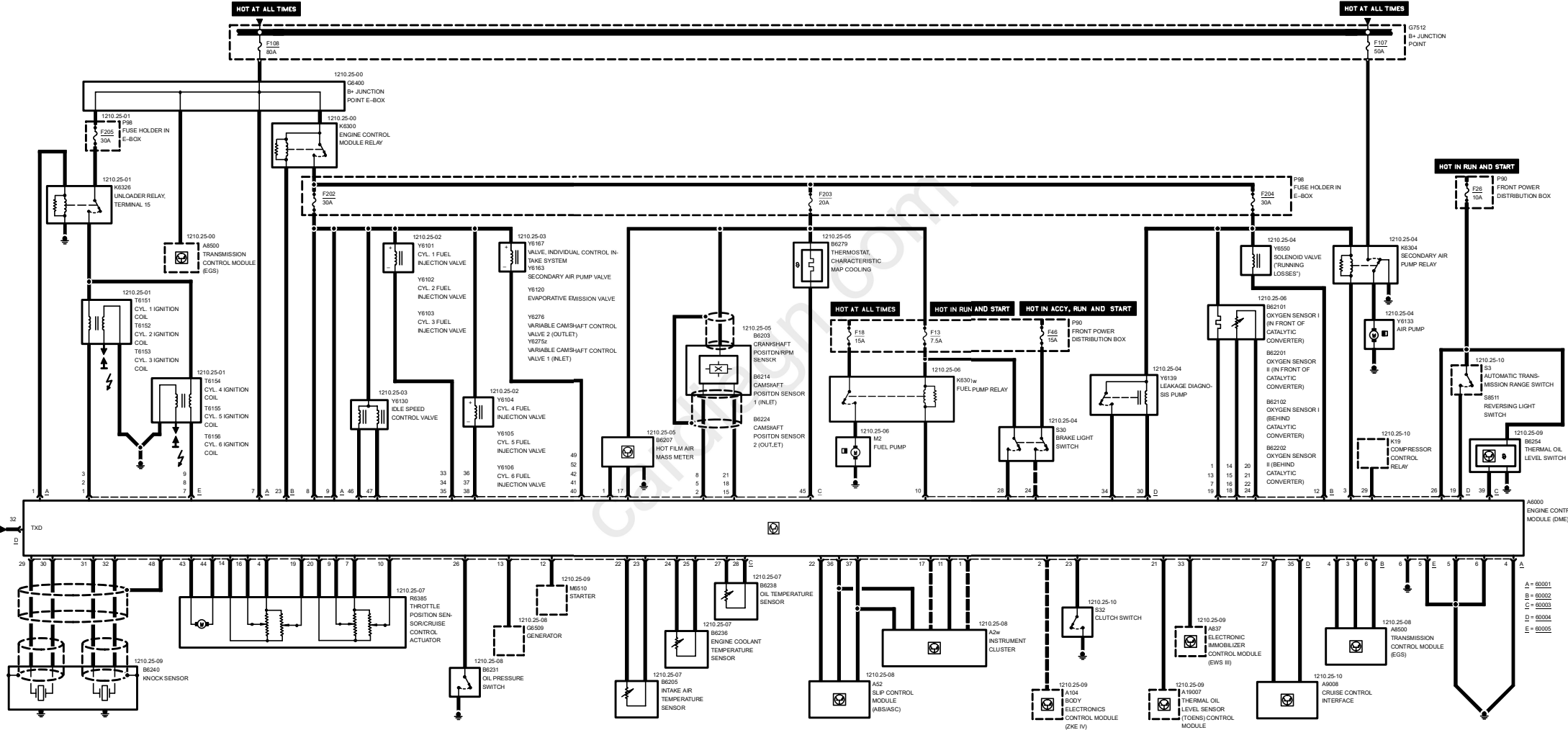
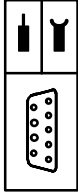


1210.25 ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

03/00 1210.25 1999





Pin Assignments

A = X60001	9 Pins, black
B = X60002	24 Pins, black
C = X60003	52 Pins, black
D = X60004	40 Pins, black
E = X60005	9 Pins, black

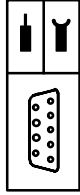
X60001

Pin	Type	Signal	Description/Function	Connection
1	A	15	Activate relay	Unloader relay terminal 15
2			Not used	
3			Not used	
4	M	31E	Ground	Ground point
5	M	31L	Ground	Ground point
6	M	31L	Ground	Ground point
7	E	30	Voltage supply	B+ junction point E-box
8	E	U_HR<2	Voltage supply	Fuse holder in E-box
9	E	U_HR<2	Voltage supply	Fuse holder in E-box

X60002

Pin	Type	Signal	Description/Function	Connection
1	M	T_LHV1	Oxygen sensor heating ground	Oxygen sensor 1 (in front of catalytic converter)
2			Not used	
3	E/A	D_CAN-L	CAN bus low	Transmission control module (EGS)
4	E/A	D_CAN-H	CAN bus high	Transmission control module (EGS)
5			Not used	
6	E/A	D_TXD2	Diagnosis	Transmission control module (EGS)
7	M	T_LHH1	Oxygen sensor heating ground	Oxygen sensor 1 (behind catalytic converter)
8			Not used	

E = Input, A = Output, M = Ground



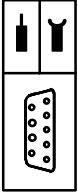
Pin Assignments

Pin	Type	Signal	Description/Function	Connection
9			Not used	
10			Not used	
11			Not used	
12	A	S_KKU	Activate valve	Solenoid valve (Running Losses)
13	M	T_LHV2	Oxygen sensor heating ground	Oxygen sensor 2 (in front of catalytic converter)
14	E	A_LSV1	Sensor signal	Oxygen sensor 1 (in front of catalytic converter)
15	E	A_LSV2	Sensor signal	Oxygen sensor 2 (in front of catalytic converter)
16	E	A_LSH1	Sensor signal	Oxygen sensor 1 (behind catalytic converter)
17			Not used	
18	E	A_LSH2	Sensor signal	Oxygen sensor 2 (behind catalytic converter)
19	M	T_LHH2	Oxygen sensor heating ground	Oxygen sensor 2 (behind catalytic converter)
20	M	M_LSV1	Signal ground	Oxygen sensor 1 (in front of catalytic converter)
21	M	M_LSV2	Signal ground	Oxygen sensor 2 (in front of catalytic converter)
22	M	M_LSH1	Signal ground	Oxygen sensor 1 (behind catalytic converter)
23	A	S_HR	Activate relay	Engine control module relay
24	M	M_LSH2	Signal ground	Oxygen sensor 2 (behind catalytic converter)

X60003

Pin	Type	Signal	Description/Function	Connection
1	E	A_HFM	Signal air mass meter	Hot film air mass meter
2	E	P_NWGA1	Signal camshaft position	Camshaft position sensor 2 (outlet)
3			Not used	
4	A	U_DKFW1	Voltage supply	Throttle position sensor 1

