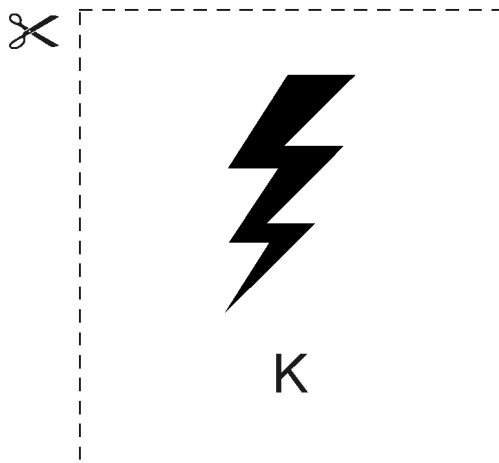




Electrical System

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

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Wiring Diagrams K100

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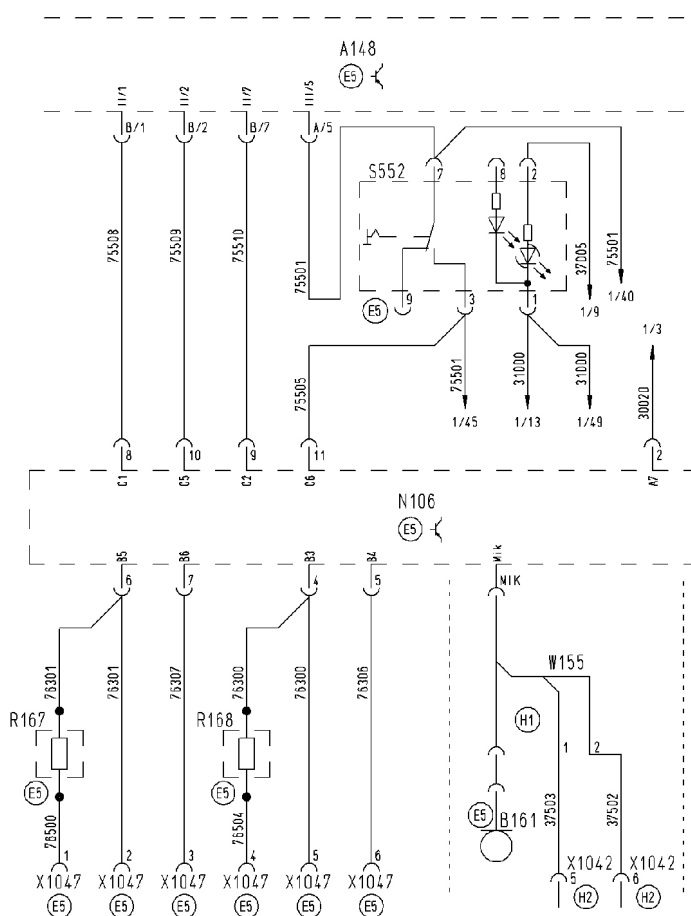
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PREFACE

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

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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)

LIST OF ABBREVIATIONS

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 - Diagnosis, entire vehicle – Multiplex central computer (buses only)
MUX
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-OB	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

LIST OF ABBREVIATIONS

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

LIST OF ABBREVIATIONS

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.



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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

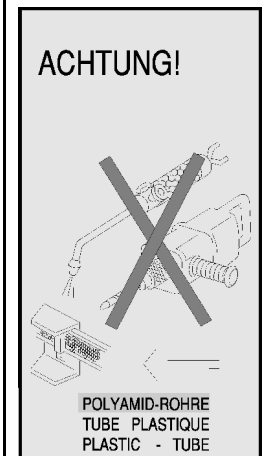
- Connect up the "ANTIZAP SERVICE MONITOR" protective device (MAN item number 80.78010.0002) in accordance with the instructions supplied with the device.
- If this device is not available, disconnect the batteries and connect the positive cable to the negative cable in order to make a conductive connection.
- 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.

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- 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

INTRODUCTION

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

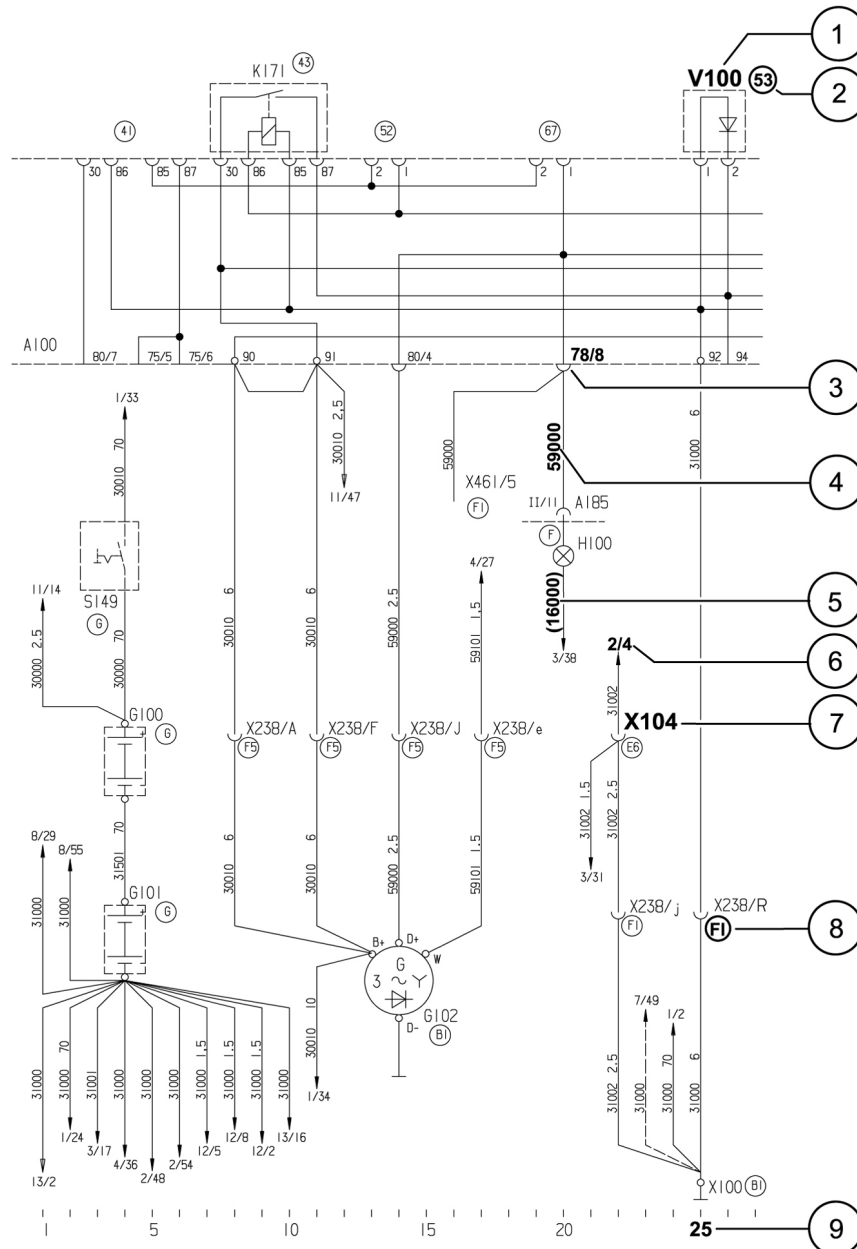
Name	Item no.:	Model 06S - 1580	Model 06S - 1581	Model 89S - 0161	Model 89S - 0162	Model 26X - 0150	Model 28X - 0006	Model 30X - 0273
ASR check lamp	81.99192.1358	X	X	X	X			
Seat belt indicator, driver	81.99192.1374	X	X	X	X	X	X	X
Engine brake	81.99192.1656	X	X	X	X	X		X
Battery master switch, mechanical	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
Baseline 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	Model	Model	Model	Model	Model	Model
		06S - 1580	06S - 1581	89S - 0161	89S - 0162	26X - 0150	28X - 0006	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

INTRODUCTION

Name	Item no.:	Model	Model	Model	Model	Model	Model	Model
		06S - 1580	06S - 1581	89S - 0161	89S - 0162	26X - 0150	28X - 0006	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



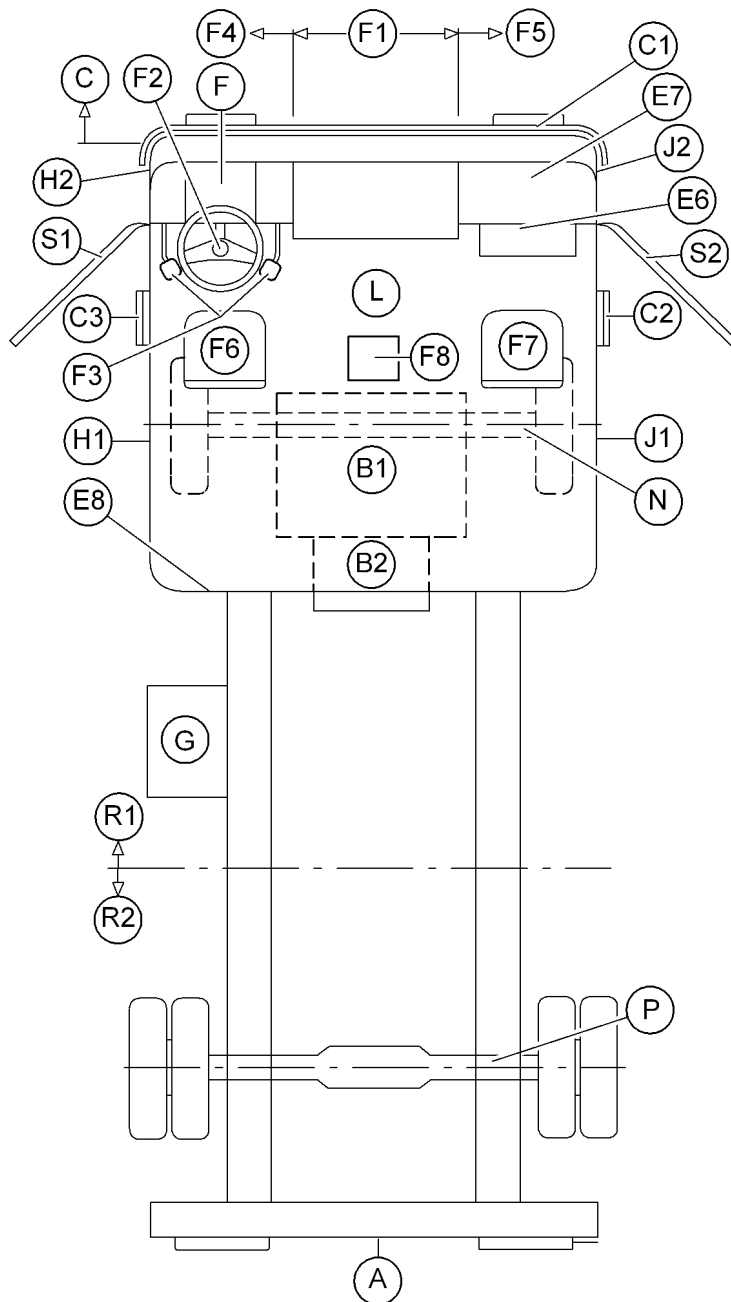
- 1 Electrical component designation (example: diode V100 on the central electrical system, number 53)
- 2 Installation position on the front of the central electrical system (here: stamped number 53)
- 3 Plug connection on the rear of the central electrical system (here: connector 78, connection 8)
- 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®.

INTRODUCTION

Installation positions for location identifiers

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



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

WIRING DIAGRAM NO. 81.99192.3079

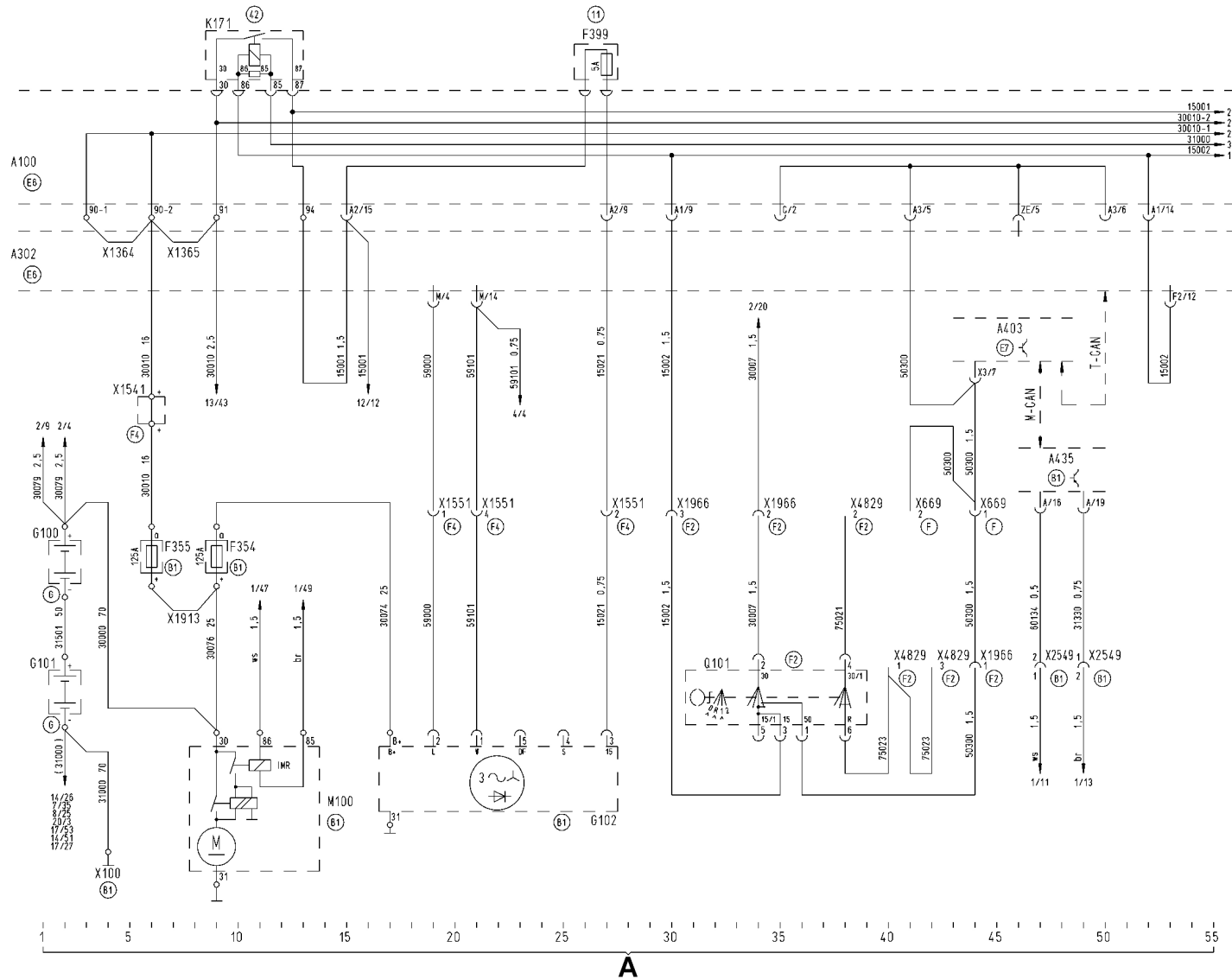
A = Voltage supply, starting system sheet 1 of 22

Date: 09.2007

Legend

- A**100 Central electrical system
- A302 Central computer 2
- A403 Vehicle management computer
- A435 Control unit, EDC
- F**354 Main fuse (terminal 30-1)
- F355 Main fuse (terminal 30-2)
- F399 Fuse, alternator (terminal 15)
- G**100 Battery 1
- G101 Battery 2
- G102 Alternator 1
- K**171 Relay, consumers (terminal 15)
- M**100 Starter
- Q**101 Steering lock
- X**100 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

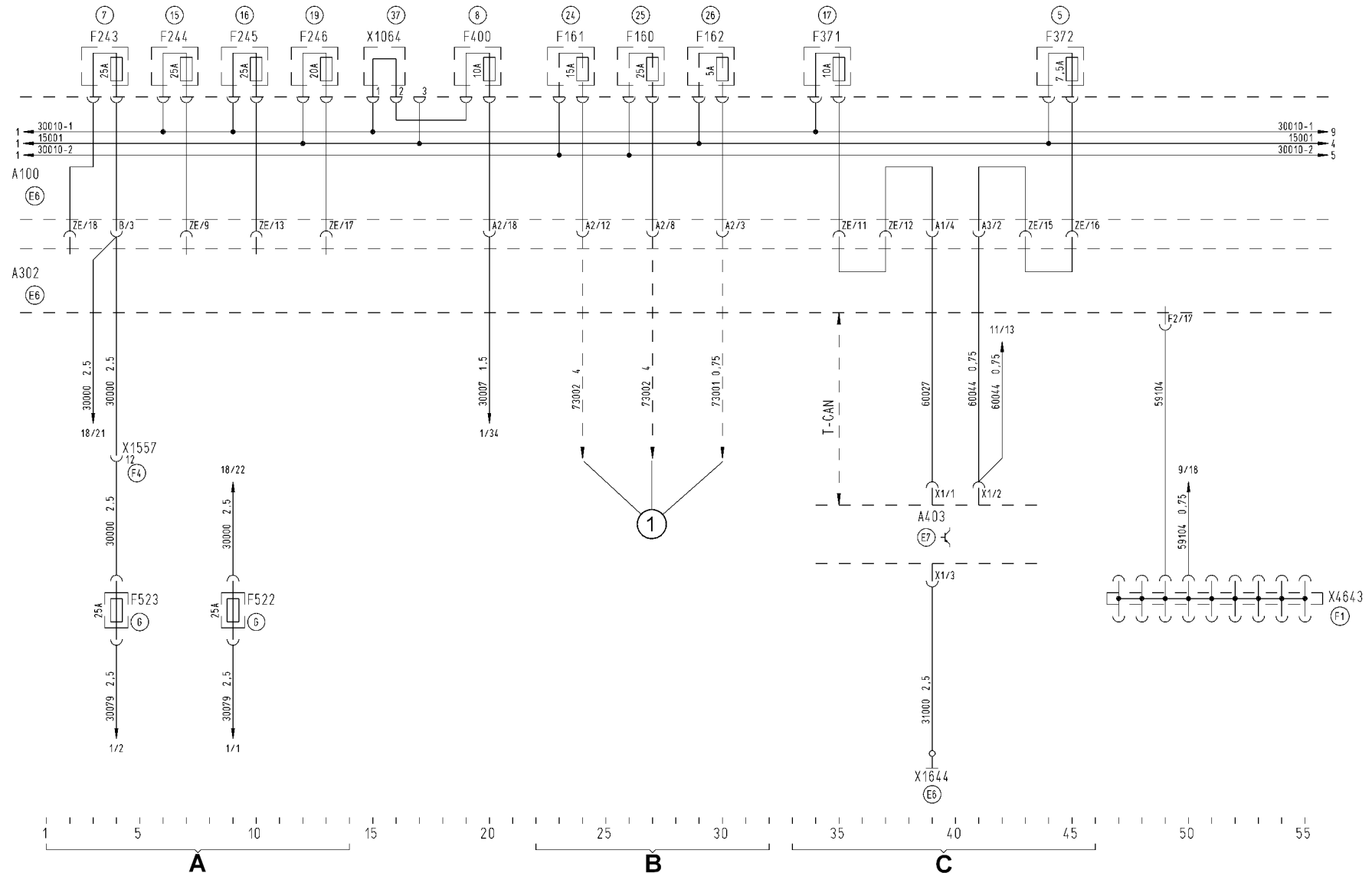
Date: 03.2005

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**

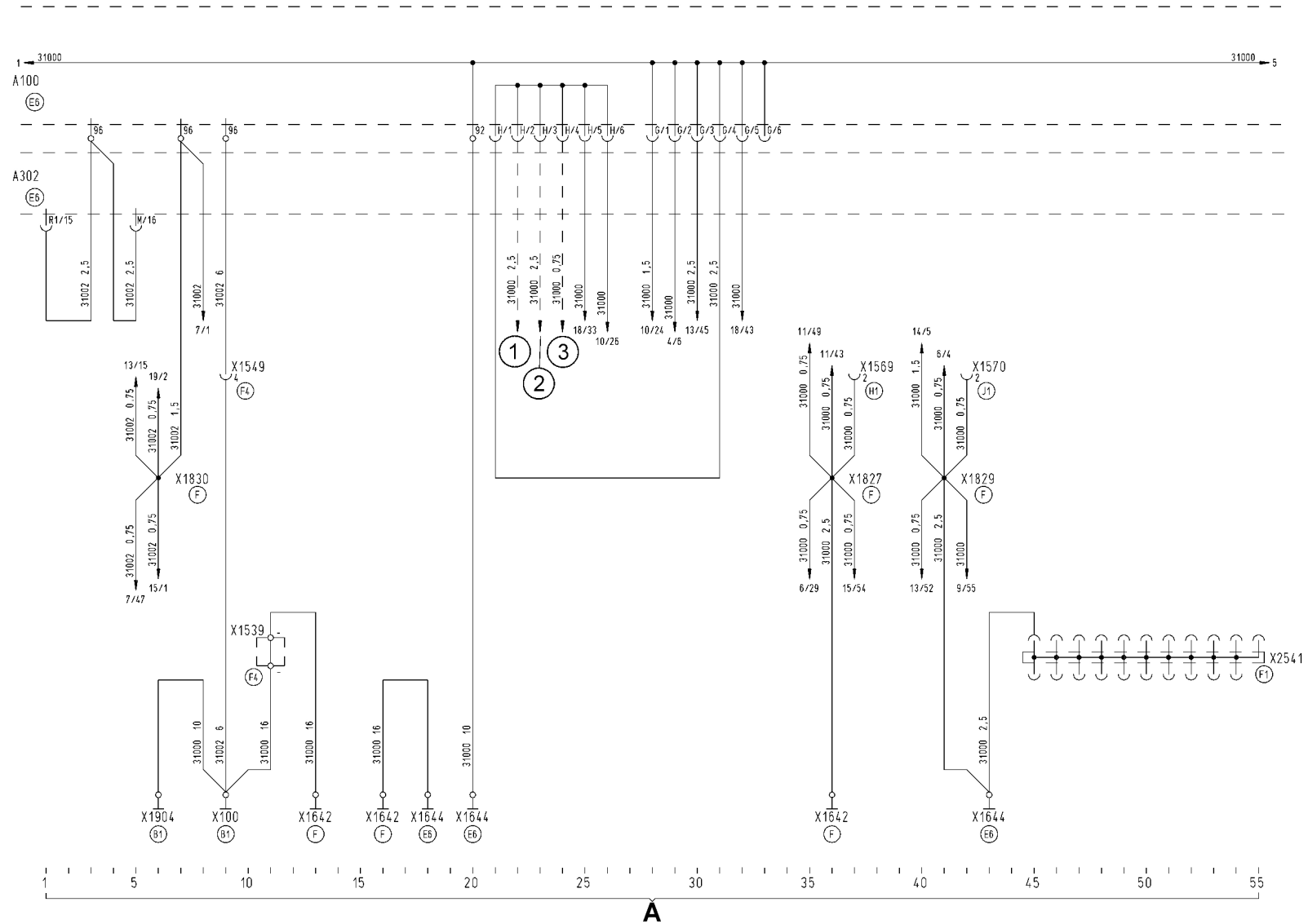
Date: 03.2005

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)

[illegible]

WIRING DIAGRAM NO. 81.99192.3079

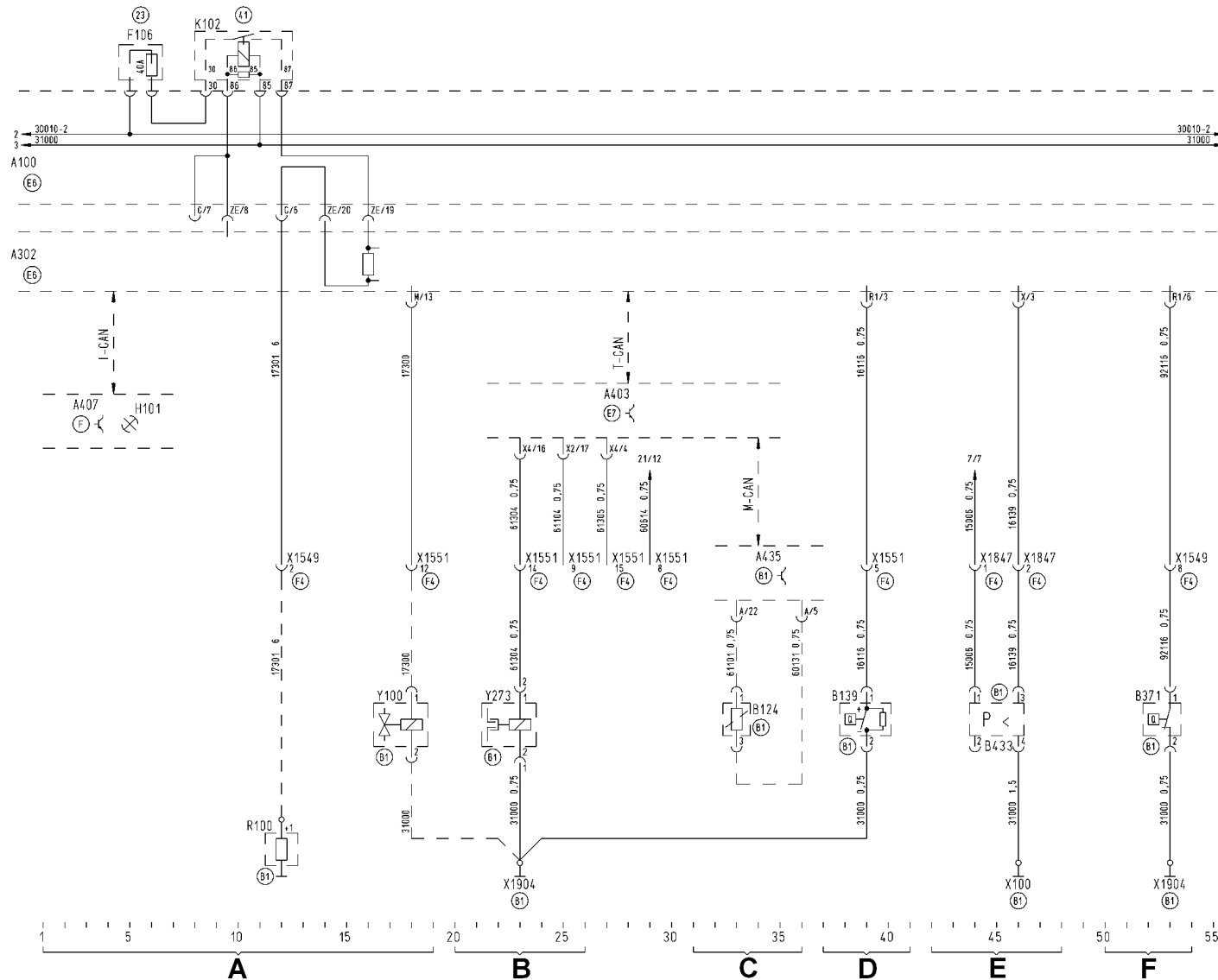
A = Flame start system / B = Fan clutch / C = EDC coolant temperature / D = Coolant level / E = Air filter pressure sensor / F = Power steering oil level sheet 5 of 22

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



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

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

WIRING DIAGRAM NO. 81.99192.3079

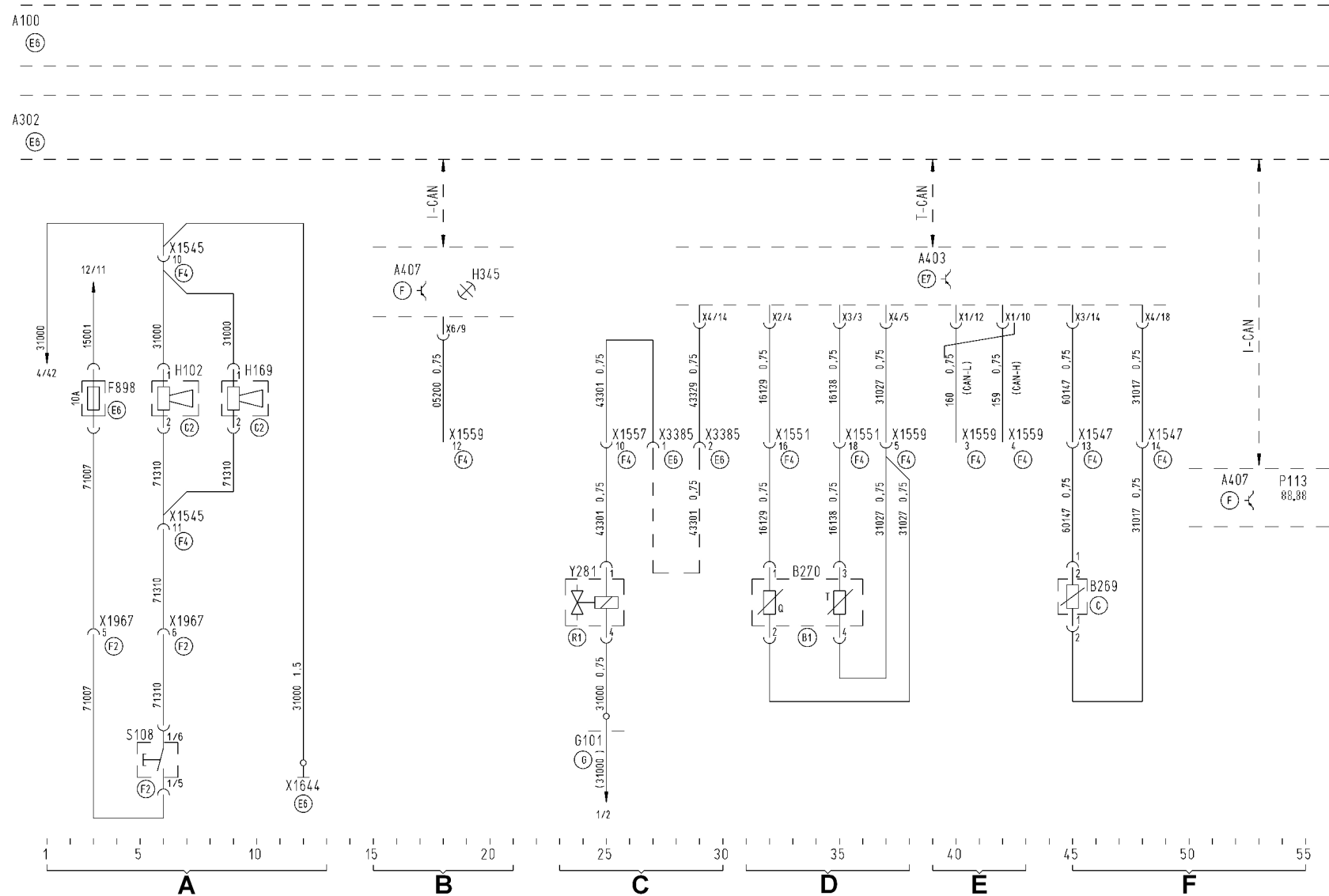
A = Signal horn / B = Fuel filter heater preparation / C = Engine brake / D = Oil level sensor / E = M-CAN / F = Outside temperature sheet 8 of 22

Date: 01.2008

Legend

- A**100 Central electrical system
- A302 Central computer 2
- A403 Vehicle management computer
- A407 Instrumentation
- B**269 Temperature sensor, outside air
- B270 Oil level sensor
- F**898 Fuse, signal horn
- G**101 Battery 2
- H**102 Signal horn
- H169 Horn (two-tone)
- H345 Check lamp, fuel filter heater
- P**113 Gauge, outside temperature
- S**108 Steering column stalk (turn indicators, wipers, headlights)
- X**1545 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
- Y**281 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**

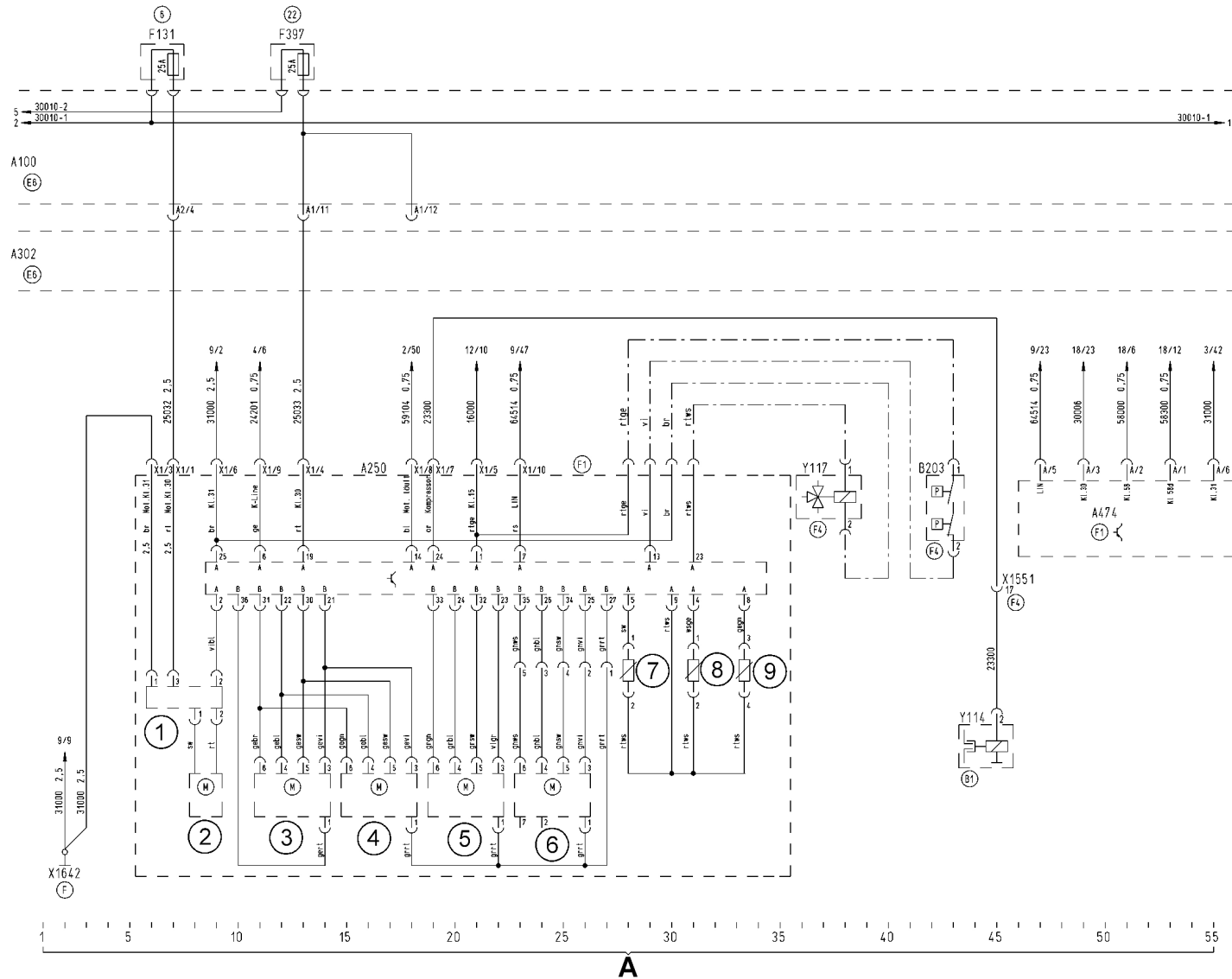
Date: 09.2007

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

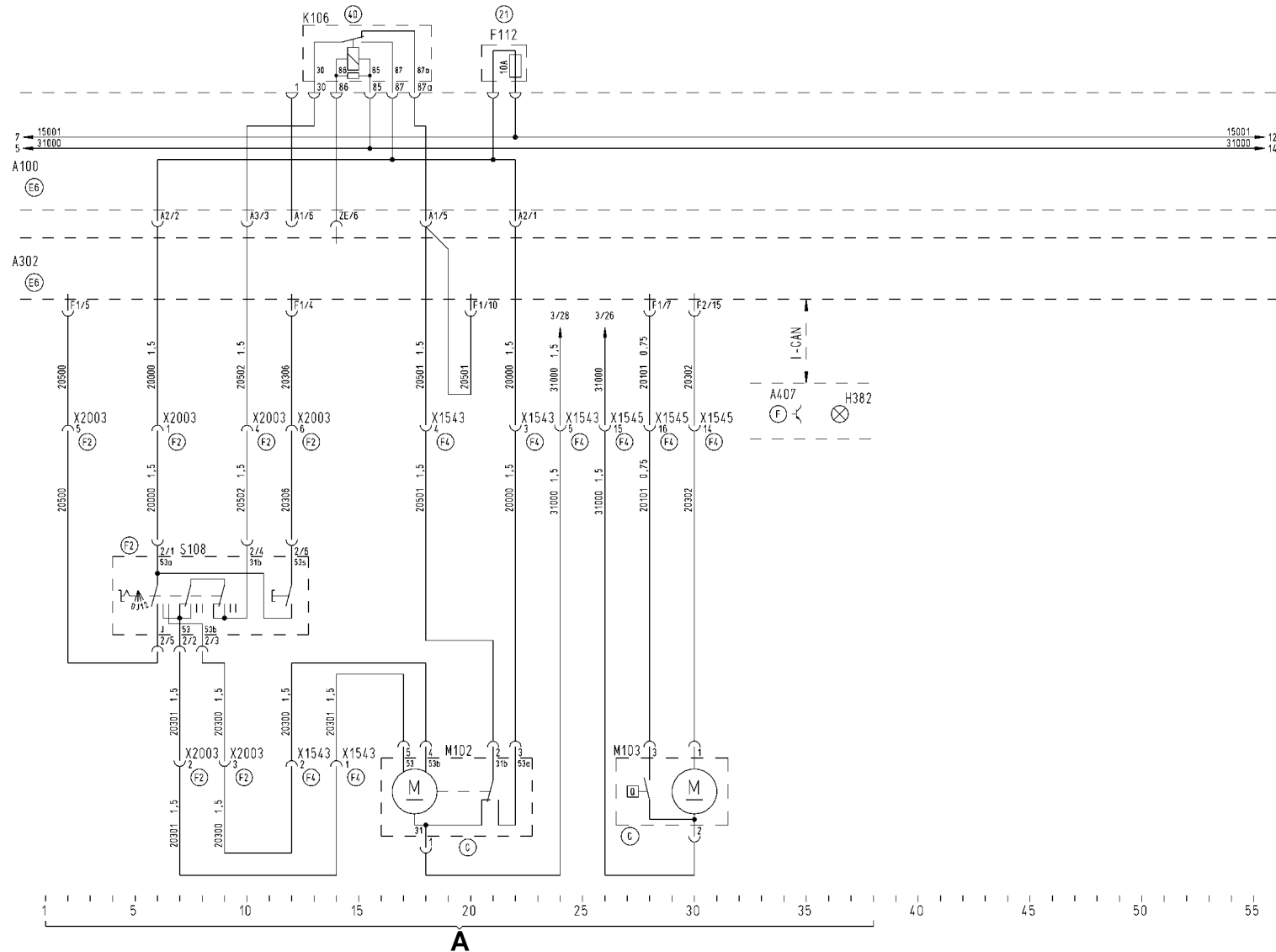
A = Washers and wipers sheet 10 of 22

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

WIRING DIAGRAM NO. 81.99192.3079**A = Voltage supply +15 / B = Instrumentation/tachograph sheet 12 of 22**

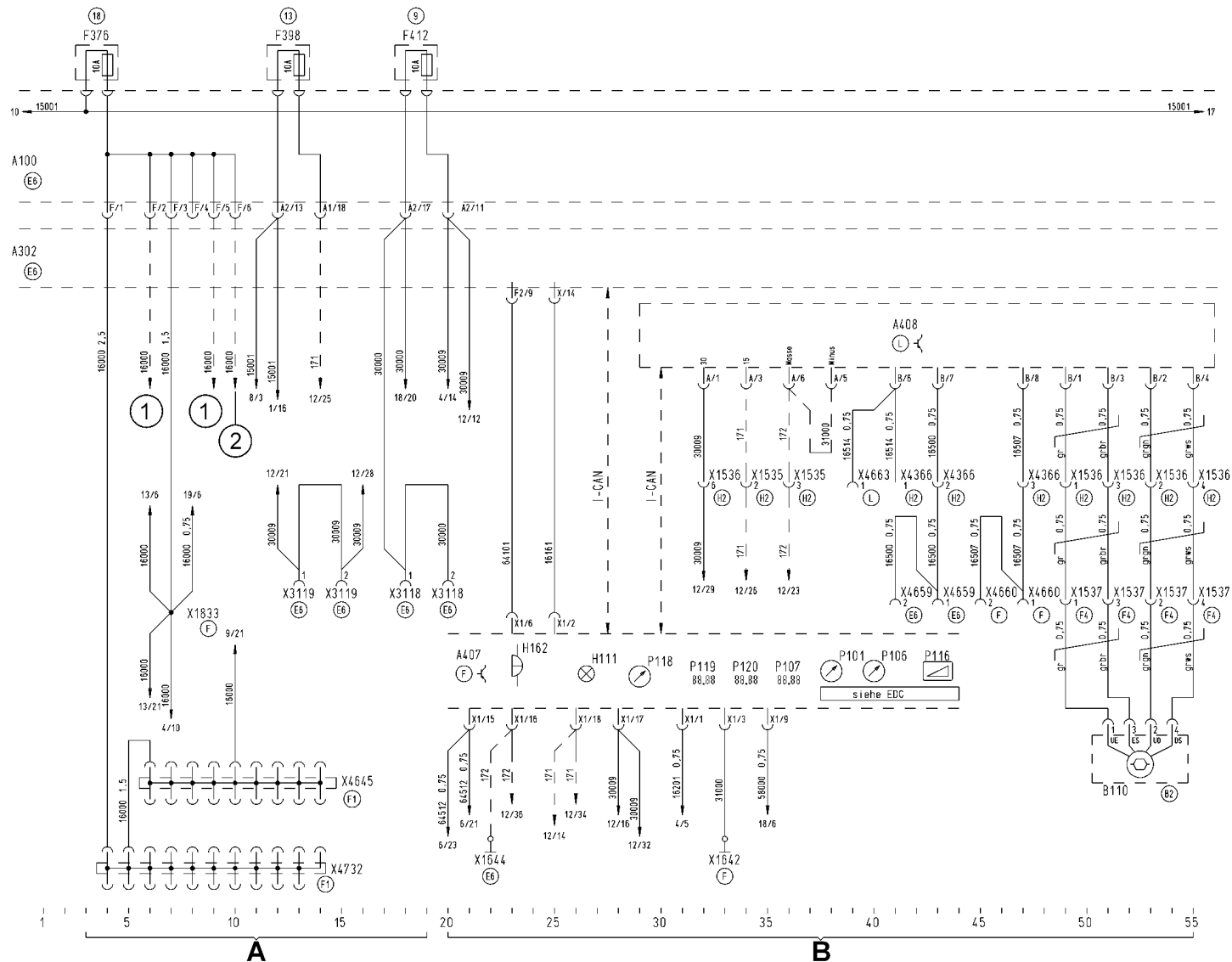
Date: 09.2007

Legend

A100 Central electrical system	2 Door module
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

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!

