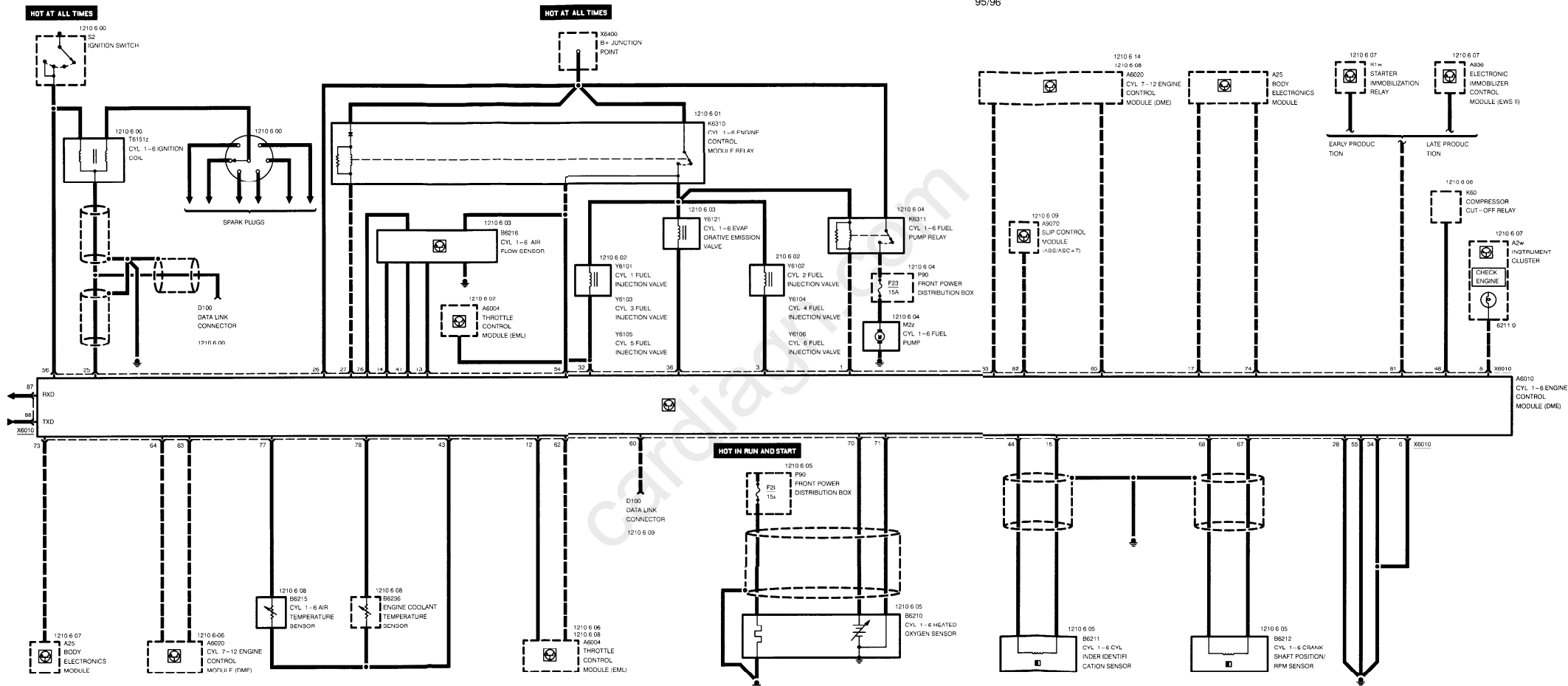
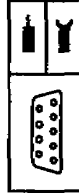




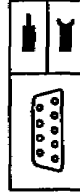


Pin Assignments

X6010

Pin	Type	Description/Function	Connection
1	A	Fuel pump relay and crankshaft reference signal (TR)	Fuel pump relay
2		Not used	
3	A	Fuel injector valves cyl. 2 - 4 - 6	Fuel injector valves
4		Not used	
5		Not used	
6	M	Ground, fuel injector valve output stages	Ground point
7		Not used	
8	A	Check engine	Instrument cluster
9		Not used	
10		Not used	
11		Not used	
12	E	Wide open throttle signal (VL)	Electronic throttle control module (EML)
13	A	Free combustion	Mass air flow sensor
14	M	Ground, mass air flow sensor	Mass air flow sensor
15		Not used	
16	E	Cylinder identification sensor (ignition)	Cylinder identification sensor (connection B)
17	A	Injection measuring signal (ti) (K/A signal)	Body electronics module (EKM)
18		Not used	
19		Not used	
20		Not used	
21		Not used	
22		Not used	
23		Not used	
24		Not used	
25	A	Ignition, terminal 1	Cyl. 1 - 6 Ignition coil
26	E	Battery voltage	B+ junction point
27	A	Engine control module relay	Engine control module relay, terminal 85
28	M	Ground for electronics and shielding the sensors	Ground point
29		Not used	

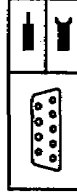
E = Input, A = Output, M = Ground



Pin Assignments

Pin	Type	Description/Function	Connection
30		Not used	
31		Not used	
32	A	Fuel injector valves cyl. 1 - 3 - 5	Fuel injector valves and electronic throttle control module (EML)
33		Not used	
34	M	Ground, remaining output stages (except for ignition and fuel injector valves)	Ground point
35		Not used	
36	A	Evaporative emission valve	Evaporative emission valve
37		Not used	
38		Not used	
39		Not used	
40		Not used	
41	E	Mass air flow sensor signal	Mass air flow sensor
42		Not used	
43	M	Ground for sensors	Temperature sensors
44	E	Cylinder identification sensor (ignition)	Cylinder identification sensor (connection A)
45		Not used	
46		Not used	
47		Not used	
48	A	Compressor cut-off signal	Compressor cut-off relay
49		Not used	
50		Not used	
51		Not used	
52		Not used	
53		Not used	
54	E	Battery voltage	Engine control module relay
55	M	Ground, ignition	Ground point
56	E	Ignition, terminal 15	Ignition switch
57		Not used	
58		Not used	
59		Not used	
60	E	Programming voltage	Data link connector

E = Input, A = Output, M = Ground



Pin Assignments

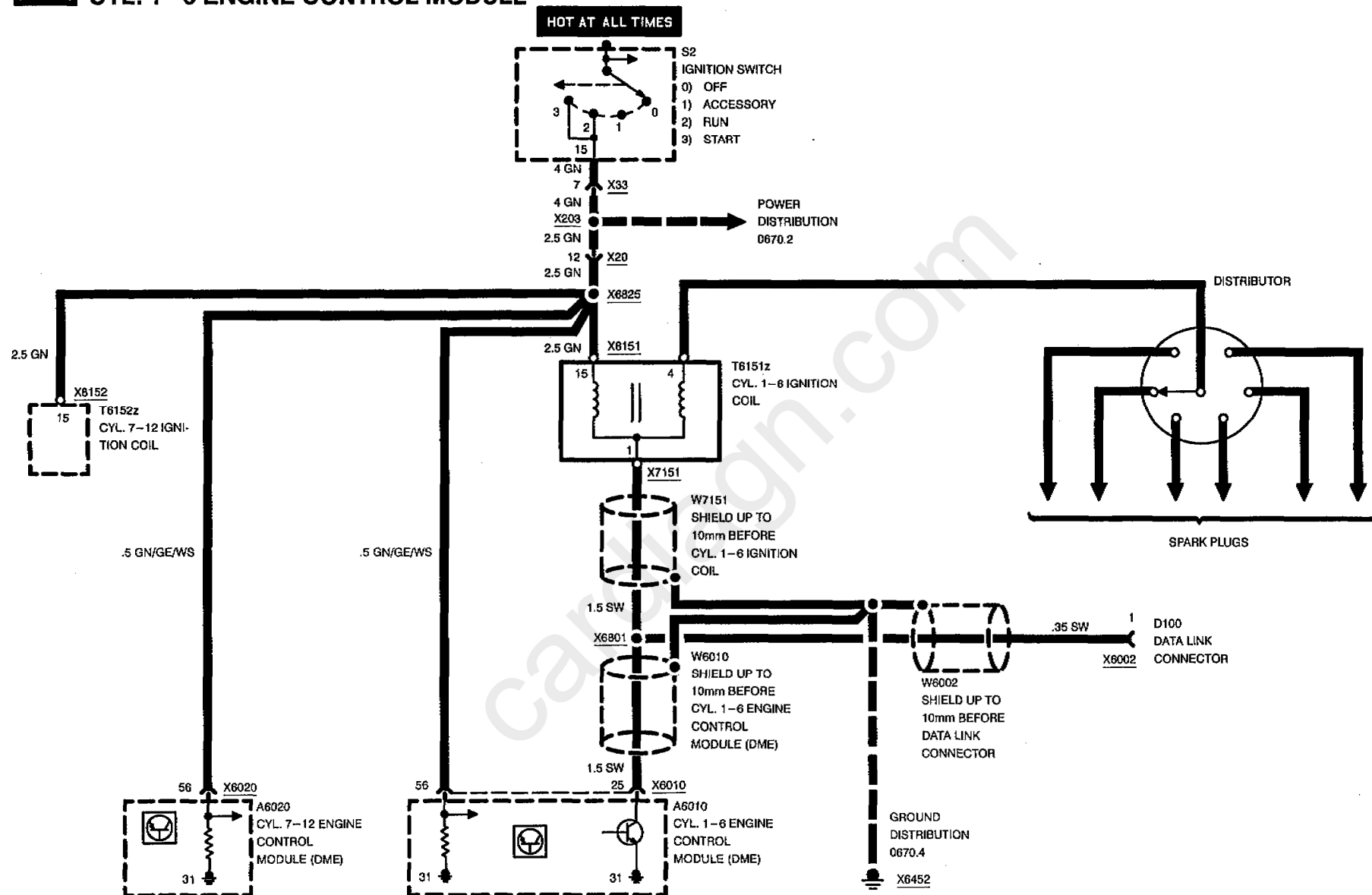
Pin	Type	Description/Function	Connection
61		Not used	
62	E	Idle signal (LL)	Electronic throttle control module (EML)
63	E	Torque converter clutch (WK)	Not used
64	E	Ignition timing intervention	Not used
65	E	Park/Neutral sensing	Not used
66		Not used	
67	E	Inductive pulse generator (connection B)	Pulse generator, crankshaft rpm sensor
68	E	Inductive pulse generator (connection A)	Pulse generator, crankshaft rpm sensor
69		Not used	
70	E	Oxygen sensor signal	Heated oxygen sensor
71	M	Ground, oxygen sensor	Heated oxygen sensor
72		Not used	
73	E	Speedometer signal	Body electronics module (EKM)
74	A	Engine speed signal (TD)	Body electronics module (EKM)
75		Not used	
76	E	Idle CO-potentiometer	Mass air flow sensor
77	E	Intake air temperature	Engine intake air temperature sensor
78	E	Engine coolant temperature	Engine coolant temperature sensor
79		Not used	
80		Not used	
81	E	Antitheft signal	Starter immobilization relay (early production) Electronic immobilizer control module (EWS II)
82	E/A	Data link	Cyl. 7-12 engine control module (DME)
83		Not used	
84		Not used	
85		Not used	
86		Not used	
87	E	RxD diagnostic data line	Data link connector
88	E/A	TxD diagnostic data line	Data link connector