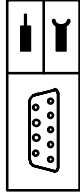
E = Input, A = Output, M = Ground



Pin Assignments

Pin	Type	Signal	Description/Function	Connection
5	E	P_NWGE1	Signal camshaft position	Camshaft position sensor 1 (inlet)
6			Not used	
7	A	U_DKFW2	Voltage supply	Throttle position sensor 2
8	E	P_KWG	Signal crankshaft position	Crankshaft position sensor
9	E	A_FWG2	Throttle position signal	Throttle position sensor 2
10	E	A_DKG2	Throttle position signal	Throttle position sensor 2
11			Not used	
12	E	S_30H	Start signal	Starter
13	E	S_61-1	Charging signal	Generator
14	M	M_DKFW1	Ground	Throttle position sensor 1
15	M	M_NWGA1	Ground	Camshaft position sensor 2 (outlet)
16	E	A_FWG1	Throttle position signal	Throttle position sensor 1
17	M	M_HFM	Ground	Hot film air massmeter
18	M	M_NWGE1	Ground	Crankshaft position sensor 1 (inlet)
19	E	A_DKG1	Throttle position signal	Throttle position sensor 1
20	M	M_DKFW2	Ground	Throttle position sensor 2
21	M	M_KWG	Ground	Crankshaft position sensor
22	E	A_TANS	Temperature signal	Intake air temperature sensor
23	M	M_TANS	Ground	Intake air temperature sensor
24	E	A_TMOT	Temperature signal	Engine coolant temperature sensor
25	M	M_TMOT	Ground	Engine coolant temperature sensor
26	E	A_OLD	Pressure signal	Oil pressure switch
27	E	A_TOEL	Temperature signal	Oil temperature sensor
28	M	M_TOEL	Ground	Oil temperature sensor
29	E	A_KS1A	Cyl. 1-3 knock sensor	Knock sensor
30	E	A_KS1B	Cyl. 1-3 knock sensor	Knock sensor
31	E	A_KS2A	Cyl. 4-6 knock sensor	Knock sensor
32	E	A_KS2B	Cyl. 4-6 knock sensor	Knock sensor
33	A	P_EVZ1	Activate valve	Cyl. 1 fuel injection valve
34	A	P_EVZ2	Activate valve	Cyl. 2 fuel injection valve
35	A	P_EVZ3	Activate valve	Cyl. 3 fuel injection valve
36	A	P_EVZ4	Activate valve	Cyl. 4 fuel injection valve

E = Input, A = Output, M = Ground



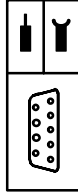
Pin Assignments

Pin	Type	Signal	Description/Function	Connection
37	A	P_EVZ5	Activate valve	Cyl. 5 fuel injection valve
38	A	P_EVZ6	Activate valve	Cyl. 6 fuel injection valve
39	E	F_OLN	Level signal	Oil level sensor
40	A	T_NWE1	Activate valve	Variable camshaft control valve 1 (inlet)
41	A	T_NWA1	Activate valve	Variable camshaft control valve 2 (outlet)
42	A	T_TEV	Activate valve	Evaporative emission valve
43	A	T_MDK1	Activate motor	Cruise control actuator
44	A	T_MDK2	Activate motor	Cruise control actuator
45	A	S_KFK	Cooling signal	Thermostat, characteristic map cooling
46	A	T_ILLFSS	CLOSE signal	Idle speed control valve
47	A	T_ILLFSO	OPEN signal	Idle speed control valve
48	M	W_KS	Ground	Shield knock sensor
49	A	S_DISA	Activate valve	Valve, individual control intake system
50			Not used	
51			Not used	
52	A	S_SLPV	Activate valve	Secondary air pump valve

X60004

Pin	Type	Signal	Description/Function	Connection
1	A	61	Charging signal	Instrument cluster
2	A	30H	Start signal	Body electronics control module (ZKE IV)
3	A	S_SLP	Activate relay	Secondary air pump relay
4			Not used	
5			Not used	
6			Not used	
7			Not used	
8			Not used	

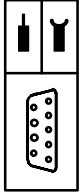
E = Input, A = Output, M = Ground



Pin Assignments

Pin	Type	Signal	Description/Function	Connection
9			Not used	
10	A	EKP	Activate relay	Fuel pump relay
11	A	OELD	Oil pressure signal	Instrument cluster
12			Not used	
13			Not used	
14			Not used	
15			Not used	
16			Not used	
17	A	TD	Crankshaft RPM speed signal TD	Instrument cluster
18			Not used	
19	E	RFL	Reverse signal	Reversing light switch/ Automatic transmission range switch
20			Not used	
21	A	A-OELN	Oil level signal	Thermal oil level sensor (TOENS) control module
22	E	DFAHR	Speed signal right rear	ABS/ASC control module
23	E	KUPP	Clutch signal	Clutch switch
24	E	KL 54 ON	Brake signal	Brake light switch
25			Not used	
26	E	15A26	Terminal 15	Fuse 26
27	E	MFL	Cruise control signal	Cruise control interface
28	E	S_BLTS	Brake signal	Brake light switch
29	A	S_KOREL	Activate relay	Compressor control relay
30	A	LDPV	Activate valve	Leakage diagnosis pump
31			Not used	
32	E/A	TXDII	TXD diagnosis data link	Data link connector
33	E	S_DWA	Drive-away protection signal (code)	Electronic immobilizer control module (EWS III)
34	E	LDPS	Leakage signal	Leakage diagnosis pump
35	M	31	Ground	Cruise control interface
36	E/A	CAN+	CAN bus high	Instrument cluster, ABS/ASC control module

E = Input, A = Output, M = Ground



Pin Assignments

Pin	Type	Signal	Description/Function	Connection
37	E/A	CAN-	CAN bus low	Instrument cluster, ABS/ASC control module
38			Not used	
39			Not used	
40			Not used	

X60005

Pin	Type	Signal	Description/Function	Connection
1	A	P_ZSZ3	Ignition coil signal	Cyl. 3 ignition coil
2	A	P_ZSZ2	Ignition coil signal	Cyl. 2 ignition coil
3	A	P_ZSZ1	Ignition coil signal	Cyl. 1 ignition coil
4			Not used	
5	M	31L	Ground	Ground point
6	M	A_ZSR	Ground	Ground point
7	A	P_ZSZ6	Ignition coil signal	Cyl. 6 ignition coil
8	A	P_ZSZ5	Ignition coil signal	Cyl. 5 ignition coil
9	A	P_ZSZ4	Ignition coil signal	Cyl. 4 ignition coil