The diagram illustrates the electrical system layout, divided into five main sections (A, B, C, D, E) along a horizontal axis from 1 to 55. Section A (approx. 1-10) shows a fuse block (F158) and a relay (R108). Section B (approx. 15-25) contains a complex network of wires and components, including a fuse (F1) and a relay (R108). Section C (approx. 30-35) features a fuse (F1) and a relay (R108). Section D (approx. 45-50) shows a fuse (F1) and a relay (R108). Section E (approx. 50-55) contains a fuse (F1) and a relay (R108). The diagram includes a legend for wire colors and a scale bar at the bottom.

WIRING DIAGRAM NO. 81.99192.3079**A = Parking lights, left / B = Parking lights, right sheet 14 of 22**

Date: 10.2007

Legend

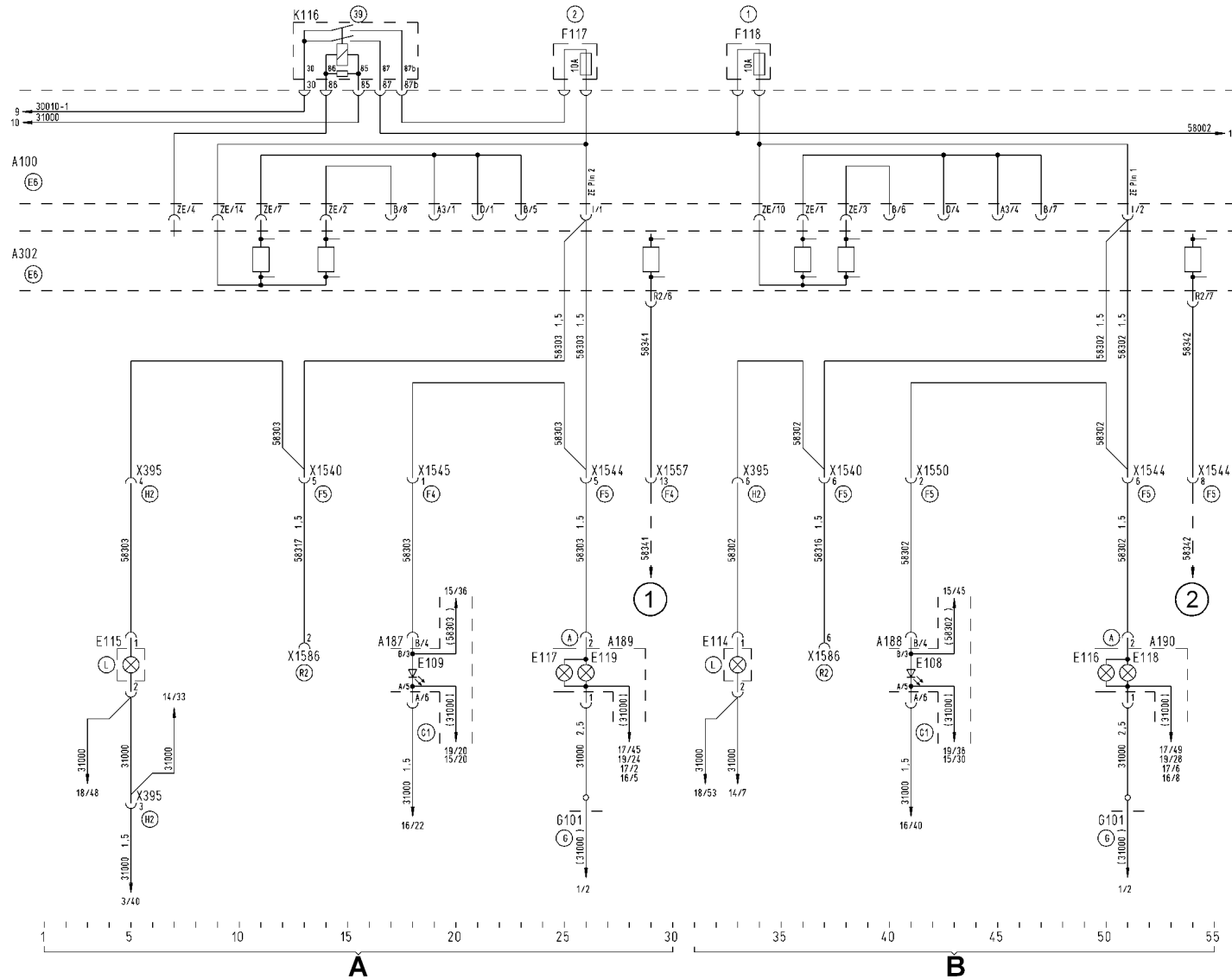
A100 Central electrical system
A187 Headlight, left
A188 Headlight, right
A189 Tail light, left
A190 Tail light, right
A302 Central computer 2
E108 Parking light, right
E109 Parking light, left
E114 Outline light, front right
E115 Outline light, front left
E116 Outline light, rear right
E117 Outline 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

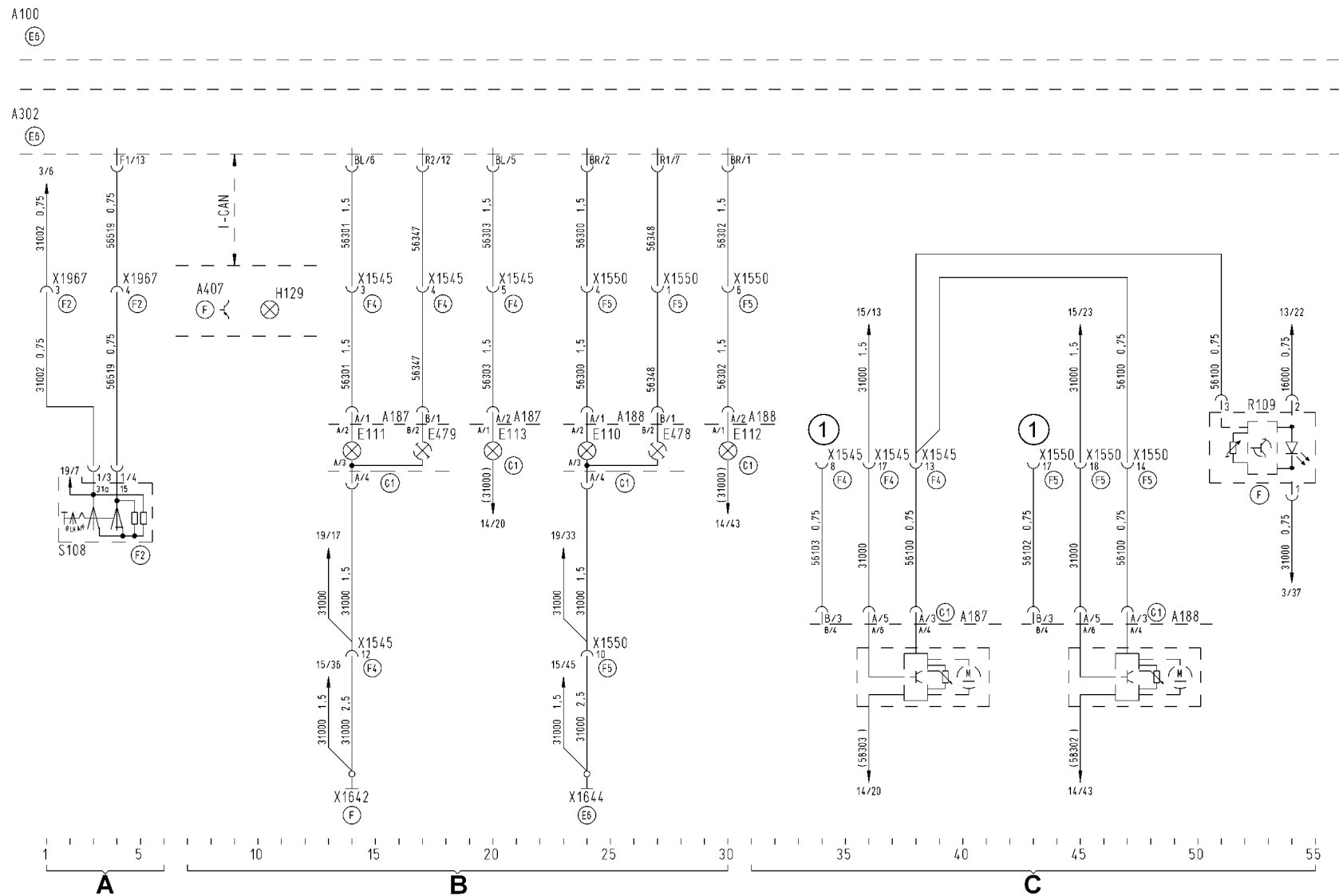
Date: 09.2007

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

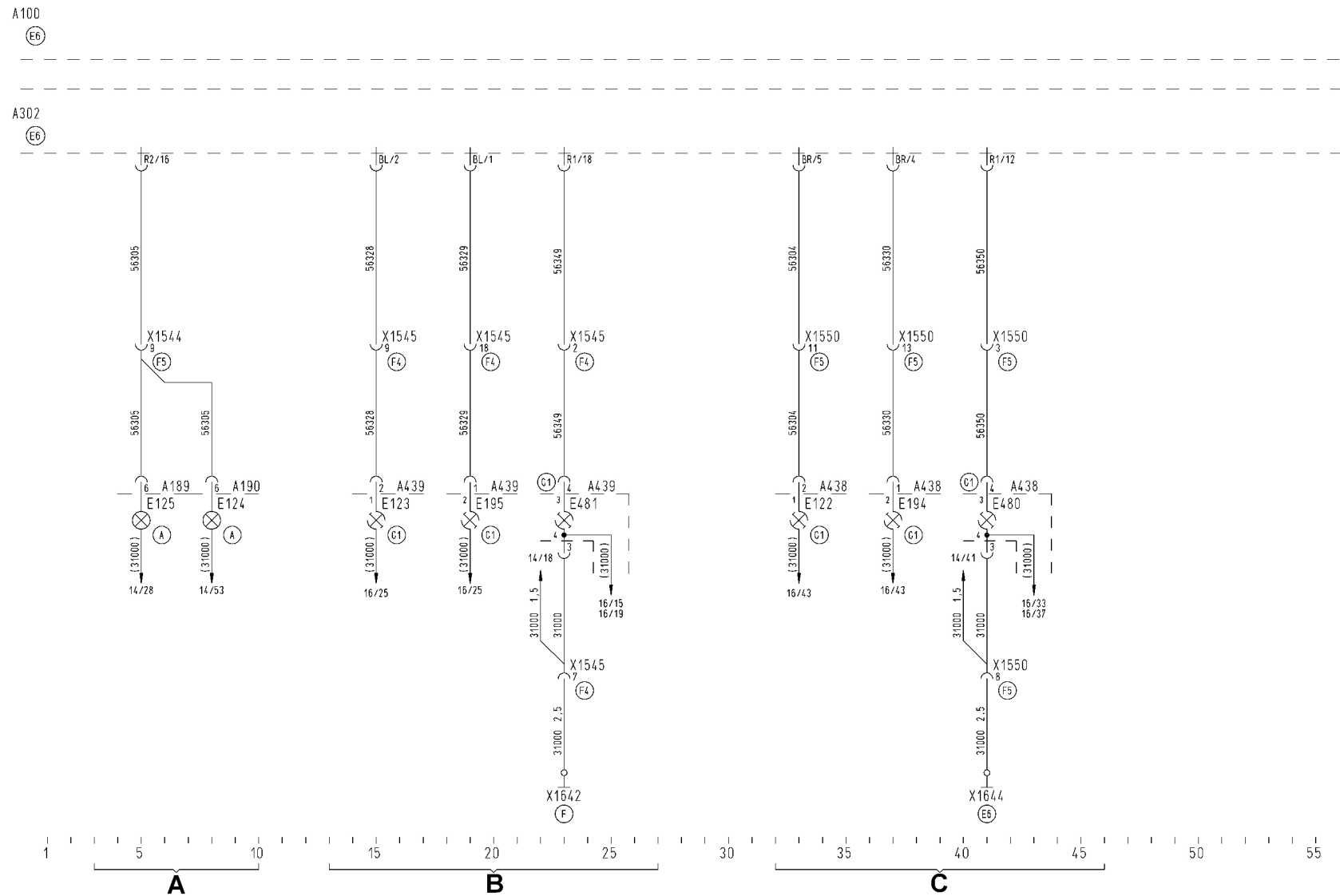
Date: 03.2005

Legend

- A**100 Central electrical system
- A189 Tail light, left
- A190 Tail light, right
- A302 Central computer 2
- A438 Light surround, right
- A439 Light surround, left
- E**122 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
- X**1544 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

SERIES STANDARD WIRING DIAGRAM

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!

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**

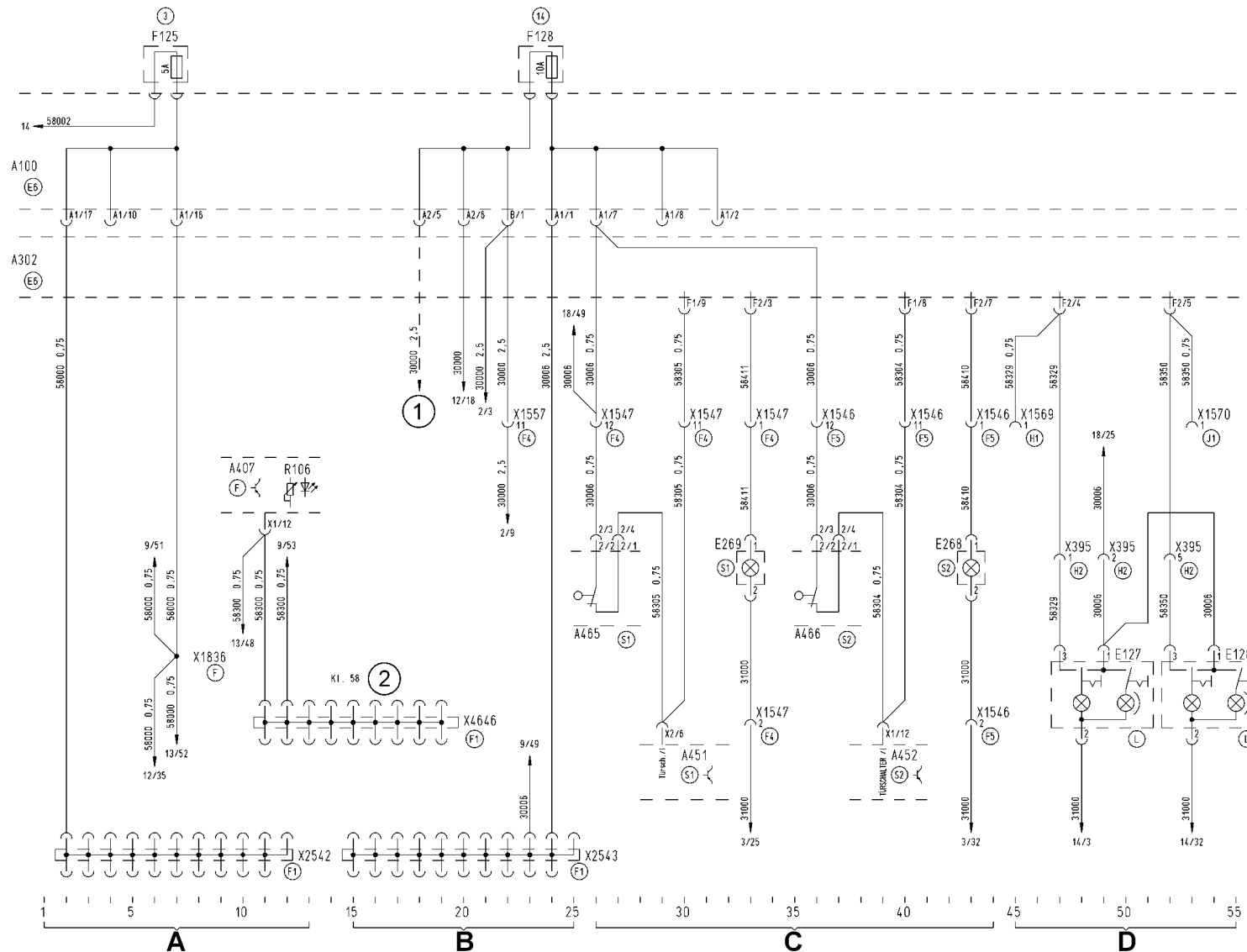
Date: 09.2006

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

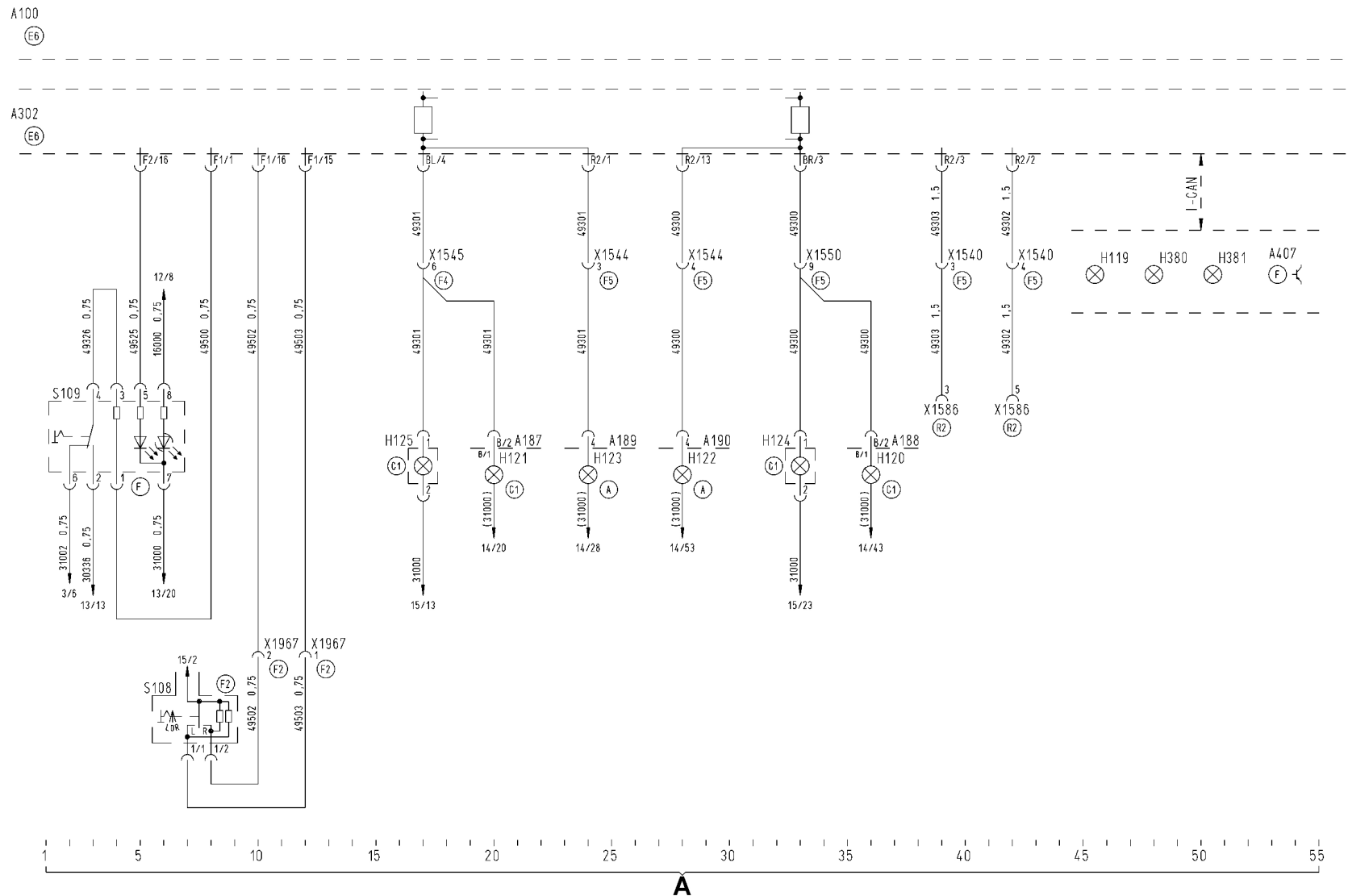
- A100 Central electrical system
- A187 Headlight, left
- A188 Headlight, right
- A189 Tail light, left
- A190 Tail light, right
- A302 Central computer 2
- A407 Instrumentation
- H119 Check lamp, turn indicators, trailer
- H120 Turn indicator, front right
- H121 Turn indicator, front left
- H122 Turn 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**

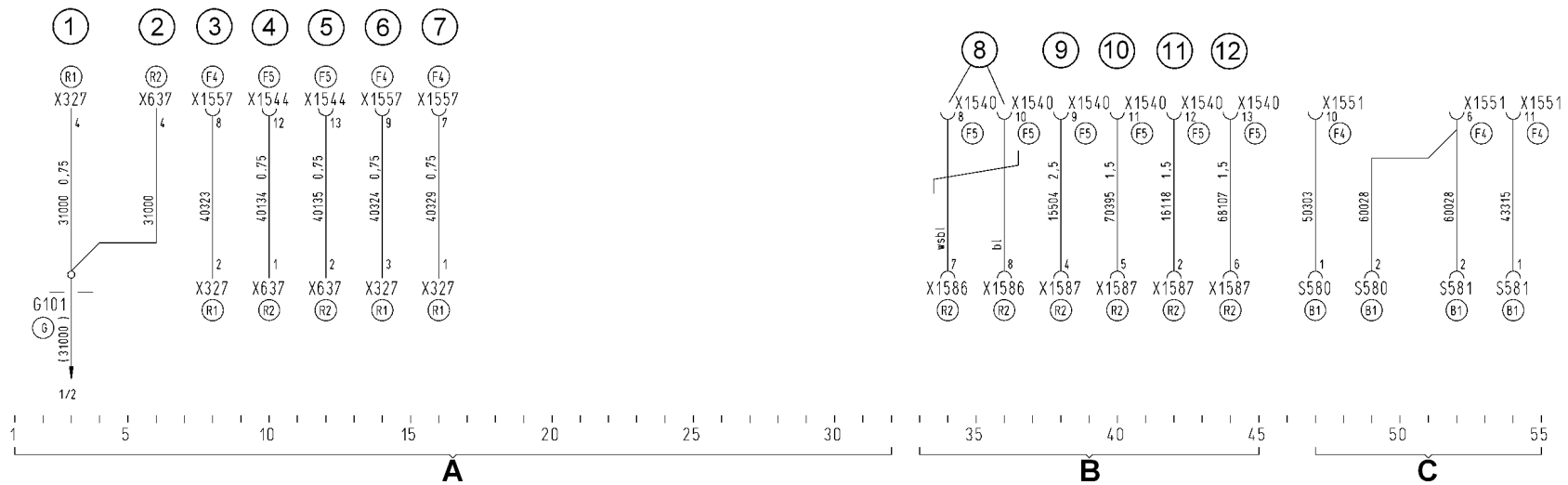
Installation position of X1586 and X1587 for semitrailer is E8!

SERIES STANDARD WIRING DIAGRAM

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

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3079**A = Gearbox / B = T-CAN network sheet 21 of 22**

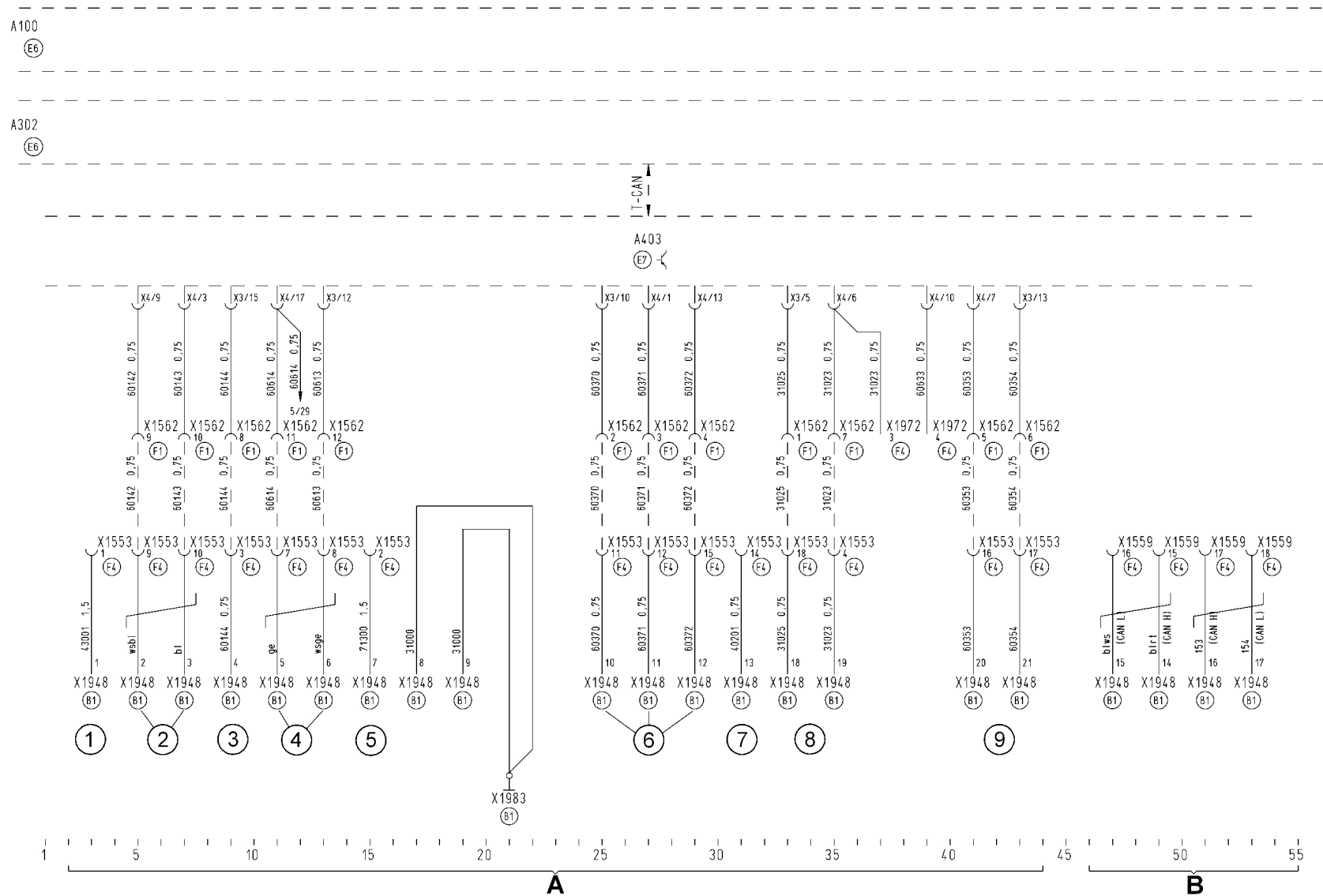
Date: 03.2005

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

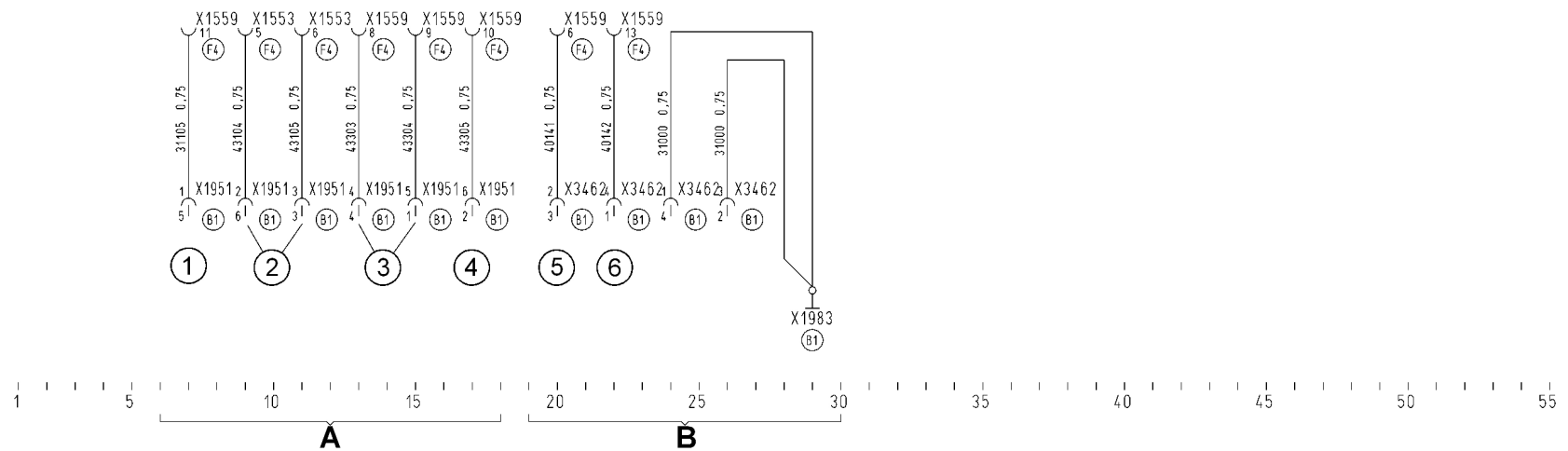
5 Check lamp, power take-off I

6 Check lamp, power take-off II

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

A100
(E6)

A302
(E6)



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!

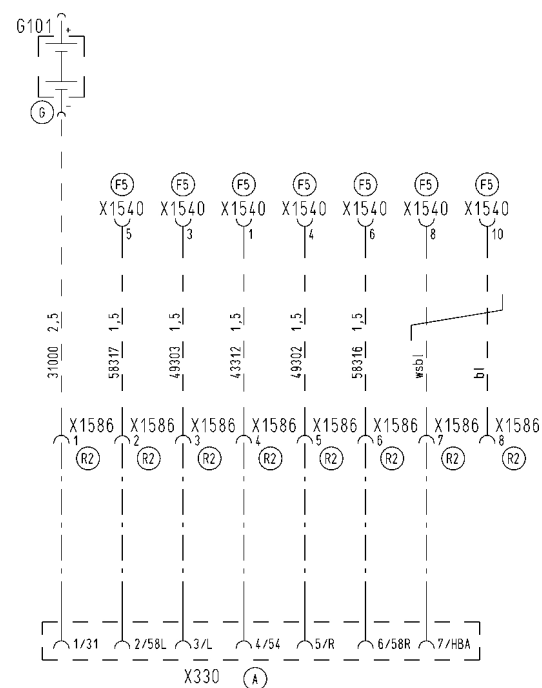
Trailer socket 24V 7-pole sheet 1 of 1

A100

(E6)

A302

(E6)



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

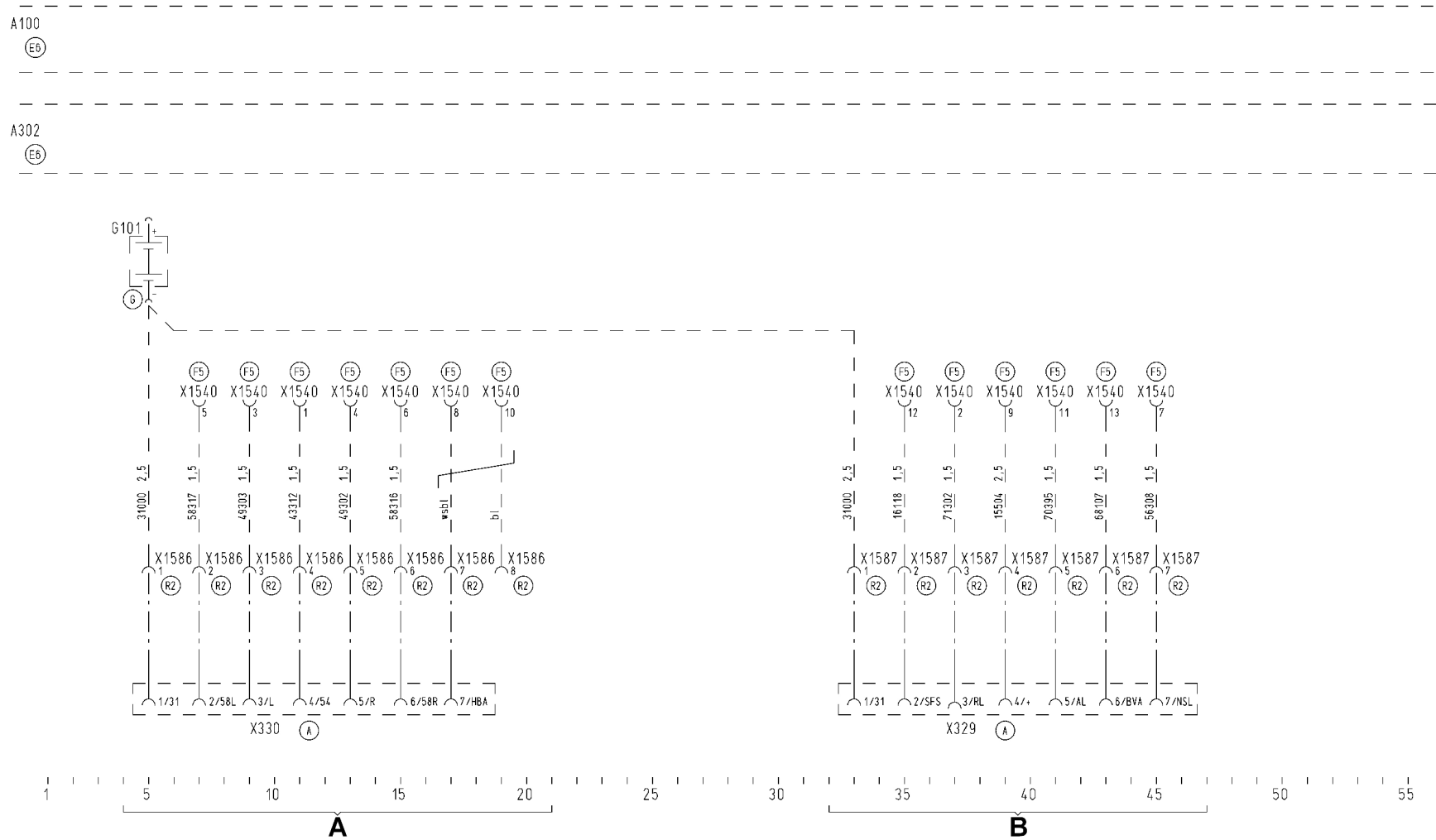
X1587 Plug conn., connection, trailer socket 2



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

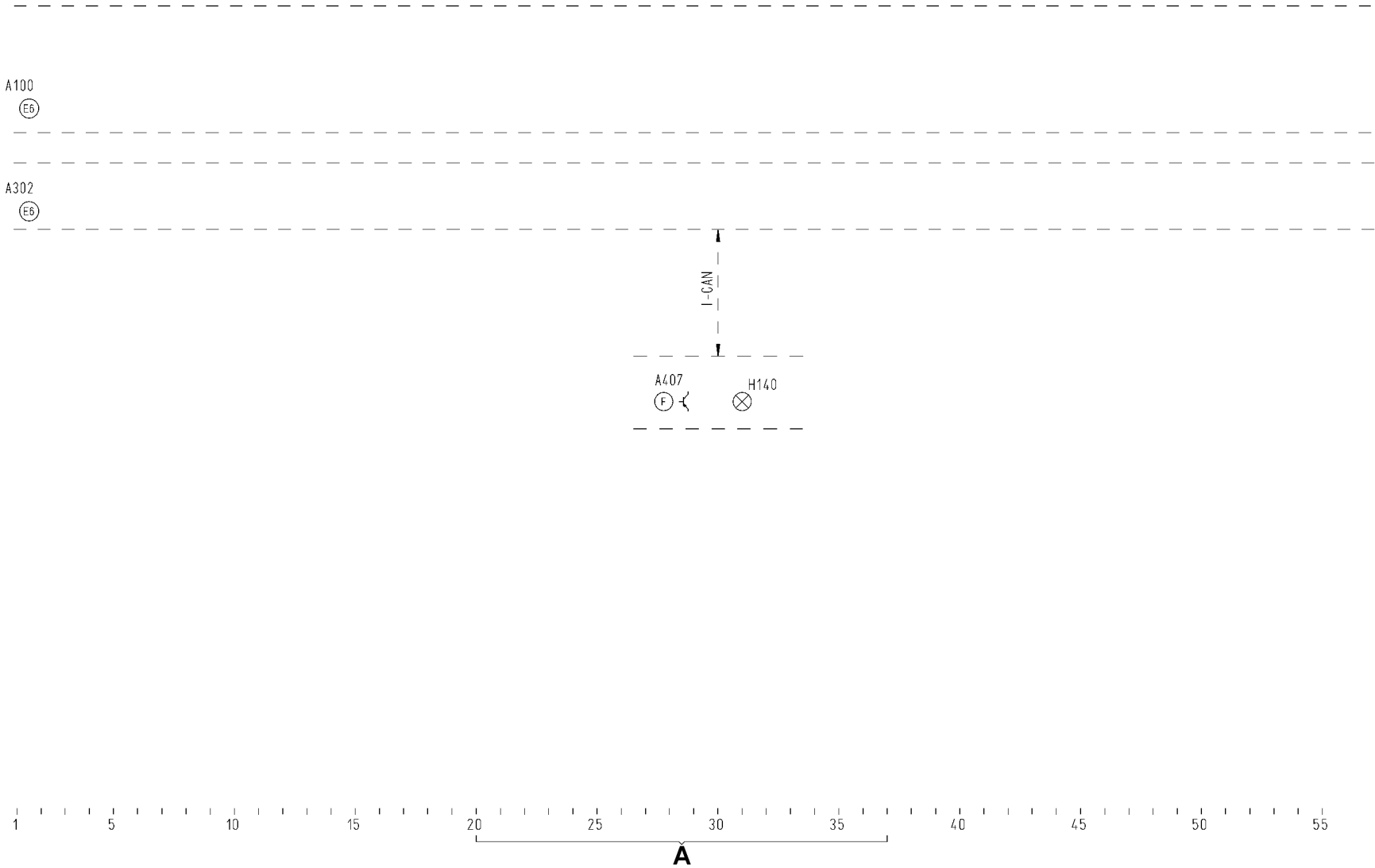
A100 Central electrical system
A302 Central computer 2
A407 Instrumentation
H140 Check lamp, ASR/ESP info.