E = Input, A = Output, M = Ground



ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

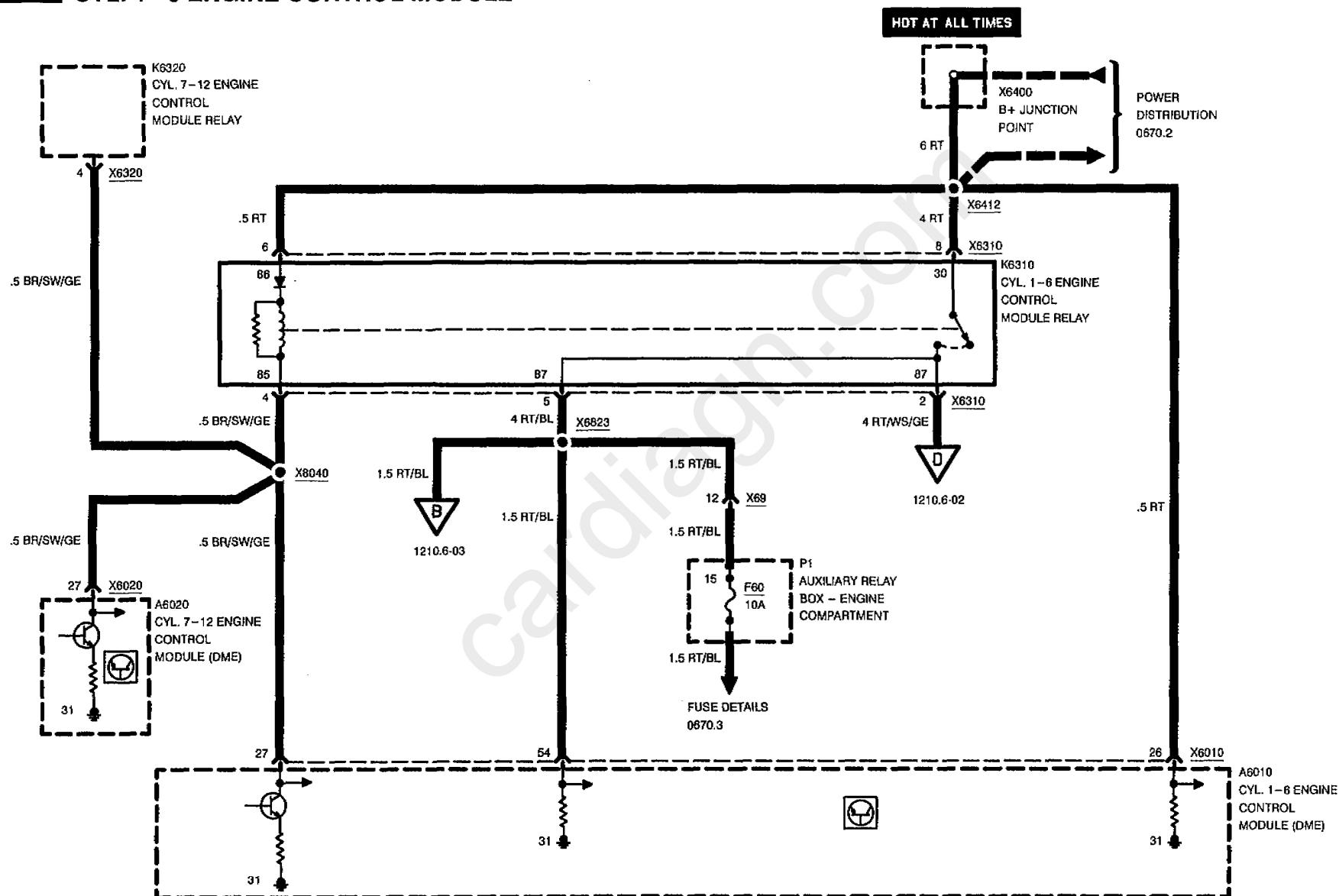
CYL. 1-6 ENGINE CONTROL MODULE





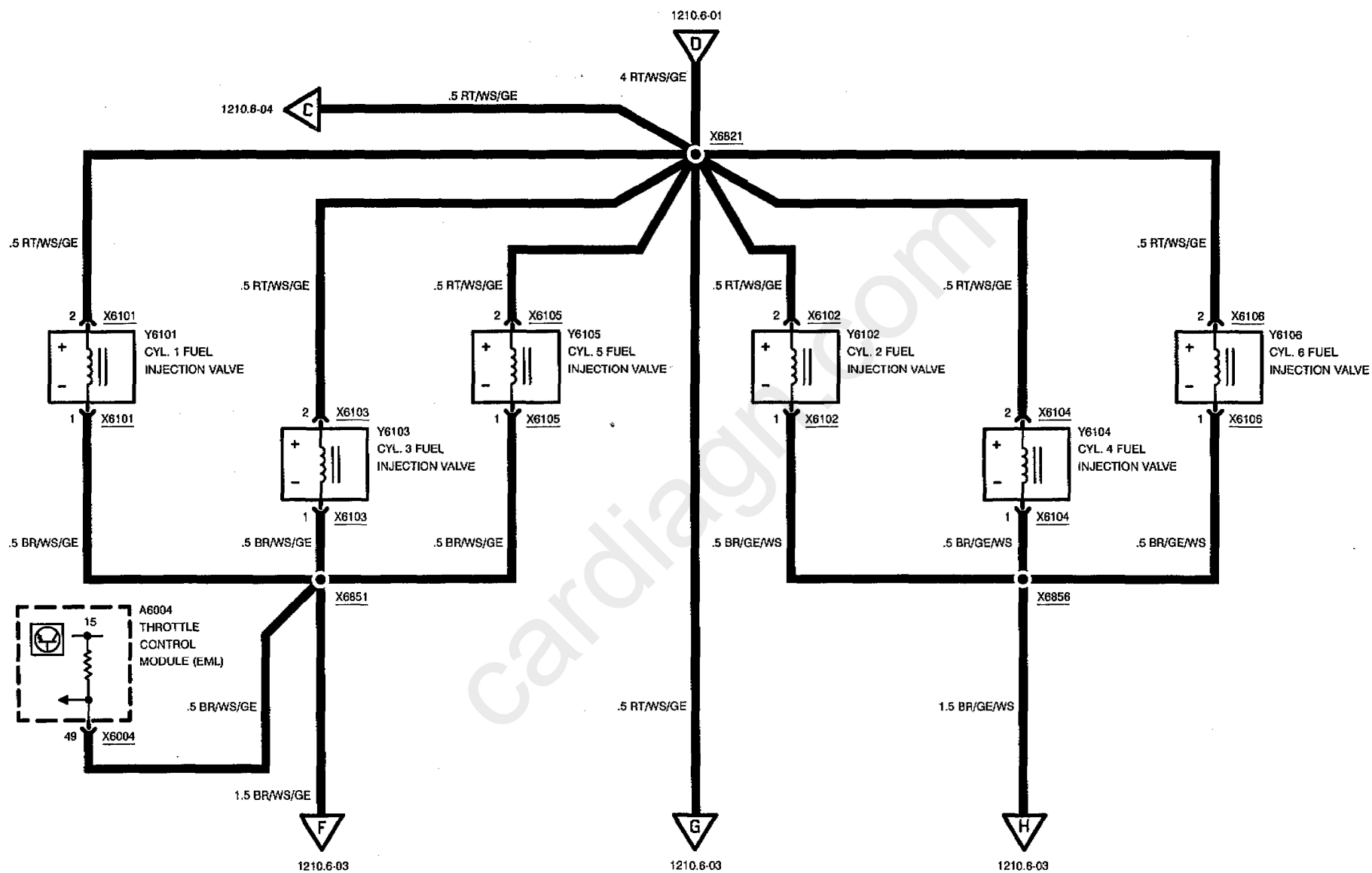
ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

