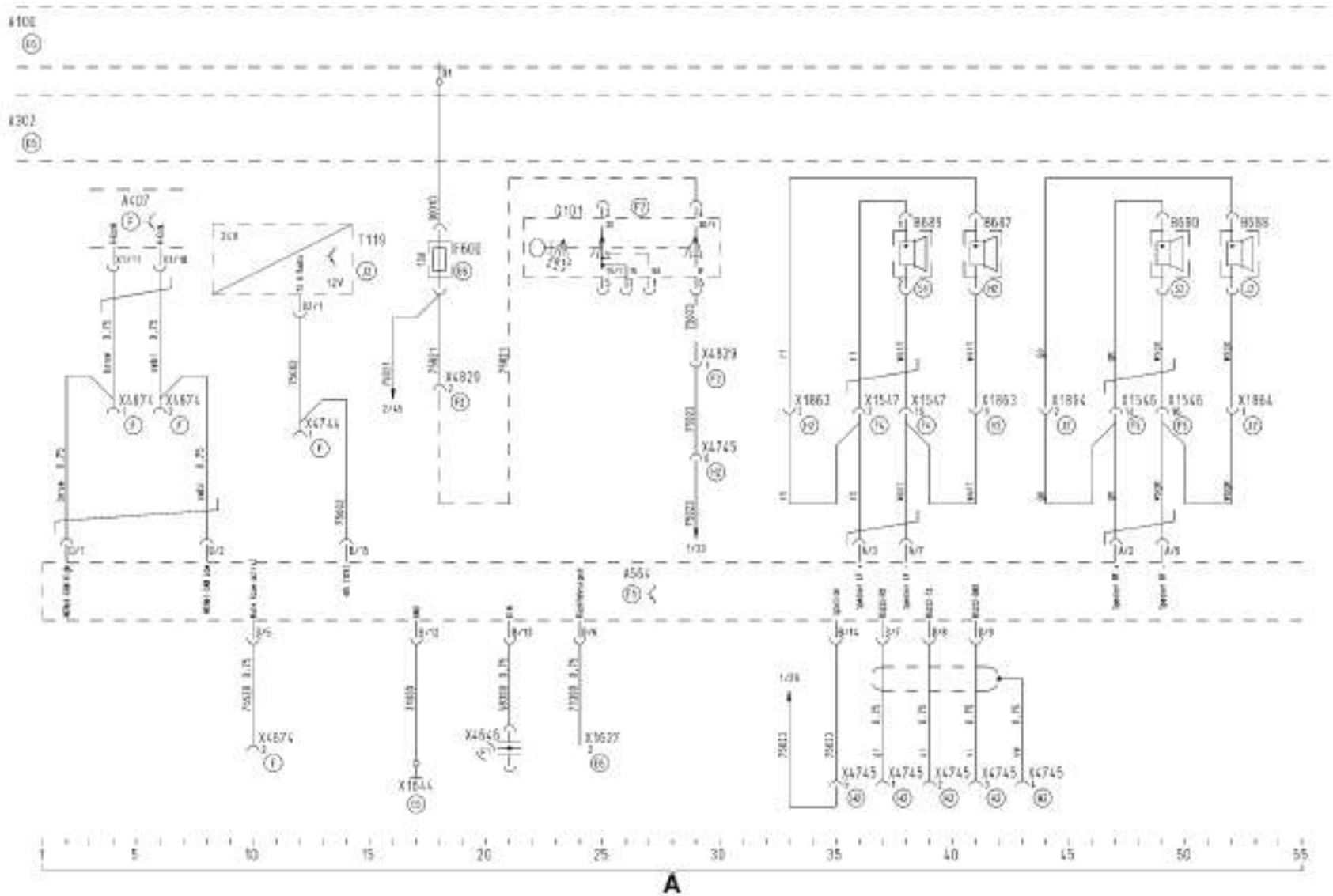
Legend

A	Topline radio
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
A564	Radio with CD
B687	Loudspeaker, tweeter, left
B688	Loudspeaker, tweeter, right
B689	Loudspeaker, wide-band, left
B690	Loudspeaker, wide-band, right
F600	Fuse, radio (terminal 30)
Q101	Steering lock
T119	Modular voltage transformer
X1546	Plug conn., door, right
X1547	Plug conn., door, left
X1627	Plug conn., reversing light
X1644	Earthing point, cab, next to central electrical system
X1863	Plug conn., loudspeaker
X1864	Plug conn., loudspeaker
X4646	Potential distributor, line 58300
X4674	Plug conn., H-CAN/Mute signal
X4744	Adaptation, 12V, for CD changer
X4745	Plug conn., TBM - navigation device
X4829	Plug conn., ignition lock (terminal R)

Note
If the vehicle is equipped with a telephone/mobile, wide-band loudspeaker B690 is replaced by B691!
Sheathed cable from A564 to X4745 must be identified with red insulating tape at device A564!

Note
Sheathed cable from A564 to X4745 must be identified with red insulating tape at device A564!

Topline radio sheet 1 of 2



WIRING DIAGRAM NO. 81.99192.3490

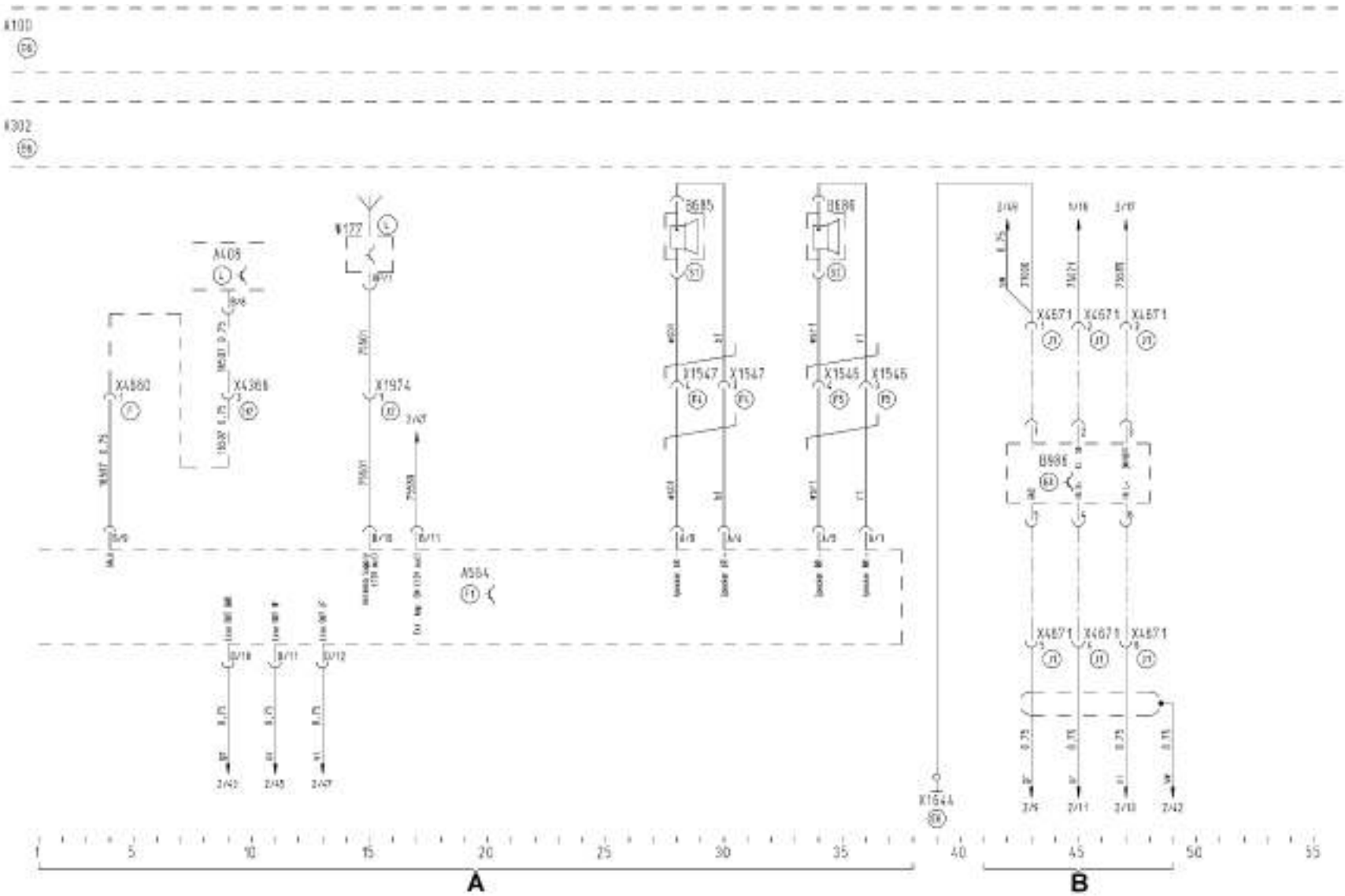
Topline radio sheet 2 of 2
Date: 04.2006

Legend

A	**Topline radio**
B	**Subwoofer**

A100	Central electrical system
A302	Central computer 2
A408	Tachograph
A564	Radio with CD
B685	Loudspeaker, bass, left
B686	Loudspeaker, bass, right
B986	Subwoofer 1
W177	Combination aerial, radio, D/E network, GPS
X1546	Plug conn., door, right
X1547	Plug conn., door, left
X1644	Earthing point, cab, next to central electrical system
X1974	Plug conn. for active aerial
X4366	Plug conn., pulse distributor - tachograph
X4660	Plug conn., 4 pulses/meter, line 16507
X4671	Plug conn., subwoofer

Topline radio sheet 2 of 2



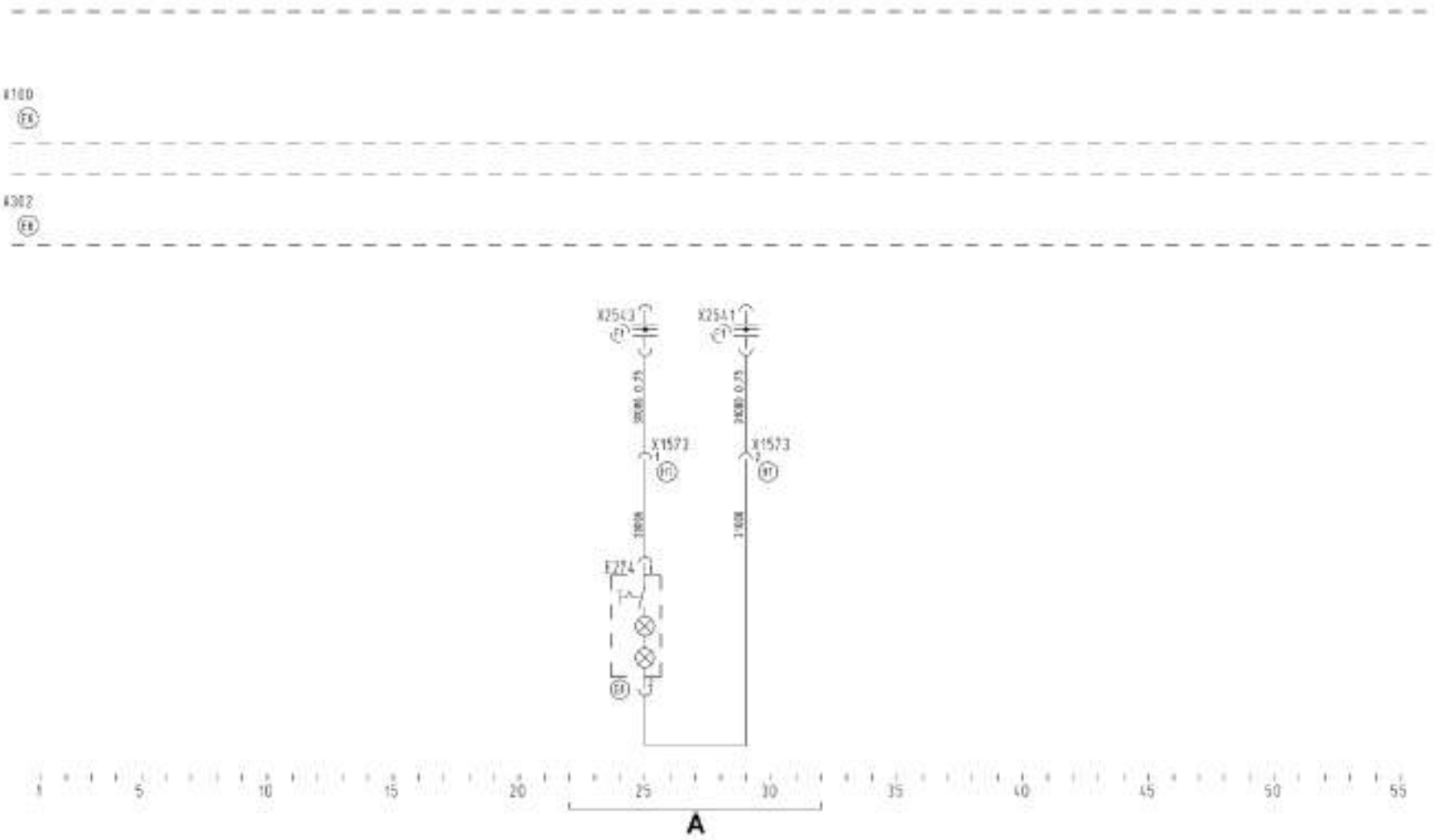
WIRING DIAGRAM NO. 81.99192.3349

Bunk light, bottom sheet 1 of 1
Date: 04.2006

Legend

A	**Bunk light, bottom**
A100	Central electrical system
A302	Central computer 2
E274	Bunk light, bottom
X1573	Plug conn., bunk light, bottom
X2541	Potential distributor, 21-pin, line 31000
X2543	Potential distributor, 21-pin, line 30006