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

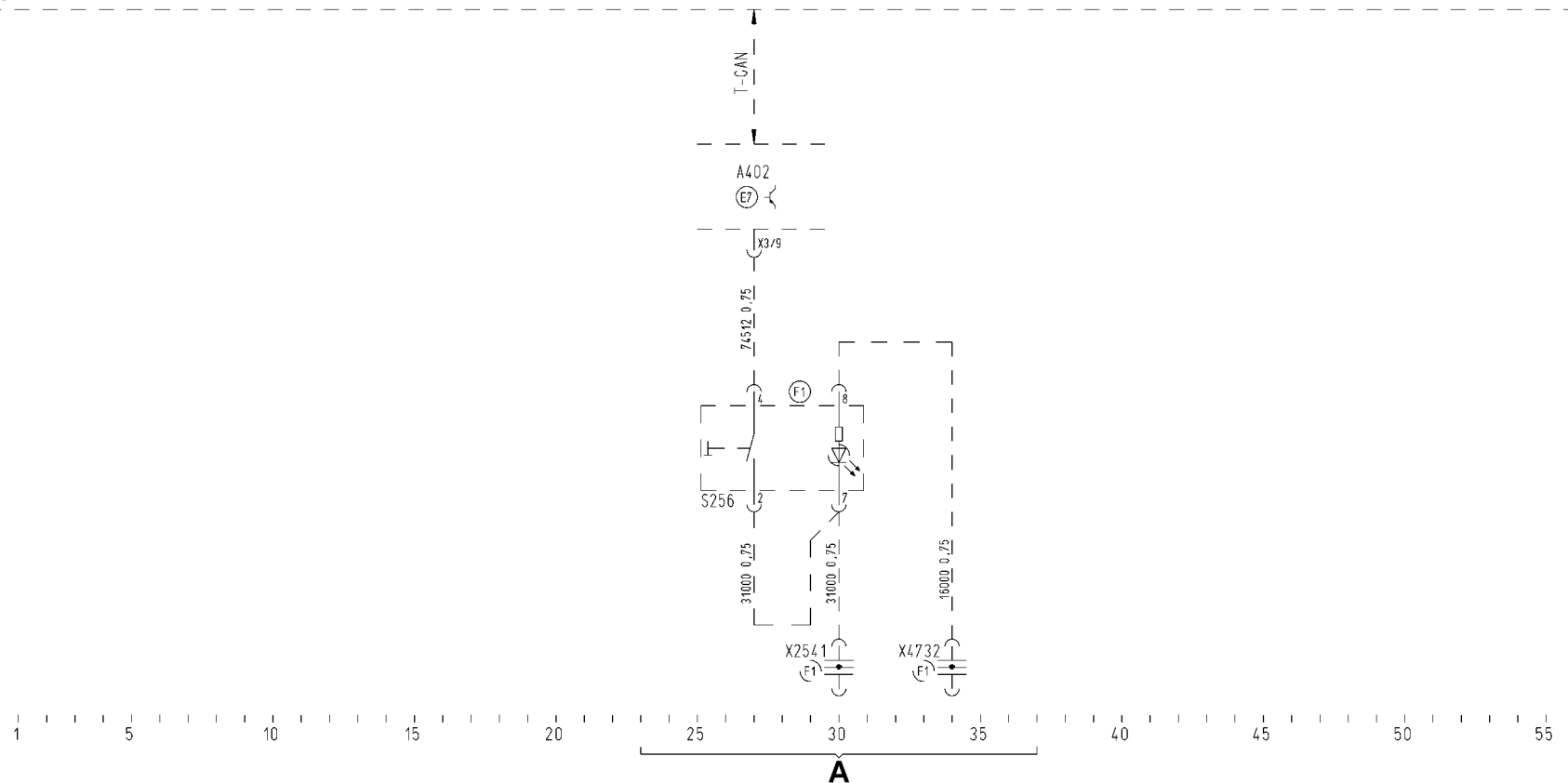
A ASR slip thresholds button

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

A100
(E6)

A302
(E6)



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 +

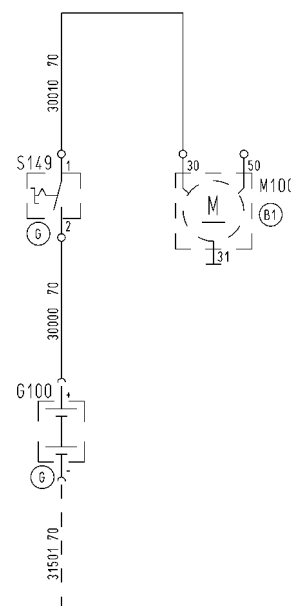
Battery master switch, mechanical sheet 1 of 1

A100

(E6)

A302

(E6)



1 5 10 15 20 25 30 35 40 45 50 55

A

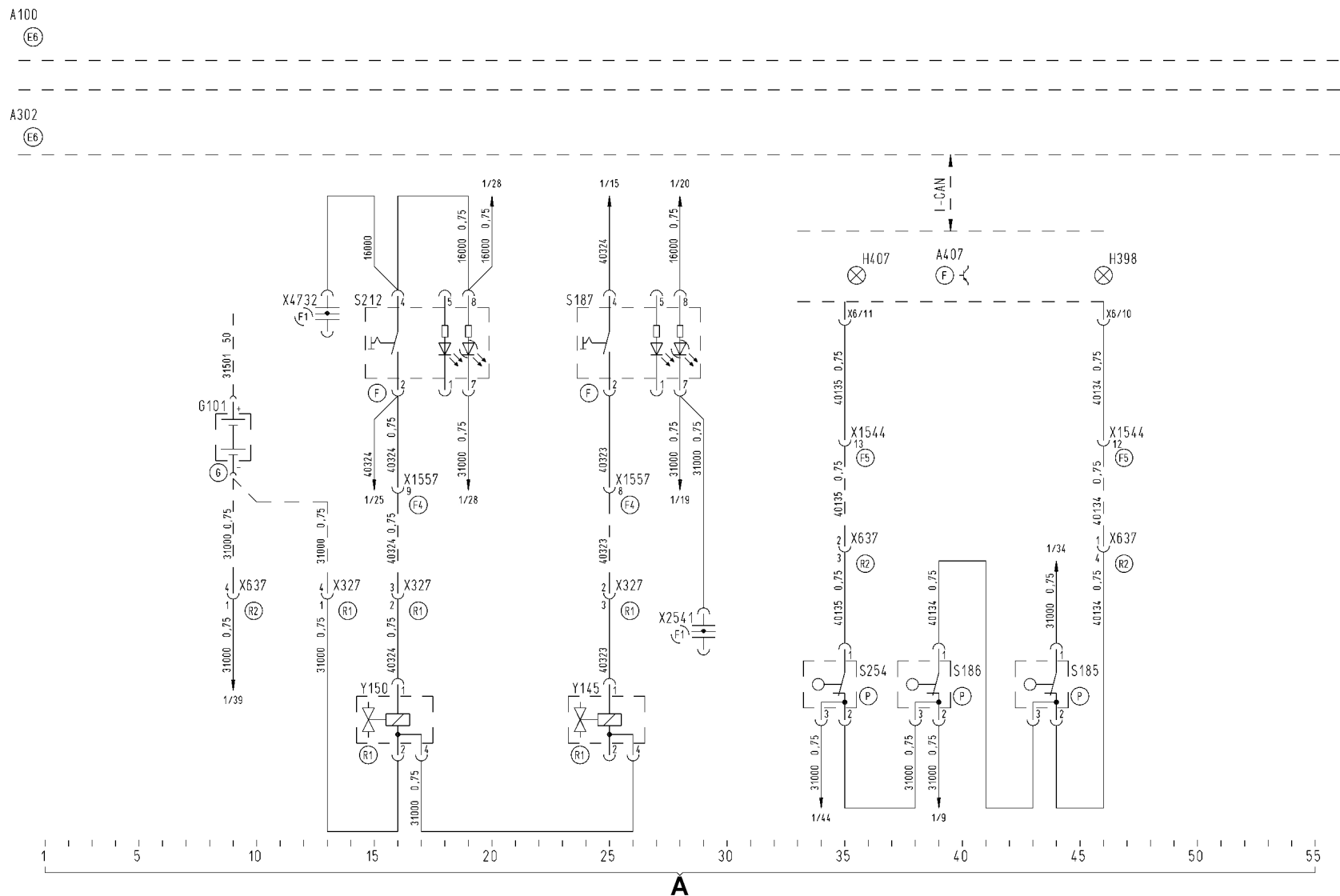
WIRING DIAGRAM NO. 81.99192.3235**Interaxle and transverse differential lock, rear axle (3-axle vehicle) sheet 1 of 1**

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**

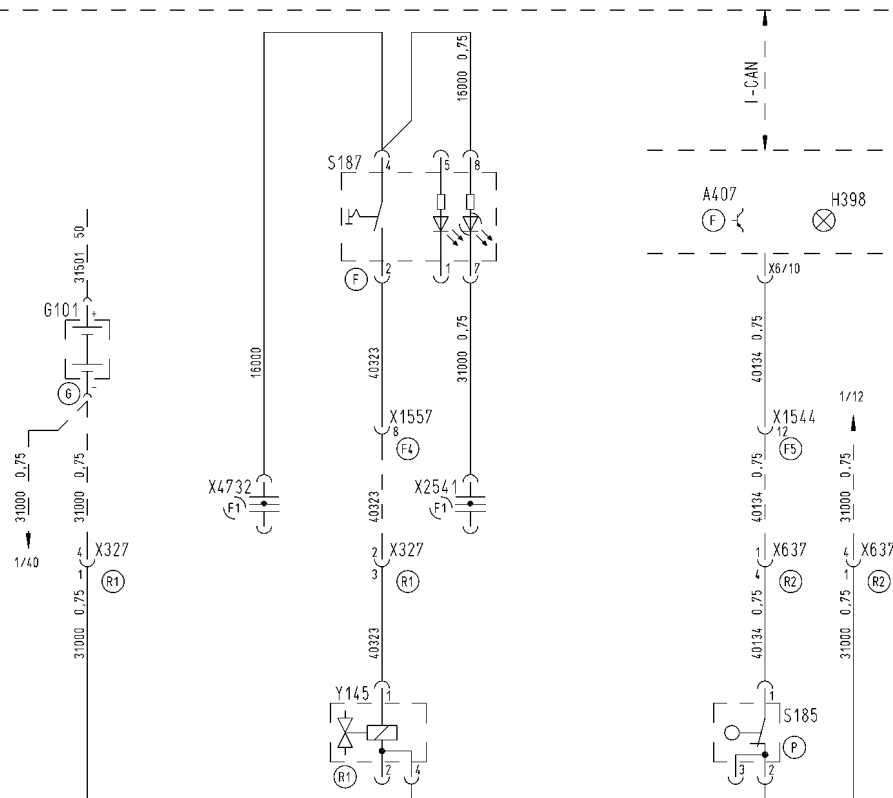
A100	Central electrical system
A302	Central computer 2
A407	Instrumentation
G101	Battery 2
H398	Check lamp, transverse differential lock, rear axle
S185	Switch, indicator, transverse differential lock, rear axle
S187	Switch, transverse differential lock, rear axle
X327	Plug conn. to solenoid valve in 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

A100

E6

A302

E6



A horizontal number line with major tick marks labeled 1, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, and 55. There are also minor tick marks between the major ones, representing every integer.

A

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

E6



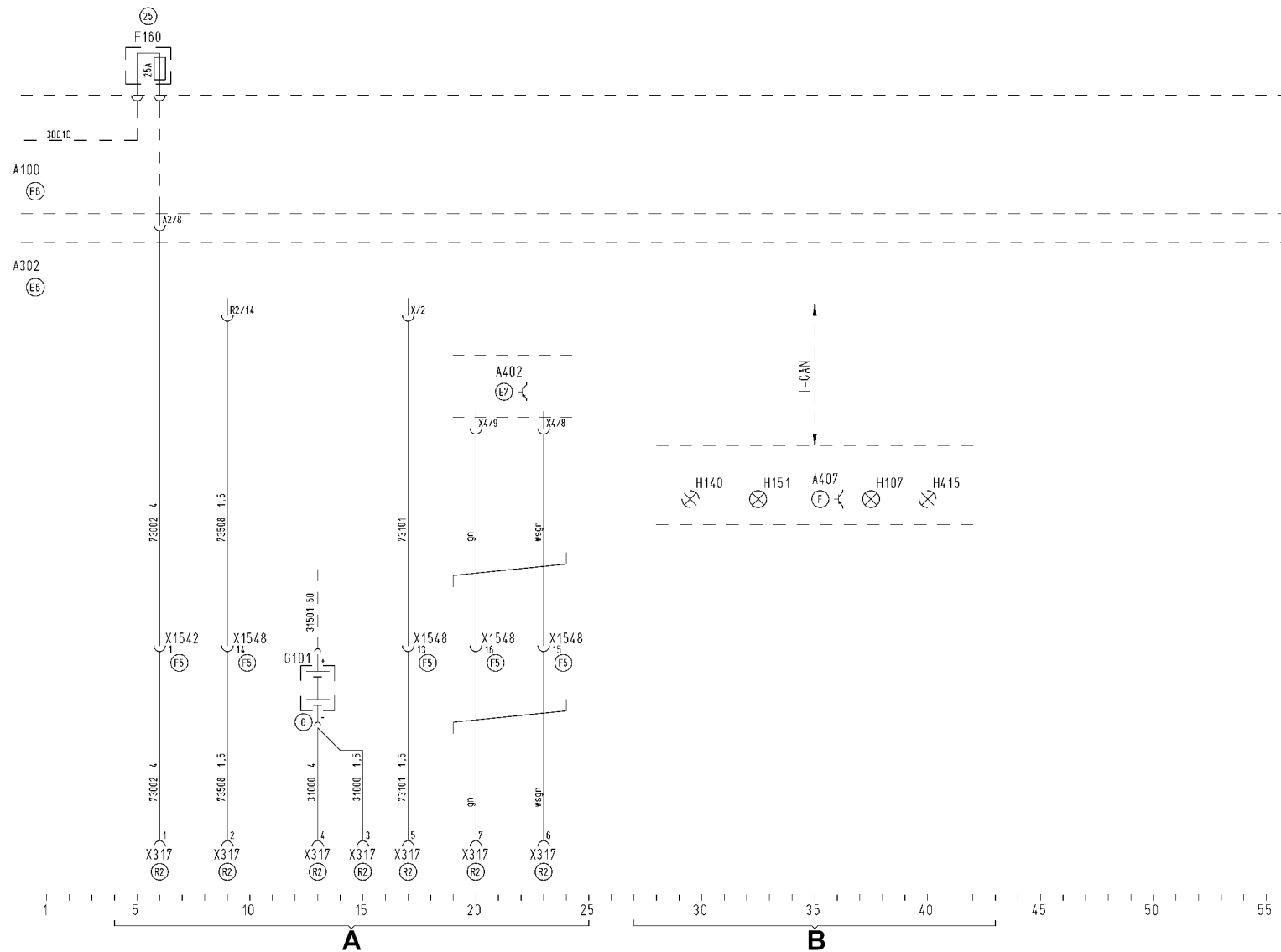
WIRING DIAGRAM NO. 81.99192.3246**Electronic Brake System EBS 5 (2-axle vehicle) sheet 2 of 3**

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

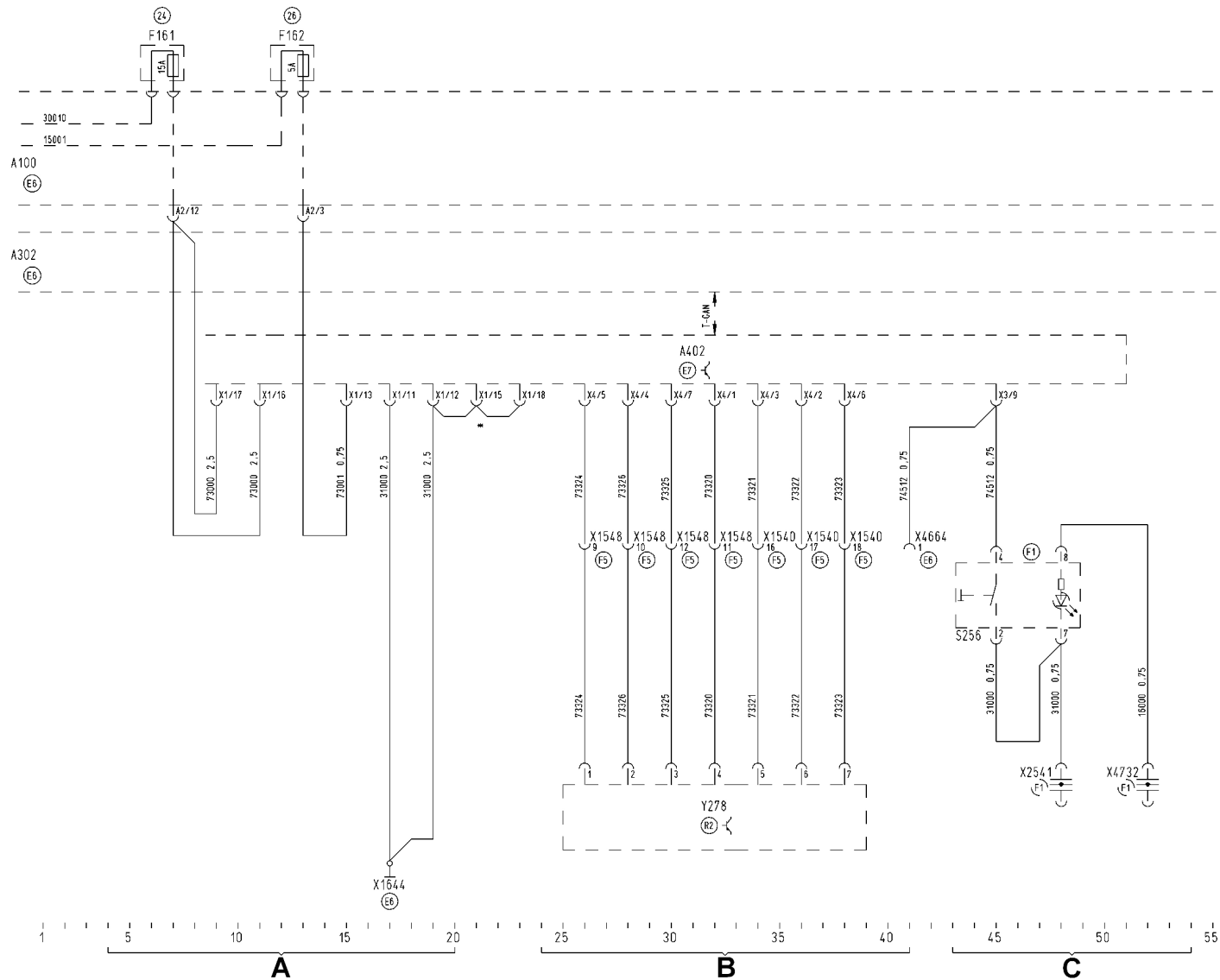
- A Voltage supply**
- B Trailer control module**
- C ASR slip thresholds**

-
- 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**

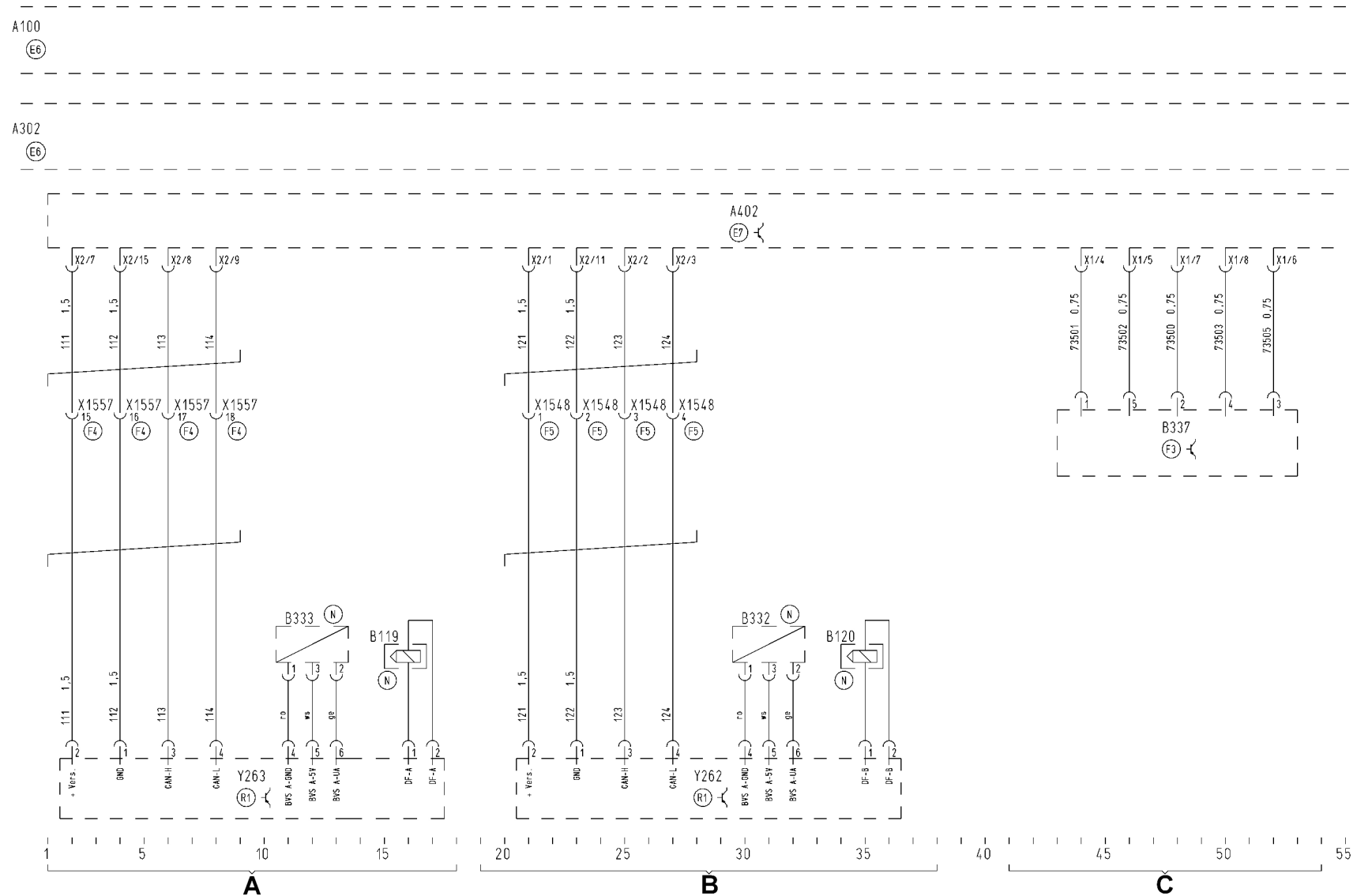
Date: 11.2005

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



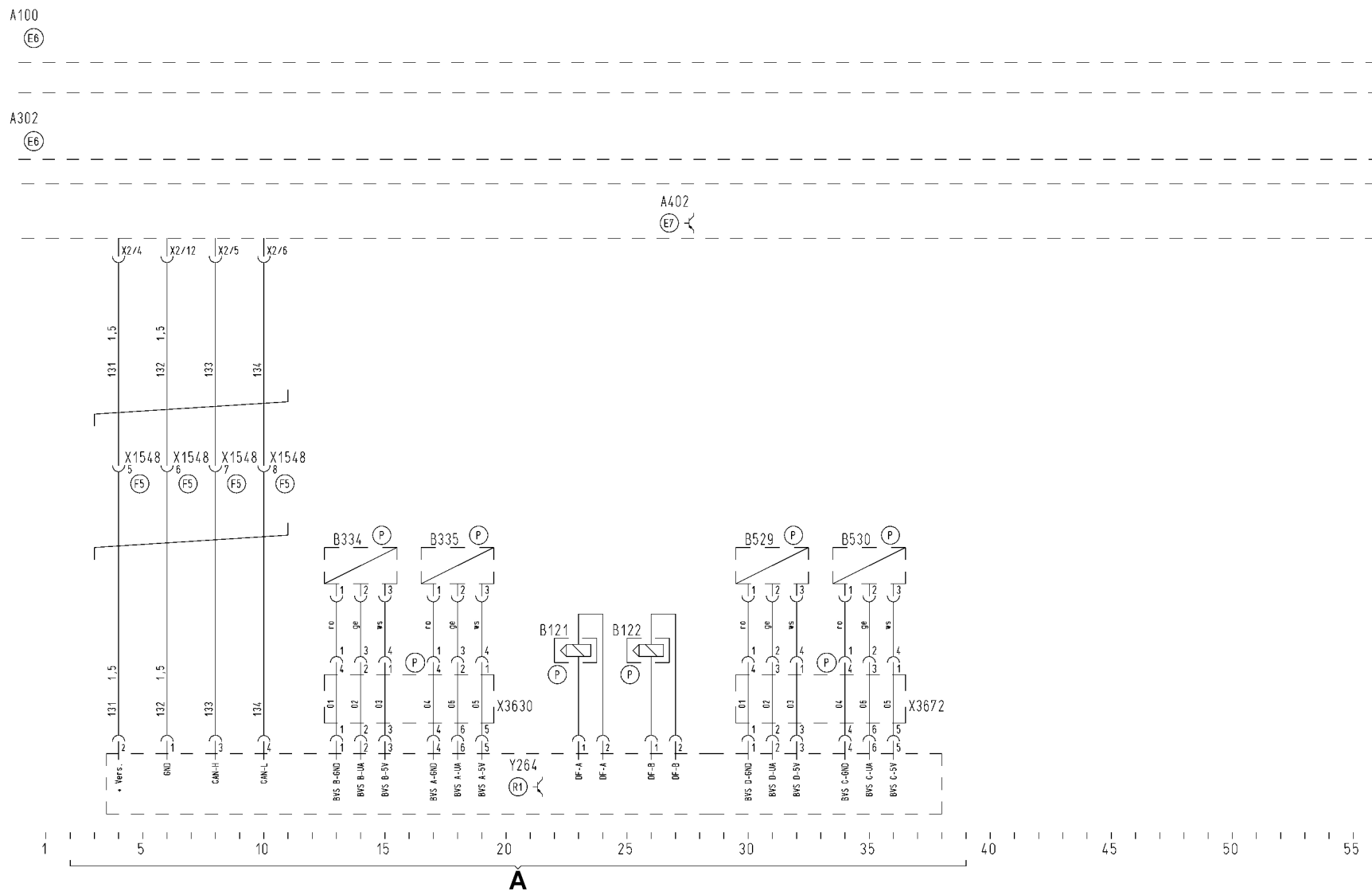
WIRING DIAGRAM NO. 81.99192.3247**Electronic Brake System EBS 5 (3-axle vehicle) sheet 2 of 4**

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



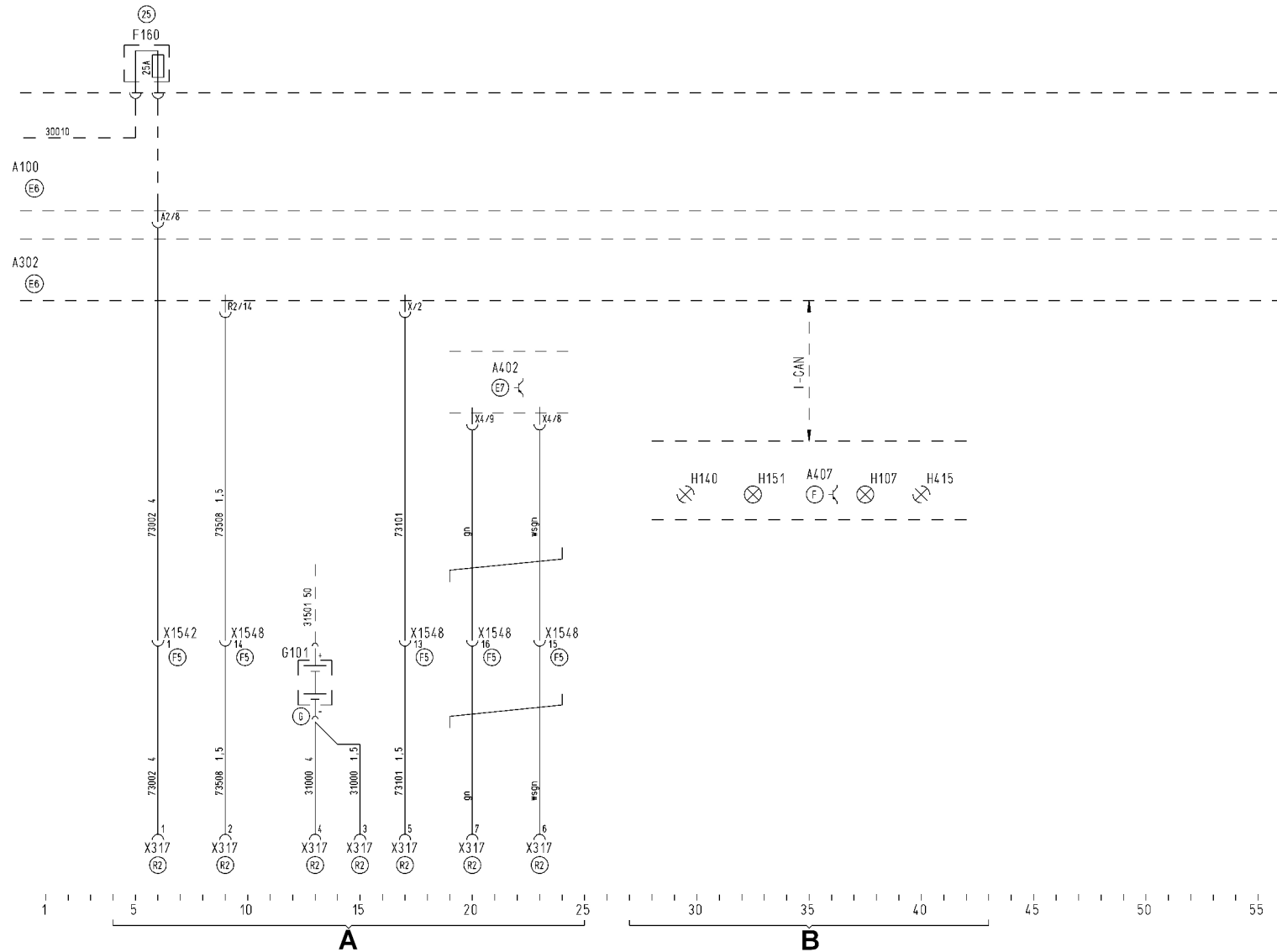
WIRING DIAGRAM NO. 81.99192.3247**Electronic Brake System EBS 5 (3-axle vehicle) sheet 3 of 4**

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!

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

[illegible]

WIRING DIAGRAM NO. 81.99192.3250

ECAS 2 (4x2) sheet 2 of 2

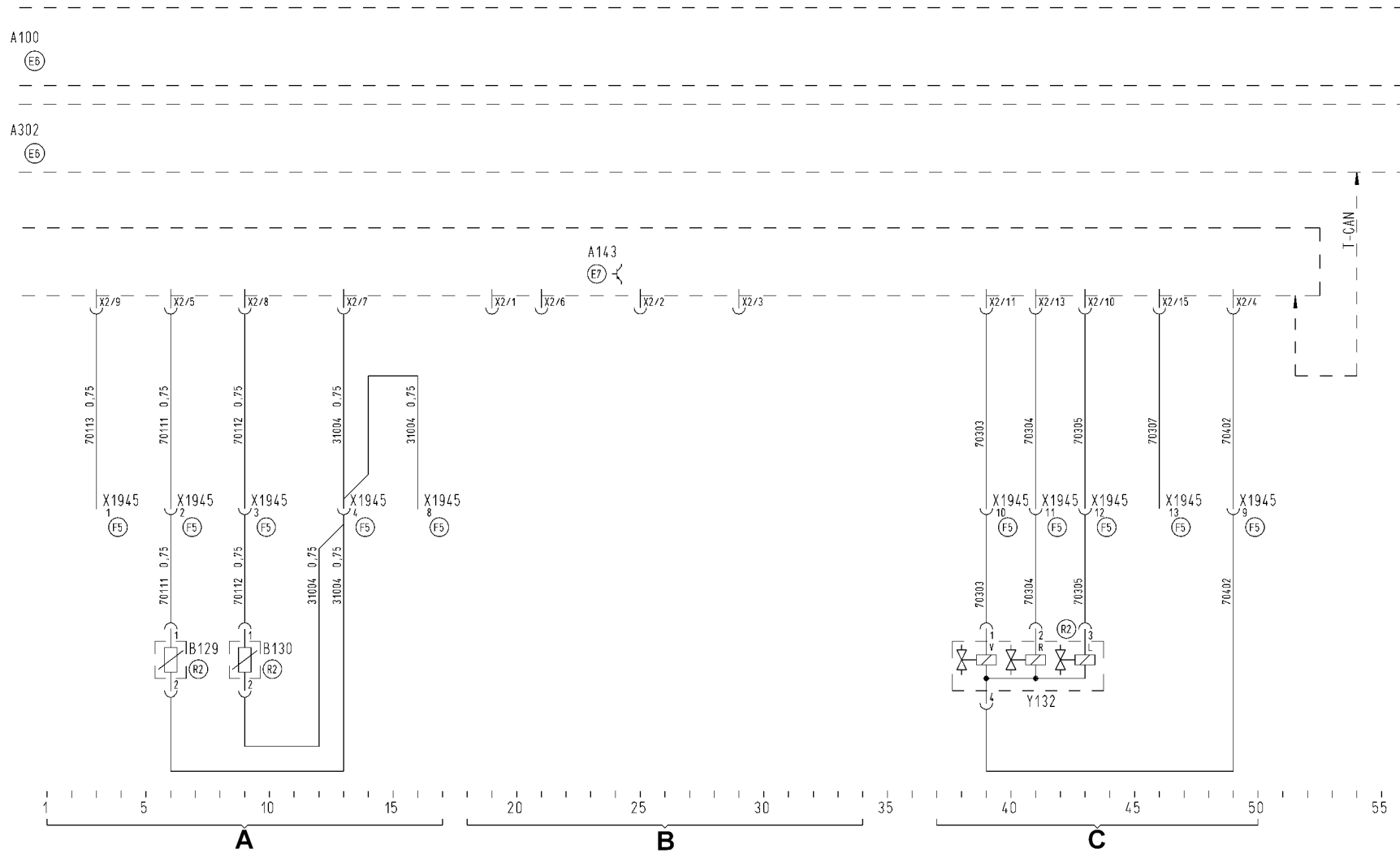
Date: 11.05

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

The diagram illustrates a complex PCB layout for a 1000-pin connector. Key components and connections include:

- Power and Protection:** A 1500V power source is connected to a 10A fuse (F375). A 15A fuse (F164) is also present, connected to a 30010 1.5 component.
- Connectors and Joints:** Various connectors and joints are labeled, including X1/10, X1/7, X1/12, X1/13, X1/15, X1/8, X1/11, X1644, X770, and X1/1.
- ICs and Components:** Several integrated circuits and components are shown, including A100, A302, A143, A221, A407, and H394. A 70002 1.5 component is also present.
- Signal and Data Lines:** A CAN bus interface (I-CAN) is shown, connected to A407 and H394. Data lines are labeled CLK and DATA.
- Layout and Scale:** The layout is divided into three sections: A, B, and C. A scale bar at the bottom ranges from 1 to 55 units.