CYL. 1-6 ENGINE CONTROL MODULE



ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

FUEL INJECTION VALVES

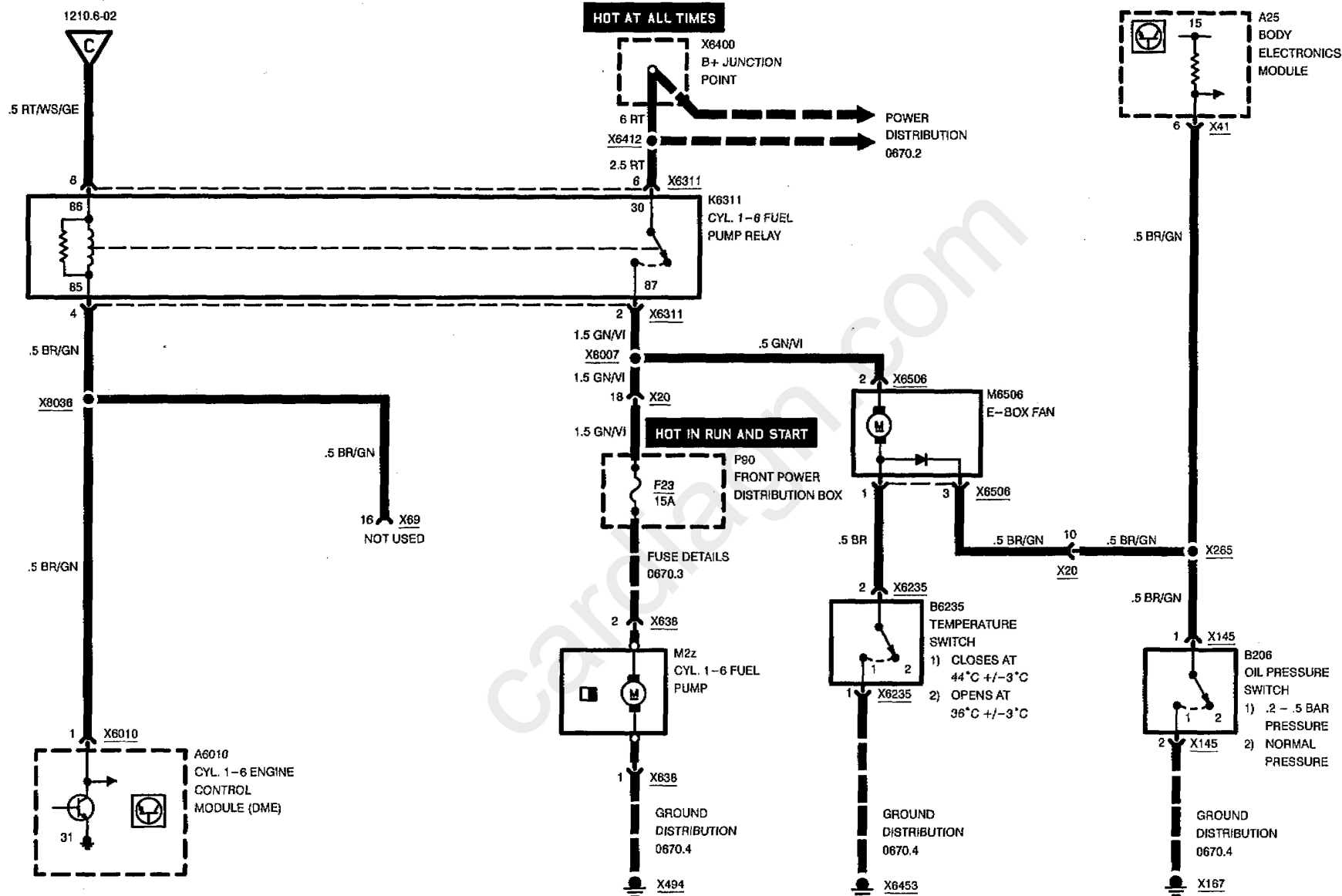






ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

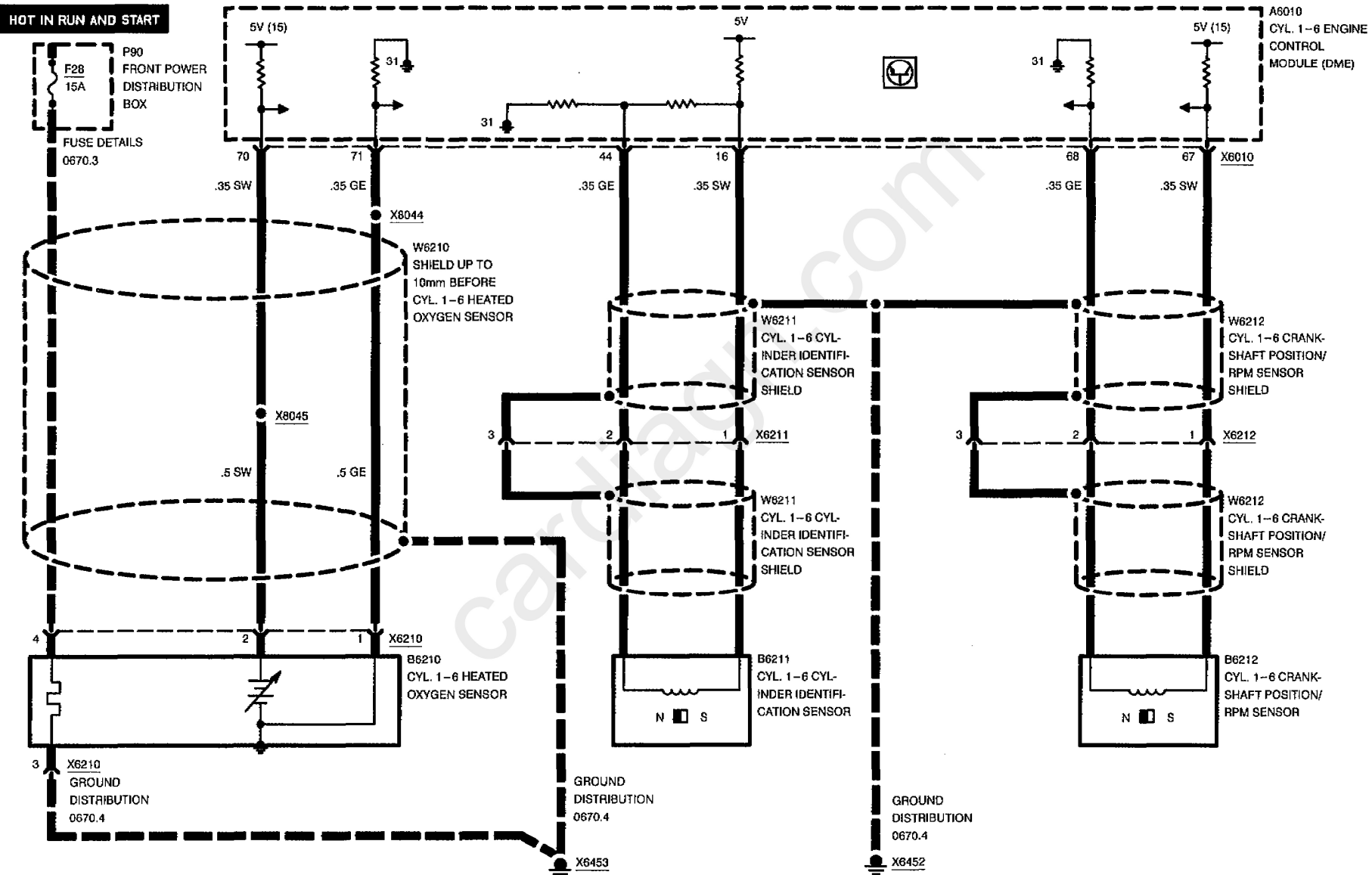
CYL. 1-6 ENGINE CONTROL MODULE





ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

