

Service Manual

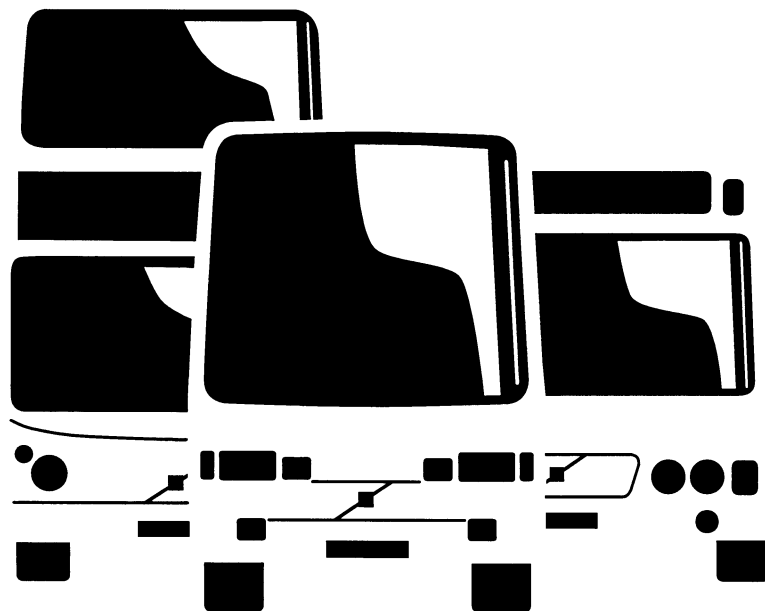
Buses

Group **37**

Release**02**

Wiring Diagram

CHID, B12M 380199–



Foreword

The descriptions and service procedures contained in this manual are based on designs and methods studies carried out up to November 09.

The products are under continuous development. Vehicles and components produced after the above date may therefore have different specifications and repair methods. When this is judged to have a significant bearing on this manual, supplementary service bulletins will be issued to cover the changes.

The new edition of this manual will update the changes.

In service procedures where the title incorporates an operation number, this is a reference to V.S.T. (Volvo Standard Times).

Service procedures which do not include an operation number in the title are for general information and no reference is made to V.S.T.

The following levels of observations, cautions and warnings are used in this Service Documentation:

Note: Indicates a procedure, practice, or condition that must be followed in order to have the vehicle or component function in the manner intended.

Caution: Indicates an unsafe practice where damage to the product could occur.

Warning: Indicates an unsafe practice where personal injury or severe damage to the product could occur.

Danger: Indicates an unsafe practice where serious personal injury or death could occur.

Volvo Bus Corporation

Curitiba, Brazil

Order number: 88950076

Repl:

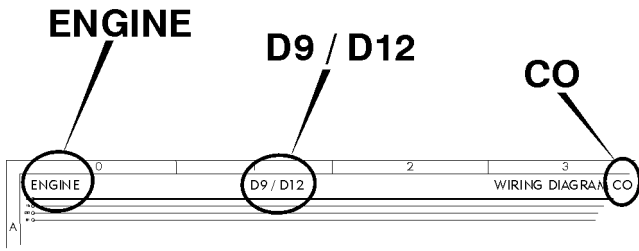
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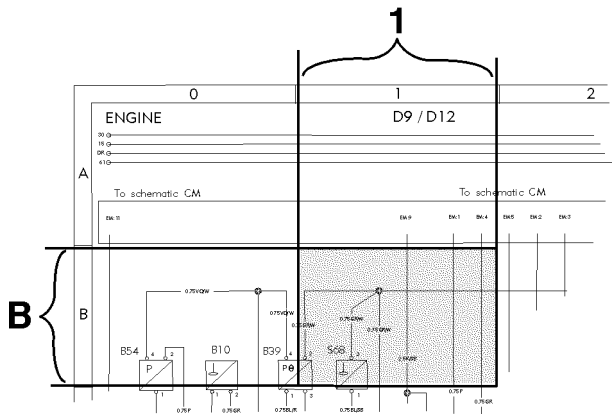
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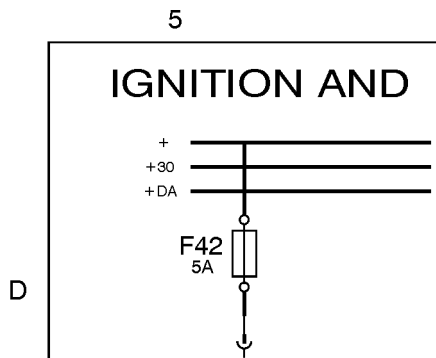
Example of wiring diagram



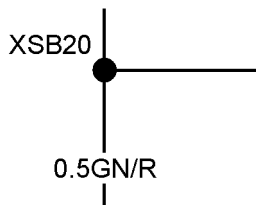
Title of component wiring diagram, variant/subtitle and symbol.



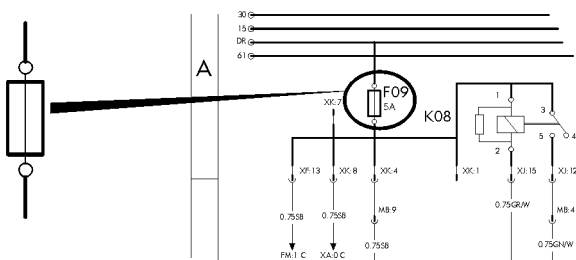
Coordinates (Line B Column 1).



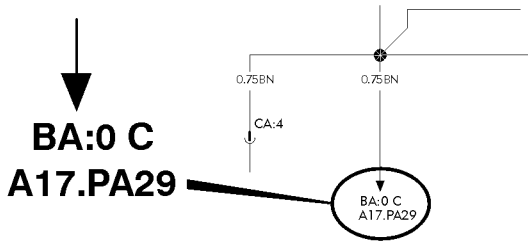
+ Battery voltage.
 + 30 Voltage with S12 key connected (main switch).
 + DR Voltage with the ignition key in the drive position, the preheating position and the start position.



Connection point

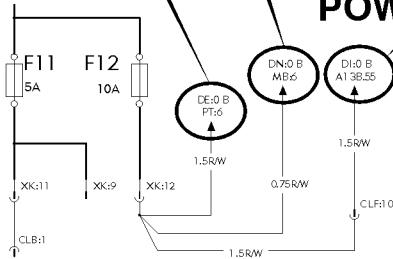


Fuse.

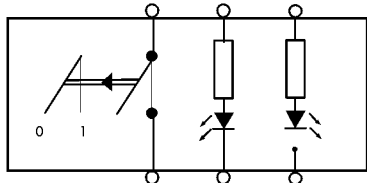


Reference arrow for BA wiring diagram, coordinate 0 C, component A17, connector PA, pin 29.

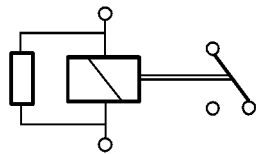
GEARTRONIC
I-SHIFT
POWERTRONIC



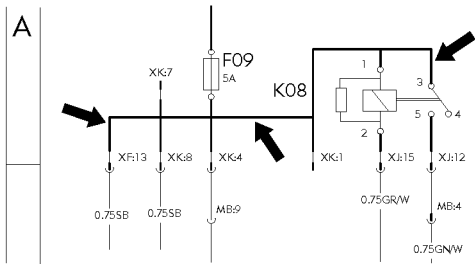
The maximum number of variants has been included in this wiring diagram. Therefore, remember that not all of the components and cables listed here will be installed in your vehicle. Their presence or absence will depend on the variants which are used in your vehicle.



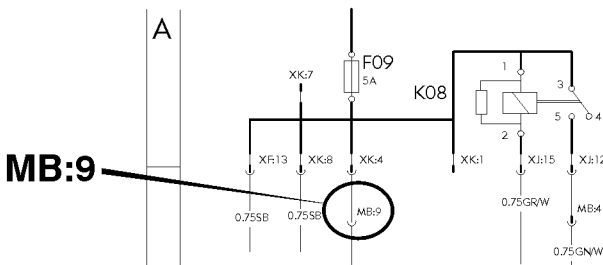
Switch



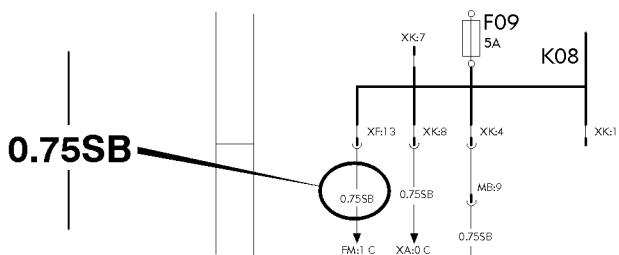
Relay.



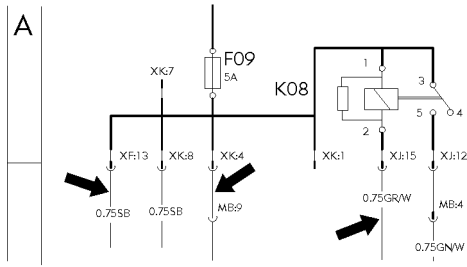
Conduction path on the printed circuit board.



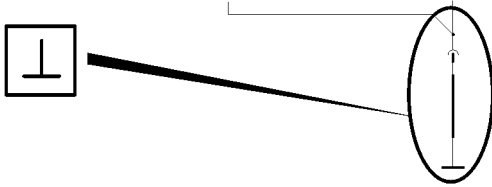
Connector MB pin 9.



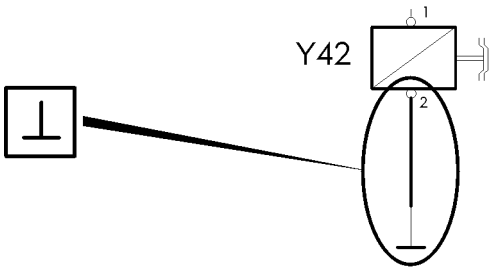
Cable section and colour



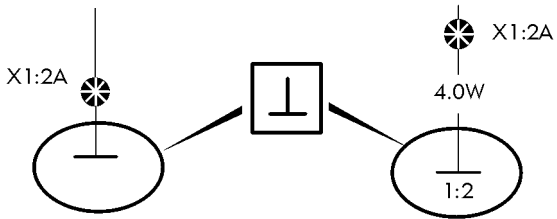
Single lines, cables



Connection to ground on the printed circuit board.



Wireless connection to ground.



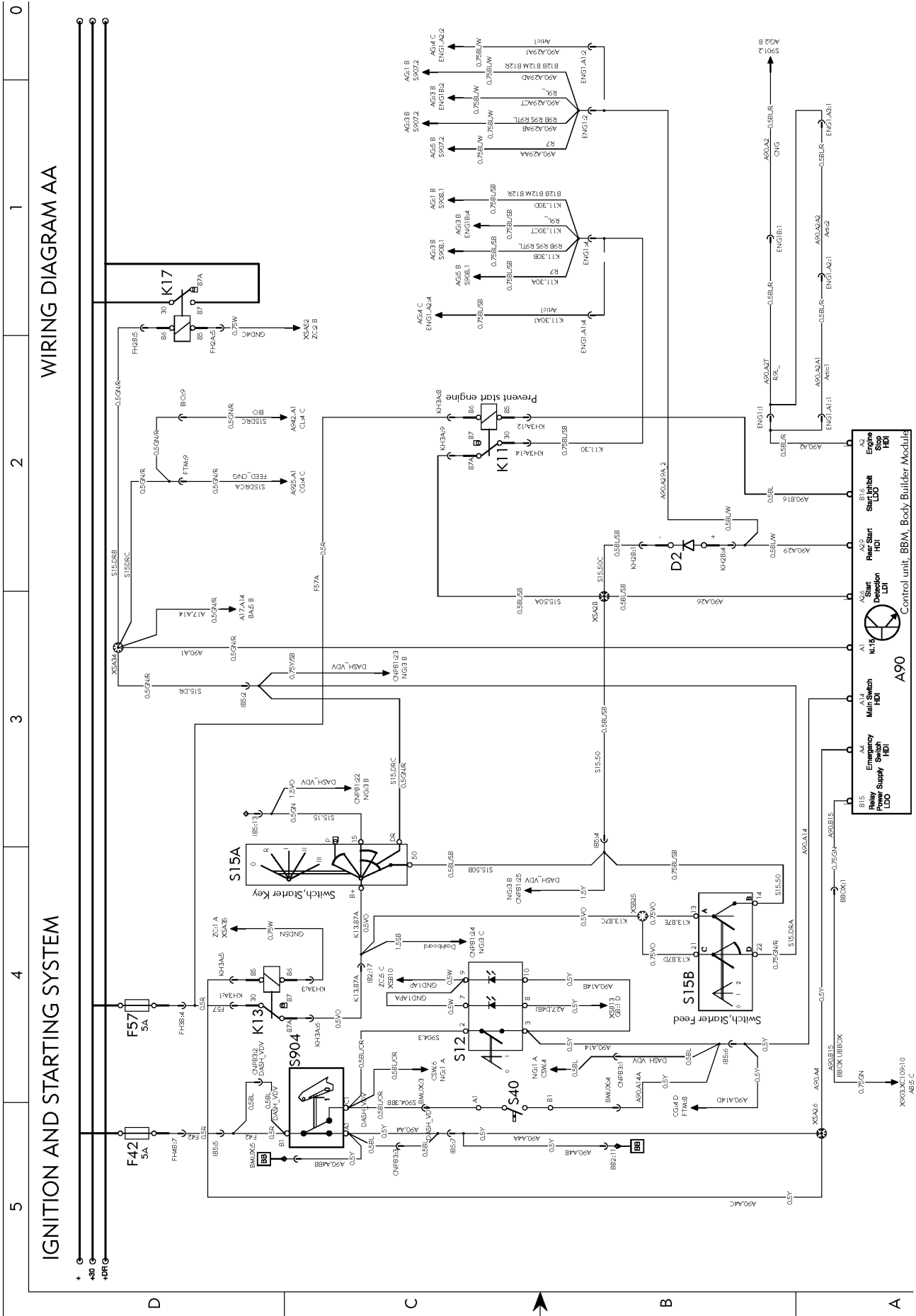
The same connection point can be shown for several diagrams. The cable from the connection point to ground is depicted and coded in only one diagram (ZC connections to ground). In the other diagrams it is shown as in the picture.

Contents of wiring diagrams

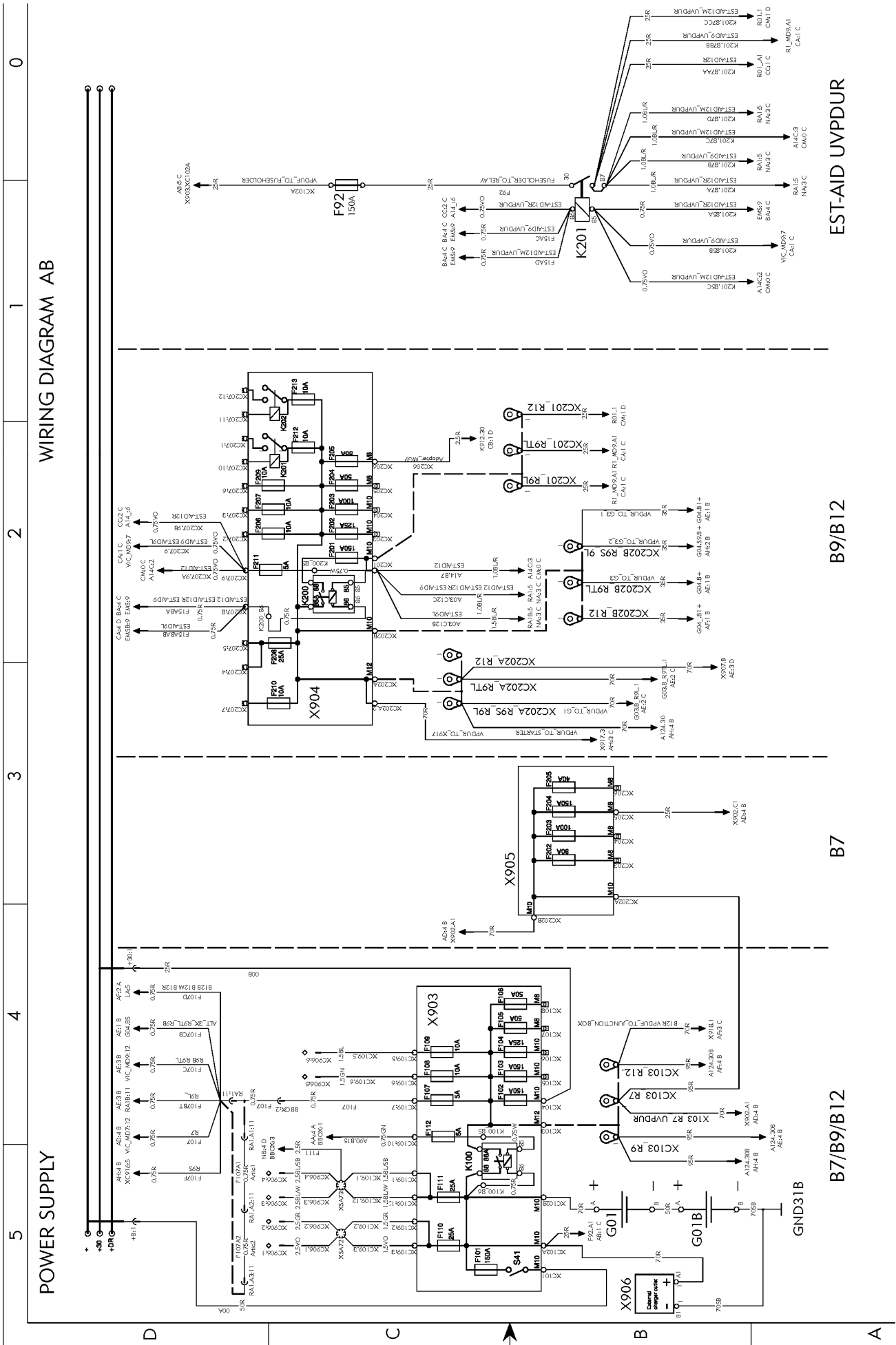
AA	Ignition, starter system	7
AB	Voltage supply, starter motor	8
AC	Starter and alternator	9
AF	Starter and alternator for MD12	10
AG	Rear start/stop buttons	11
BA	VECU Vehicle Control Unit	12
BB	BBM bodybuilder module	13
BC	BBM bodybuilder module	14
BD	Fire alarm	15
CC	EECU D12D Engine control unit	16
CG	FTM Control unit	17
CL	BIO Control unit	18
CM	EECU D12E Engine control unit	19
CO	OILMASTER Control unit	20
CP	BIC and RTVW Control uni	21
CU	DNOX2 Control unit	22
CV	DNOX2 Control unit	23
DA	G8-EGS Gearbox	24
DB	ECOMAT ZF (6HP600N) Gearbox	25
DC	VOITH Gearbox	26
DD	ECOLIFE ZF Gearbox	27
DM	Retarder	28
DN	I-shift gearbox	29
DO	VOITH Gearbox (Artic)	30
EO	EBS 5.0 control unit	31
EP	EBS 5.0 control unit	32
EX	Parking brake relay	33
FA	ECS air suspension control unit	34
FB	ECS air suspension control unit	35
FC	AMECU Control unit	36
FO	Eletronic steered axle	37
GA	LCM lighting control unit, tail light	38
GB	LCM lighting control unit, front light	39
GC	LCM lighting control unit, tail light	40

GD	LCM lighting control unit, light, articulated	41
GE	LCM lighting control unit, BI-XENON light	42
GF	LCM, biartic lights	43
GM	Wiper, washer	44
GN	LCM lighting control unit, XENON light	45
IS	SWM, SRS and horn	46
IU	Audio	47
LA	ECU first turntable	48
LB	ECU second turntable	49
NA	BIC2 Dashboard	50
NB	Tachograph	51
NC	Dynafleet	52
ND	FMS 200	53
NE	FMS Gateway control unit	54
NF	VDV Instrument cluster	55
NG	VDV Instrument cluster	56
TL	Telematics ITS4mobility	57
XC	Busbar J1939	58
XD	Busbar J1587	59
XE	Busbar J1587 UDS	60
ZC	Connection to ground	61

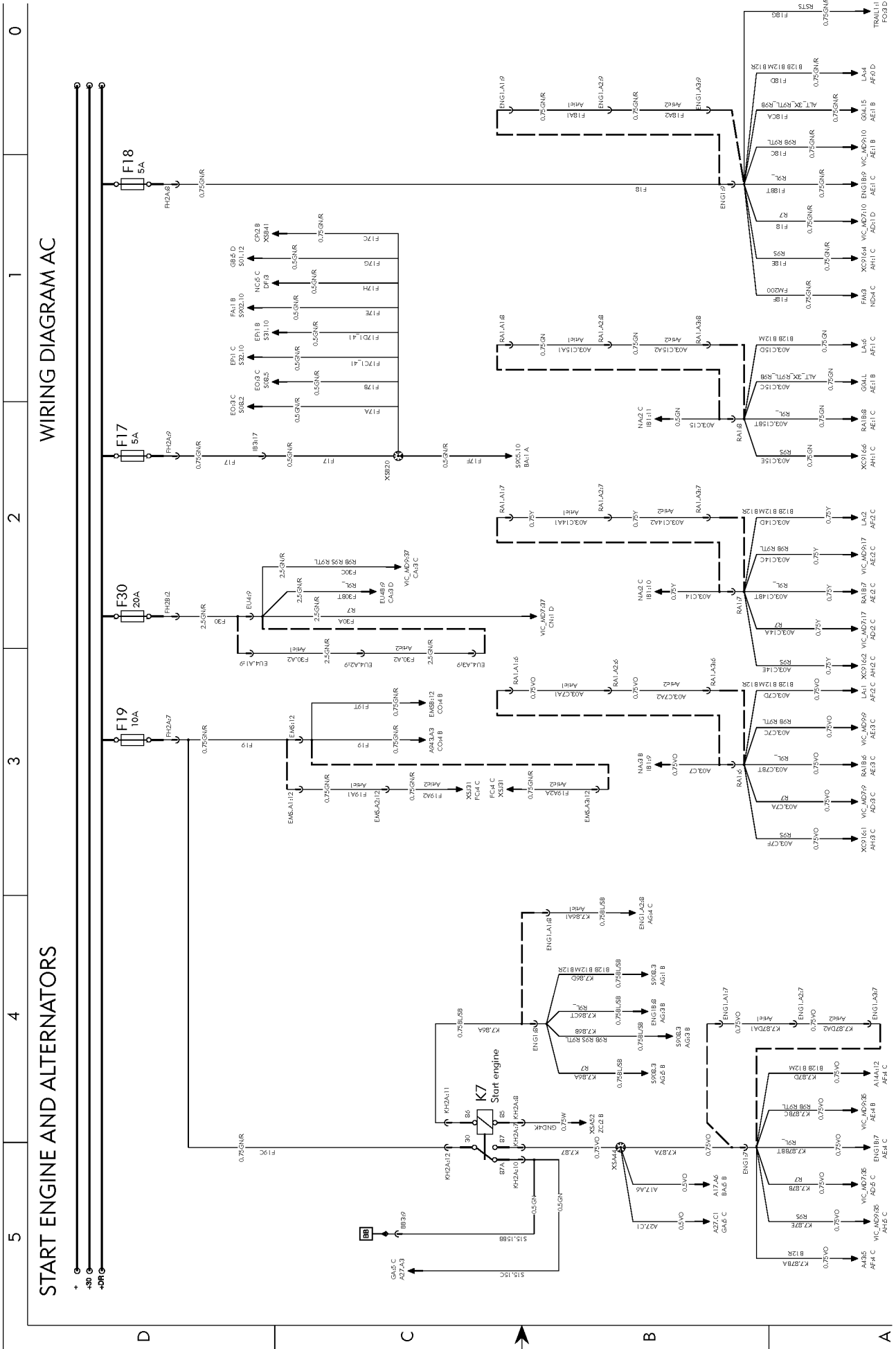
Wiring diagrams

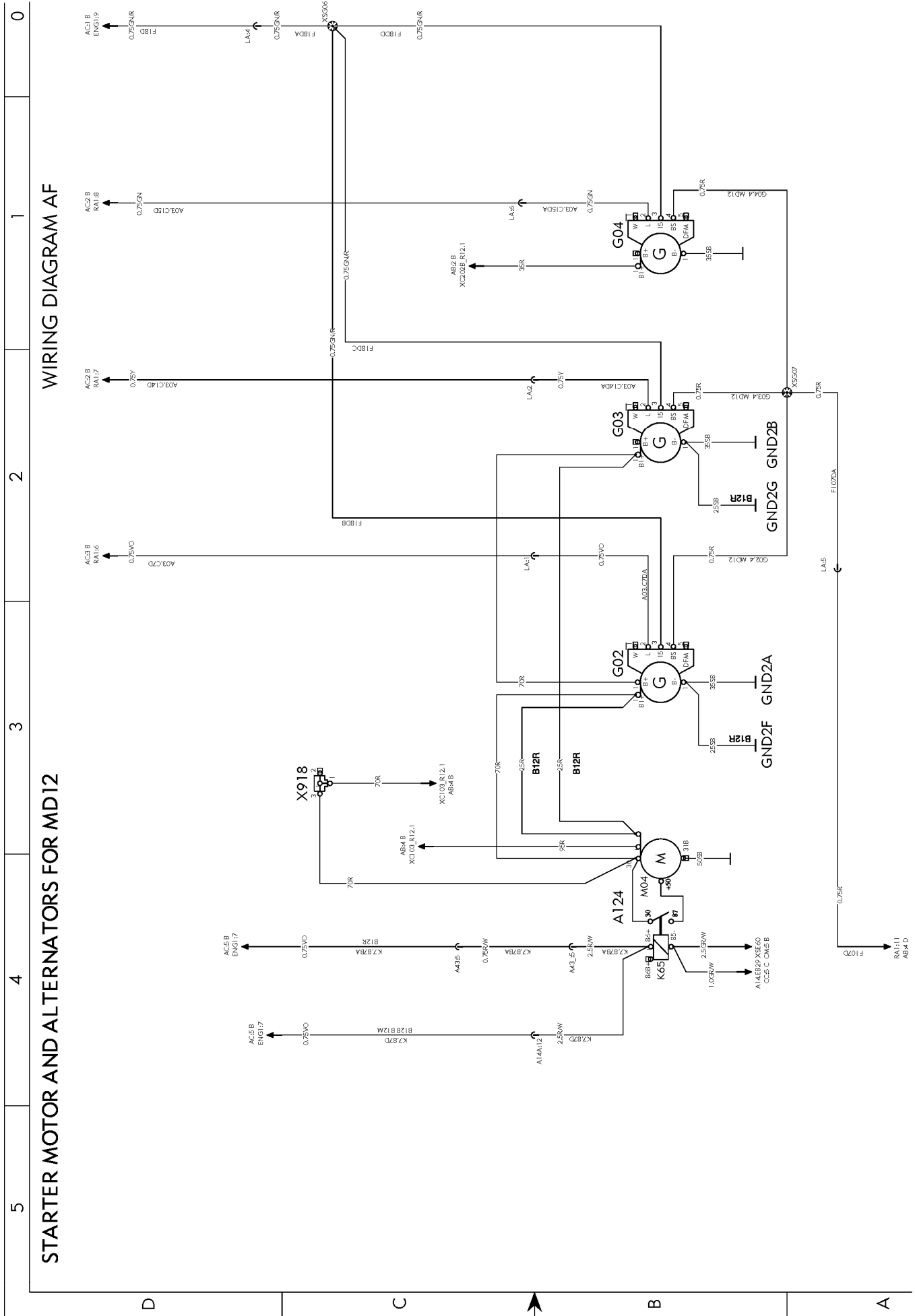


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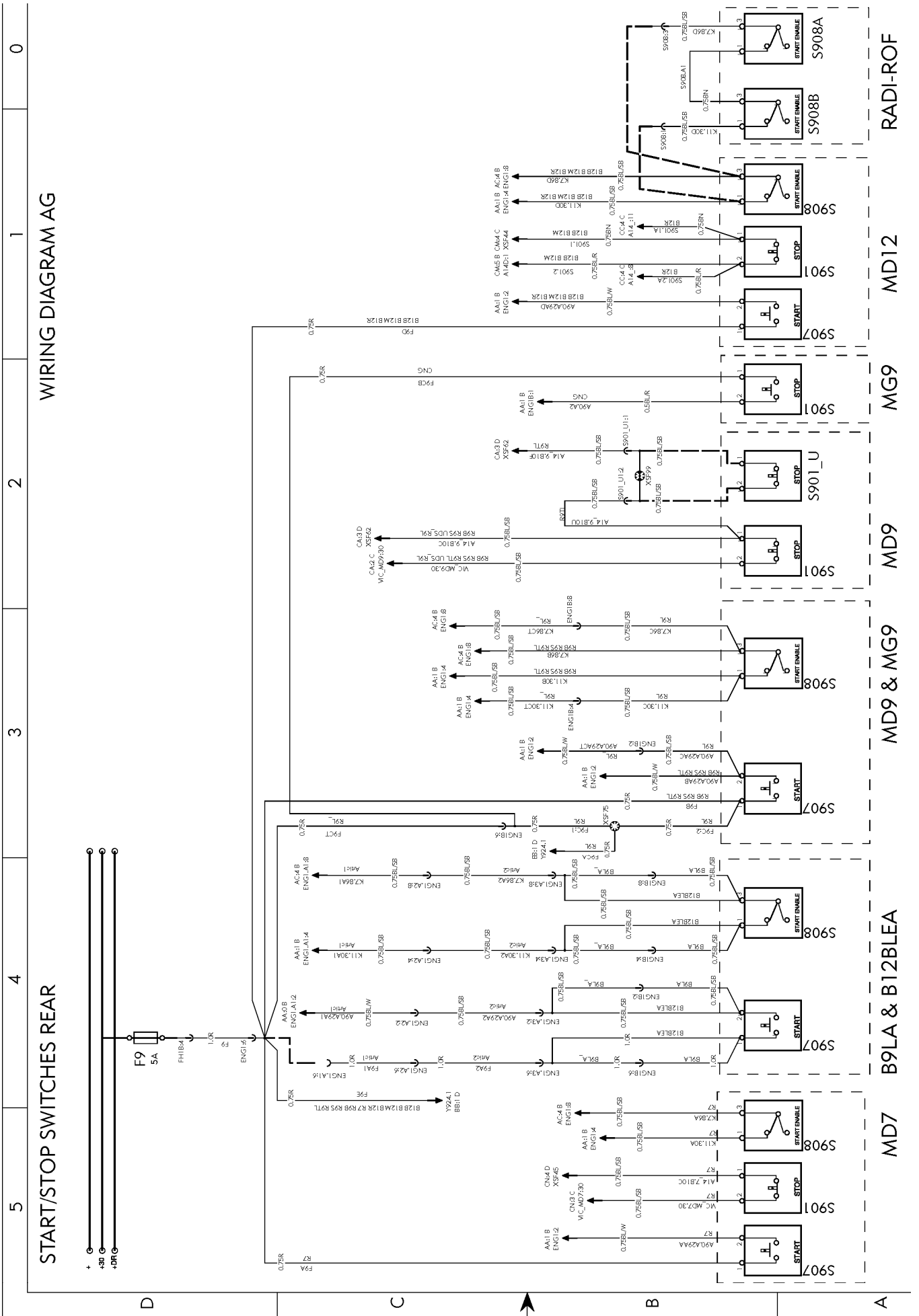


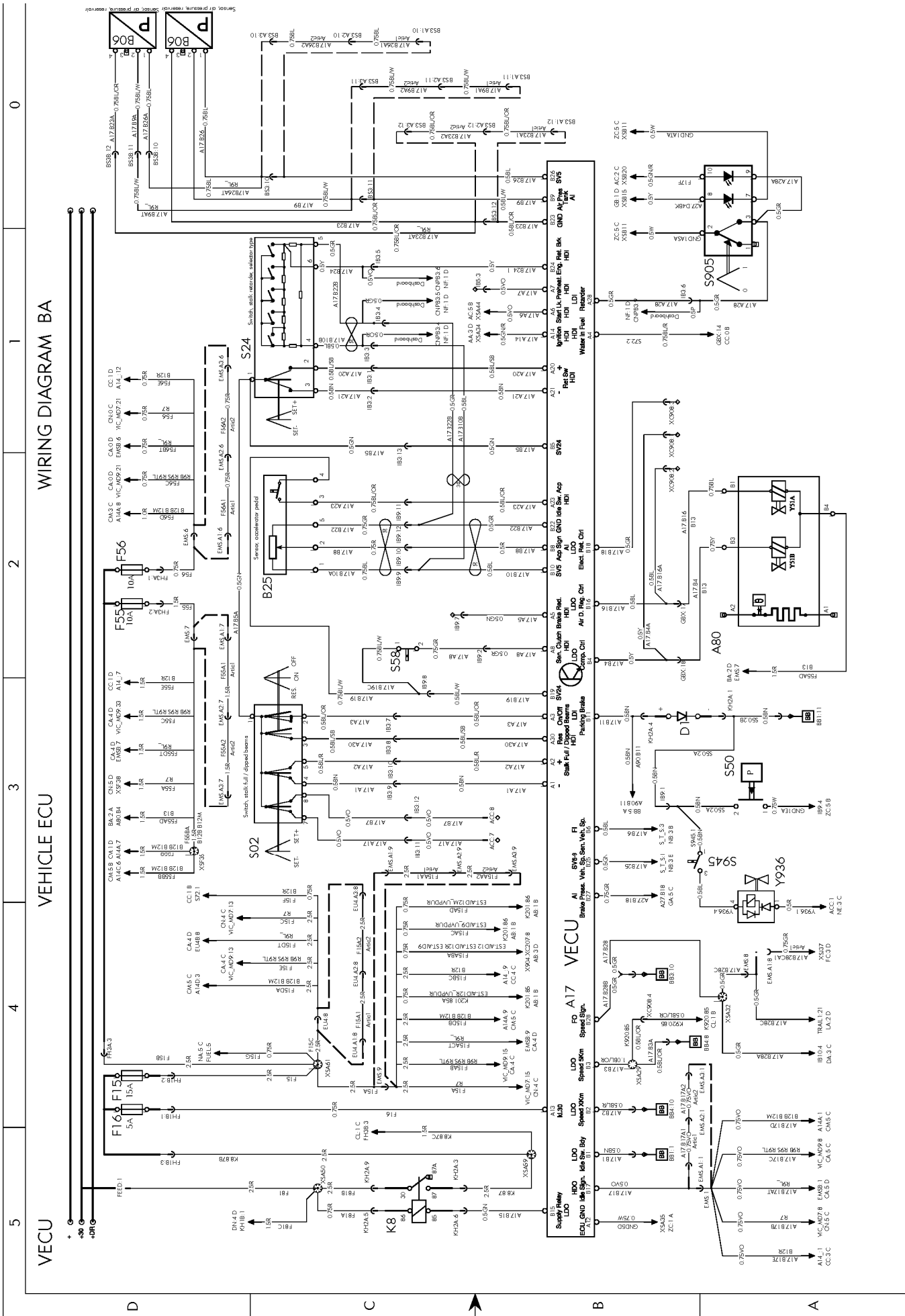
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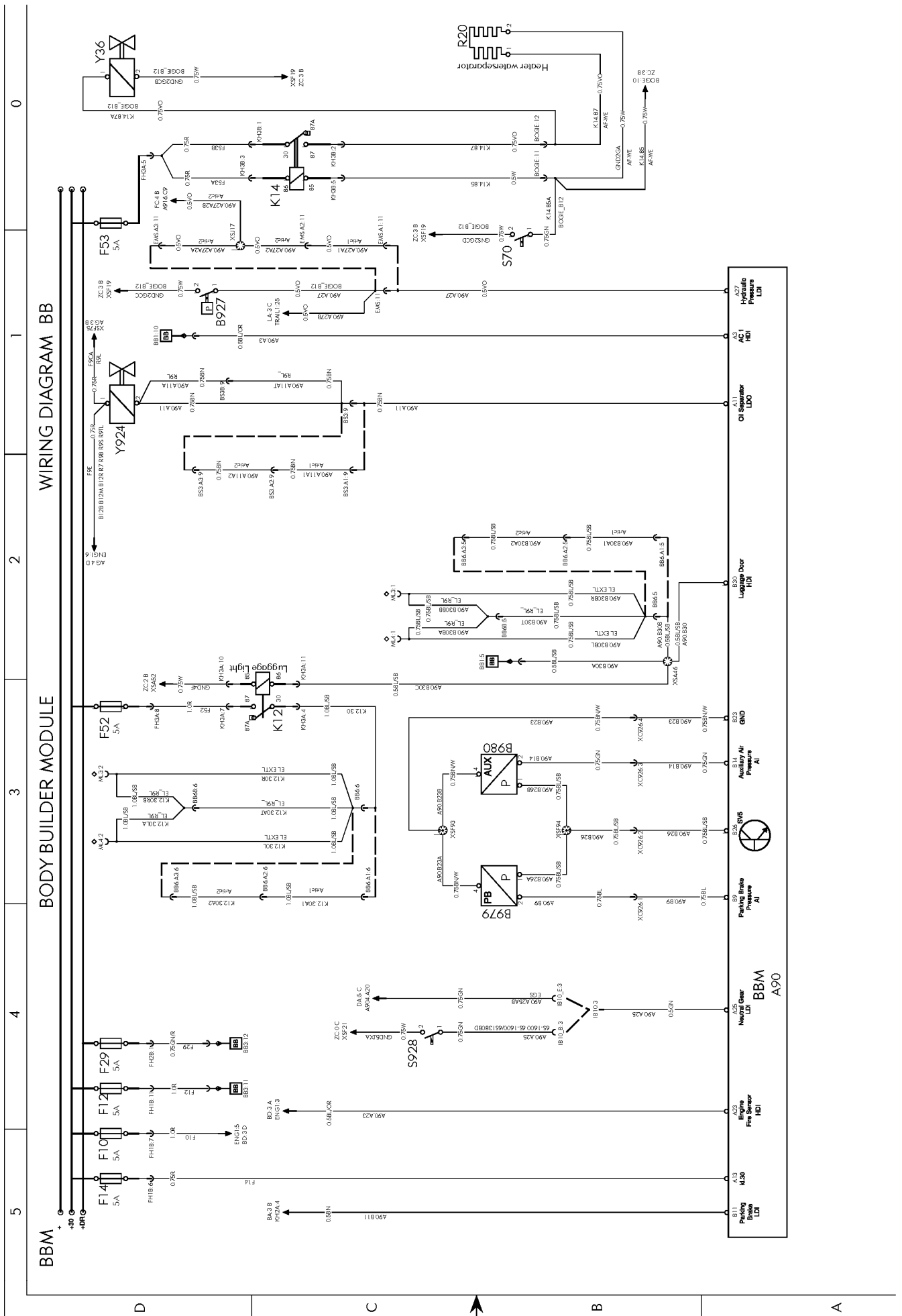