Bunk light, bottom sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.2592

Side marker lights sheet 1 of 1
Date: 01.2007

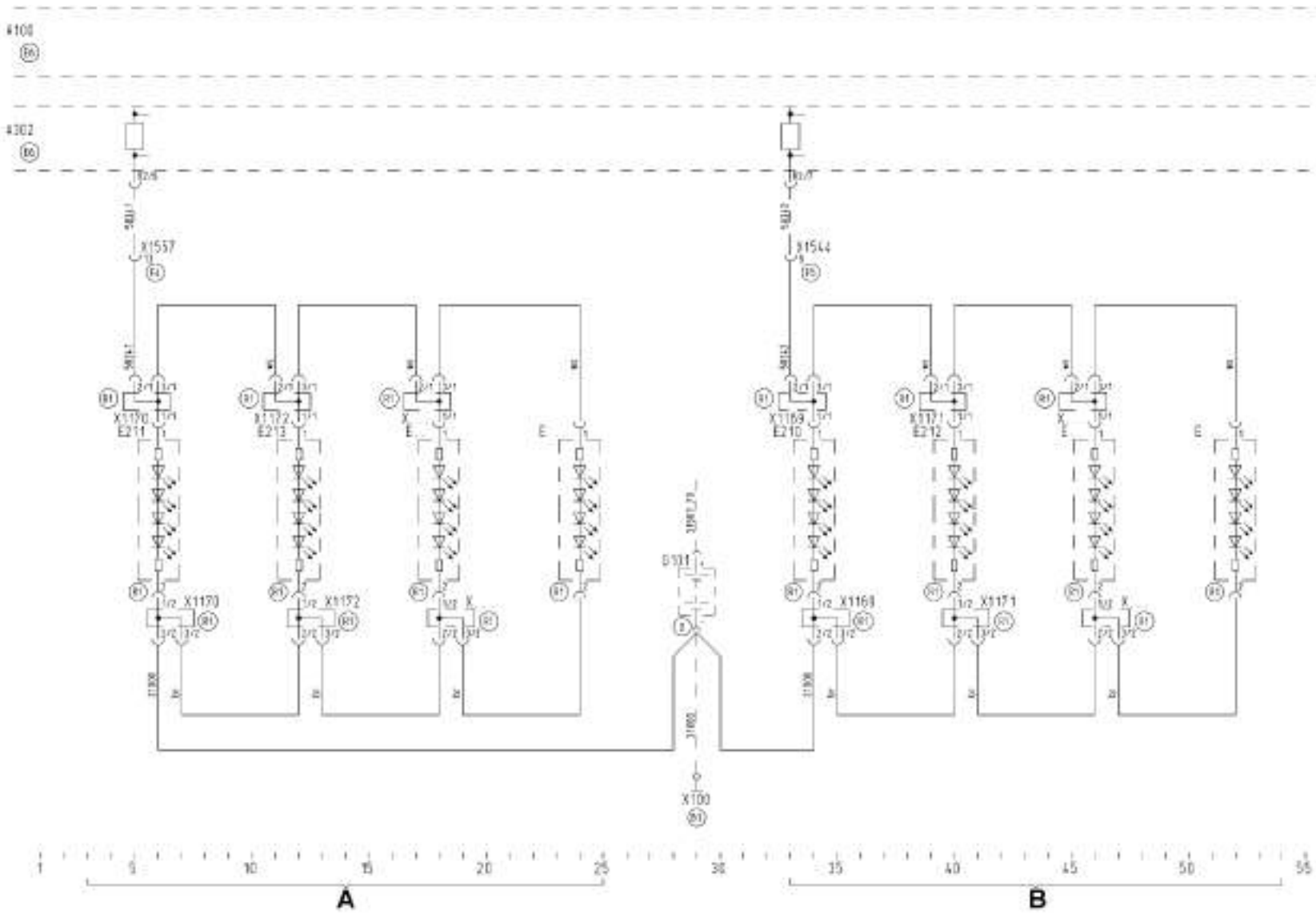
Legend

A	**Side marker lights, left**
B	**Side marker lights, right**

A100	Central electrical system
A302	Central computer 2
E210	1st side marker light, right
E211	1st side marker light, left
E212	2nd side marker light, right
E213	2nd side marker light, left
E..	Further side marker lights without designation
E...	Last side marker lights without designation
G101	Battery 2
X100	Earthing point, engine
X1169	3-way divider for 1st side marker light, right
X1170	3-way divider for 1st side marker light, left
X1171	3-way divider for 2nd side marker light, right
X1172	3-way divider for 2nd side marker light, left
X1544	Plug conn., frame III
X1557	Plug conn., frame, left
X..	Further connectors without designation

Note
In the case of the side marker lights, the corresponding numbering and the number depends on the individual models, wheelbase lengths and overhangs!

Side marker lights sheet 1 of 1



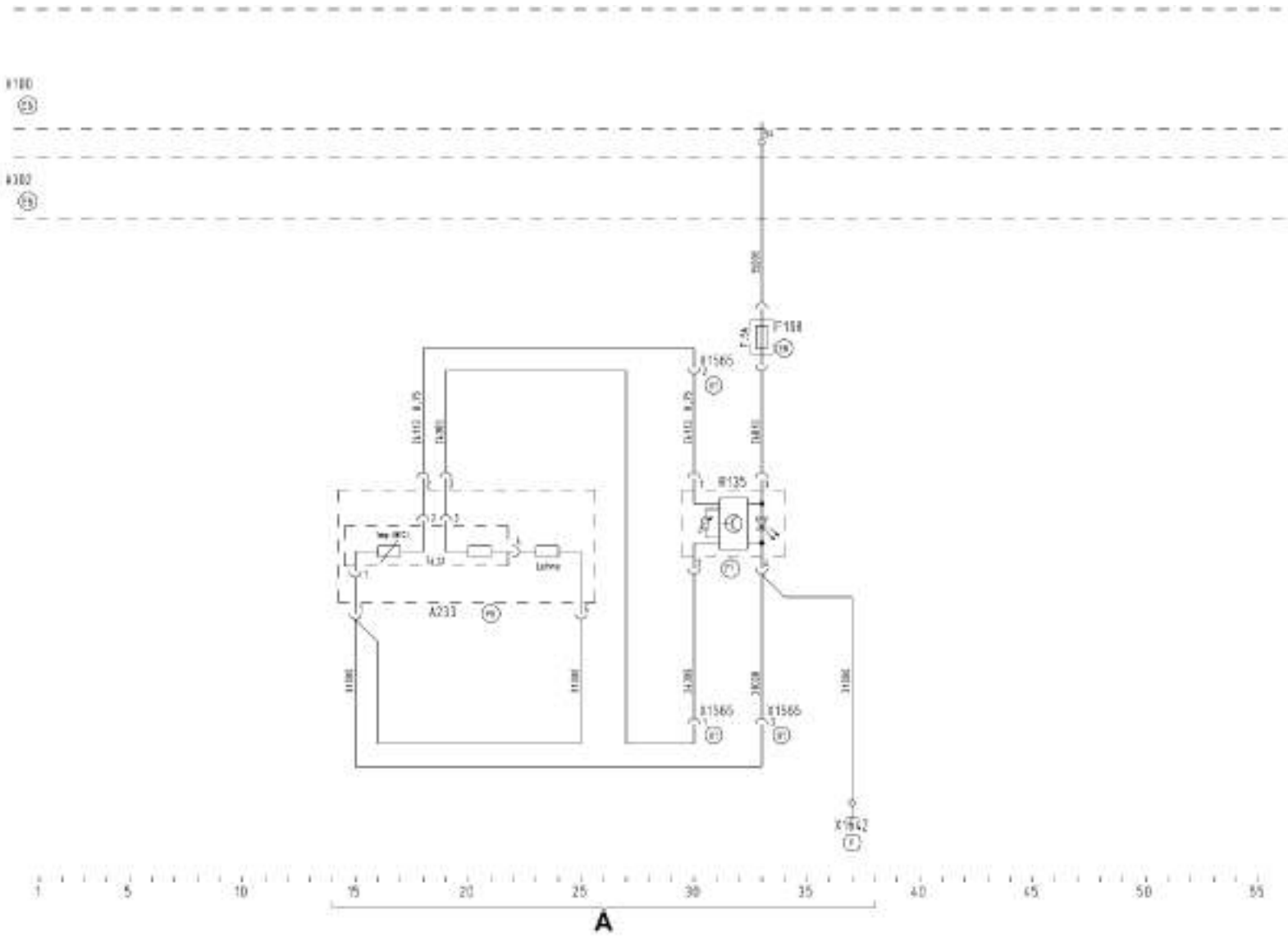
WIRING DIAGRAM NO. 81.99192.3298

Seat heating, driver sheet 1 of 1
Date: 12.2005

Legend

A	Seat heating, driver
A100	Central electrical system
A233	Seat, driver side
A302	Central computer 2
F198	Fuse, seat heating
R135	Potentiometer, seat heating, driver
X1565	Plug conn., Seat heating
X1642	Earthing point, cab behind instrument panel

Seat heating, driver sheet 1 of 1



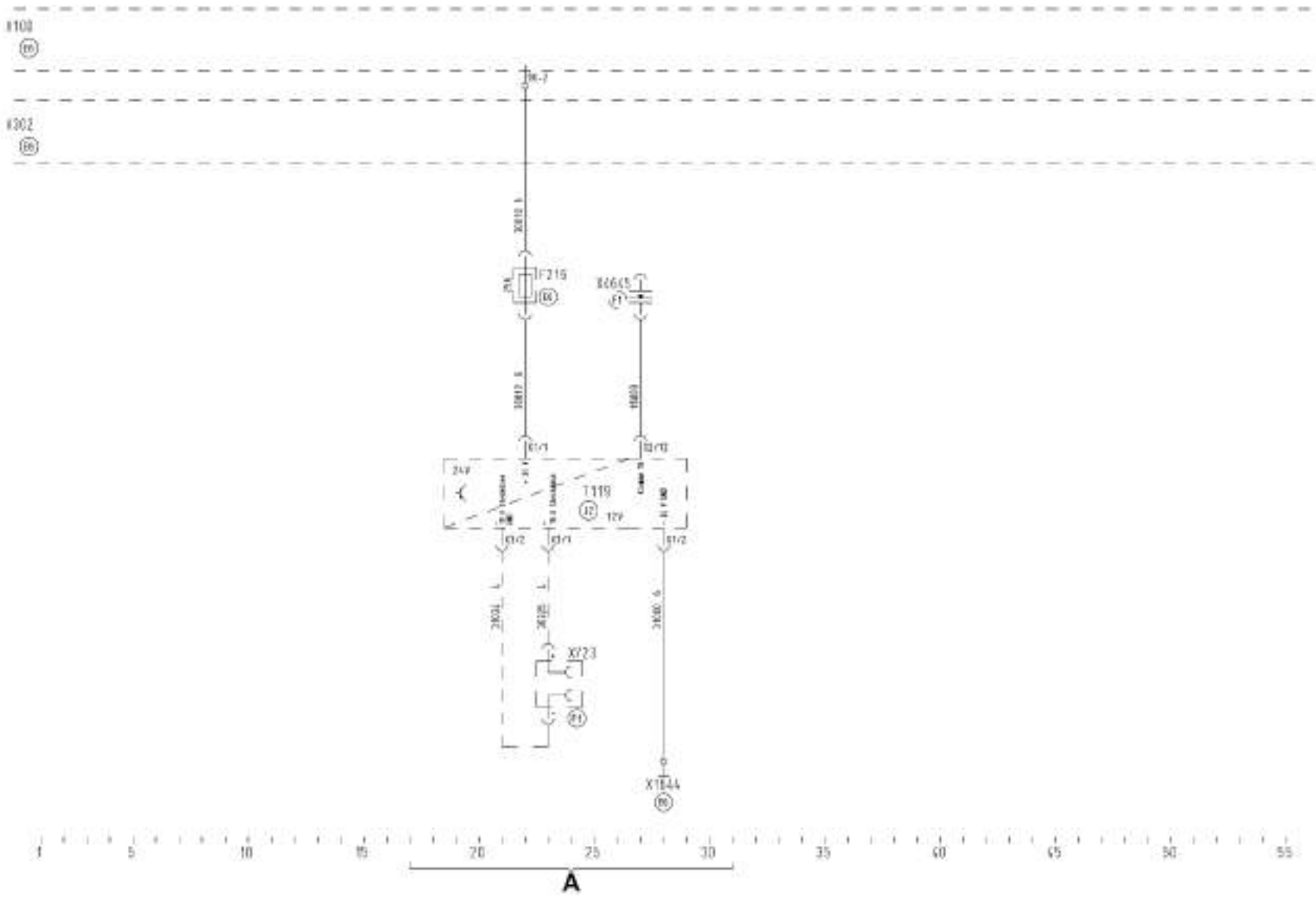
WIRING DIAGRAM NO. 81.99192.3313

Voltage transformer, 12V sheet 1 of 1
Date: 12.2005

Legend

A	Voltage transformer, 12V
A100	Central electrical system
A302	Central computer 2
F216	Fuse, voltage transformer, 12V
T119	Modular voltage transformer
X723	Socket, 12V
X1644	Earthing point, cab, next to central electrical system
X4645	Potential distributor, line 16000