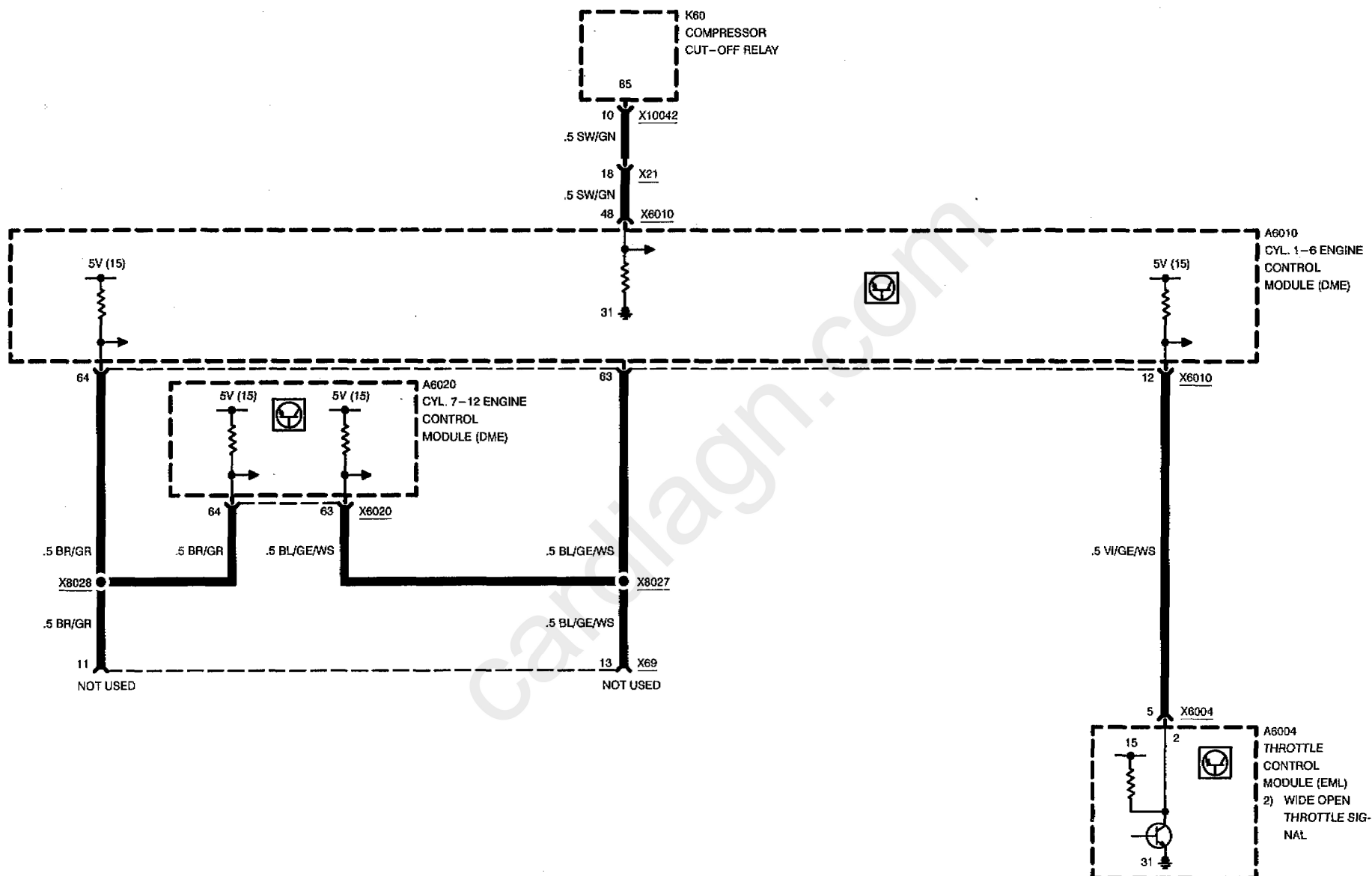
CYL. 1-6 ENGINE CONTROL MODULE





ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

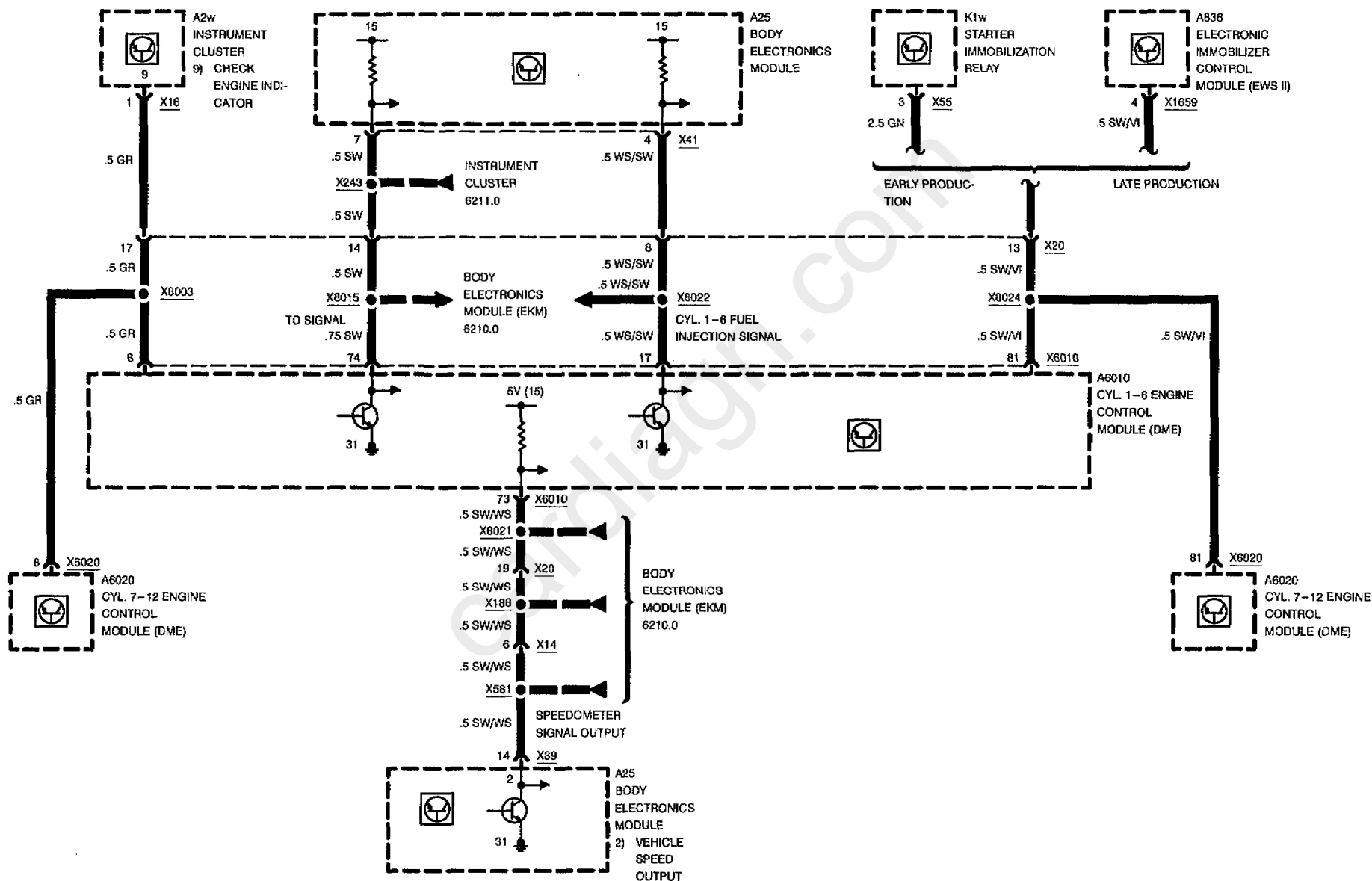
CYL. 1-6 ENGINE CONTROL MODULE





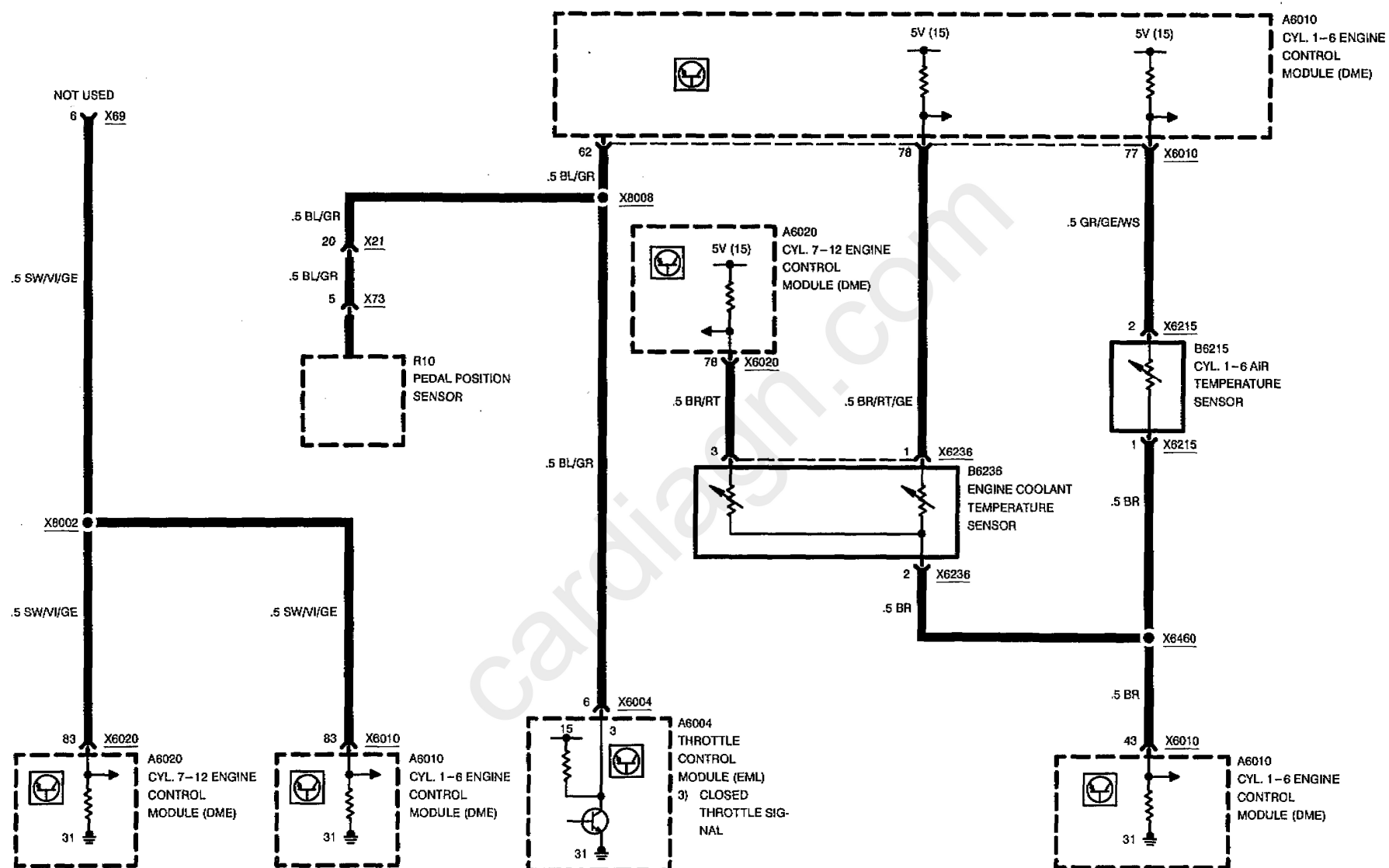
ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