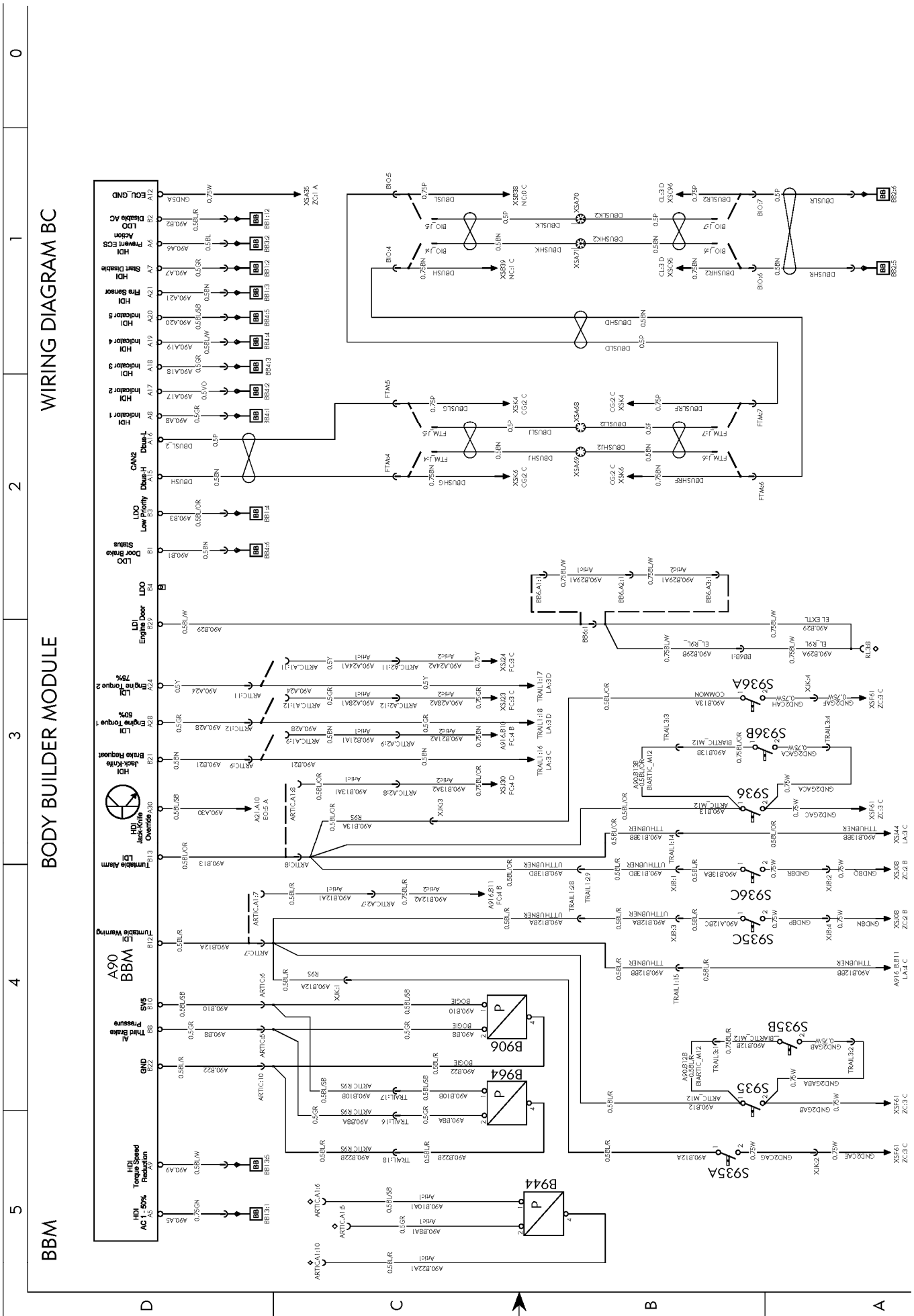
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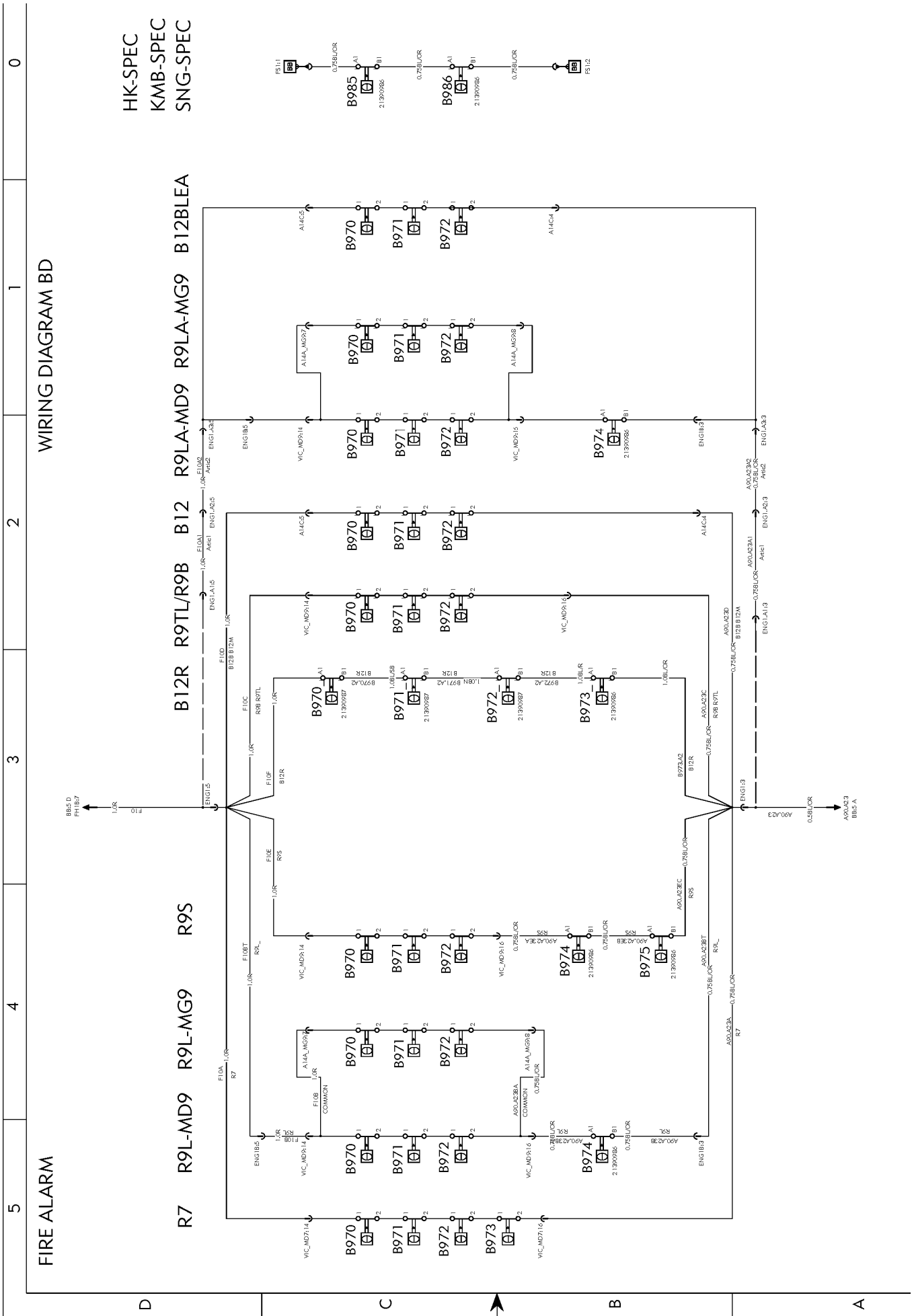


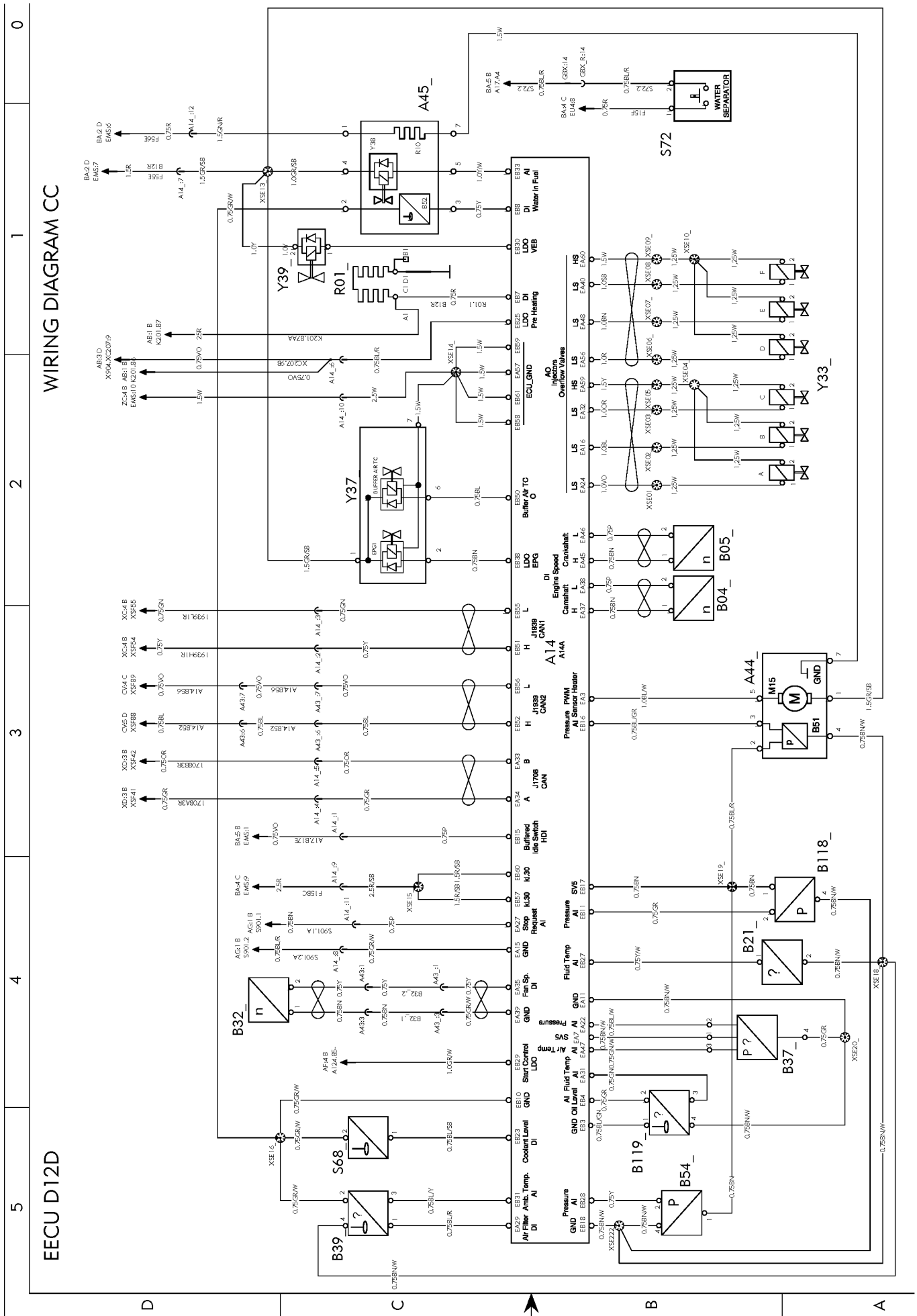


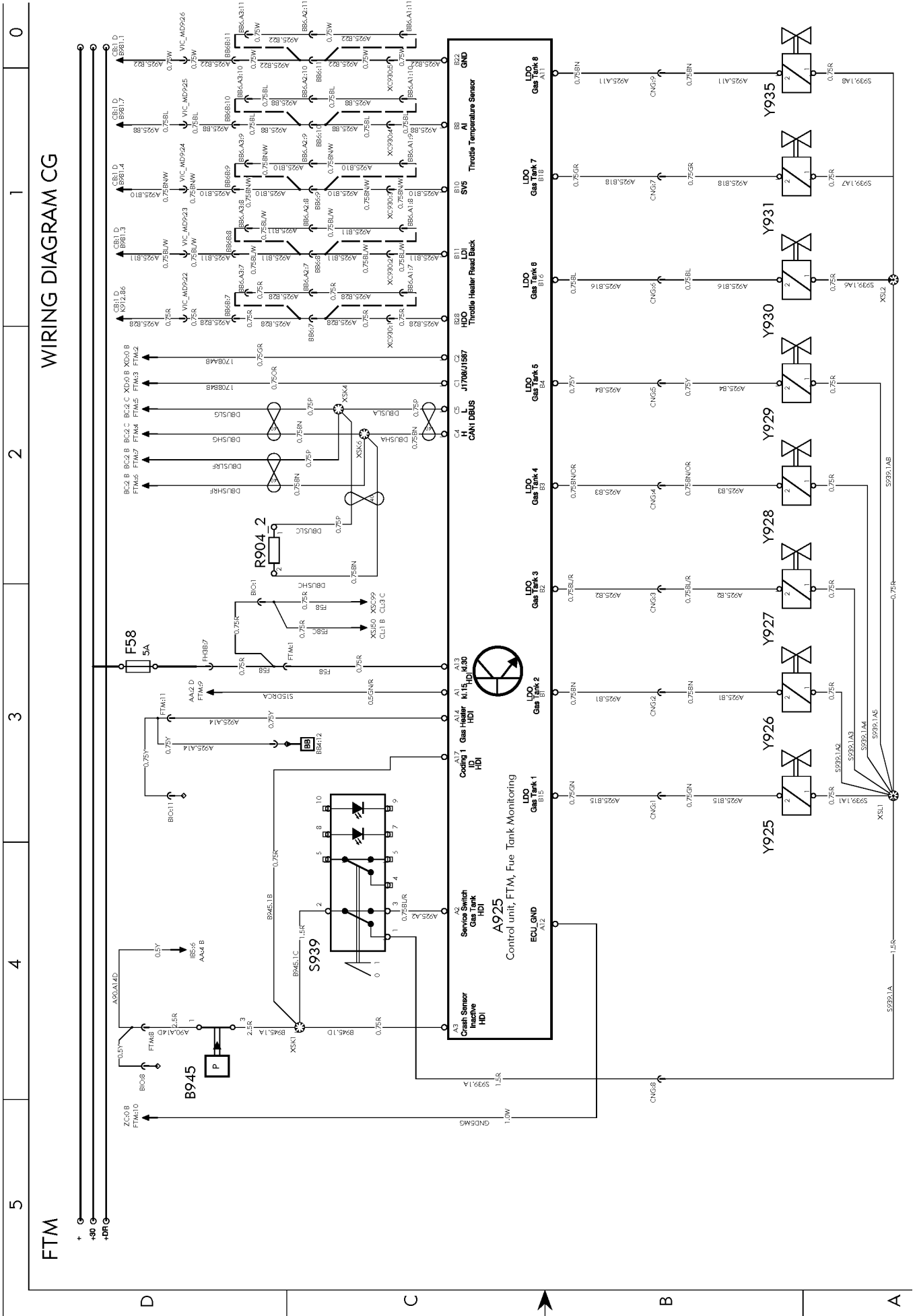
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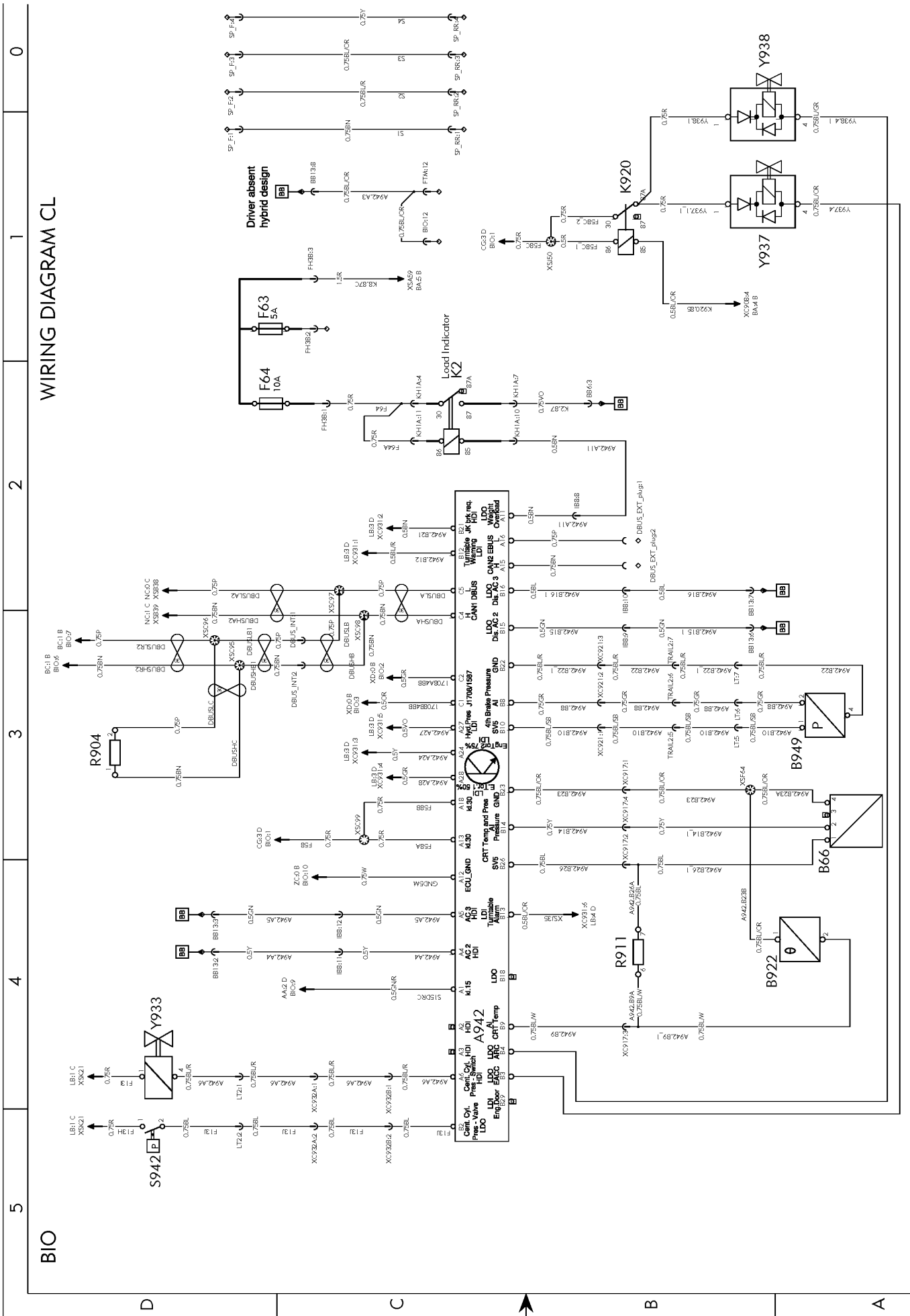


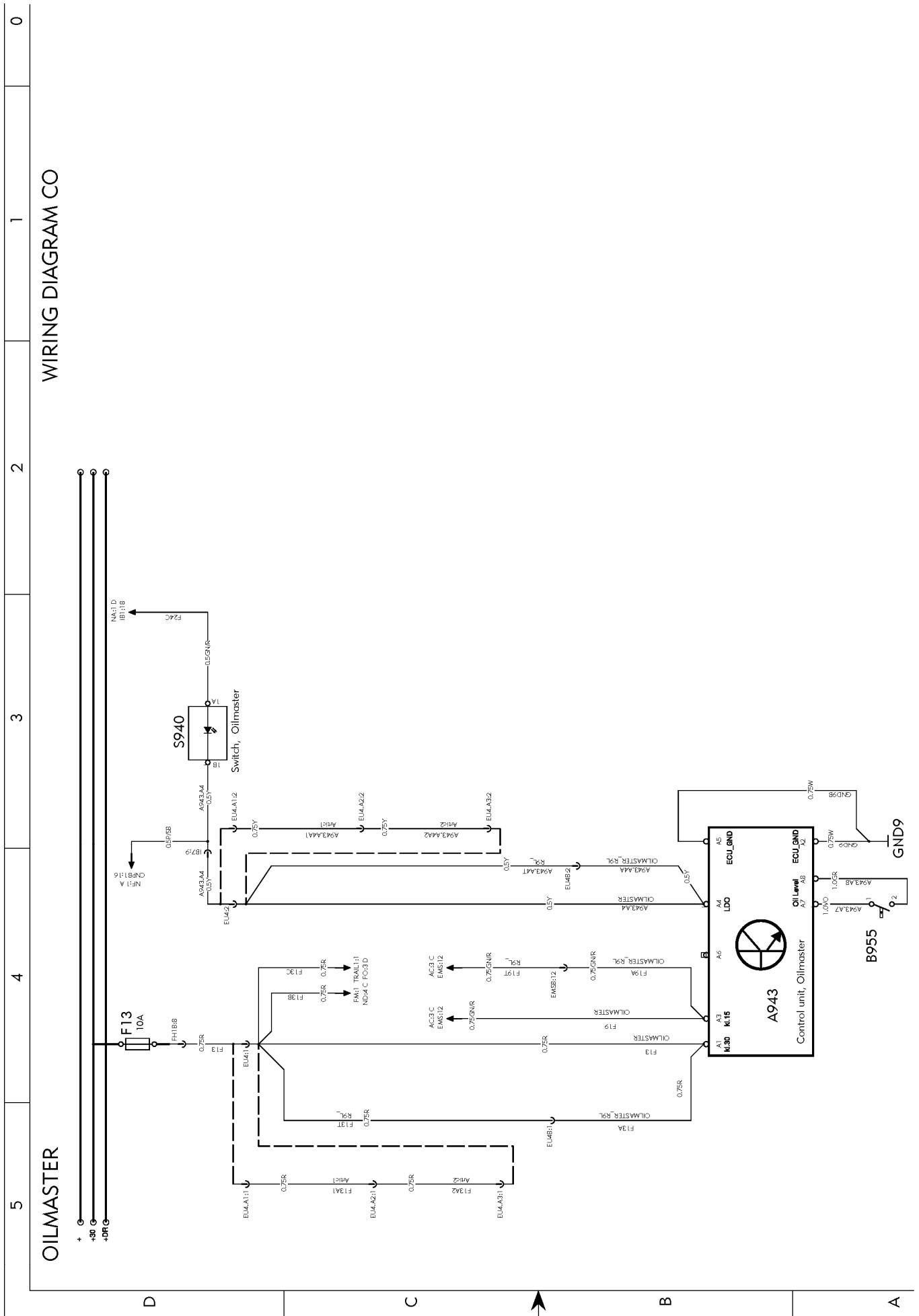




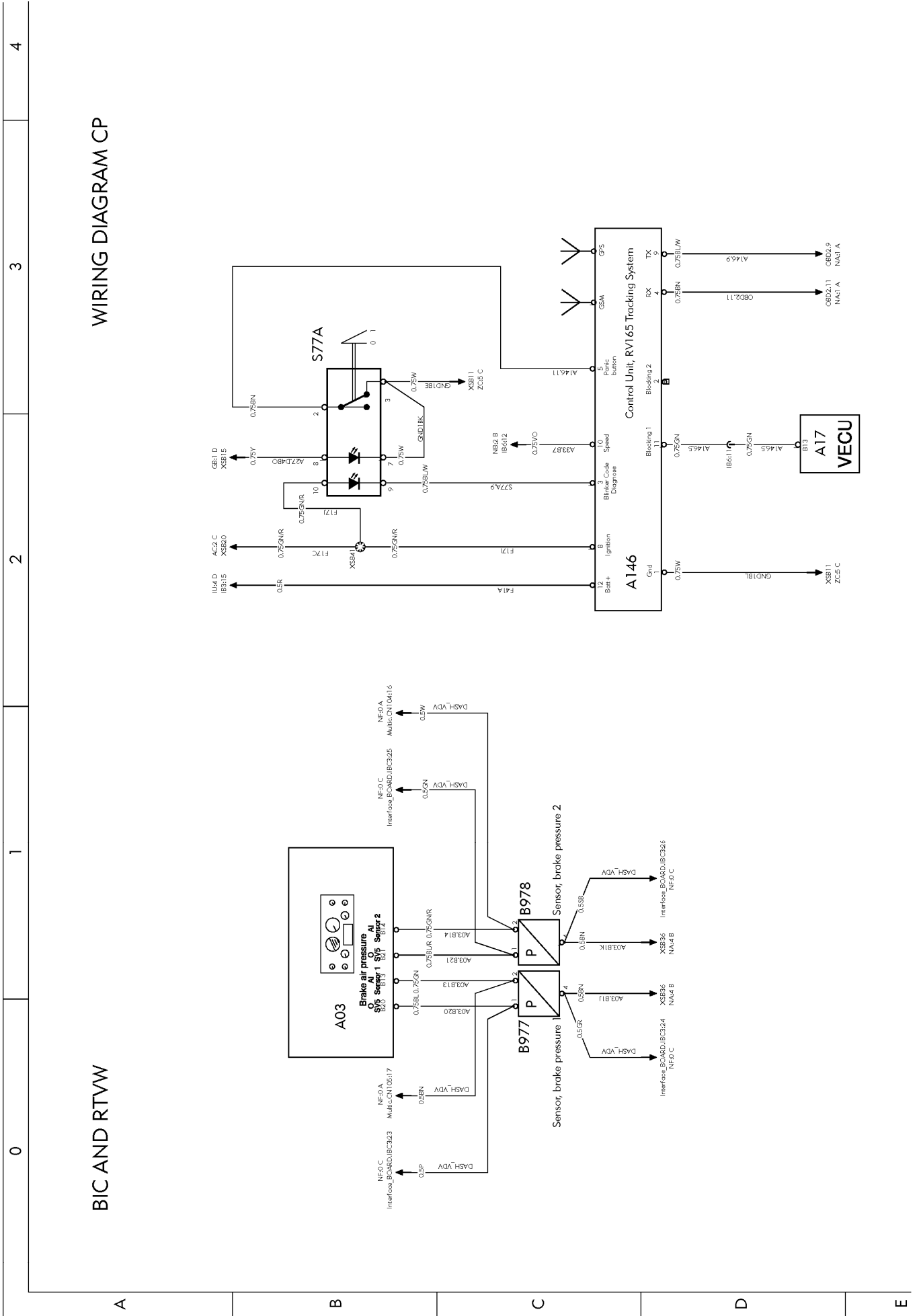


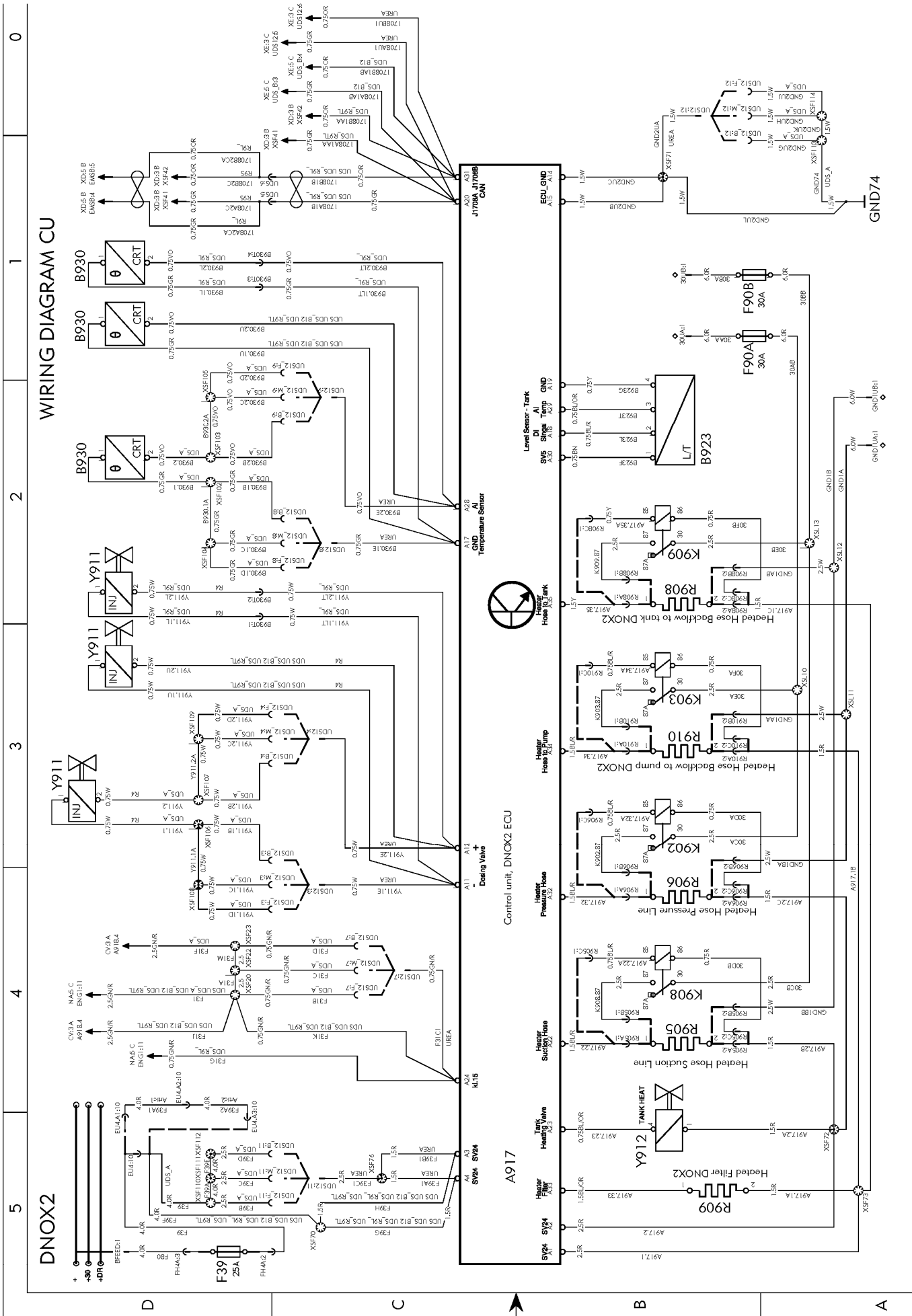


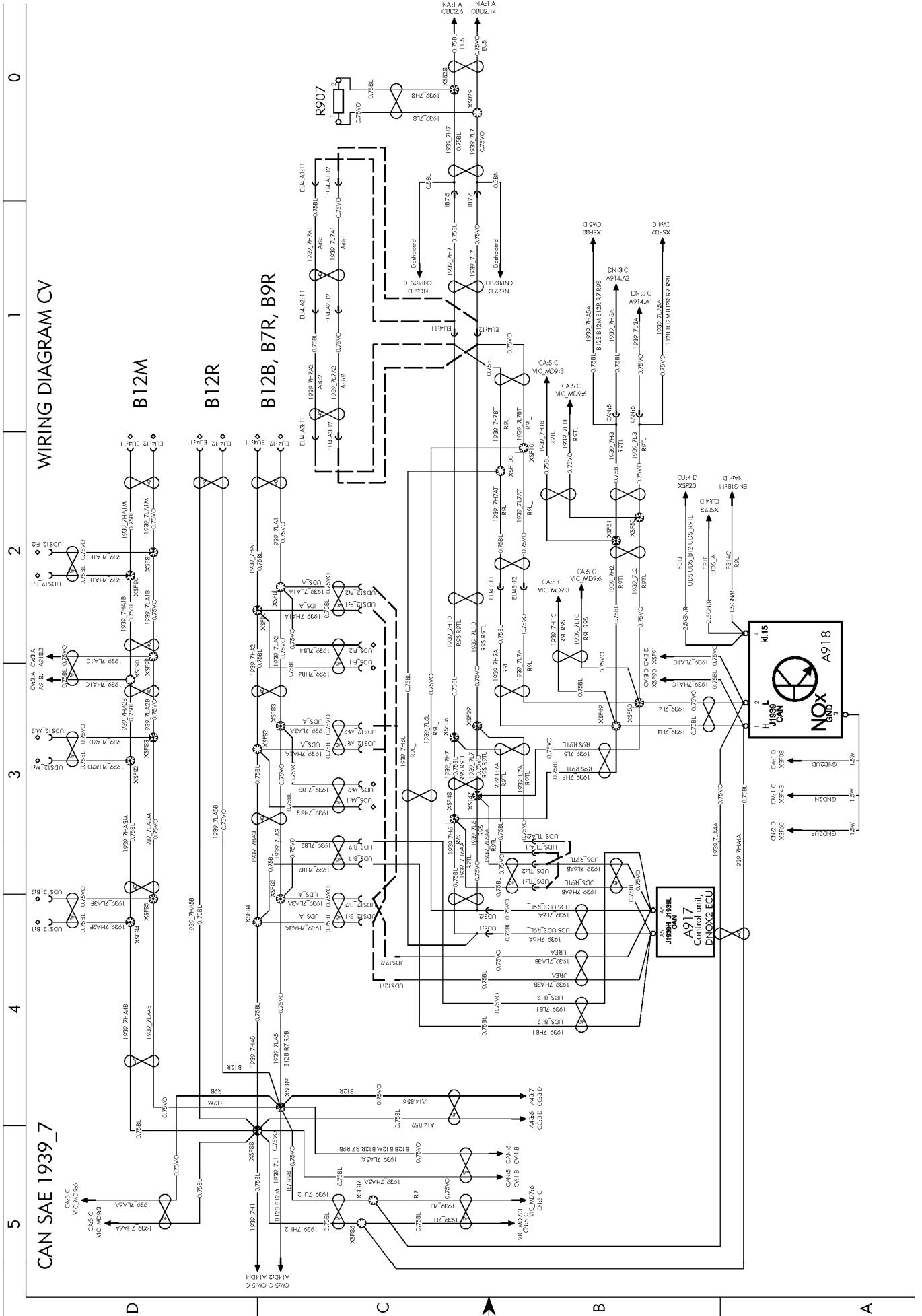


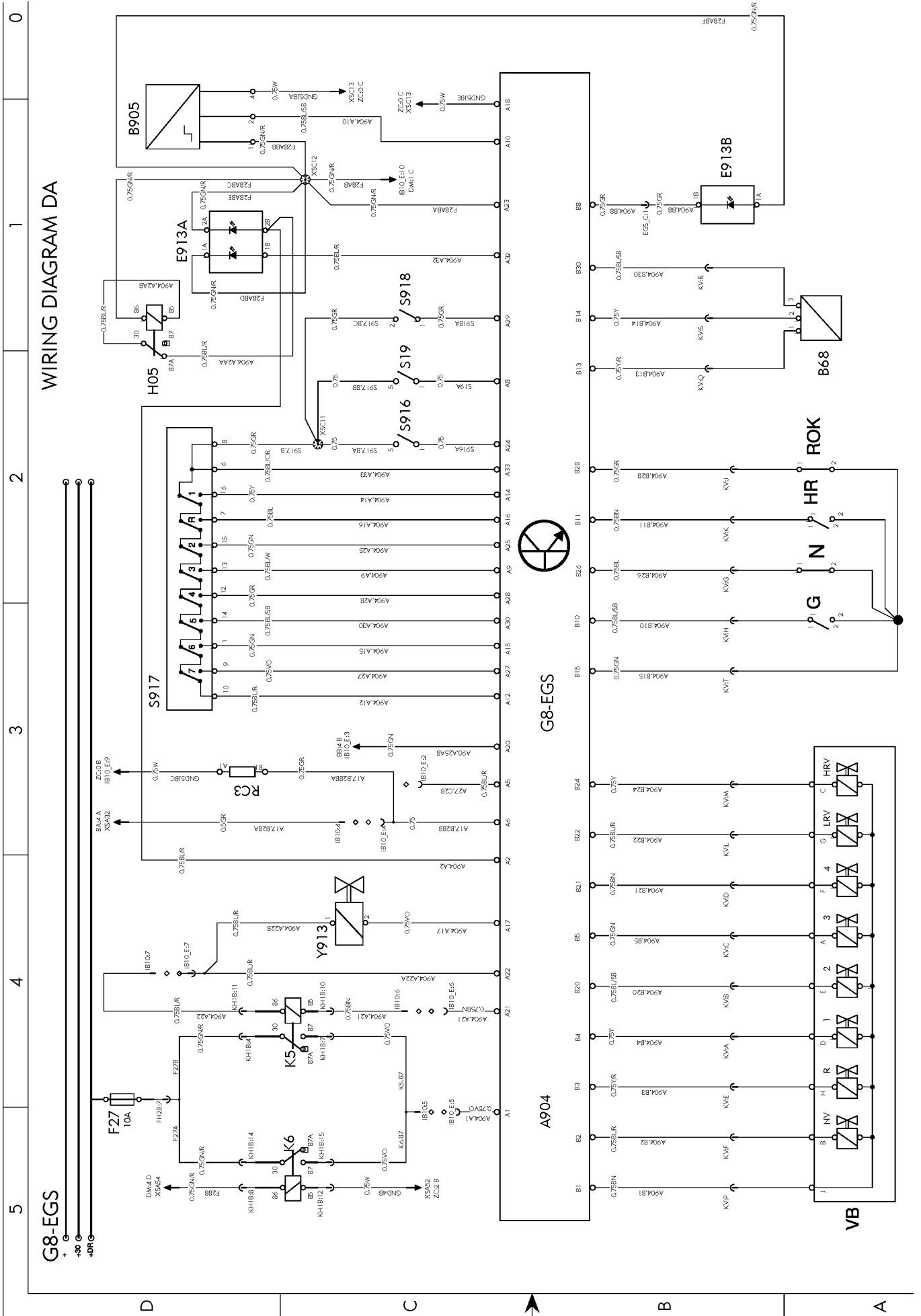


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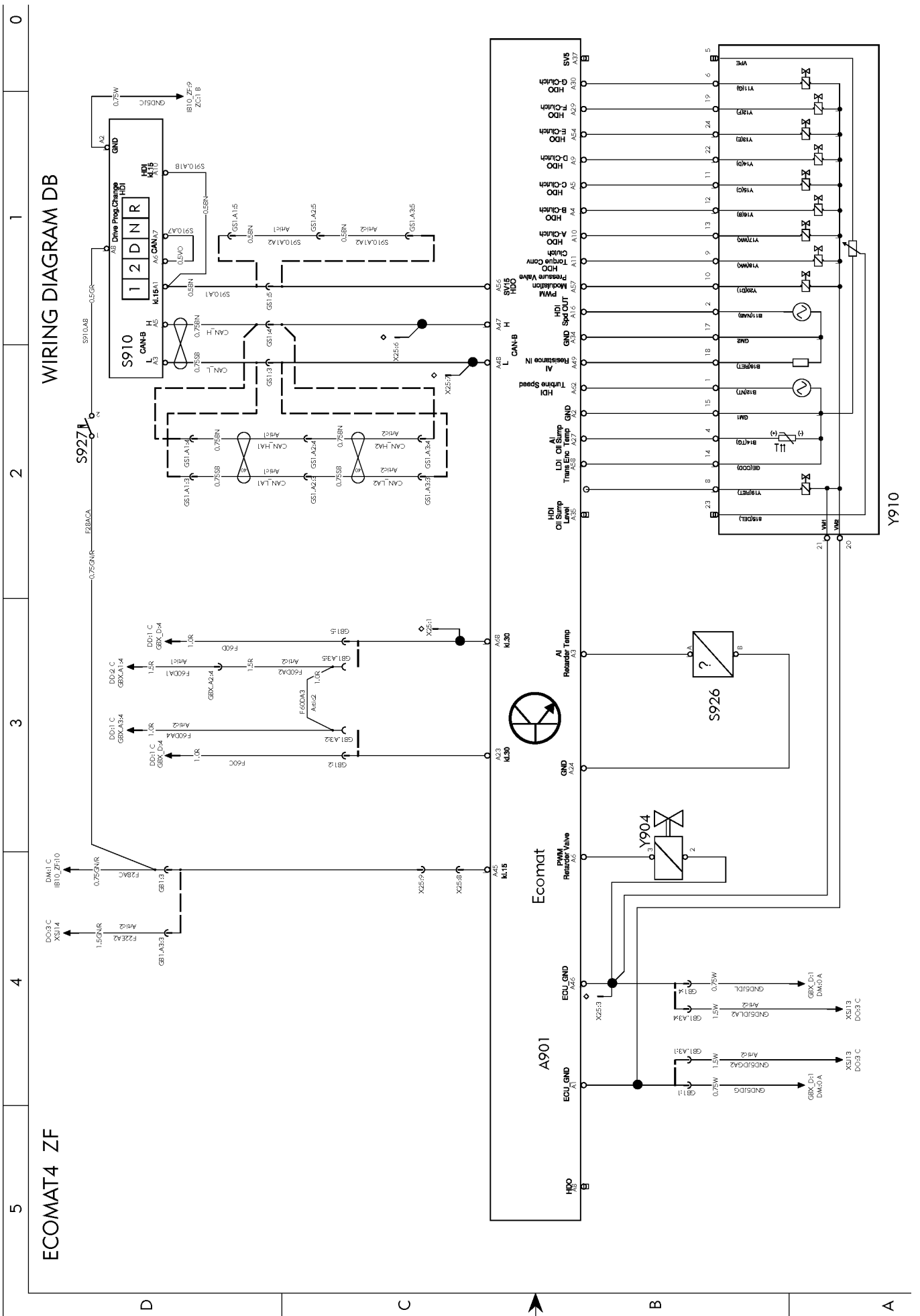