WIRING DIAGRAM NO. 81.99192.3248

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

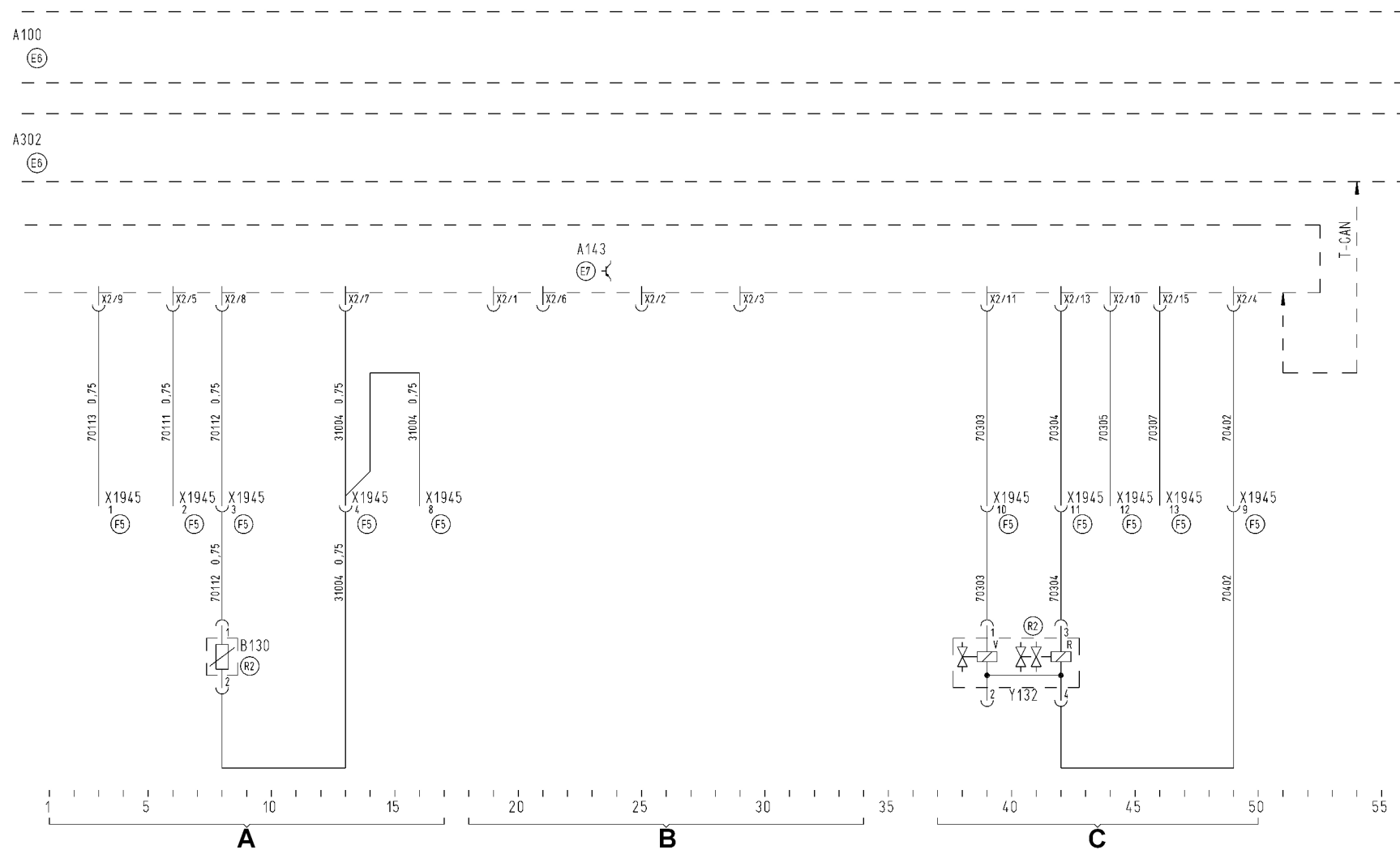
Date: 11.05

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



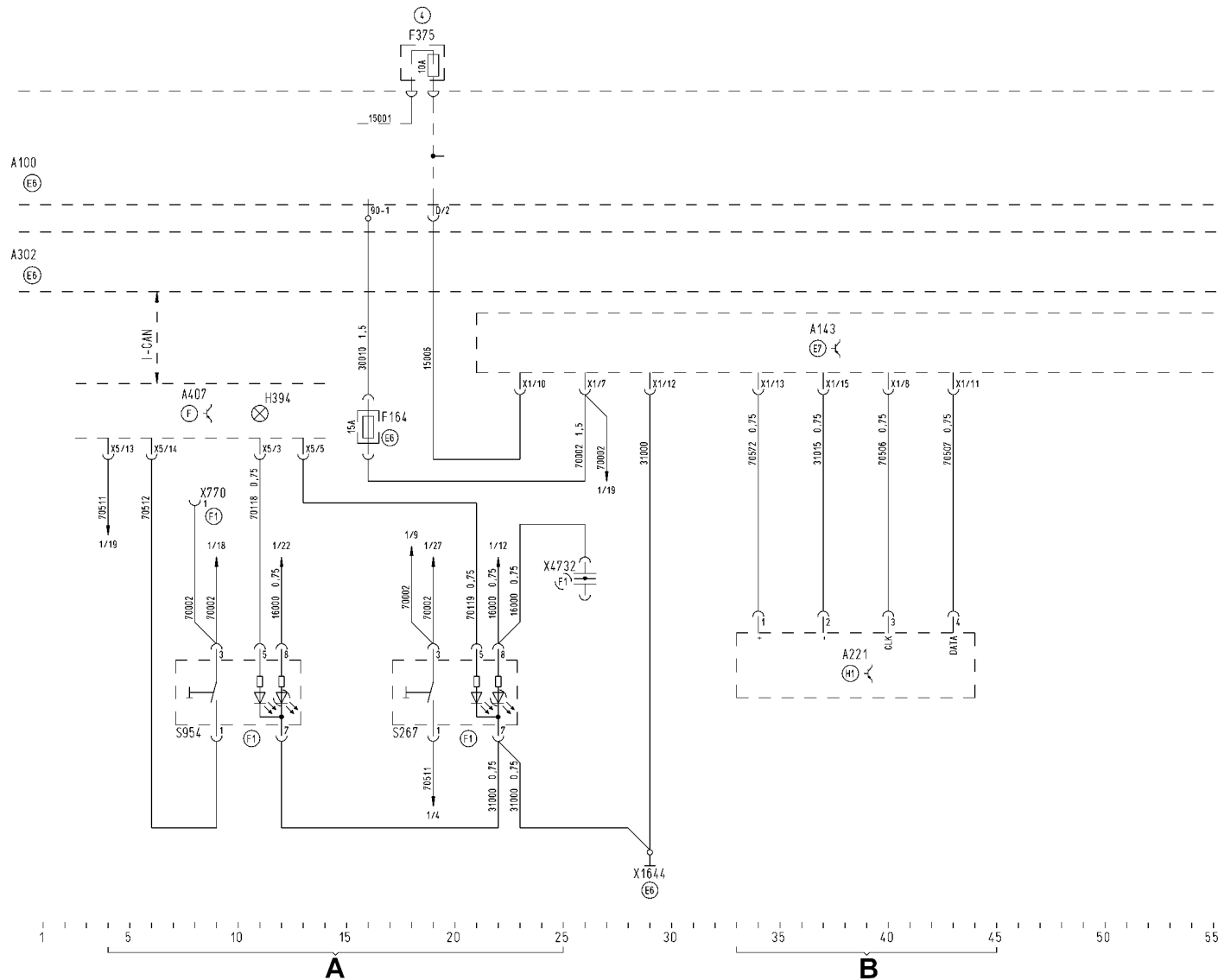
WIRING DIAGRAM NO. 81.99192.3253**ECAS 2 (6x2 optionally with ALM/crane) sheet 1 of 2**

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

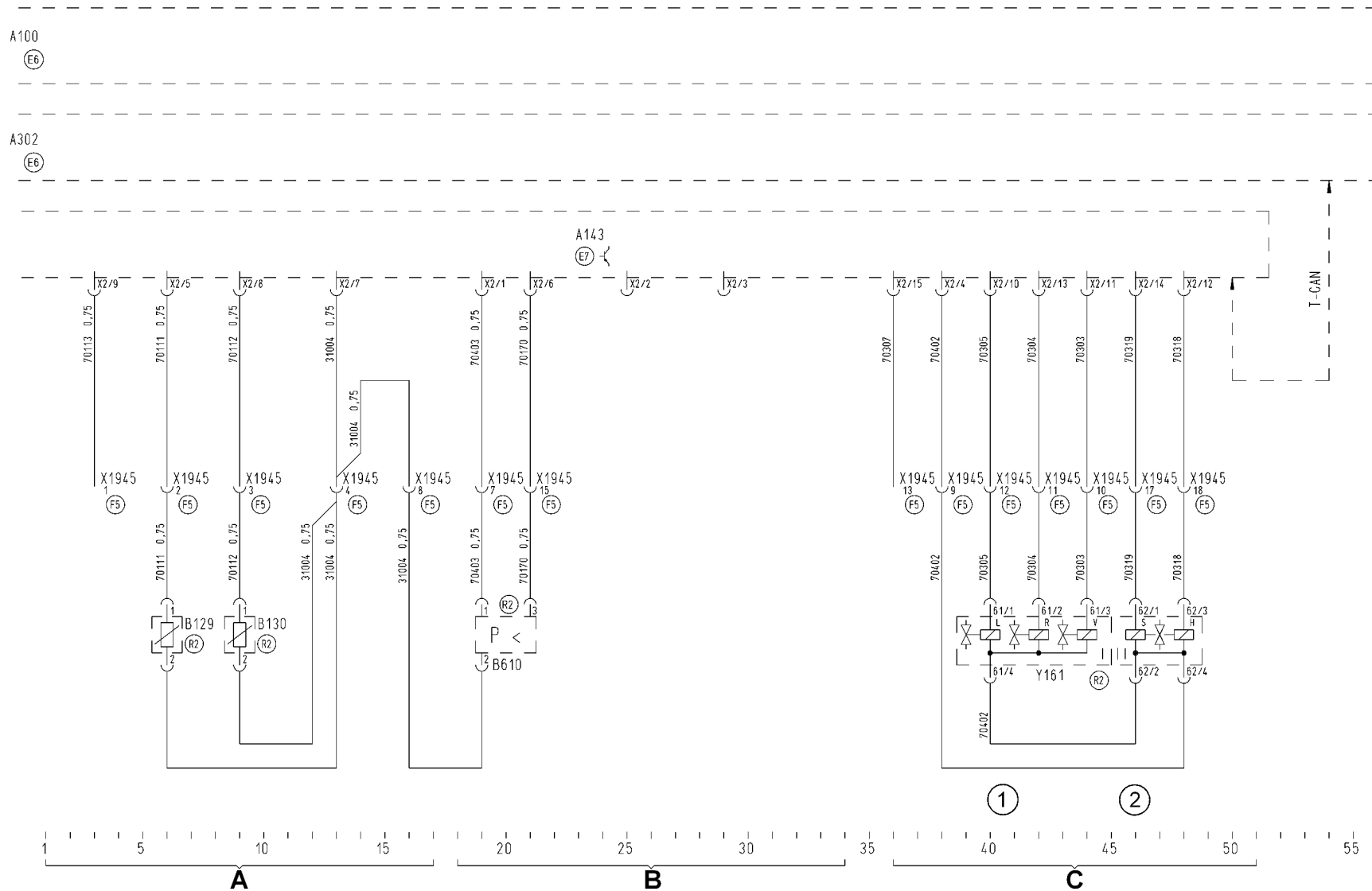
Legend

- 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**

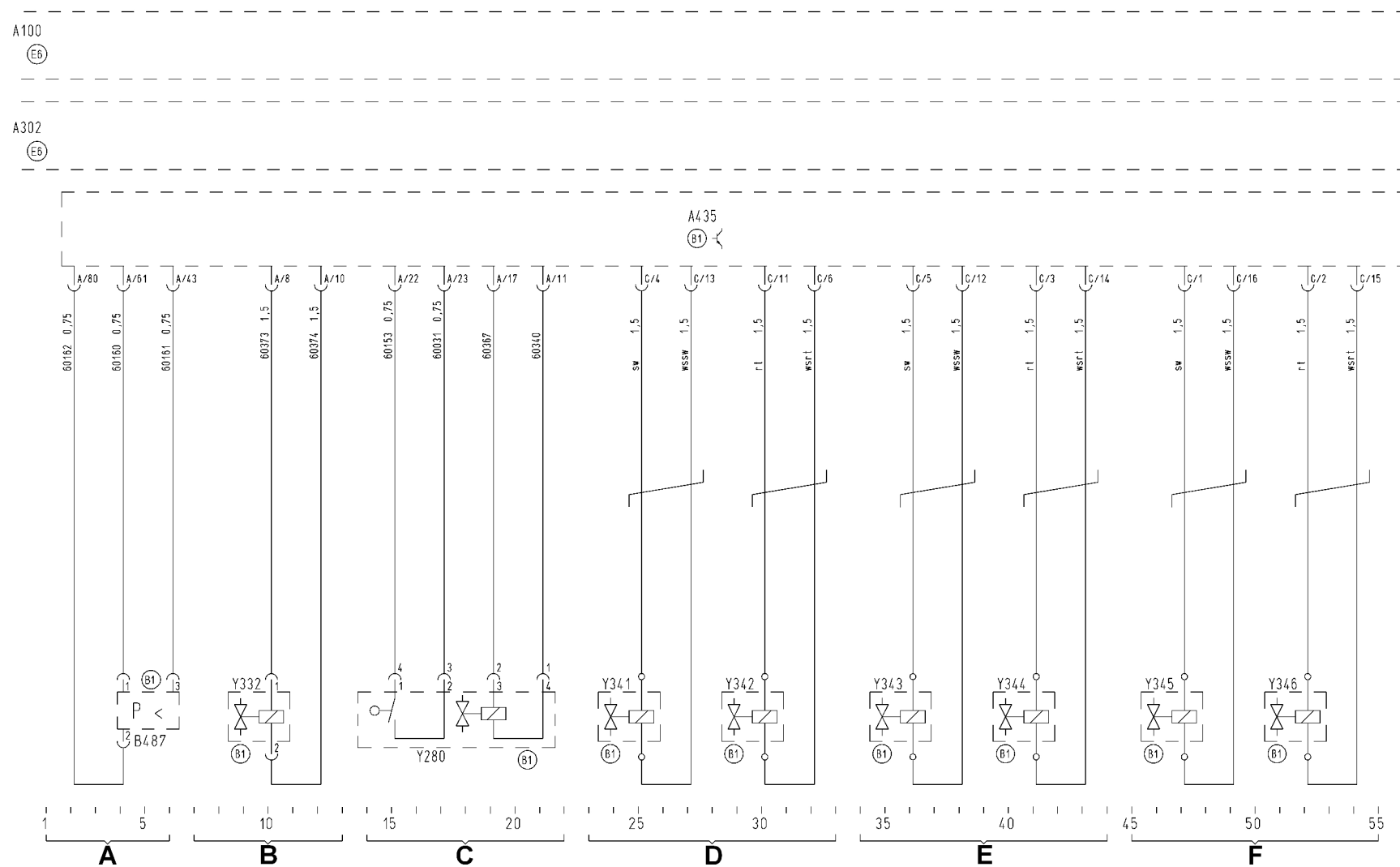
Date: 02.2008

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**

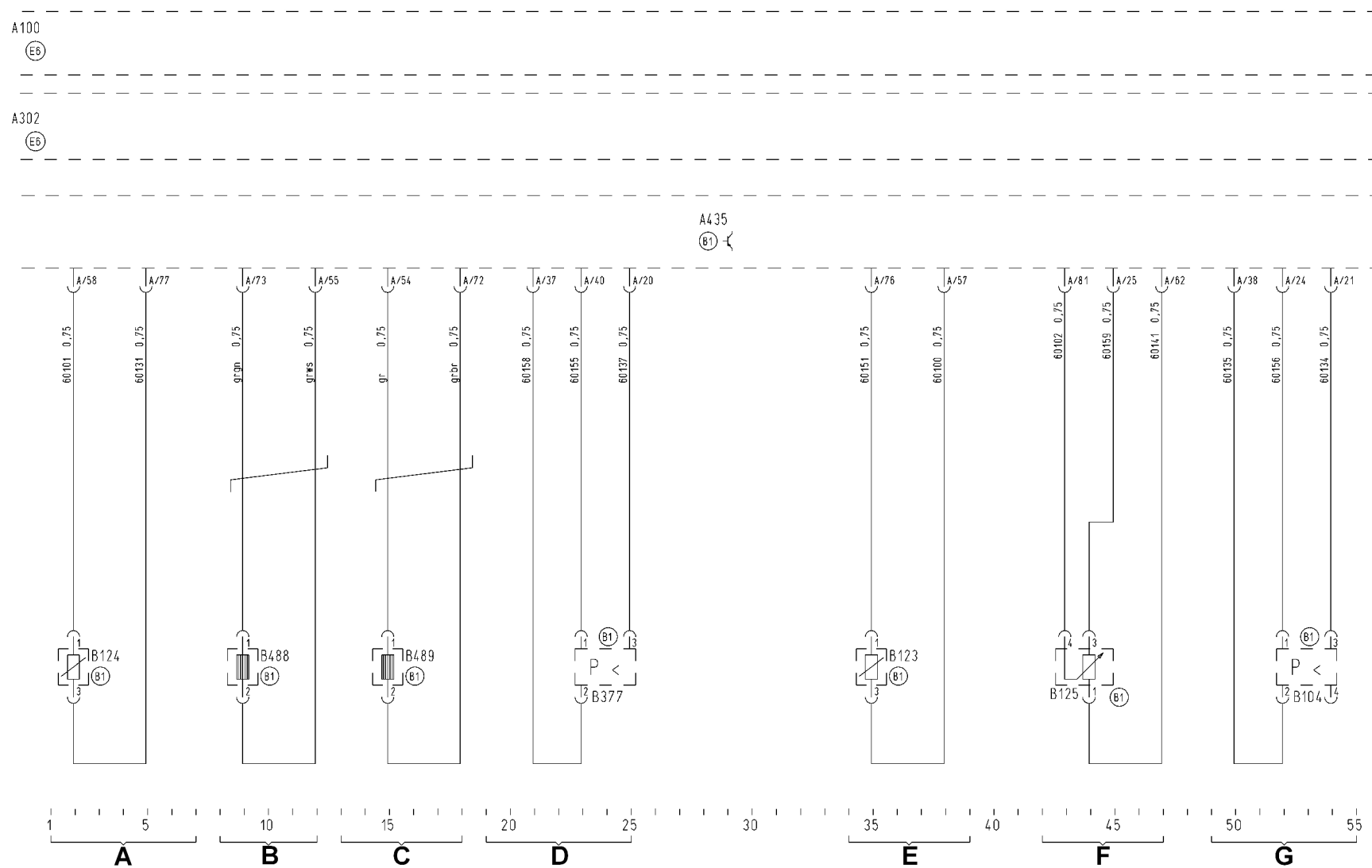
Date: 02.2008

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**

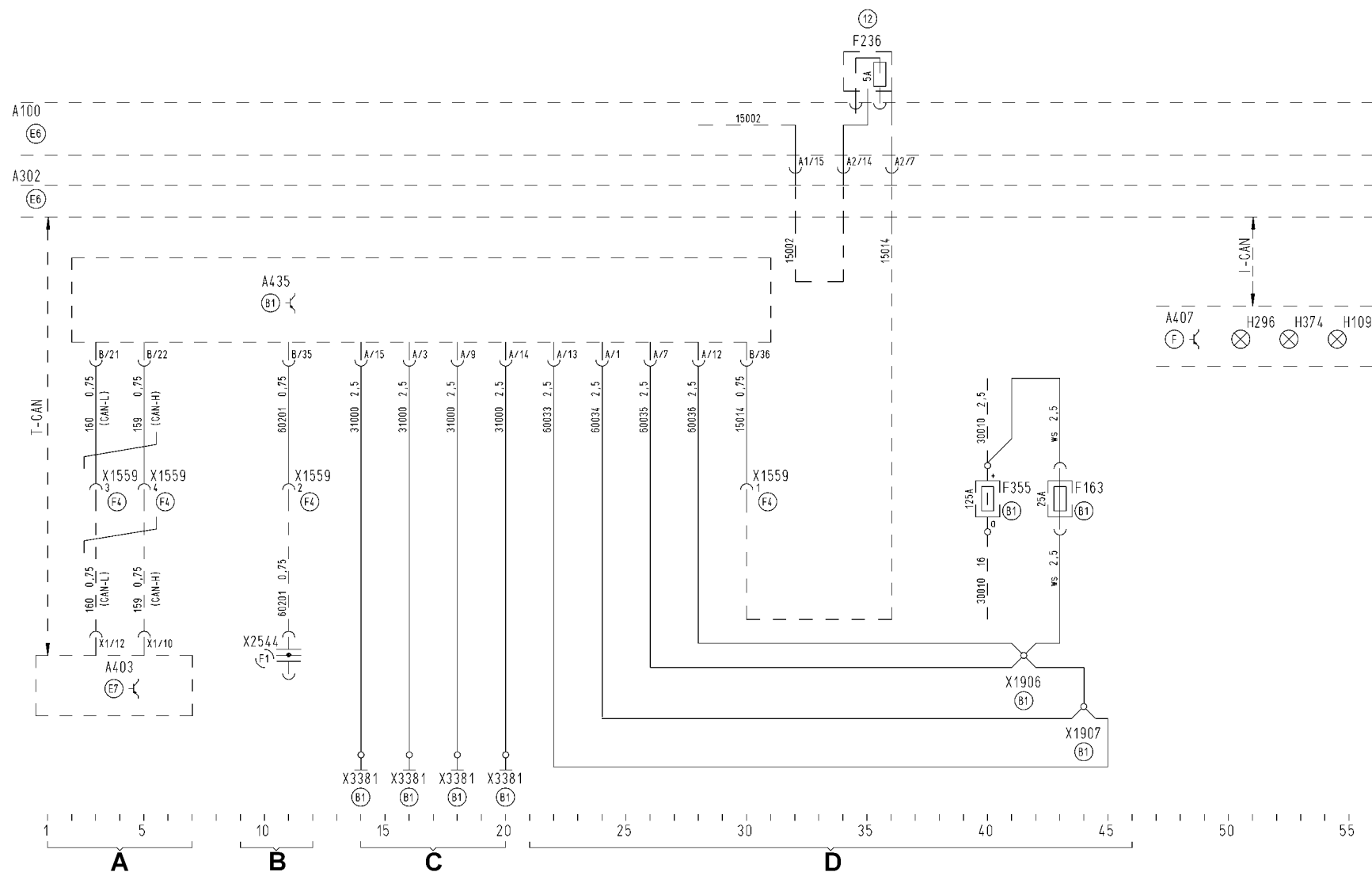
Date: 02.2008

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**

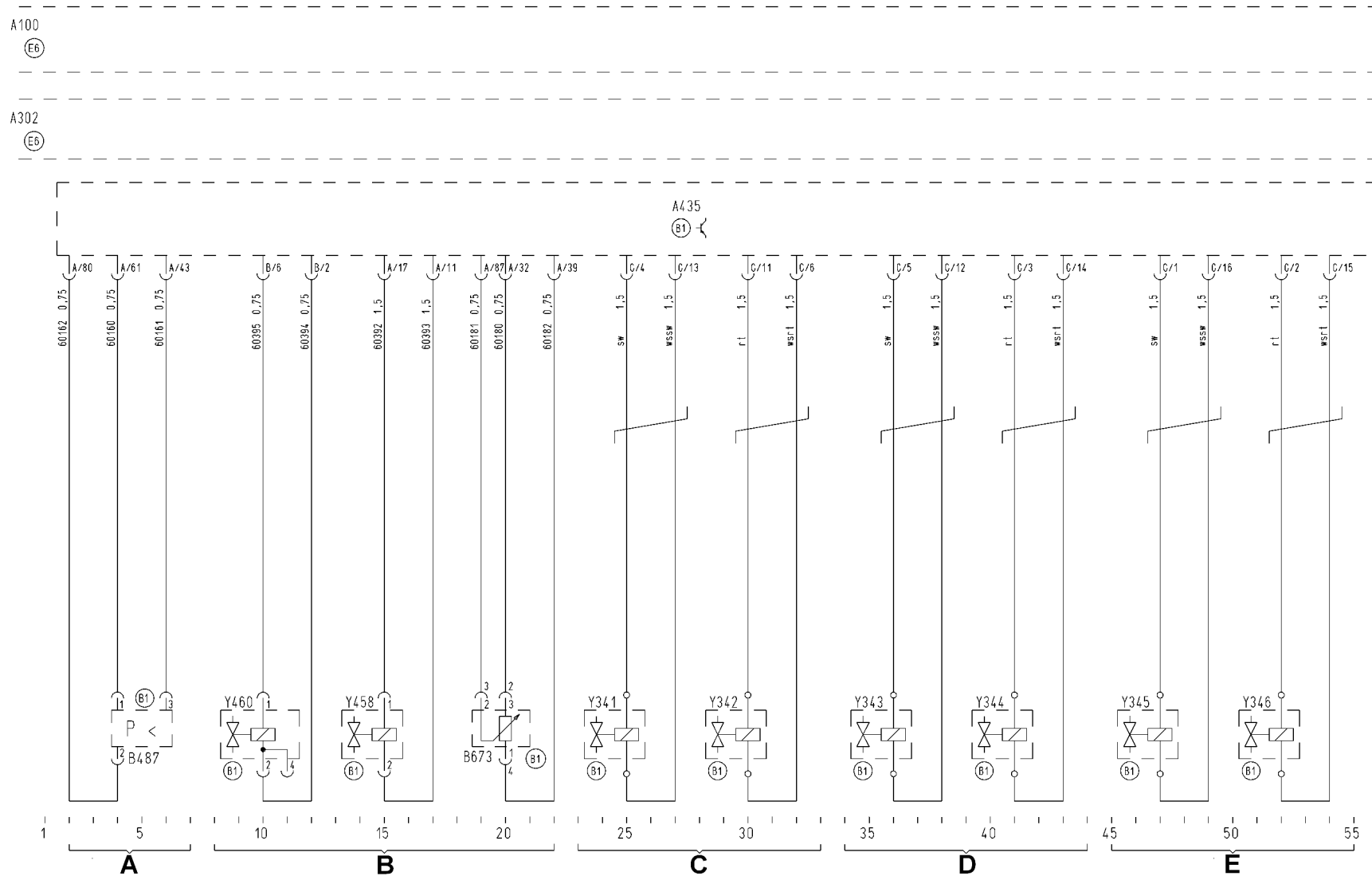
Date: 02.2008

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**

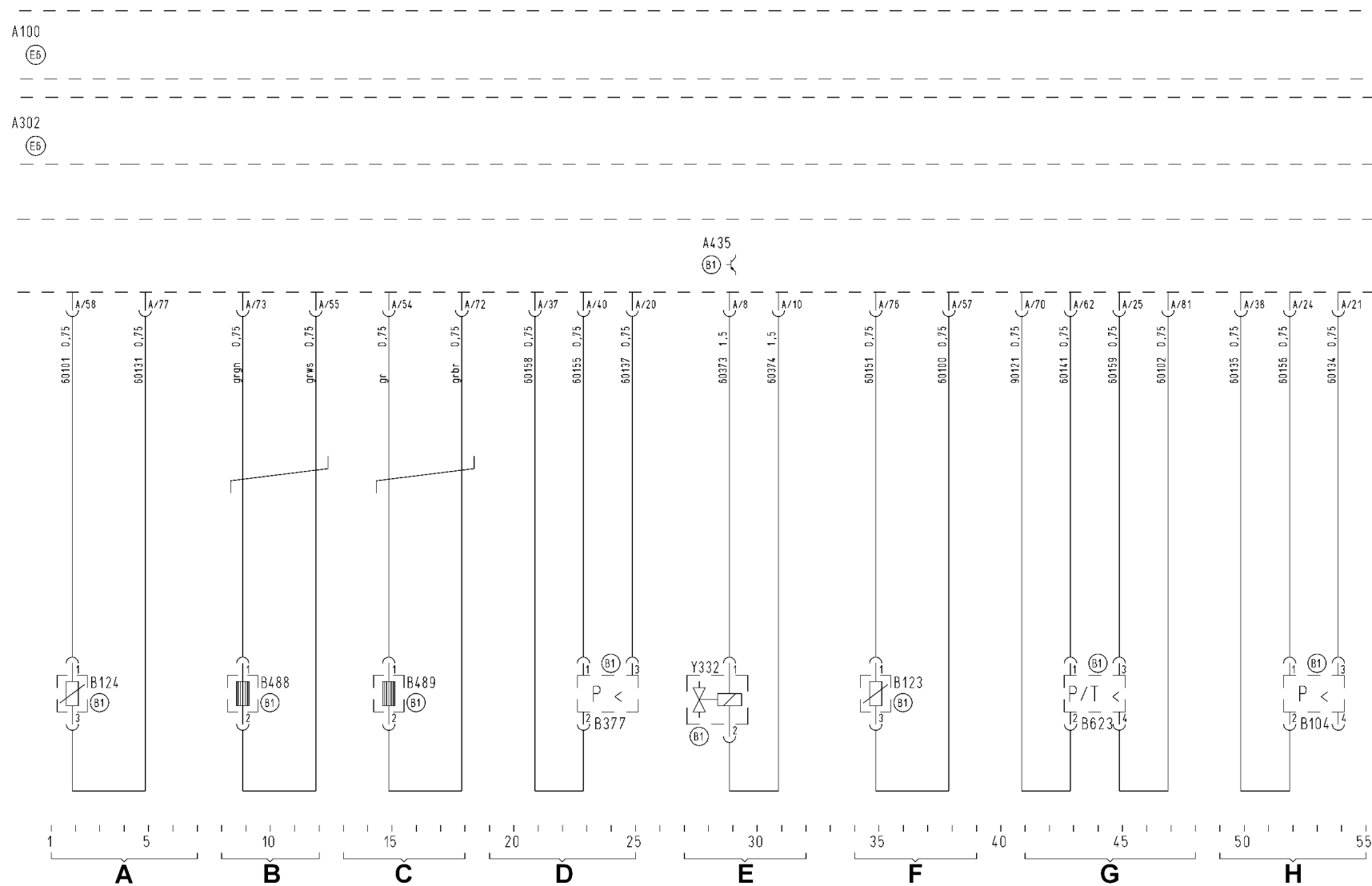
Date: 02.2008

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)

[illegible]

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

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3617**Electric cab tilt mechanism sheet 1 of 1**

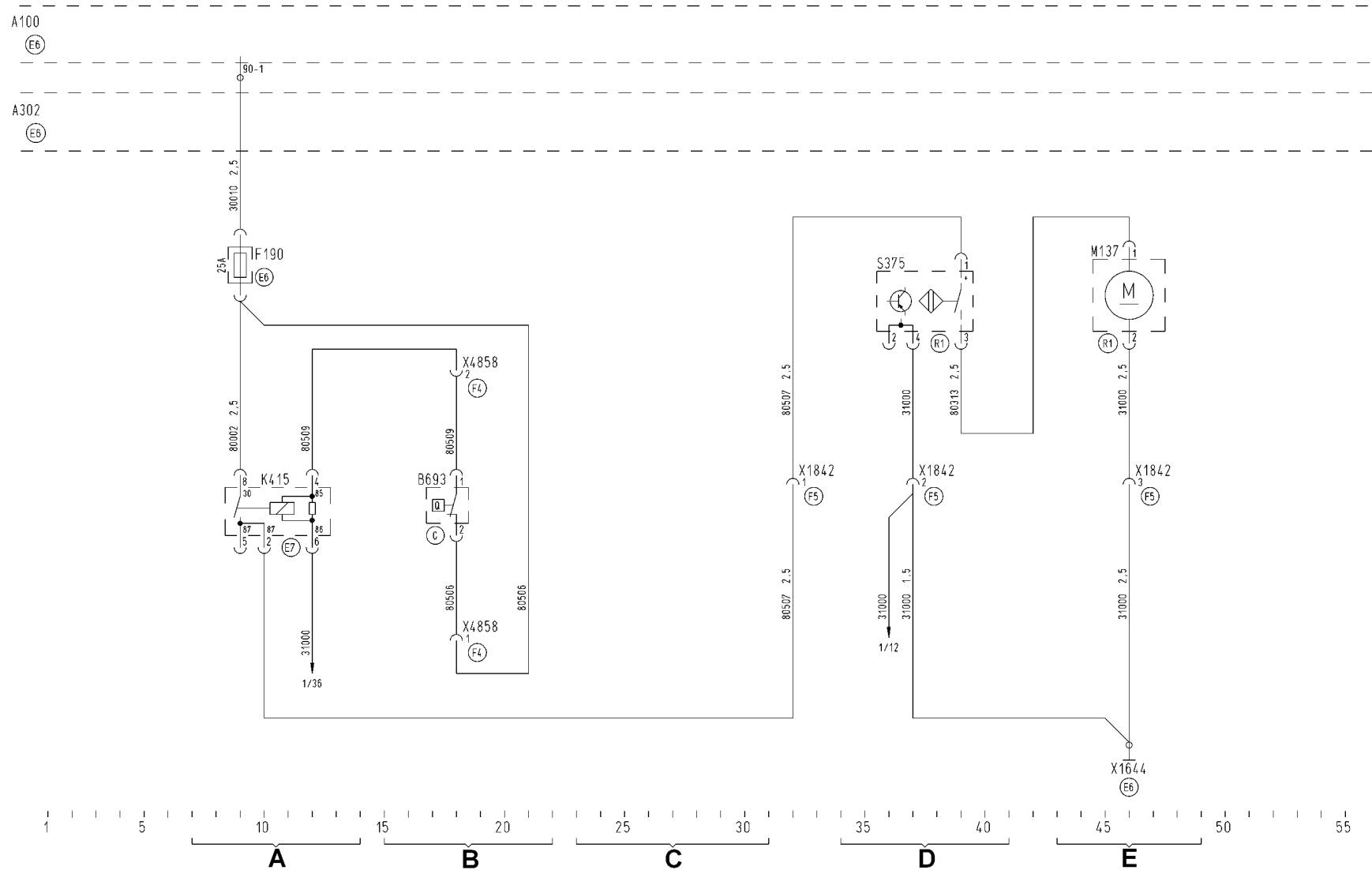
02.2008

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**

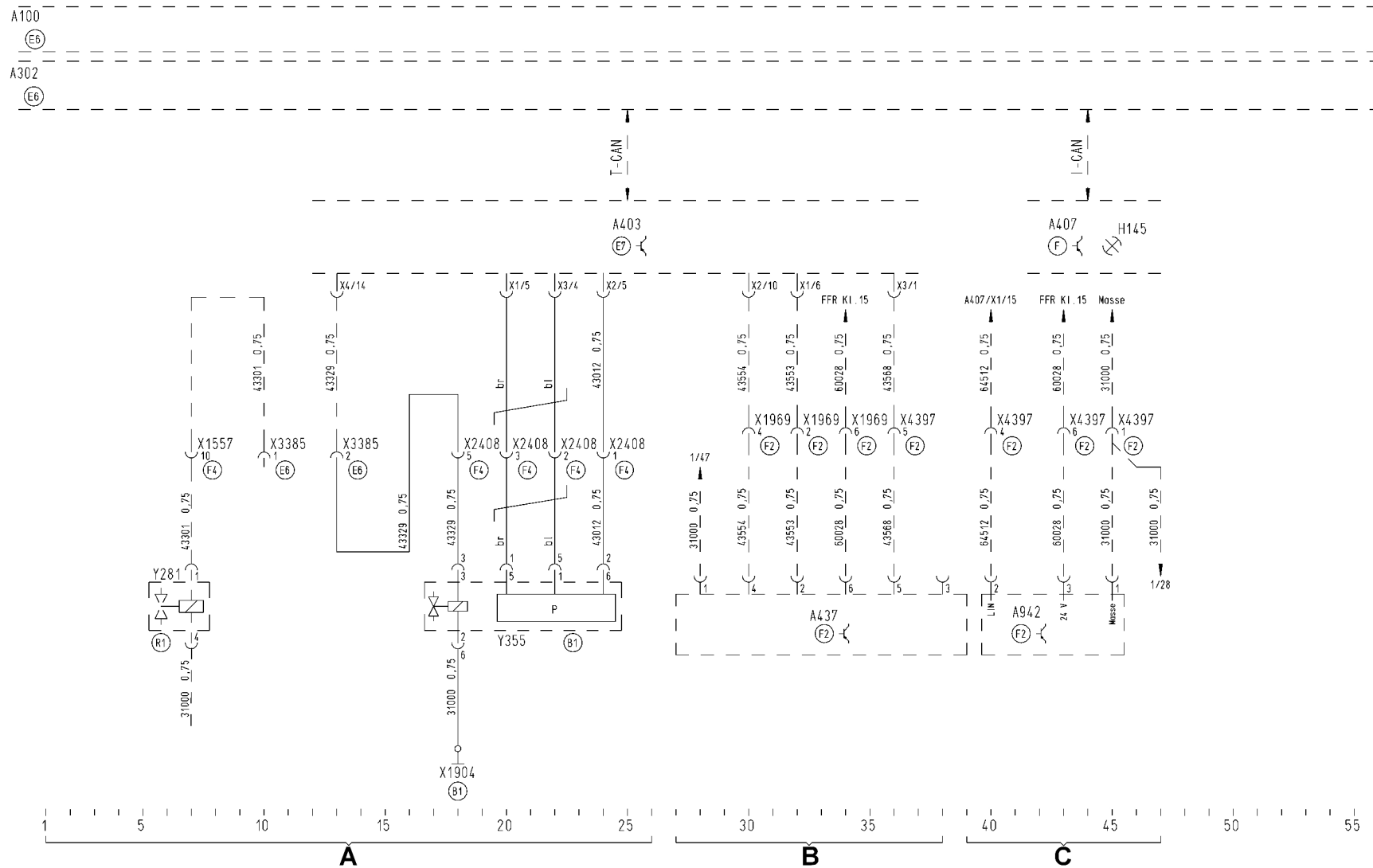
Date: 09.2006

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

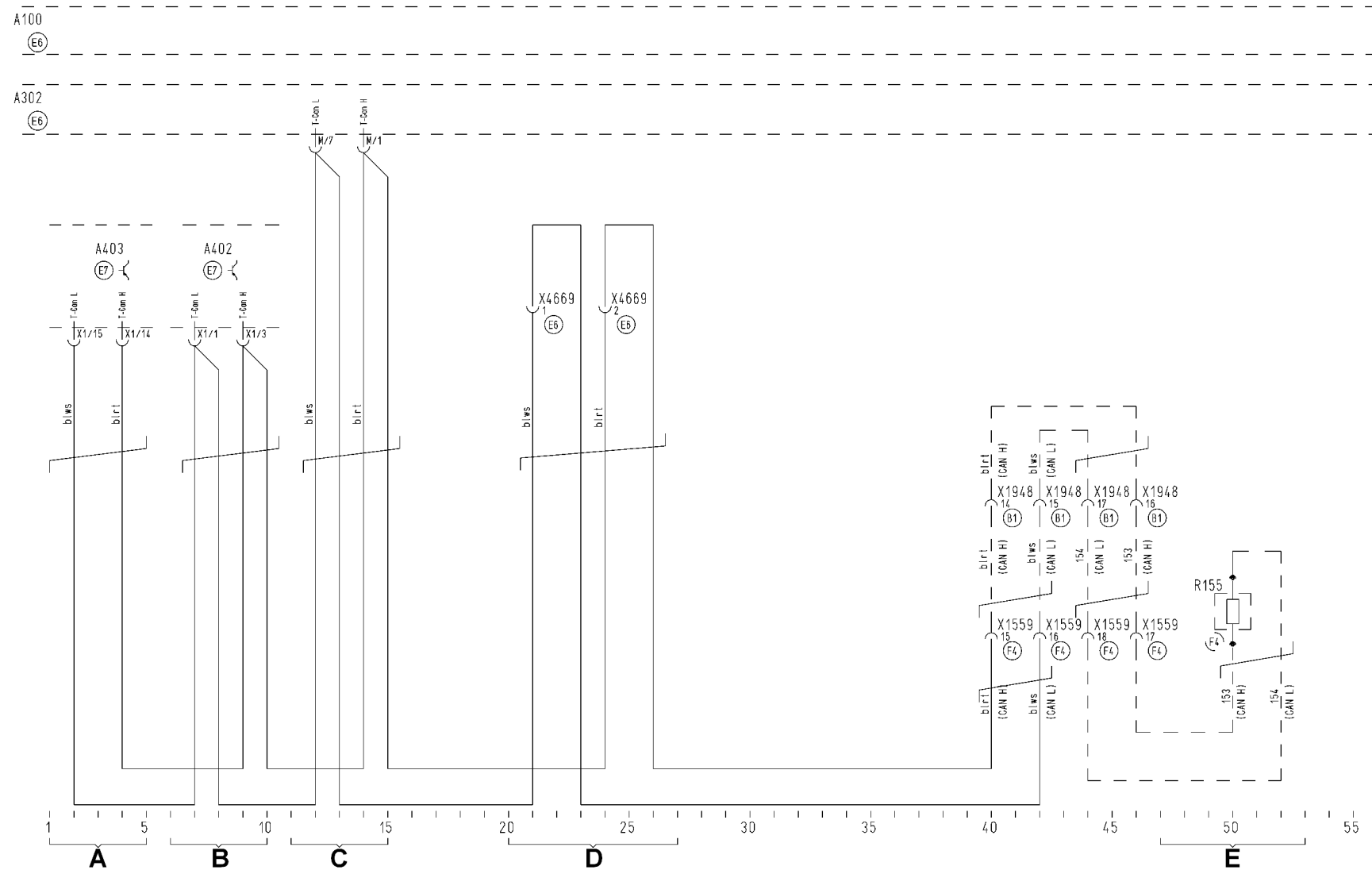
- A** FFR (vehicle management computer)
- B** EBS
- C** ZBR (central on-board computer)
- D** Adaptation, supplementary equipment
- E** Terminating resistor