CYL. 1-6 ENGINE CONTROL MODULE



ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

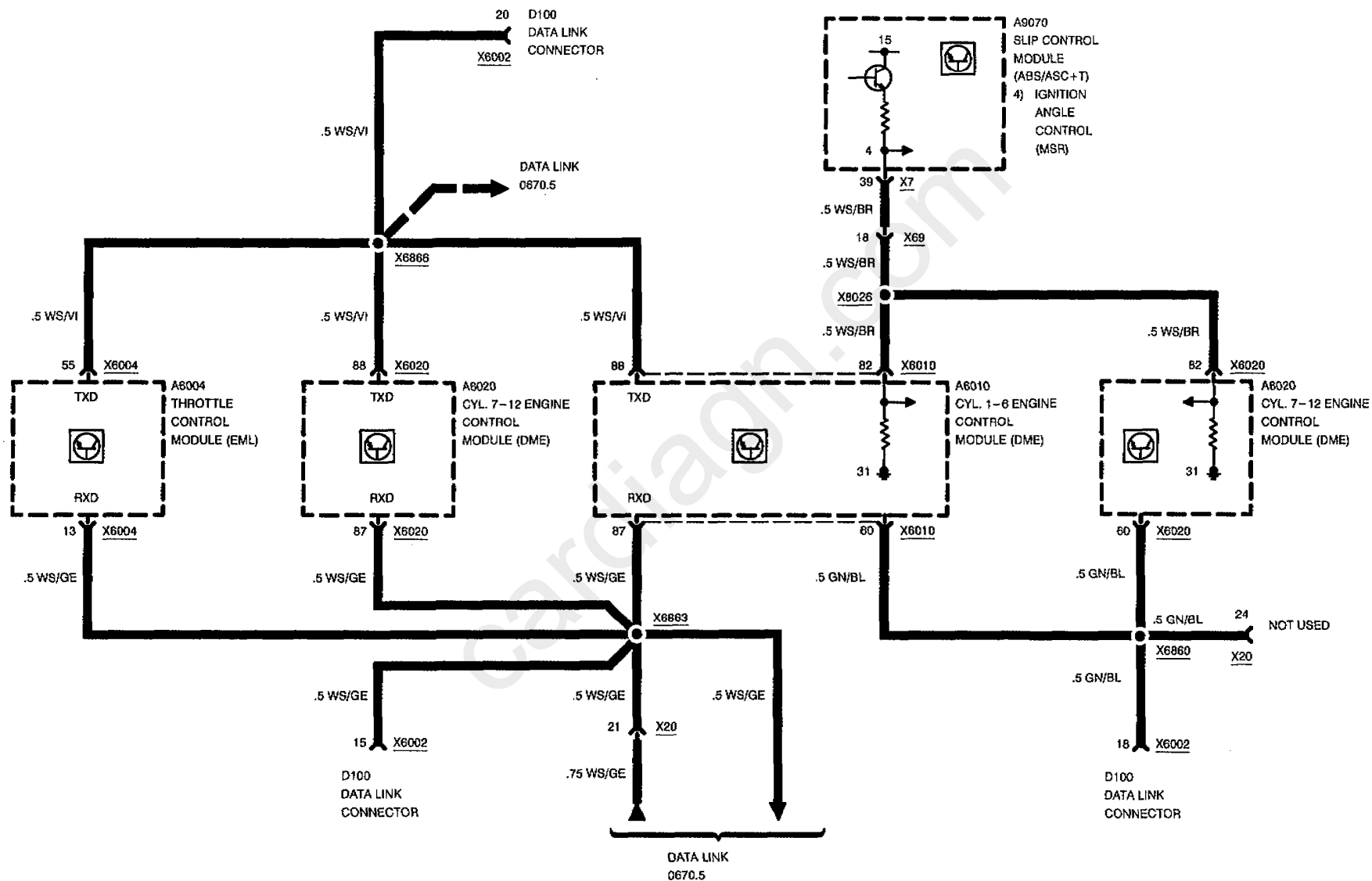
CYL. 1-6 ENGINE CONTROL MODULE





ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

CYL. 1-6 ENGINE CONTROL MODULE

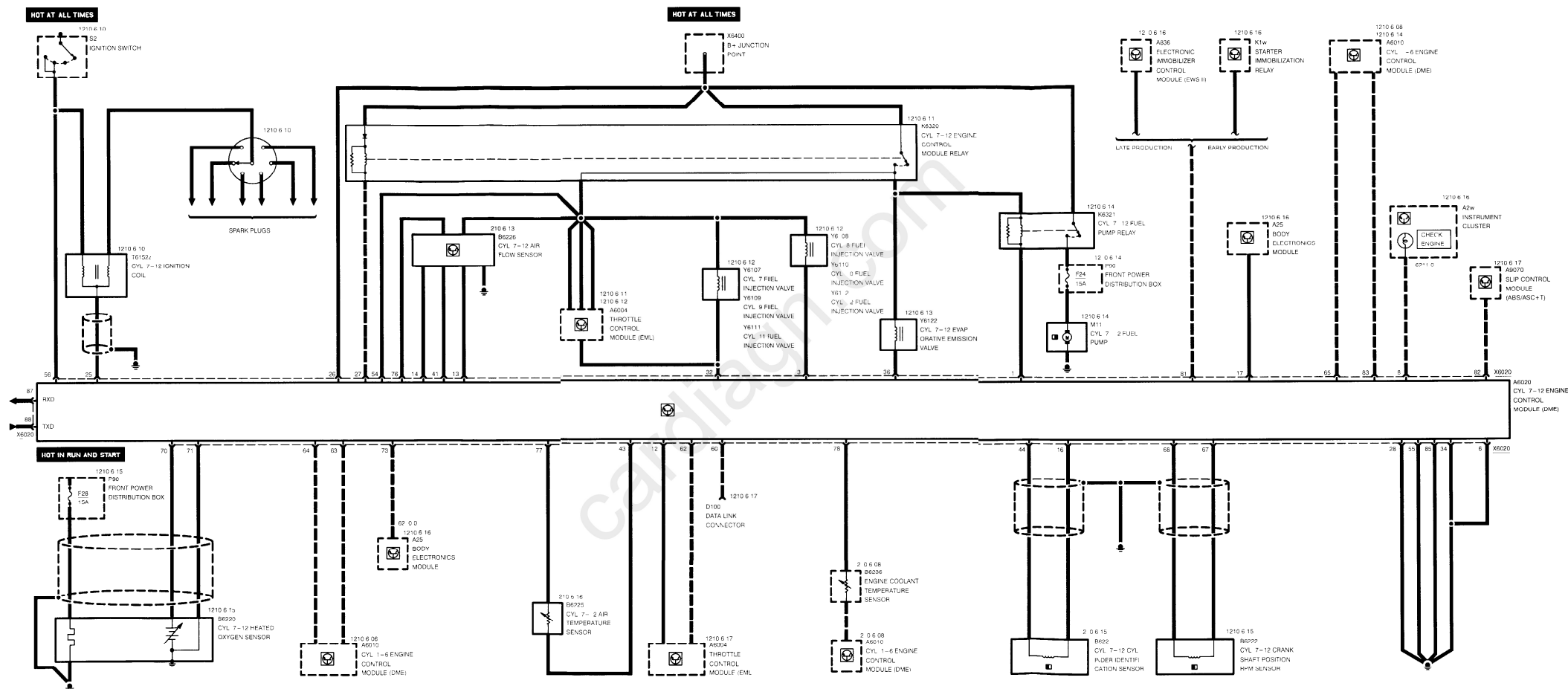


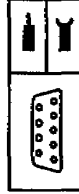
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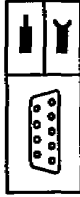