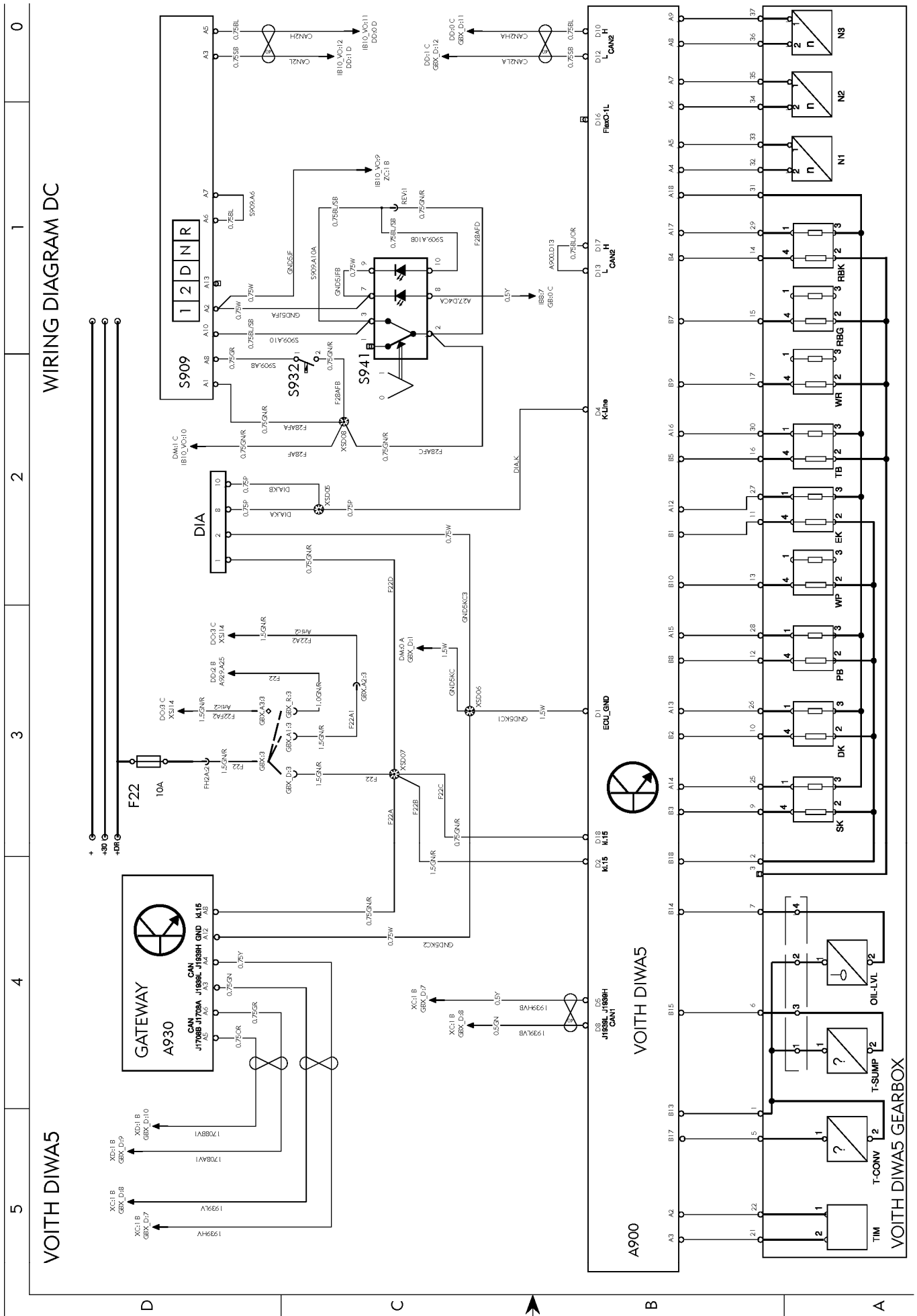




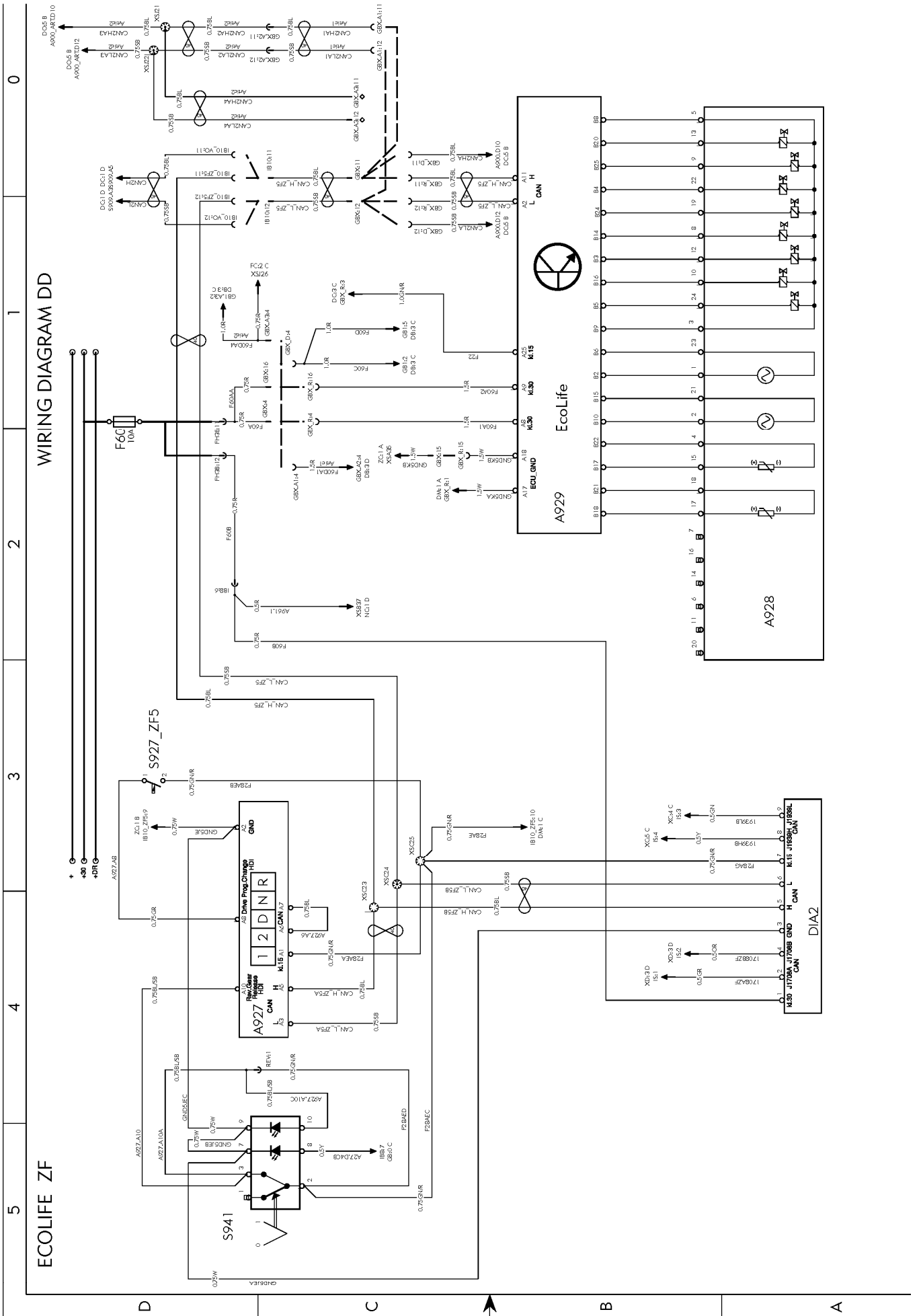
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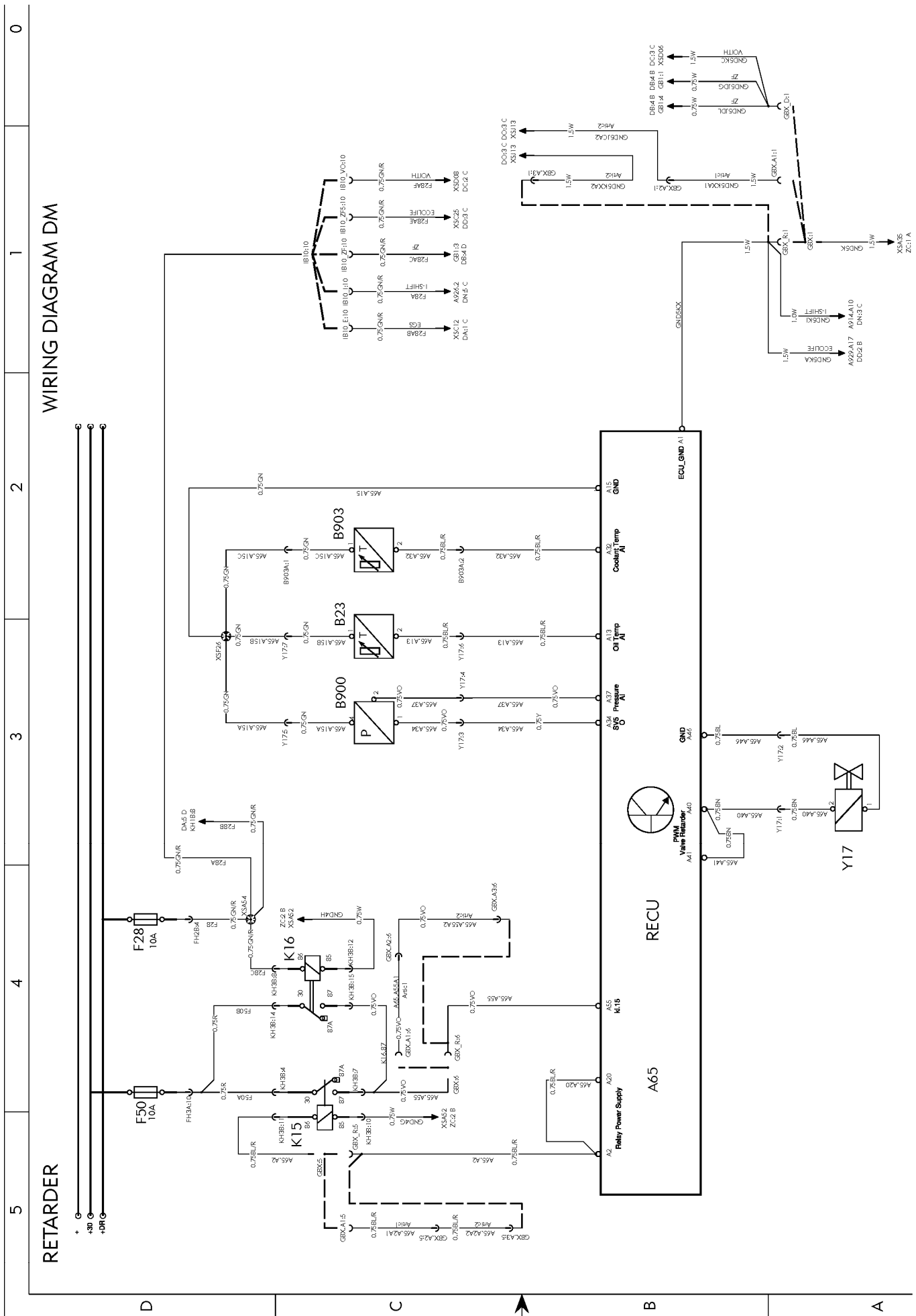


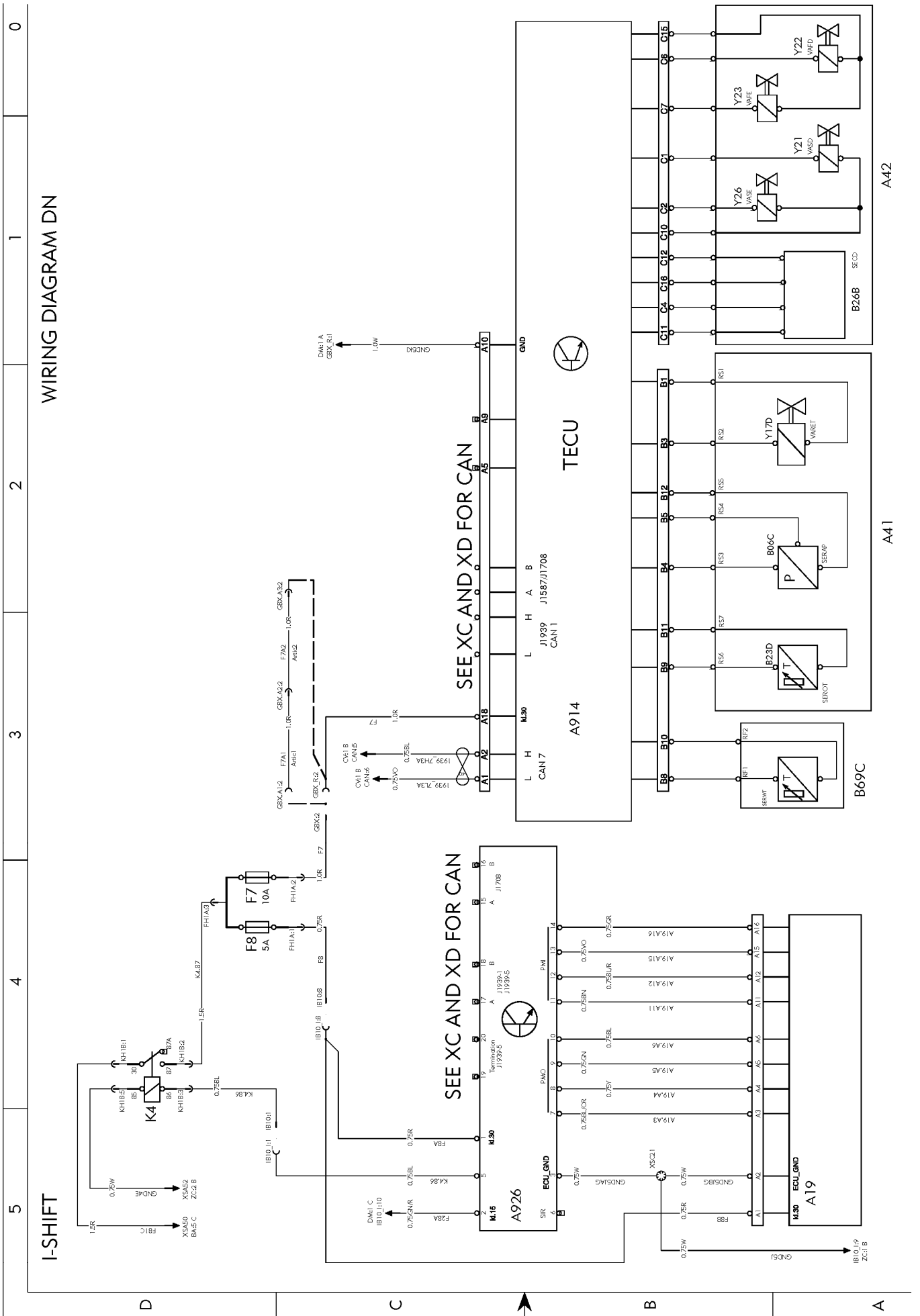
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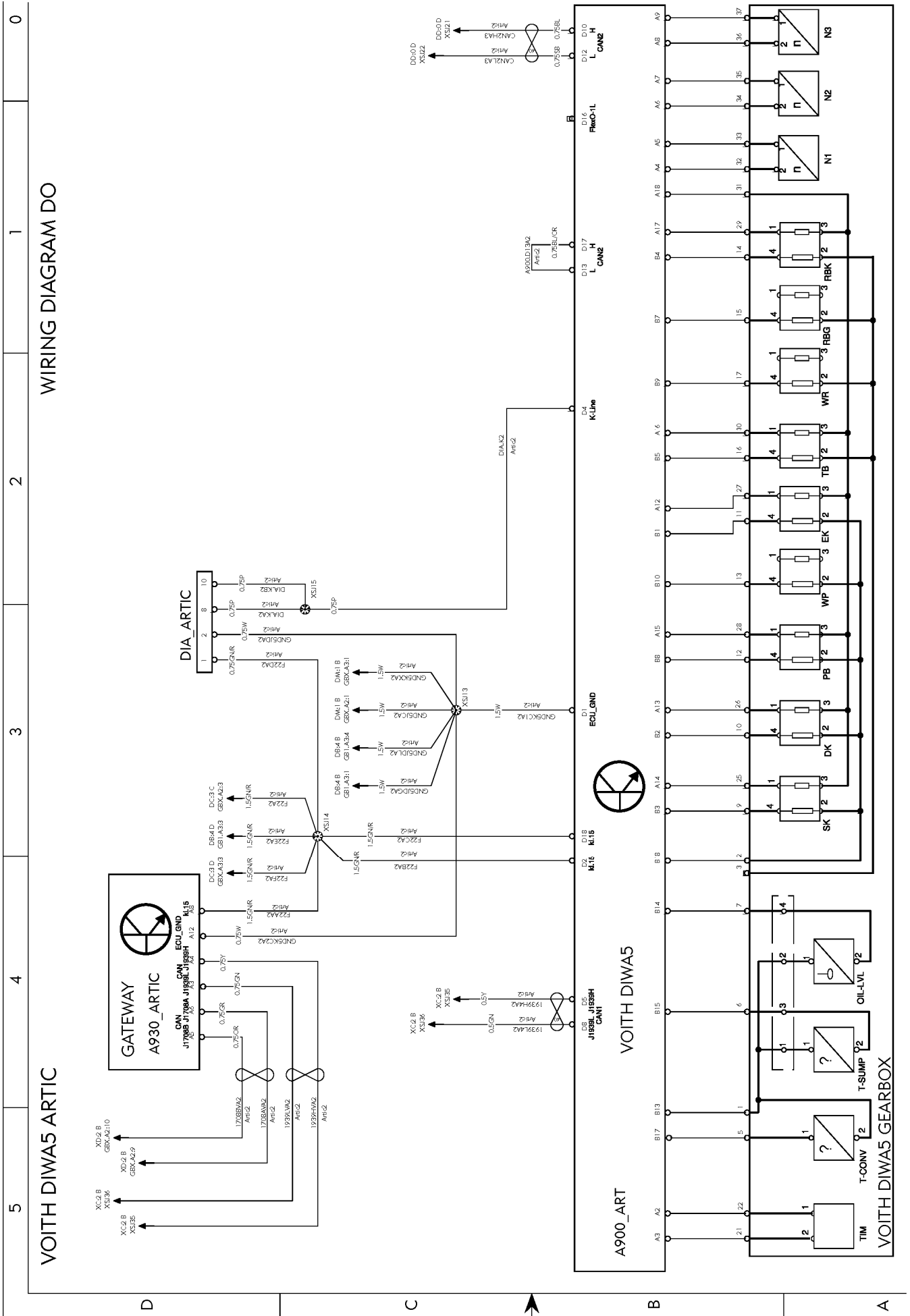


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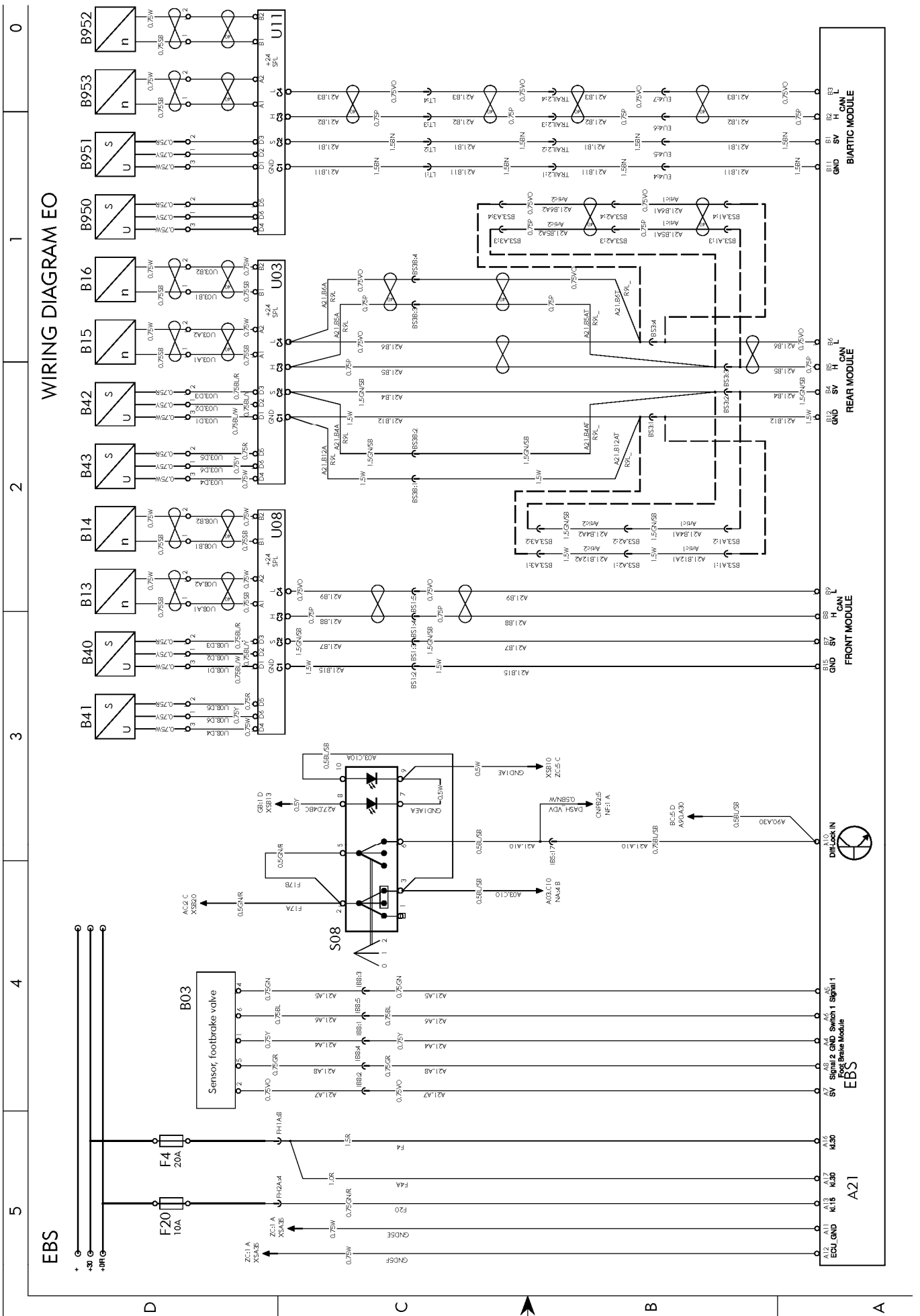




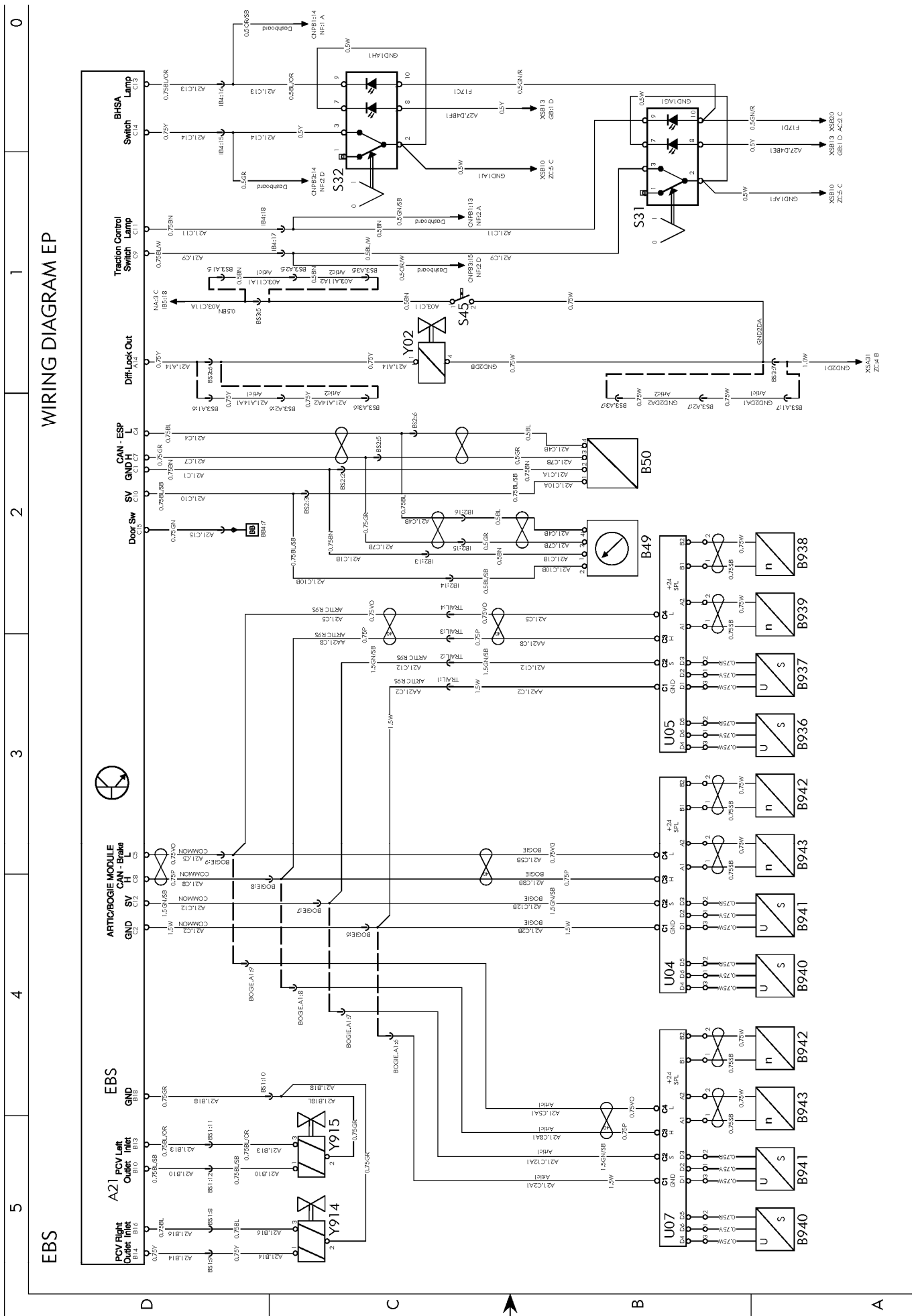


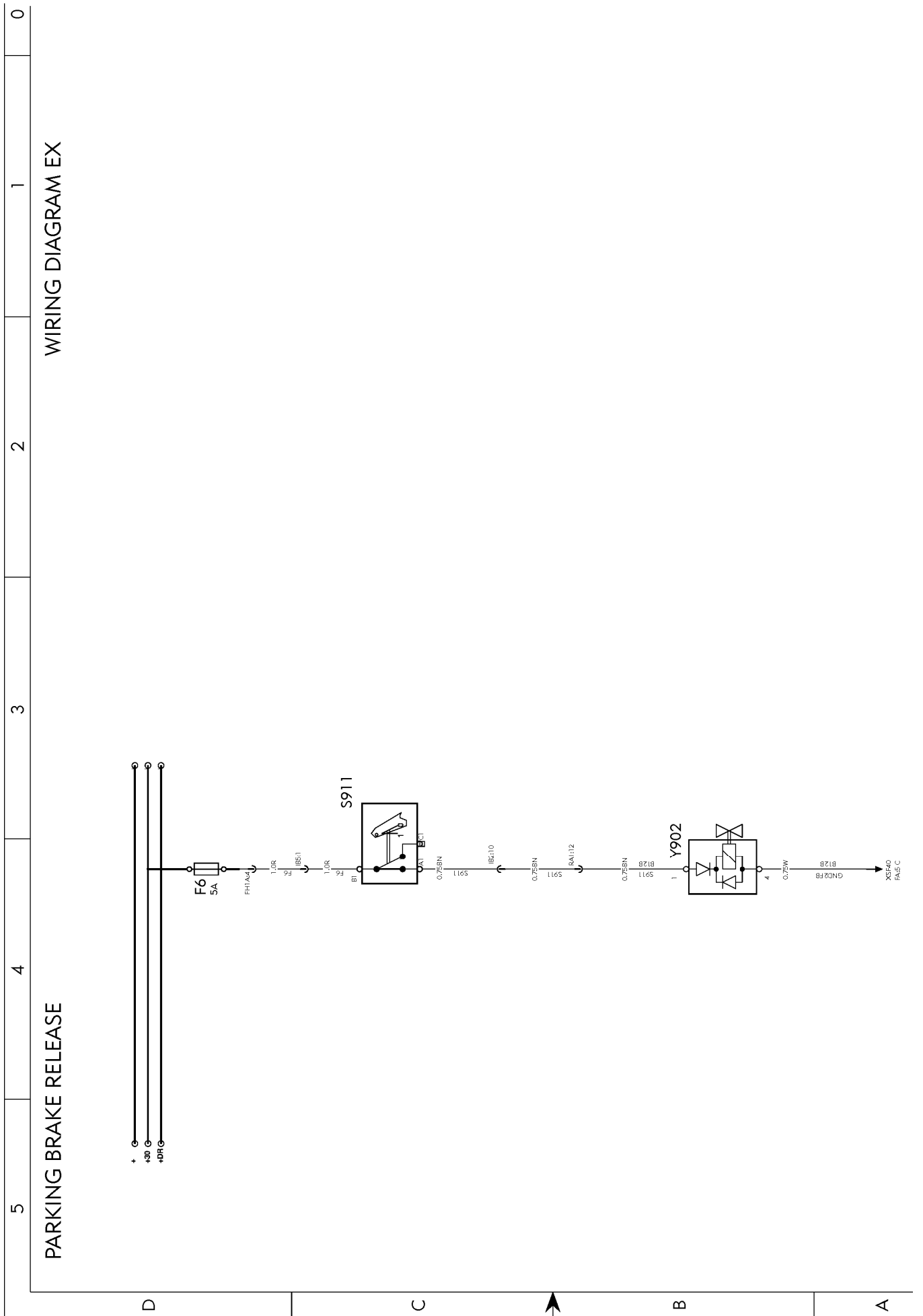


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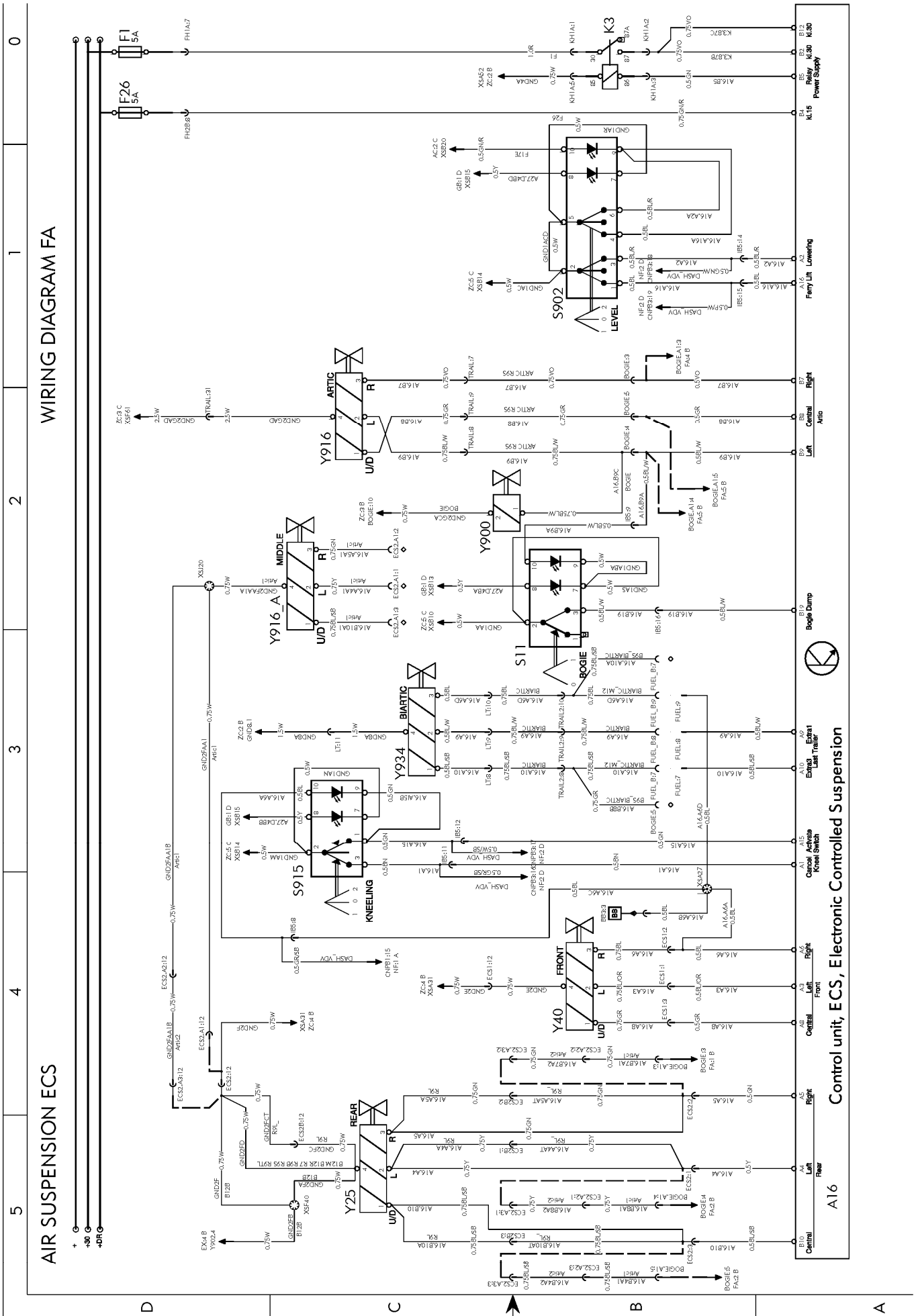


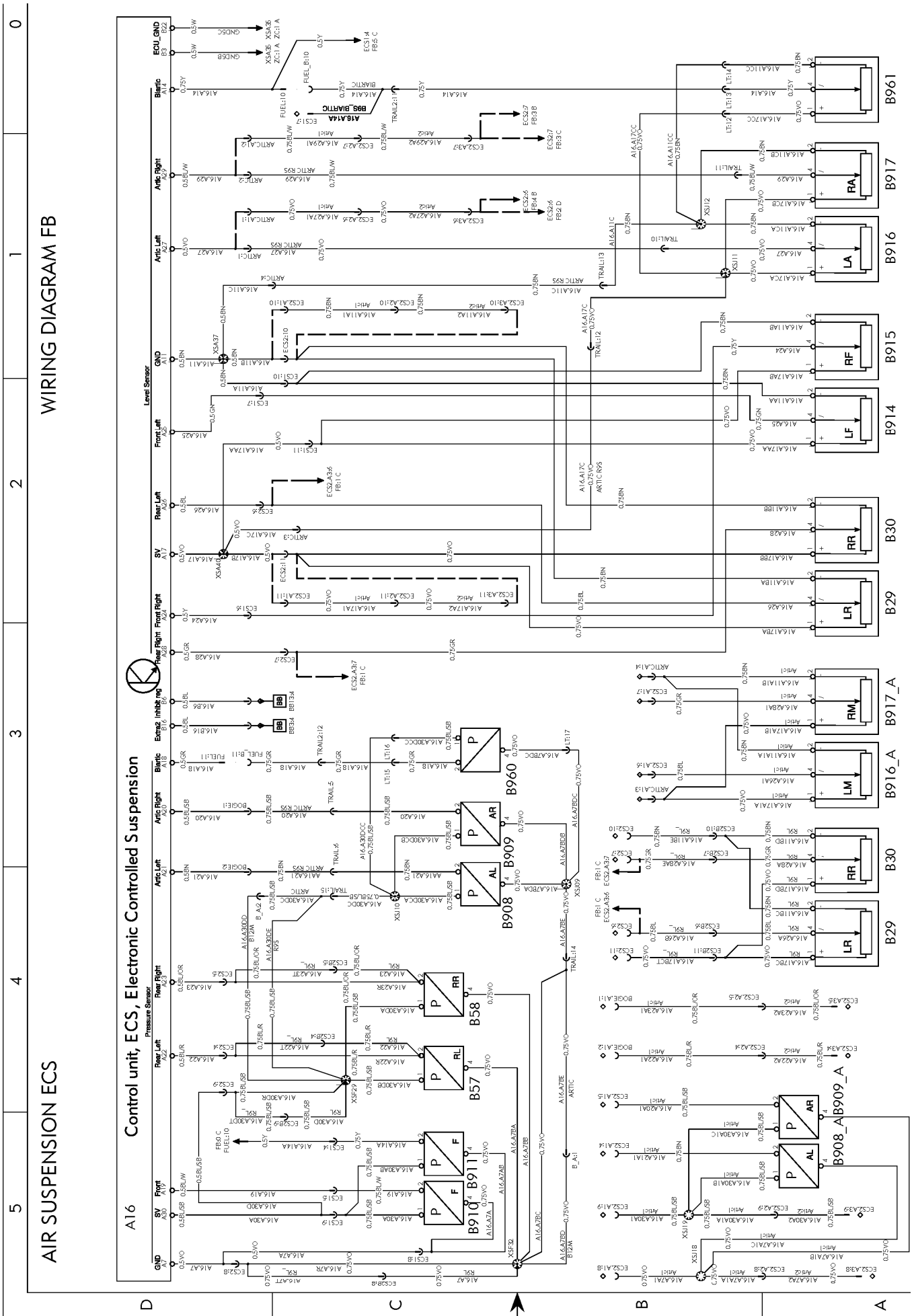
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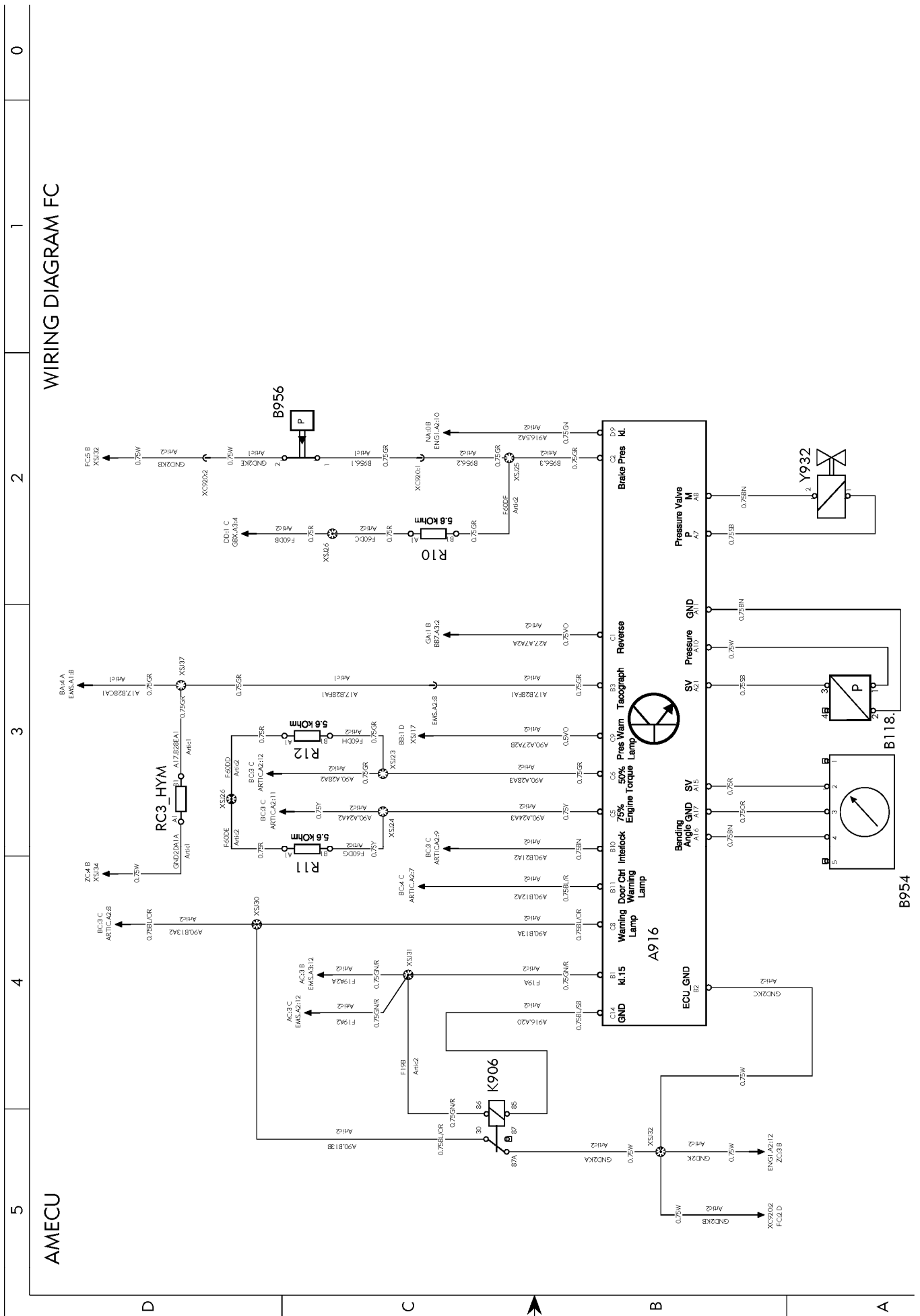