-
- 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

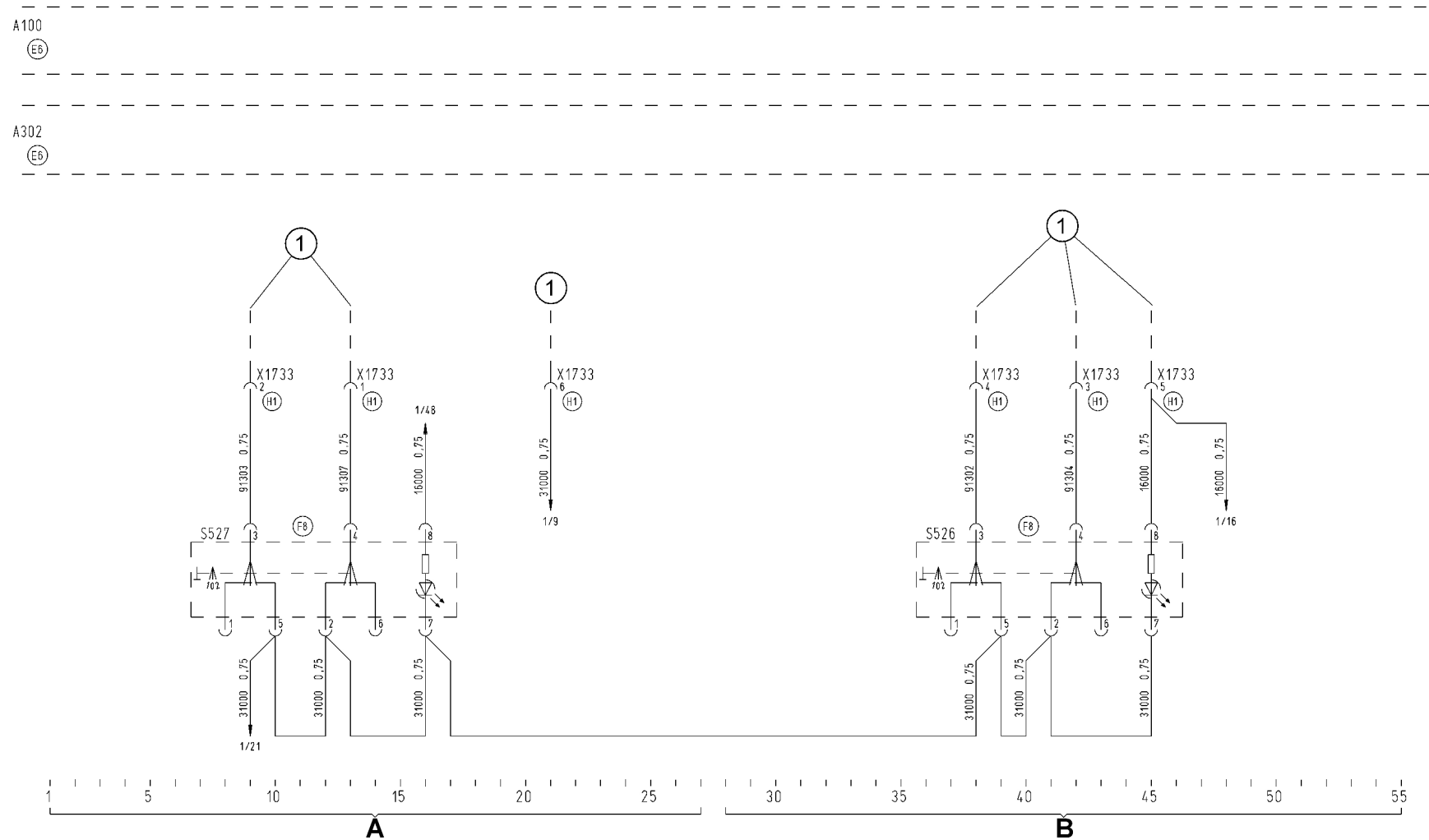
Legend

- 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



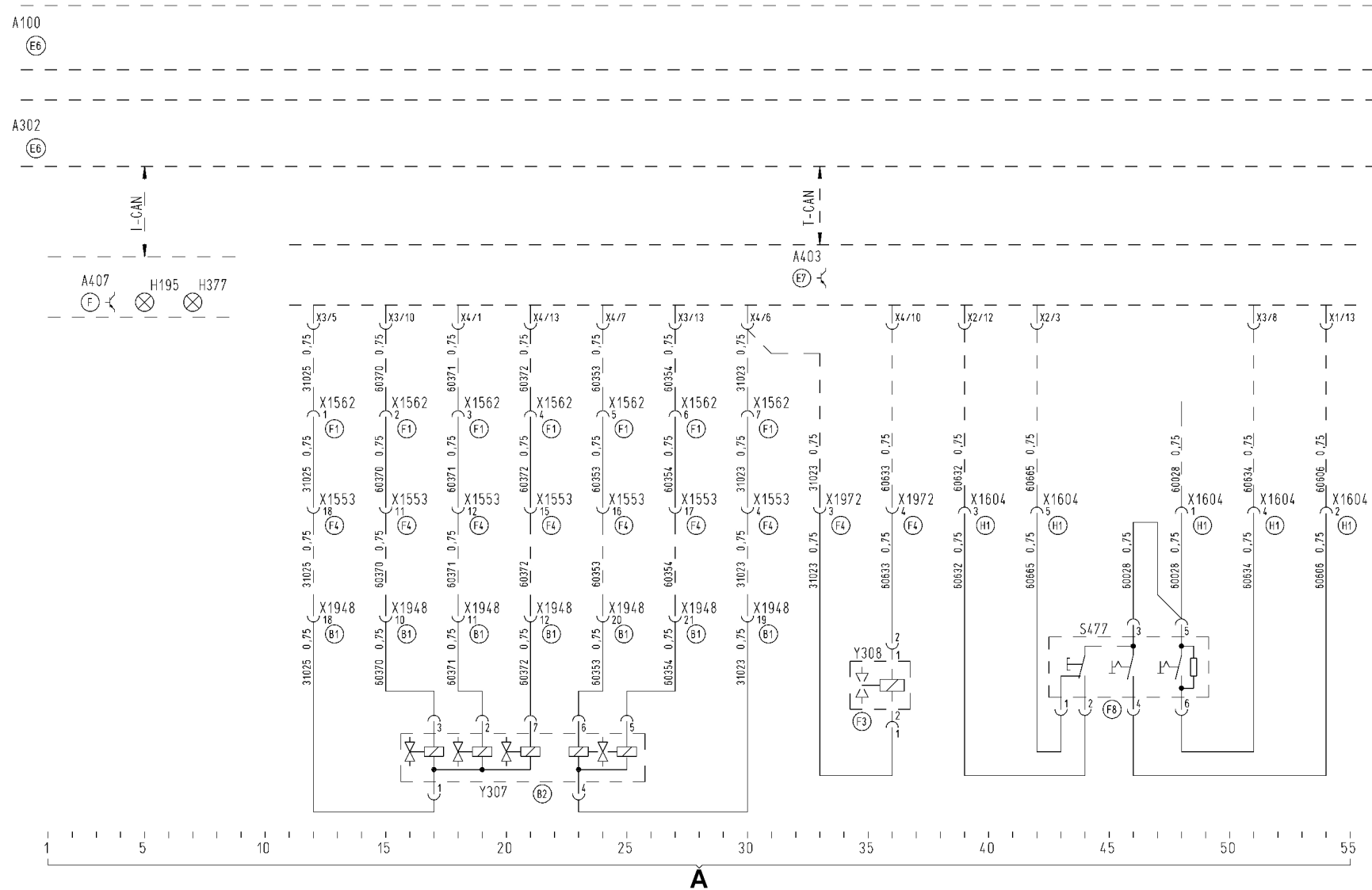
WIRING DIAGRAM NO. 81.99192.3276**Gearbox / manual gearbox sheet 1 of 2**

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)

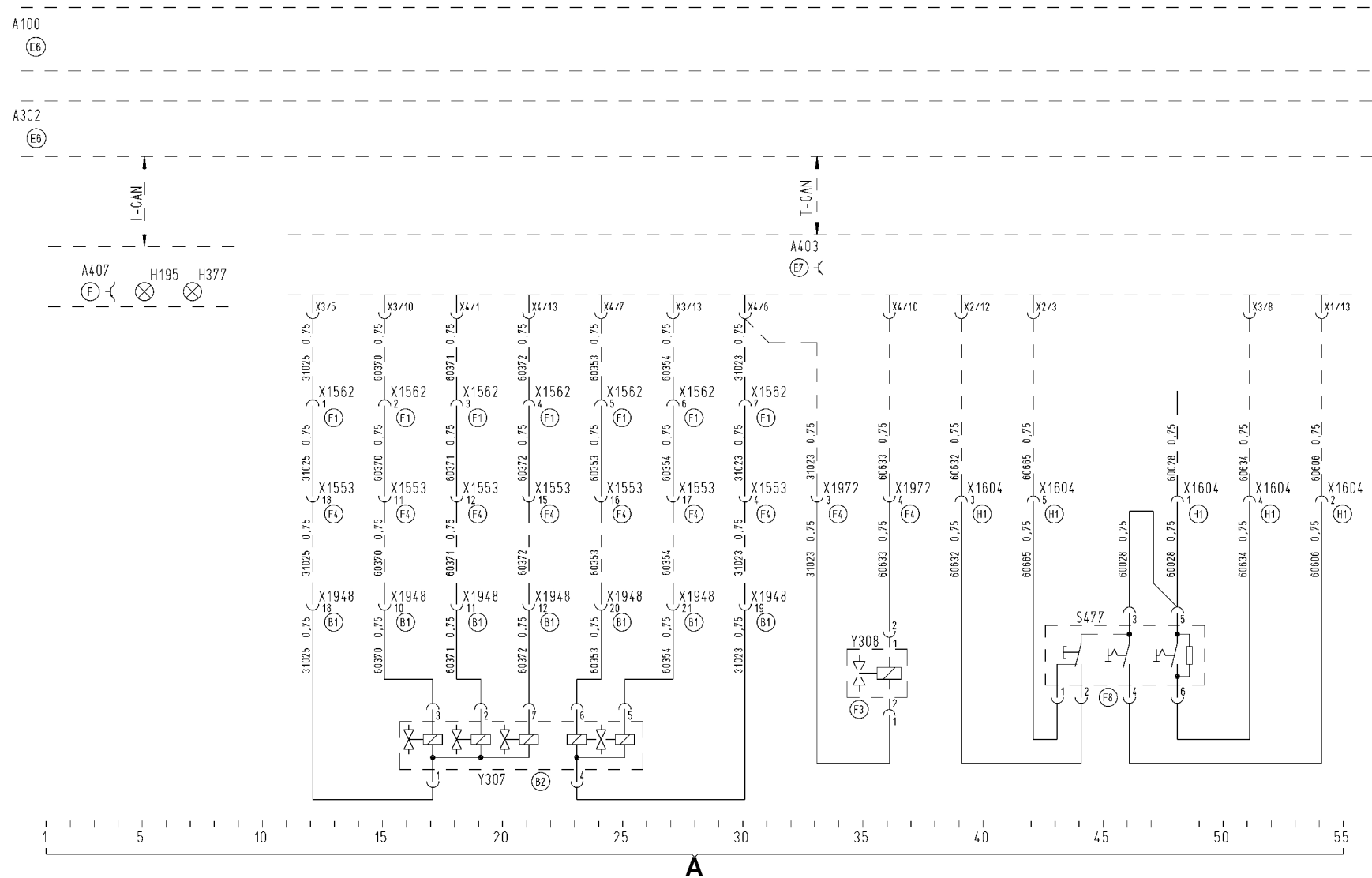
WIRING DIAGRAM NO. 81.99192.3748**Gearbox / manual gearbox sheet 1 of 2**

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)

WIRING DIAGRAM NO. 81.99192.1374

Seat belt indicator, driver sheet 1 of 1

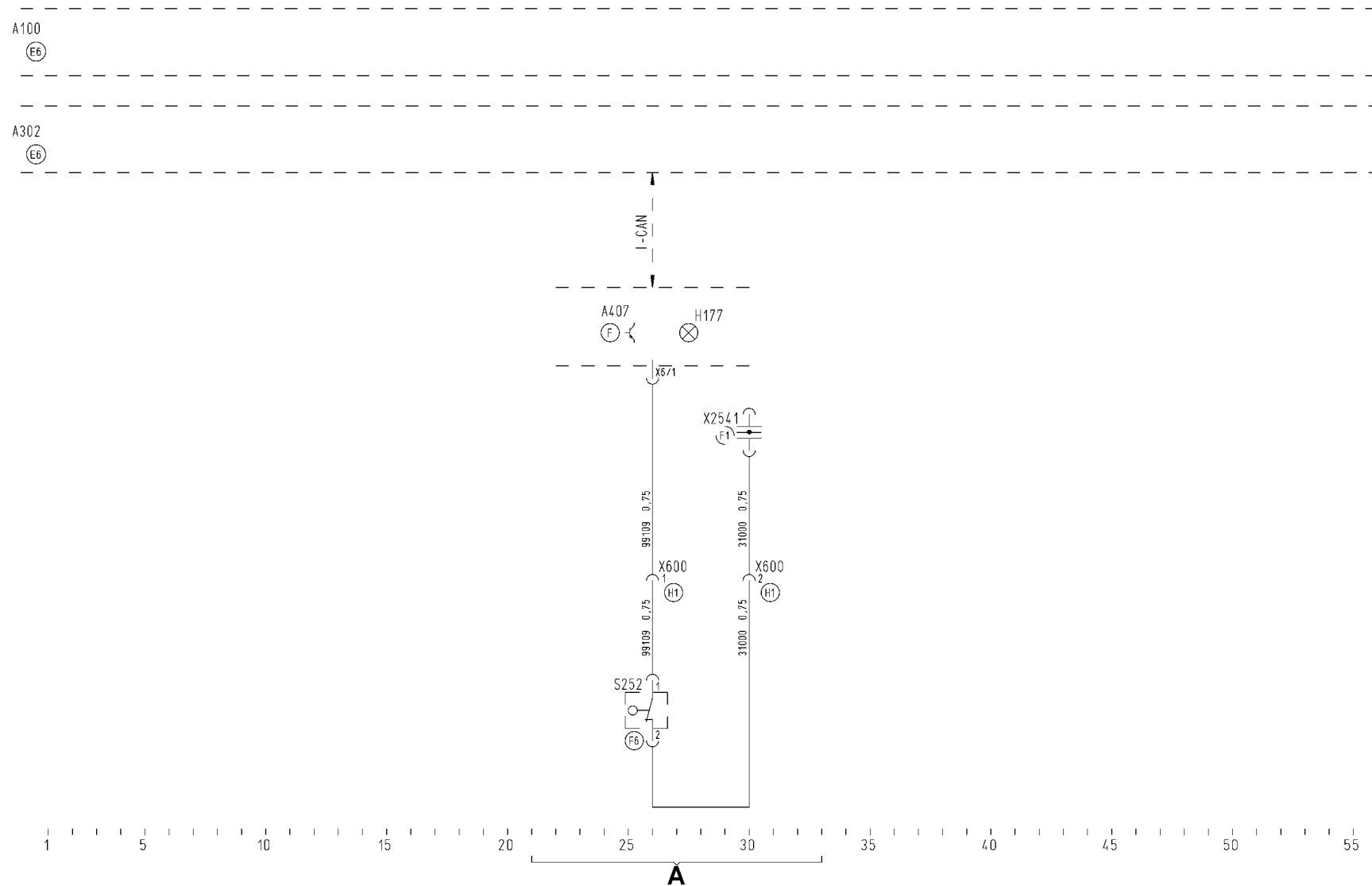
Date: 10.2006

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!

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3237

I-CAN cab (standard) sheet 1 of 1

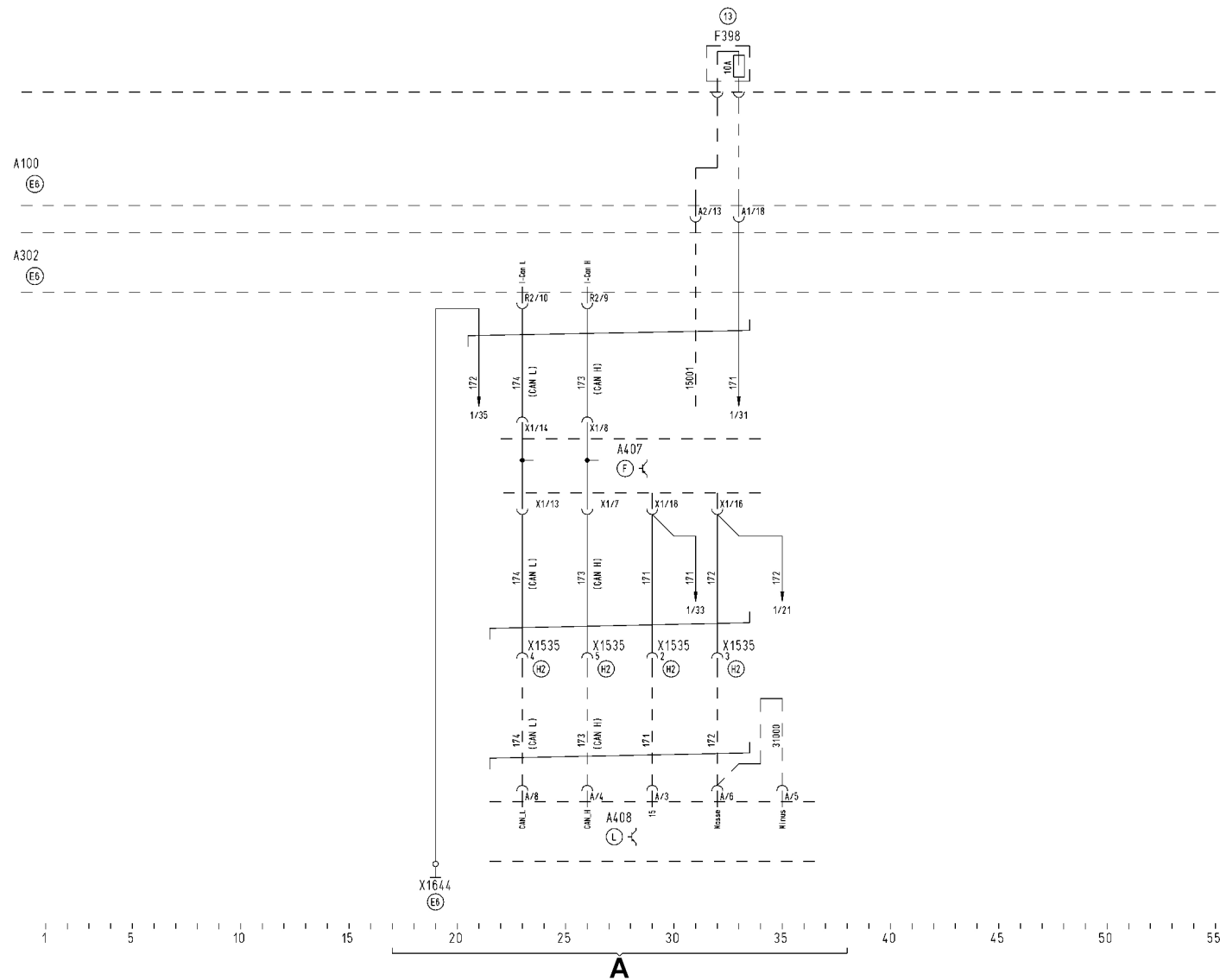
Date: 11.2005

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

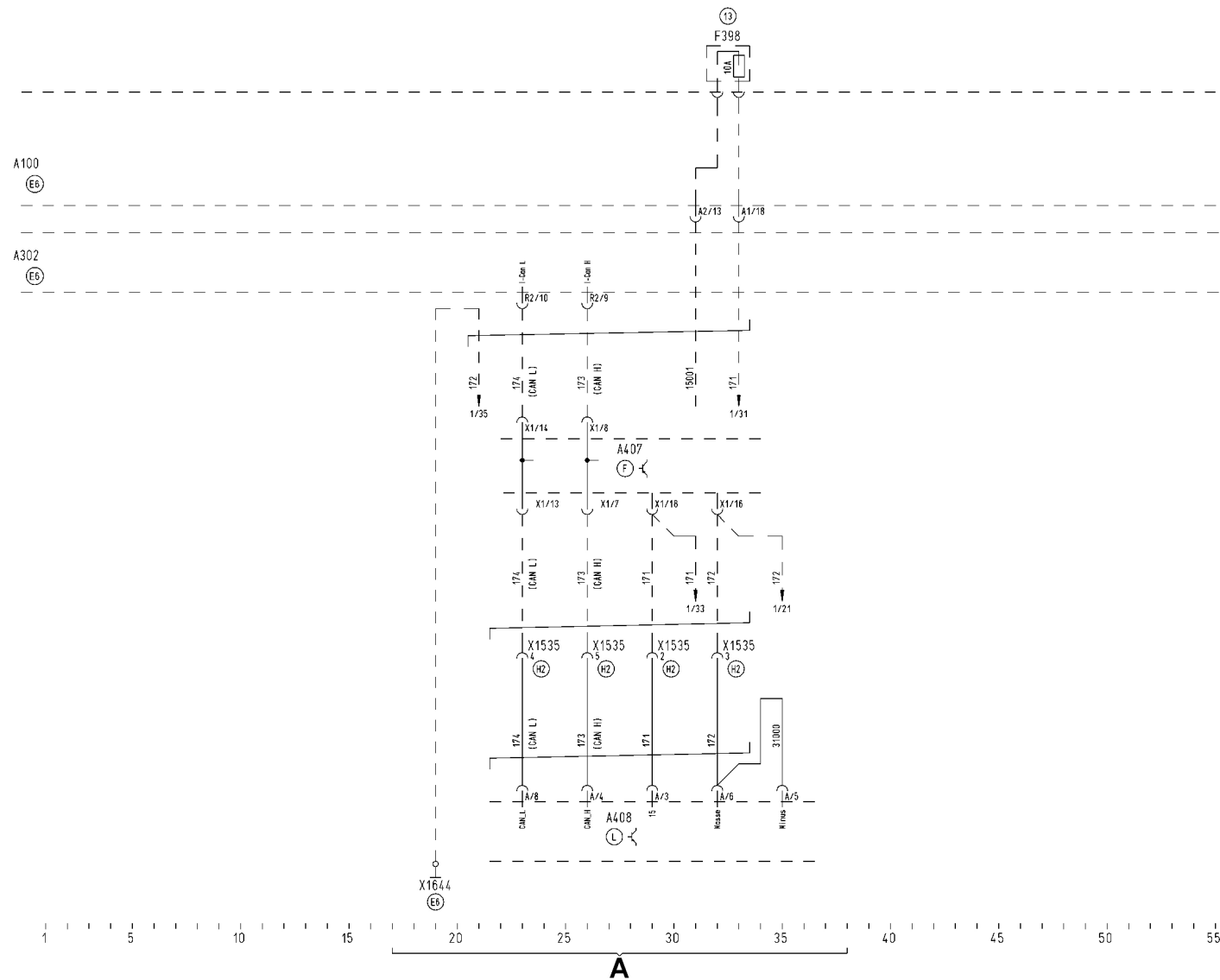
Date: 09.2007

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

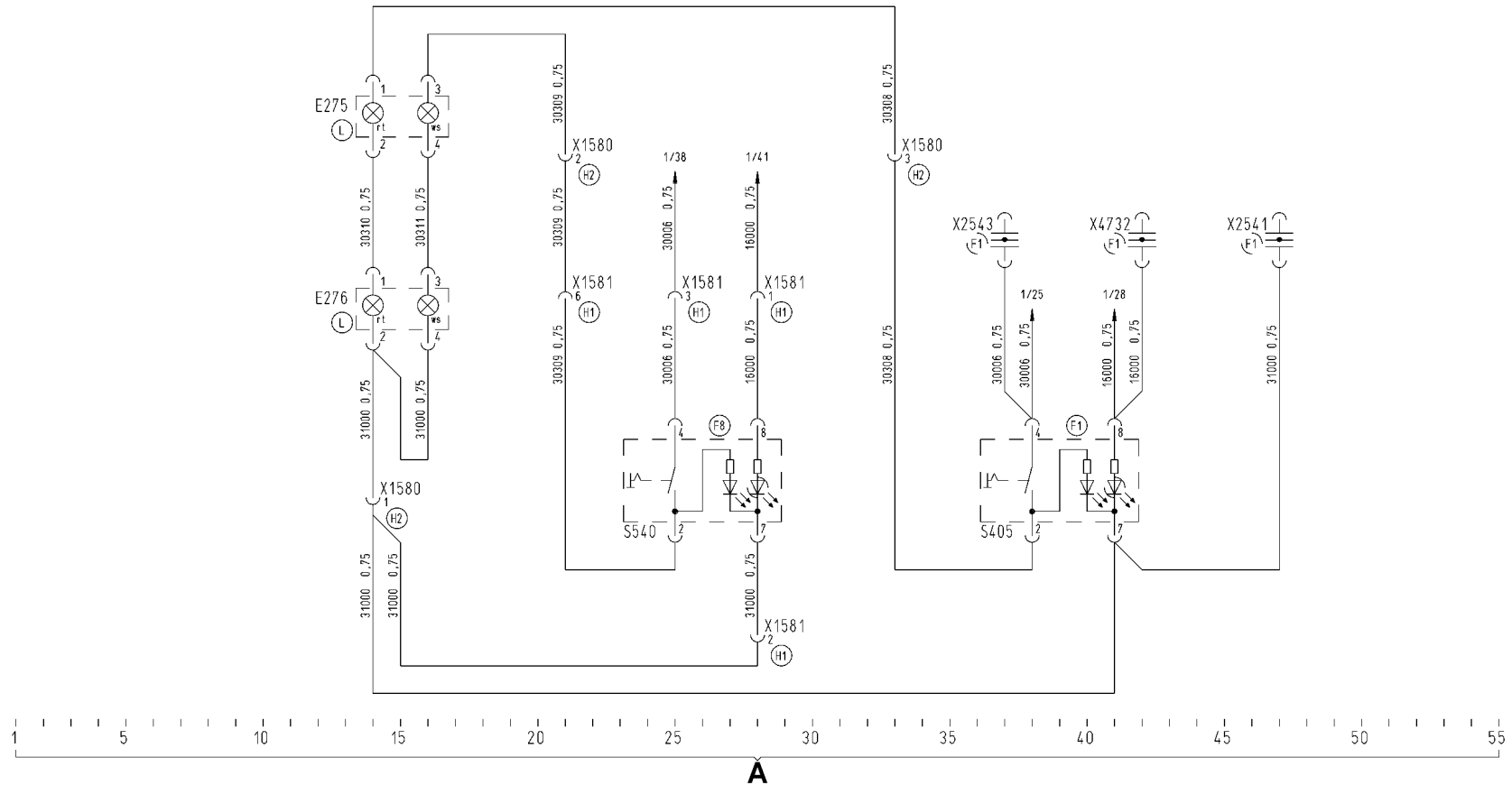
Legend**A Interior lighting, roof, white/red**

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

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3461

Interior lights with ambient light sheet 1 of 1

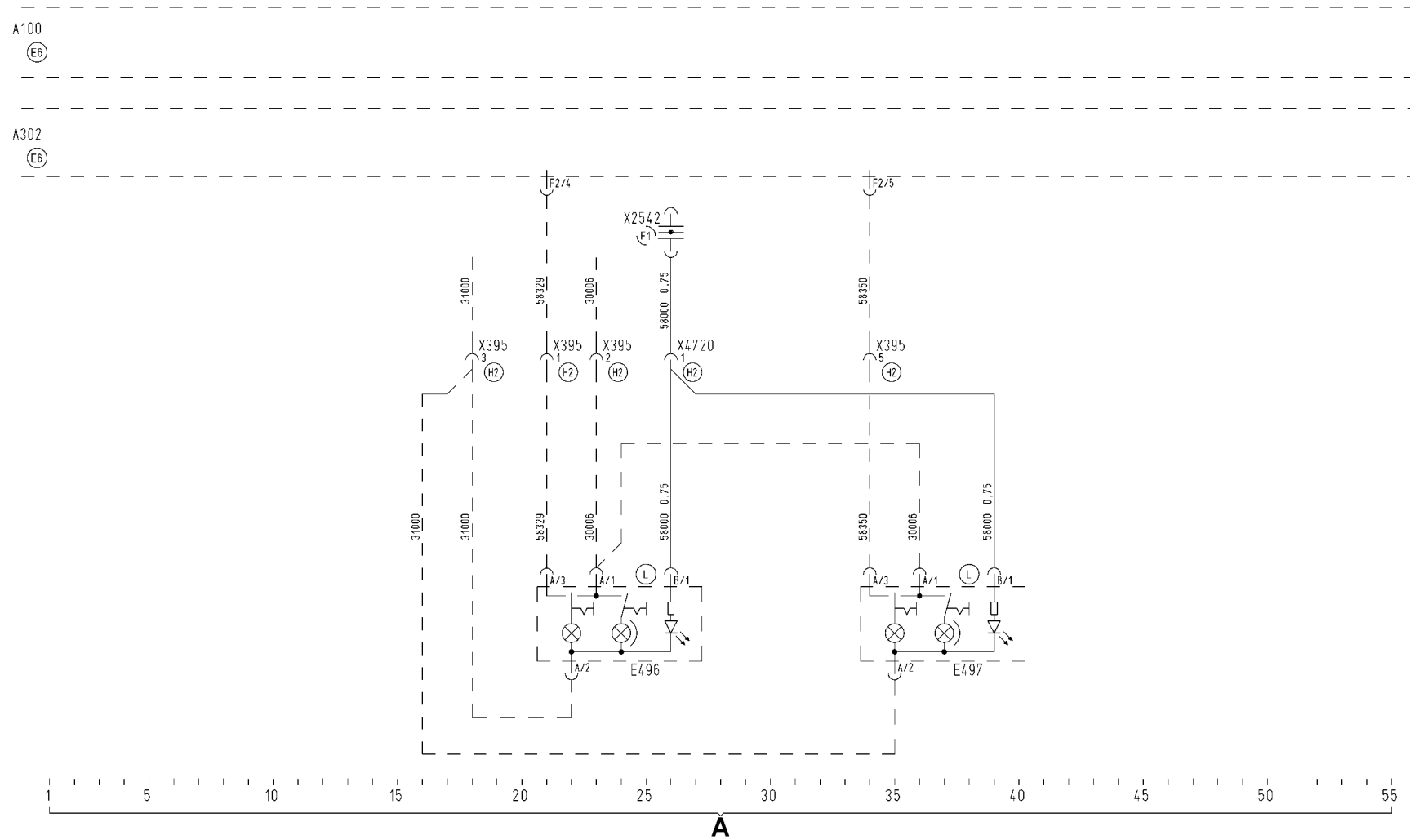
Date: 03.2006

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

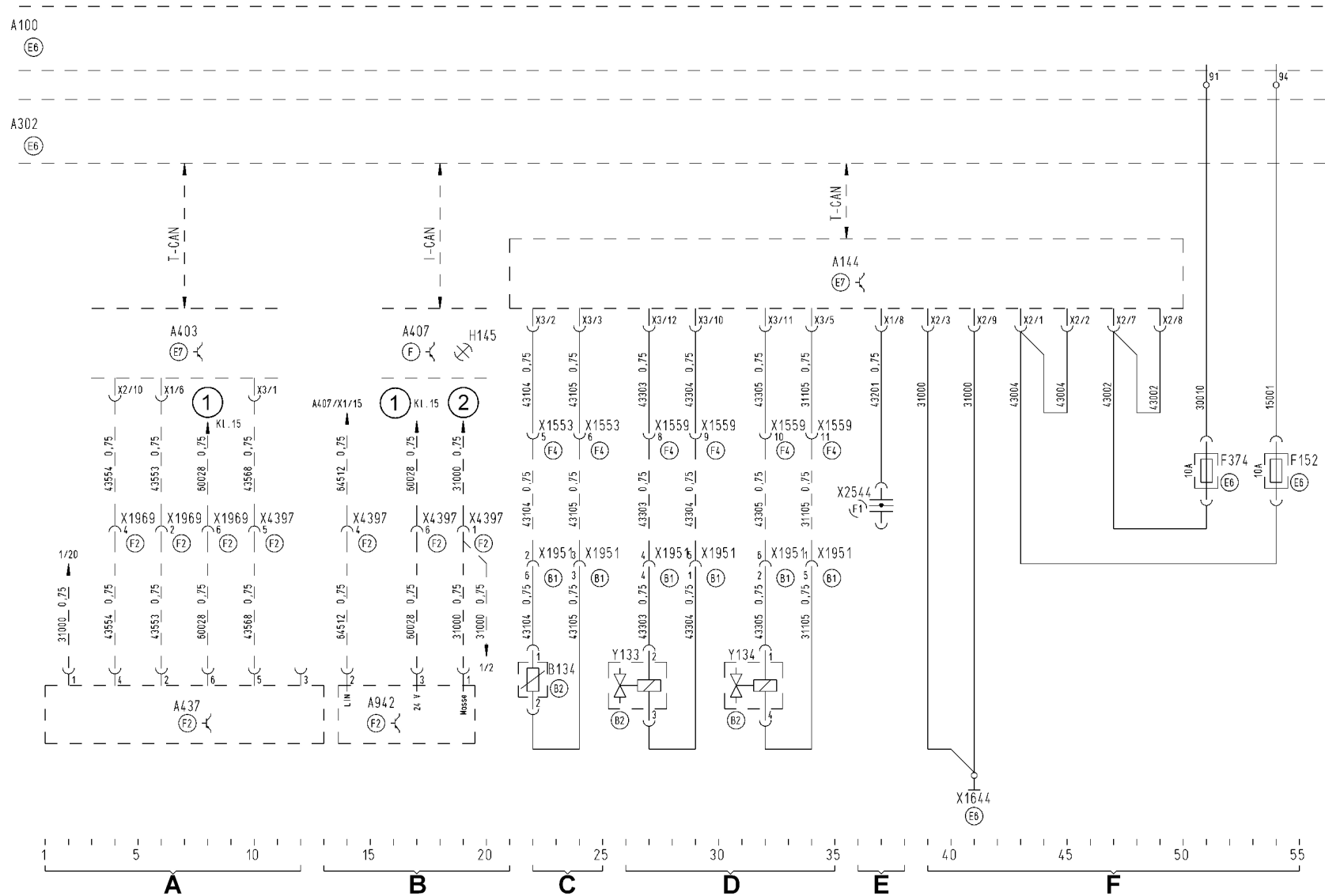
Legend

- 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

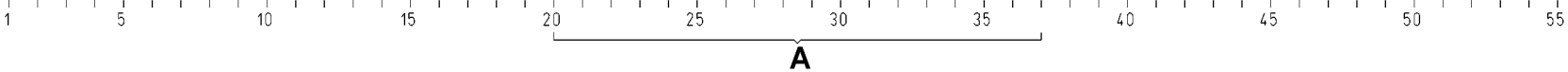
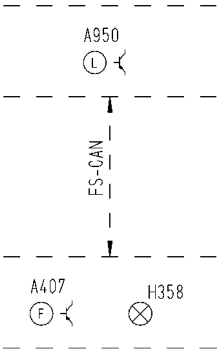
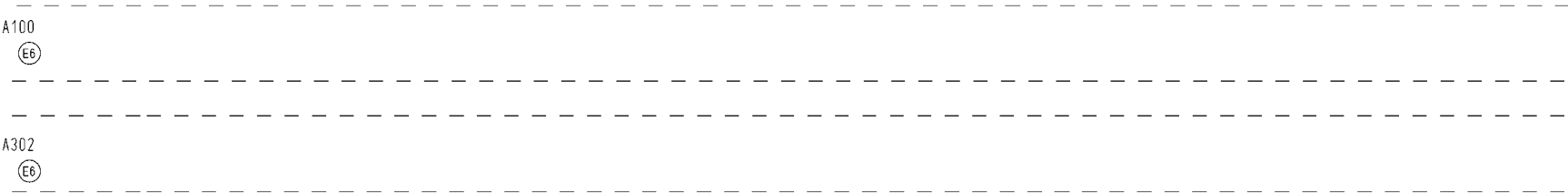
Date: 03.2005