Voltage transformer, 12V sheet 1 of 1



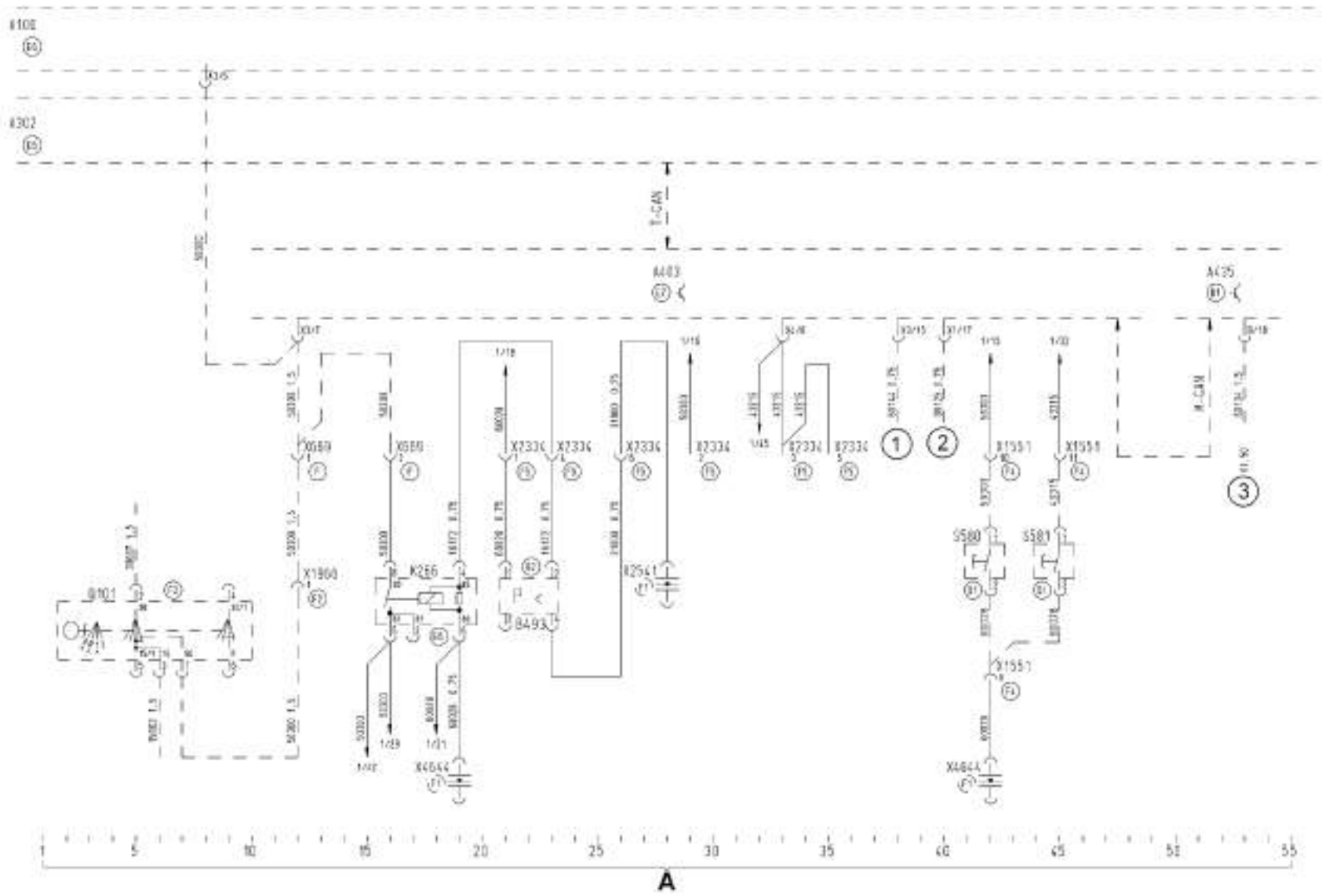
WIRING DIAGRAM NO. 81.99192.3317

START/STOP device on engine sheet 1 of 1
Date: 12.2005

Legend

A	**START/STOP device on engine**
A100	Central electrical system
A302	Central computer 2
A403	Vehicle management computer
A435	Control unit, EDC
B493	Pressure switch, parking brake switch, start/stop, external
K266	Relay, parking brake if start/stop fitted
Q101	Steering lock
S580	Button, engine start (MP box)
S581	Button, engine stop (MP box)
X669	Plug conn., Starter interlock
X1551	Plug conn., engine/EDC/gearbox II
X1966	Plug conn., ignition lock
X2334	Plug conn., start/stop device
X2541	Potential distributor, 21-pin, line 31000
X4644	Potential distributor, line 60028
1	Immobiliser
2	Gearbox neutral
3	Starter, terminal 50

START/STOP device on engine sheet 1 of 1



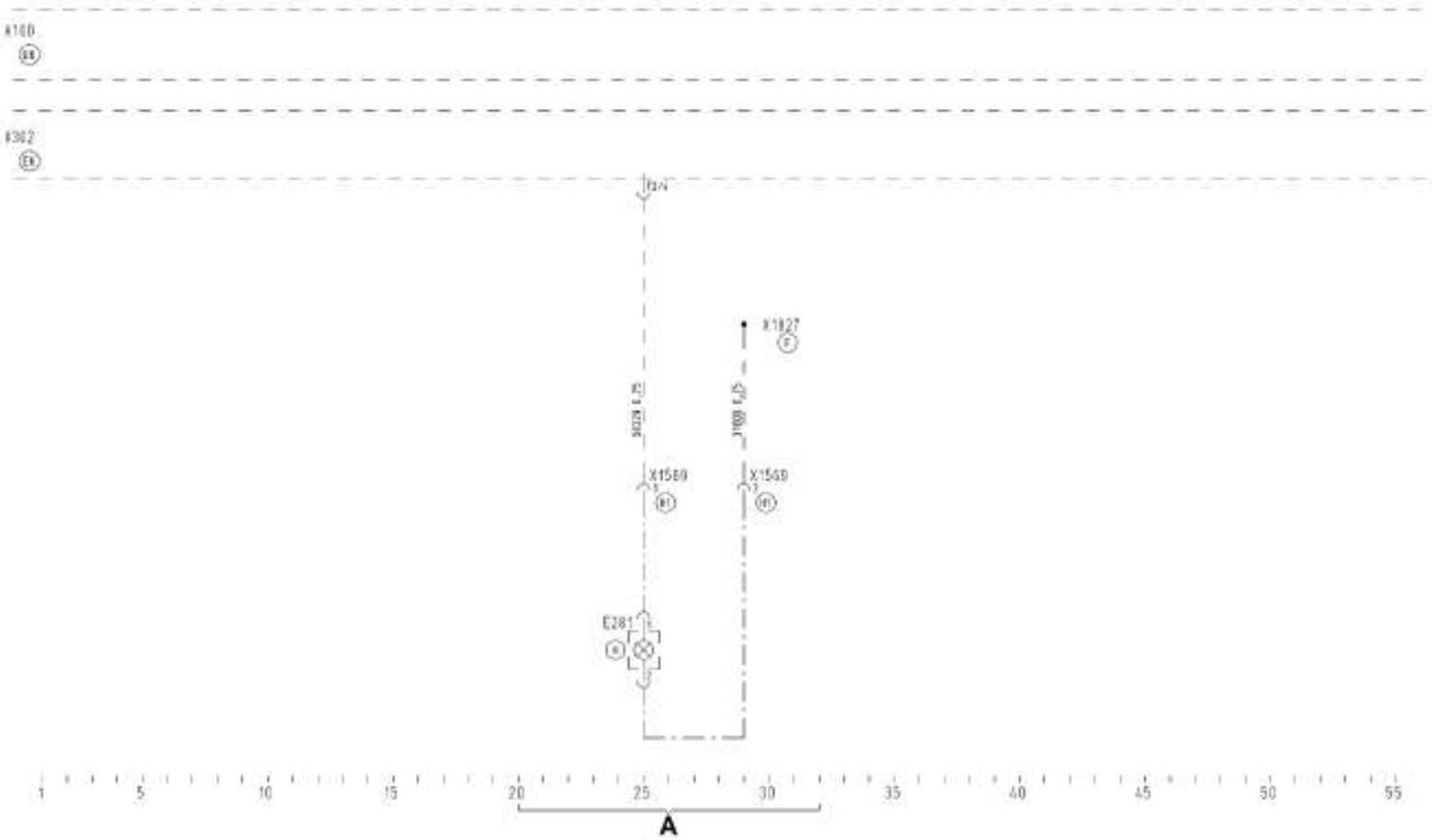
WIRING DIAGRAM NO. 81.99192.3395

Storage locker lighting, rear left sheet 1 of 1
Date: 01.2006

Legend

A	**Storage locker lighting, rear left**
A100	Central electrical system
A302	Central computer 2
E281	Storage locker light, rear
X1569	Plug conn., storage locker lighting
X1827	Crimped connector, line 31000

Storage locker lighting, rear left sheet 1 of 1



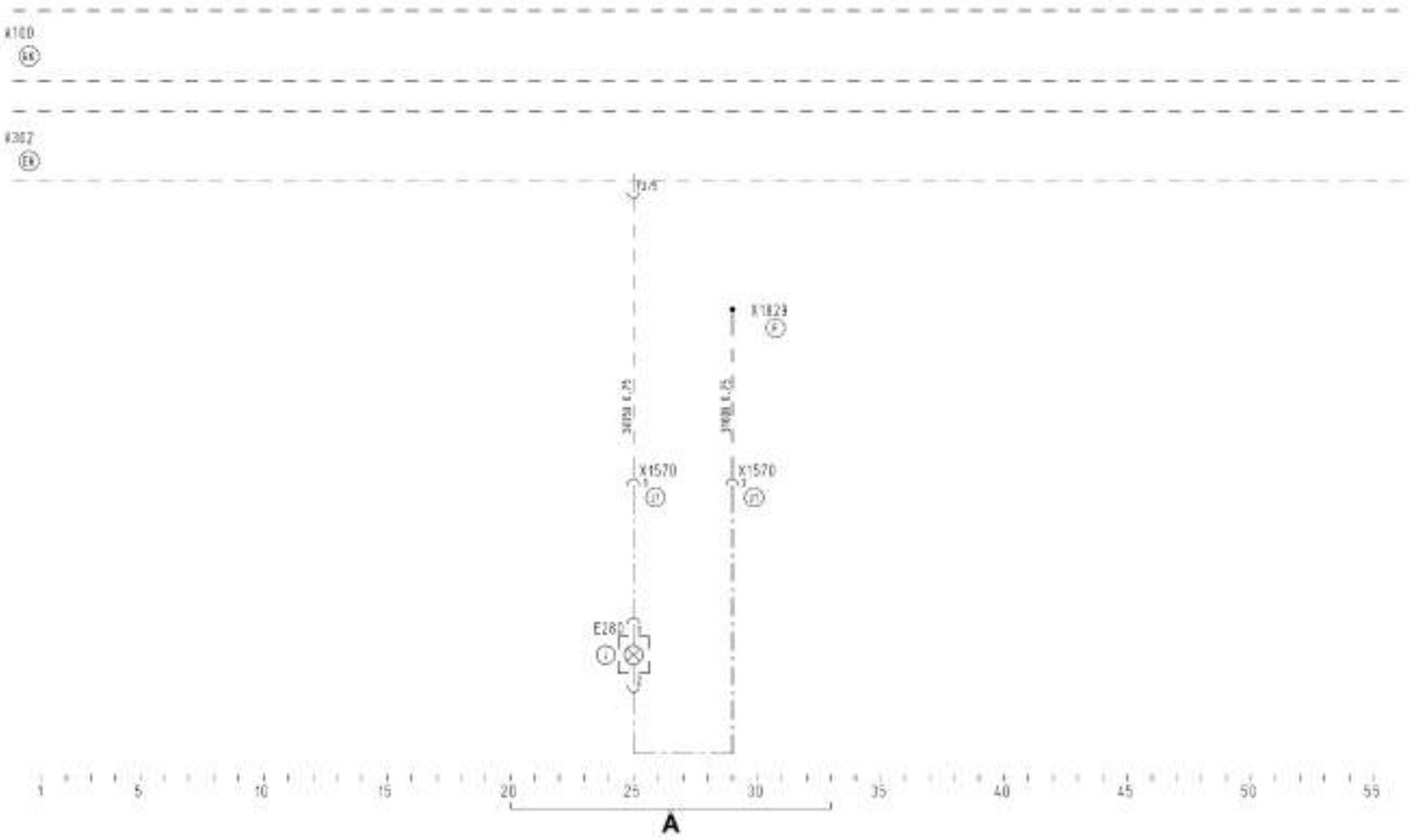
WIRING DIAGRAM NO. 81.99192.3396

Storage locker lighting, rear right sheet 1 of 1
Date: 01.2006

Legend

A	**Storage locker lighting, rear right**
A100	Central electrical system
A302	Central computer 2
E280	Storage locker light, rear
X1570	Plug conn., storage locker lighting
X1829	Crimped connector, line 31000

Storage locker lighting, rear right sheet 1 of 1



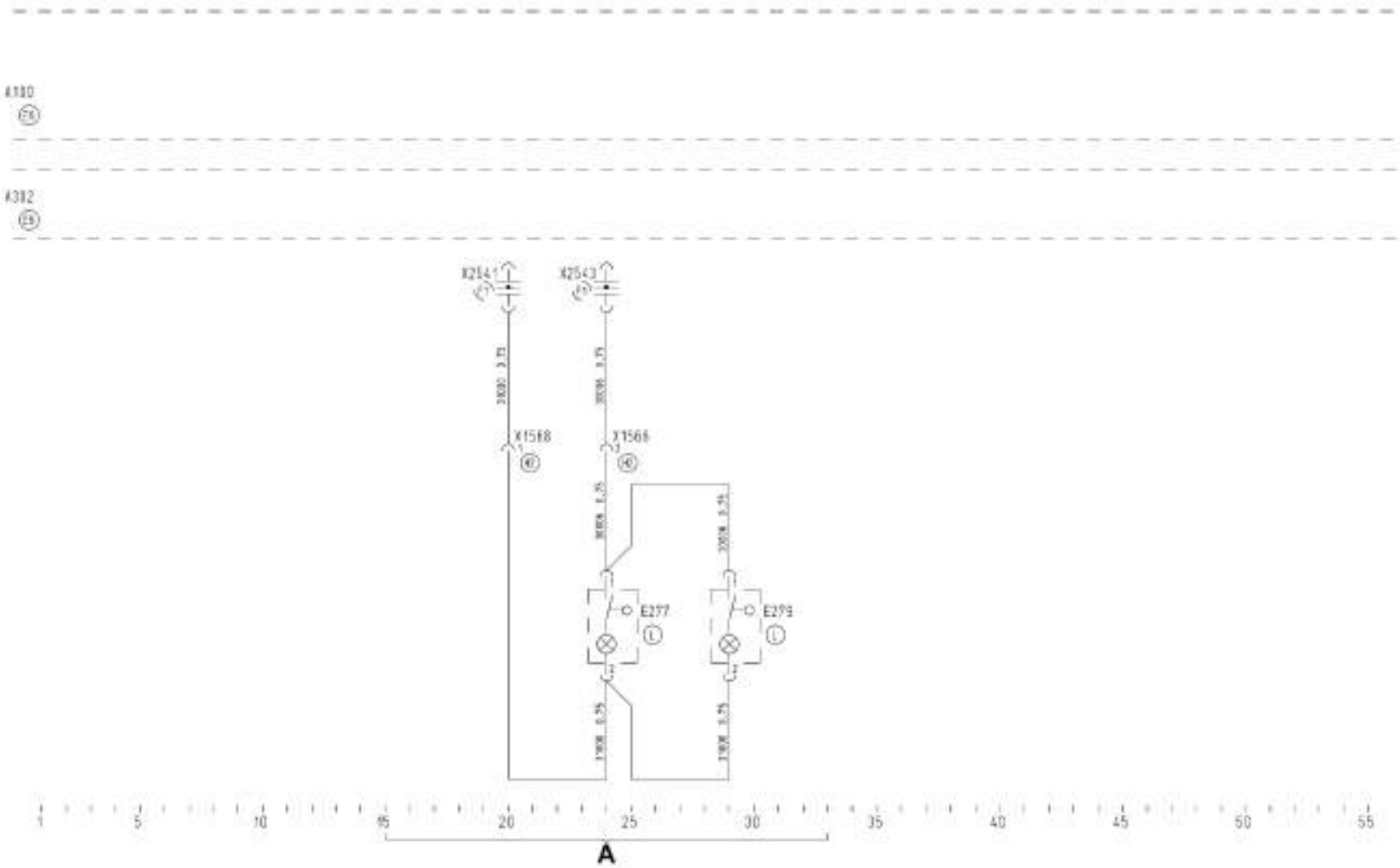
WIRING DIAGRAM NO. 81.99192.3350

Storage locker lighting, top (left, middle) sheet 1 of 1
Date: 04.2006

Legend

A	**Storage locker lighting, top (left, middle)**
A100	Central electrical system
A302	Central computer 2
E277	Storage locker light, top
E279	Storage locker light, top
X1568	Plug conn., storage locker light, top
X2541	Potential distributor, 21-pin, line 31000
X2543	Potential distributor, 21-pin, line 30006