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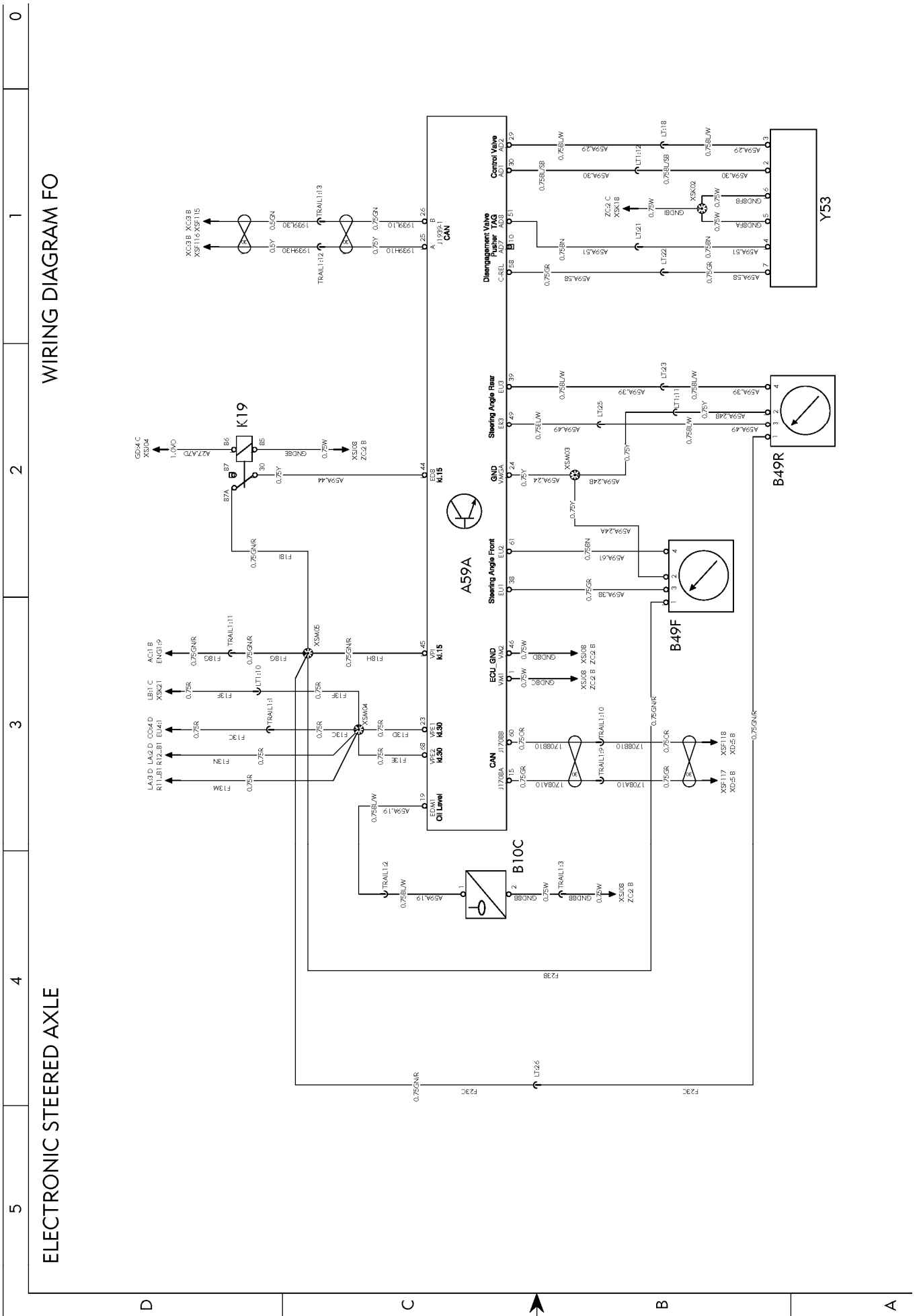


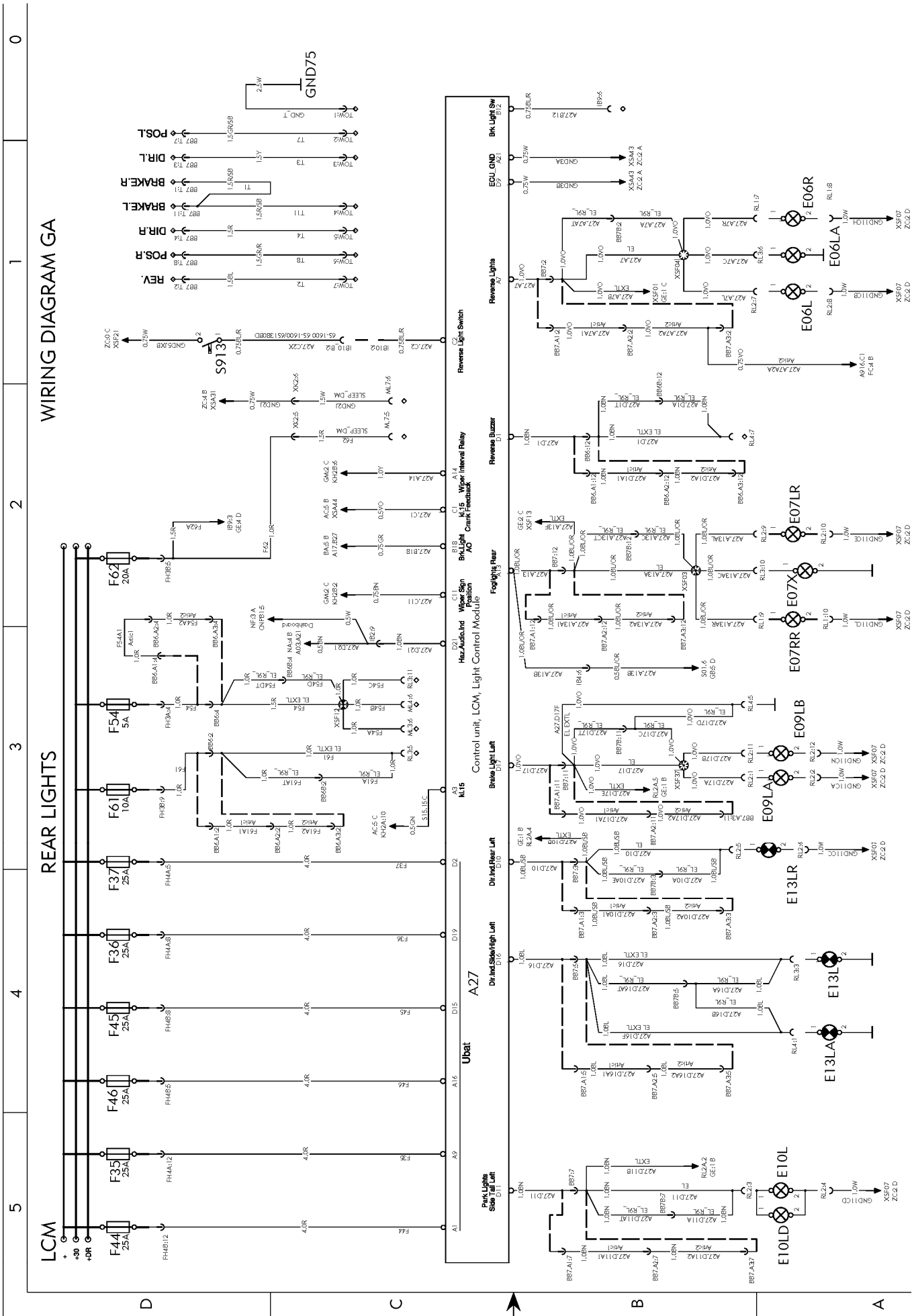


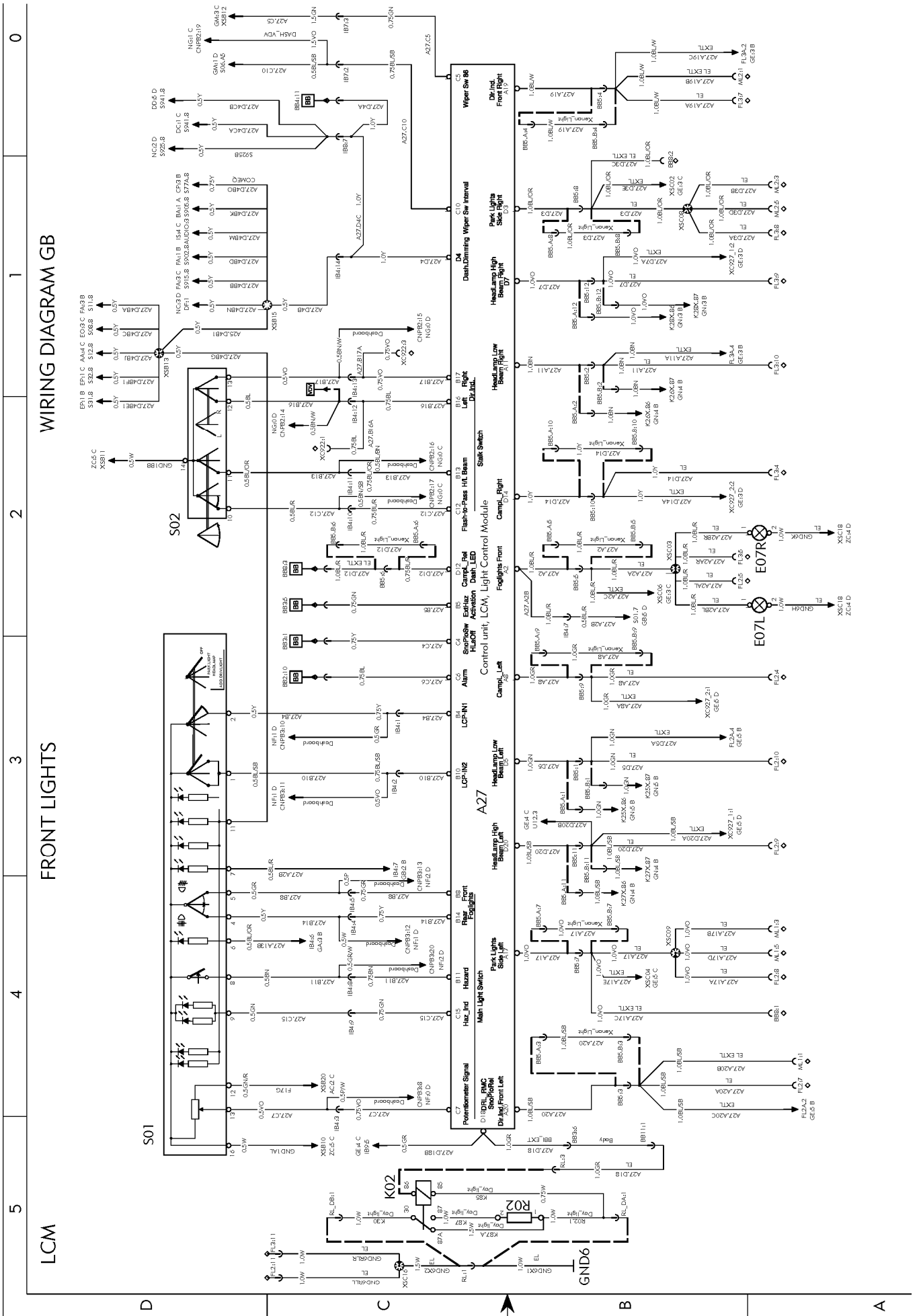
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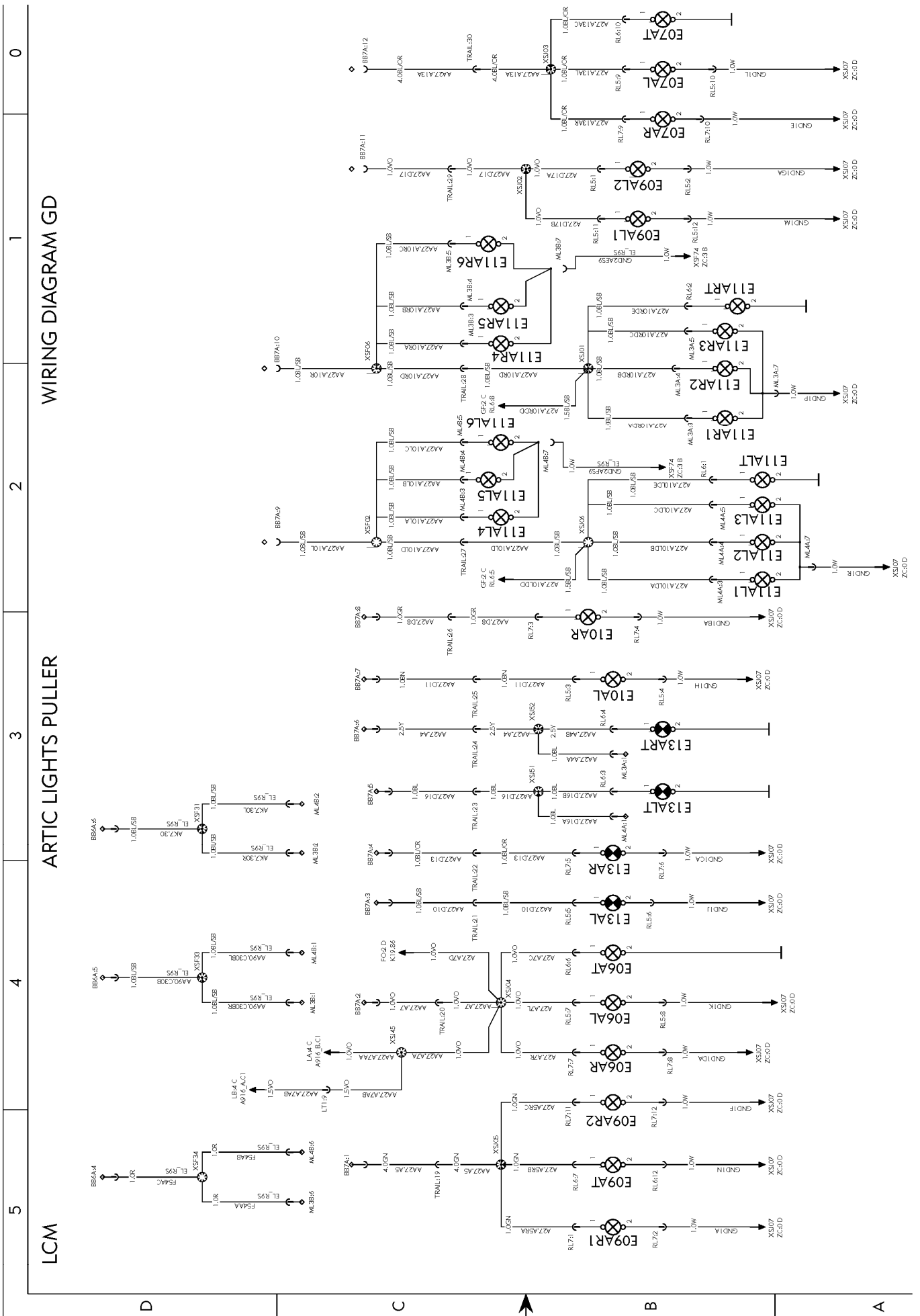
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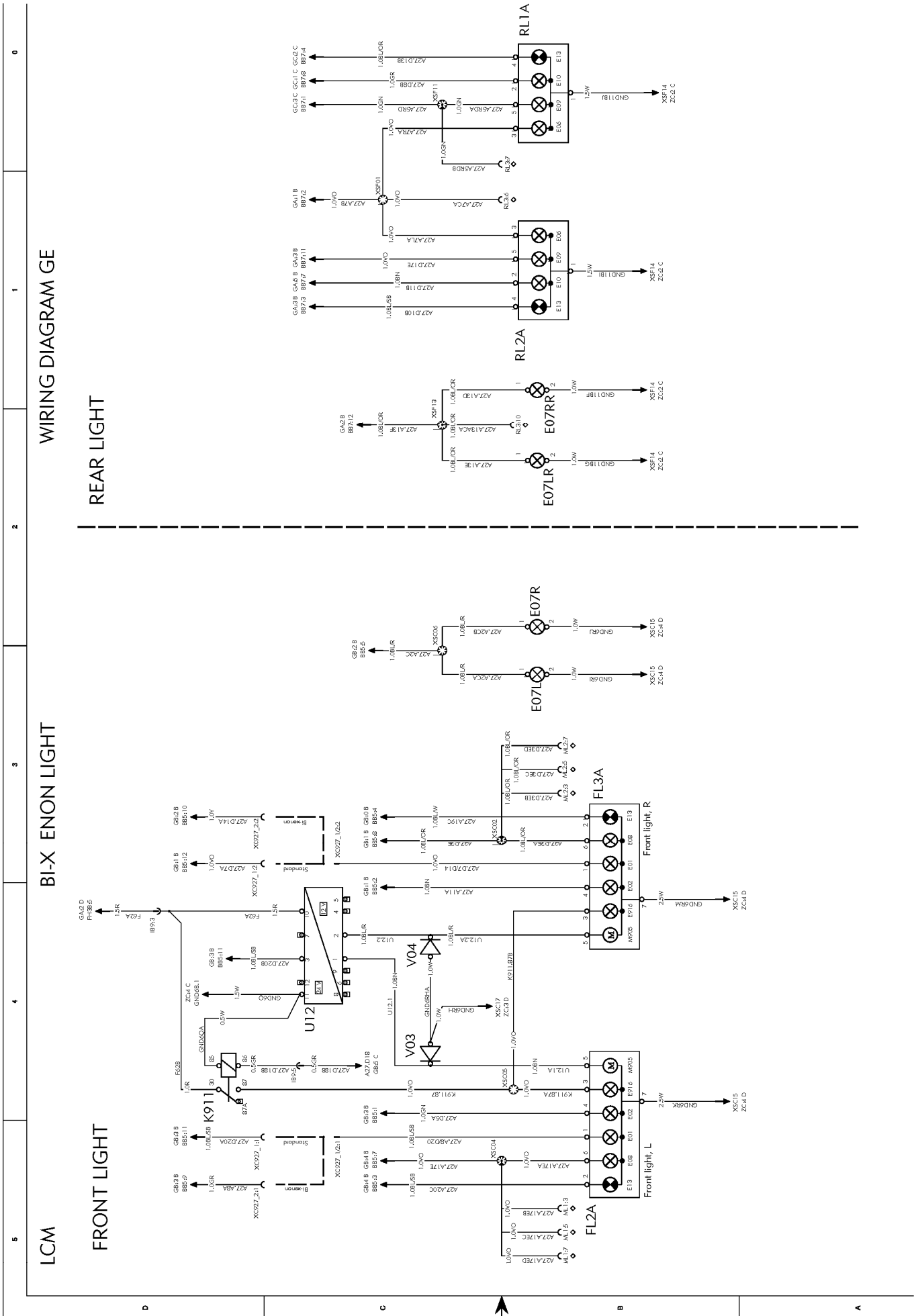


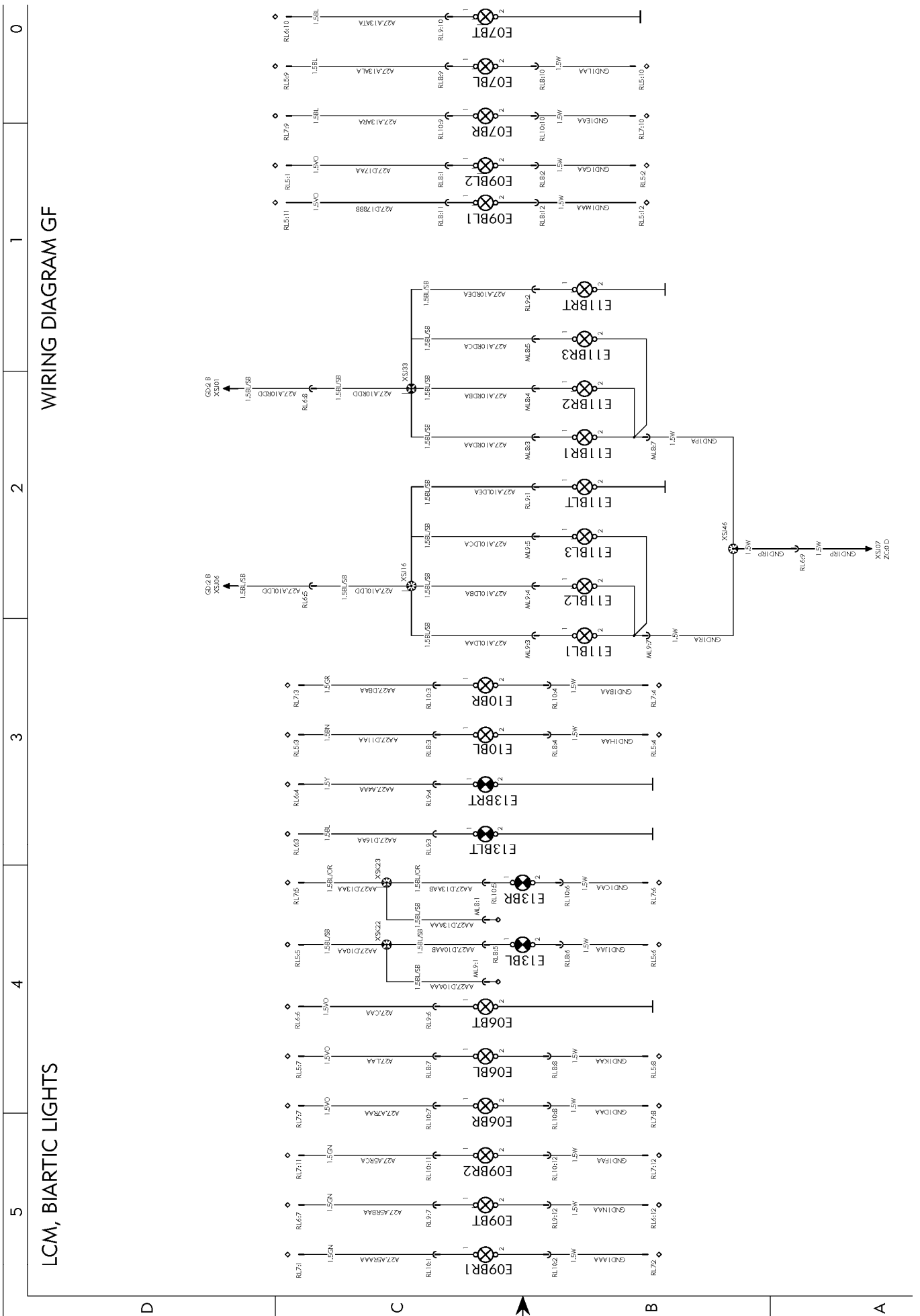


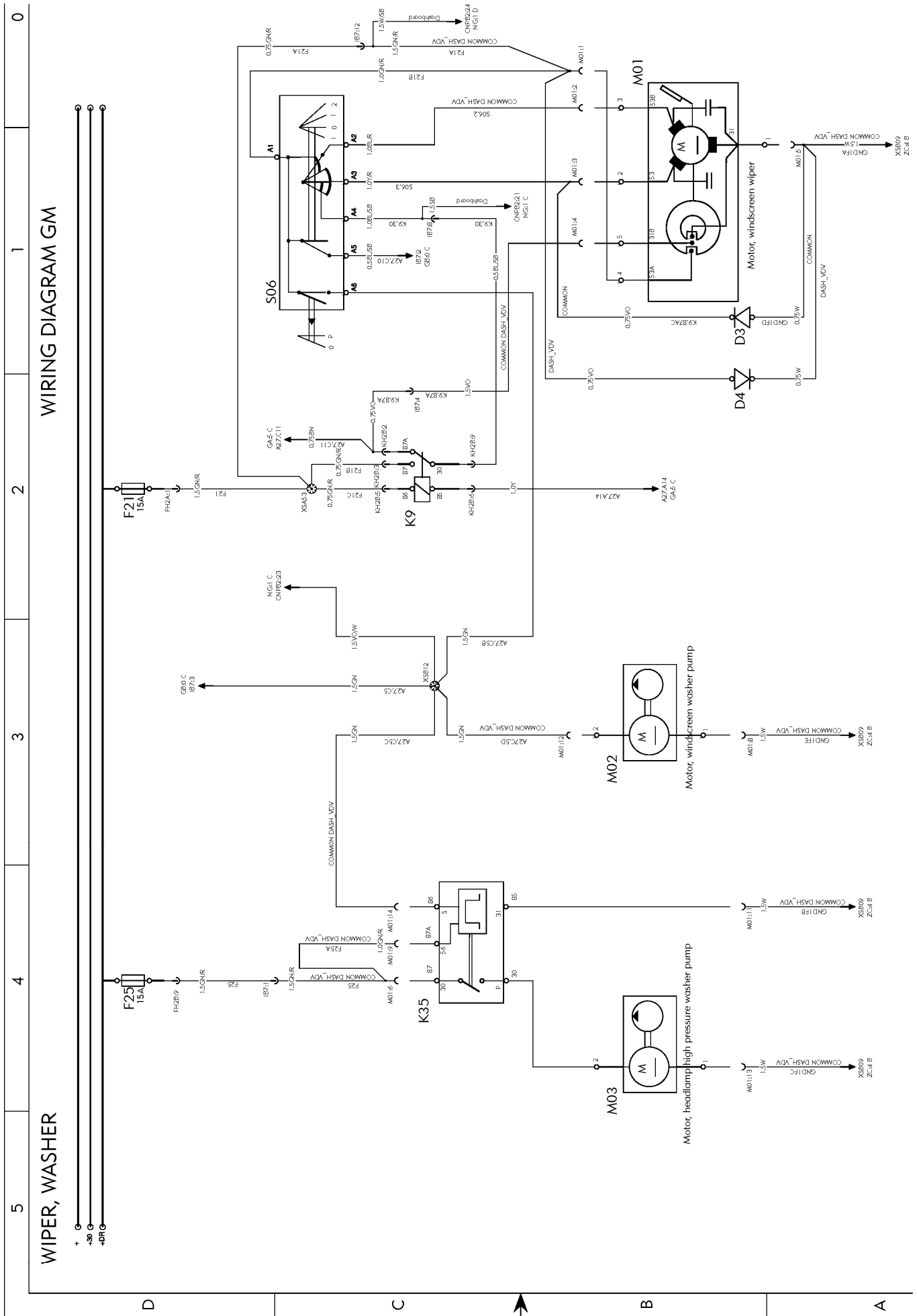
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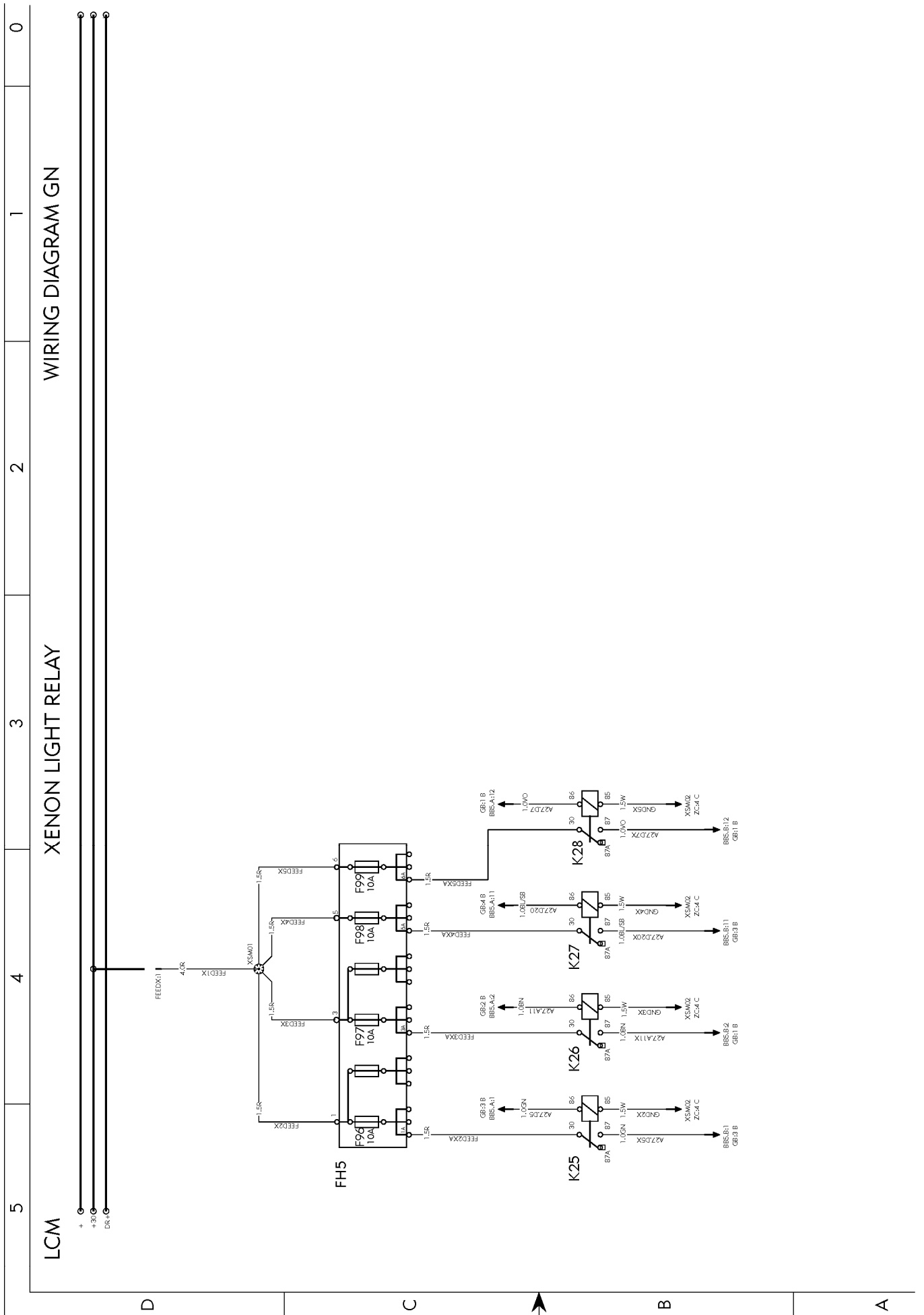


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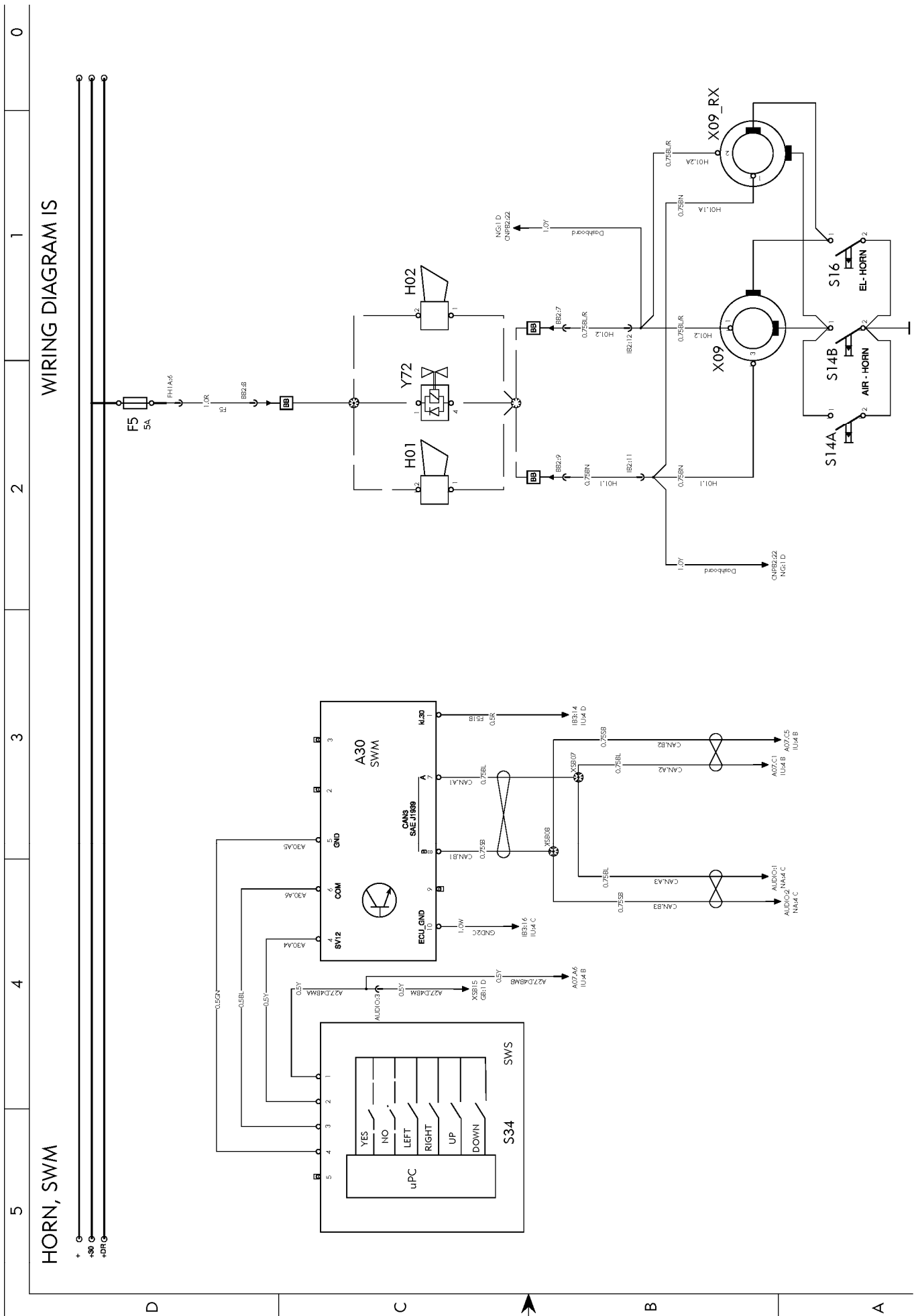