Pin Assignments

X6020

Pin	Type	Description/Function	Connection
1	A	Fuel pump relay and crankshaft reference signal (TR)	Fuel pump relay
2		Not used	
3	A	Fuel injector valves cyl. 8 - 10 - 12	Fuel injector valves
4		Not used	
5		Not used	
6	M	Ground, fuel injector valve output stages	Ground point
7		Not used	
8	A	Check engine	Instrument cluster
9		Not used	
10		Not used	
11		Not used	
12	E	Wide open throttle signal (VL)	Electronic throttle control module (EML)
13	A	Free combustion	Mass air flow sensor
14	M	Ground, mass air flow sensor	Mass air flow sensor
15		Not used	
16	E	Cylinder identification sensor (ignition)	Cylinder identification sensor (connection B)
17	A	Injection measuring signal (ti) (KVA signal)	Body electronics module (EKM)
18		Not used	
19		Not used	
20		Not used	
21		Not used	
22		Not used	
23		Not used	
24		Not used	
25	A	Ignition, terminal 1	Cyl. 7 - 12 ignition coil
26	E	Battery voltage	B+ junction point
27	A	Engine control module relay	Engine control module relay terminal 85
28	M	Ground for electronics and shielding the sensors	Ground point
29		Not used	

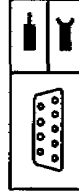
E = Input, A = Output, M = Ground



Pin Assignments

Pin	Type	Description/Function	Connection
30		Not used	
31		Not used	
32	A	Fuel injector valves cyl. 7 - 9 - 11	Fuel injector valves and electronic throttle control module (EML)
33		Not used	
34	M	Ground, remaining output stages (except for ignition and fuel injector valves)	Ground point
35		Not used	
36	A	Evaporative emission valve	Evaporative emission valve
37		Not used	
38		Not used	
39		Not used	
40		Not used	
41	E	Mass air flow sensor signal	Mass air flow sensor
42		Not used	
43	M	Ground for sensors	Temperature sensors
44	E	Cylinder identification sensor (ignition)	Cylinder identification sensor (connection A)
45		Not used	
46		Not used	
47		Not used	
48		Not used	
49		Not used	
50		Not used	
51		Not used	
52		Not used	
53		Not used	
54	E	Battery voltage	Engine control module relay, terminal 87
55	M	Ground, ignition	Ground point
56	E	Ignition, terminal 15	Ignition switch
57		Not used	
58		Not used	
59		Not used	
60	E	Programming voltage	Data link connector

E = Input, A = Output, M = Ground



Pin Assignments

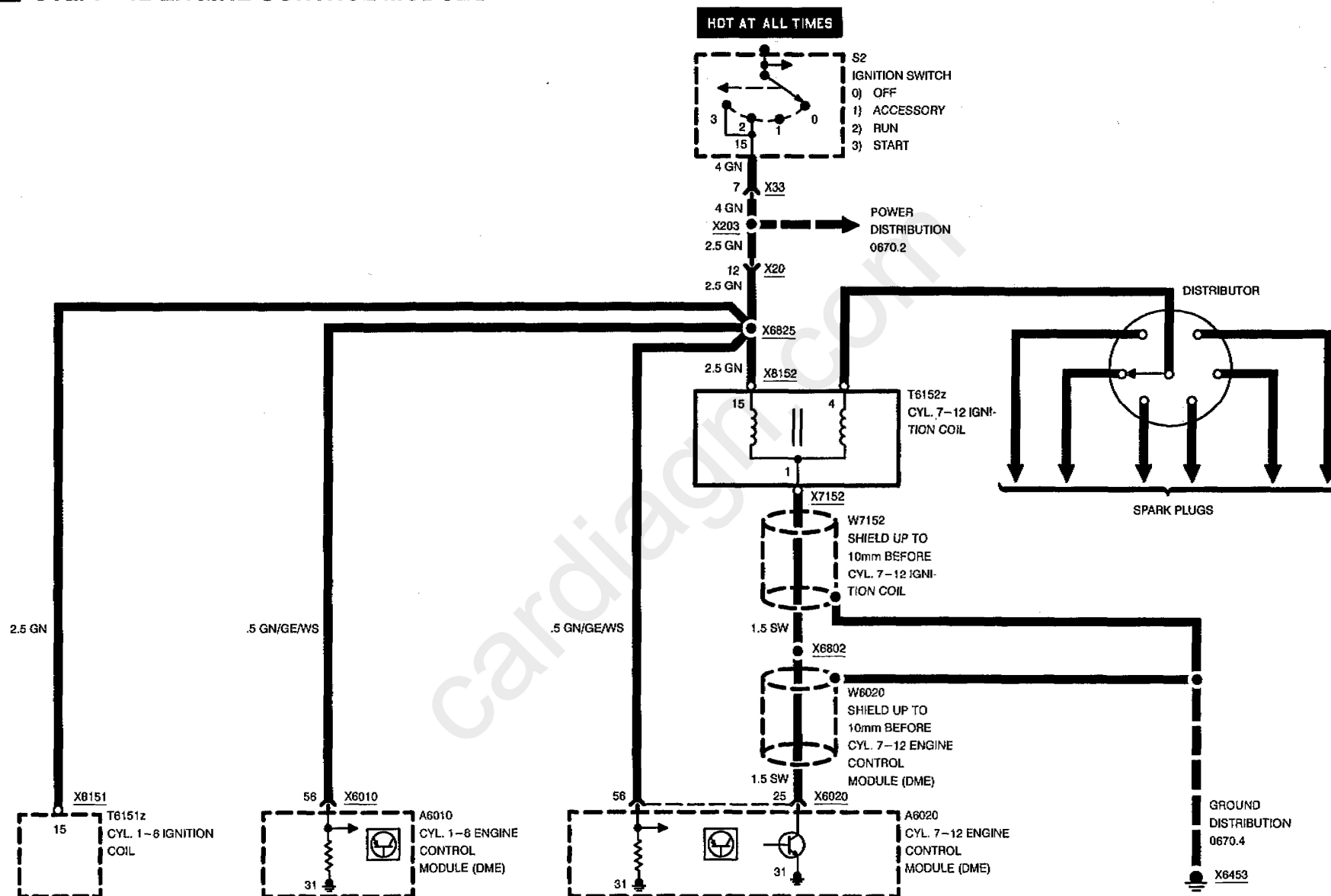
Pin	Type	Description/Function	Connection
61		Not used	
62	E	Idle signal (LL)	Electronic throttle control module (EML)
63	E	Torque converter clutch	Not used
64	E	Ignition timing intervention	Not used
65	E	Park/Neutral sensing	Not used
66		Not used	
67	E	Inductive pulse generator (connection B)	Pulse generator, crankshaft rpm sensor
68	E	Inductive pulse generator (connection A)	Pulse generator, crankshaft rpm sensor
69		Not used	
70	E	Oxygen sensor signal	Heated oxygen sensor
71	M	Ground, oxygen sensor	Heated oxygen sensor
72		Not used	
73	E	Speedometer signal	Body electronics module (EKM)
74		Not used	
75		Not used	
76	E	Idle CO-potentiometer	Mass air flow sensor
77	E	Intake air temperature	Engine intake air temperature sensor
78	E	Engine coolant temperature	Engine coolant temperature sensor
79		Not used	
80		Not used	
81	E	Antitheft signal	Starter immobilization relay (early production) Electronic immobilizer control module (EWS II)
82	E	ASC ignition angle control	ASC + T control unit
83	E/A	Data link	Cyl. 1-6 engine control module
84		Not used	
85	E	Identifier, Cyl. 7 - 12 engine control module	Ground point
86		Not used	
87	E	RxD diagnostic data line	Data link connector
88	E/A	TxD diagnostic data line	Data link connector