Storage locker lighting, top (left, middle) sheet 1 of 1



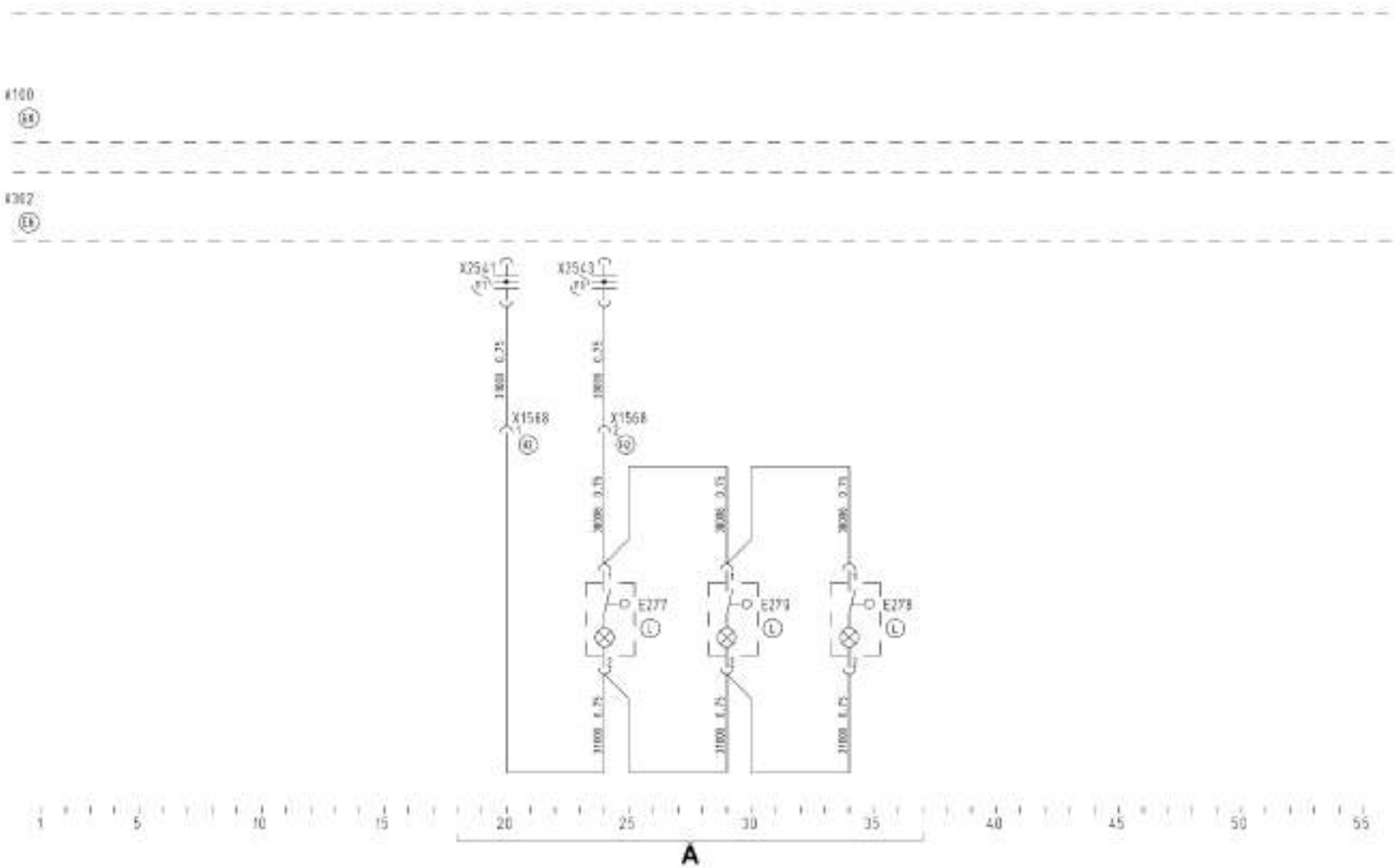
WIRING DIAGRAM NO. 81.99192.3351

Storage locker lighting, top (left, middle, right) sheet 1 of 1
Date: 04.2006

Legend

A	Storage locker lighting, top (left, middle, right)
A100	Central electrical system
A302	Central computer 2
E277	Storage locker light, top
E278	Storage locker light, top
E279	Storage locker light, top
X1568	Plug conn., storage locker light, top
X2541	Potential distributor, 21-pin, line 31000
X2543	Potential distributor, 21-pin, line 30006

Storage locker lighting, top (left, middle, right) sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3367

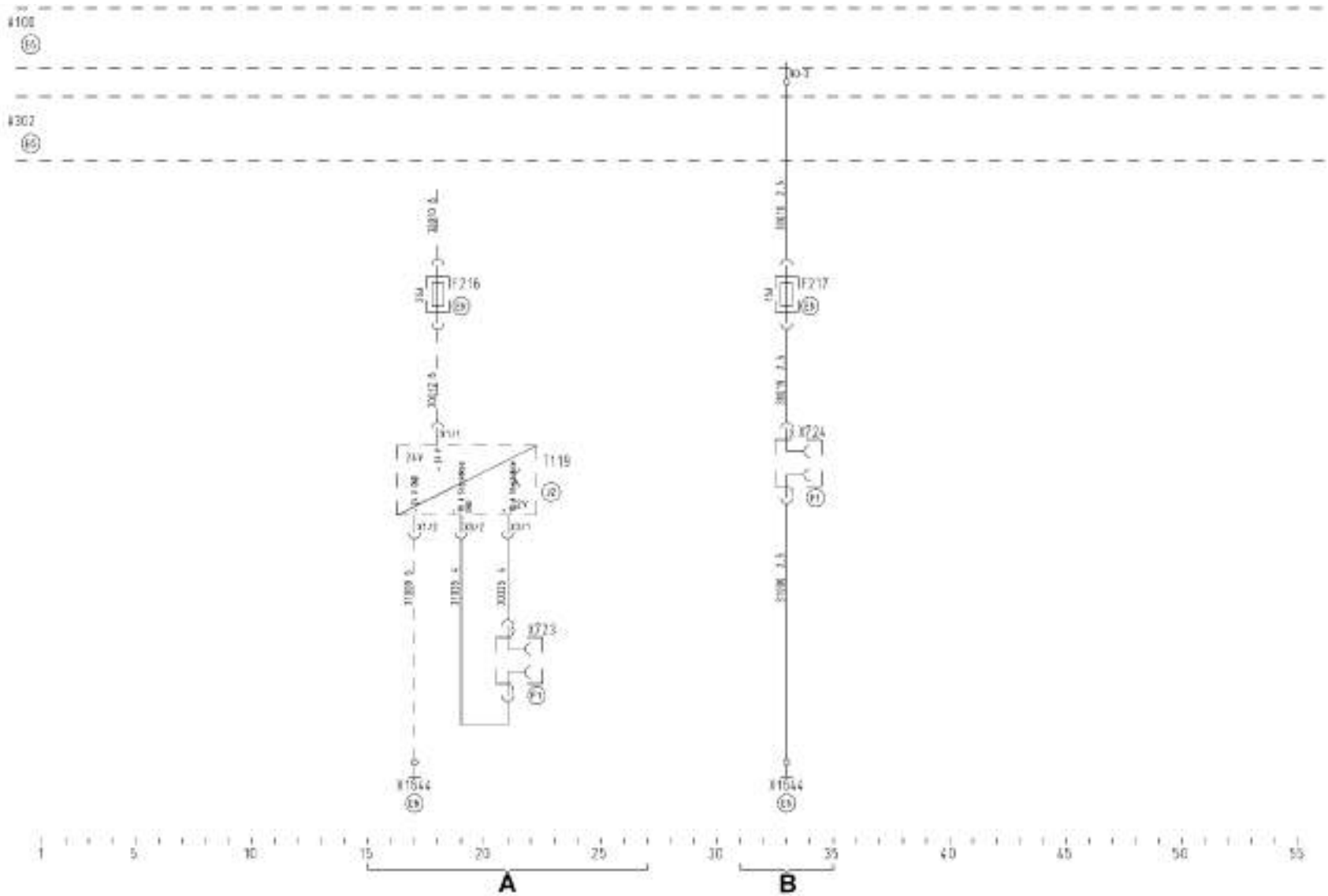
Sockets in cab, 12V and 24V sheet 1 of 1
Date: 12.2005

Legend

A	**Socket, 12V**
B	**Socket, 24V**

A100	Central electrical system
A302	Central computer 2
F216	Fuse, voltage transformer, 12V
F217	Fuse, socket, 24V
T119	Modular voltage transformer
X723	Socket, 12V
X724	Socket, 24V
X1644	Earthing point, cab, next to central electrical system

Sockets in cab, 12V and 24V sheet 1 of 1



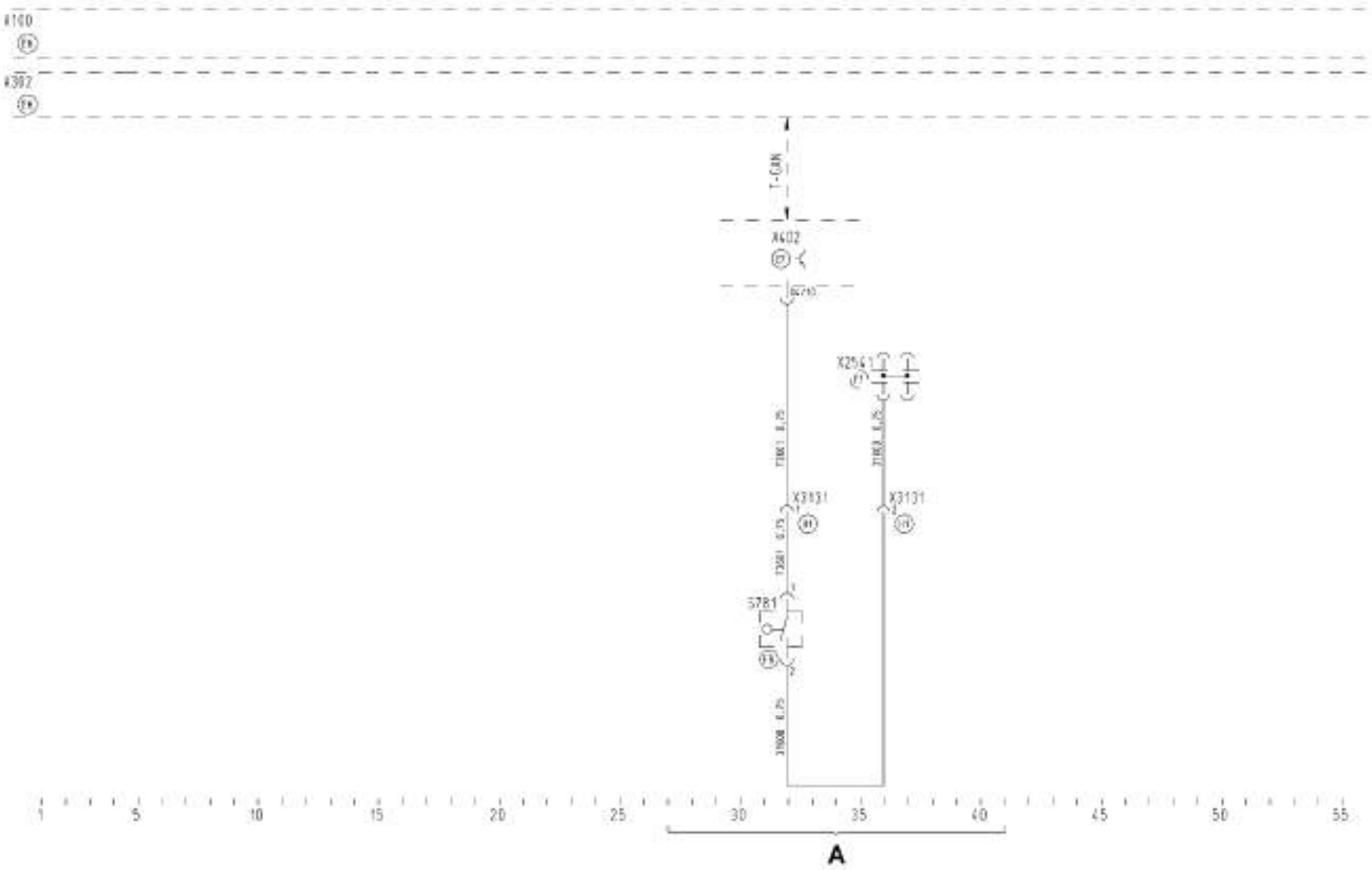
WIRING DIAGRAM NO. 81.99192.3082

Anti-jackknife brake for EBS5 sheet 1 of 1
Date: 04.2005

Legend

A	**Pilot switch, anti-jackknife brake**
A100	Central electrical system
A302	Central computer 2
A402	Control unit, EBS
S781	Switch for anti-jackknife brake actuation
X2541	Potential distributor, 21-pin, line 31000
X3131	Plug conn., switch in anti-jackknife brake actuator

Anti-jackknife brake for EBS5 sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3221