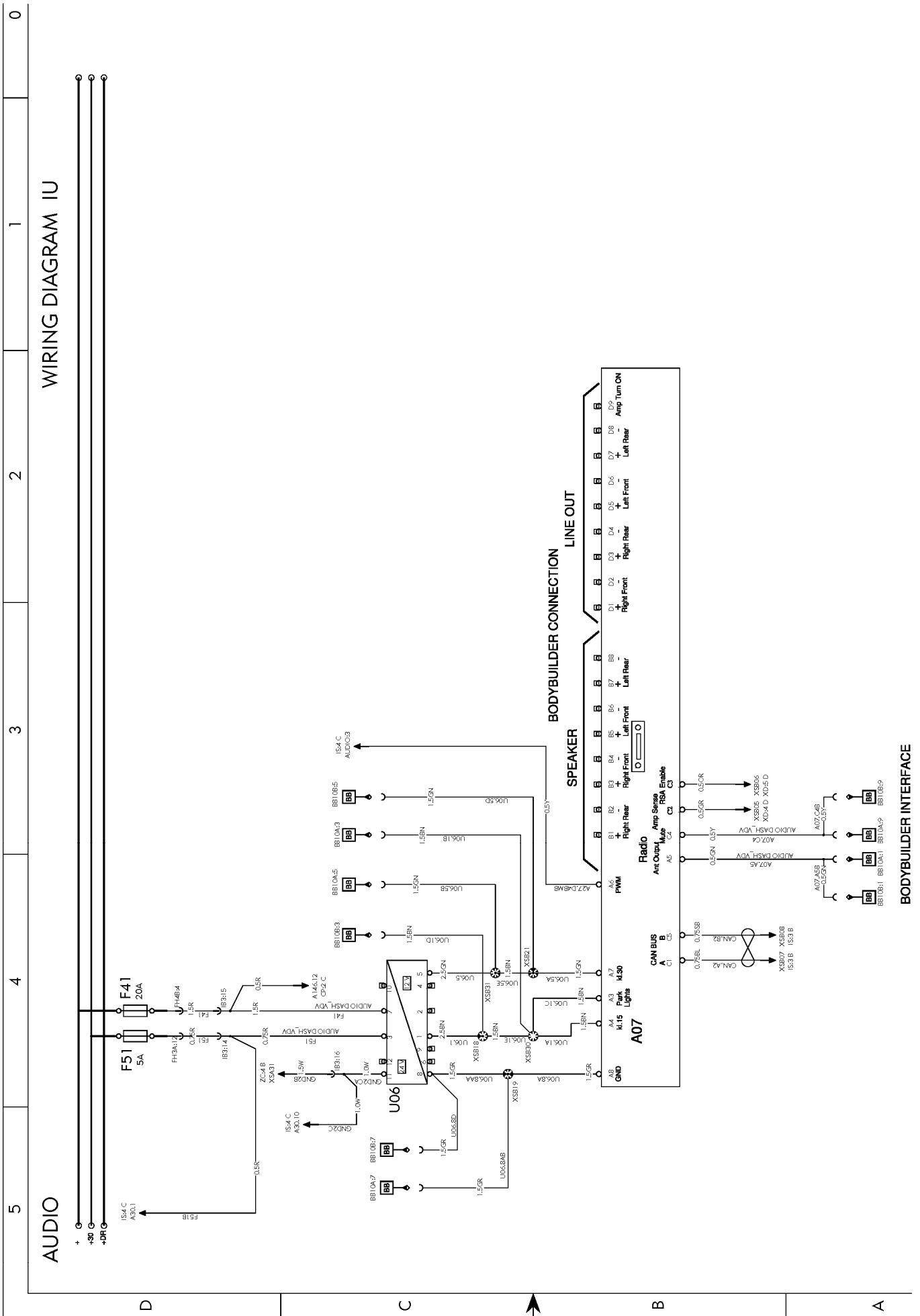




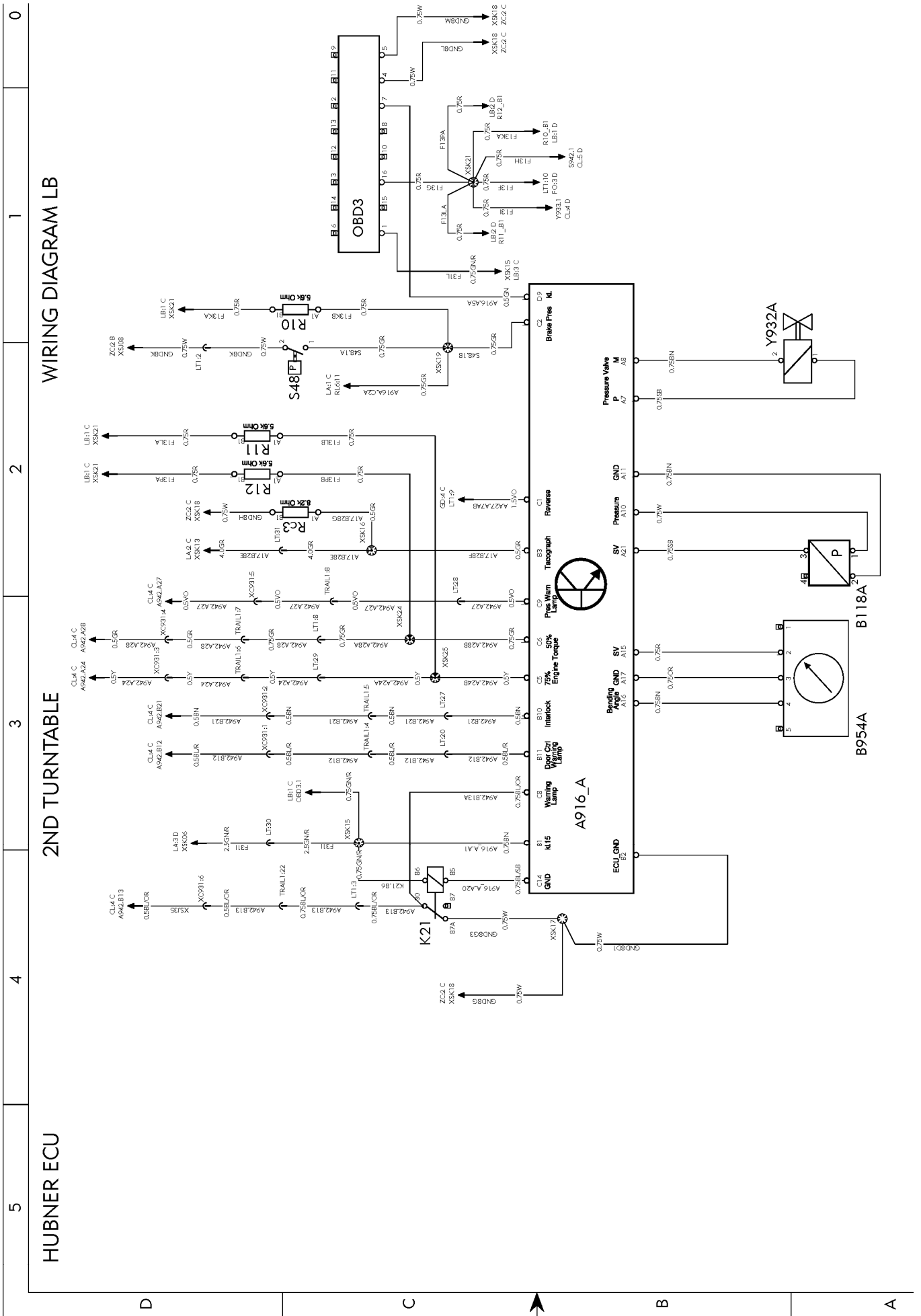


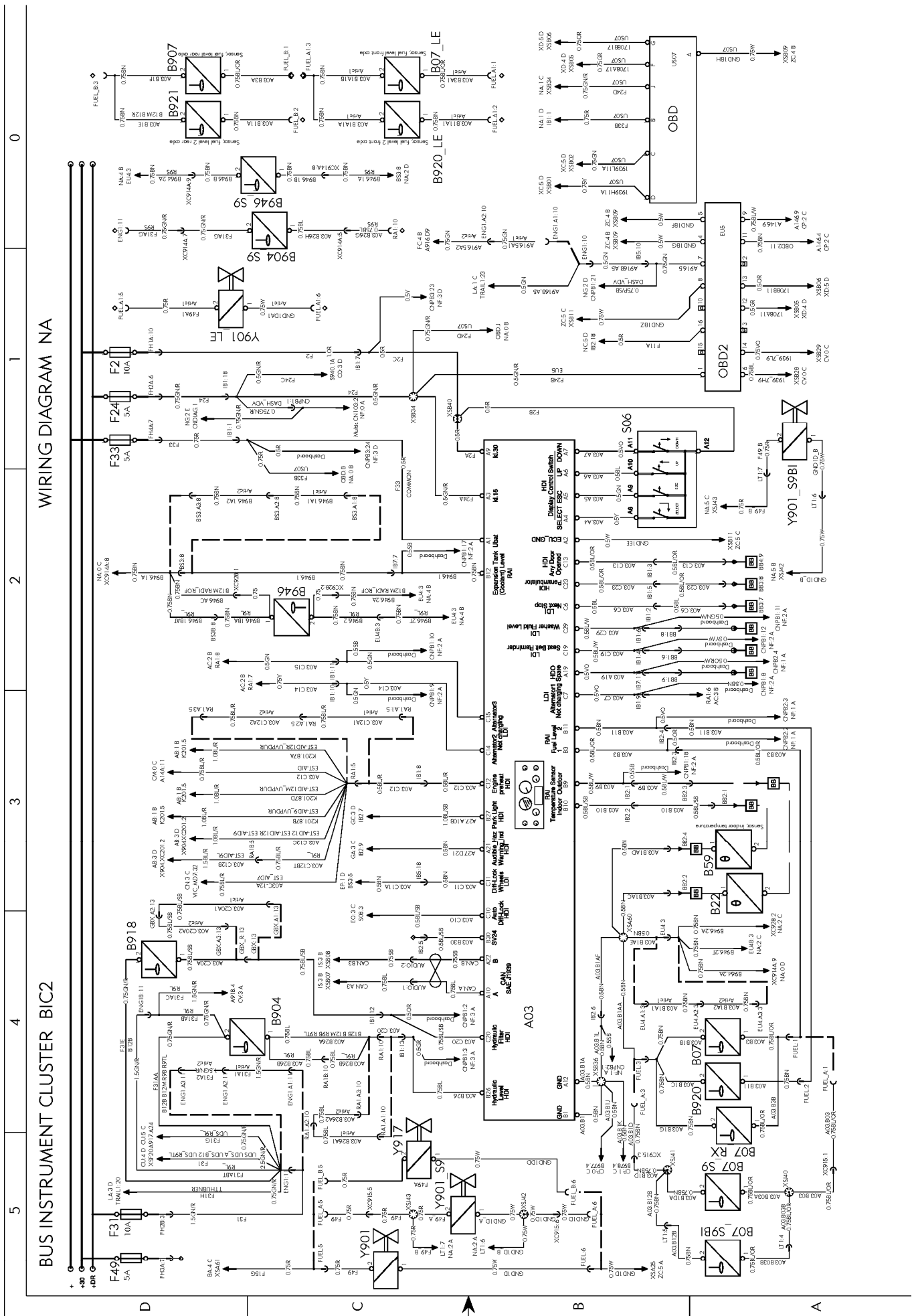
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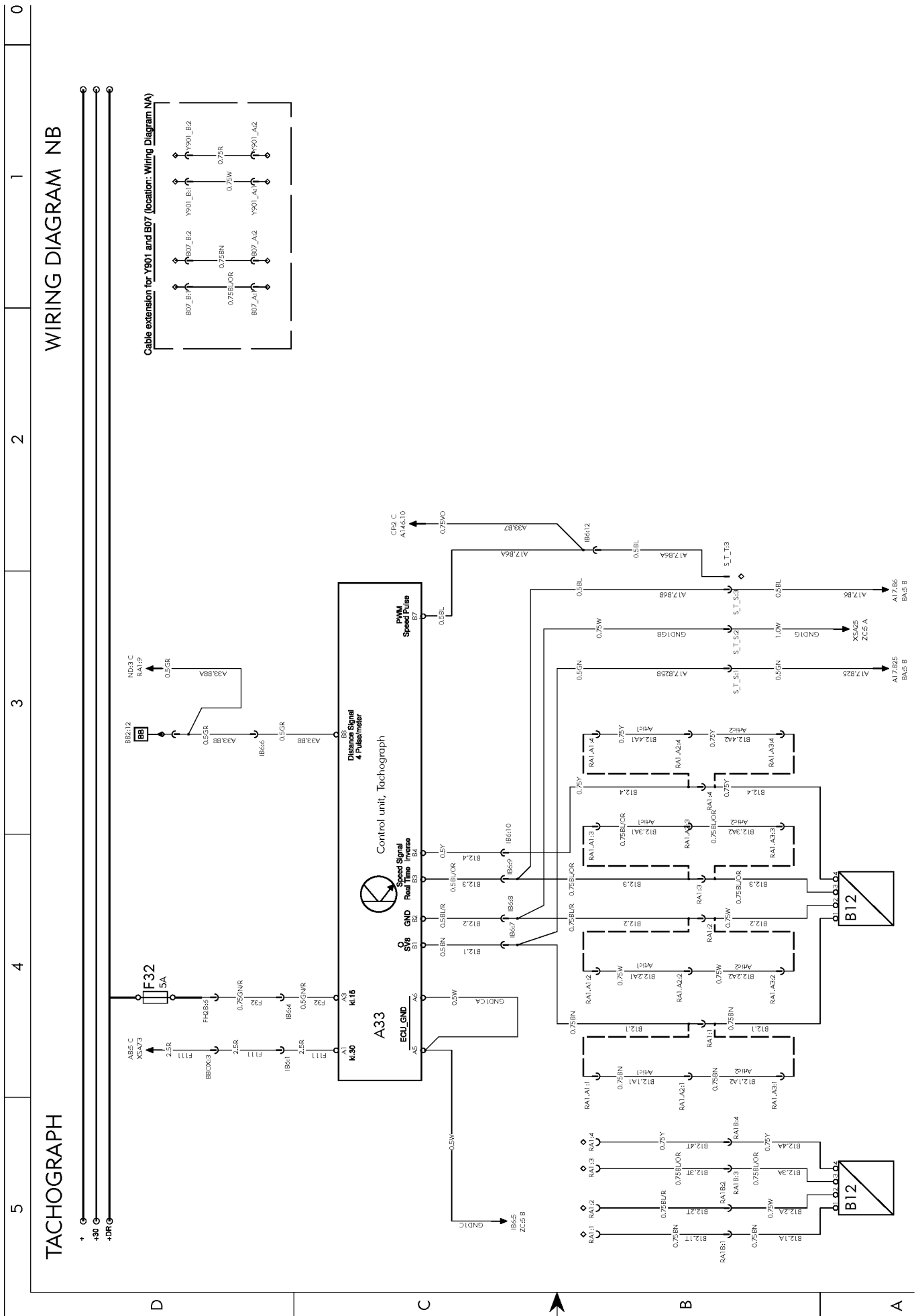


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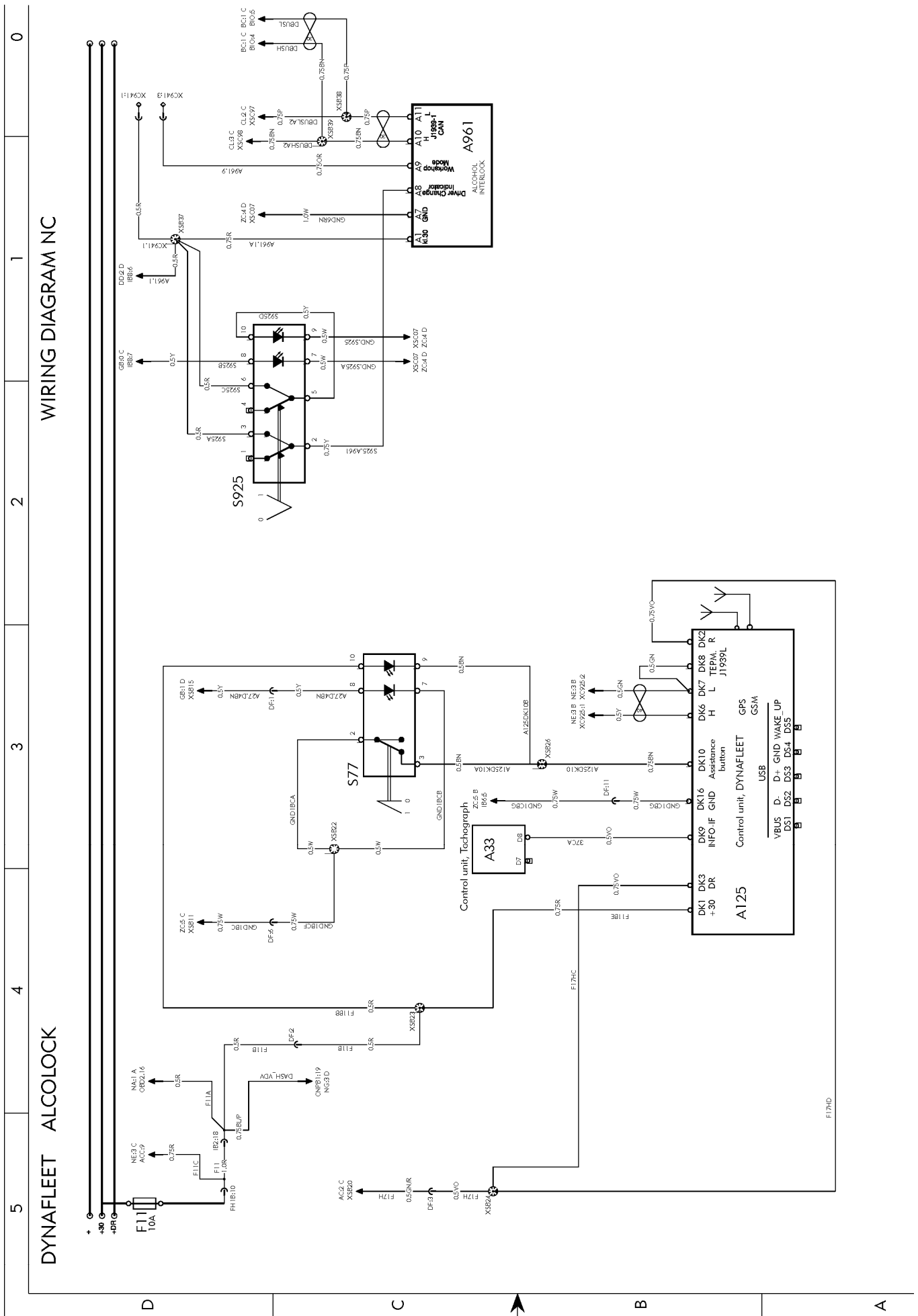


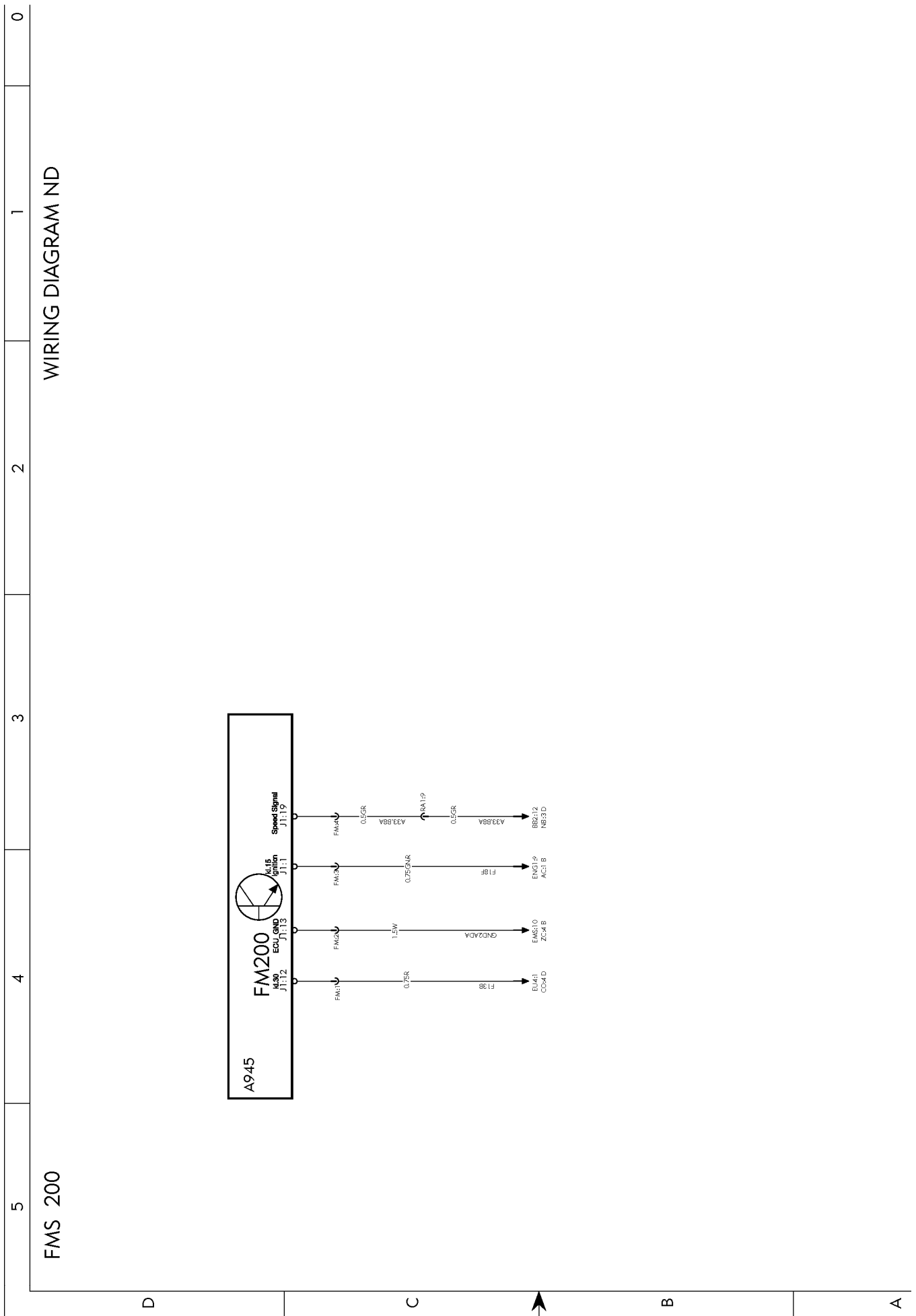


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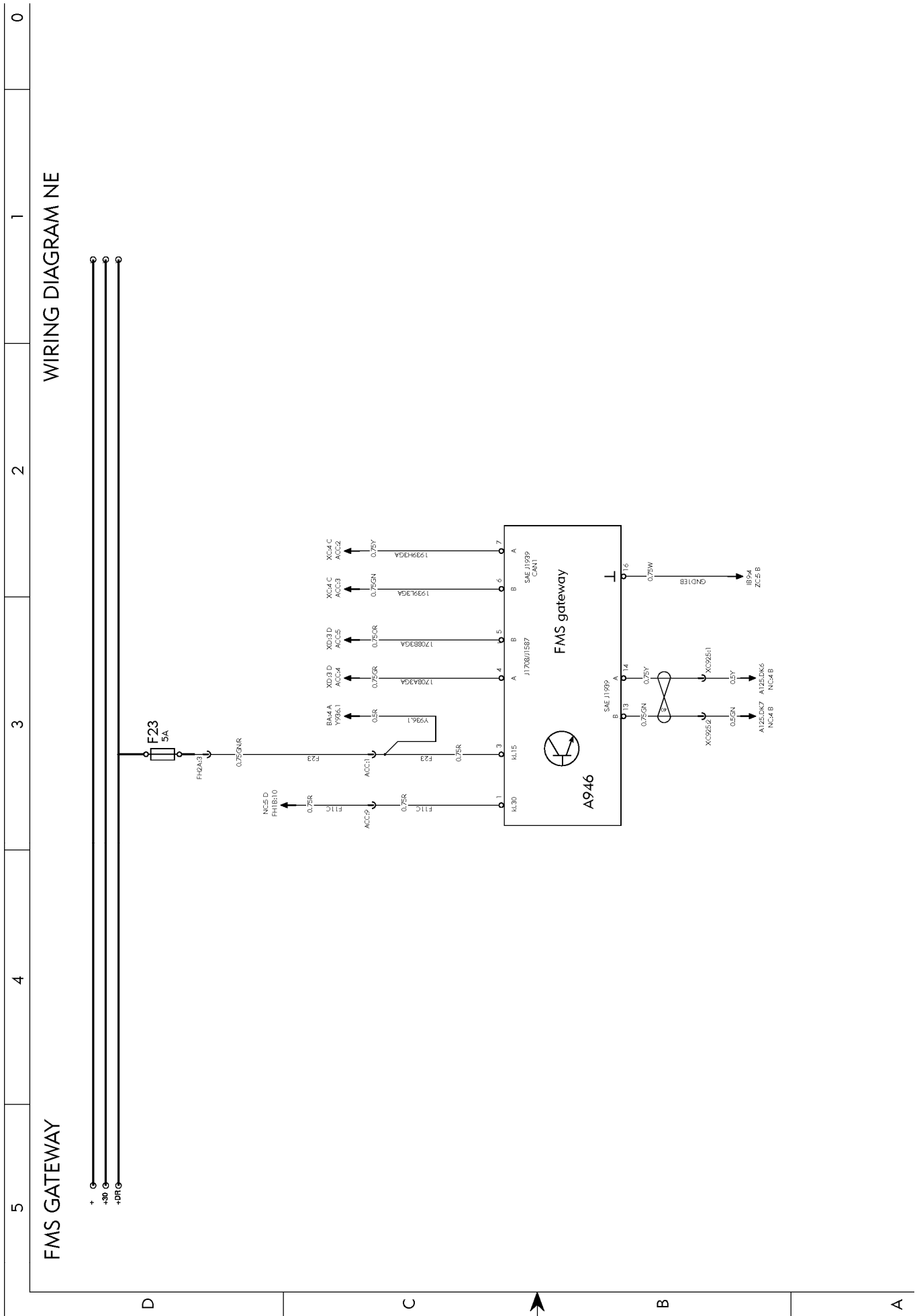


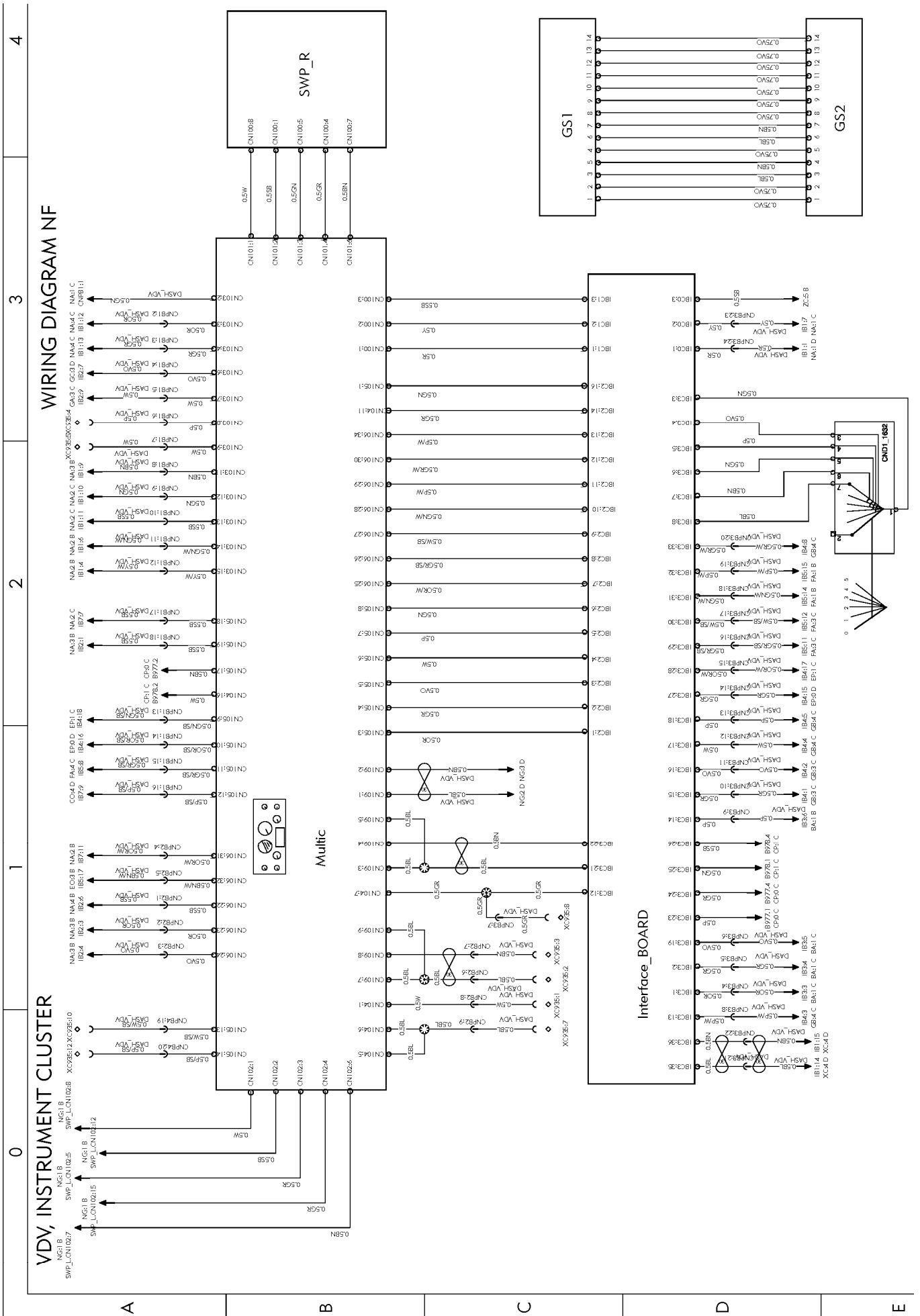
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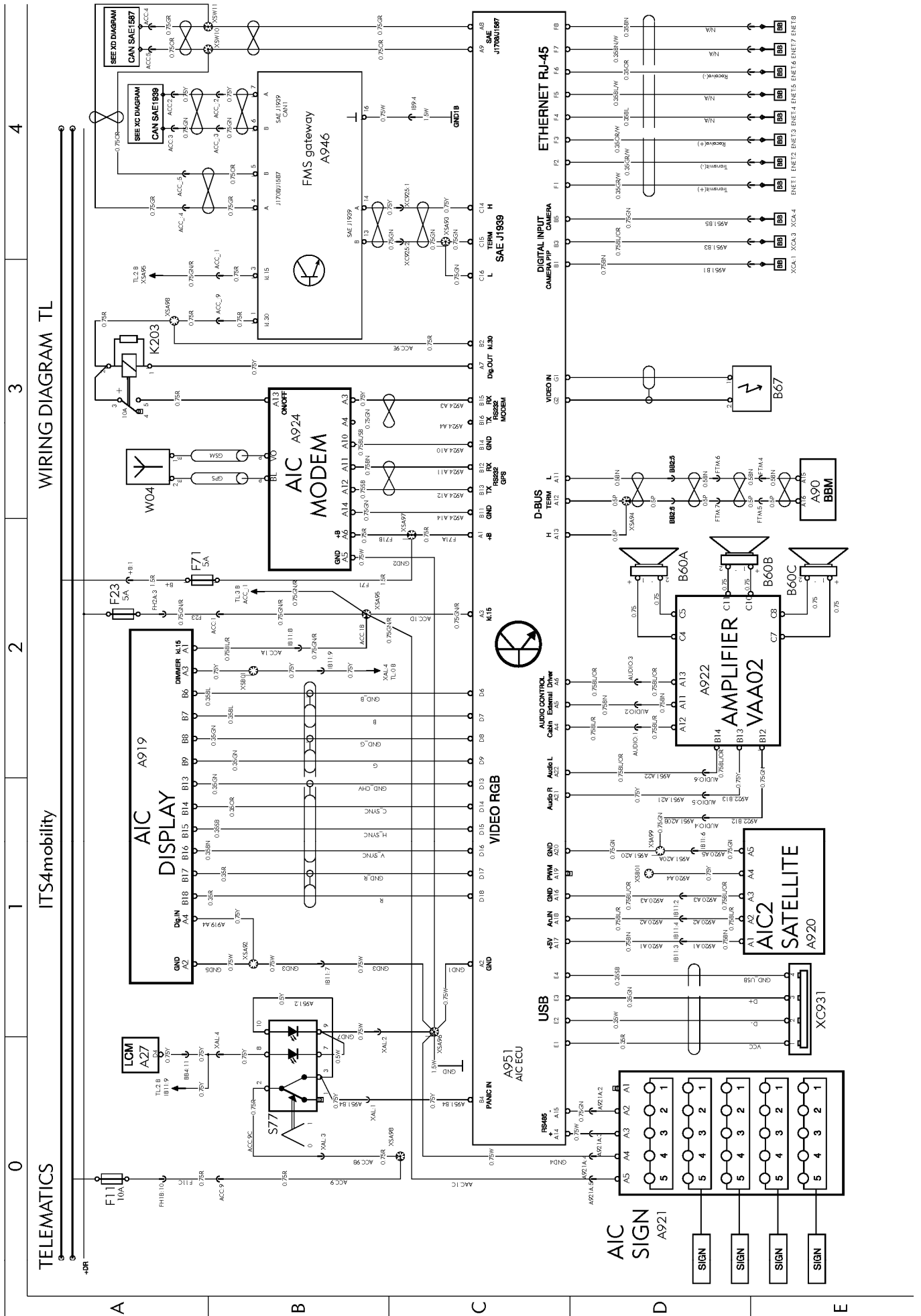




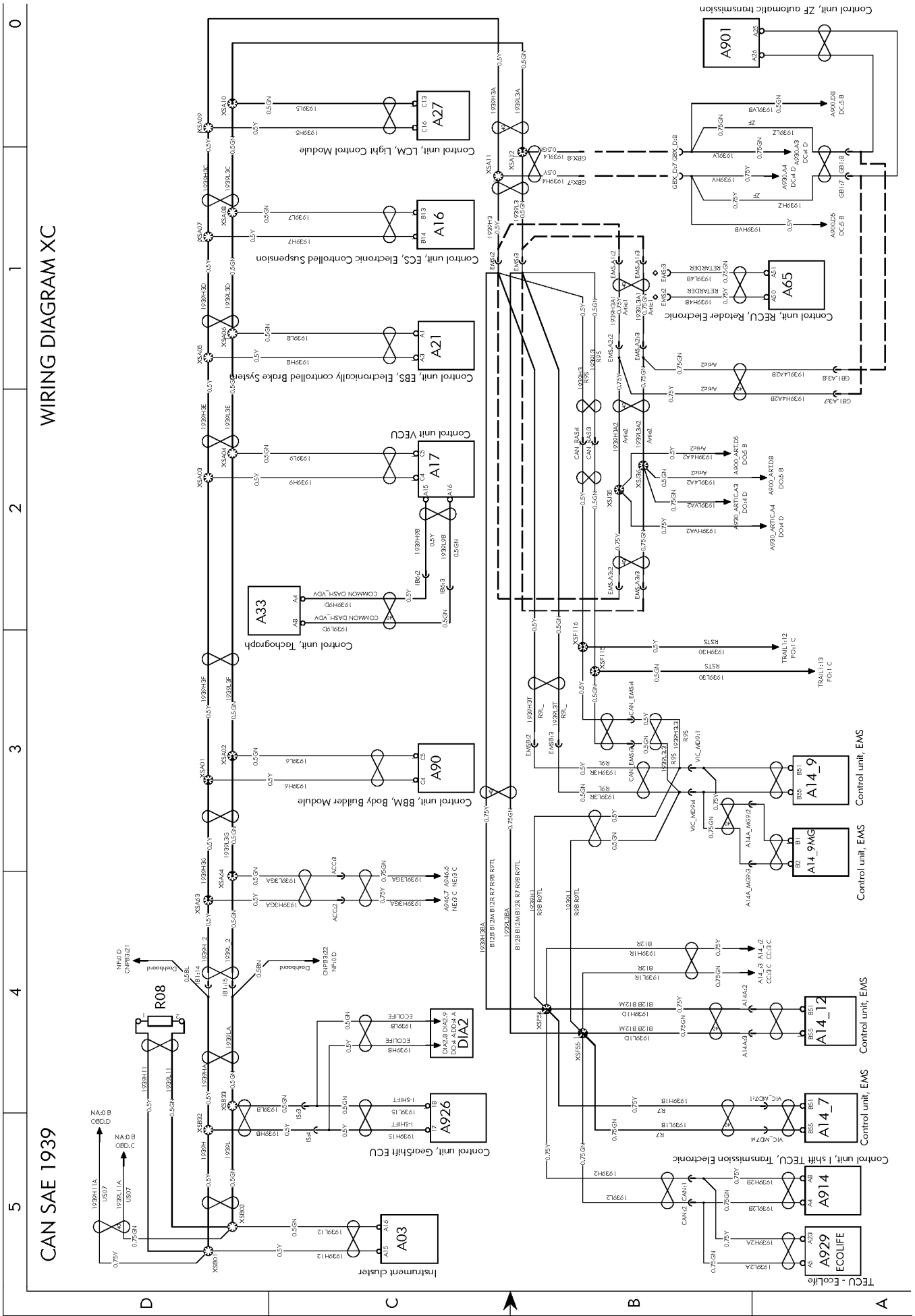
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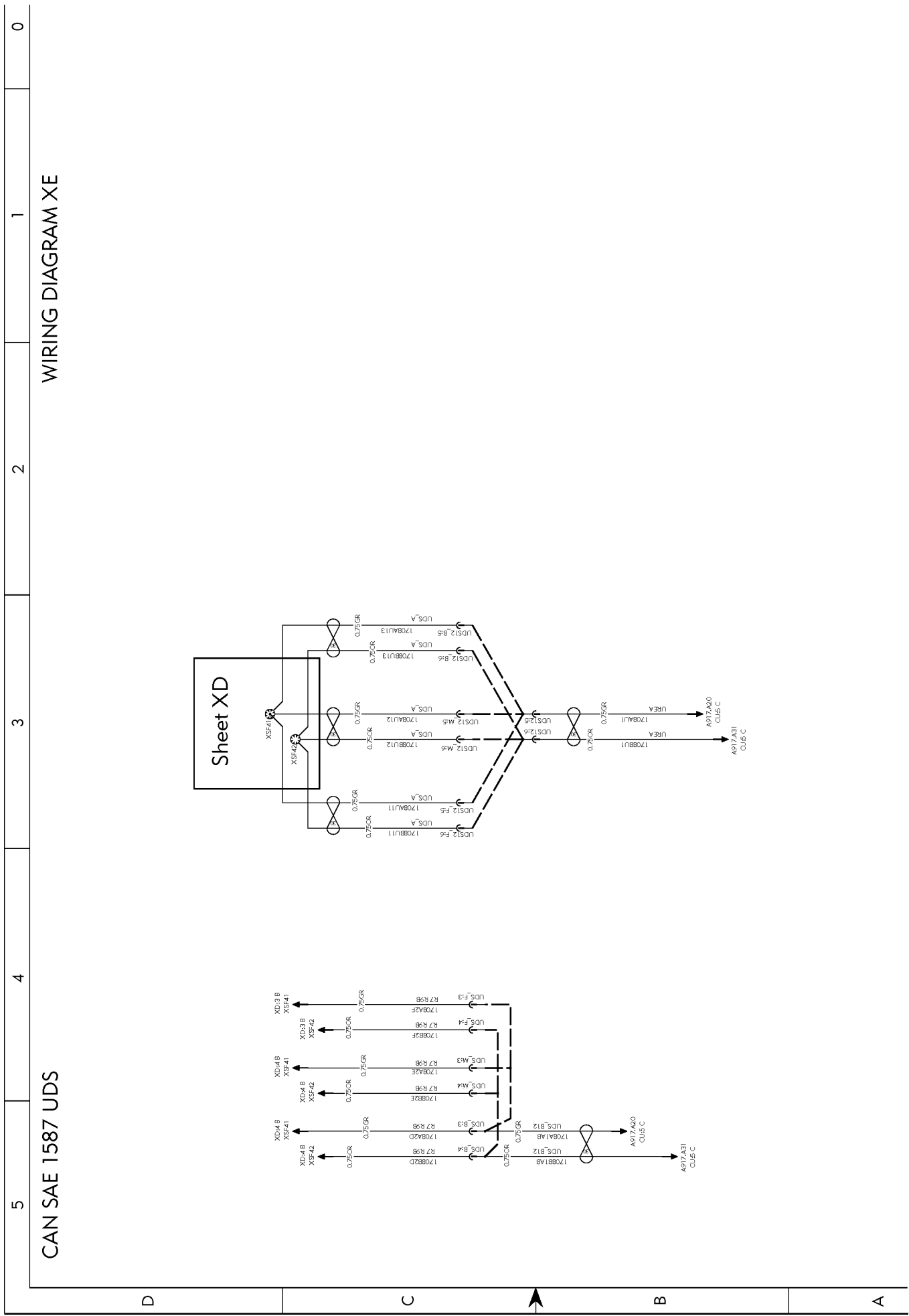