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)

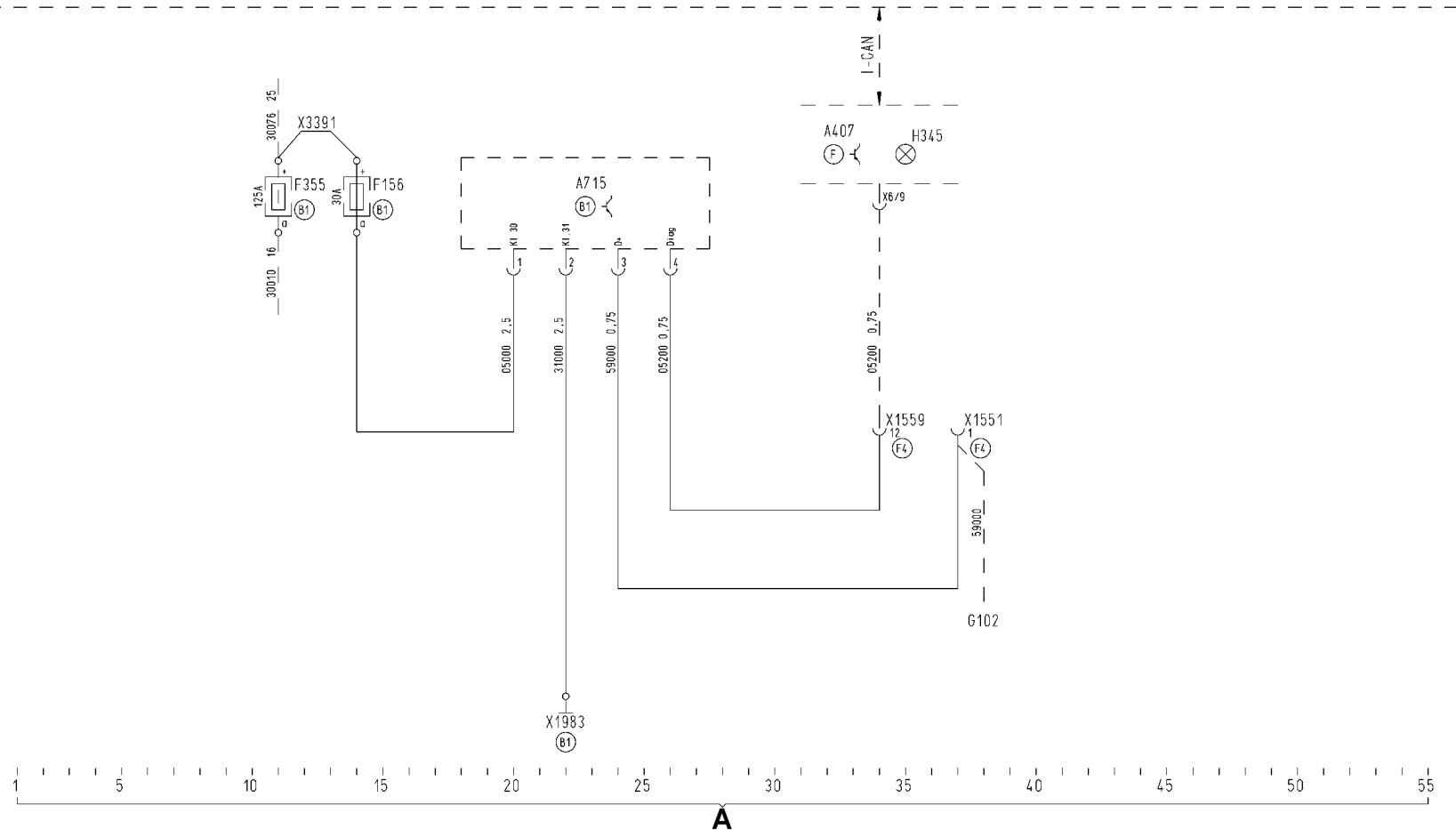
Fuel filter heater sheet 1 of 1

A100

(E6)

A302

(E6)



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

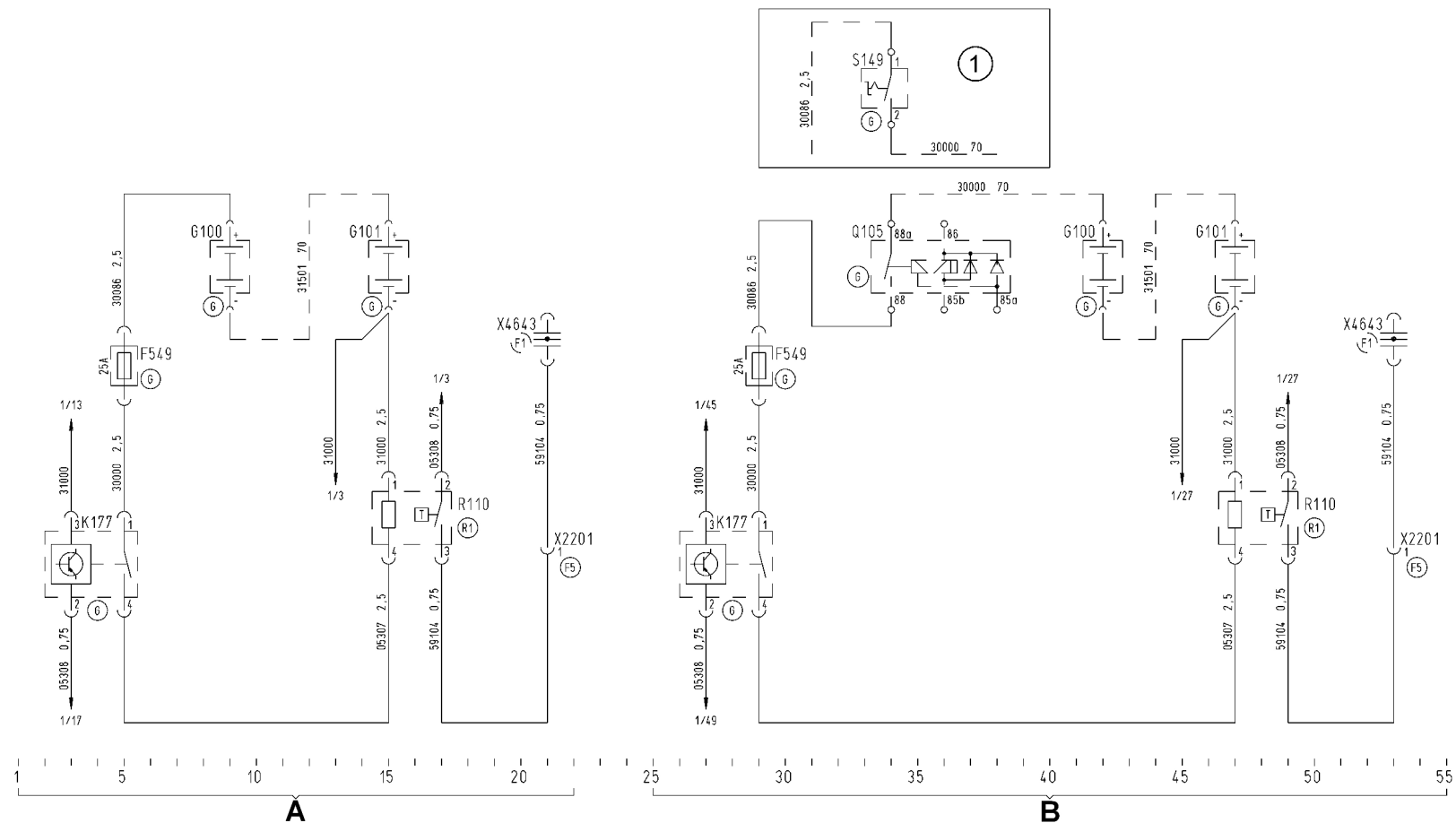
Fuel filter heater, Separ sheet 1 of 1

A100

E6

A302

E6



WIRING DIAGRAM NO. 81.99192.3300**Customer-specific control module (KSM) sheet 1 of 2**

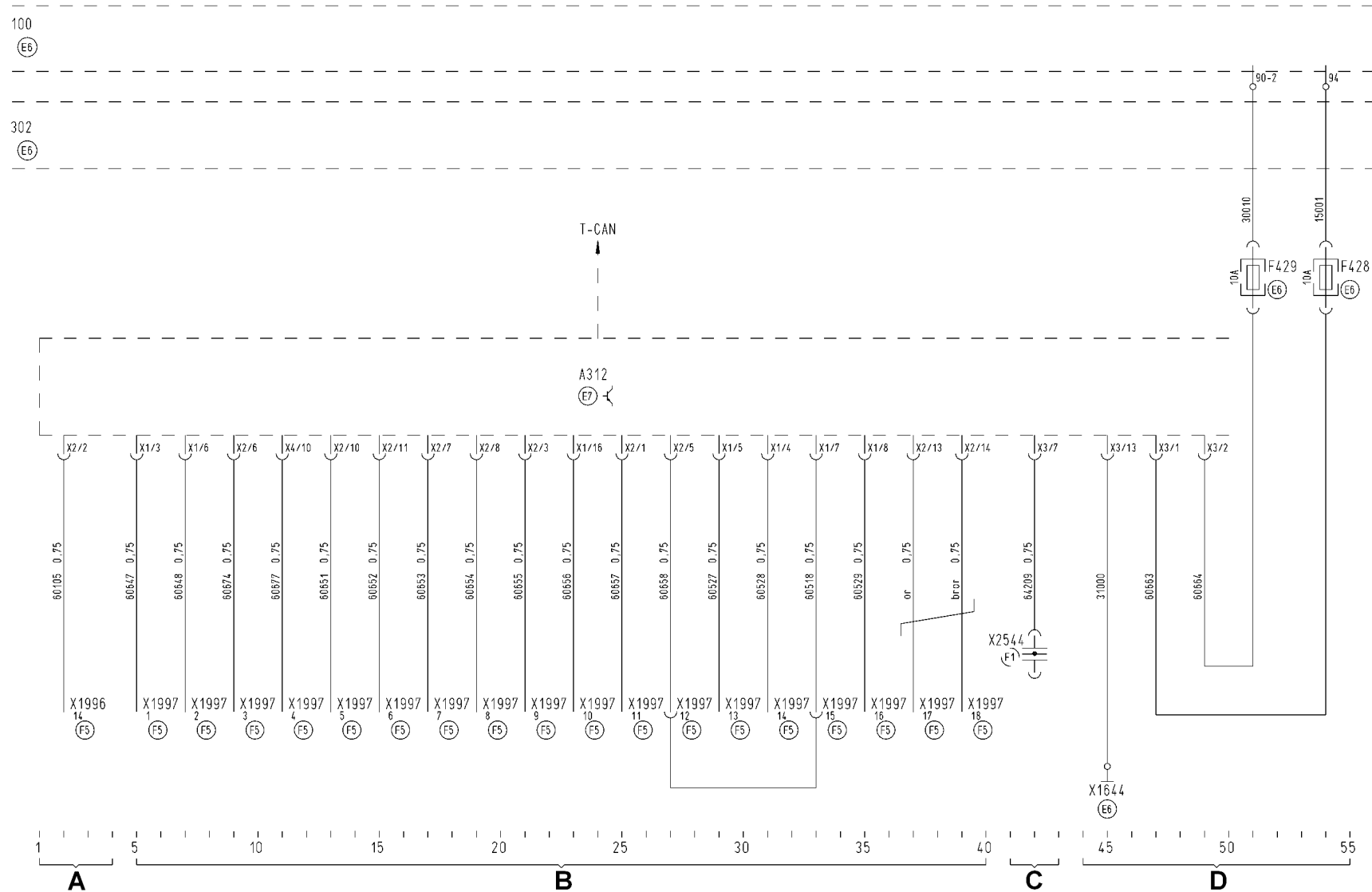
Date: 02.2008

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

WIRING DIAGRAM NO. 81.99192.3314**Headlight beam regulator sheet 1 of 1**

Date: 05.2006

Legend**A Headlight beam regulator**

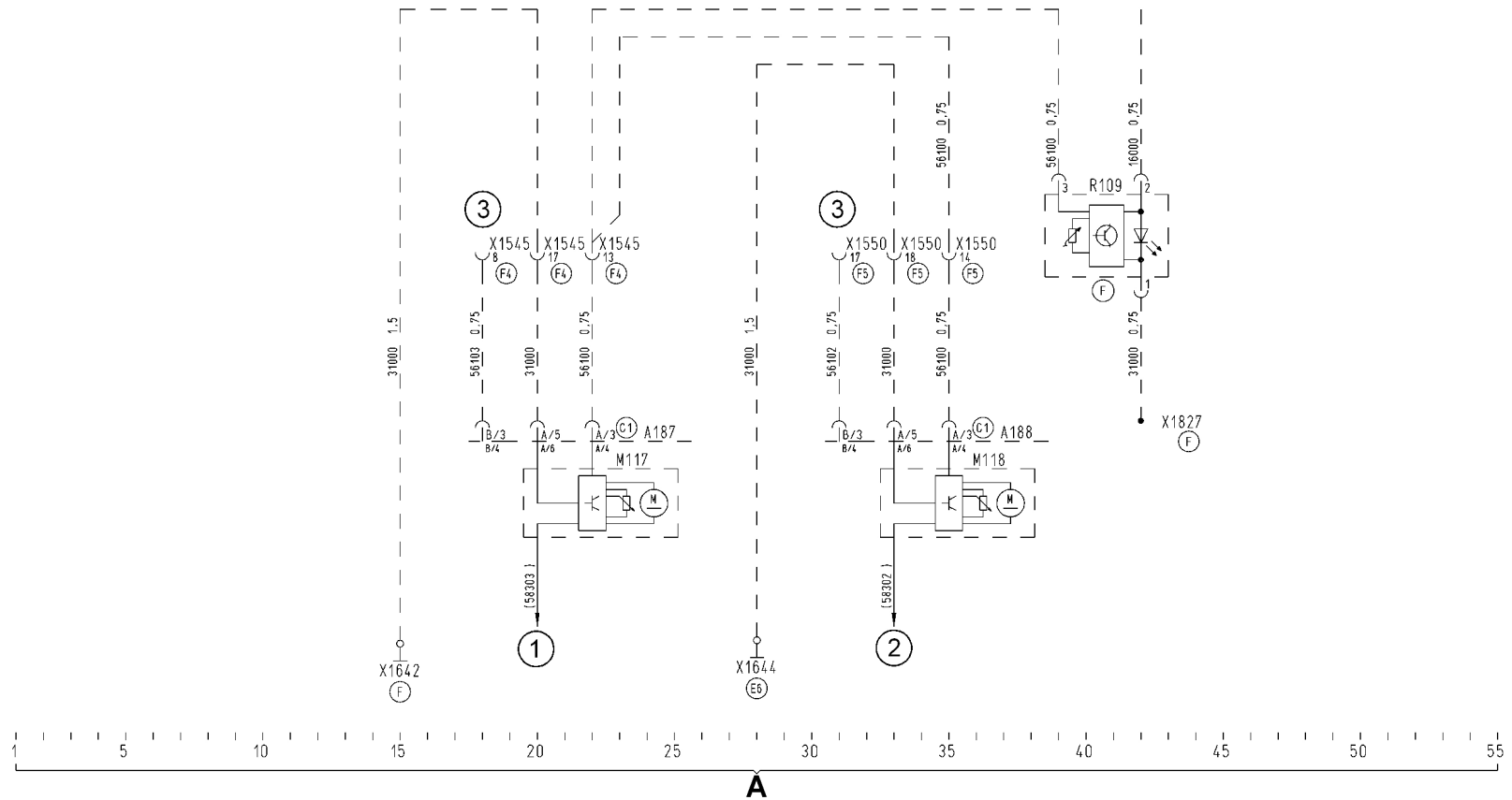
A100 Central electrical system
A187 Headlight, left
A188 Headlight, right
A302 Central computer 2
M117 Servomotor, headlight beam regulator, left
M118 Servomotor, headlight beam regulator, right
R109 Potentiometer, headlight beam regulator
X1545 Plug conn., front end, left
X1550 Plug conn., front end, 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

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3120

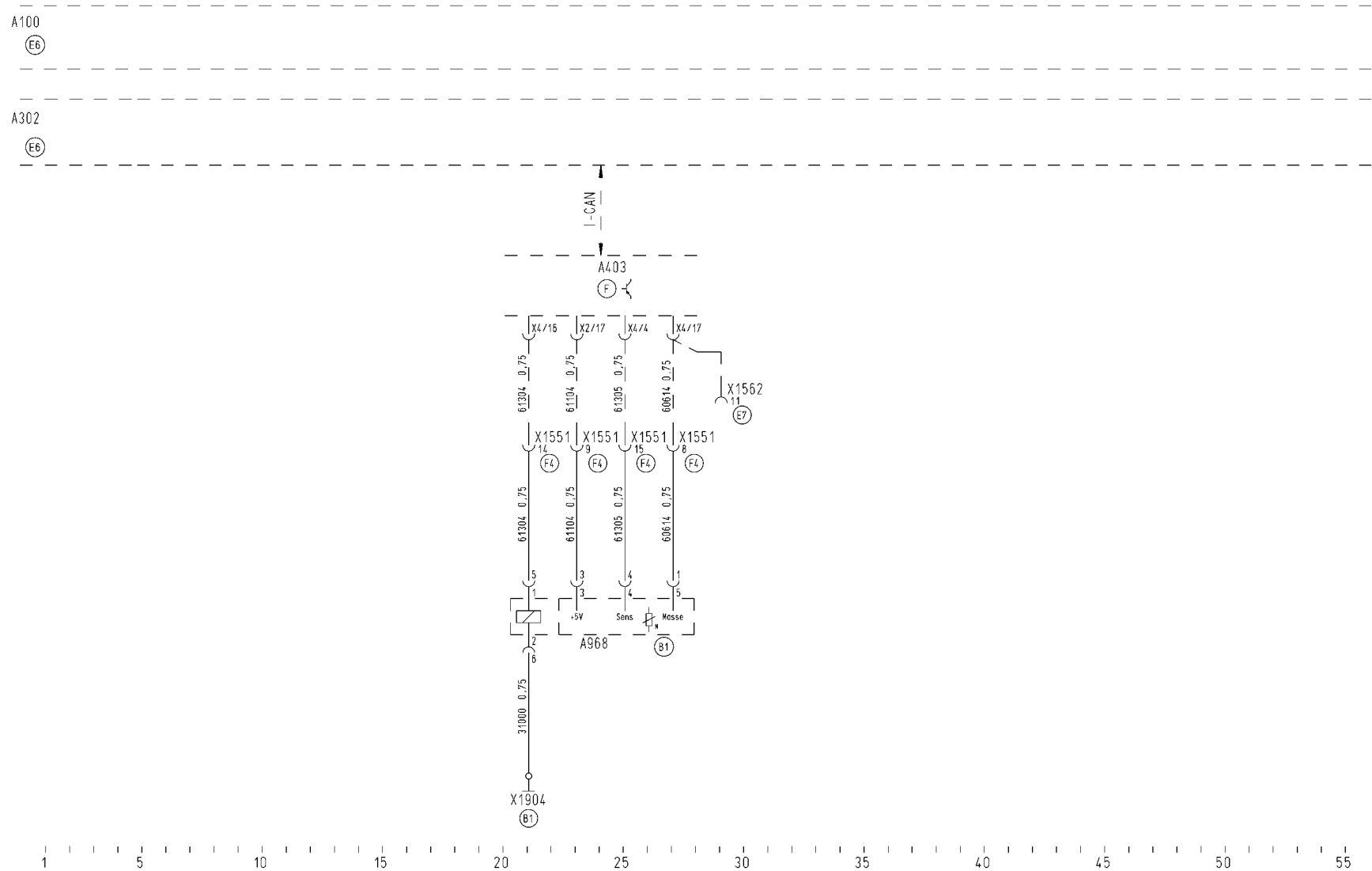
Fan clutch with speed feedback sheet 1 of 1

Date: 07.2005

Legend

- A**100 Central electrical system
- A302 Central computer 2
- A403 Vehicle management computer
- A968 Fan clutch with speed sensor
- X**1551 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

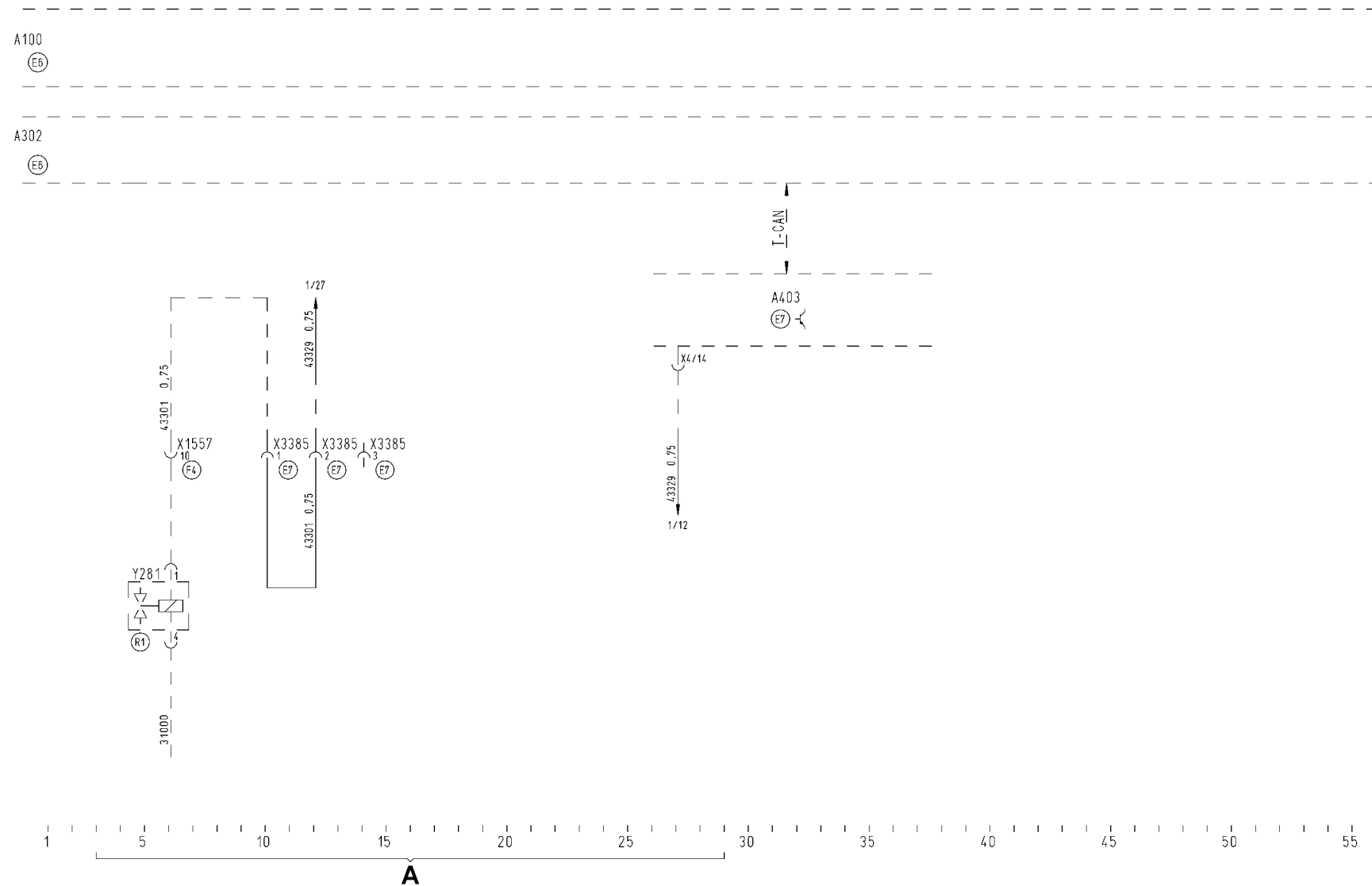
Date: 07.2002

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

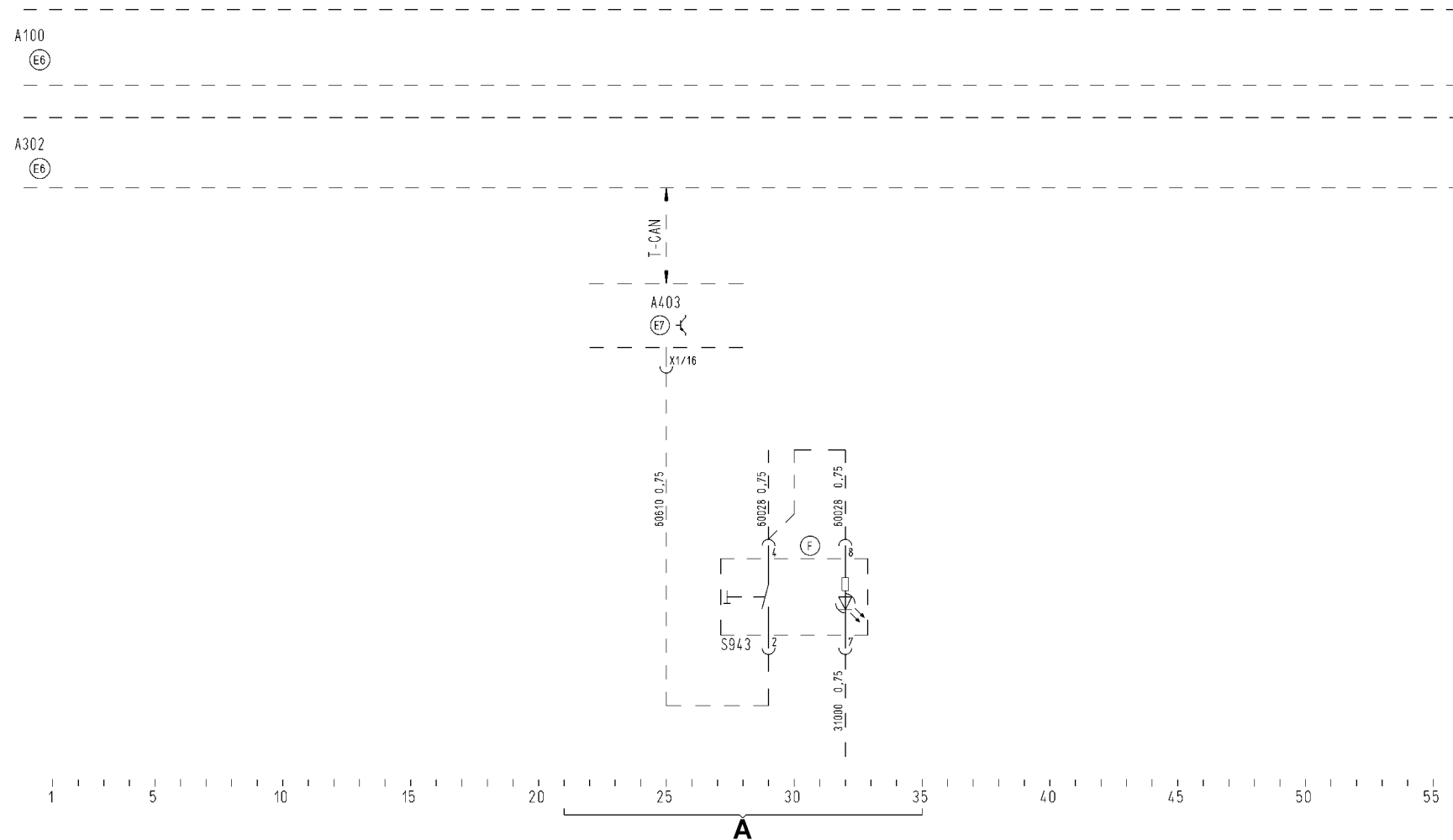
A100 Central electrical system
A302 Central computer 2
A403 Vehicle management computer
S943 Button, engine brake



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

Multifunction 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., multifunction steering wheel

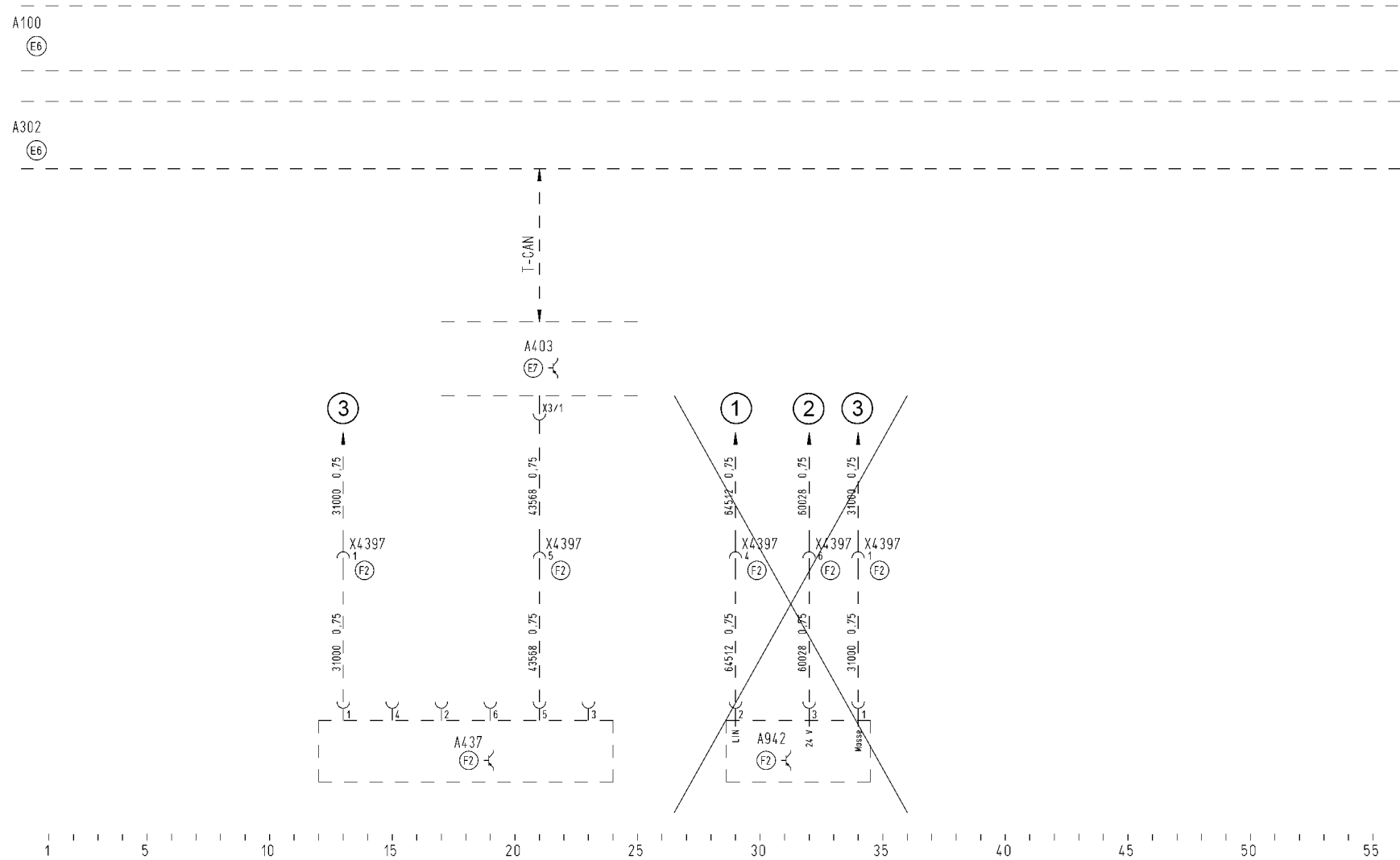
-
- 1** A407 / X1/15
 - 2** Vehicle management computer (terminal 15)
 - 3** Ground



Note

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

Multifunction 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**

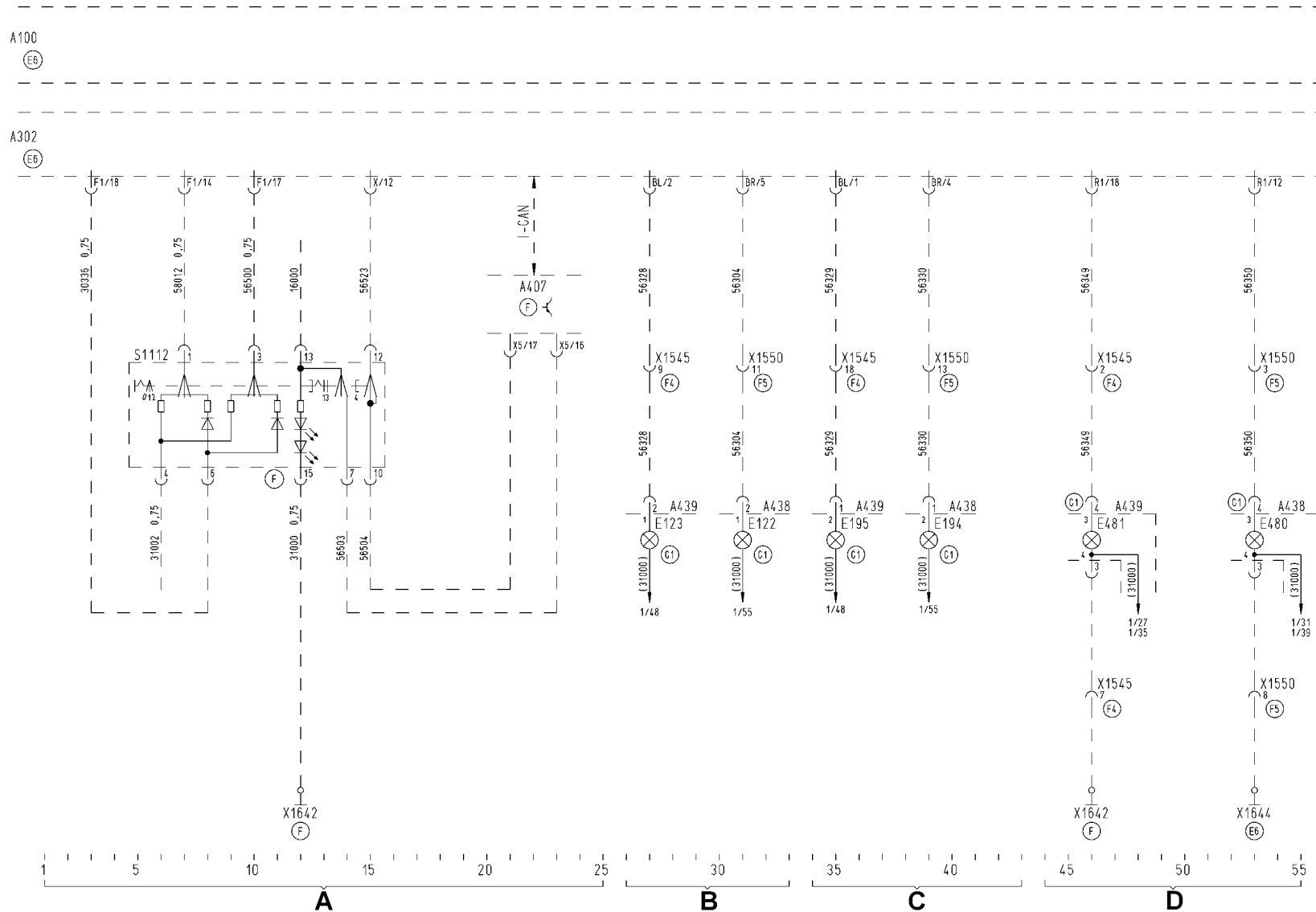
Date: 10.2007

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

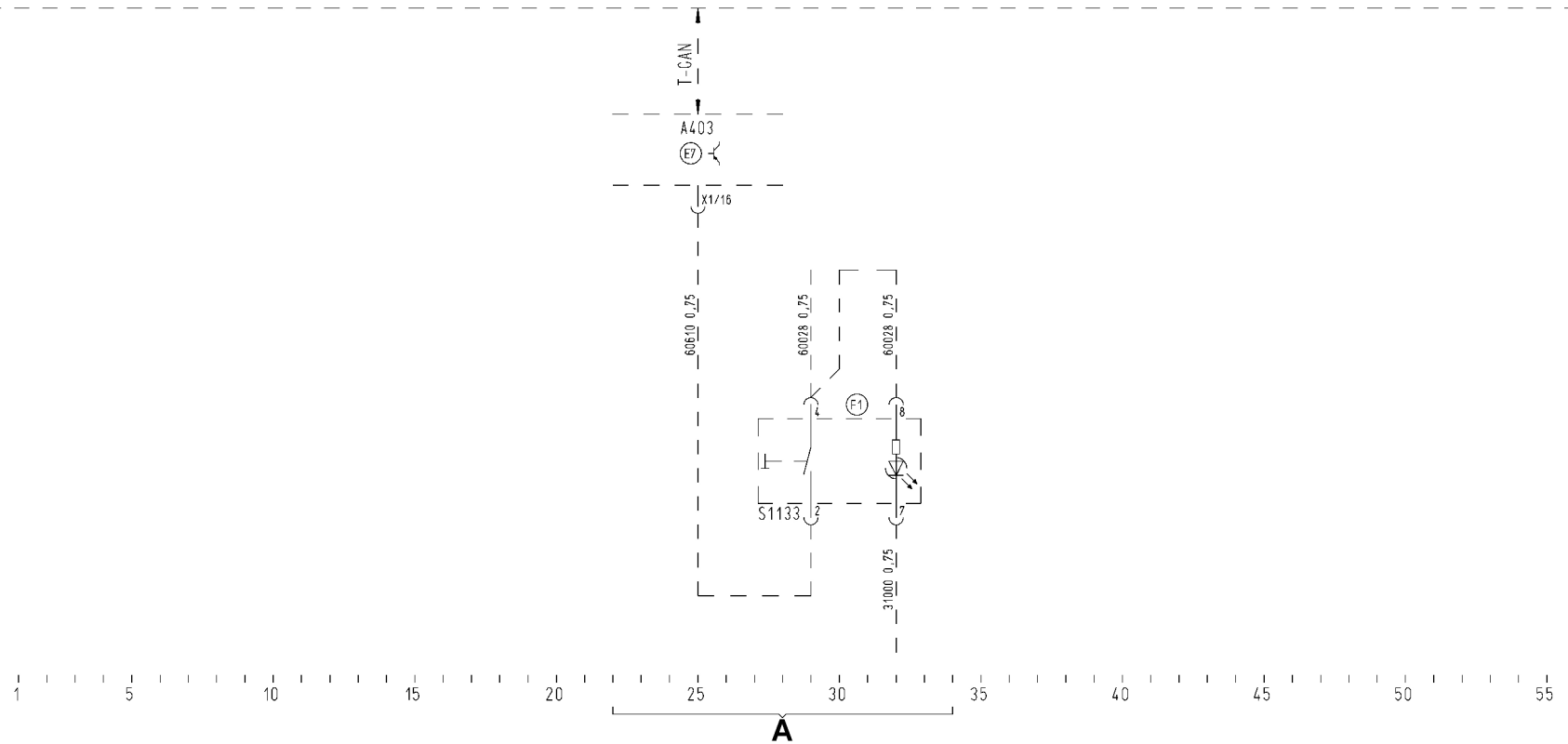
A Pritarder/Intarder, automatic

-
- 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

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3134**Baseline radio sheet 1 of 1**