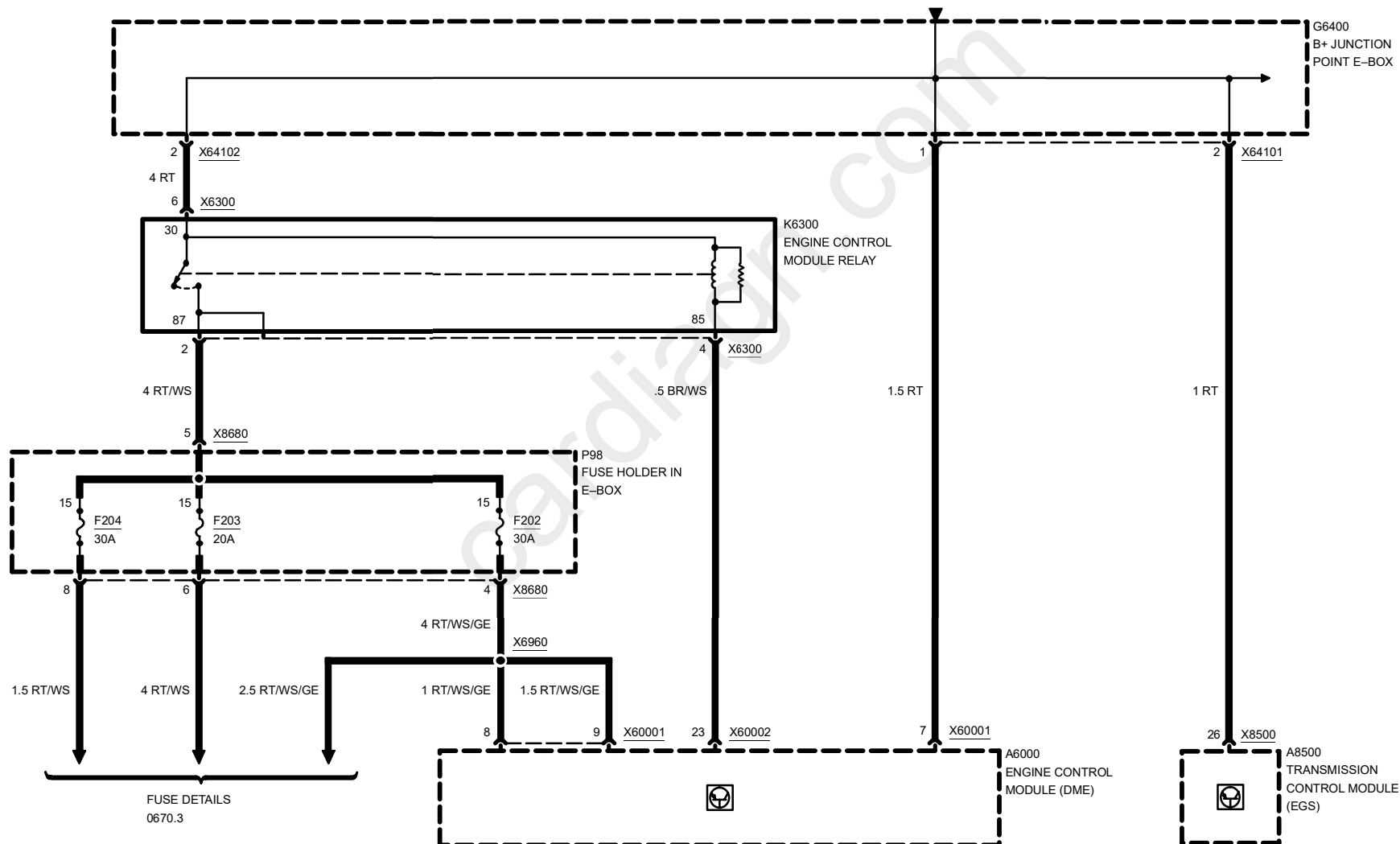
ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