T-CAN terminating resistor in cab sheet 1 of 1
Date: 10.2005

Legend

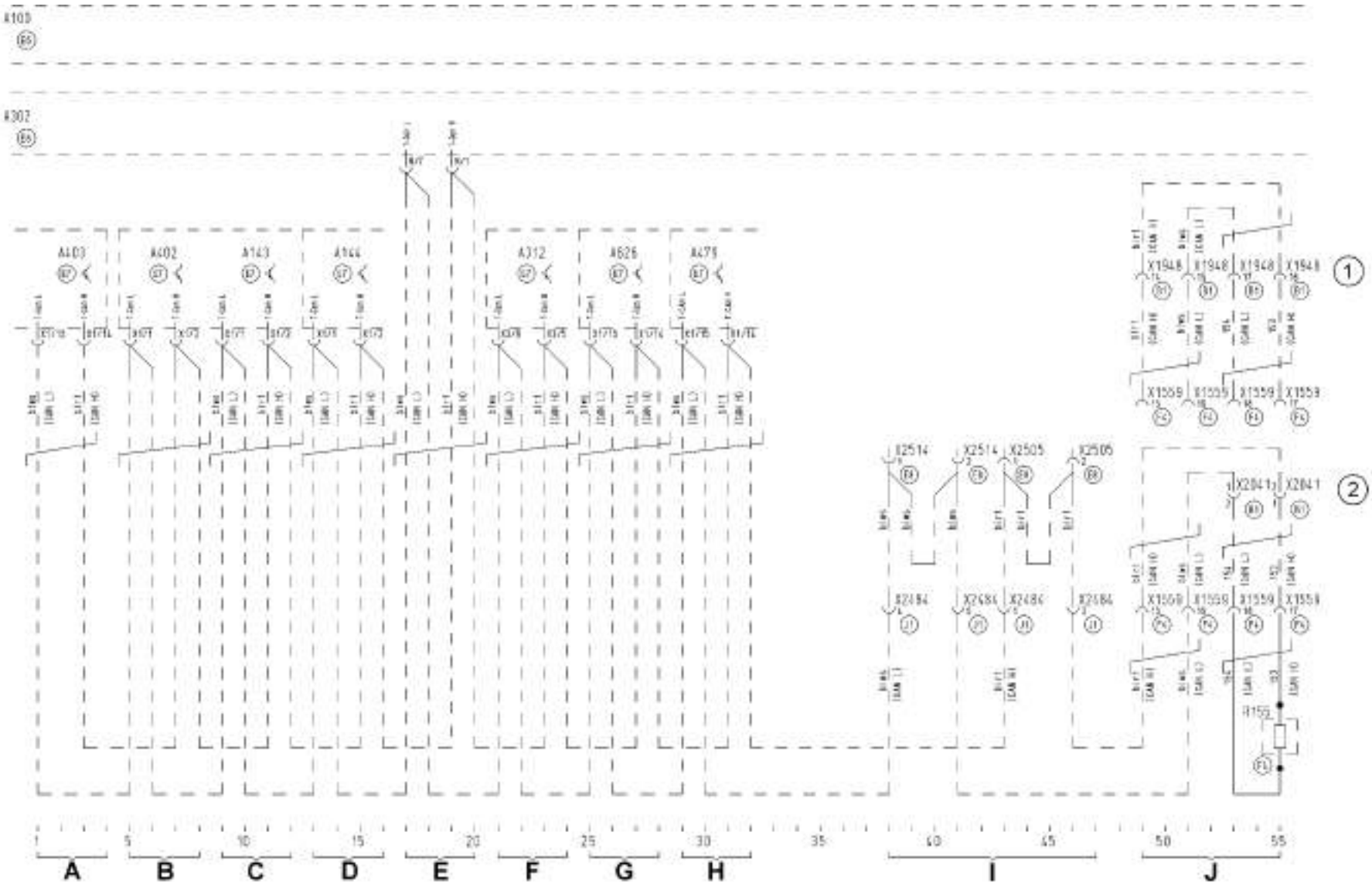
A	**FFR (vehicle management computer)**
B	**EBS**
C	**ECAS**
D	**PriTarder**
E	**ZBR (central on-board computer)**
F	**KSM (customer-specific control module)**
G	**HVA (hydrostatic front-axle drive)**
H	**ACC**
I	**RAS-EC/HP gearbox**
J	**Terminating resistor**

A100	Central electrical system
A143	Control unit, ECAS
A144	Control unit, retarder
A302	Central computer 2
A312	Customer-specified control module
A402	Control unit, EBS
A403	Vehicle management computer
A479	ACC control unit
A626	Control unit, hydrostatic front axle drive
R155	Terminating resistor, T-CAN
X1559	Plug conn., engine/EDC/gearbox IV
X1948	Plug conn., engine/gearbox
X2041	Plug conn., adaptation, AS-Tronic
X2484	Plug conn., B-pillar, RAS-EC/HP gearbox
X2505	Plug conn., CAN, RAS-EC/HP gearbox
X2514	Plug conn., CAN, RAS-EC/HP gearbox

1	Wiring for engine D2066
2	Wiring for engine D0836, D2866, D2876

Note
In vehicles with TPM, the T-CAN terminating resistor sits in the frame on the TPM module!

T-CAN terminating resistor in cab sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3174

T-CAN standard/ECAS sheet 1 of 1
Date: 09.2005

Legend

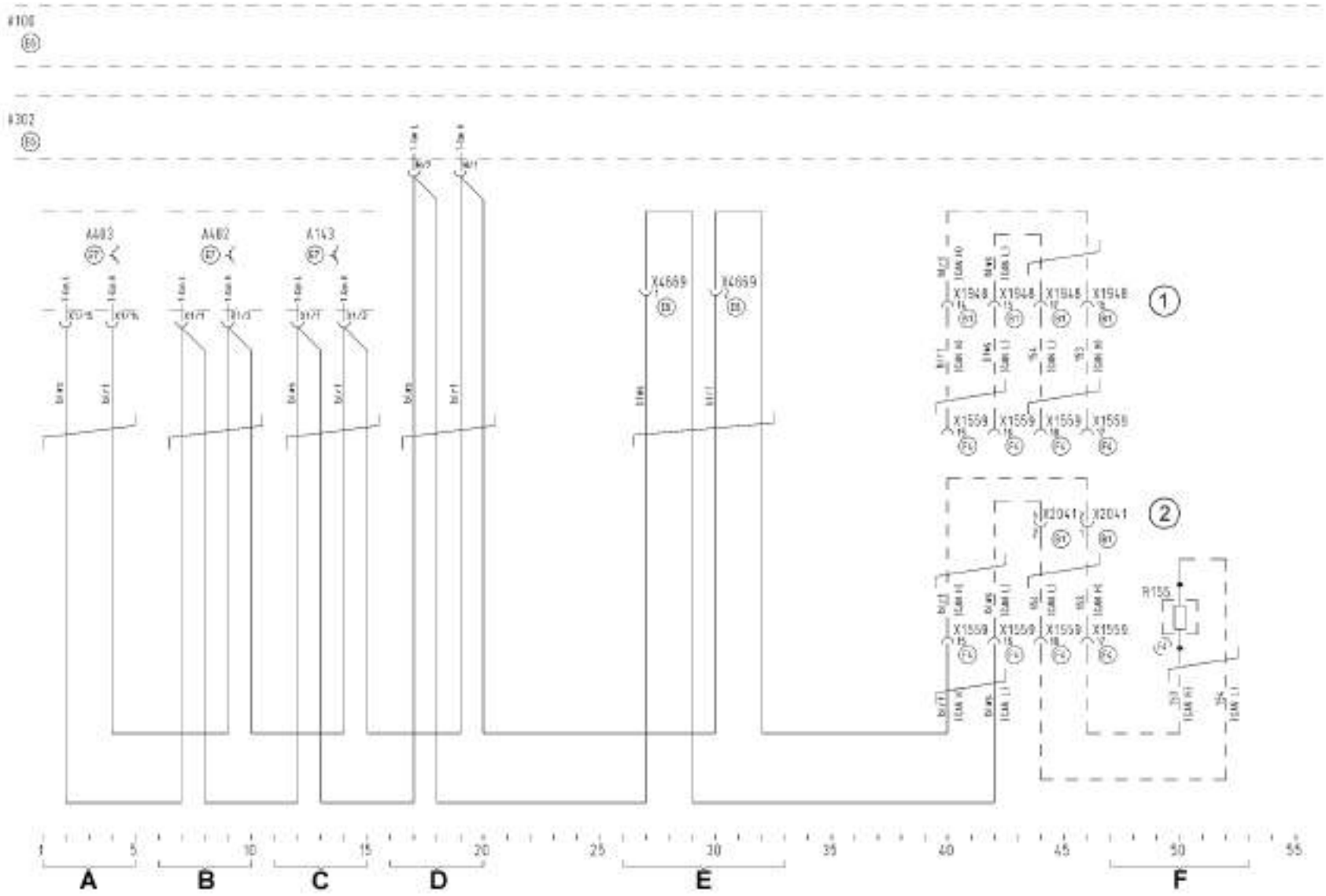
A	**FFR (vehicle management computer)**
B	**EBS**
C	**ECAS**
D	**ZBR (central on-board computer)**
E	**Adaptation, supplementary equipment**
F	**Terminating resistor**

A100	Central electrical system
A143	Control unit, ECAS
A302	Central computer 2
A402	Control unit, EBS
A403	Vehicle management computer
R155	Terminating resistor, T-CAN
X1559	Plug conn., engine/EDC/gearbox IV
X1948	Plug conn., engine/gearbox
X2041	Plug conn., adaptation, AS-Tronic
X4669	Adaptation, supplementary equipment

1	Wiring for engine D2066
2	Wiring for engine D0836, D2866, D2876

Note
In vehicles with TPM, the T-CAN terminating resistor sits in the frame on the TPM module!

T-CAN standard/ECAS sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3175

T-CAN standard/ECAS/Intarder sheet 1 of 1
Date: 09.2005

Legend

A	**FFR (vehicle management computer)**
B	**EBS**
C	**ECAS**
D	**Intarder**
E	**ZBR (central on-board computer)**
F	**Adaptation, supplementary equipment**
G	**Terminating resistor**

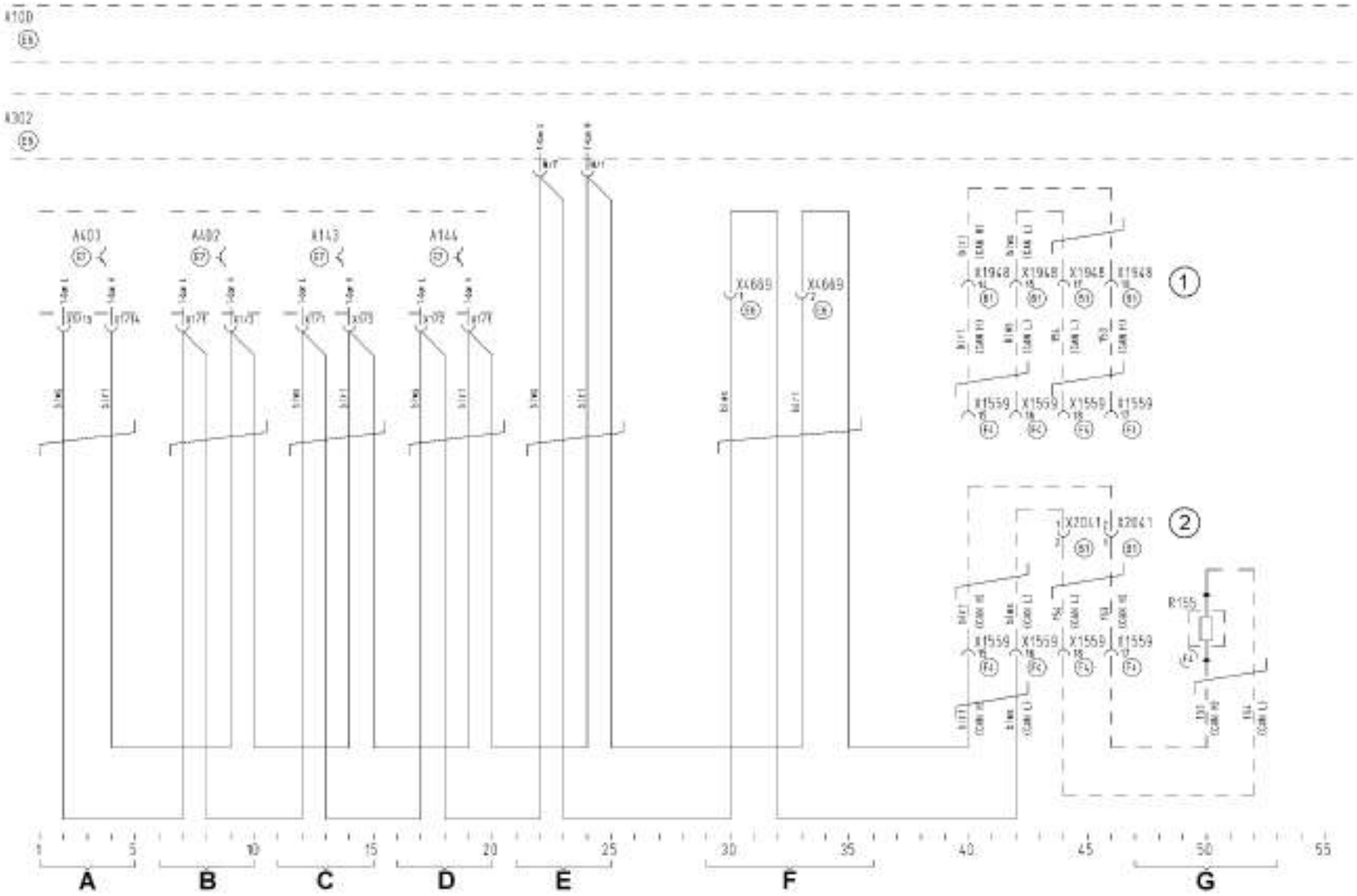
A100	Central electrical system
A143	Control unit, ECAS
A144	Control unit, retarder
A302	Central computer 2
A402	Control unit, EBS
A403	Vehicle management computer
R155	Terminating resistor, T-CAN
X1559	Plug conn., engine/EDC/gearbox IV
X1948	Plug conn., engine/gearbox
X2041	Plug conn., adaptation, AS-Tronic
X4669	Adaptation, supplementary equipment

1	Wiring for engine D2066
2	Wiring for engine D0836, D2866, D2876

Note
In vehicles with TPM, the T-CAN terminating resistor sits in the frame on the TPM module!

Note
The pin assignment for control unit A144 shown on the wiring diagram applies to Intarder EST 48 only!
Pin assignment for Voith Retarder is: **CAN High:** X1/3; **CAN Low:** X1/1.