Date: 01.2007

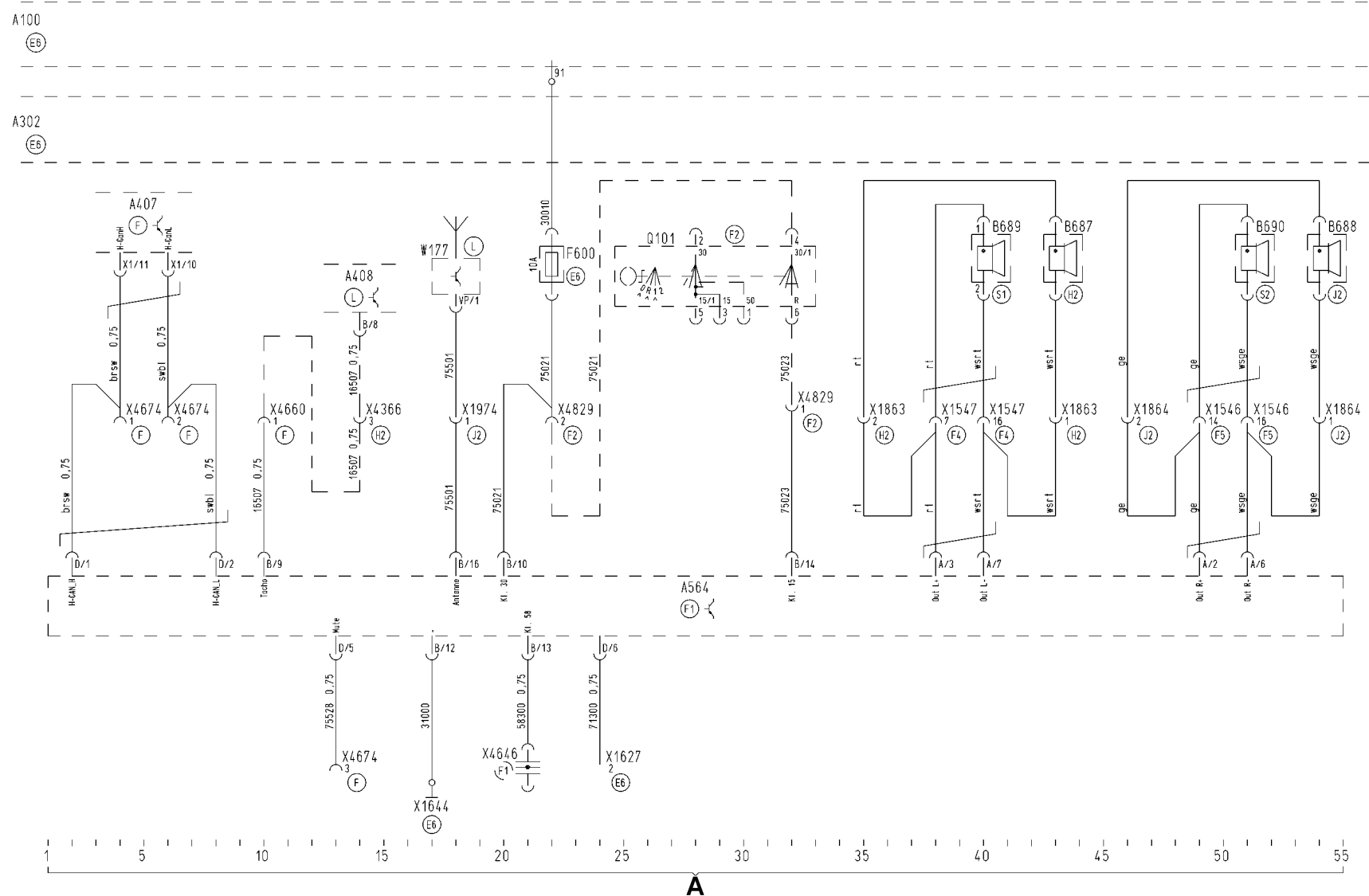
Legend**A Baseline radio**

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)

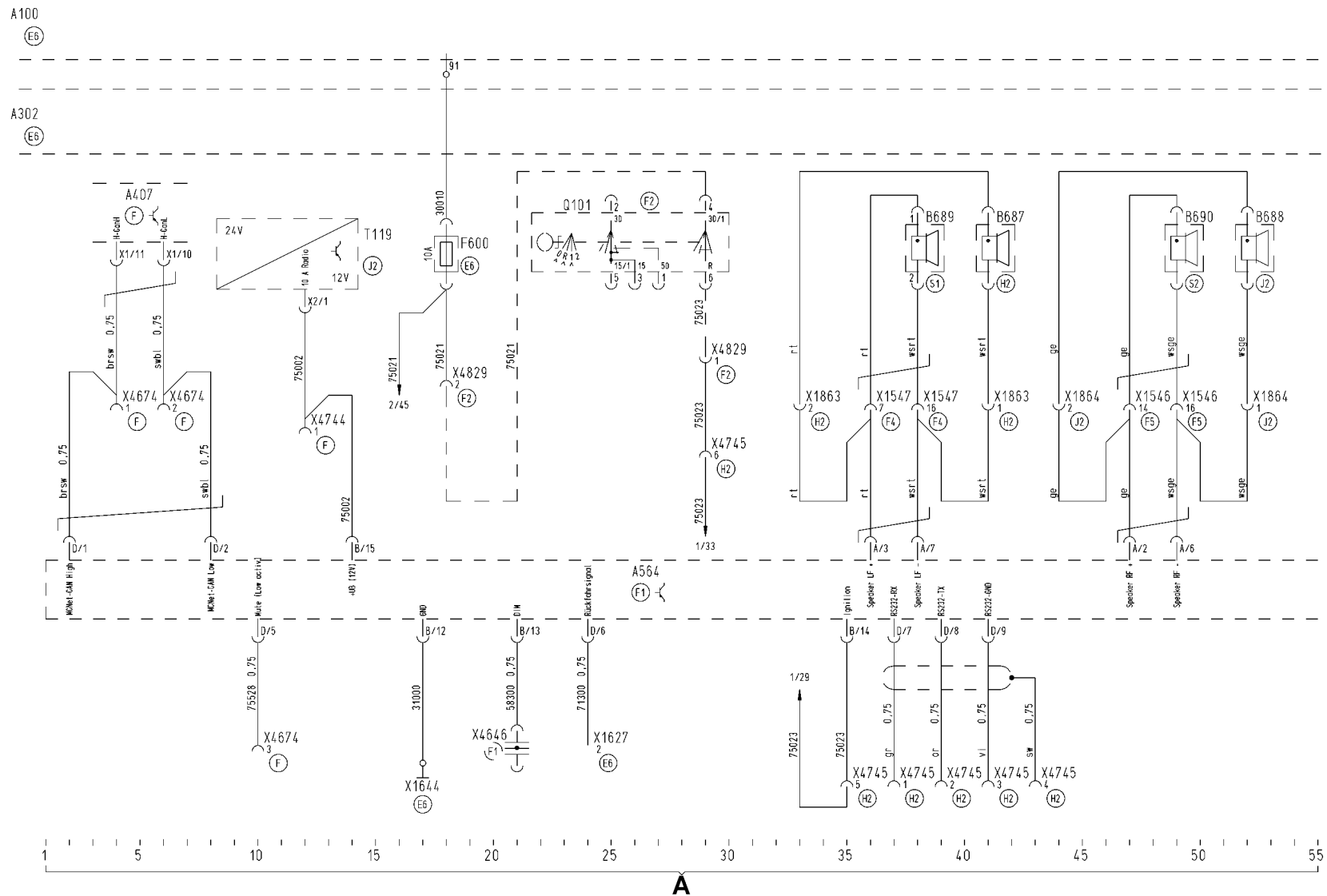
**Note**

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**

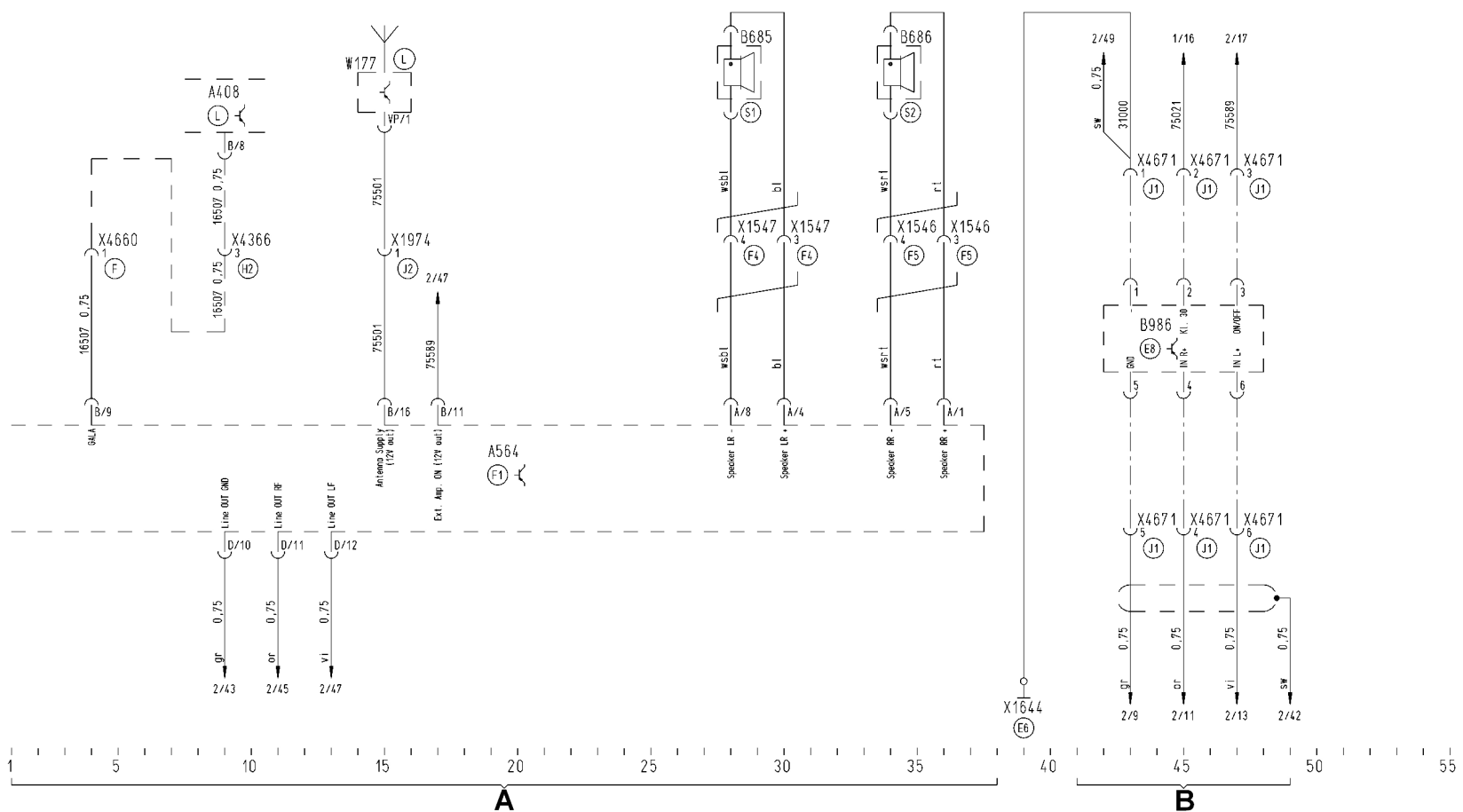
A100	Central electrical system
A302	Central computer 2
A408	Tachograph
A564	Radio with CD
B685	Loudspeaker, bass, left
B686	Loudspeaker, bass, right
B986	Subwoofer 1
W177	Combination aerial, radio, D/E network, GPS
X1546	Plug conn., door, right
X1547	Plug conn., door, left
X1644	Earthing point, cab, 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

A100

(E6)

A302

(E6)



WIRING DIAGRAM NO. 81.99192.3349

Bunk light, bottom sheet 1 of 1

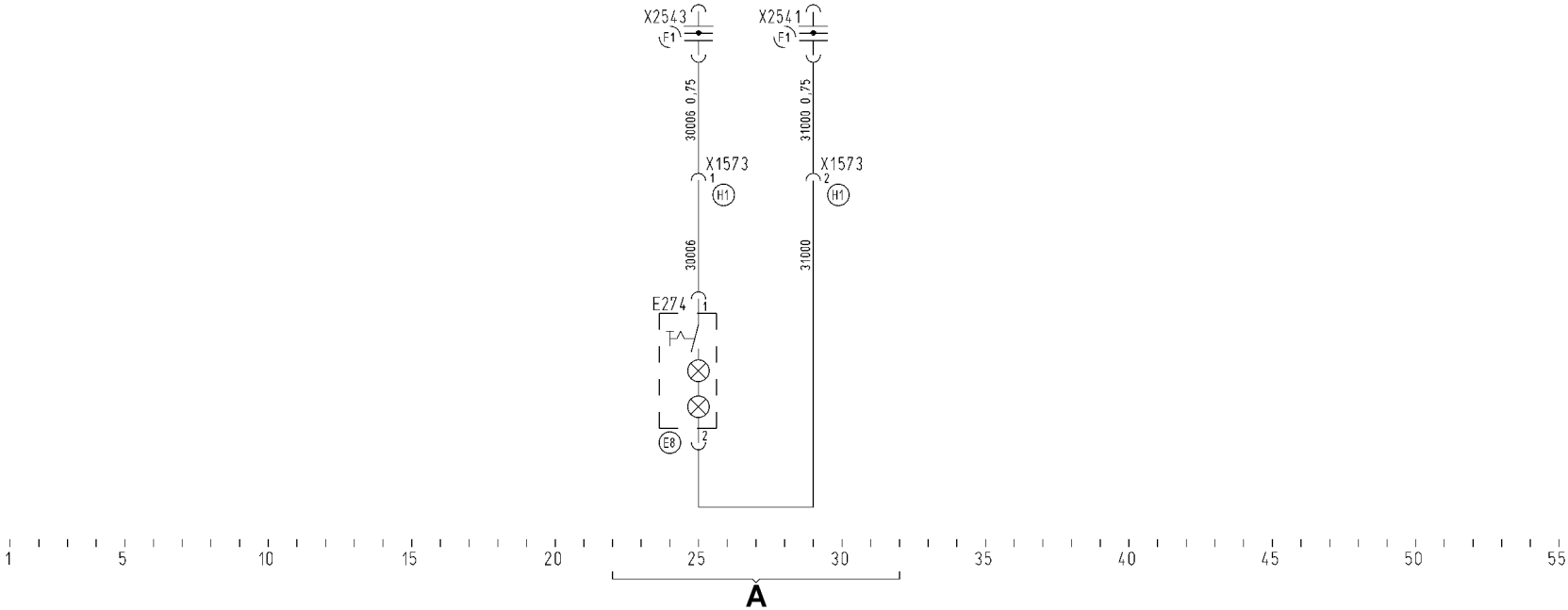
Date: 04.2006

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

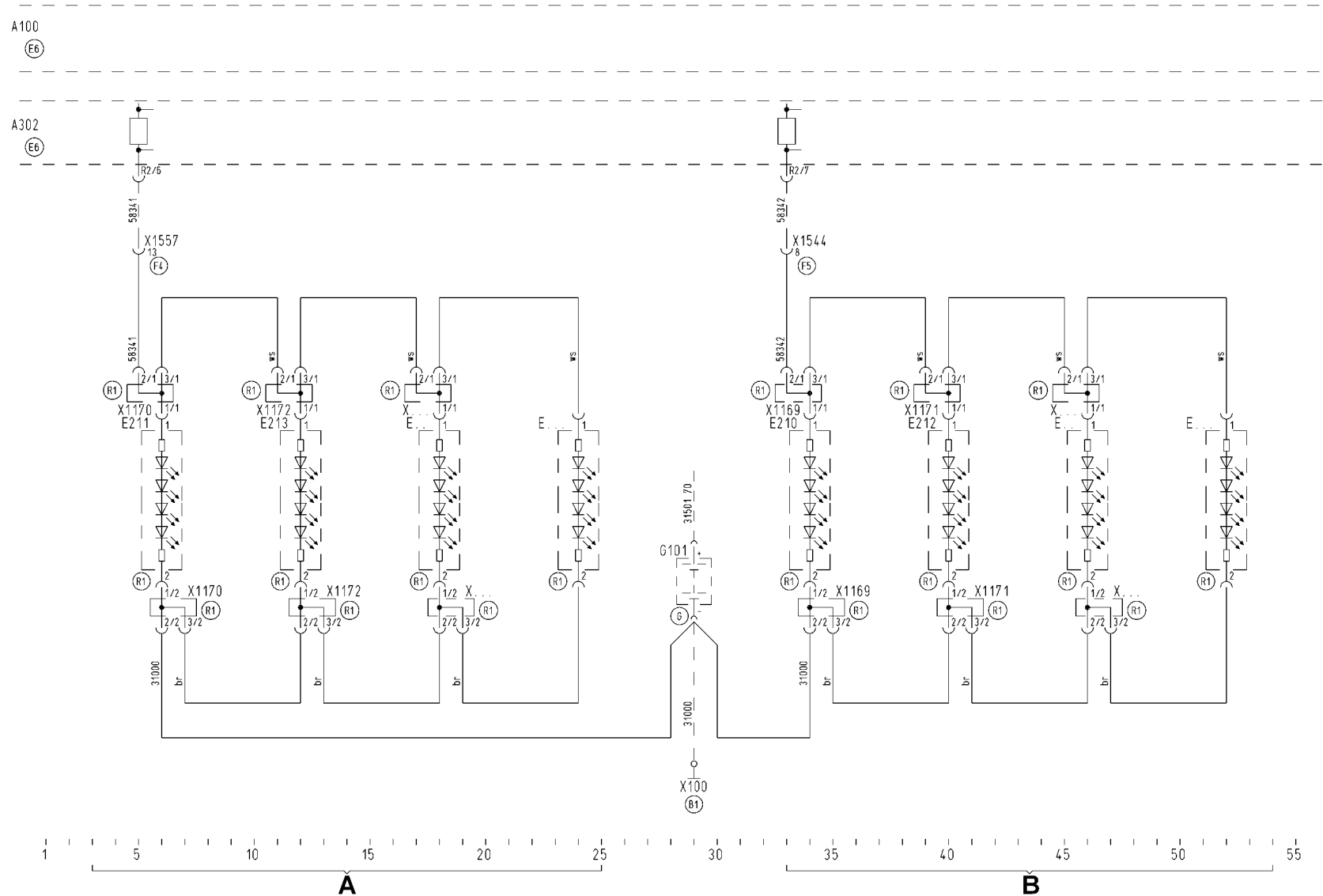
Legend**A Side marker lights, left****B Side marker lights, right**

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

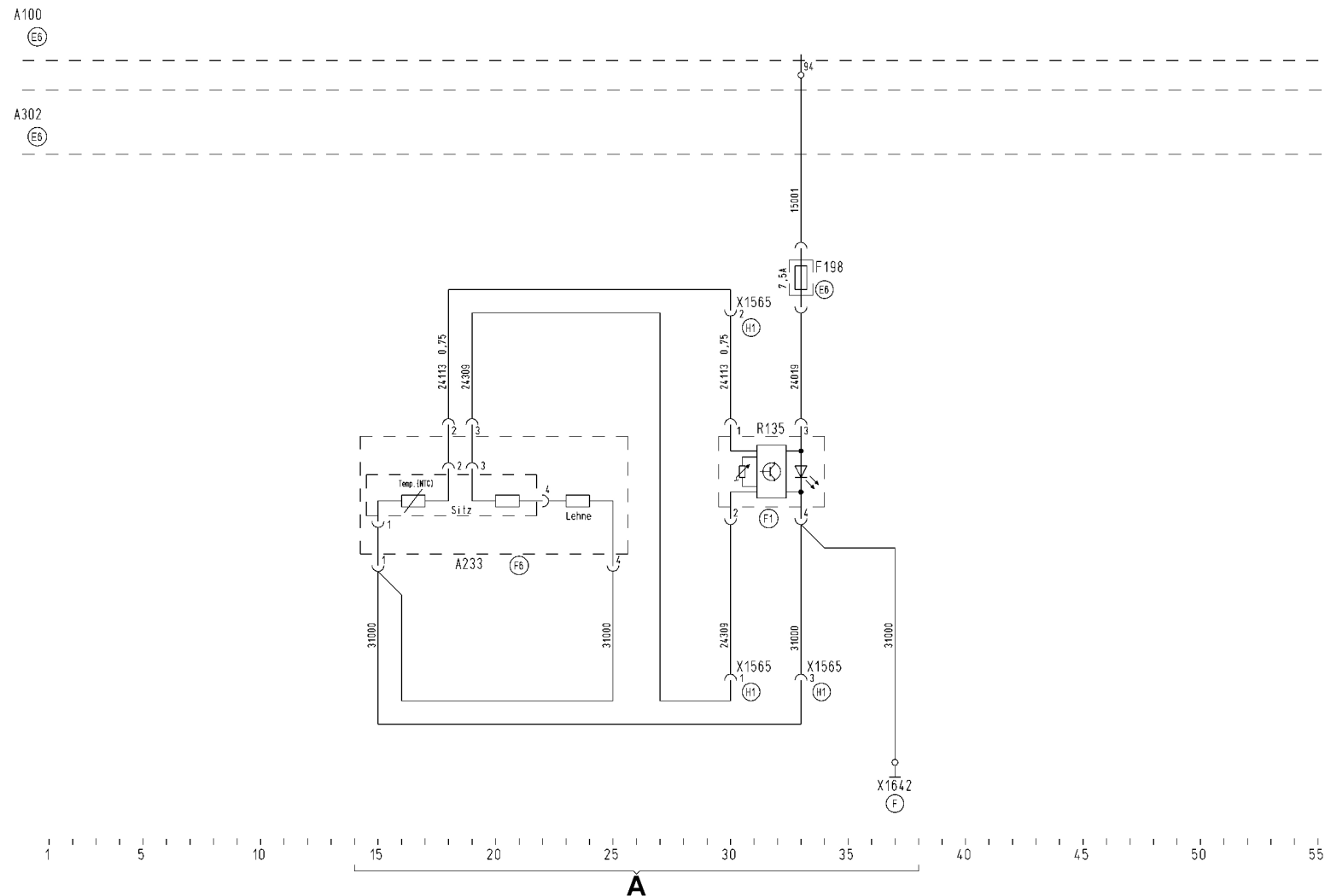
Date: 12.2005

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

Technical drawing of a control circuit (A) for a machine. The circuit is powered by a 24V AC supply. It includes a 16A fuse (F2 16), a 16A thermal relay (T119), a 16A contactor (C1), and a 16A contactor (C2). The circuit is protected by a 16A fuse (F1) and a 16A thermal relay (T119). The circuit includes various components like switches, fuses, and relays, with labels for terminals and components.

Labels in the diagram include: A100, A302, E6, 90-2, 300/10 5, 25A, F2 16, E6, X4 64 5, F1, 16000, X1/1, X2/12, 24V, 12V, 24V DND, X3/2, X3/1, T119, J2, X1/2, 31034, 30325, X7 23, F1, 31000 5, X16 44, E6.

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

WIRING DIAGRAM NO. 81.99192.3395

Storage locker lighting, rear left sheet 1 of 1

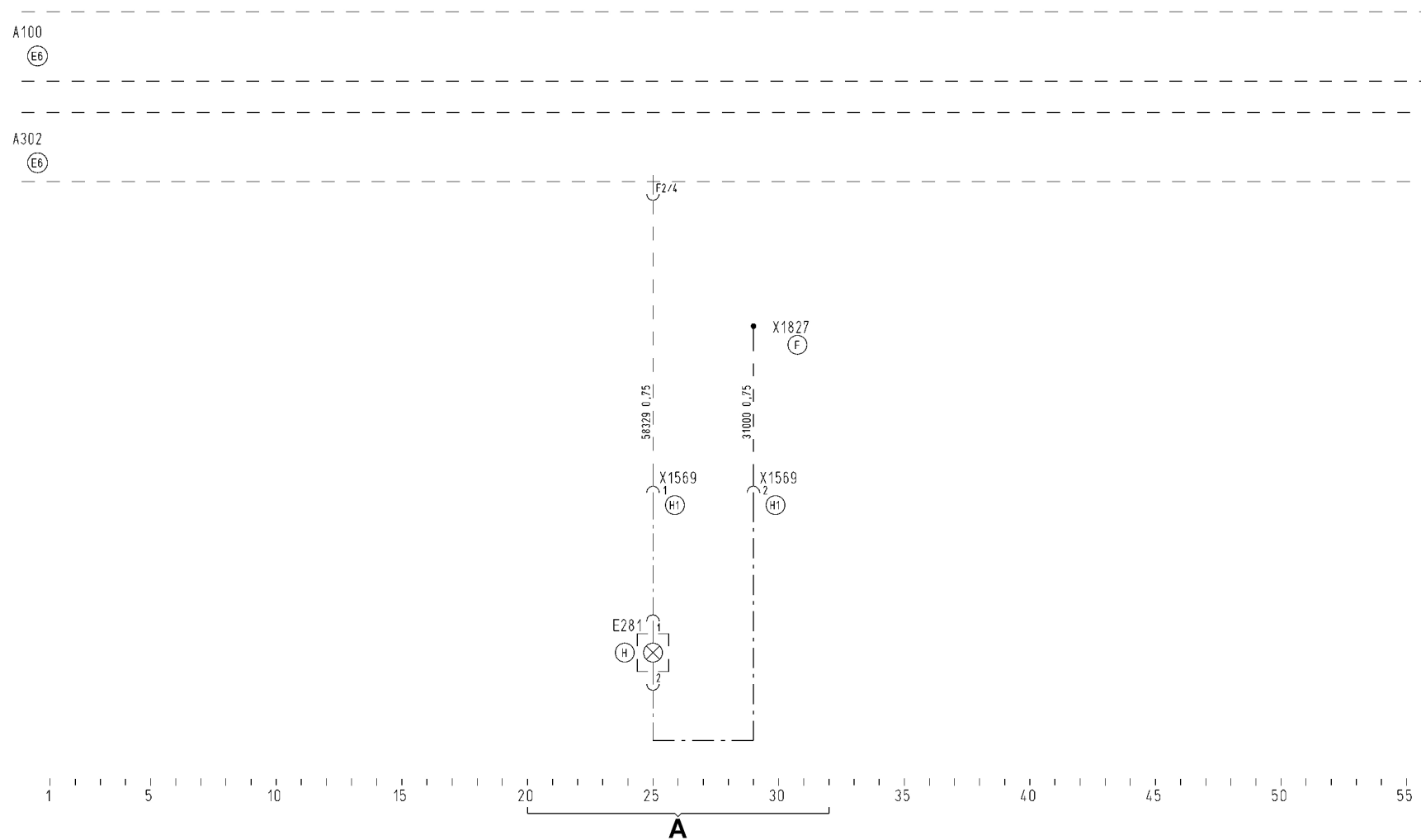
Date: 01.2006

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

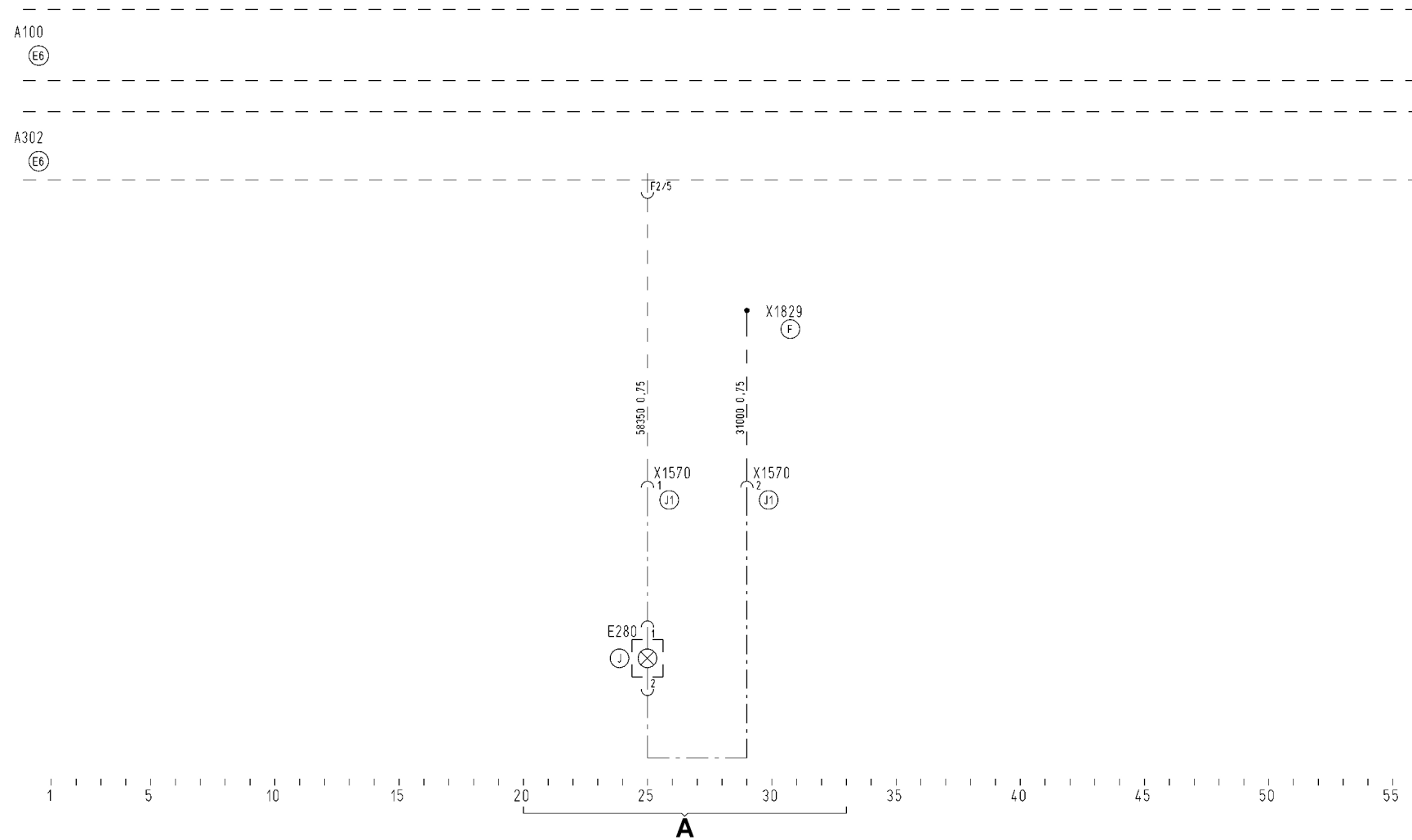
Date: 01.2006

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

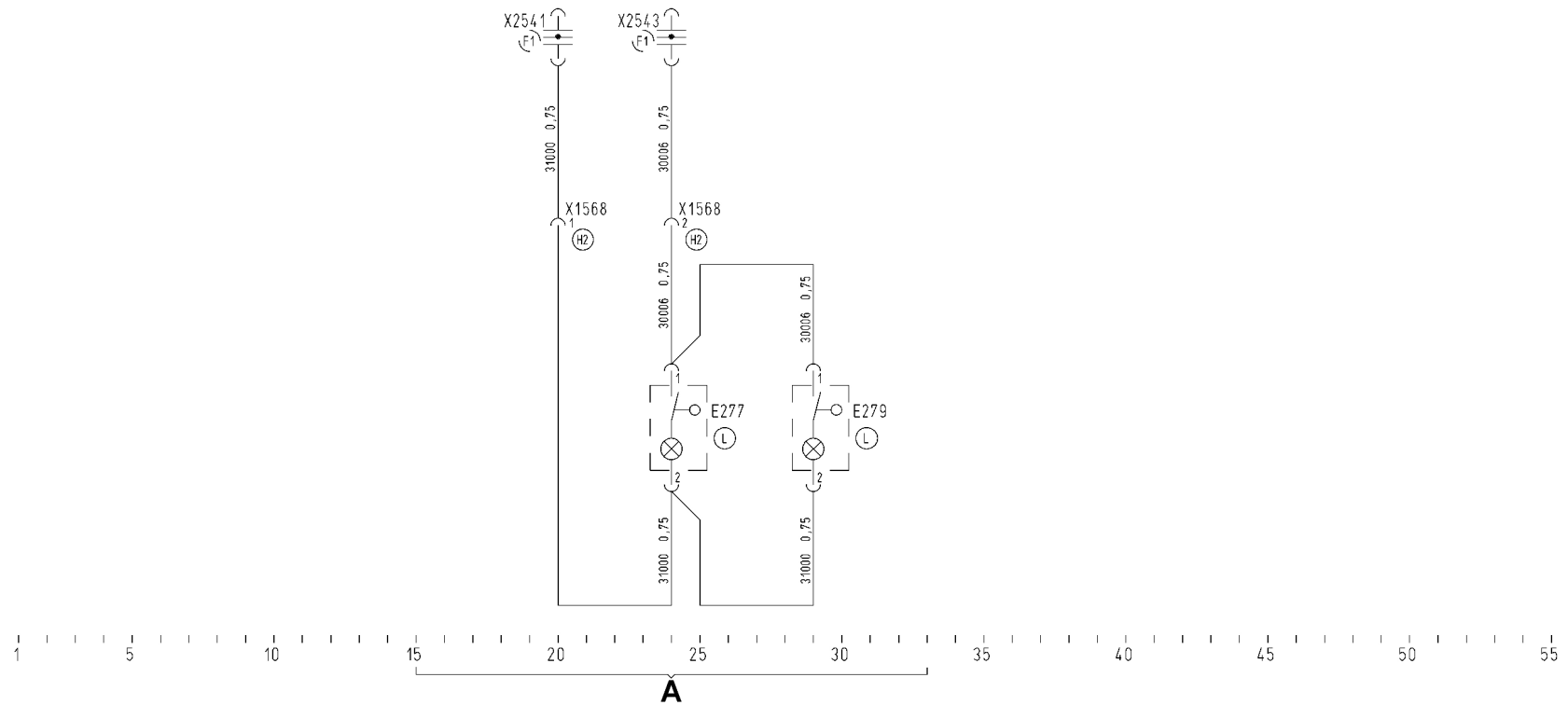
A Storage locker lighting, top (left, middle)

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

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3351**Storage locker lighting, top (left, middle, right) sheet 1 of 1**

Date: 04.2006

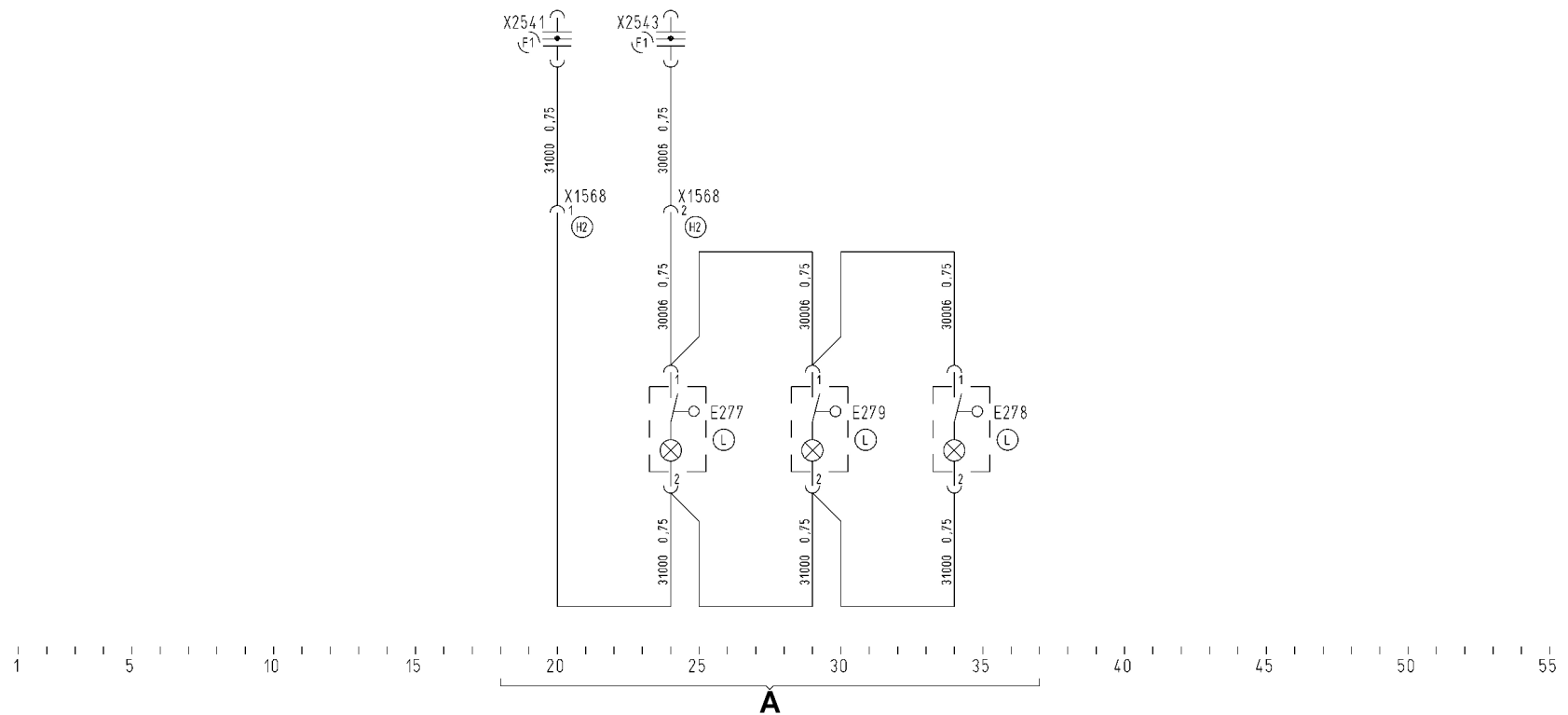
Legend**A Storage locker lighting, top (left, middle, right)**

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

A100
(E6)

A302
(E6)