Z3 VERSIONS

POWER

HOT AT ALL TIMES

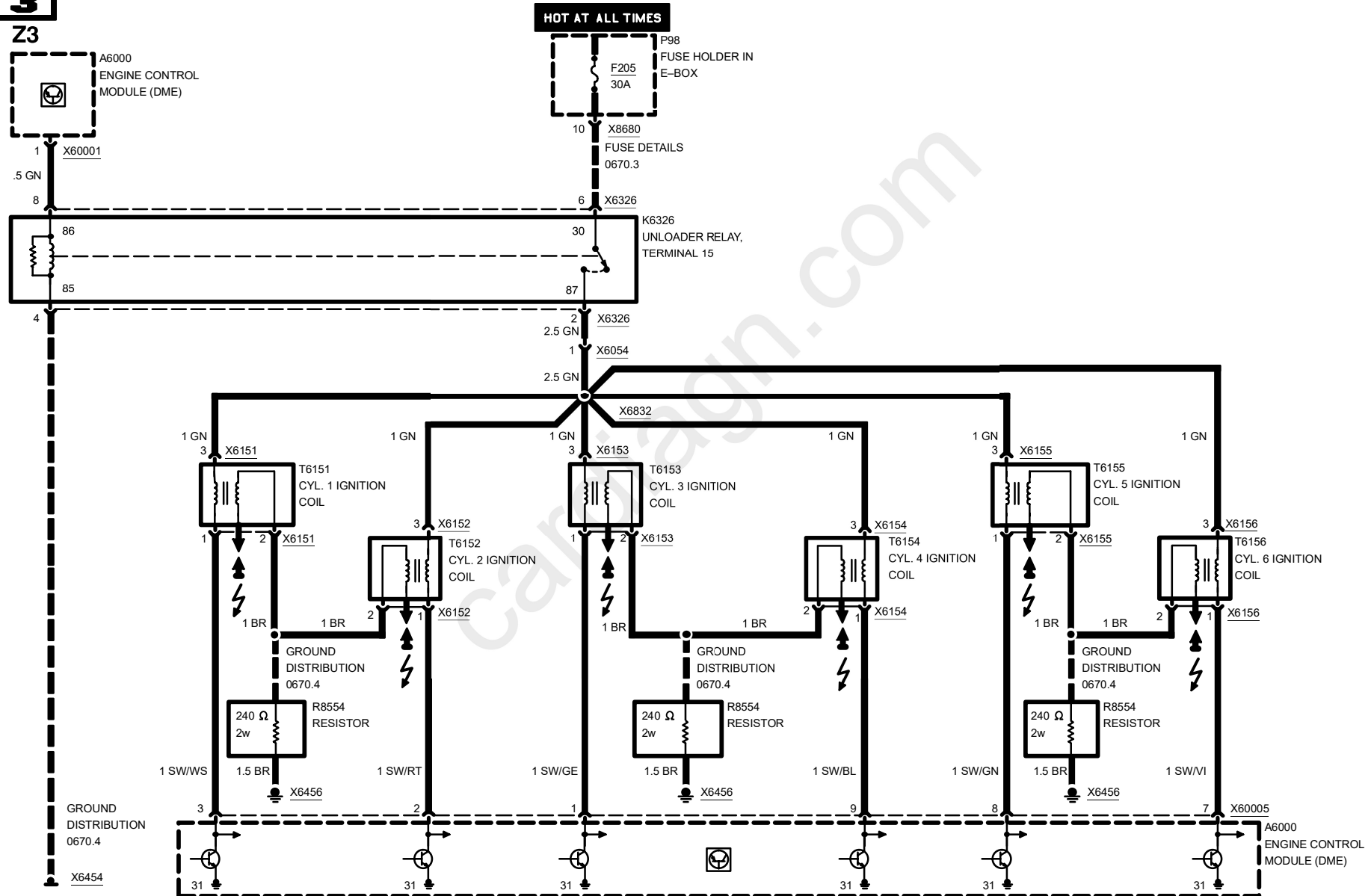
POWER
DISTRIBUTION
0670.2

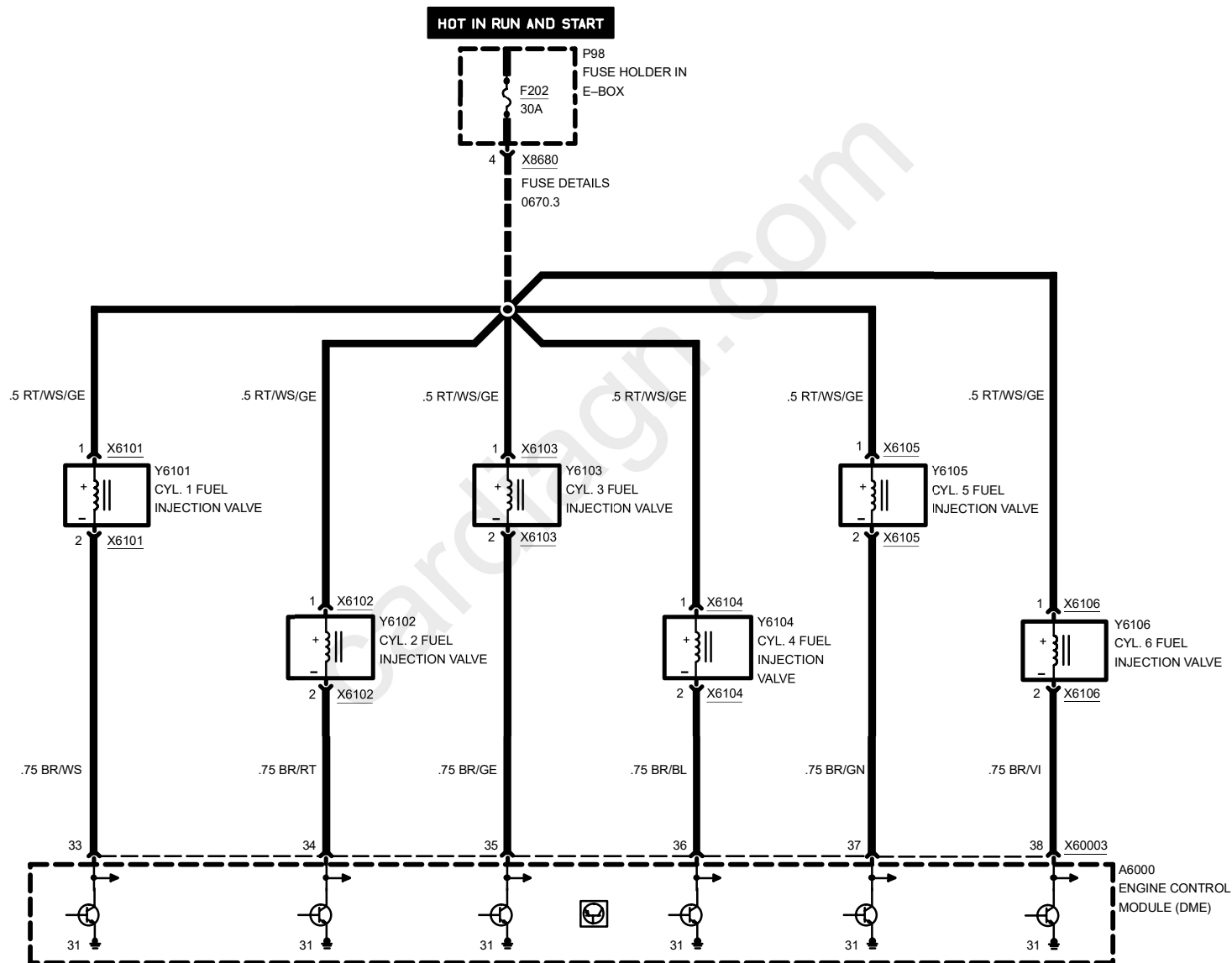


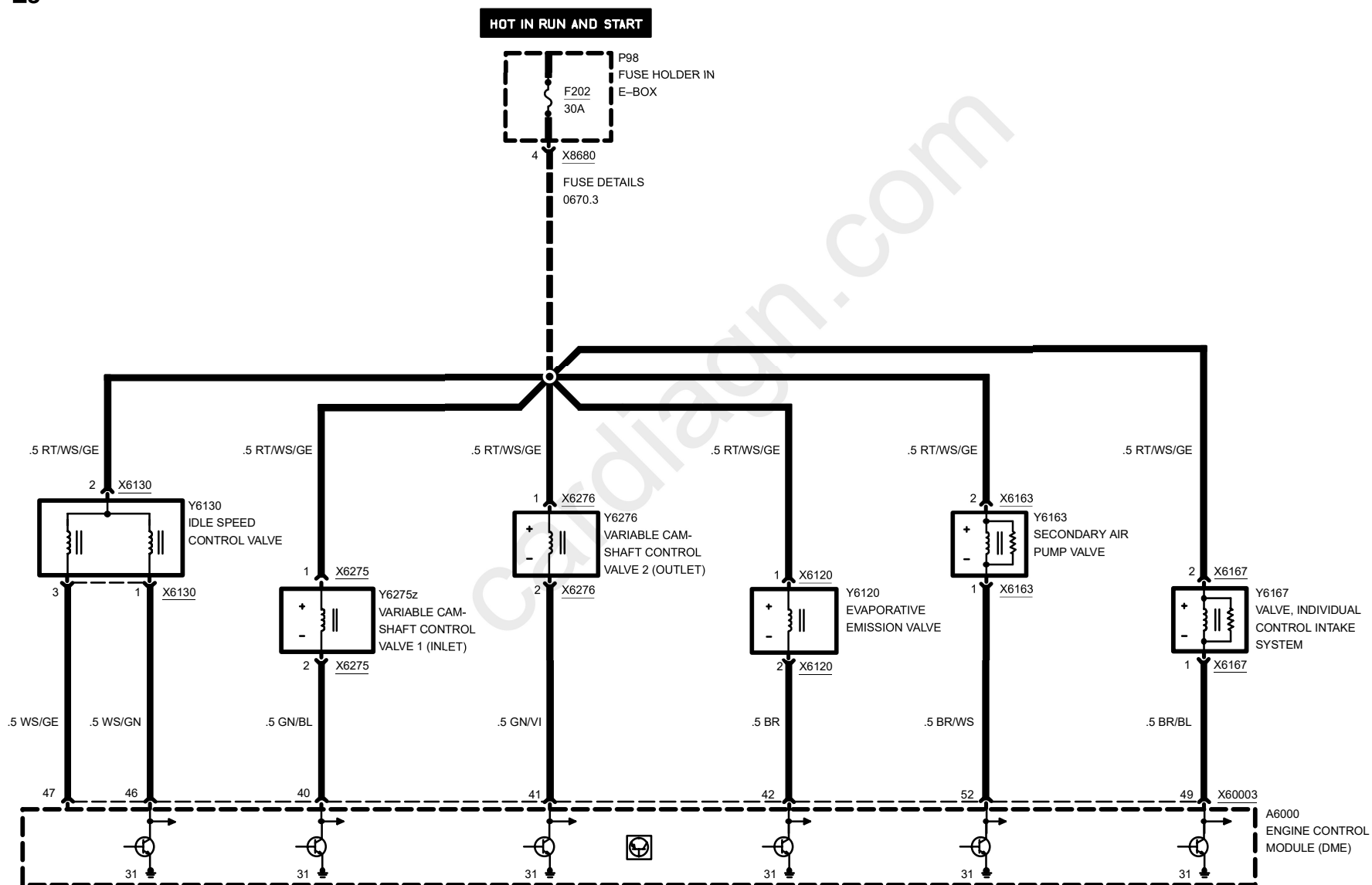


ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

Z3 VERSIONS





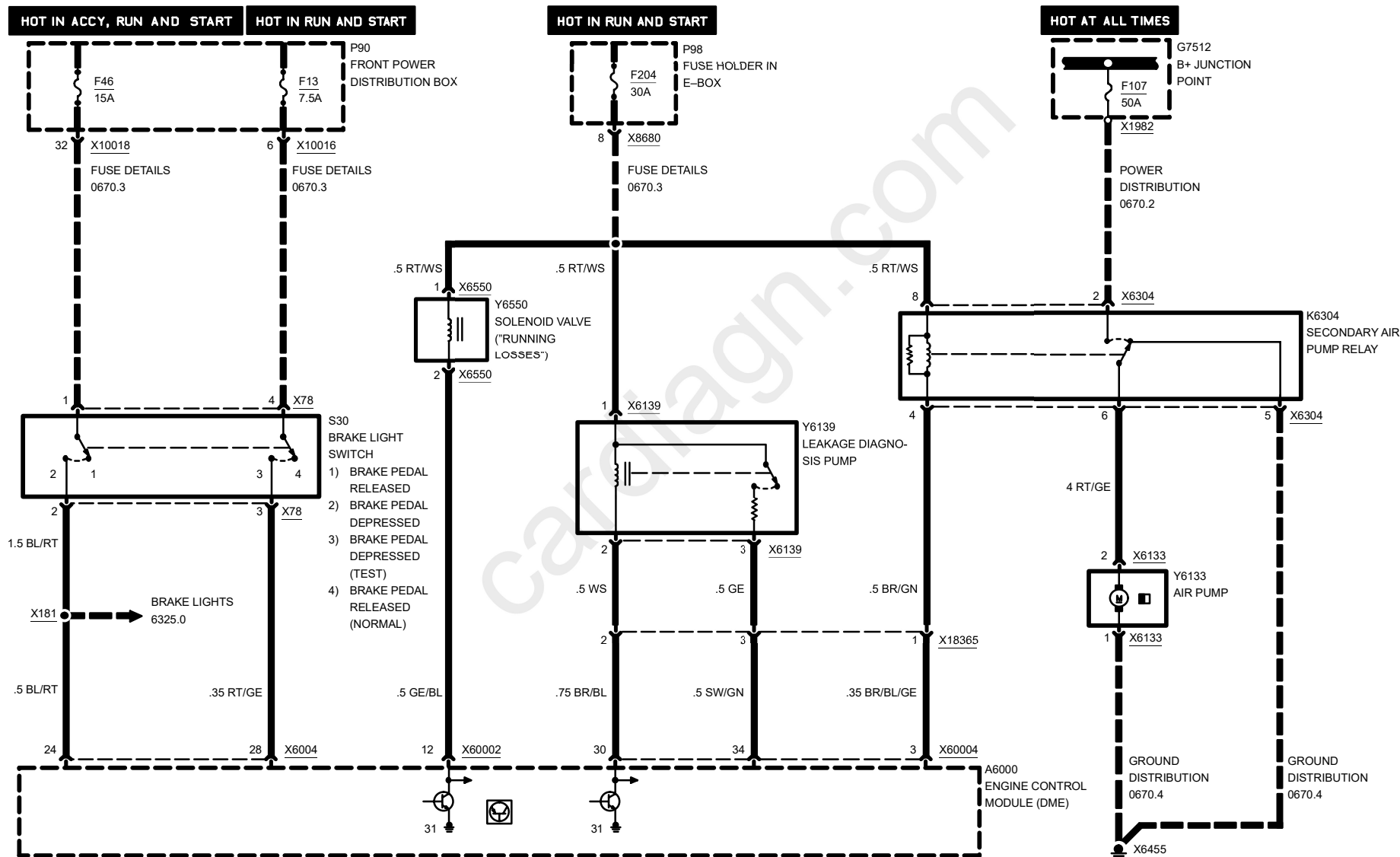




ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