T-CAN standard/ECAS/Intarder sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3178

T-CAN standard/Intarder sheet 1 of 1
Date: 09.2005

Legend

A	**FFR (vehicle management computer)**
B	**EBS**
C	**Intarder**
D	**ZBR (central on-board computer)**
E	**Adaptation, supplementary equipment**
F	**Terminating resistor**

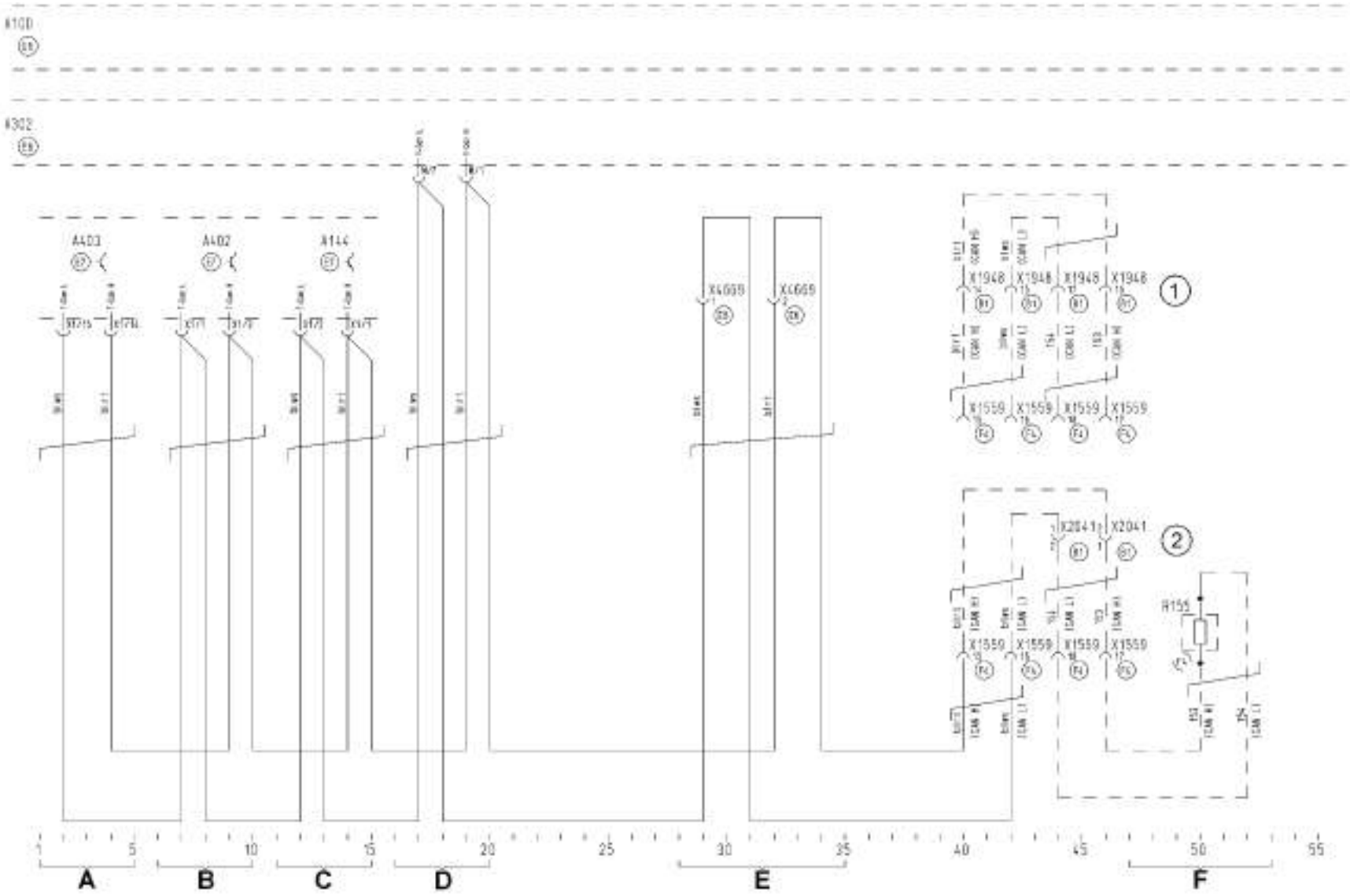
A100	Central electrical system
A144	Control unit, retarder
A302	Central computer 2
A402	Control unit, EBS
A403	Vehicle management computer
R155	Terminating resistor, T-CAN
X1559	Plug conn., engine/EDC/gearbox IV
X1948	Plug conn., engine/gearbox
X2041	Plug conn., adaptation, AS-Tronic
X4669	Adaptation, supplementary equipment

1	Wiring for engine D2066
2	Wiring for engine D0836, D2866, D2876

Note
In vehicles with TPM, the T-CAN terminating resistor sits in the frame on the TPM module!

Note
The pin assignment for control unit A144 shown on the wiring diagram applies to Intarder EST 48 only!
Pin assignment for Voith Retarder is: **CAN High:** X1/3; **CAN Low:** X1/1.

T-CAN standard/Intarder sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3180

T-CAN (KSM) sheet 1 of 1
Date: 09.2005

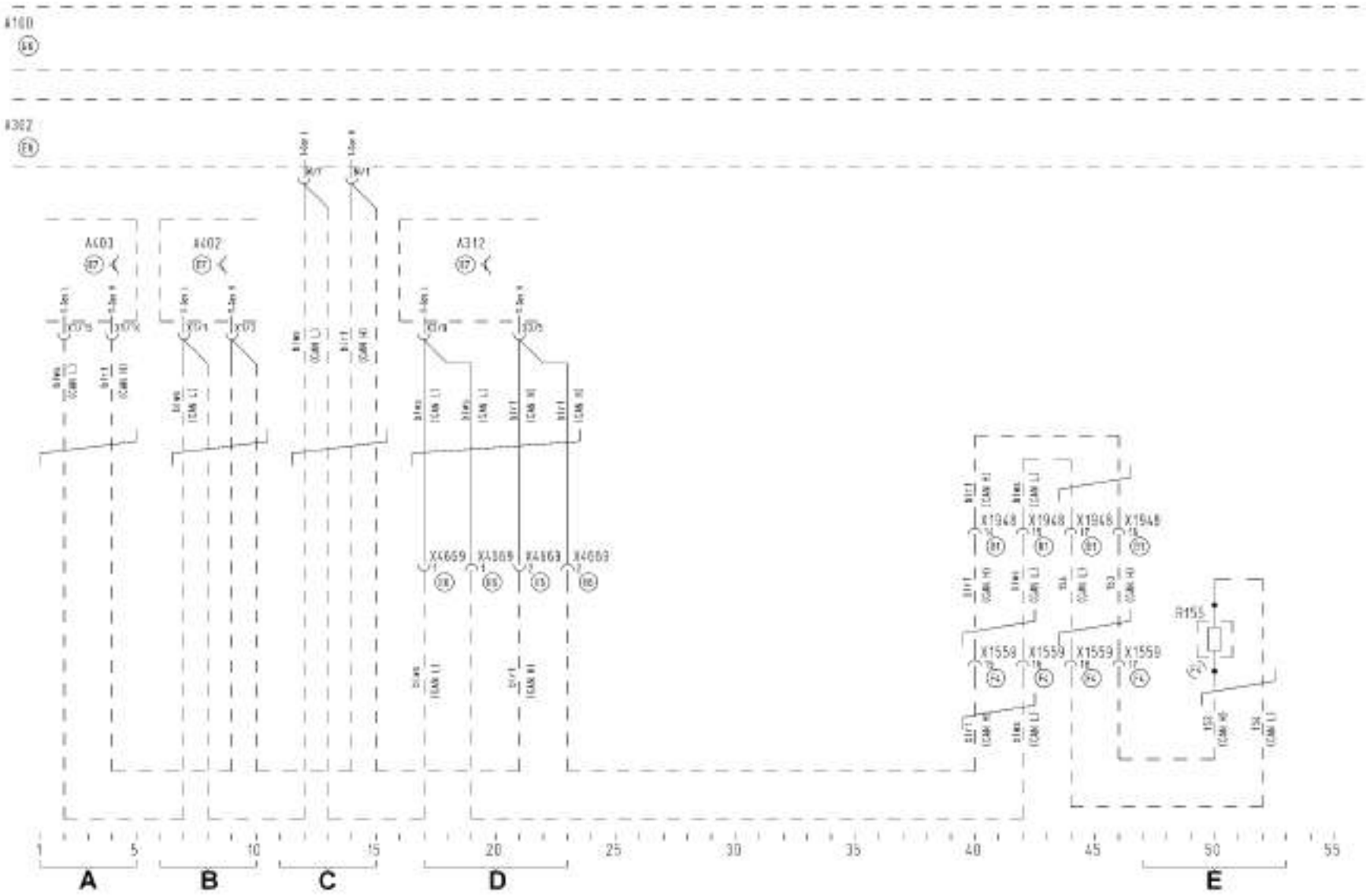
Legend

A	**FFR (vehicle management computer)**
B	**EBS**
C	**ZBR (central on-board computer)**
D	**KSM (customer-specific control module)**
E	**Terminating resistor**

A100	Central electrical system
A302	Central computer 2
A312	Customer-specified control module
A402	Control unit, EBS
A403	Vehicle management computer
R155	Terminating resistor, T-CAN
X1559	Plug conn., engine/EDC/gearbox IV
X1948	Plug conn., engine/gearbox
X4669	Adaptation, supplementary equipment

Note
In vehicles with TPM, the T-CAN terminating resistor sits in the frame on the TPM module!

T-CAN (KSM) sheet 1 of 1



WIRING DIAGRAM NO. 81.99192.3077

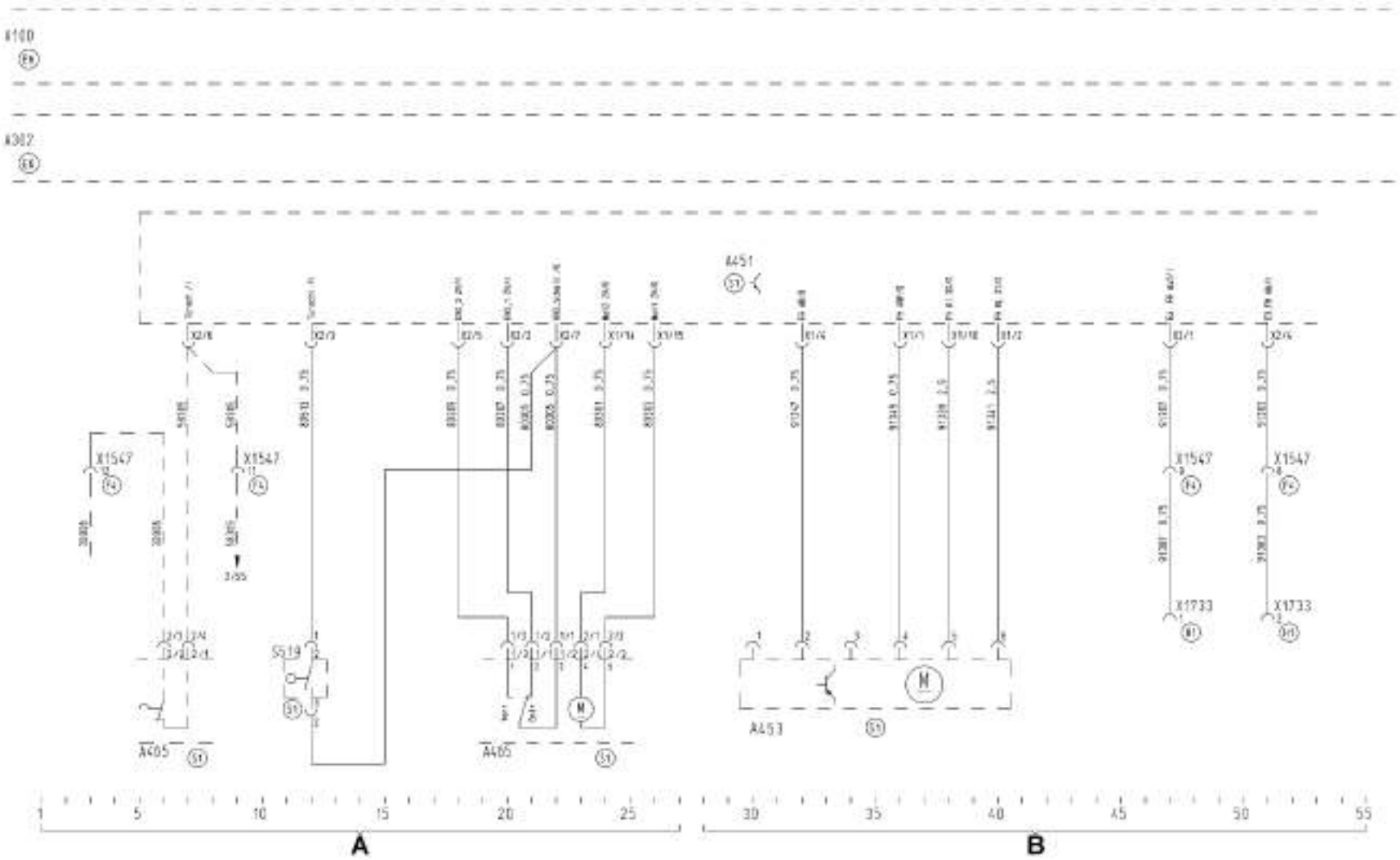
Door module sheet 1 of 5
Date: 03.2005

Legend

A	**Central locking, driver door**
B	**Window lifter, driver door**

A100	Central electrical system
A302	Central computer 2
A451	Door module, left
A453	Window lifter, left
A465	Door lock, left
S519	Door lock switch, left
X1547	Plug conn., door, left
X1733	Plug conn., switch, window lifters