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

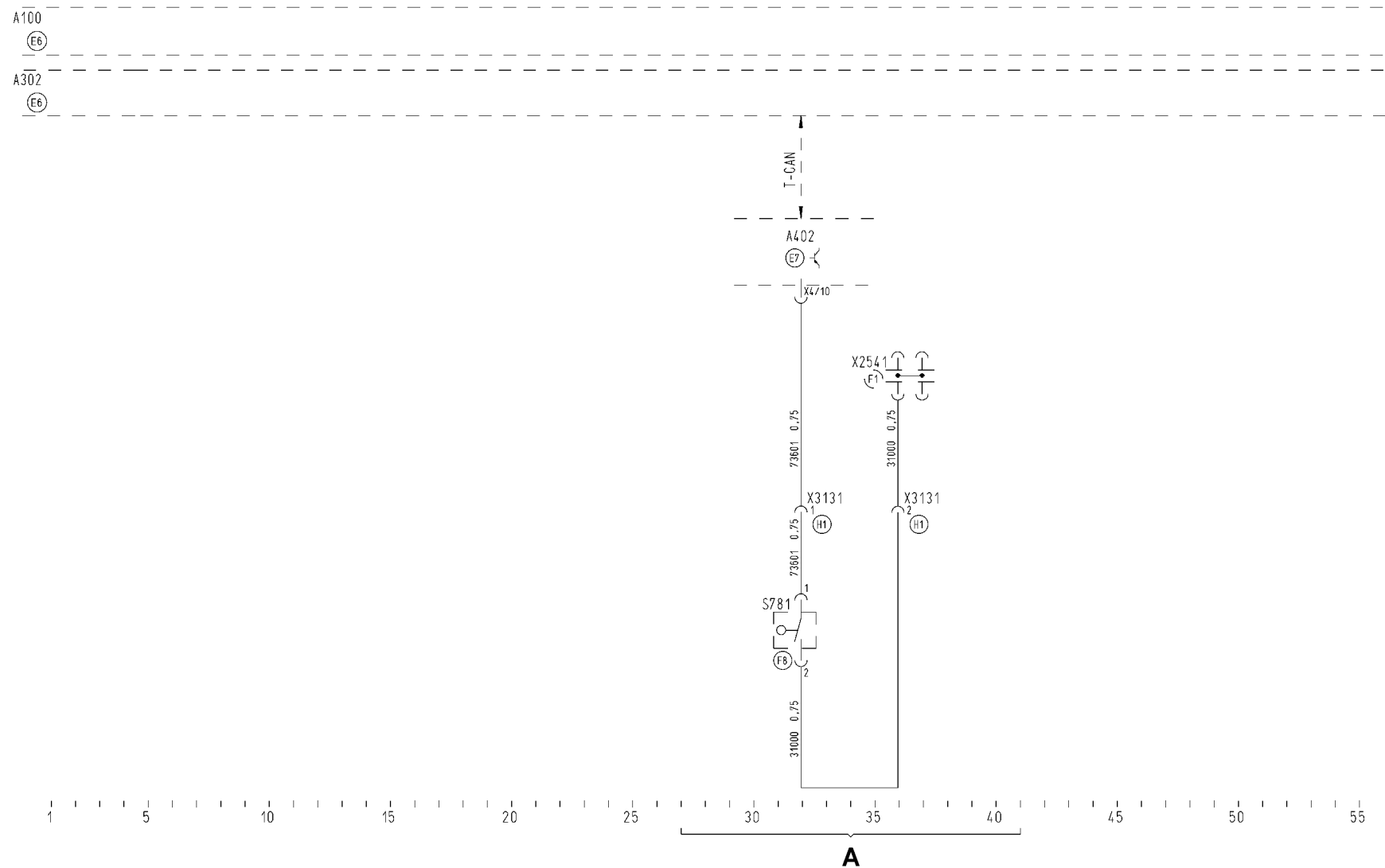
WIRING DIAGRAM NO. 81.99192.3082**Anti-jackknife brake for EBS5 sheet 1 of 1**

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

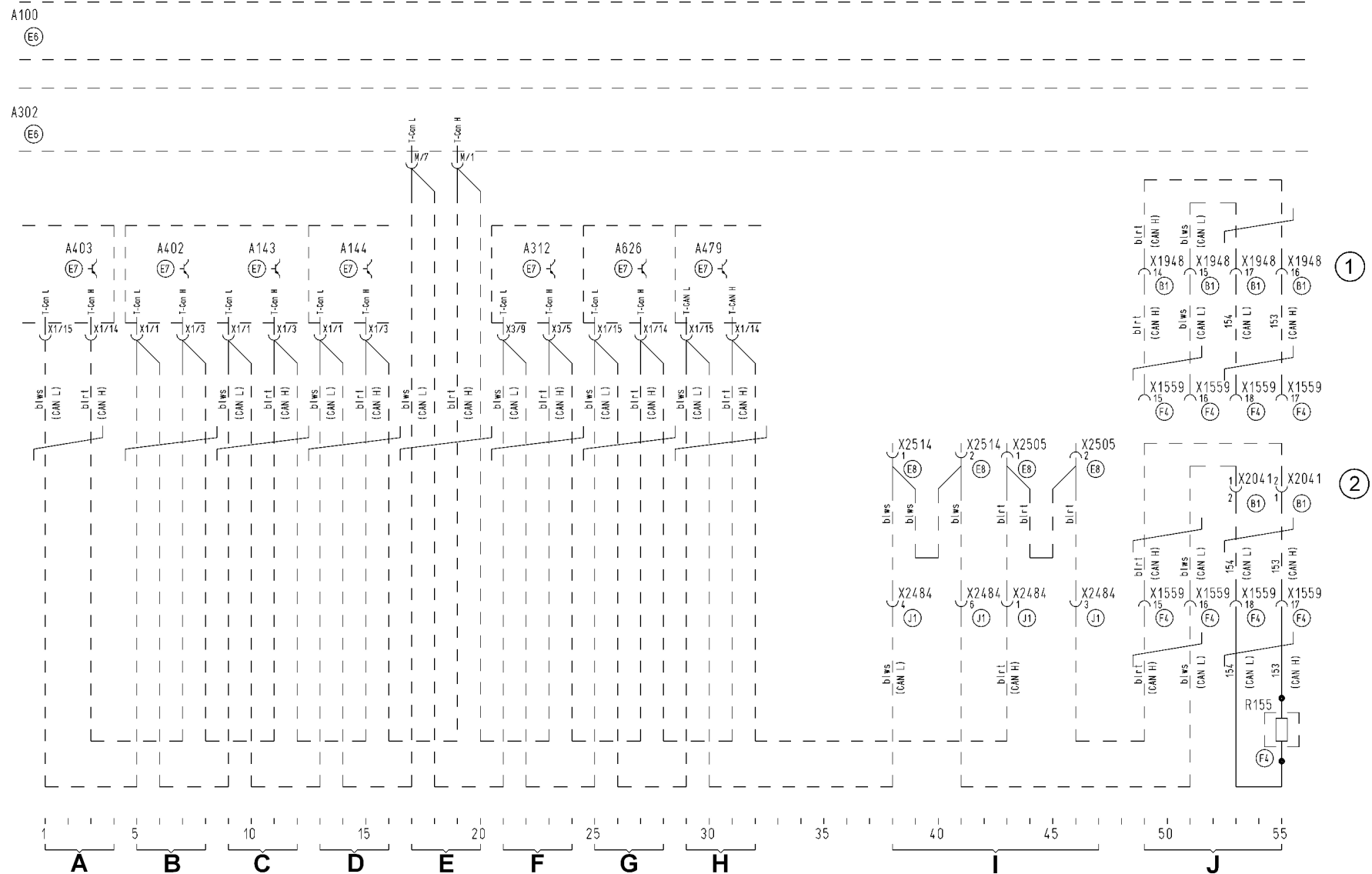
-
- A100** Central electrical system
 - A143** Control unit, ECAS
 - A144** Control unit, retarder
 - A302** Central computer 2
 - A312** Customer-specified control module
 - A402** Control unit, EBS
 - A403** Vehicle management computer
 - A479** ACC control unit
 - A626** Control unit, hydrostatic 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
-

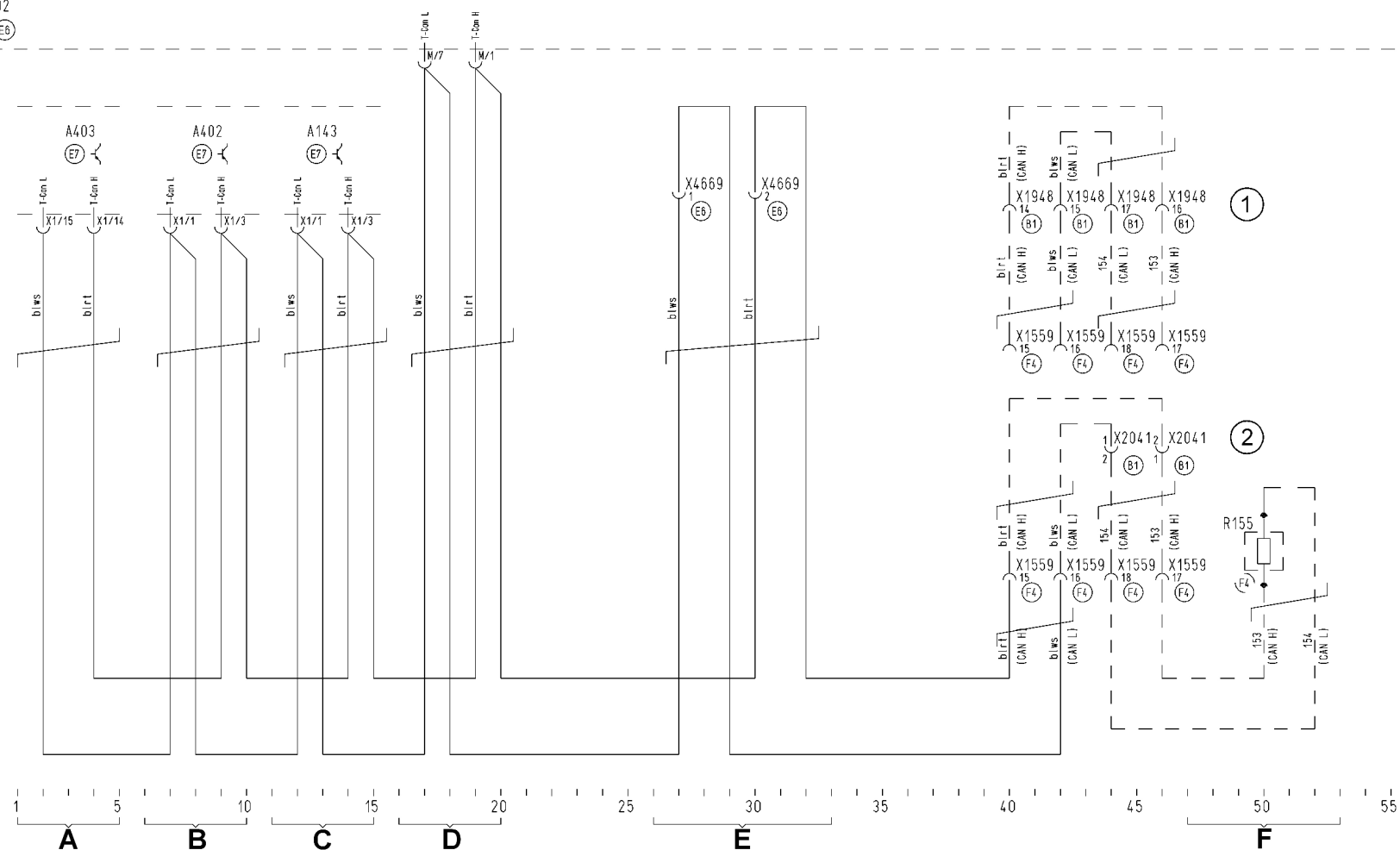
- 1** Wiring for engine D2066
- 2** Wiring for engine D0836, D2866, D2876

**Note**

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

A100
(E6)

A302
(E6)



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.

A100
(E6)

A302
(E6)



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

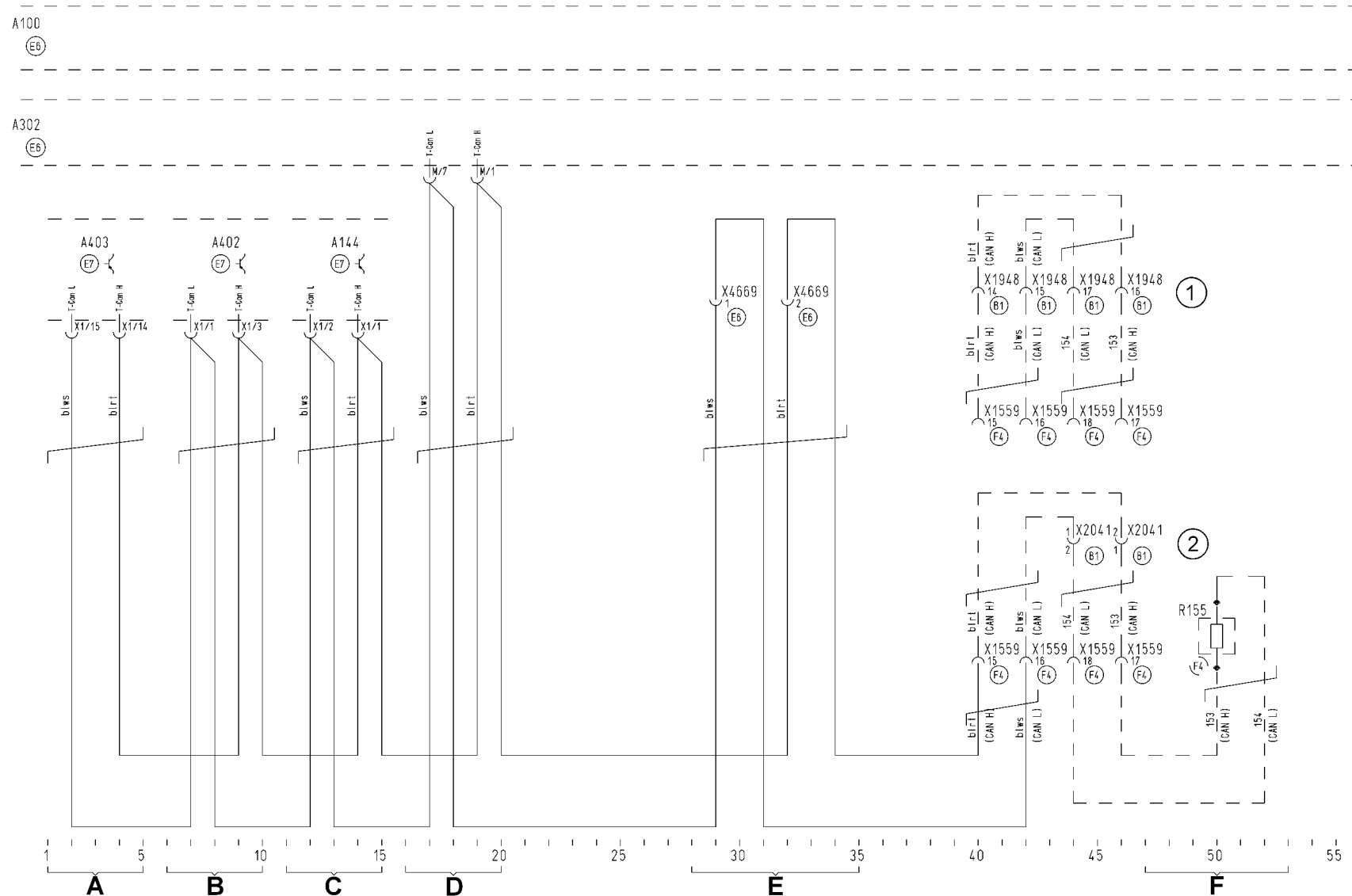
**Note**

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

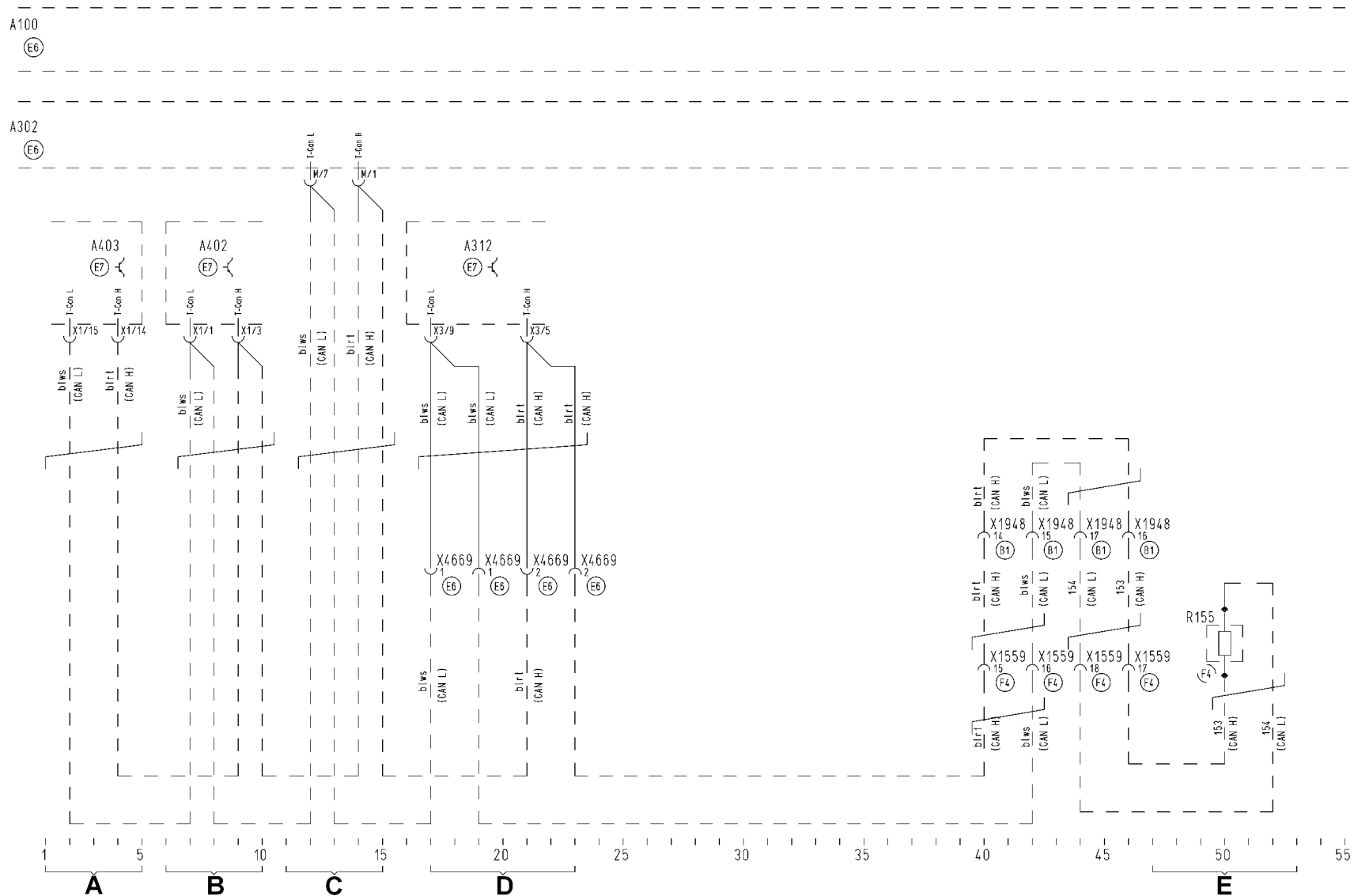
- A** FFR (vehicle management computer)
- B** EBS
- C** ZBR (central on-board computer)
- D** KSM (customer-specific control module)
- E** Terminating resistor

-
- 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

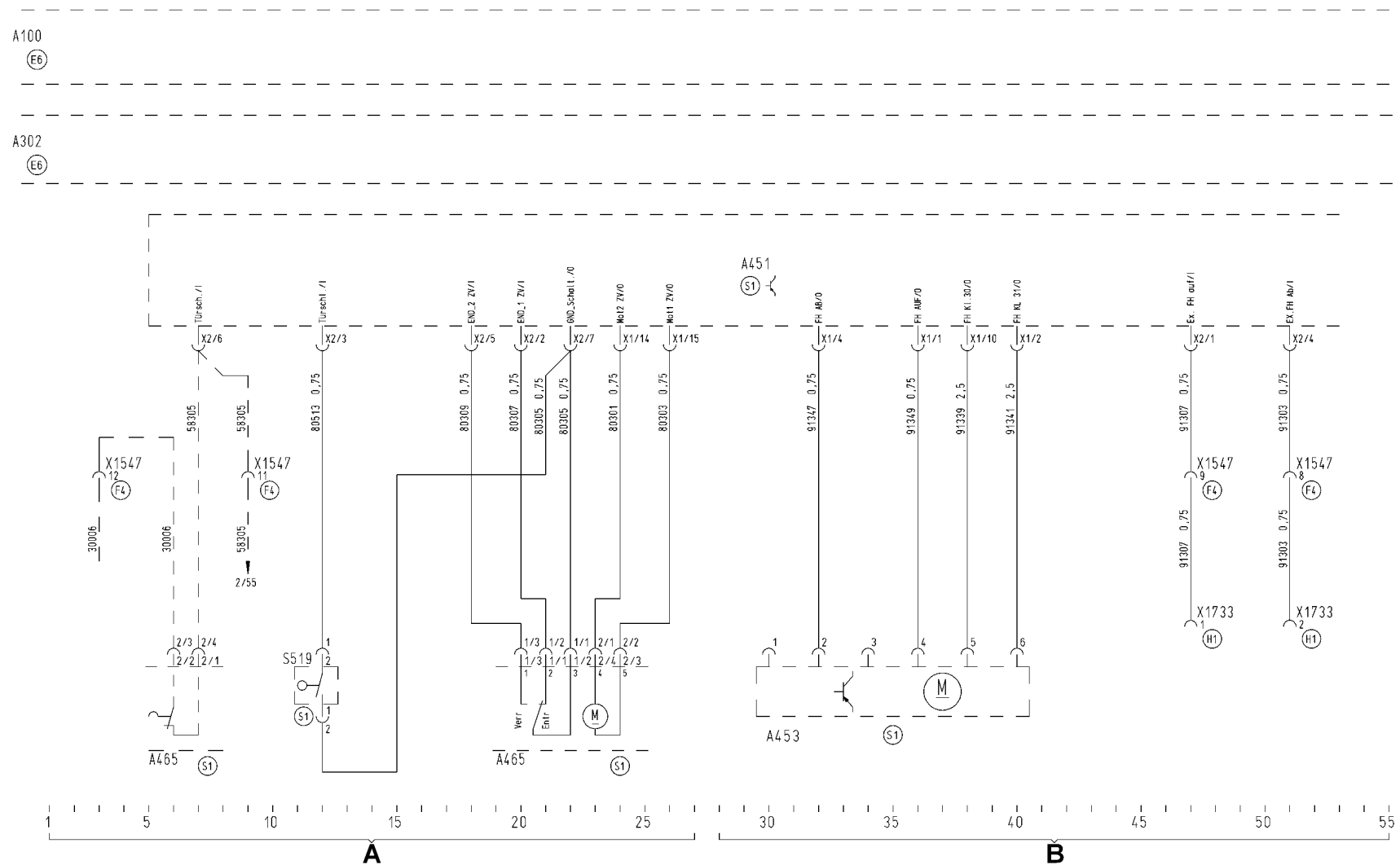
Legend

A Central locking, driver door

B Window lifter, driver door

A 100	Central electrical system
A302	Central computer 2
A451	Door module, left
A453	Window lifter, left
A465	Door lock, left
S 519	Door lock switch, left
X 1547	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

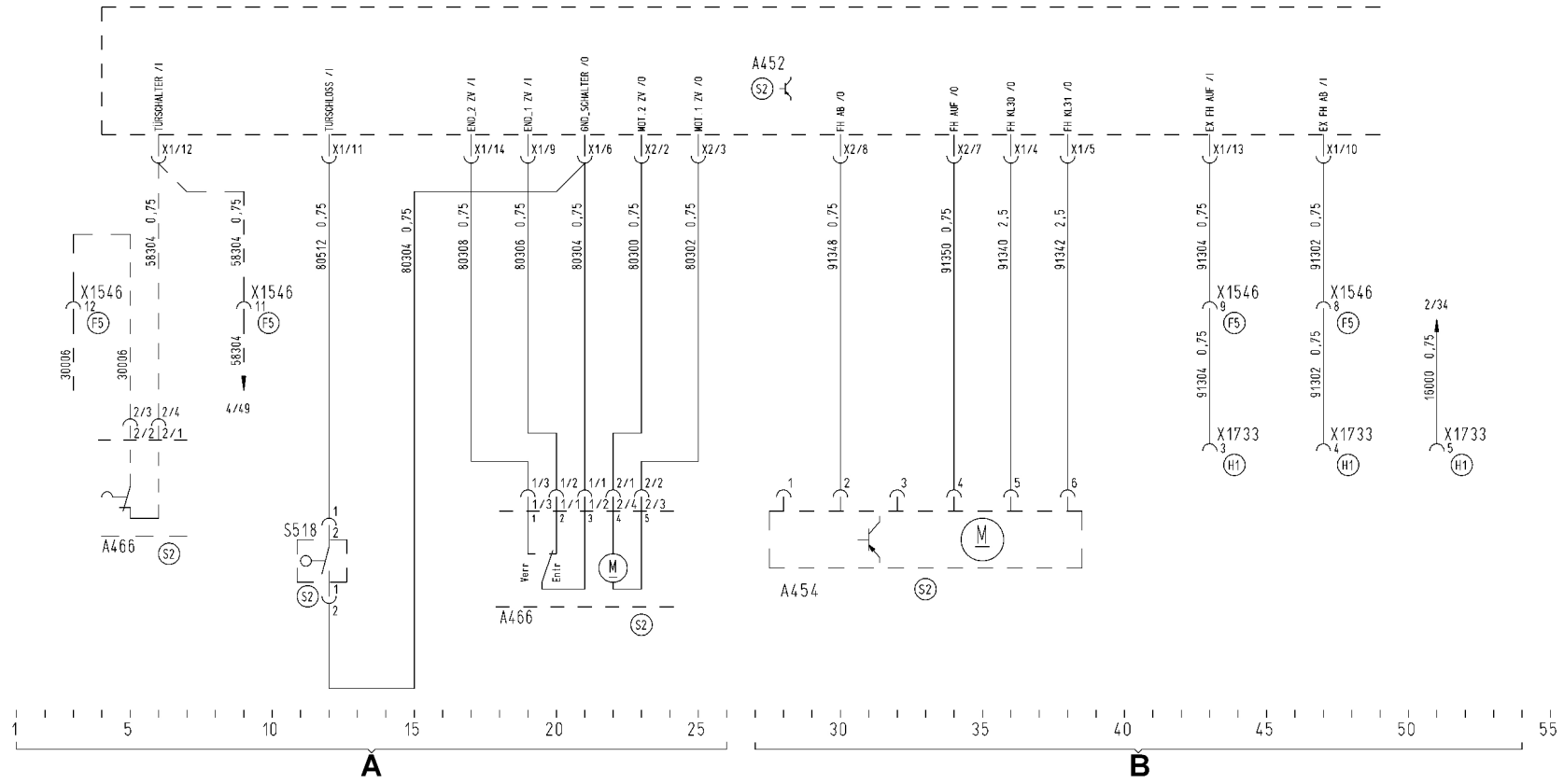
Legend**A Central locking, co-driver door****B Window lifter, co-driver door**

A 100	Central electrical system
A302	Central computer 2
A452	Door module, right
A454	Window lifter, right
A466	Door lock, right
S 518	Door lock switch, right
X 1546	Plug conn., door, right
X1733	Plug conn., switch, window lifters

Door module sheet 3 of 5

A100
(E6)

A302
(E6)



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

A100
(E6)

A302
(E6)



WIRING DIAGRAM NO. 81.99192.3077

Door module sheet 5 of 5

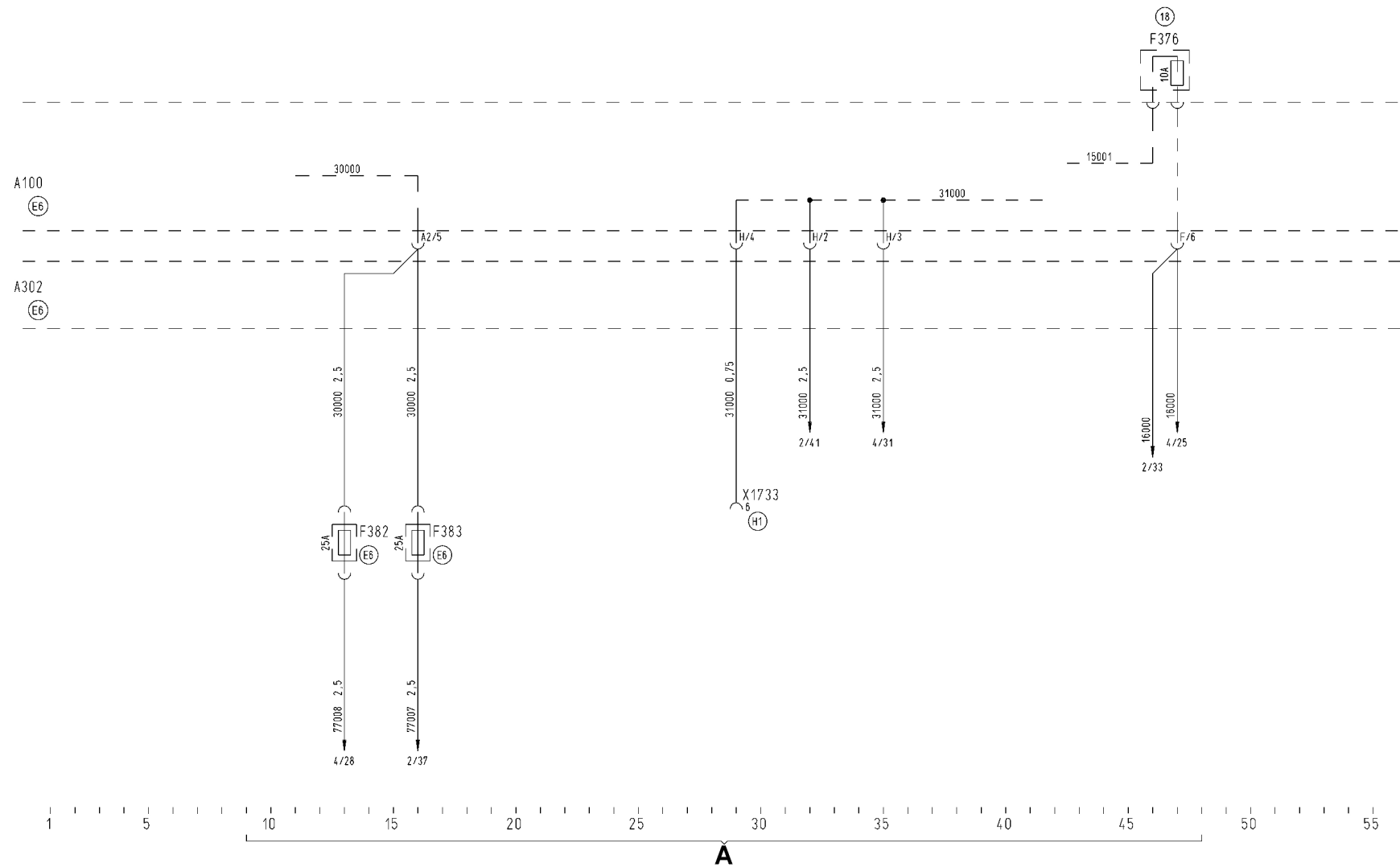
Date: 03.2005

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

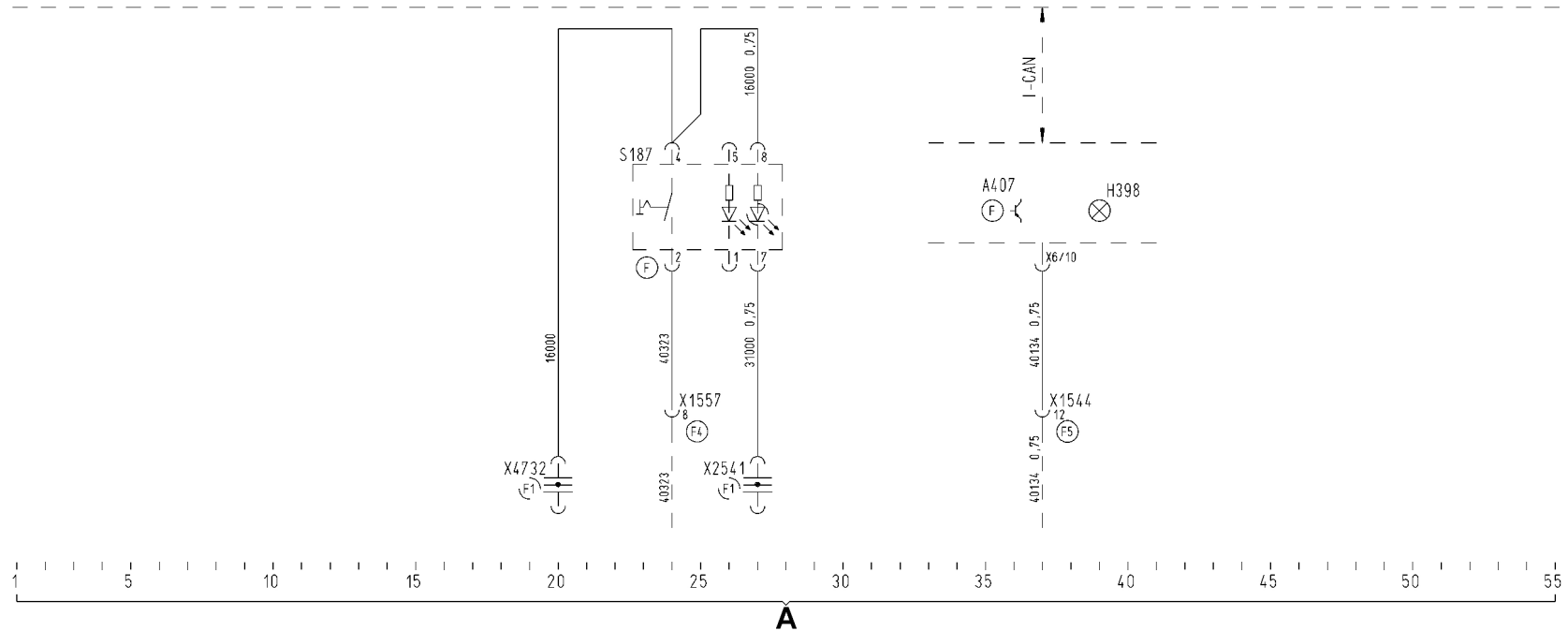
A Preparation, transverse differential lock, rear axle

-
- A**100 Central electrical system
 - A**302 Central computer 2
 - A**407 Instrumentation
 - H**398 Check lamp, differential lock, transverse, rear axle
 - S**187 Switch, transverse differential lock, rear axle
 - X**1544 Plug conn., frame III
 - X**1557 Plug conn., frame, left
 - X**2541 Potential distributor, 21-pin, line 31000
 - X**4732 Potential distributor, line 16000, switch lighting

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

A100
(E6)

A302
(E6)



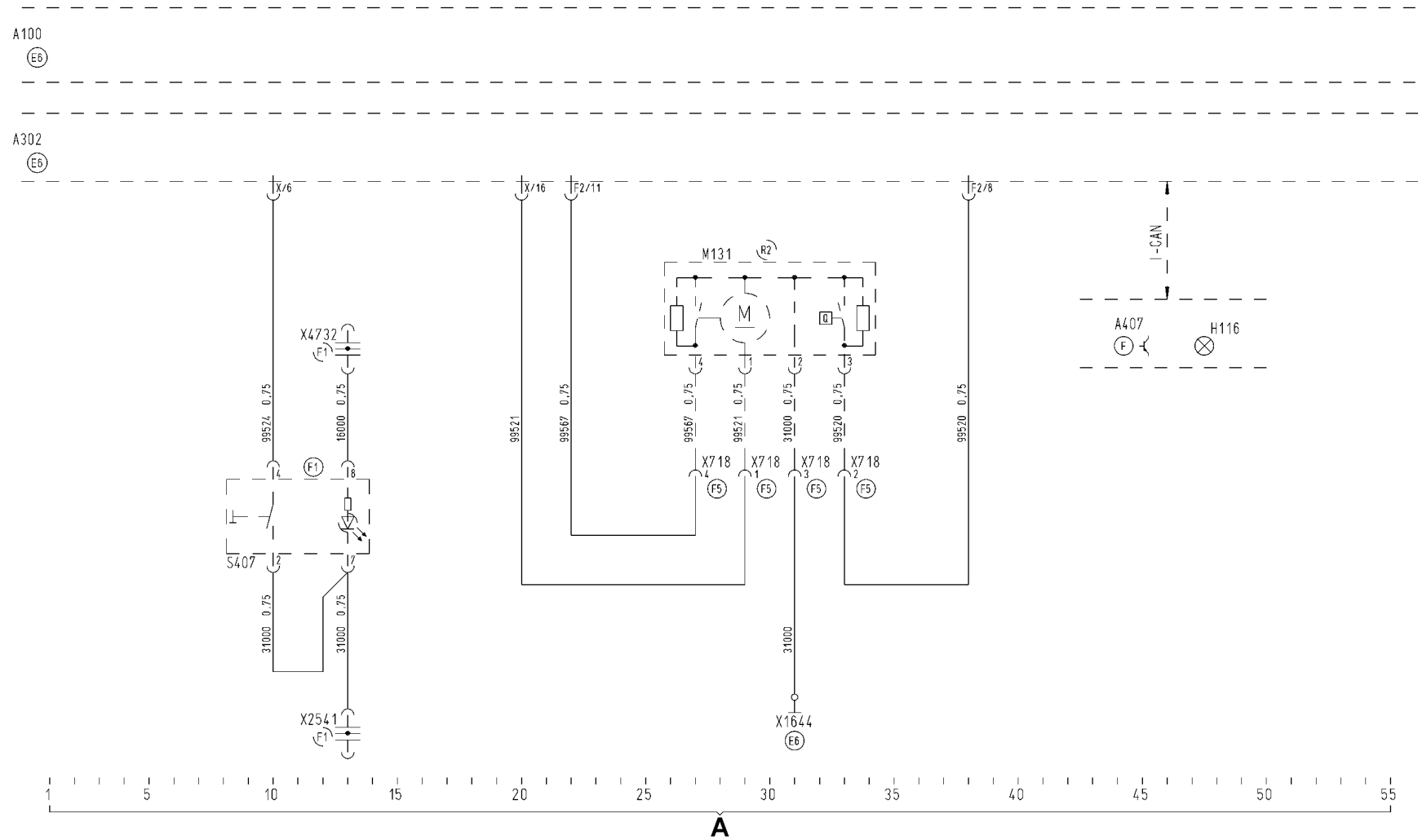
WIRING DIAGRAM NO. 81.99192.3379**Preparation, central lubrication system sheet 1 of 1**

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