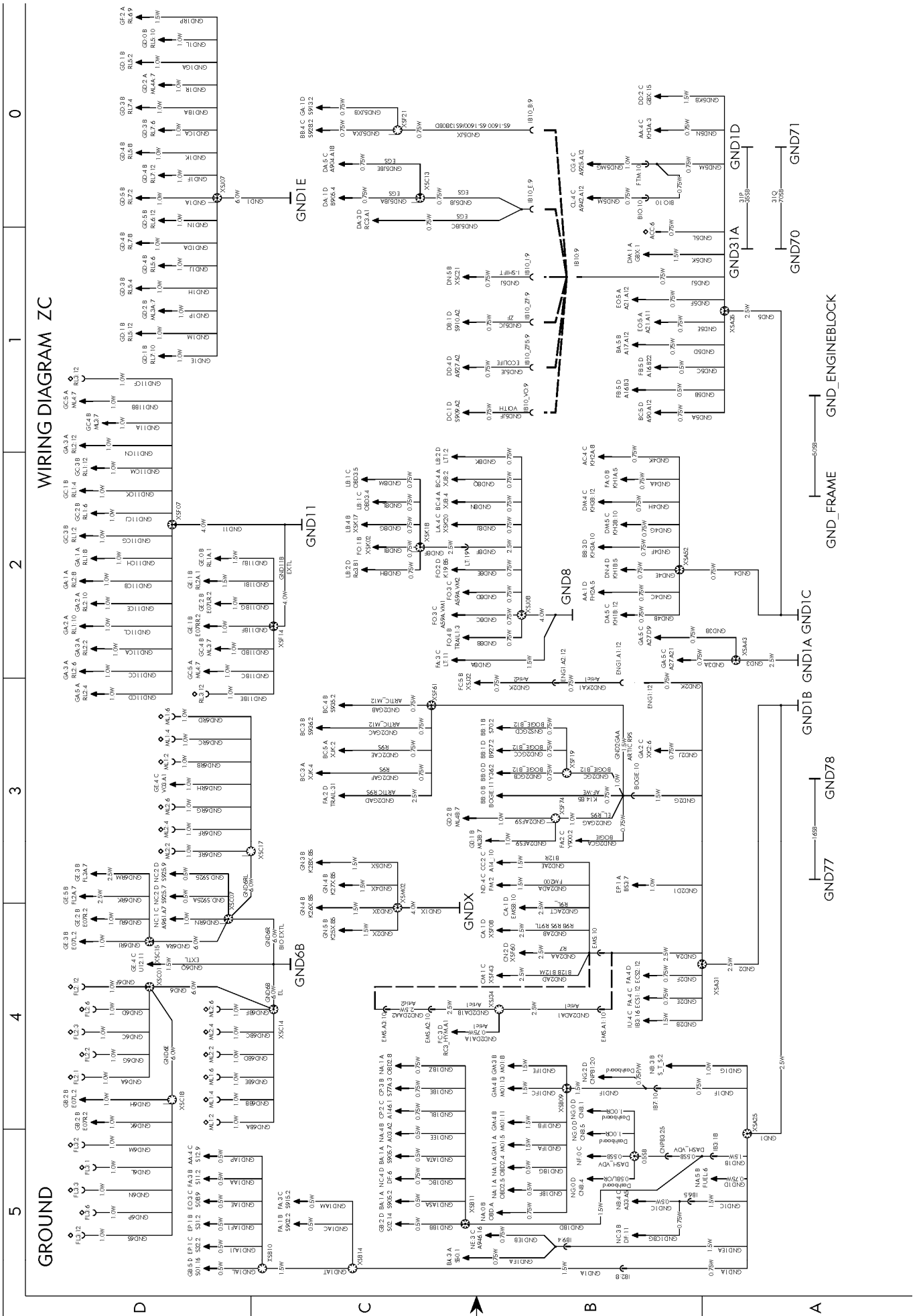


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C3036301





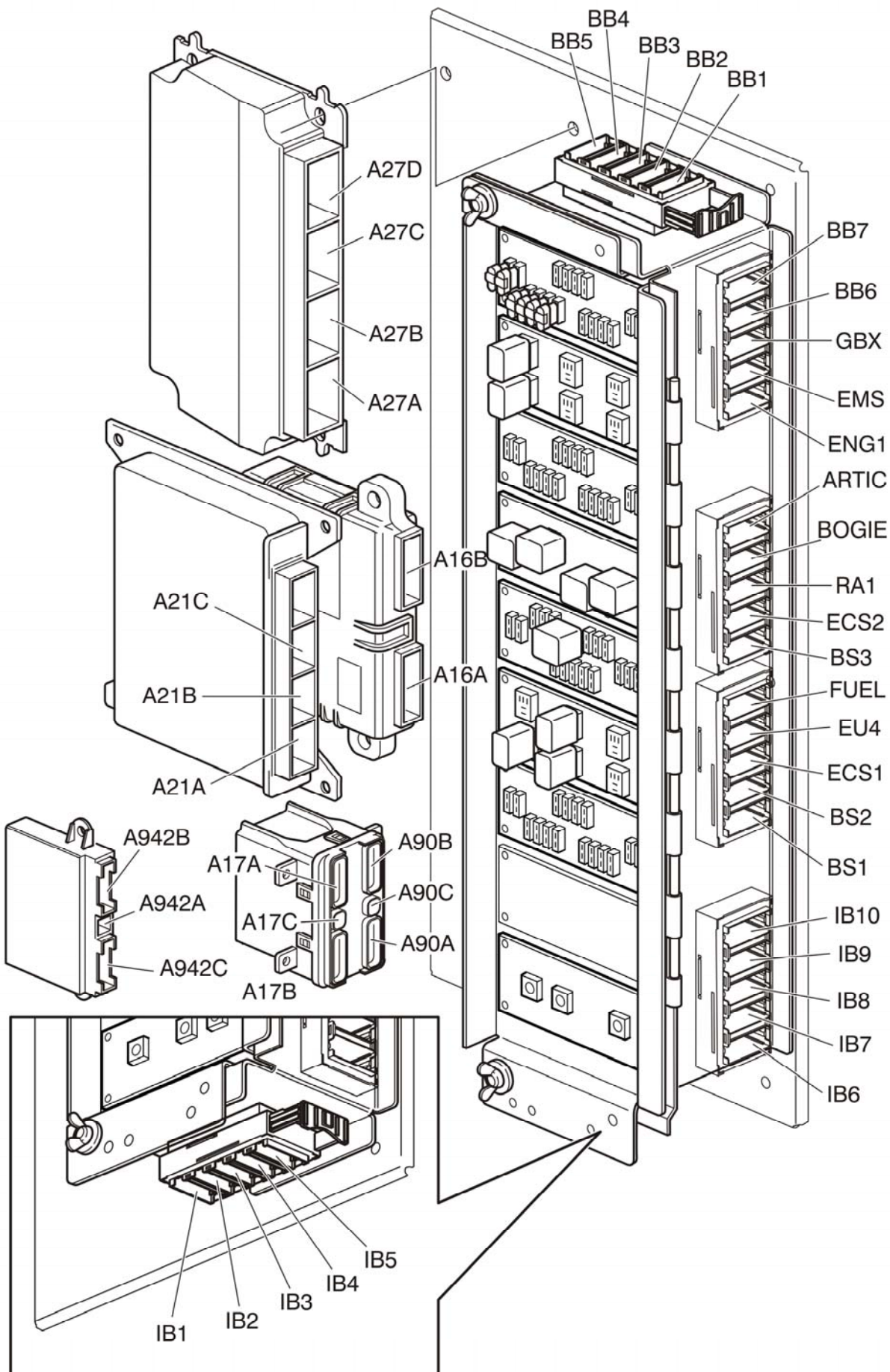
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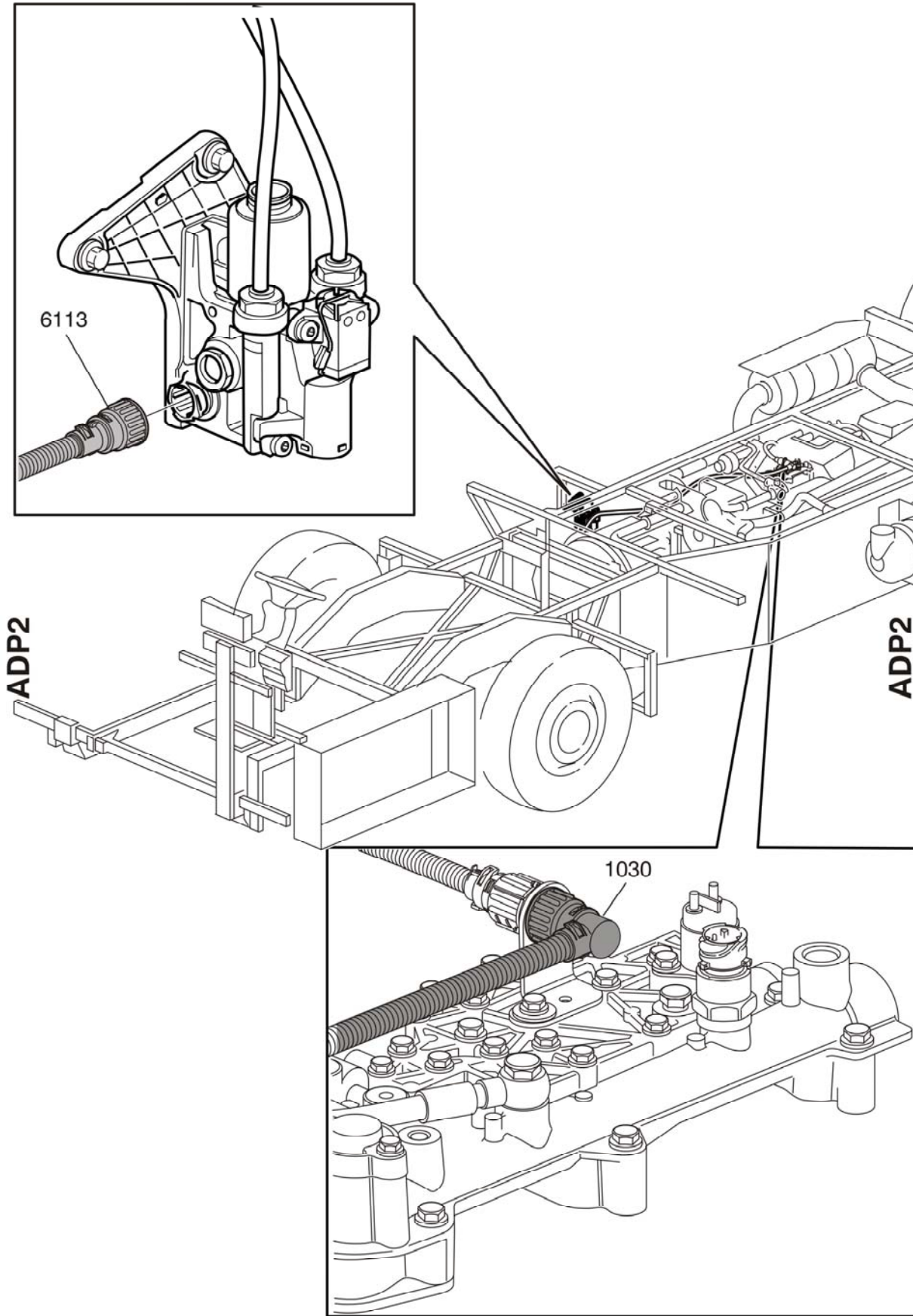
Illustrations index

Note: The following illustrations show the locations of connectors in their respective components. Some connectors may not appear to be connected because the location of their components varies according to the design of the bodybuilder.

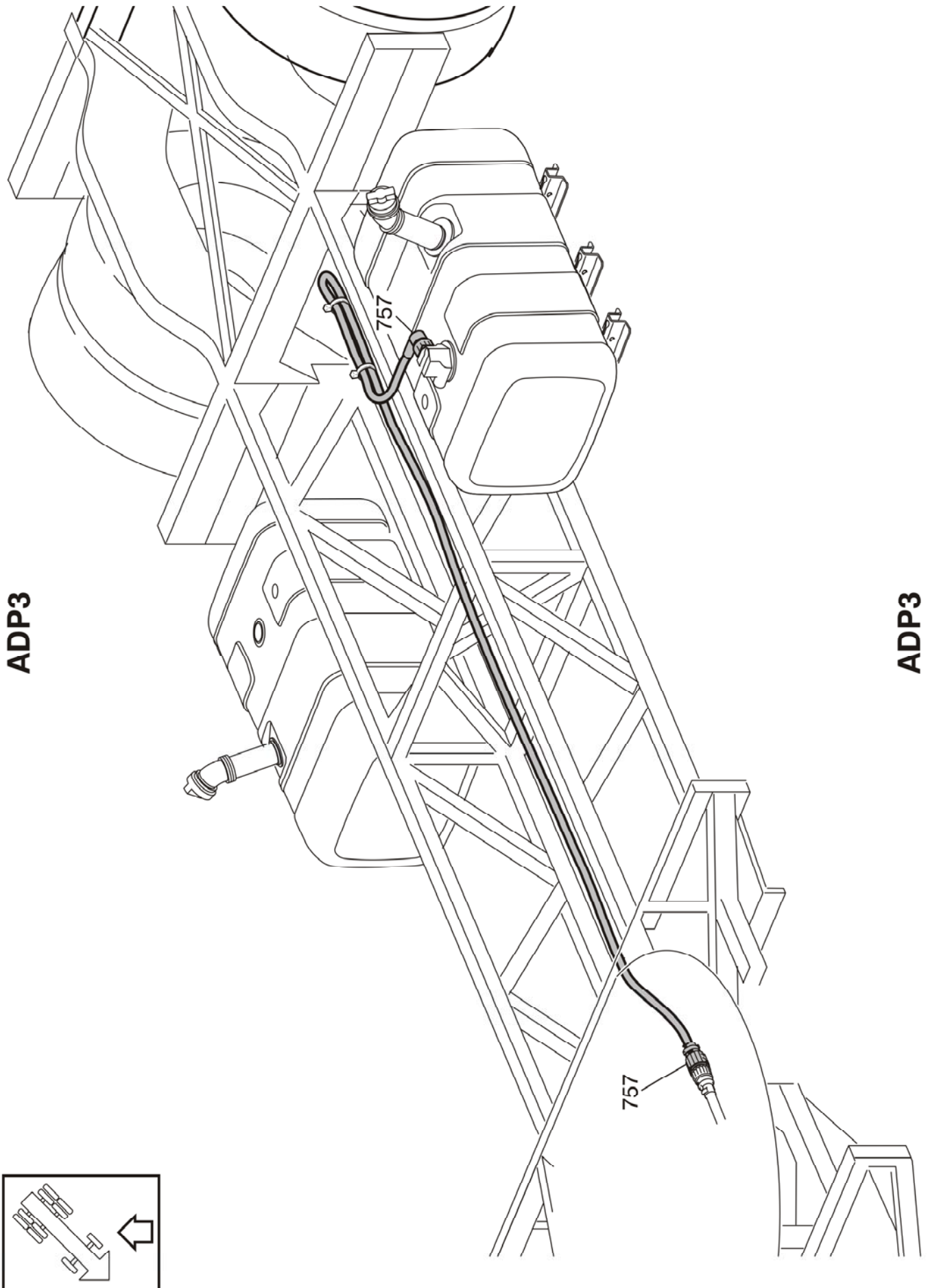
-	Electrical centre	63
ADP2	Adapter cable harness, air valve	64
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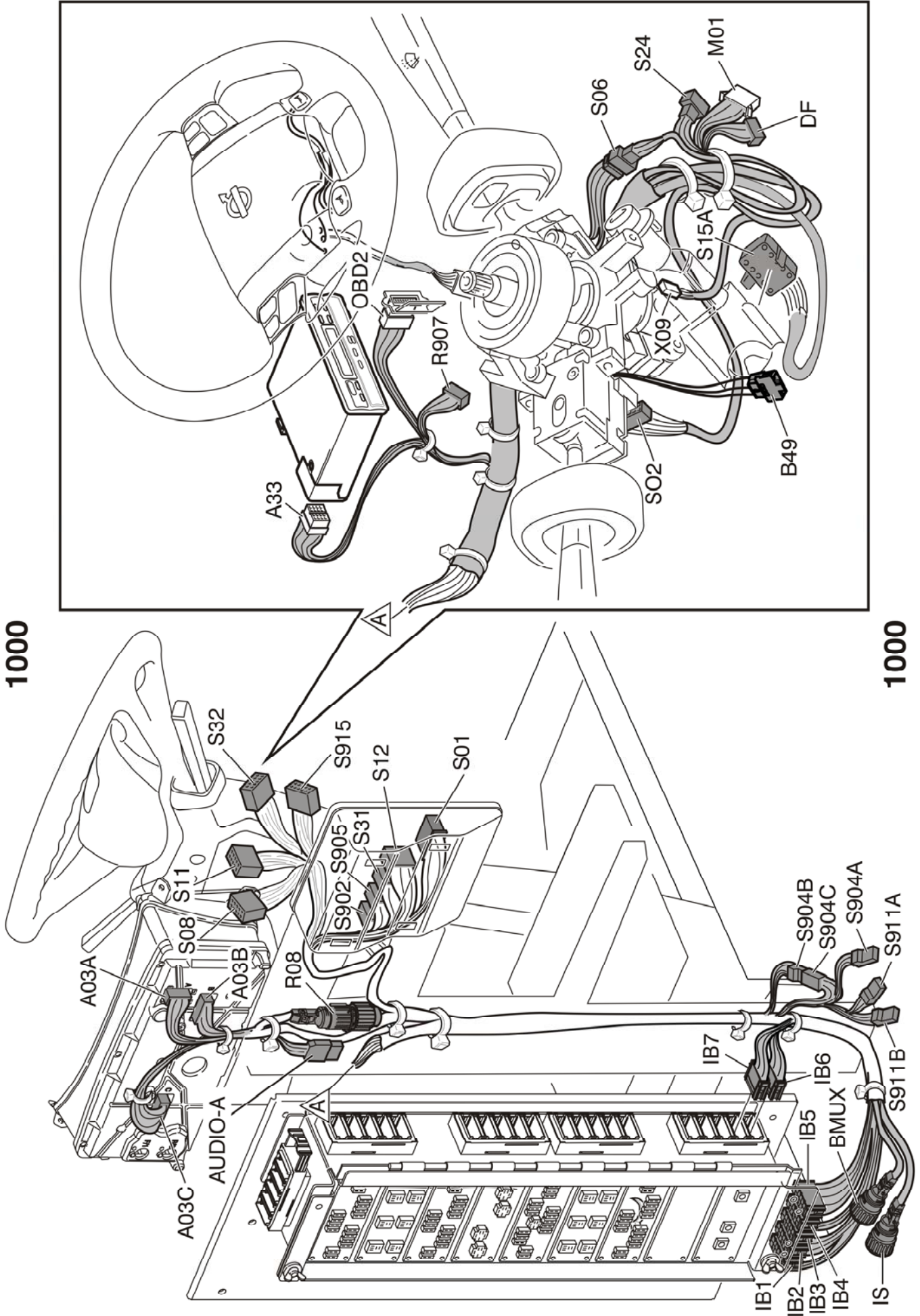
Illustrations

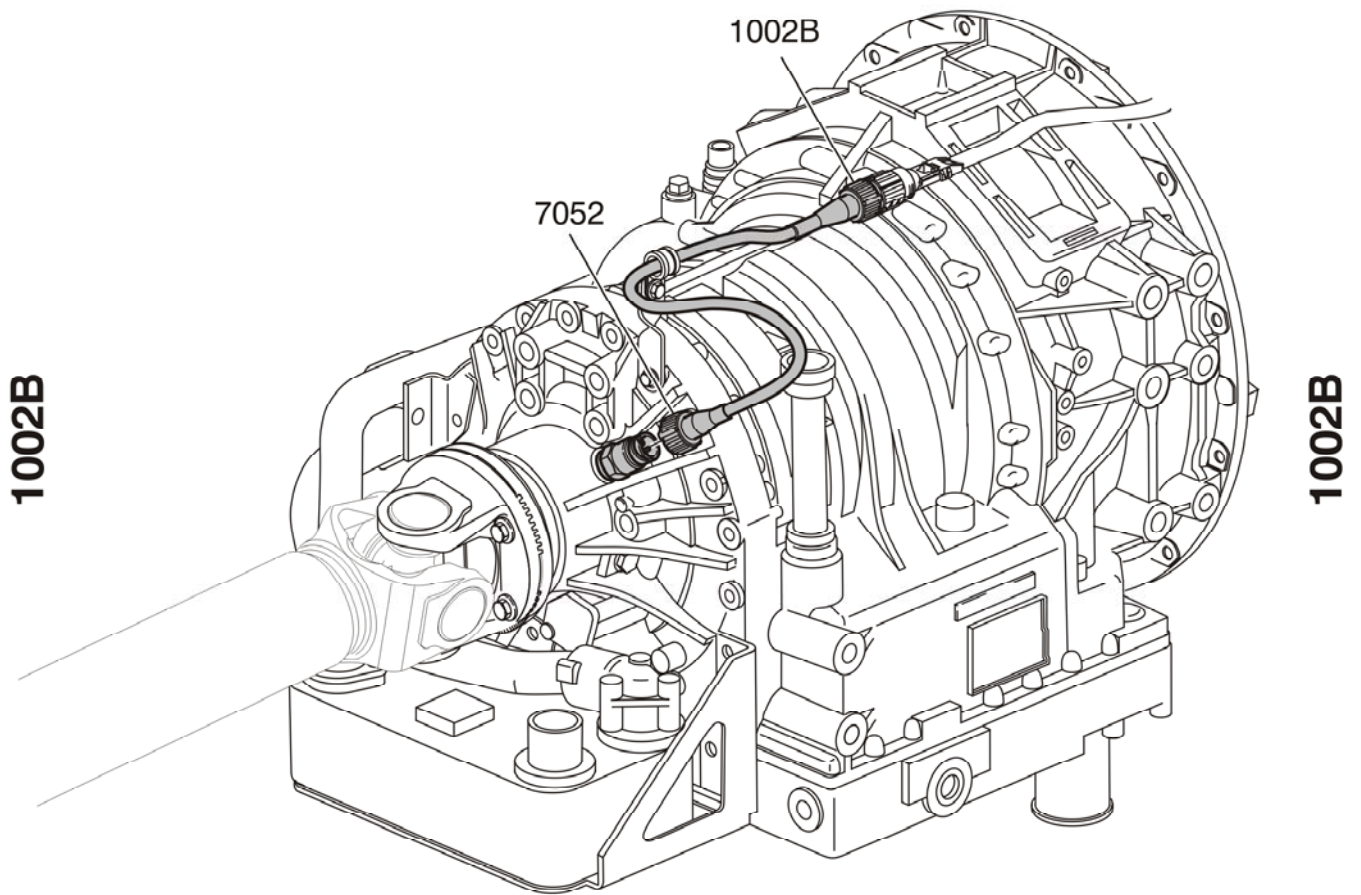
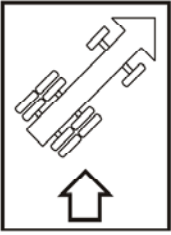


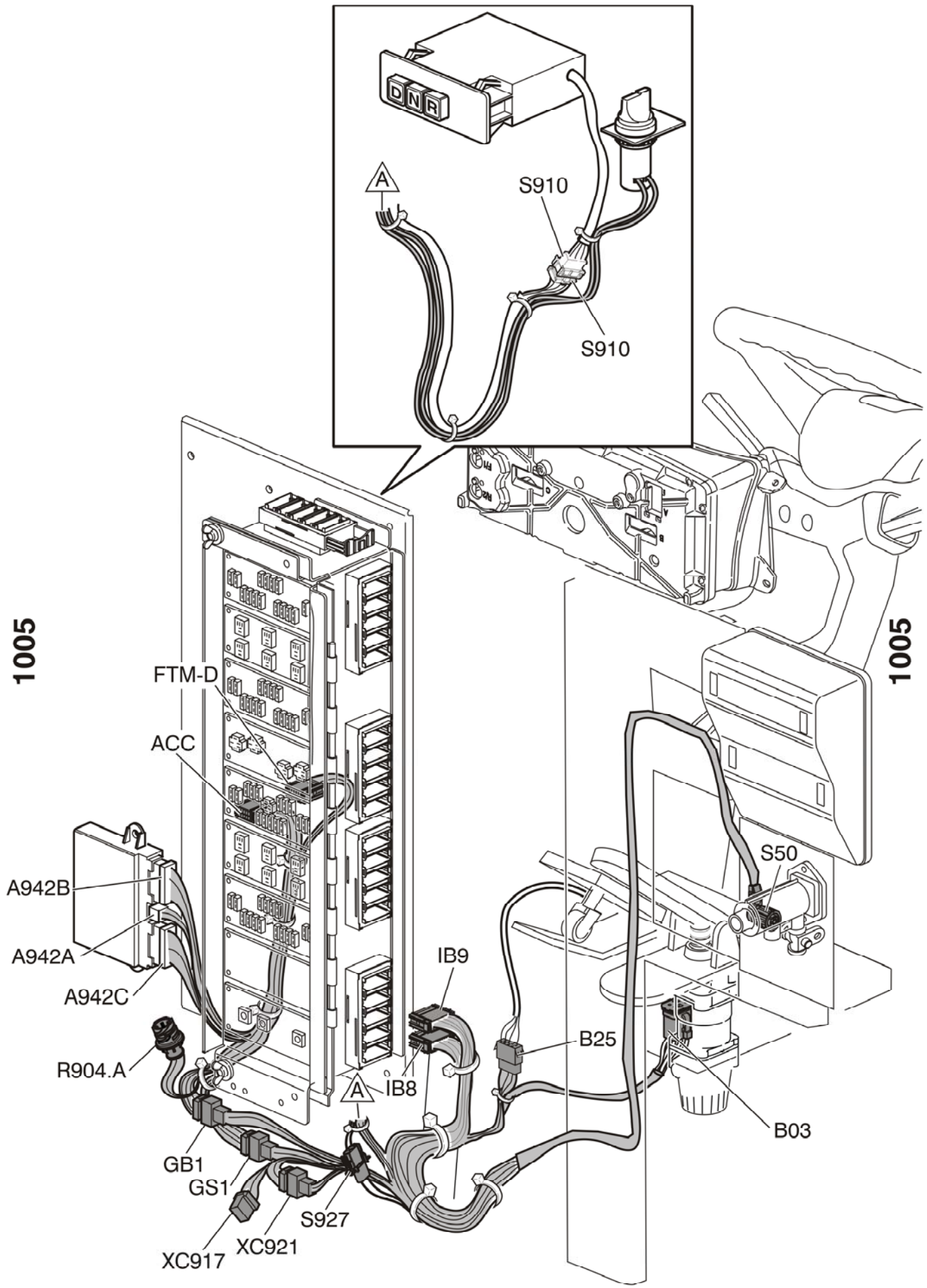


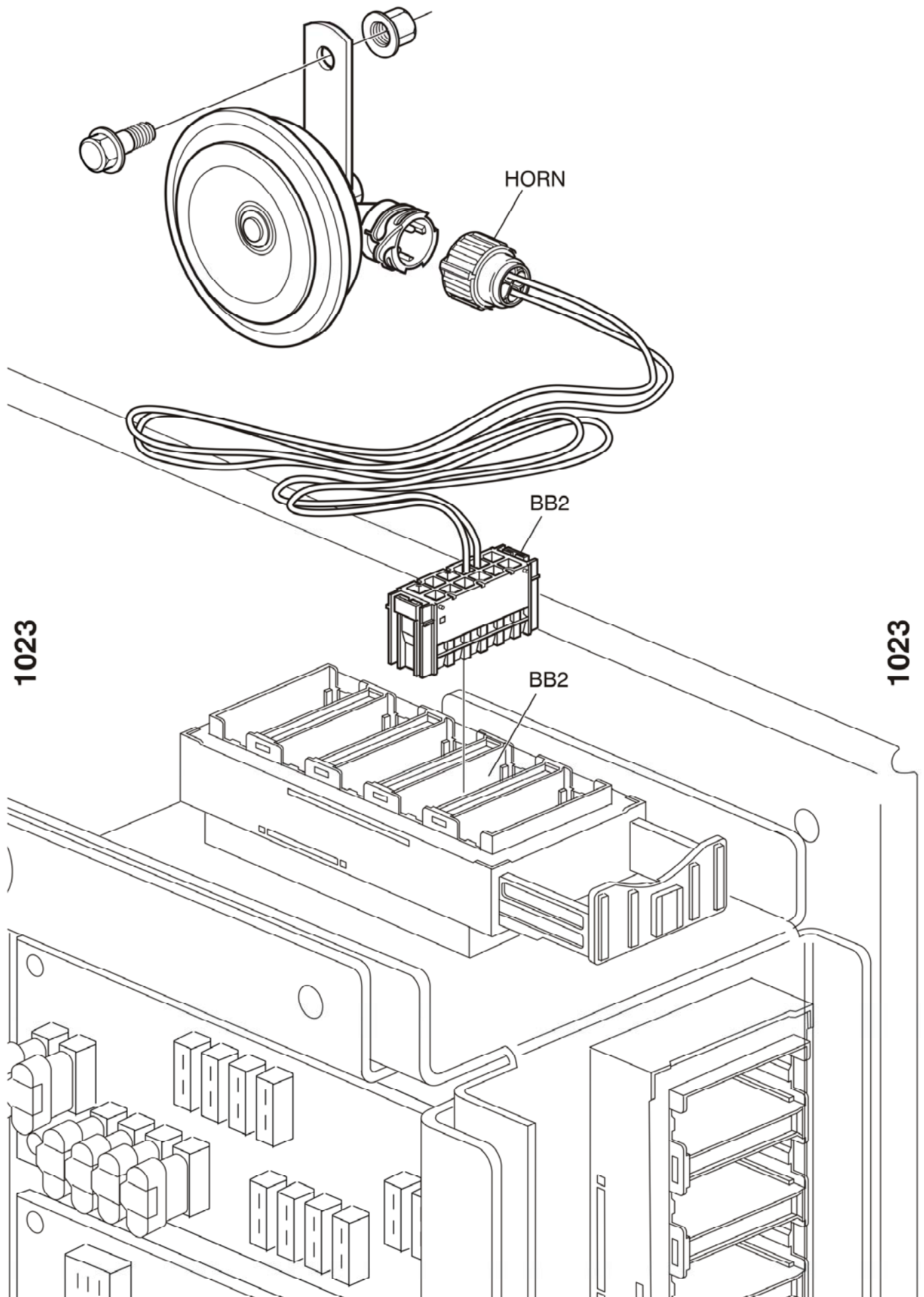
C3002103



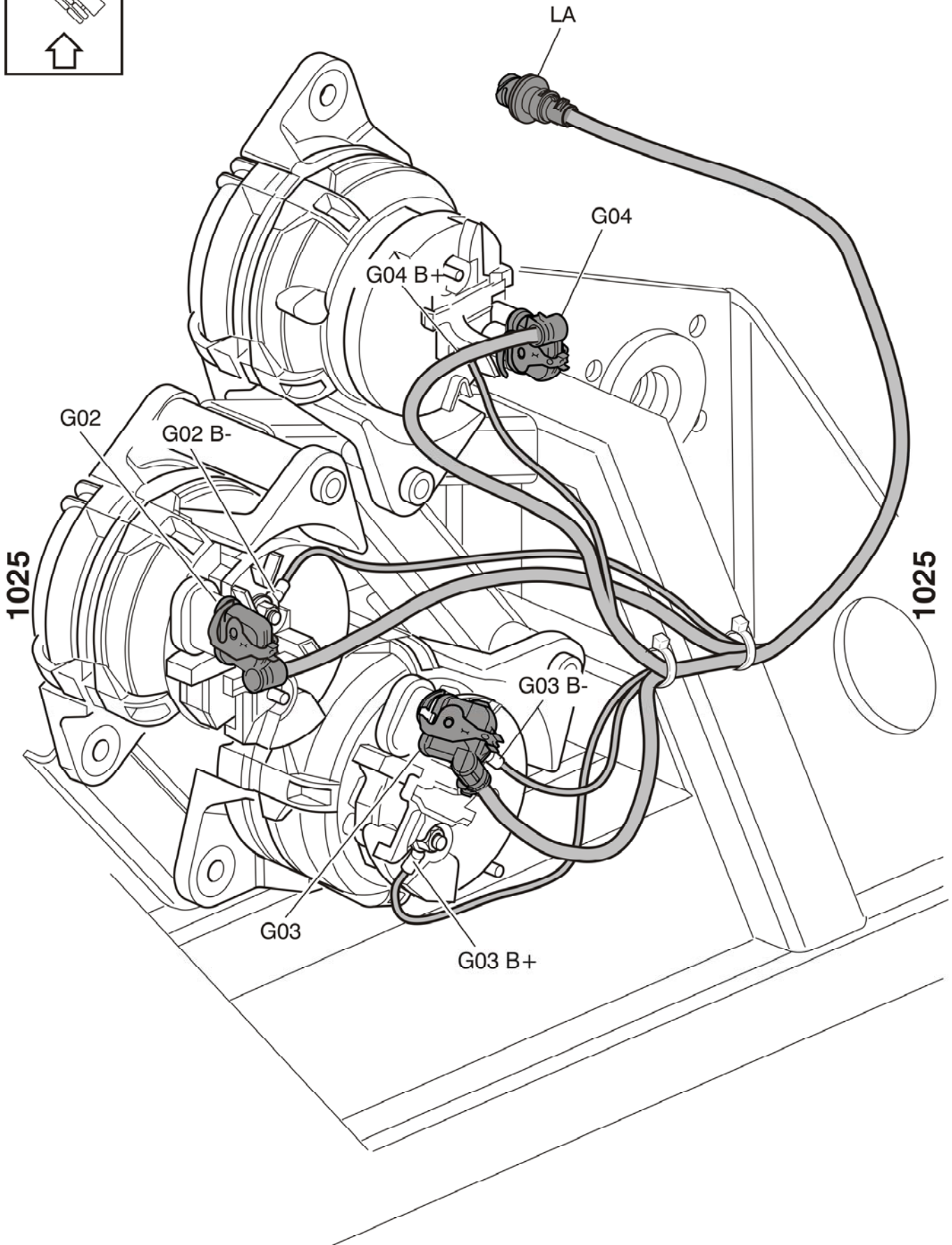
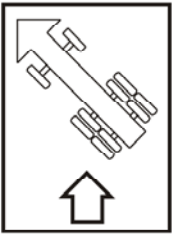


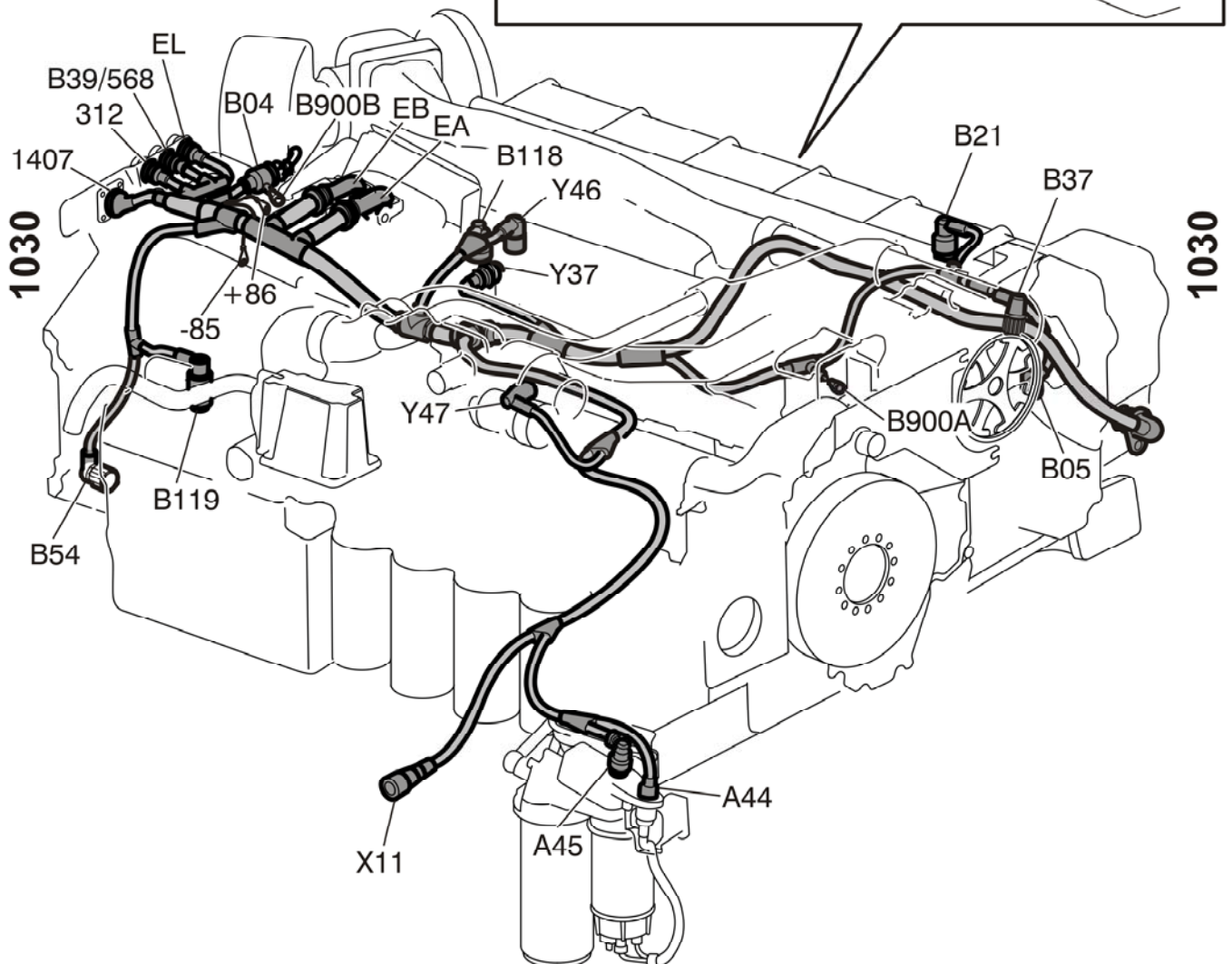
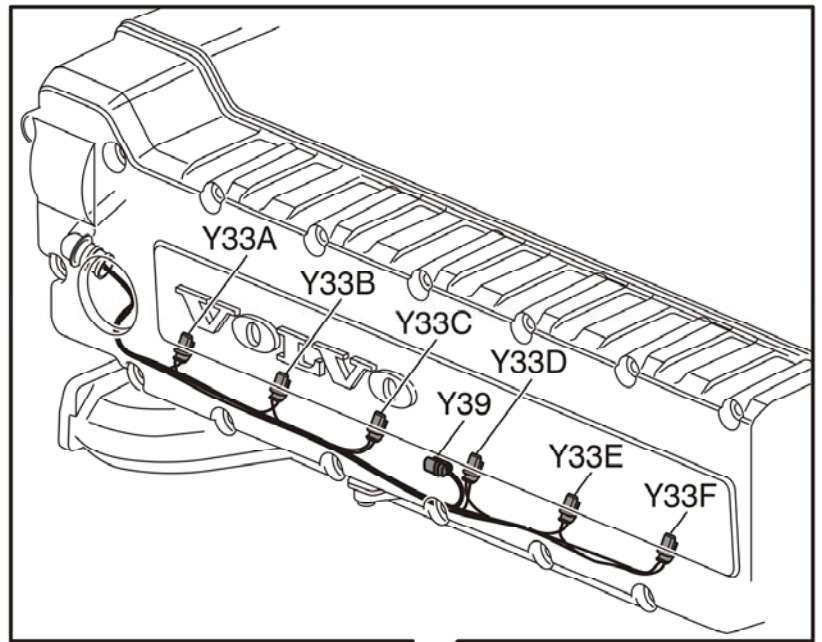
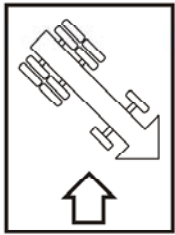