Door module sheet 1 of 5



WIRING DIAGRAM NO. 81.99192.3077

Door module sheet 2 of 5
Date: 04.2006

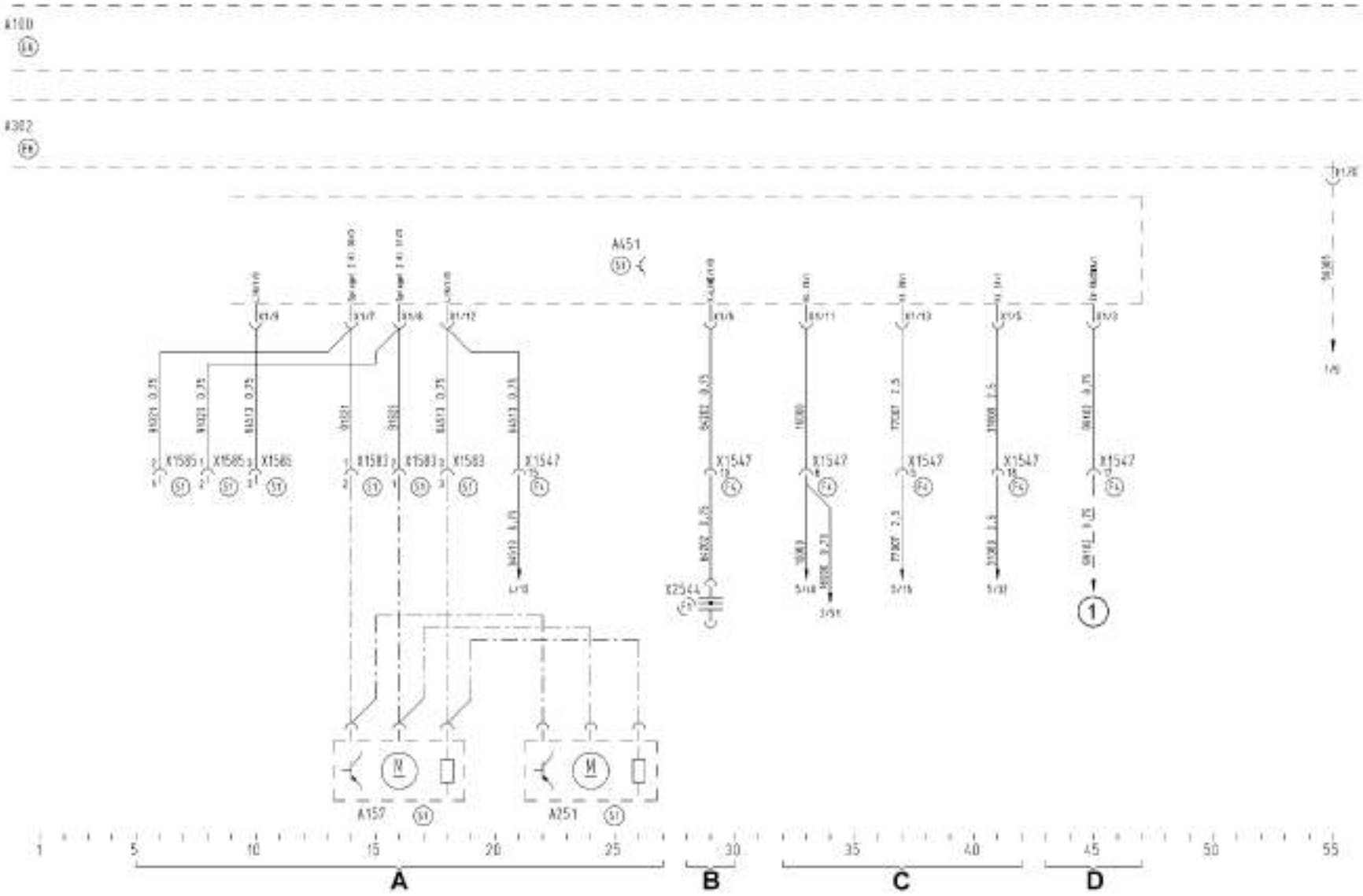
Legend

A	**Mirror adjustment/mirror heater, driver door**
B	**Diagnosis**
C	**Voltage supply, driver door**
D	**CAN**

A100	Central electrical system
A157	Main mirror, left
A251	Wide-angle mirror, left
A302	Central computer 2
A451	Door module, left
X1547	Plug conn., door, left
X1583	Plug conn., main and wide-angle mirror, left
X1585	Plug conn., kerb mirror, left
X2544	Potential distributor, 21-pin, K-line

1	Theft warning

Door module sheet 2 of 5



WIRING DIAGRAM NO. 81.99192.3077

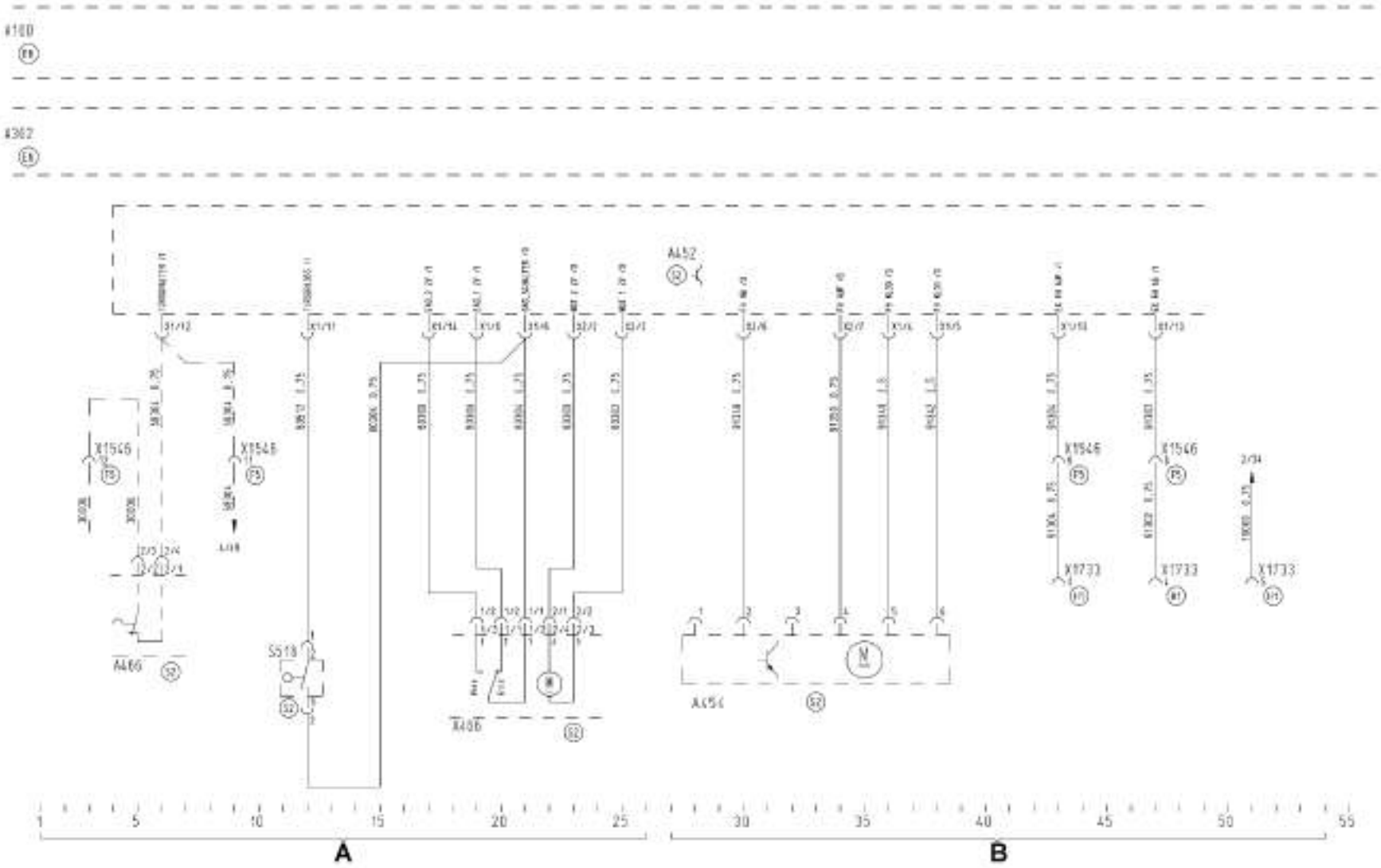
Door module sheet 3 of 5
Date: 04.2006

Legend

A Central locking, co-driver door
B Window lifter, co-driver door

A100	Central electrical system
A302	Central computer 2
A452	Door module, right
A454	Window lifter, right
A466	Door lock, right
S518	Door lock switch, right
X1546	Plug conn., door, right
X1733	Plug conn., switch, window lifters

Door module sheet 3 of 5



WIRING DIAGRAM NO. 81.99192.3077

Door module sheet 4 of 5
Date: 03.2005

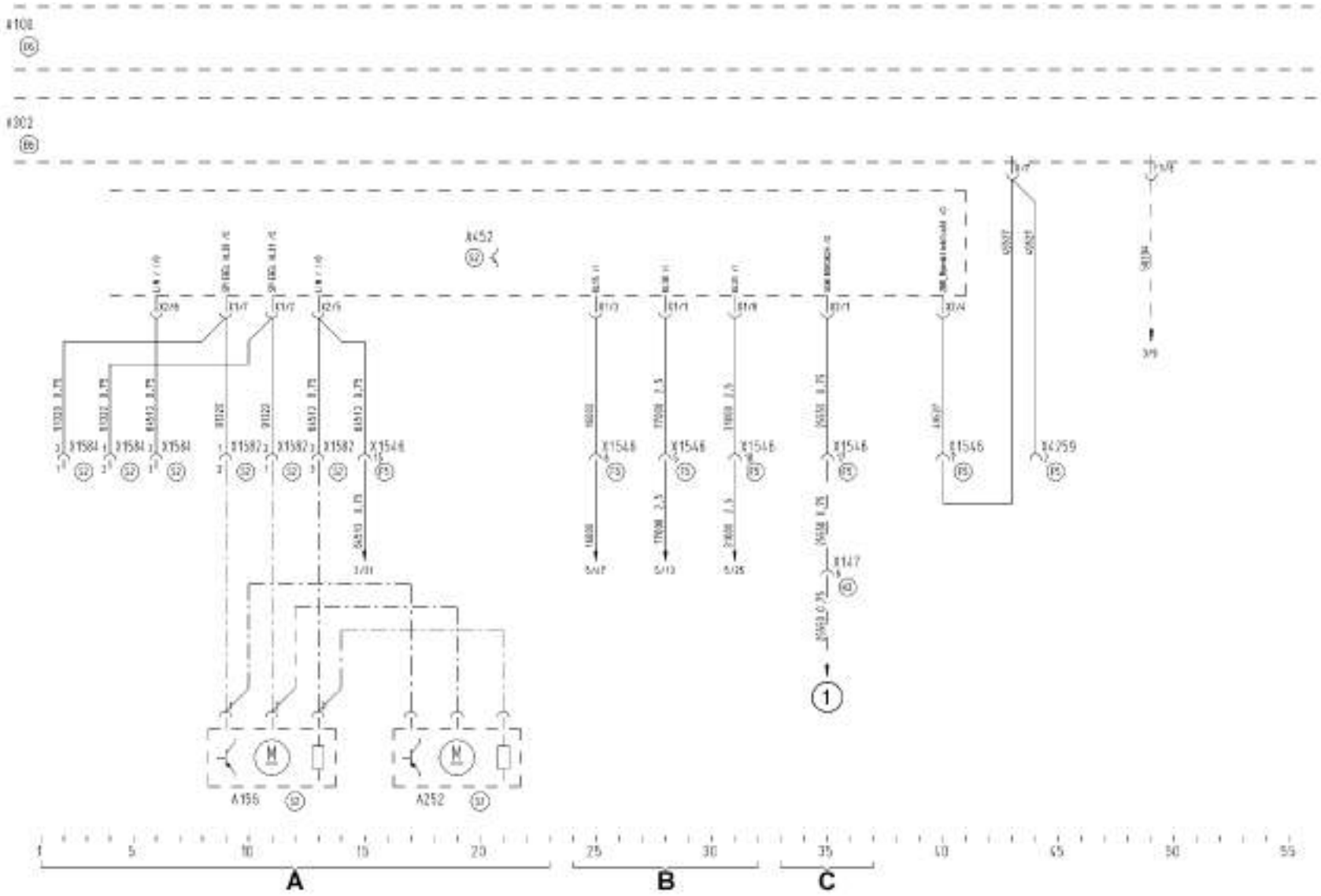
Legend

A	**Mirror adjustment/mirror heater, co-driver door**
B	**Voltage supply, co-driver door**
C	**Sliding roof**

A100	Central electrical system
A156	Main mirror, right
A252	Wide-angle mirror, right
A302	Central computer 2
A452	Door module, right
X147	Plug conn., sliding roof
X1546	Plug conn., door, right
X1582	Plug conn., main and wide-angle mirror, right
X1584	Plug conn., kerb mirror, right
X4259	Adaptation, reversing buzzer in rear light

1	Sliding roof

Door module sheet 4 of 5



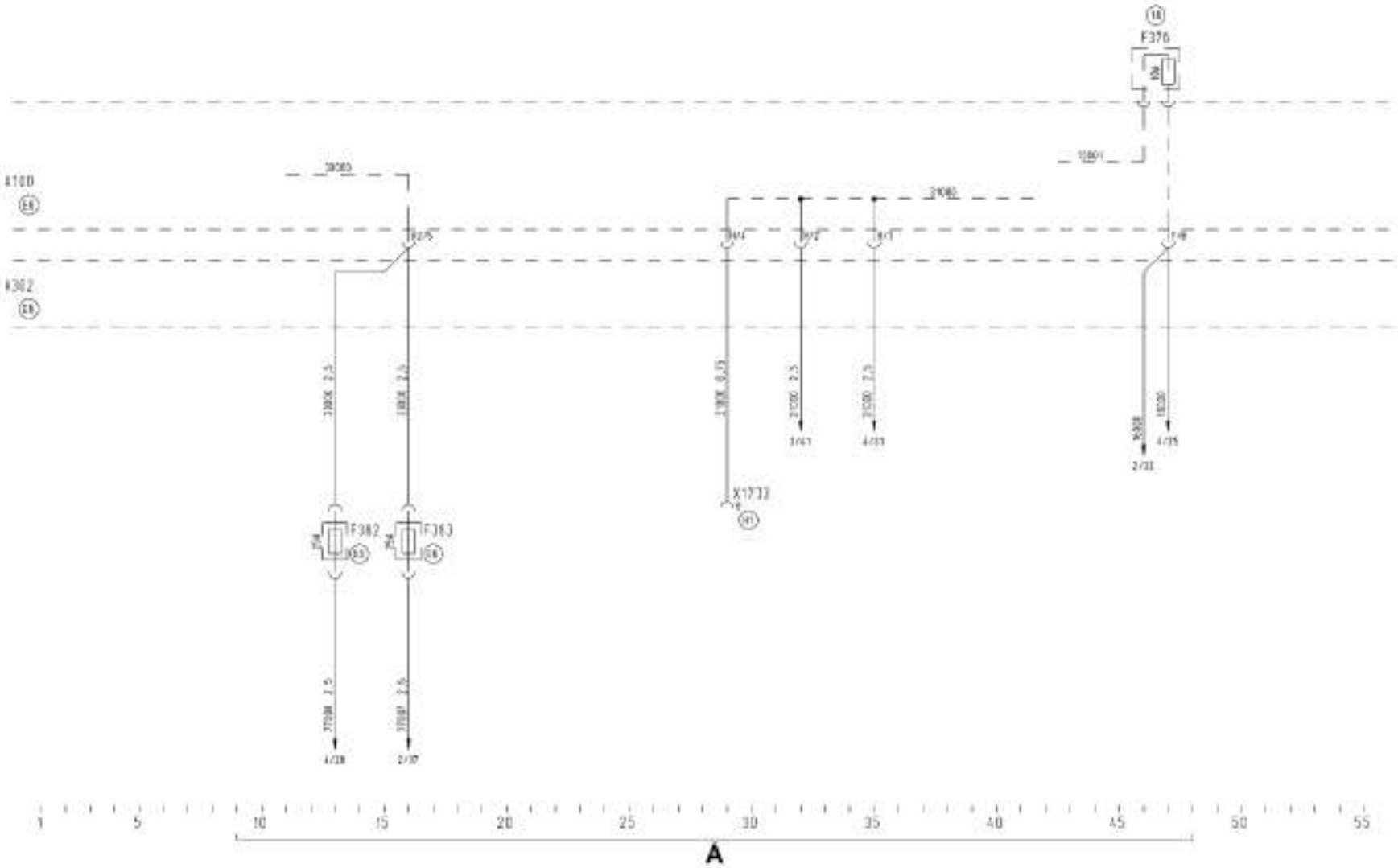
WIRING DIAGRAM NO. 81.99192.3077

Door module sheet 5 of 5
Date: 03.2005

Legend

A	Voltage supply
A100	Central electrical system
A302	Central computer 2
F376	Fuse, cab, inside (terminal 15)
F382	Fuse, door module
F383	Fuse, door module
X1733	Plug conn., switch, window lifters