Z3 VERSIONS

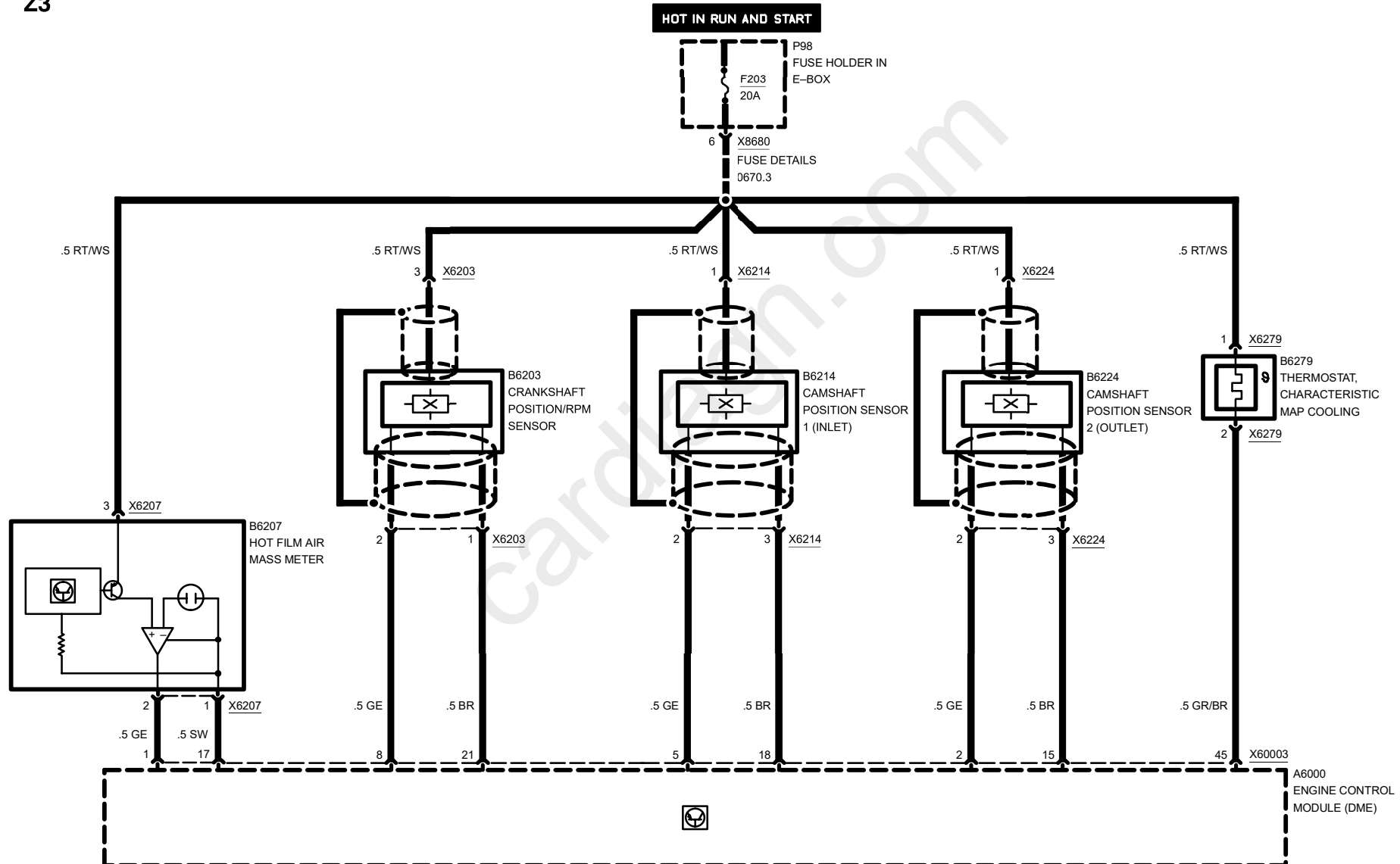
Z3



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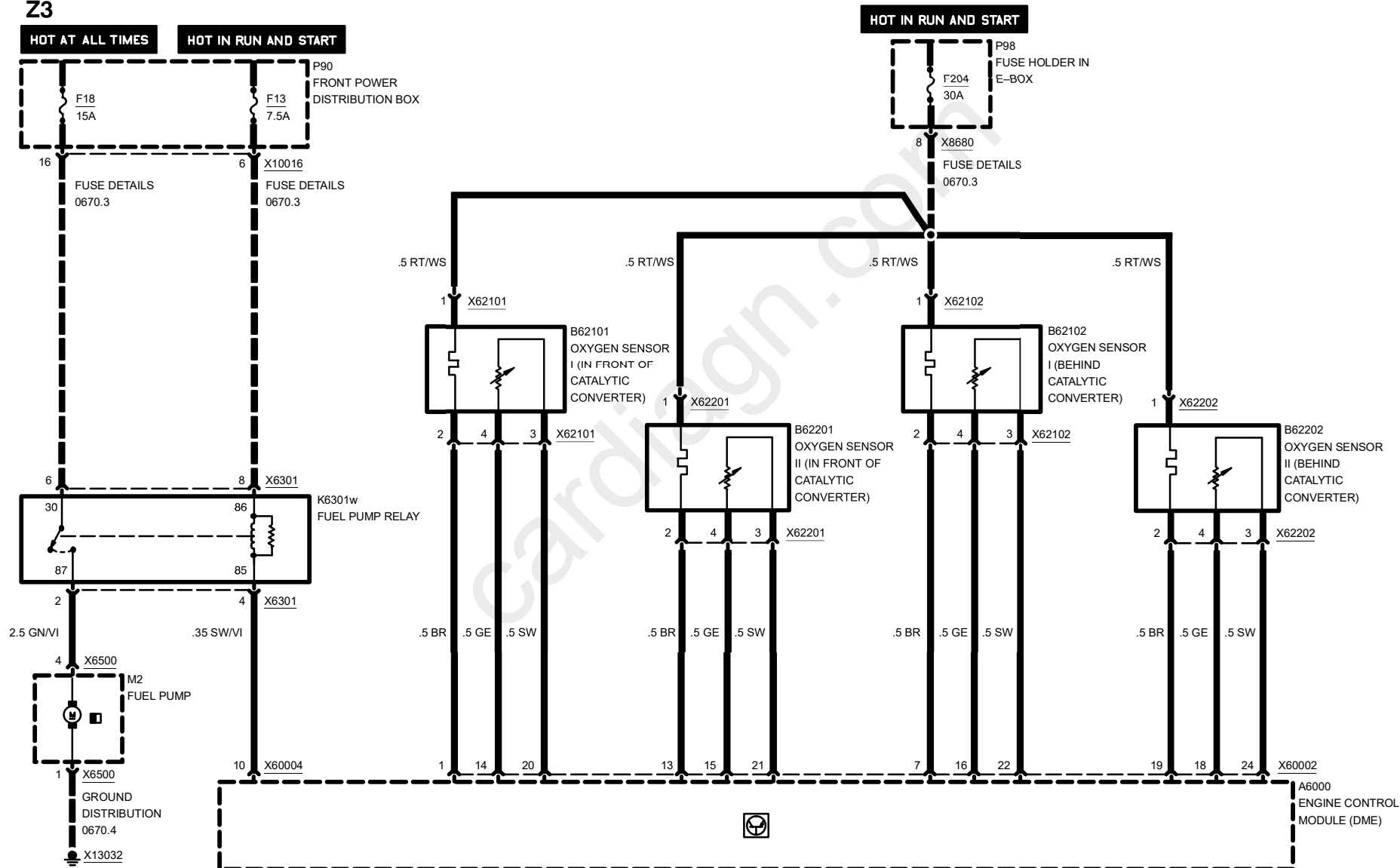




ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

Z3 VERSIONS

Z3



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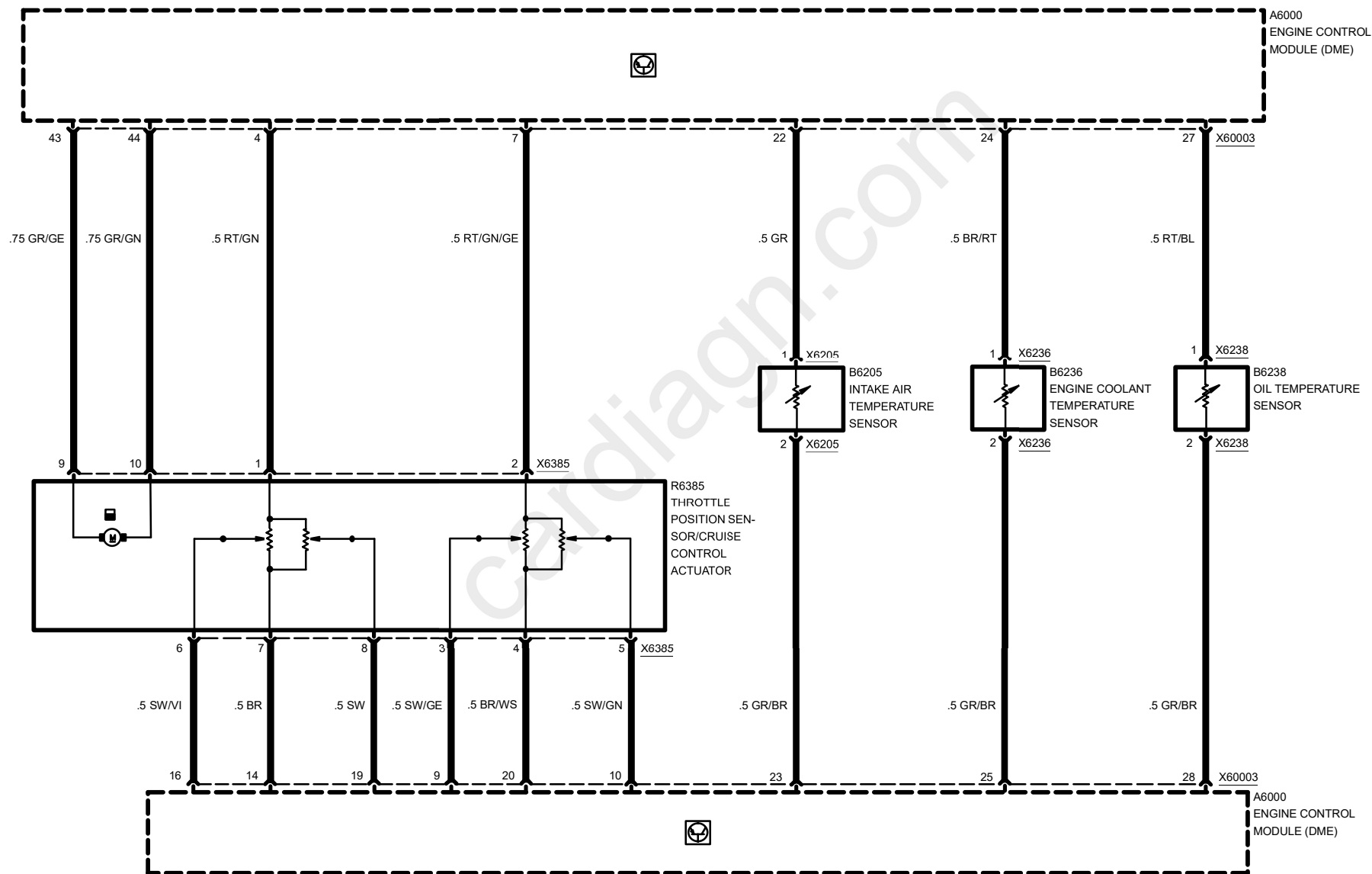
1999



ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

Z3 VERSIONS

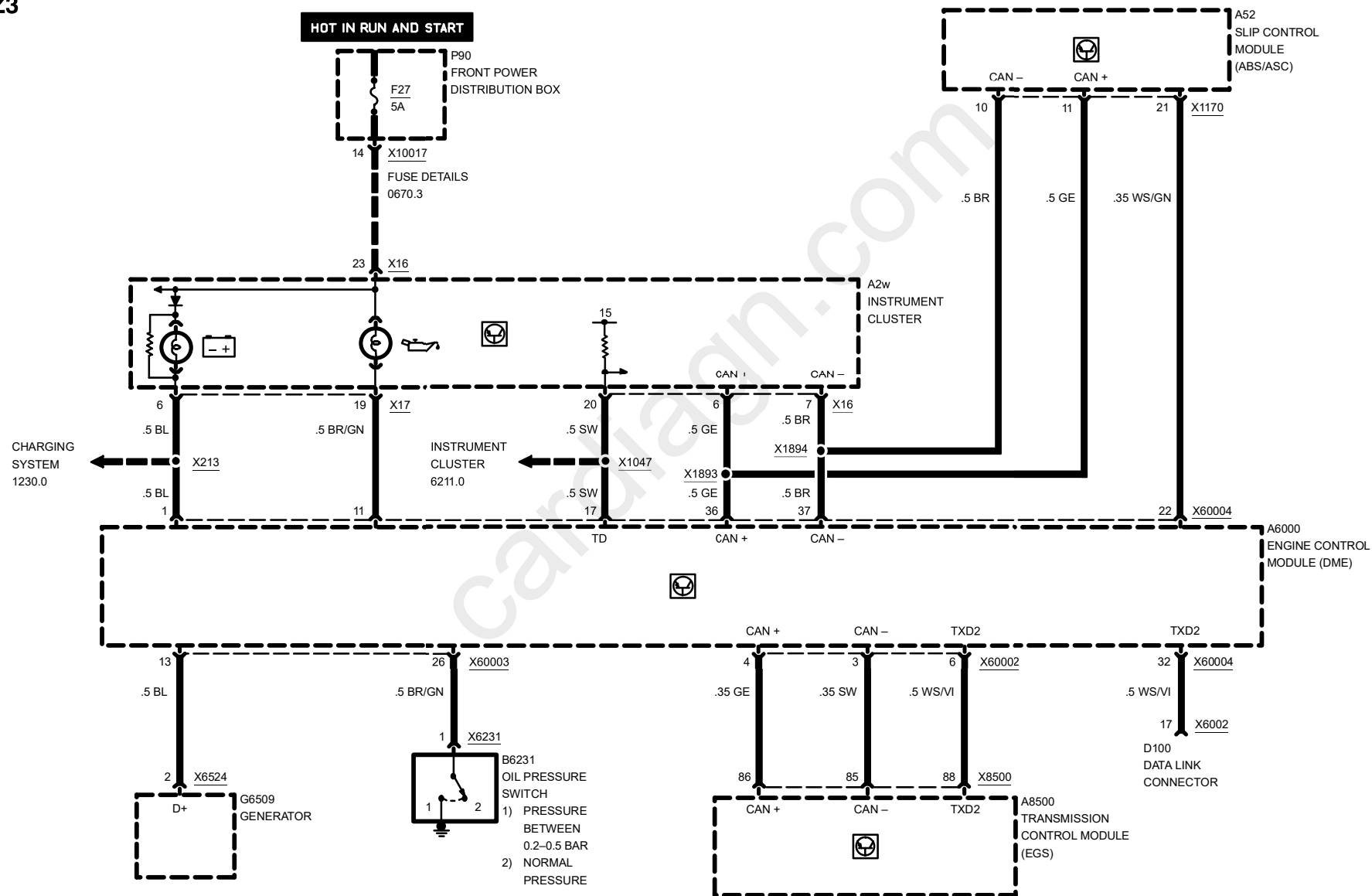
Z3



03/00

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1999

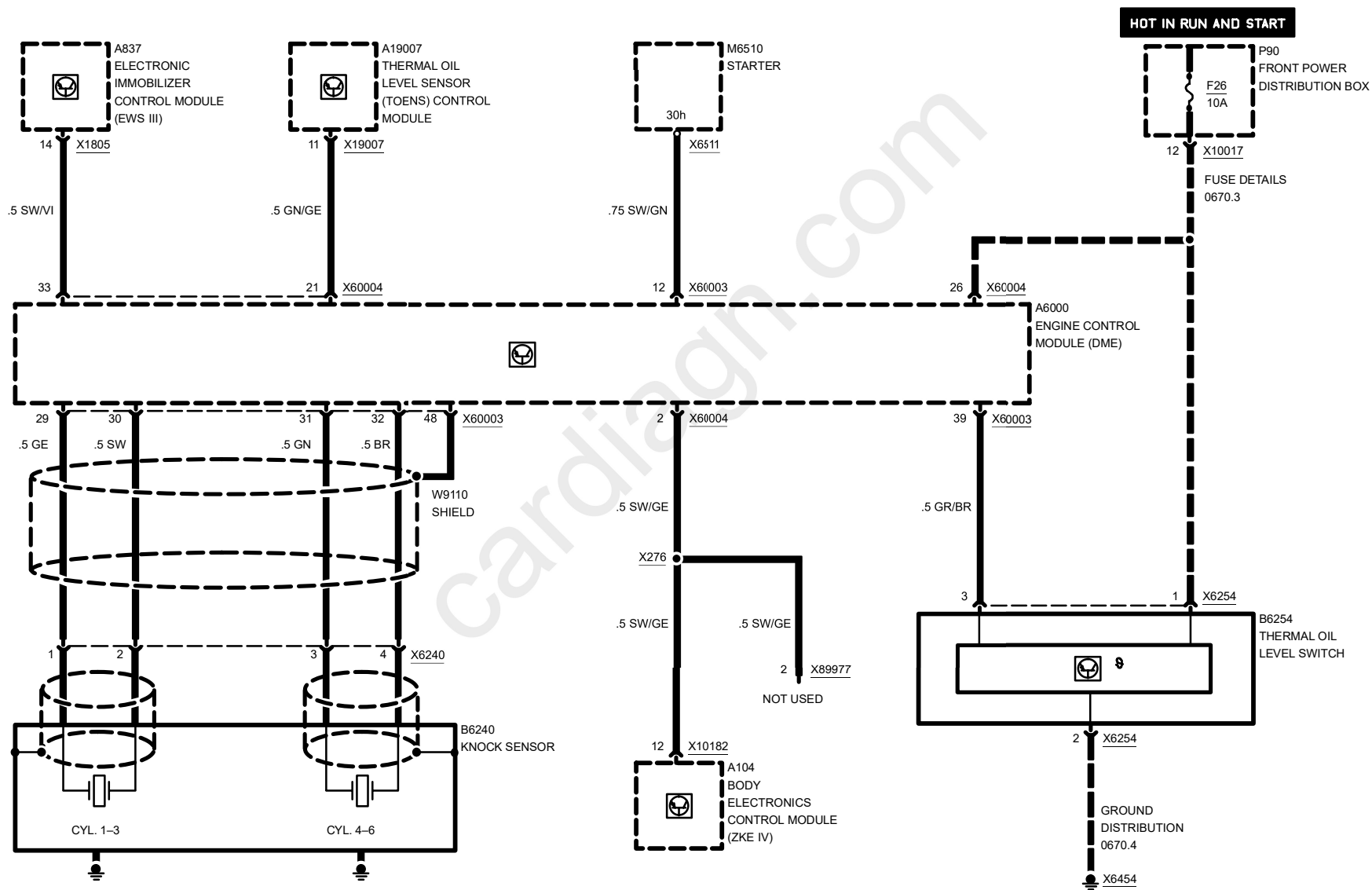




Z3

ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

Z3 VERSIONS



03/00

1210.25-09

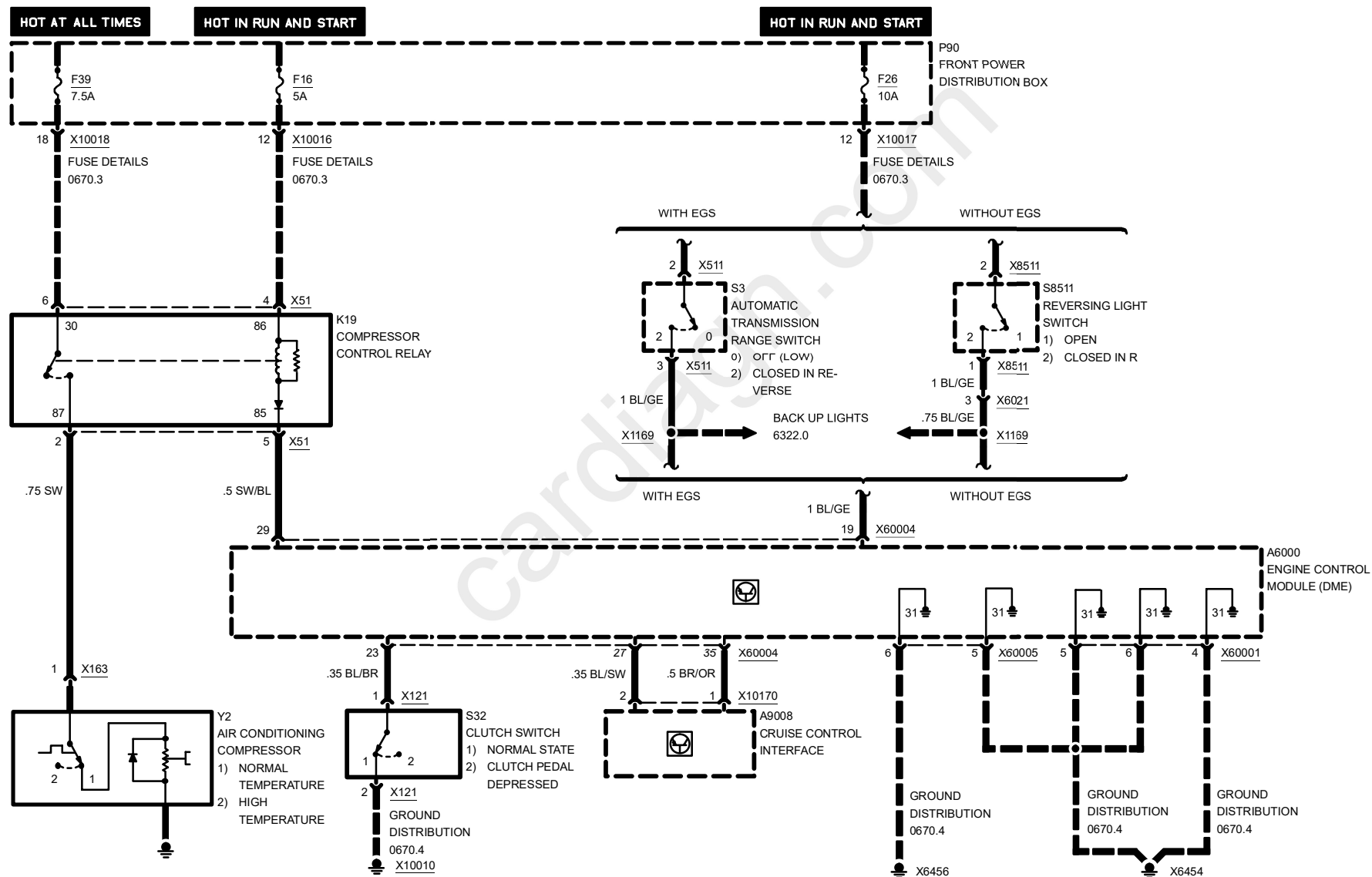
1999



ENGINE CONTROL SYSTEM MS42.1 (6-CYLINDER M52)

Z3 VERSIONS

Z3



03/00

1210.25-10

1999