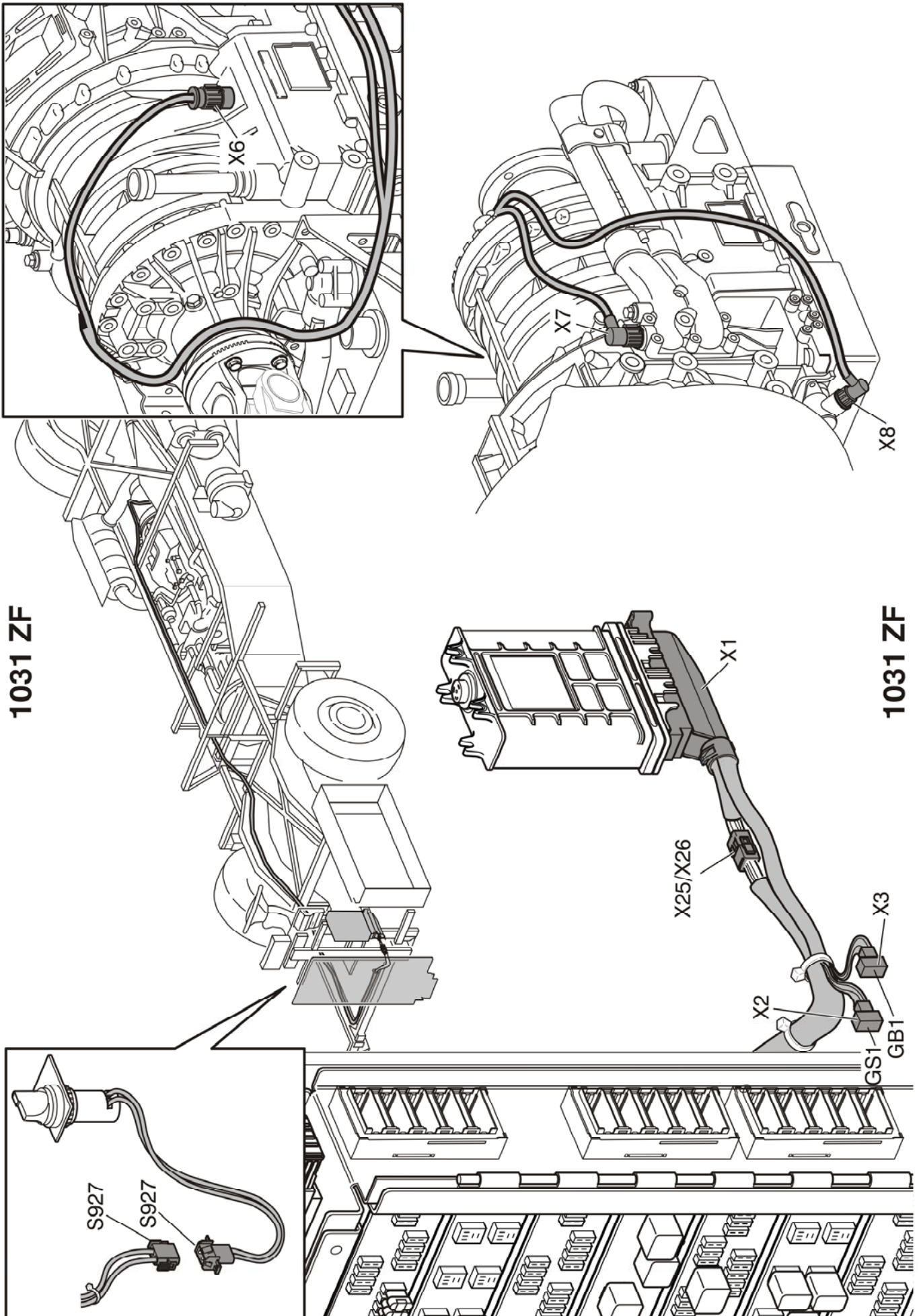


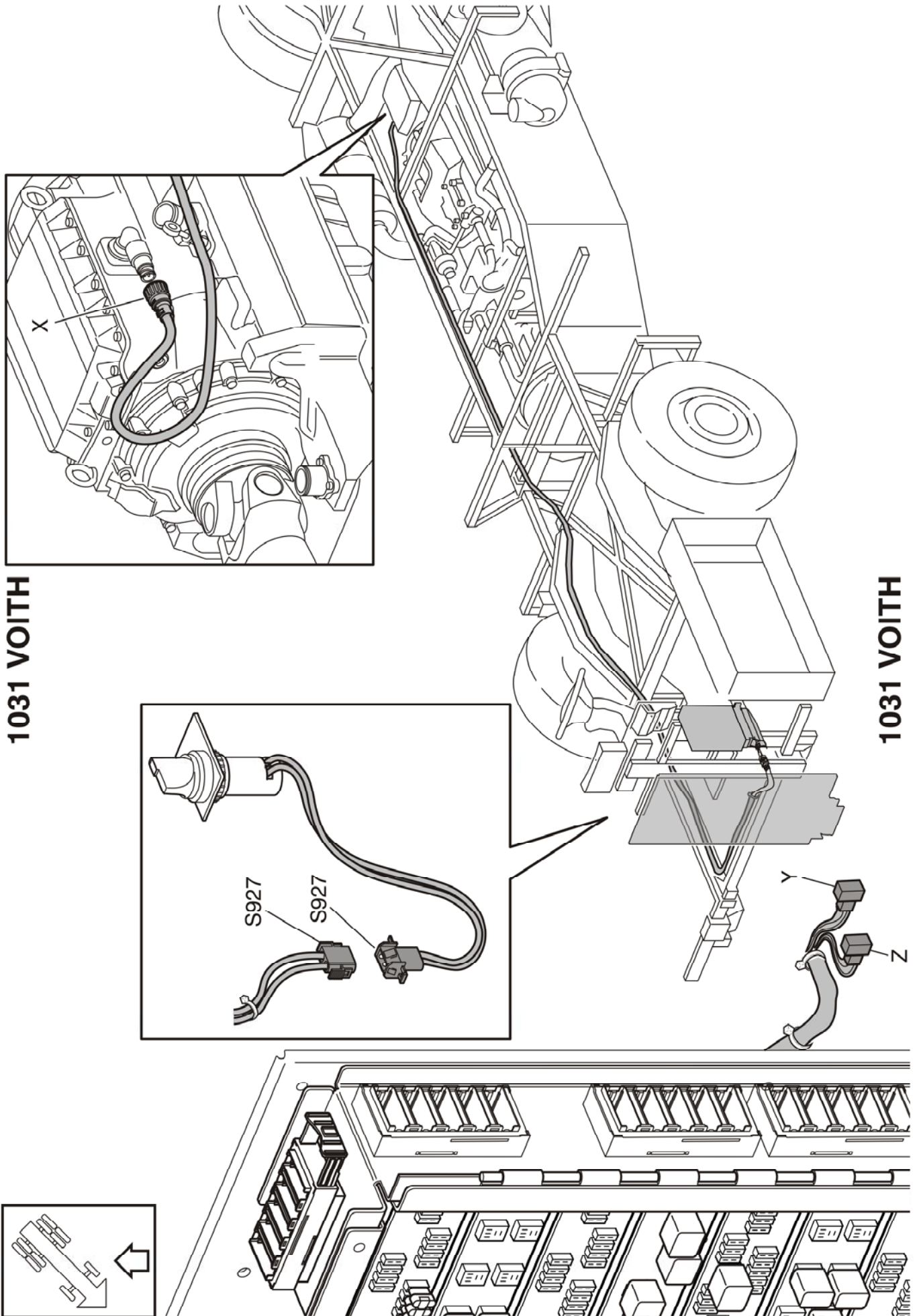


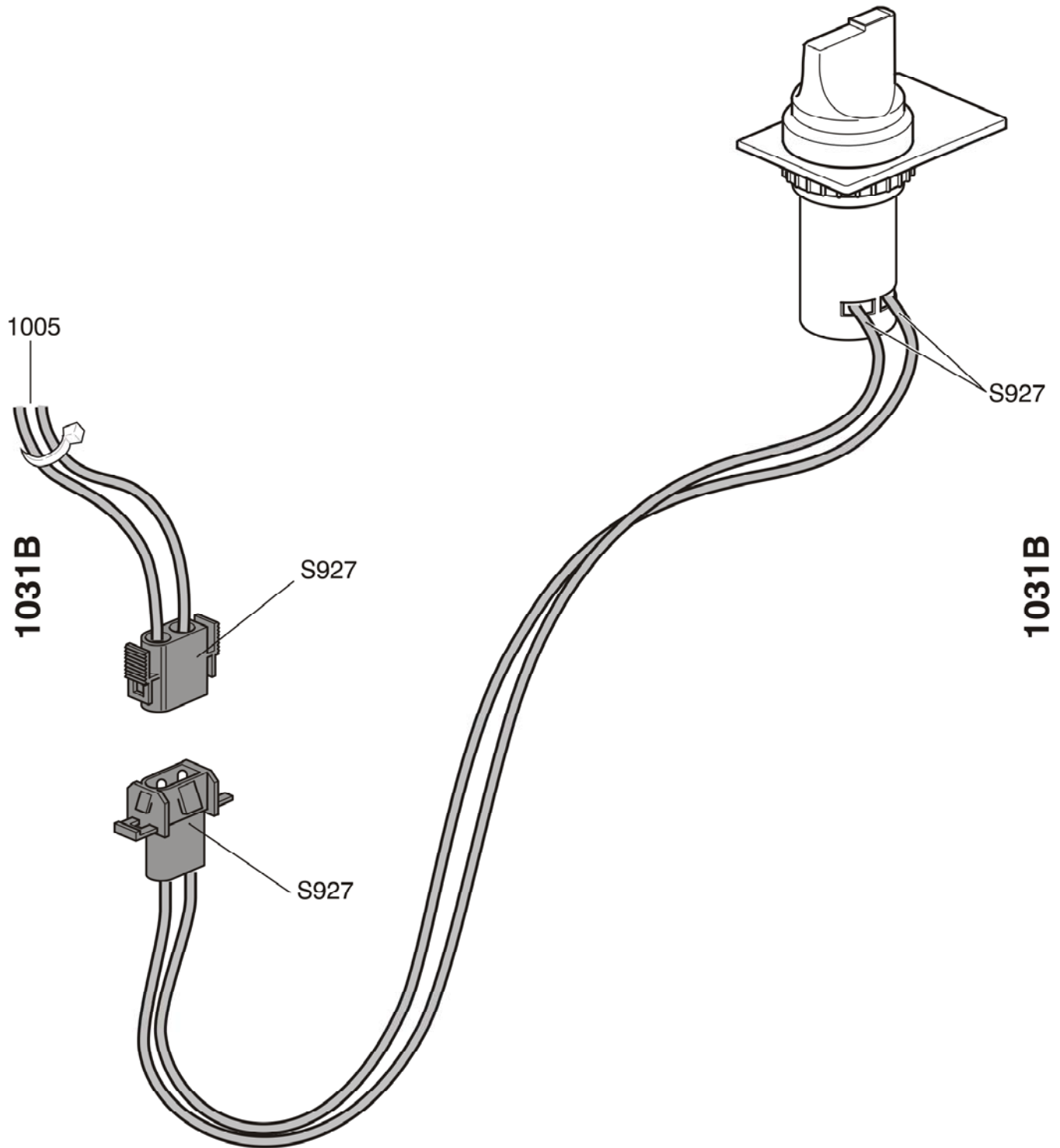
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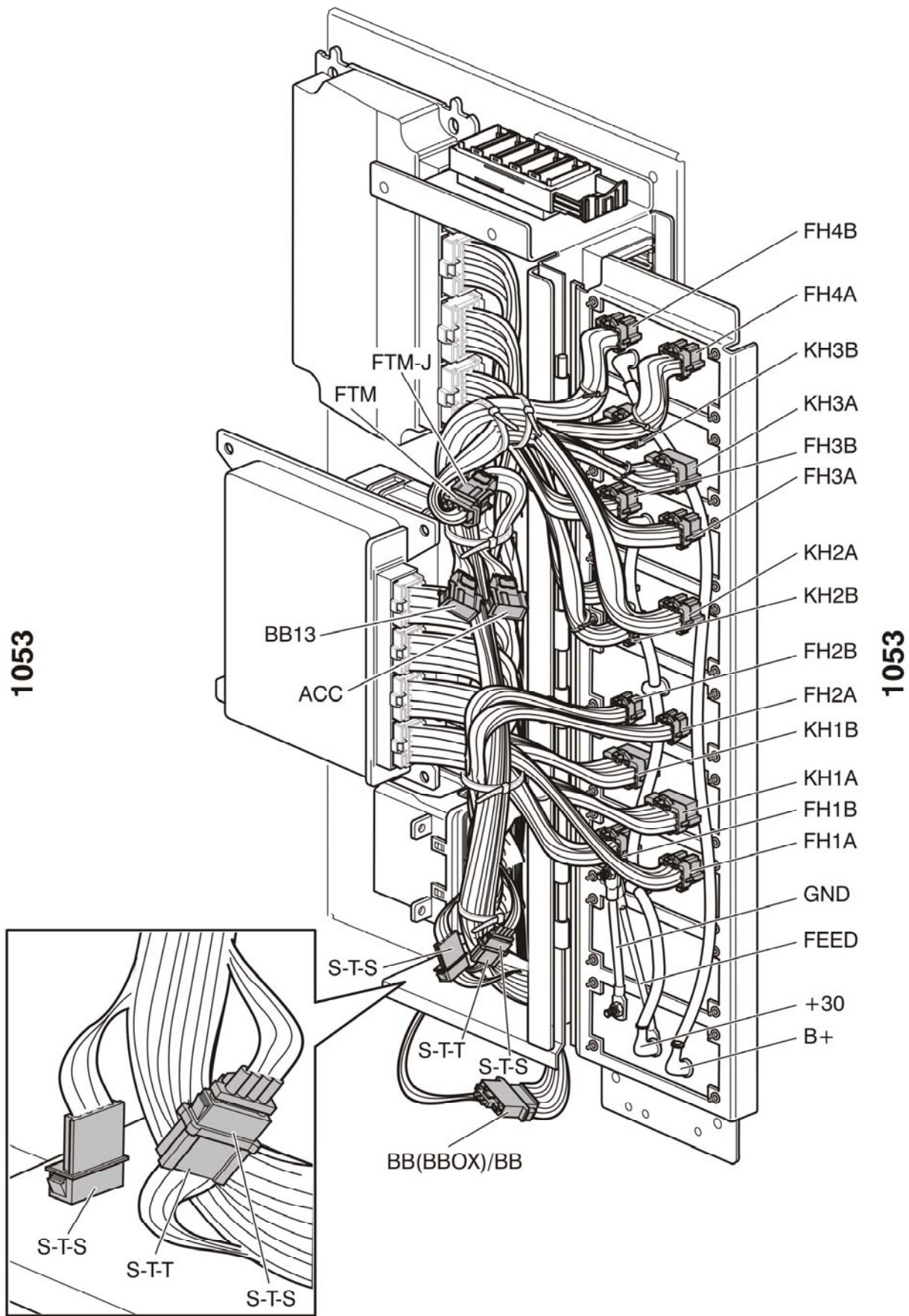






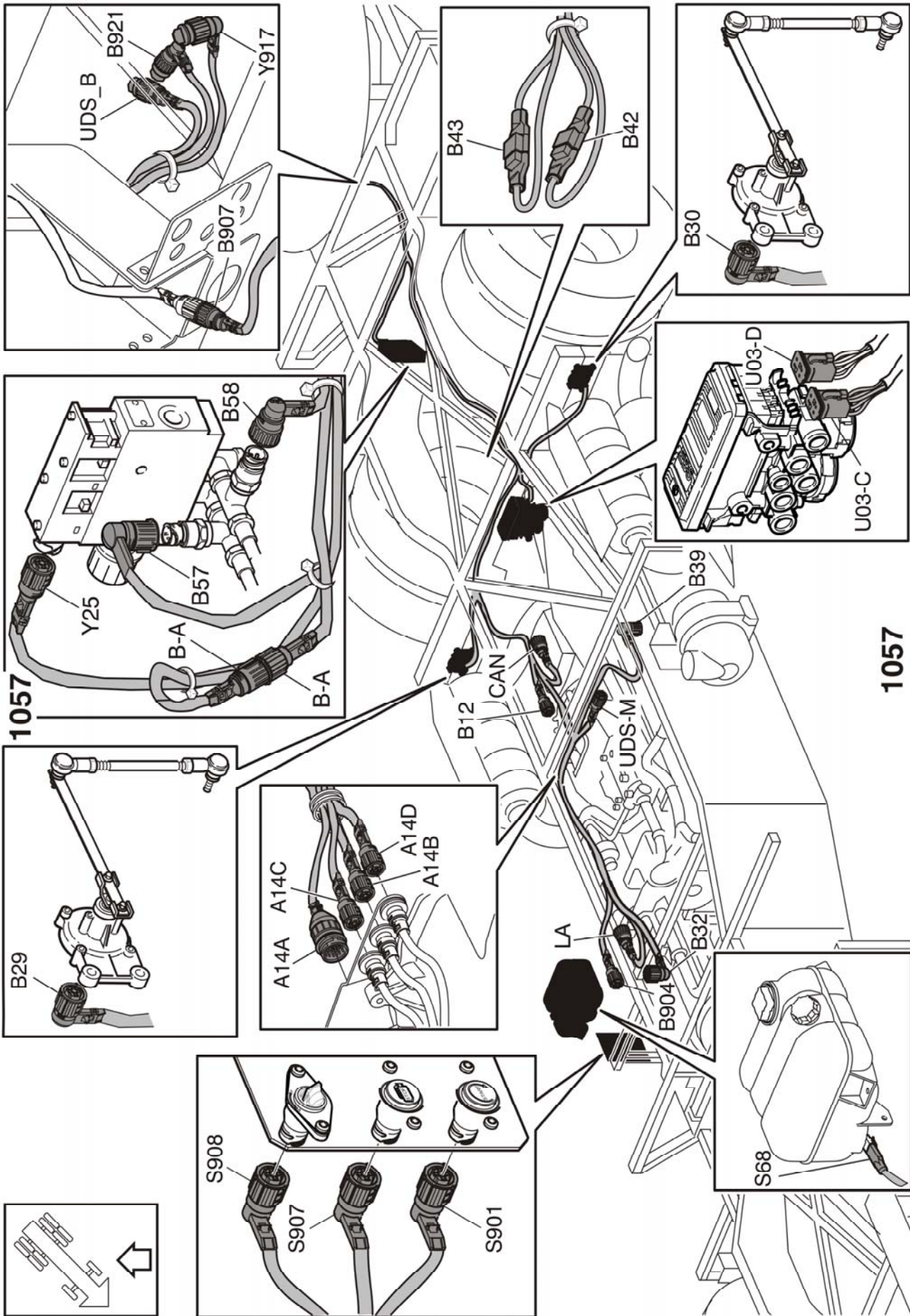


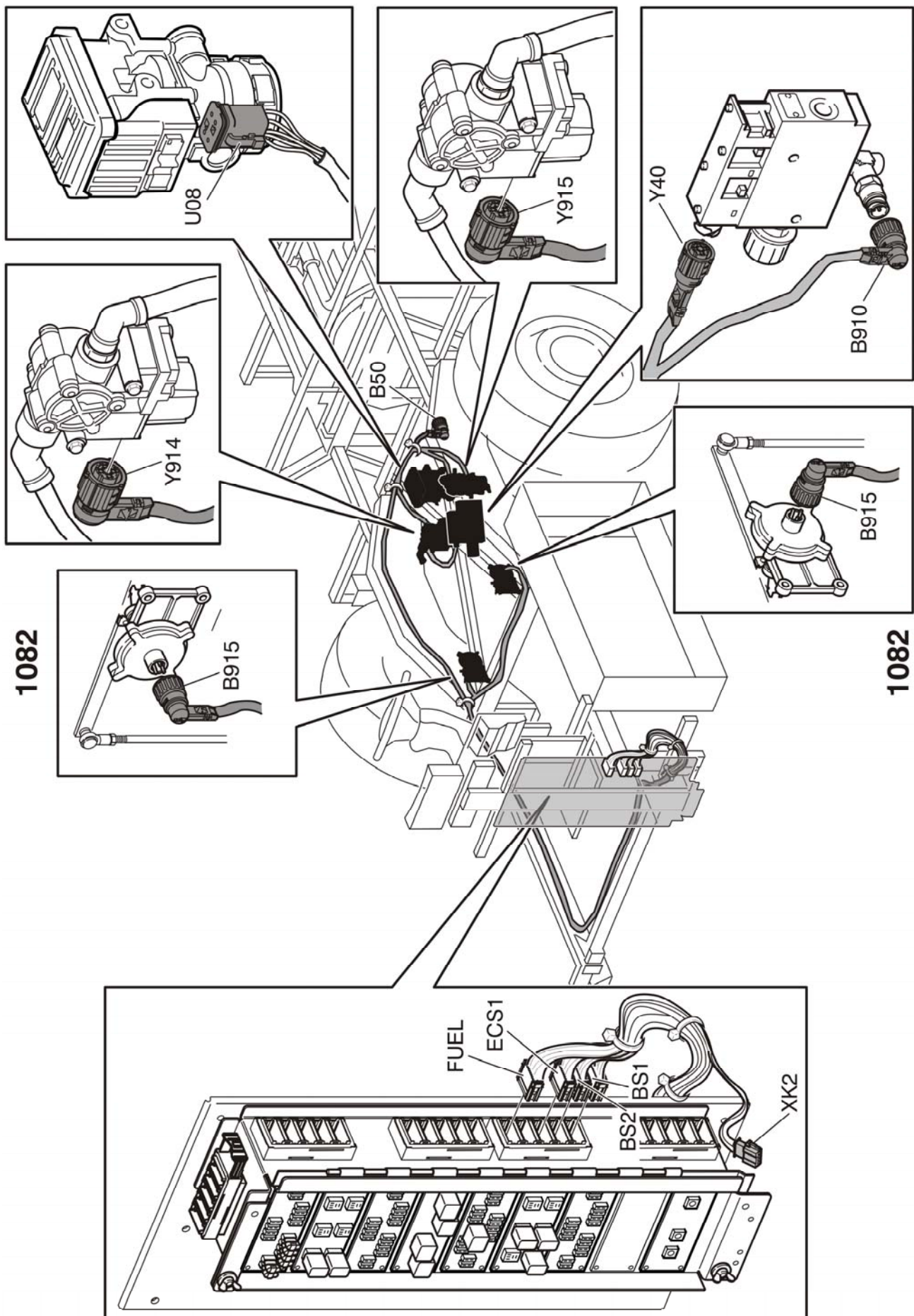


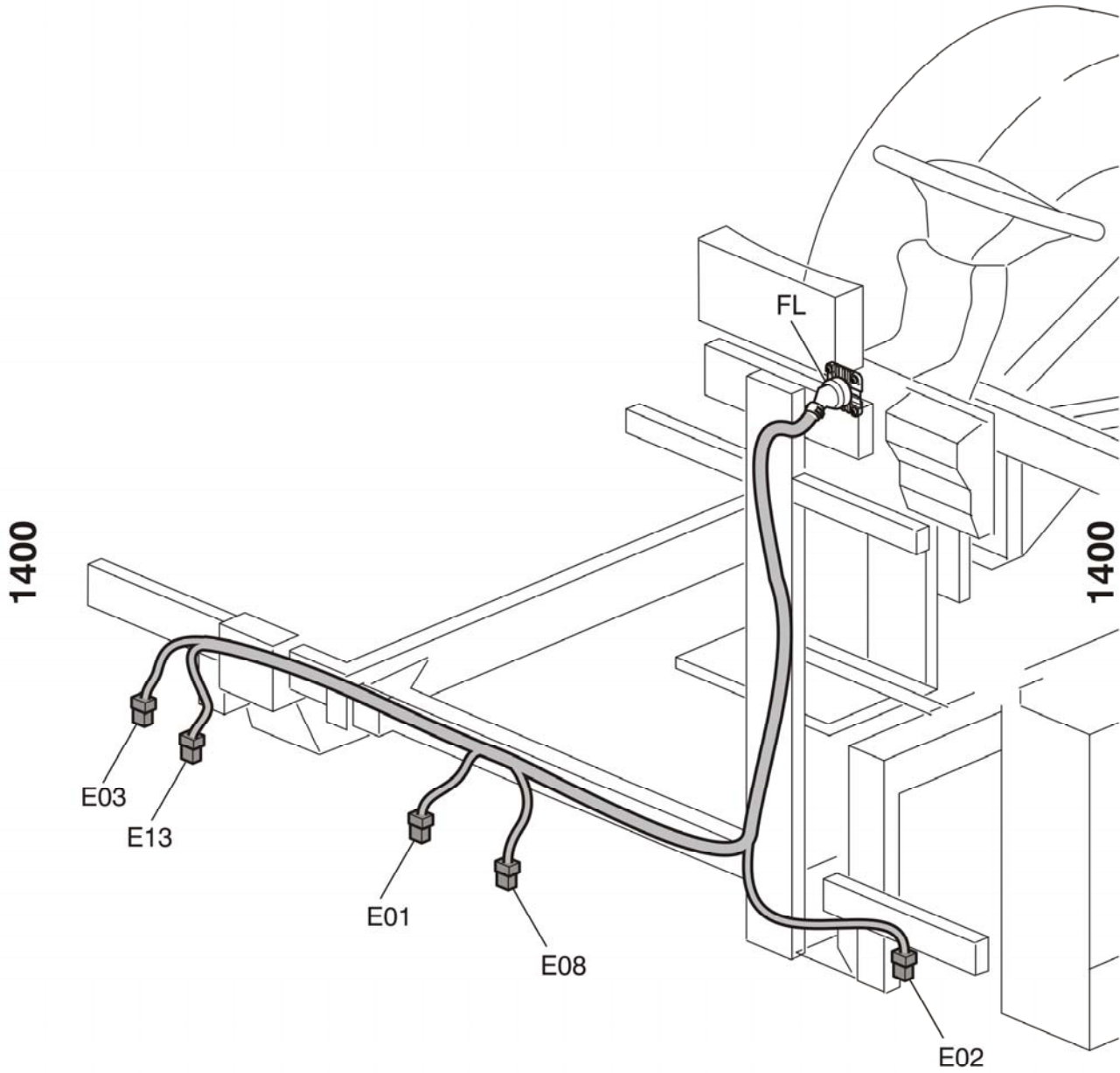


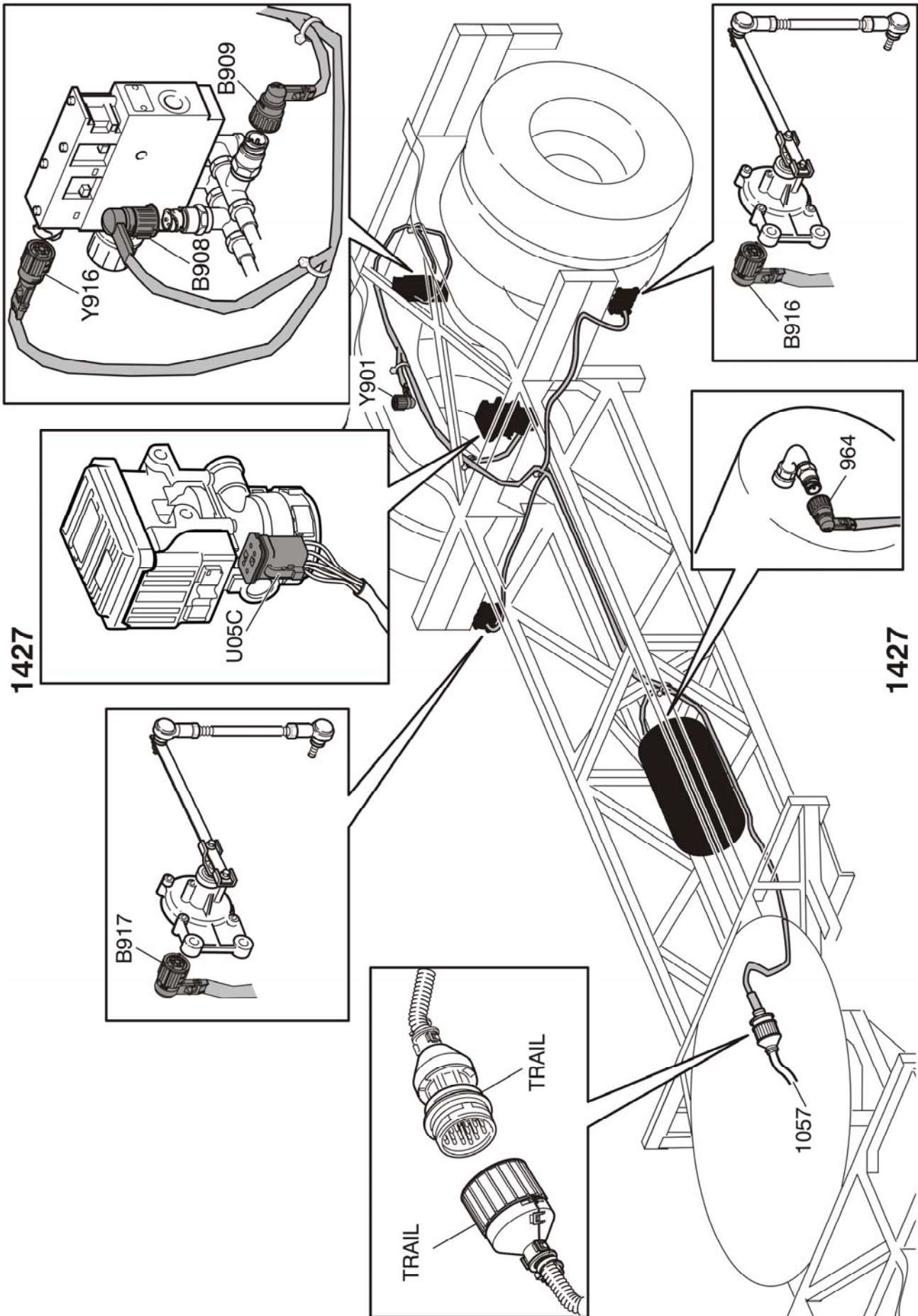
C3002161

Note: For vehicles equipped with tachographs, connect the S-T-T connector to the S-T-S connector.

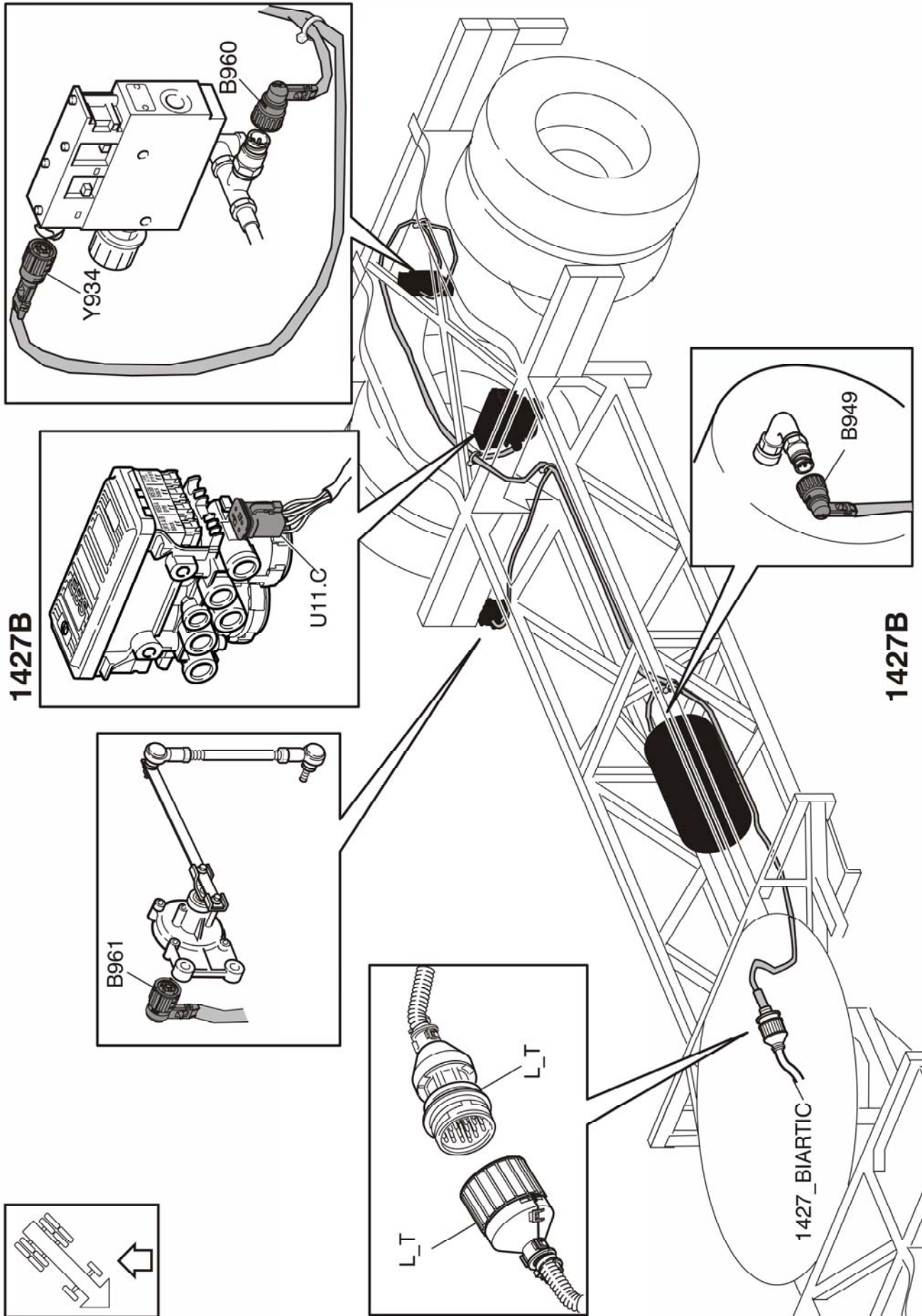




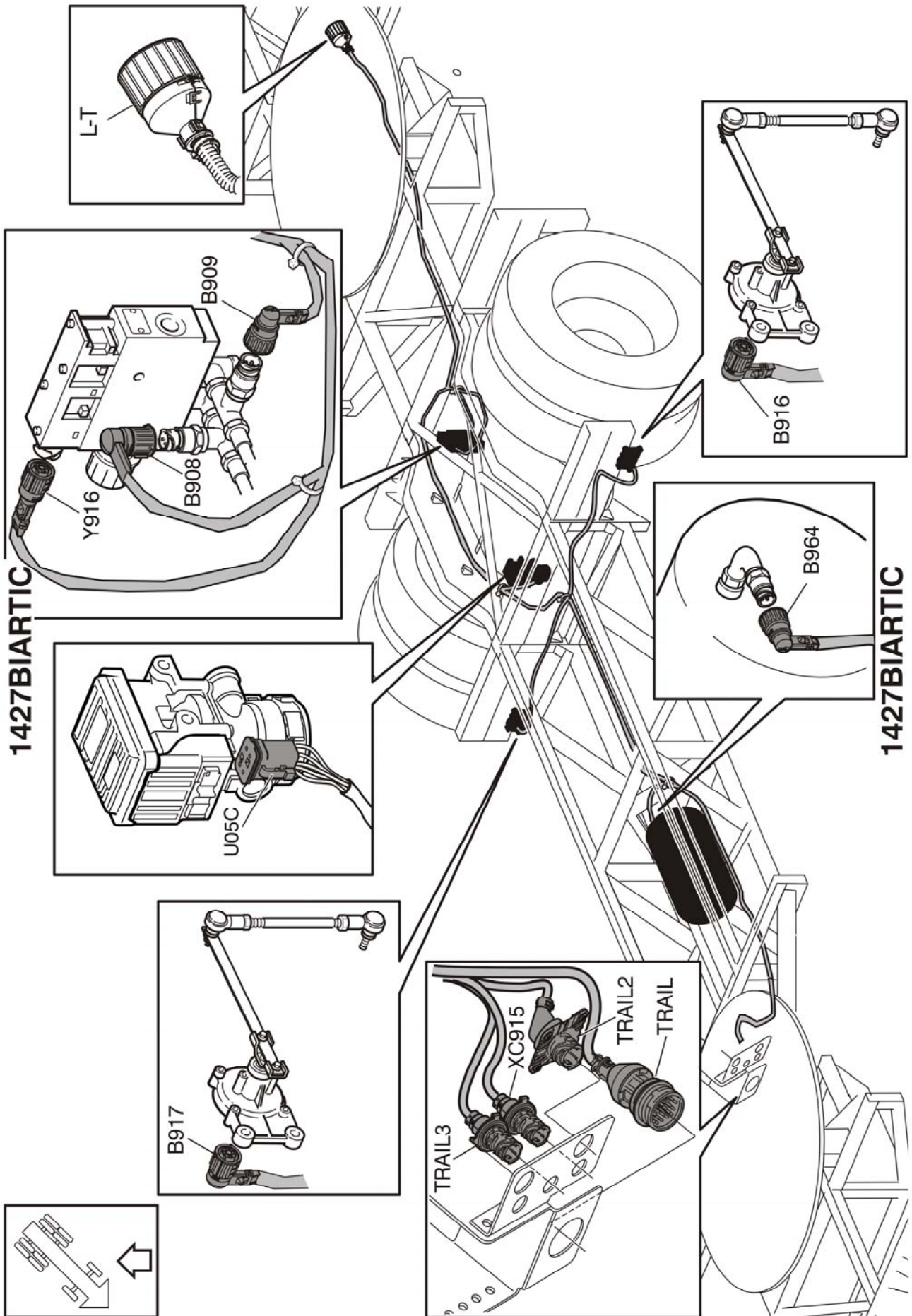




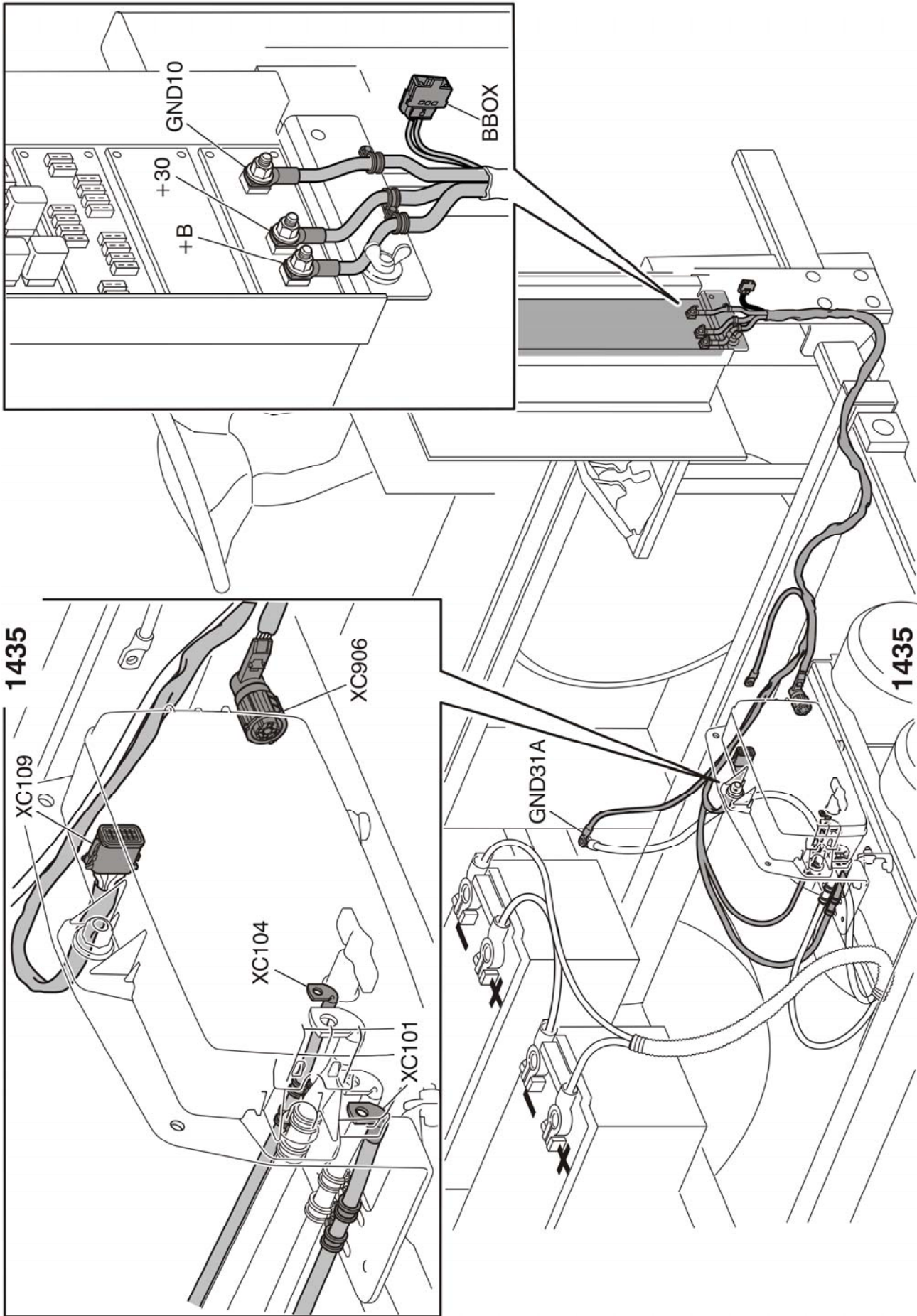
C3002100



C3002169

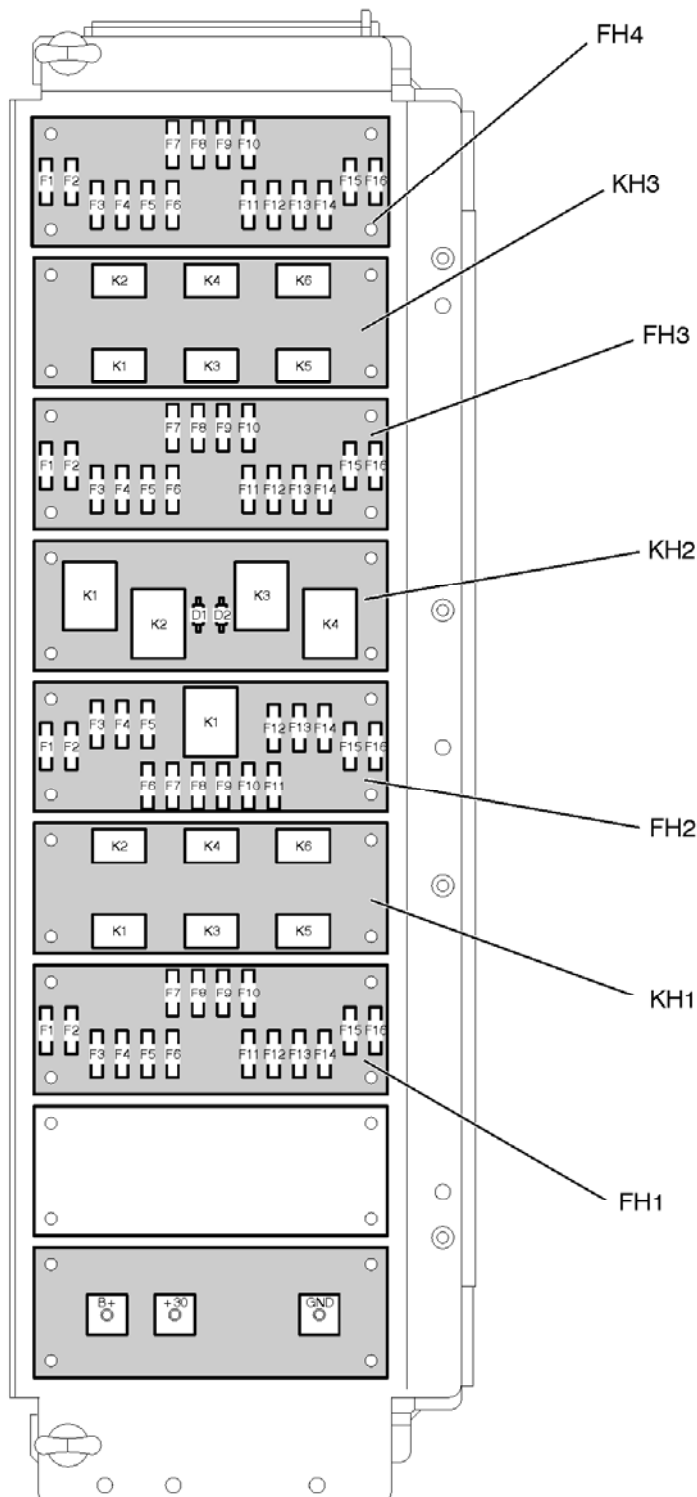


C3002171



Fuses

Note: In the electrical centre fuses and relays are separated by boards, as depicted in the illustration below.