Door module sheet 5 of 5



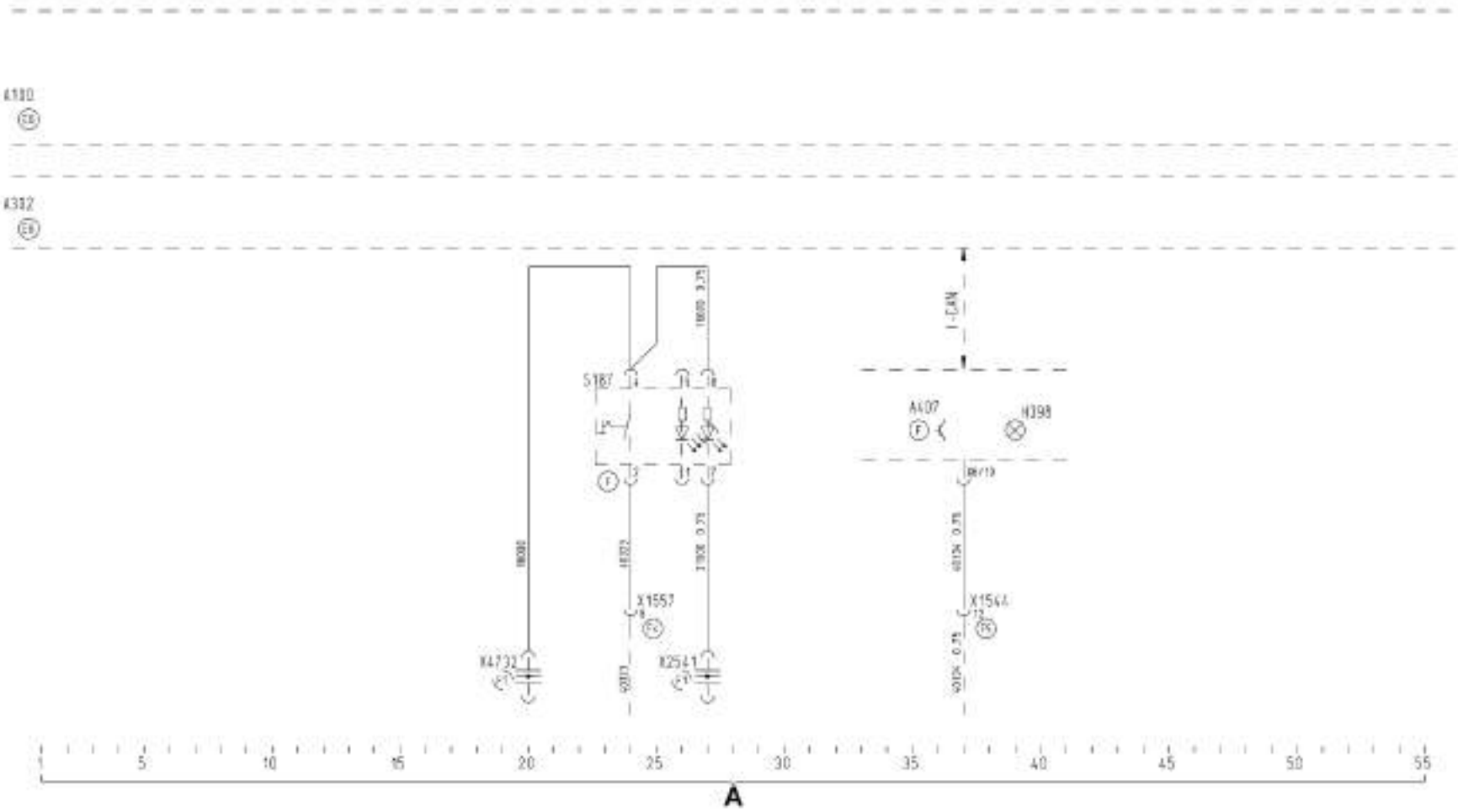
WIRING DIAGRAM NO. 81.99192.3303

Preparation, transverse differential lock, rear axle (2-axle vehicle) sheet 1 of 1
Date: 01.2006

Legend

A	Preparation, transverse differential lock, rear axle
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
H398	Check lamp, differential lock, transverse, rear axle
S187	Switch, transverse differential lock, rear axle
X1544	Plug conn., frame III
X1557	Plug conn., frame, left
X2541	Potential distributor, 21-pin, line 31000
X4732	Potential distributor, line 16000, switch lighting

Preparation, transverse differential lock, rear axle (2-axle vehicle) sheet 1 of 1



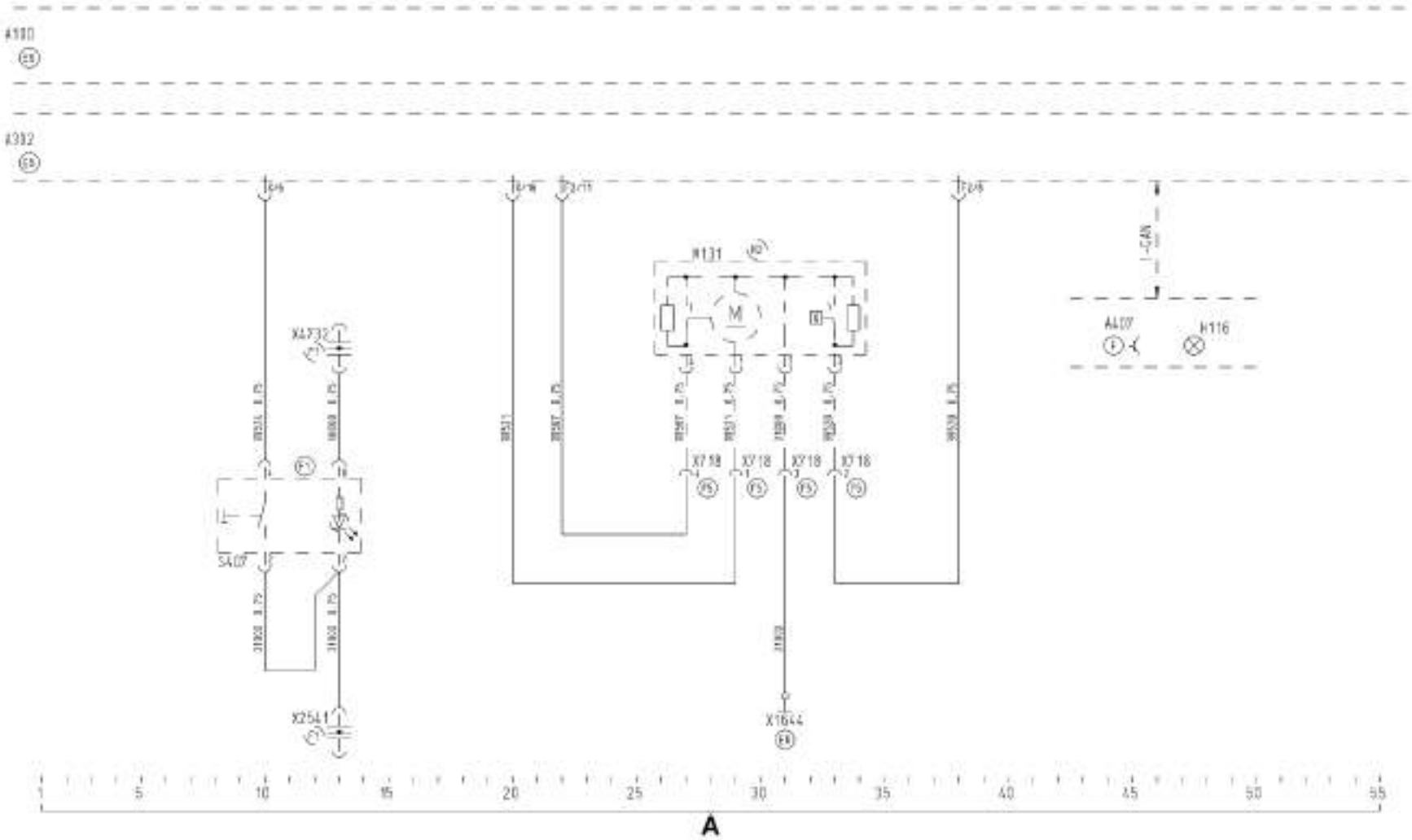
WIRING DIAGRAM NO. 81.99192.3379

Preparation, central lubrication system sheet 1 of 1
Date: 01.2006

Legend

A	**Central lubrication system**
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
H116	Check lamp, central lubrication system
M131	Central lubrication pump
S407	Button, interim lubrication
X718	Plug conn., cab-central lubrication system
X1644	Earthing point, cab, next to central electrical system
X2541	Potential distributor, 21-pin, line 31000
X4732	Potential distributor, line 16000, switch lighting

Preparation, central lubrication system sheet 1 of 1



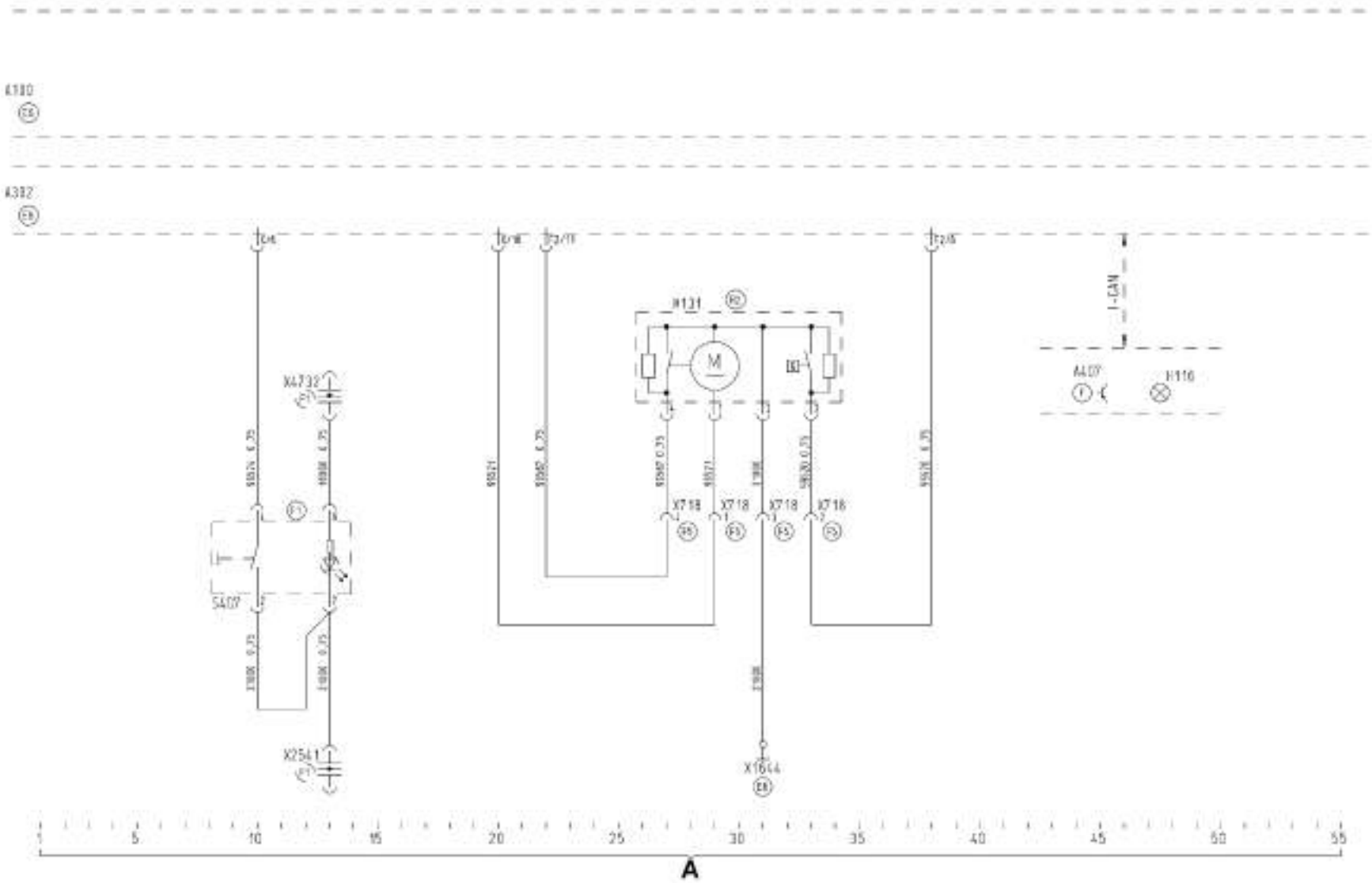
WIRING DIAGRAM NO. 81.99192.3352

Central lubrication system sheet 1 of 1
Date: 11.2005

Legend

A	**Central lubrication system**
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
H116	Check lamp, central lubrication system
M131	Central lubrication pump
S407	Button, interim lubrication
X718	Plug conn., cab-central lubrication system
X1644	Earthing point, cab, next to central electrical system
X2541	Potential distributor, 21-pin, line 31000
X4732	Potential distributor, line 16000, switch lighting

Central lubrication system sheet 1 of 1



MAN