C3001846

Note: Fuse identification codes in the vehicle are different from those in the wiring diagram. The table below shows fuse identification codes in the vehicle and their respective identification codes in the wiring diagram.

Identification code in the vehicle	Identification code in the wiring diagram	Description	Location in the diagram
F1 (FH1)	F1	ECS Air suspension, 5A	(FA 0 D)
F2 (FH1)	F2	Dashboard, 10A	(NA 1 D)
F3 (FH1)	F3	Starter motor, 15A	(AA 1 D)
F4 (FH1)	F4	EBS Brakes, 20A	(EO 5 D)
F5 (FH1)	F5	Horn, 30A	(IS 2 D)
F6 (FH1)	F6	Parking brake. 5A	(AA 5 D)
F7 (FH1)	F7	ZF Gearbox, 15A	(DN 4 D)
F8 (FH1)	F8	I-shift gearbox, 5A	(DN 4 D)
F9 (FH1)	F9	Rear starter switch	(AG 4 D)
F10 (FH1)	F10	Fire alarm, 5A	(BB 5 D)
F11 (FH1)	F11	Dynafleet, 10A	(NC 5 D)
F12 (FH1)	F12	Bodybuilder +30, 5A	(BB 4 D)
F13 (FH1)	F13	No function	
F14 (FH1)	F14	BBM bodybuilder module, 5A	(BB 5 D)
F15 (FH1)	F15	VECU, 15A	(BA 4 D)
F16 (FH1)	F16	VECU, 5A	(BA 4 D)
F1 (FH2)	F17	Power switch, 5A	(AC 5 D)
F2 (FH2)	F18	Alternator, 5A	(AC 1 D)
F3 (FH2)	F19	Starter preheater, 5A	(AC 3 D)
F4 (FH2)	F20	EBS Brakes, 10A	(EO 5 D)
F5 (FH2)	F21	Wiper, washer, 15A	(GM 2 D)
F6 (FH2)	F22	Ecolife Gearbox, 10A	(DC 3 D)
F7 (FH2)	F23	ACC	(AC 3 D)
F8 (FH2)	F24	Dashboard, 2.5A	(NA 1 D)
F9 (FH2)	F25	Wiper, washer, 15A	(GM 4 D)
F10 (FH2)	F26	ECS Air suspension, 5A	(FA 0 D)
F11 (FH2)	F27	G8-EGS Gearbox, 10A	(DA 4 D)
F12 (FH2)	F28	Retarder, 10A	(DM 4 D)
F13 (FH2)	F29	Bodybuilder +30, 5A	(BB 4 D)
F14 (FH2)	F30	Fuel heater, 10A	(AC 2 D)
F15 (FH2)	F31	Hydraulic oil level sensor, 5A	(NA 5 D)
F16 (FH2)	F32	Tachograph, 5A	(NB 4 D)
F1 (FH4)	F33	Dashboard, 2.5A	(NA 1 D)
F2 (FH4)	F34	Tachograph, 10A	(NB 4 D)
F3 (FH4)	F35	LCM lighting control unit power supply, 25A	(GA 1 A)

F4 (FH4)	F36	LCM lighting control unit, 25A	(GA 2 A)
F5 (FH4)	F37	LCM lighting control unit, 25A	(GA 2 A)
F6 (FH4)	F38	No function	
F7 (FH4)	F39	NOx control system, 25A	(CU 5 D)
F8 (FH4)	F40	No function	
F9 (FH4)	F41	Radio, 20A	(IU 4 D)
F10 (FH4)	F42	EME Main switch, 5A	(AA 5 D)
F11 (FH4)	F43	No function	
F12 (FH4)	F44	LCM lighting control unit, 25A	(GA 5 A)
F13 (FH4)	F45	LCM lighting control unit, 25A	(GA 4 A)
F14 (FH4)	F46	LCM lighting control unit, 25A	(GA 4 A)
F15 (FH4)	F47	Left direction indicator, 5A	(GC 5 D)
F16 (FH4)	F48	Right direction indicator, 5A	(GC 5 D)
F1 (FH3)	F49	Fuel cut-off valve, 5A	(NA 5 D)
F2 (FH3)	F50	Retarder, 10A	(DM 4 D)
F3 (FH3)	F51	Audio, 20A	(IU 4 D)
F4 (FH3)	F52	Luggage compartment light, 10A	(BB 3 D)
F5 (FH3)	F53	Bogie valve, 5A	(BB 0 D)
F6 (FH3)	F54	Engine compartment light, 5A	(BB 2 D)
F7 (FH3)	F55	Engine brake valve, 10A	(BA 2 D)
F8 (FH3)	F56	Engine brake valve, 5A	(BA 2 D)
F9 (FH3)	F57	Key switch, 5A	(AA 4 D)
F10 (FH3)	F58	Fuel tank	(CG 3 D)
F11 (FH3)	F59	No function	
F12 (FH3)	F60	Ecolife Gearbox, 10A	(DD 1 D)
F13 (FH3)	F61	Luggage compartment light	(GA 3 A)
F14 (FH3)	F62	Sleeping compartment light, 5A	(GA 2 D)
F15 (FH3)	F63	Inverted starter motor, 5A	(AC 4 D)
F16 (FH3)	F64	Spare	
-	F80	General power supply (+)	(AB 0 D)
-	F81	Power supply (+30)	(AB 0 D)
Sens	F93	Alternator	(AB 1 B)

Relays

Note: Relay identification codes in the vehicle are different from those in the wiring diagram. The table below shows relay identification codes in the vehicle and their respective identification codes in the wiring diagram.

Identification code in the vehicle	Identification code in the wiring diagram	Description	Location in the diagram
K1 (KH1)	K1	No function	
K2 (KH1)	K2	Load indicator	(AC 4 C)
K3 (KH1)	K3	ECS Air suspension relay	(FA 0 B)
K4 (KH1)	K4	I-shift/Voith gearbox relay	(DN 4 D)
K5 (KH1)	K5	EGS Relay	(DA 4 C)
K6 (KH1)	K6	EGS Relay	(DA 5 C)
K1 (KH2)	K7	Starter motor relay	(AC 5 C)
K2 (KH2)	K8	VECU/EECU Relay	(BA 5 C)
K3 (KH2)	K9	Wiper and washer relay	(GM 2 C)
K4 (KH2)	K10	No function	
K1 (KH3)	K11	Starter motor protection relay	(AA 2 C)
K2 (KH3)	K12	Luggage compartment light relay	(BB 3 C)
K3 (KH3)	K13	Ignition key relay	(AA 4 D)
K4 (KH3)	K14	Bogie relay	(BB 0 C)
K5 (KH3)	K15	RECU relay	(DM 4 C)
K6 (KH3)	K16	RECU relay	(DM 4 C)
K1 (FH2)	K17	Ignition relay +15	(AA 2 D)
-	K25	Exhaust relay	(CN 1 C)
-	K35	Headlamp washer relay	(GM 4 C)
-	K48	Engine preheater relay	(CN 1 C)
342	K51	Power relay, battery main switch	(AB 0 B)

List of components

A03	BIC Instruments (NA 4 C) (XC 5 C)	A901	Control unit, 6HP600N gearbox (DB 5 C) (XC 0 A) (XD 2 A)
A07	Radio (IU 4 B)	A904	Control unit, Volvo EGS gearbox (DA 5 C)
A08	GPS control unit (NC 3 A)	A914	Control unit, TECU (Automatic Transmission) (XC 5 A) (DN 3 C) (XD 5 A)
A14	EMS engine control unit (CM 5 C) (XC 4 A) (XD 4 A)	A916	Control unit, AMECU (FC 4 B)
A14_7	EMS, control unit (XC 5 A) (CN 5 C) (XD 3 A)	A916_A	Control unit, AMECU (LB 4 C)
A14_9	EMS, control unit (XC 3 A) (XD 5 A)	A916_B	Control unit, AMECU (LA 4 C)
A14_9MG	EMS, control unit (XC 3 A) (CB 5 C) (XD 5 A)	A917	Control unit, DNOX2 ECU (CU 5 C) (CV 4 B)
A14_MD9	EMS, control unit (CA 5 C)	A918	Control unit, Nox sensor (CV 3 A)
A14_12	EMS, control unit (XC 4 A) (CM 5 C) (XD 3 A)	A925	Control unit, Fuel tank monitoring (CG 4 C)
A16	ECS air suspension control unit (FA 5 B) (XC 1 C) (XD 1 C) (FB 5 B)	A926	Control unit, Gearshift (XC 5 C) (DN 5 C) (XD 3 D)
A17	VECU vehicle control unit (BA 5 B) (XC 2 C) (XD 2 C)	A927	Control unit, GECU ecomat5 (DD 4 D)
A19	GECU gearbox control unit (DN 5 B)	A928	Control unit, Gearbox ecomat5 (DD 2 B)
A21	EBS brake control unit (XC 2 C) (EO 5 A) (XD 2 C) (EP 5 D)	A929	TECU, Ecolife (XC 5 A) (DD 2 B) (XD 4 A)
A22	Dynafleet (XC 4 C) (NC 4 B)	A930	Control unit, DIVA5 (DC 4 D)
A23	FMS (NC 3 C)	A930_artic	Control unit, DIWA5 (DO 4 D)
A27	LCM lighting control unit (XC 0 C) (GA 5 C) (GB 4 C) (GC 4 C) (XD 1 C)	A942	BIO, Bus I/O (CL 4 C)
A30	SWM steering control unit (IS 4 C)	A943	Control unit, Oilmaster (CO 4 B)
A33	Tachograph (NB 4 C) (XC 3 C) (NC 5 B)	A945	Control unit, VDO FM200 (ND 4 D)
A41	Transmission component group Contains B23, B06 and Y17 (DN 3 B)	A946	Control unit, Fleet management system (NE 3 C)
A42	Transmission component group Contains B26, Y21, Y22, Y23 and Y26 (DN 1B)	A961	Alcohol interlock, ECU (NC 1 C)
A43	I/O Module (CA 4 C)	B03	Brake pedal valve sensor (EO 4 D)
A44	Control unit, module 44 (CM 3 D)	B04	Engine speed sensor, crankshaft (CM 4 A)
A44_	Control unit, module 44 (CC 3 B)	B04_	Engine speed sensor, crankshaft (CC 3 B)
A44_D9	Control unit, fuel pump (CA 3 C)	B05	Engine speed sensor, camshaft (CM 3 A)
A45	Control unit, module 45 (CA 3 C)	B05_	Engine speed sensor, camshaft (CC 2 B)
A45_	Control unit, module 45 (CC 1 C)	B06	Air tank pressure (BA 0 D)
A45_MD12	Fuel water separator (CM 3 D)	B07	Fuel level sensor (NA 4 A)
A59_A	Control unit, RAS ECU (FO 3 C)	B07_LE	Fuel level sensor, front axle (NA 0 C)
A65	RECU (DM 5 B) (XC 1 B) (XD 1 A)	B07_RX	Fuel level sensor (NA 4 A)
A80	Control unit, heated air dryer (BA 2 A)	B07_S9	Fuel level sensor (NA 5 A)
A90	BBM bodybuilder module (BB 5 A) (XC 3 C) (AA 4 A) (XD 2 C) (BC 5 D)	B07_S9BI	Fuel sensor (NA 5 A)
A105	SIB (NC 5 B)	B10C	Sensor, oil level (FO 4 C)
A124	Start motor (AD 4 C) (AE 4 B) (AF 4 B) (AH 4 B)	B12	Tachograph sensor, speedometer (NB 4 A)
A125	Control unit, DYNAFLEET (NC 4 B) (XD 4 C)	B13	Wheel speed sensor, first left-hand front axle (EO 2 D)
A146	Control unit, RV165 tracking system (CP 2 C)	B14	Wheel speed sensor, first right-hand front axle (EO 2 D)
A900	Control unit, VOITH gearbox (DC 5 B)	B15	Wheel speed sensor, first left-hand driven axle (EO 1 D)
A900_ART	Control unit, VOITH ECU artic (DO 5 B)	B16	Wheel speed sensor, first right-hand driven axle (EO 1 D)
		B21	Sensor, cooler temperature (CM 4 D)
		B21_	Sensor, cooler temperature (CC 4 B)
		B21_D9	Sensor, cooler temperature (CA 1 B)

Group 37 B12M Wiring diagram

B22	Sensor, external temperature (NA 3 A)	B119	Sensor, engine oil temperature and pressure (CM 4 A)
B23	Sensor, retarder oil temperature (DM 3 C)	B119_	Sensor, engine oil temperature and pressure (CC 5 B)
B25	Sensor, accelerator pedal (BA 3 C)	B900	Sensor, manual gearbox retarder pressure (DM 3 C)
B29	Sensor, chassis level, rear axle LHS (FB 3 A) (FB 3 C)	B903	Sensor, retarder water temperature, manual gearbox (DM 2C)
B30	Sensor, chassis level, rear axle RHS (FB 3 C) (FB 2 A)	B904	Sensor, hydraulic oil level (NA 4 C)
B32	Sensor, engine fan speed (CM 5 B)	B904_S9	Sensor, hydraulic oil level (NA 0 C)
B32.9	Sensor, engine fan speed (CA 1 A)	B905	Inductive sensor, clutch pedal position (DA 1 D)
B32_	Sensor, engine fan speed (CC 4 C)	B906	Sensor, break press 6*2 (BC 4 C)
B32_S9	Sensor, engine fan speed (CA 1 B)	B907	Sensor, rear axle fuel level (NA 0 C)
B37	Sensor, boots pressure and temperature (CM 4 A)	B908	Sensor, air pressure ECS AL (FB 4 C)
B37_	Sensor, boots pressure and temperature (CC 4 B)	B908_A	Sensor, air pressure ECS AL (FB 5 A)
B37_MD9	Sensor, boots pressure and temperature (CA 0 B)	B909	Sensor, air pressure ECS AR (FB 3 C)
B39	Sensor, air filter temperature and pressure (CM 4 D)	B909_A	Sensor, air pressure ECS AR (FB 5 A)
B39_	Sensor, air filter temperature and pressure (CC 5 C)	B910	Sensor, air pressure ECS LHS (FB 5 C)
B40	Sensor, brake wear, first left-hand front axle (EO 3 D)	B911	Sensor, air pressure ECS RHS (FB 5 C)
B41	Sensor, brake wear, first right-hand front axle (EO 3 D)	B914	Sensor, chassis level, left-hand front axle (FB 2 A)
B42	Sensor, brake wear, first left-hand driven axle (EO 2 D)	B915	Sensor, chassis level, right-hand front axle (FB 1 B)
B43	Sensor, brake wear, first right-hand driven axle (EO 2 D)	B916	Sensor, chassis level, right-hand articulated axle (FB 1 A)
B48	Sensor, coolant pressure (CN 1 B)	B916_A	Sensor, chassis level, left-hand articulated axle (FB 3 A)
B49	Sensor, steering angle (EP 2 B)	B917	Sensor, chassis level, right-hand articulated axle (FB 1 A)
B49F	Sensor, steering angle front (FO 3 B)	B917_A	Sensor, chassis level , left-hand articulated axle (
B49R	Sensor, steering angle rear (FO 2 B)	B918	Sensor, Hydraulic oil level (NA 4 D)
B50	Yaw-rate sensor (EP 2 B)	B920	Sensor, fuel level 2 (NA 4 A)
B52	Fuel filter sensor (CN 3 C)	B920_LE	Sensor, fuel level 2 front axle (NA 0 C)
B54	Crankcase pressure sensor (CM 4 D)	B921	Sensor, fuel level 2, rear axle (NA 0 D)
B54_	Crankcase pressure sensor (CC 5 B)	B922	Sensor, temperature downstream SCRT (CL 4 B)
B54_D9	Crankcase pressure sensor (CA 1 B)	B923	Sensor, temperature level adblue SCRT (CU 2 B)
B57	Sensor, suspension air pressure, left-hand rear bellows (FB 5 C)	B927	Hydraulic oil pressure sensor (BB 1 D)
B58	Sensor, suspension air pressure, right-hand rear bellows (FB 4 C)	B930	Sensor, temperature upstream SCRT DNOX2 (CU 1 D) (CU 2 D) (CU 1 D)
B66	Sensor pressure downstream SCRT (CL 3 A)	B936	Sensor, pad wear, right-hand brake, articulated A/B (EP 3 B)
B68	Sensor, gearbox output shaft (DA 1 A)	B937	Sensor, pad wear, left-hand brake, articulated A/B (EP 3 B)
B69C	Sensor, retarder cooler temperature (DN 3 B)	B938	Sensor, left wheel speed, articulated A/B (EP 2 B)
B118	Sensor, oil pressure (CB 2 B)	B939	Sensor, right wheel speed, articulated A/B (EP 2 B)
B118.	Sensor, oil pressure (FC 3 A) (LA 2 A)	B940	Sensor, pad wear, right-hand brake A/B (EP 5 B) (EP 4 B)
B118_	Sensor, oil pressure (CC 4 A)		
B118_MD12	Sensor, oil pressure (CM 3 D)		
B118A	Sensor, oil pressure (LB 2 A)		

B941	Sensor, pad wear, left-hand brake A/B (EP 5 B) (EP 4 B)	B984_D7	Sensor, temperature downstream catalyst (CN 1 C)
B942	Sensor, left wheel speed A/B (EP 4 B) (EP 3 B)	B9TL_Asia	Alternator2 (AE 2 C)
B943	Sensor, left wheel speed A/B (EP 5 B) (EP 3 B)	BB	Bodybuilder interface (NB 3 D) (BB 2 C) (BB 2 C) (BB 2 D) (BB 2 D) (BB 2 C) (BB 2 C) (BB 2 B) (BB 3 B) (BB 3 D) (BB 3 D) (BB 2 C) (BB 3 B) (BB 1 B) (BB 1 B) (BB 2 B) (BB 2 B) (BB 2 B) (BB 2 B) (BB 2 B) (BB 1 B) (BB 1 B) (BA 2 B) (BA 5 B) (BA 4 B) (BA 4 B) (BA 5 B)
B944	Sensor, air pressure, trailer brake (BC 5 A)		
B945	Crash sensor (CG 4 D)		
B946	Sensor, coolant level (NA 2 C)		
B946_S9	Sensor, coolant level (NA 0 C)	CNB	VDV-dash (NG 0 D)
S948	Sensor, air filter pressure and temperature (CA 3 B)	CNDIAG	VDV-dash (NG 2 E)
B949	Sensor, air tank pressure, last trailer (bi-articulated) (CL 3 A)	CREVWS	VDV-dash (NG 2 A)
B950	Sensor, pad wear, right-hand brake, bi-articulated A/B (EO 1 D)	CSW	VDV-dash (NG 1 A)
B951	Sensor, pad wear, left-hand brake, bi-articulated A/B (EO 1 D)	CSW1	VDV-dash (NG 0 B)
B952	Sensor, right wheel speed, bi-articulated A/B (EO 0 D)	CSW2	VDV-dash (NG 0 B)
B953	Sensor, left wheel speed, bi-articulated A/B (EO 0 D)	CSW3	VDV-dash (NG 1 B)
B954	Sensor, turntable angle (FC 3 A) (LA 3 B)	D1	Diode (BA 3 B)
B954A	Sensor, turntable angle (LB 3 B)	D2	Diode (AA 2 B)
B955	Oil level sensor (CO 4 A)	D3	Diode (GM 1 B)
B956	Pressure sensor AMEC (FC 2 C)	D4	Diode (GM 1 B)
B960	ECS air pressure sensor, last trailer (bi-articulated) (FB 3 C)	DIA	Diagnostic connector (DC 2 D)
B961	Sensor, chassis level, last trailer (bi-articulated) (FB 0 A)	DIA_Artic	Diagnostic connector artic (DO 3 D)
B964	Sensor, air pressure, trailer brake (BC 4 A)	DIA2	Diagnostic connector for ecomat5 (DD 4 A)
B970	Sensor, fire (BD 2 C)	E06AL	Articulated reverse light (left) (GD 4 B)
B970_	Fire sensor, 110°C (BD 2 C)	E06AR	Articulated reverse light (right) (GD 4 B)
B971	Sensor, fire (BD 2 C)	E06AT	Reverse light, trailer (articulated) (GD 4 B)
B971_	Fire sensor, 110°C (BD 2 C)	E06BL	Reverse light, biartic (left) (GF 4 C)
B972	Sensor, fire (BD 0 2) (BD 2 B) (BD 1 C) (BD 3 C) (BD 4 C) (BD 2 B) (BD 5 C)	E06BR	Reverse light, biartic (right) (GF 4 C)
B972_	Fire sensor, 110°C (BD 2 C)	E06BT	Reverse light, biartic (triler) (GF 4 C)
B973	Sensor, fire (BD 5 B)	E06L	Reverse light, left (GA 1 A)
B973_	Fire sensor, 150°C (BD 2 B)	E06LA	Reverse light (GA 1 A)
B974	Sensor, fire (BD 1 B) (BD 3 B) (BD 5 B)	E06R	Reverse light, right (GA 1 A)
B975	Sensor, fire (BD 3 B)	E07AL	Fog lamp, articulated (left) (GD 0 B)
B977	Sensor, brake (CP 0 C)	E07AR	Fog lamp, articulated (right) (GD 1 B)
B978	Sensor, brake (CP 1 C))	E07AT	Fog lamp, trailer (articulated) (GD 0 B)
B979	Sensor, parking brake pressure (BB 3 B)	E07BL	Fog light, biartic (left) (GF 0 C)
B980	Sensor, auxiliary pressure (BB 3 B)	E07BR	Fog light, biartic (right) (GF 0 C)
B981	Sensor, throttle heater MG9 (CB 1 D)	E07BT	Fog light, biartic (trailer) (GF 0 C)
B982	Sensor, DP-cat differential pressure (CA 2 C)	E07L	Fog lamp (left) (GB 3 B)
B982_D7	Sensor, DPF diferential (CN 2 C)(E07LR	Fog lamp, trailer (left) (articulated) (GA 2 A)
B983	Sensor, DP-cat temperature (CA 2 C)	E07R	Fog lamp (right) (GB 3 B)
B983_D7	Sensor, temperature upstream catalyst (CN 1 C)	E07RR	Fog lamp (right) rear (GA 2 A) (GE 1 B)
		E07LR	Fog lamp, trailer (right) (articulated) (GA 2 A)
		E07X	Fog light, extra (GA 2 A)
		E09AL1	Brake lamp (left), articulated (GD 1 B)
		E09AL2	Brake lamp (left), articulated (GD 1 B)
		E09AR1	Brake lamp (right), articulated (GD 5 B)
		E09AR2	Brake lamp (right), articulated (GD 4 B)
		E09AT	Brake lamp (centre), articulated and biarticulated (GD 5 B)

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E09BL1	Brake lamp (left), biarticulated (GF 1 C)	E11RR	Rear side marker lamp (right) (GC 4 B)
E09BL2	Brake lamp (left), biarticulated (GF 1 C)	E11TL	Position lamp, trailer (left) (GC 5 B)
E09BR1	Brake lamp (right), biarticulated (GF 5 C)	E11TR	Position lamp, trailer (right) (GC 4 B)
E09BR2	Brake lamp (right), biarticulated (GF 5 C)	E13AL	Direction indicator (left), articulated (GD 4 B)
E09BT	Brake lamp (centre), trailer and biarticulated (GF 5 C)	E13ALT	Direction indicator (left), articulated trailer (GD 3 B)
E09LA	Brake light (left) (GA 3 A)	E13AR	Direction indicator (right), articulated (GD 3 B)
E09LB	Brake light (left) (GA 3 A)	E13ART	Direction indicator (right), articulated trailer (GD 3 B)
E09RC	Brake light (right) (GC 3 B)	E13BL	Direction indicator (left), biarticulated (GF 4 C)
E09RD	Brake light (right), rear (GC 3 B)	E13BLT	Direction indicator (left), biarticulated trailer (GF 3 C)
E09RE	Brake light (left), centre (E13BR	Direction indicator (right), biarticulated (GF 4 C)
E10AL	Tail lamp (left), articulated (GD 3 B)	E13BRT	Direction indicator (right), biarticulated trailer (GF 3 C)
E10AR	Tail lamp (right), articulated (GD 3 B)	E13L	Lamp direction indicator (left) (GA 4 A)
E10BL	Tail lamp (left), biarticulated (GF 3 C)	E13LA	Direction indicator (left) (GA 4 A)
E10BR	Tail lamp (right), biarticulated (GF 3 C)	E13LR	Rear direction indicator (left) (GA 3 B)
E10L	Tail lamp (left) (GA 5 A)	E13R	Lamp direction indicator (right) (GC 2 B)
E10LD	Tail lamp (left) (GA 5 A)	E13RB	Direction indicator (right) (GC 2 B)
E10R	Tail lamp (right) (GC 1 B)	E13RR	Rear direction indicator (right) (GC 2 B)
E11AL1	Side marker (left), articulated (GD 2 B)	E4	Fuel heater (CN 0 D)
E11AL2	Side marker (left), articulated (GD 2 B)	E913A	Diagnostic lamp, EGS gearbox (DA 1 D)
E11AL3	Side marker (left), articulated (GD 2 B)	E913B	Gearbox diagnostic lamp EGS (DA 1 A)
E11AL4	Side marker (left), articulated (GD 2 C)	FL2A	Front light, L (GE 5 B)
E11AL5	Side marker (left), articulated (GD 2 C)	FL3A	Front light, R (GE 3 B)
E11AL6	Side marker (left), articulated (GD 2 C)	FUSE	Engine preheating fuse (CM 0 D)
E11ALT	Position light, left (trailer), articulated (GD 2 B)	G01	Battery (AB 5 B)
E11AR1	Side marker (right), articulated (GD 2 B)	G01B	Battery (AB 5 B)
E11AR2	Side marker (right), articulated (GD 2 B)	G02	Alternator 1 (AD 3 C), (AE 3 B), (AF 3 B)
E11AR3	Side marker (right), articulated (GD 1 B)	G02.S9	Alternator 1 (AH 3 B)
E11AR4	Side marker (right), articulated (GD 1 C)	G02_	Alternator 1 (AF 3 B)
E11AR5	Side marker (right), articulated (GD 1 C)	G03	Alternator 2 (AD 2 C), (AE 2 B), (AF 2 B)
E11AR6	Side marker (right), articulated (GD 1 C)	G03.B_R9L	Alternator 2 (AE 2 C)
E11ART	Side marker (right), articulated trailer (GD 1 B)	G03.B_R9TL	Alternator 2 (AE 2 C)
E11BL1	Side marker (left), biarticulated (GF 3 B)	G03.S9	Alternator 2 (AH 3 B)
E11BL2	Side marker (left), biarticulated (GF 2 B)	G03_	Alternator 2 (AF 2 B)
E11BL3	Side marker (left), biarticulated (GF 2 B)	G04	Alternator 3 (AE 1 B)
E11BLT	Position lamp, left (trailer) biarticulated (GF 2 B)	G04.S9	Alternator 3 (AH 2 B)
E11BR1	Side marker (right), biarticulated (GF 2 B)	G04_	Alternator 3 (AF 1 B)
E11BR2	Side marker (right), biarticulated (GF 2 B)	G04_25	Alternator 3 (AE 2 B)
E11BR3	Side marker (right), biarticulated (GF 1 B)	GS1	VDV_dash (NF 3 D)
E11BRT	Side marker (right), trailer biarticulated (GF 1 B)	GS2	VDV_dash (NF 3 E)
E11LA	Side marker lamp (left) (GC 5 B)	H01	Air operator (IS 2 C)
E11LF	Front side marker lamp (left) (GC 5 B)	H02	Horn diaphragm (IS 1 C)
E11LR	Rear side marker lamp (left) (GC 5 B)	H05	Horn (DA 1 D)
E11ML	Middle side marker lamp (left) (GC 4 B)	Interface_board	VDV_dash (NF 0 C)
E11MR	Middle side marker lamp (right) (GC 3 B)	M01	Windscreen wiper motor (GM 1 B)
E11RA	Side marker lamp (right) (GC 4 B)		
E11RF	Front side marker lamp (right) (GC 4 B)		

M02	Windscreen washer motor (GM 3 B)	S19	Extra switch (DA 2 C)
M03	Headlamp washer motor (GM 4 B)	S24	Retarder control lever (BA 2 D)
M04	Starter motor (AD 4 C), (AE 4 B), (AF 4 B), (AH 4 B)	S31	EBS Switch (EP 0 B)
Multic	VDV_dash (NF 0 A)	S32	EBS Switch (EP 1 C)
OBD	On board diagnostic (NA 0 B)	S34	Switch unit, steering wheel buttons (IS 5 C)
OBD2	On board diagnostic (NA 1 A)	S40	Main battery switch (AA 5 C)
OBD3	Diagnostic ECU (LB 1 C)	S41	Control switch, battery main switch (AB 0 C)
R01	Engine preheater (CM 1 C)	S45	Differential lock switch, NC or NO (EP 1 C)
R01_	Engine preheater (CC 1 C)	S48	Pressure switch, brake light (LB 2 D)
R02	Rear view mirror (GB 5 C)	S50	Engine brake pressure switch, NC (BA 3 A)
R08	Termination resistor CAN busbar (XC 4 D)	S58	Clutch switch (BA 2 C)
R1	Engine preheater (CN 3 C)	S68	Coolant level (CM 2 D), (CN 3 C), (CA 3 C) (CC 5 C) (CA 2 D)
R1_MD9	Engine preheater (CA 1 C)	S70	Hydraulic oil switch, flow sensor (BB 1 B)
R10	Pulldown for brake signal (FC 2 C)	S72	Switch, water separator draining (CC 1 B)
R10_	Pulldown for brake signal (LB 1 D)	S77	Switch, emergency call (NC 3 C)
R11	Pulldown for E-gas (FC 3 C)	S77A	Switch, emergency call (CP 3 B)
R11.	Pulldown for E-gas (LA 3 D)	S209	Switch, fuel pump (CA 3 C) (CM 3 C)
R11_	Pulldown for E-gas (LB 2 D)	S901	Rear engine stoppage switch (AG 0 B), (AG 5 B), AG 2 B), (AG 1 B)
R12	Pulldown for E-gas (FC 3 C)	S901_U	Switch, engine stoppage (AG 2 B)
R12.	Pulldown for E-gas (LA 2 D)	S902	Levelling switch (FA 1 B)
R12_	Pulldown for E-gas (LB 2 D)	S904	Emergency cut-off switch (AA 4 D)
R20	Heater waterseparator (BB 0 B)	S905	Retarder switch (BA 1 A)
R904	Resistor, Dbus termination (CL 3 D)	S907	Rear start switch (AG 4 B)
R904_2	Resistor Dbus (CG 2 D)	S908	Rear start enable switch (AG 3 B)
R905	Heated hose suction line (CU 4 B)	S908A	Switch, engine start enable roof (AG 0 B)
R906	Heater hose pressure line (CU 4 B)	S908B	Switch, engine start enable rear (AG 0 B)
R907	Resistor, CAN2 terminator (CV 0 C)	S909	Voith gearbox selector (DC 1 D)
R908	Heated hose backflow to tank DNOX2 (CU 2 B)	S910	Switch unit, Ecomat transmission, gear selector (DB 1 D)
R909	Heated filter DNOX2 (CU 5 B)	S911	EGG switch (AA 5 D)
R910	Heated hose backflow to pump DNOX2 (CU 3 B)	S913	Clutch switch, manual transmission (GA 1 D)
R911	Resistor, CRT diagnos (CL 4 B)	S915	Kneeling switch (FA 3 C)
RC3	C3 Signal (DA 3 D)	S916	Switch, EGS fault (DA 2 C)
RL1A	Rear light, R (GE 0 B)	S917	Switch, EGS gear selector EGS (DA 3 D)
RL2A	Rear light, L (GE 1 B)	S918	Switch, extra gear EGS (DA 1 C)
S01	Selector switch, general lighting (GB 5 D)	S926	Oil temperature sensor, Ecomat transmission 6HP600N (DB 3 B)
S02	Control switch LHS (BA 3 D) (GB 2 D)	S927	6HP600N gearshift alternative program switch (DB 2 D) (DD 3 D)
S06	Windscreen wiper control lever (NA 2 B) (GM 1 D)	S928	Neutral position switch (BB 4 C)
S07	Engine brake switch (CM 3 C)	S932	Voith gearshift alternative program switch (DC 2 C)
S08	Differential lock switch (EO 3 D)	S935	Turn angle warning sensor, articulated (BC 4 B)
S11	Bogie lift switch (FA 3 B)	S935A	Switch, jack knife warning (BC 5 C)
S12	Main switch (AA 4 C)	S935B	Turn angle warning sensor, last trailer, bi-articulated (BC 4 A)
S14A	Horn button switch (IS 2 B)	S936	Turn angle stop sensor, articulated (BC 3 B)
S14B	Horn button switch (IS 1 B)		
S15A	Ignition key switch (AA 3 D)		
S15B	Power supply key switch (AA 4 B)		
S16	Air horn button switch (IS 1 B)		

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S936B	Turn angle stop sensor, last trailer, bi-articulated (BC 3 A)	Y39	Solenoid valve, Volvo engine brake VEB (CM 1 D) (CC 1 C)
S939	Switch, service gas system (CG 4 C)	Y40	Solenoid valve unit, ECS, front axle (FA 4 B)
S940	Switch, oilmaster (CO 3 D)	Y46	Solenoid valve, piston cooling (CM 2 C)
S941	Reverse gear selector switch (DC 2 C)	Y47	Solenoid valve, engine cooling motor (CM 5 B)
S942	Switch, ON/OFF RAS (CL 5 D)	Y53	Control valve, RAS (FO 1 B)
S945	Switch, steering wheel adjustment (BA 3 B)	Y72	Horn valve (IS 2 C)
SWP_L	VDV_dash (NG 1 B)	Y900	Solenoid valve unit, ECS, bogie axle (FA 2 C)
SWP_R	VDV_dash (NF 3 B)	Y901	Fuel cut-off valve, front axle (NA 5 B) (NA 1 D) (NA 5 B) (NA 1 A)
U03	EBS modulator, rear axle (EO 2 C)	Y902	Solenoid valve EGG (AA 5 B)
U04	EBS modulator, 3 rd axle (EP 4 B)	Y904	X9/Y1 Ecomat (DB 4 B)
U05	EBS modulator, trailer (EP 3 B)	Y910	X6/A4 Ecomat (DB 2 B)
U06	Voltage converter (IU 4 C) (CB 4 C)	Y911	Solenoid valve, injector (CU3 D) (CU 2 D)
U07	EBS modulator, articulated (EP 5 B)	Y912	Solenoid valve, water heating (CU 5 B)
U08	EBS modulator, front (EO 3 C)	Y913	Solenoid valve EGS (DA 4 C)
U11	EBS modulator, bi-articulated (EO 1 C)	Y914	Pressure control valve (PUC/R) (EP 5 C)
U12	Voltage converter, bi-xenon (GE 4 C)	Y915	Pressure control valve (PUC/R) (EP 5 C)
V03	Diod, light (GE 4 C)	Y916	Solenoid valve unit, ECS, articulated axle (FA 2 C)
V04	Diod, light (GE 4 C)	Y917	Fuel cut-off valve, rear axle (NA 5 C)
X09	Horn contact (IS 1 B)	Y924	Oil separator solenoid (BB 1 D)
X902	Power connection box MD7 (AD 4 B)	Y925	Solenoid valve, gas tank1 (CG 3 B)
X903	Box with relay and main switch (AB 5 C)	Y926	Solenoid valve, gas tank2 (CG 3 B)
X904	Box with starter preheater relay (AB3 C)	Y927	Solenoid valve, gas tank3 (CG 3 B)
X905	Box without preheater relay (AB 4 B)	Y928	Solenoid valve, gas tank4 (CG 2 B)
X906	External charger output (AB 5 B)	Y929	Solenoid valve, gas tank5 (CG 2 B)
X907	Box 3 fuses (AE 3 D)	Y930	Solenoid valve, gas tank6 (CG 1 B)
X917	Power junction R9S (AH 3 C)	Y931	Solenoid valve, gas tank7 (CG 1 B)
X918	Power connection box T (AF 3 C)	Y932	Proportional valve, hubner (LB 2 A) (FC 2 A) (LA 2 B)
Y02	Solenoid valve, rear wheel differential lock (EP 1 C)	Y933	Solenoid valve, cylinder RAS (CL 4 D)
Y07	Solenoid valve EPG (CA 1 C)	Y934	Solenoid valve, ECS, bi-articulated (FA 3 C)
Y17	Retarder solenoid valve (manual gearbox) (DM 3 A) (CN 1 B)	Y935	Solenoid valve, gas tank8 (CG 1 B)
Y25	Solenoid valve unit, ECS, rear axle (FA 5 C)	Y936	Solenoid, steering wheel adjustment (BA 4 A)
Y33	Solenoid valve, unit injector (CM 3 B) (CC 2 B)		
Y35	Solenoid valve, engine cooling fan (CN 5 D) (CB 2 C) (CA 4 C)		
Y36	Solenoid valve, bogie (BB 0 D)		
Y37	Solenoid valve unit, EPG engine brake (CM 1 C) (CC 2 C)		

Colour codes of electrical cables

BL	Blue	R	Red
BN	Brown	SB	Black
GN	Green	VO	Violet
GR	Grey	W	White
OR	Orange	Y	Yellow
P	Pink		

Note: If an electrical cable has two colours, it will be marked as shown below: Y/R = Yellow/Red.

VOLVO

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