E = Input, A = Output, M = Ground



ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

CYL. 7-12 ENGINE CONTROL MODULE

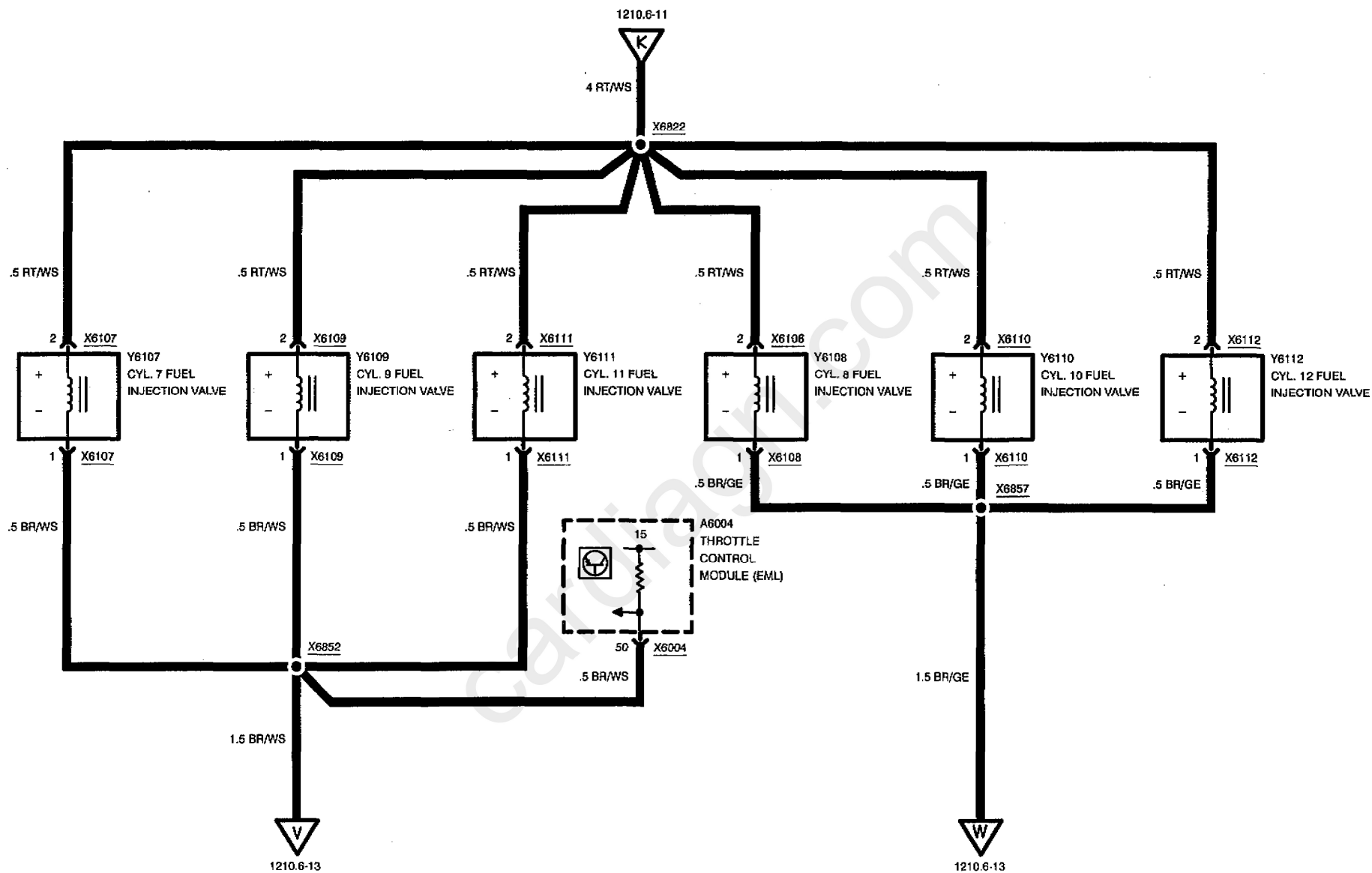






ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

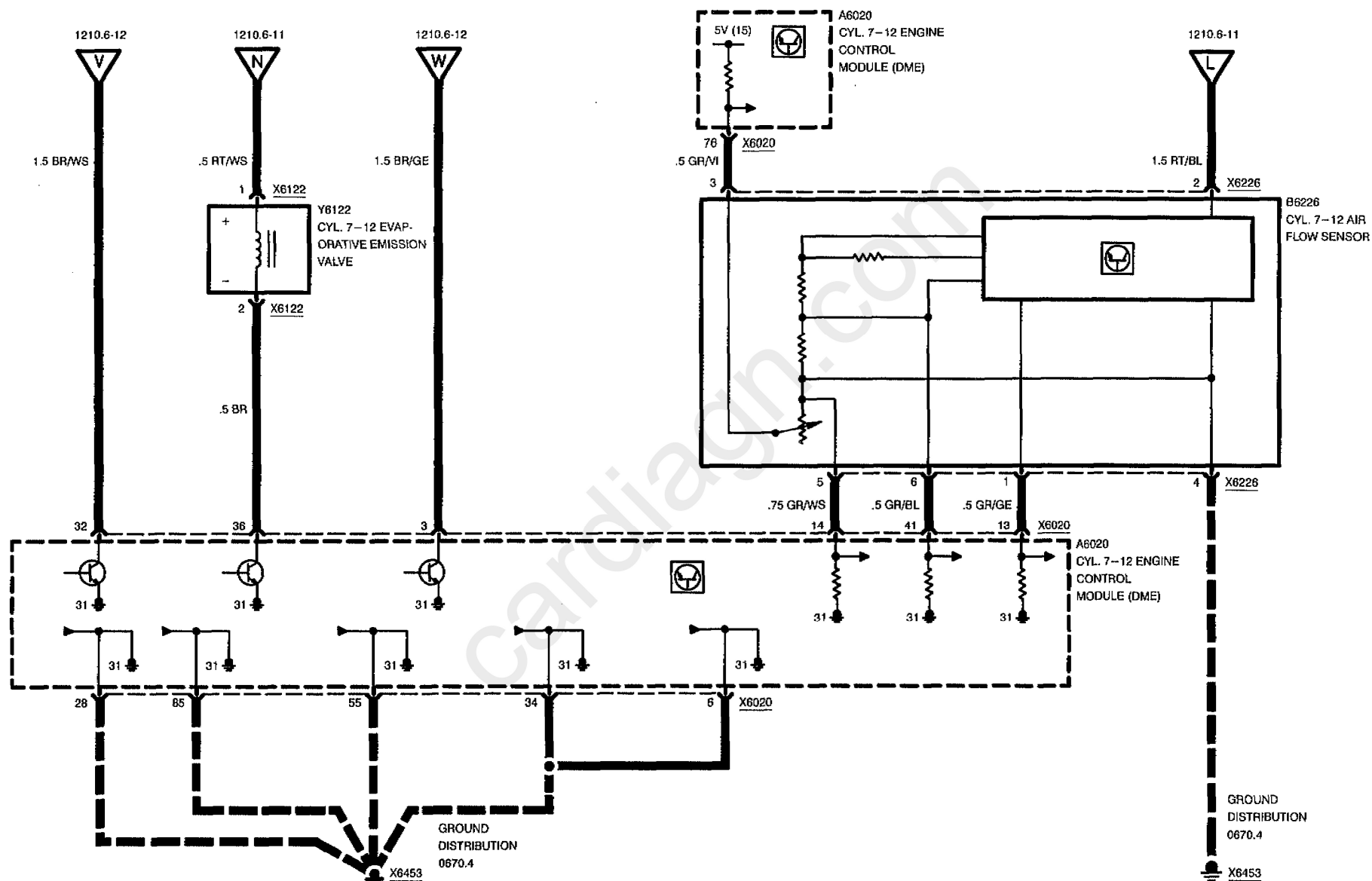
FUEL INJECTION VALVES





ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

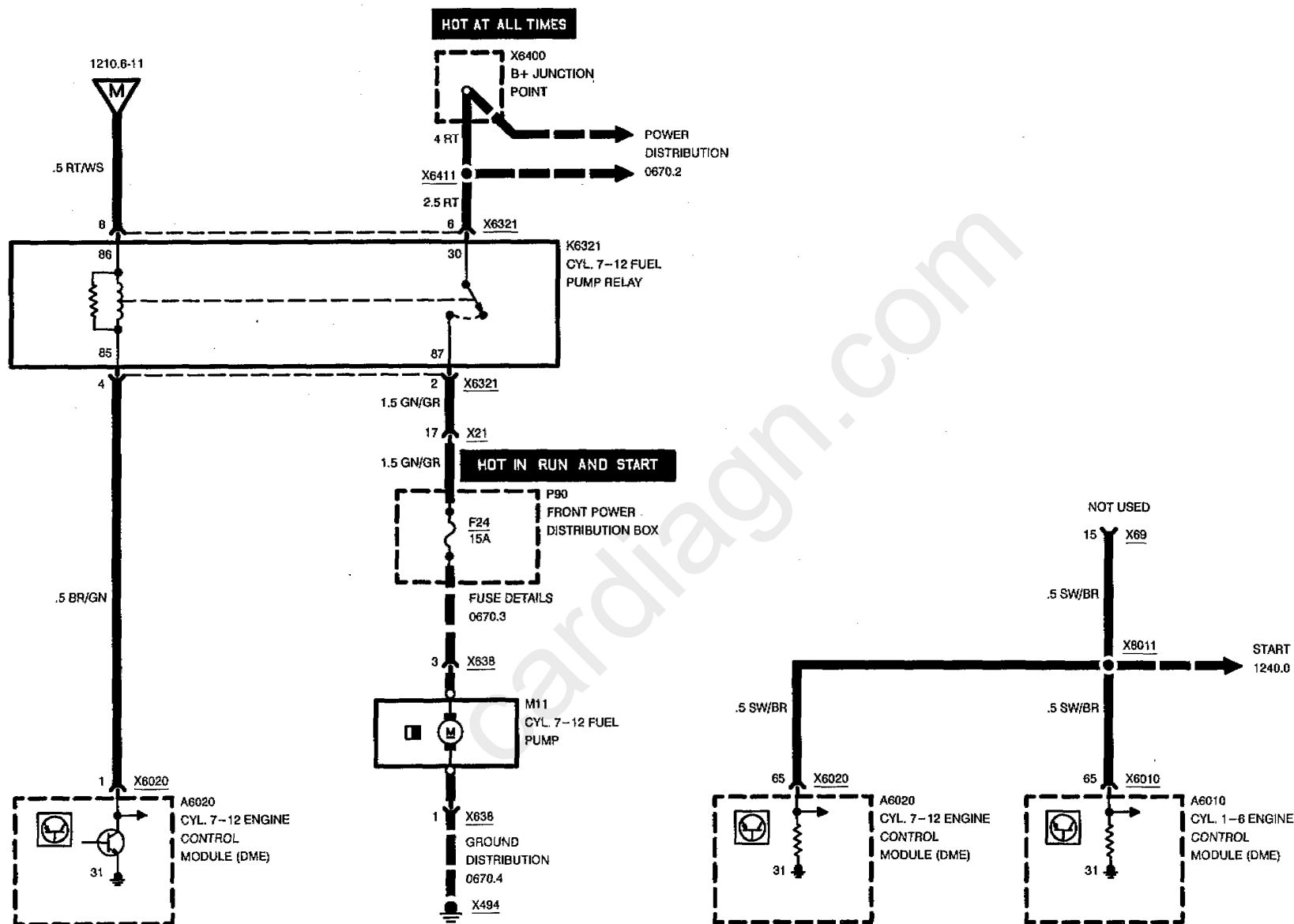
CYL. 7-12 ENGINE CONTROL MODULE





ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

CYL. 7-12 ENGINE CONTROL MODULE

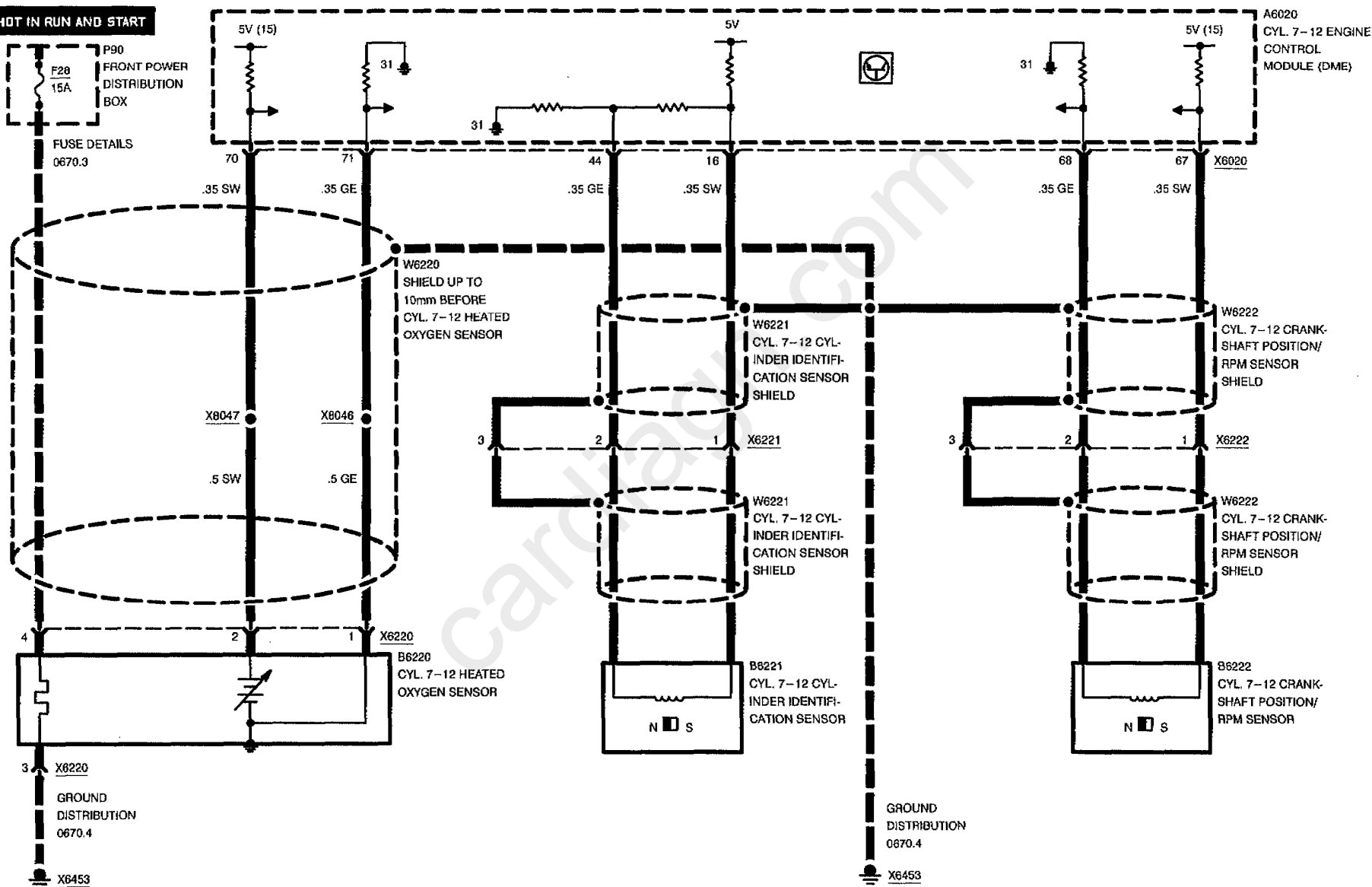




ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

CYL. 7-12 ENGINE CONTROL MODULE

HOT IN RUN AND START



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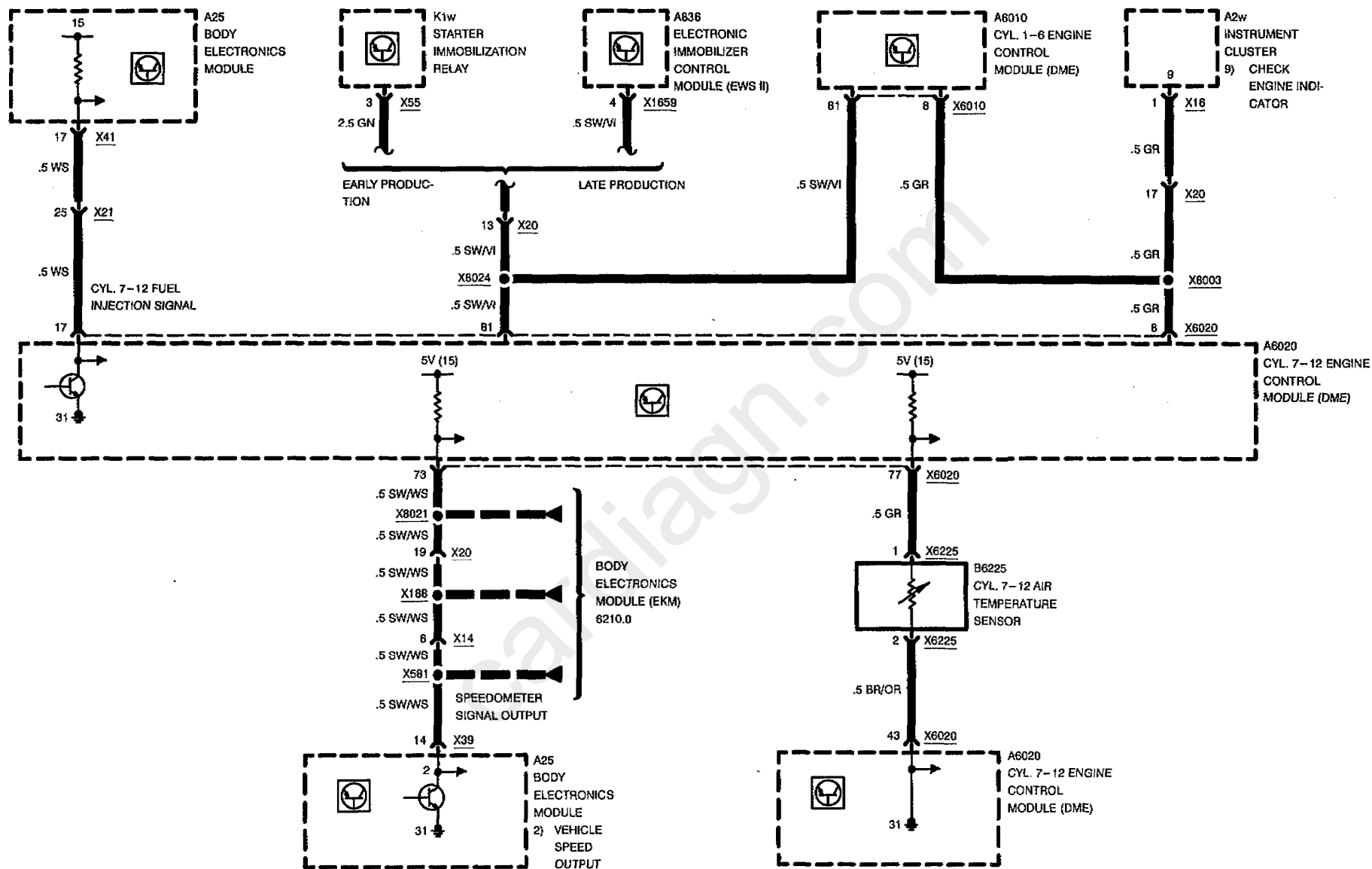
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ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

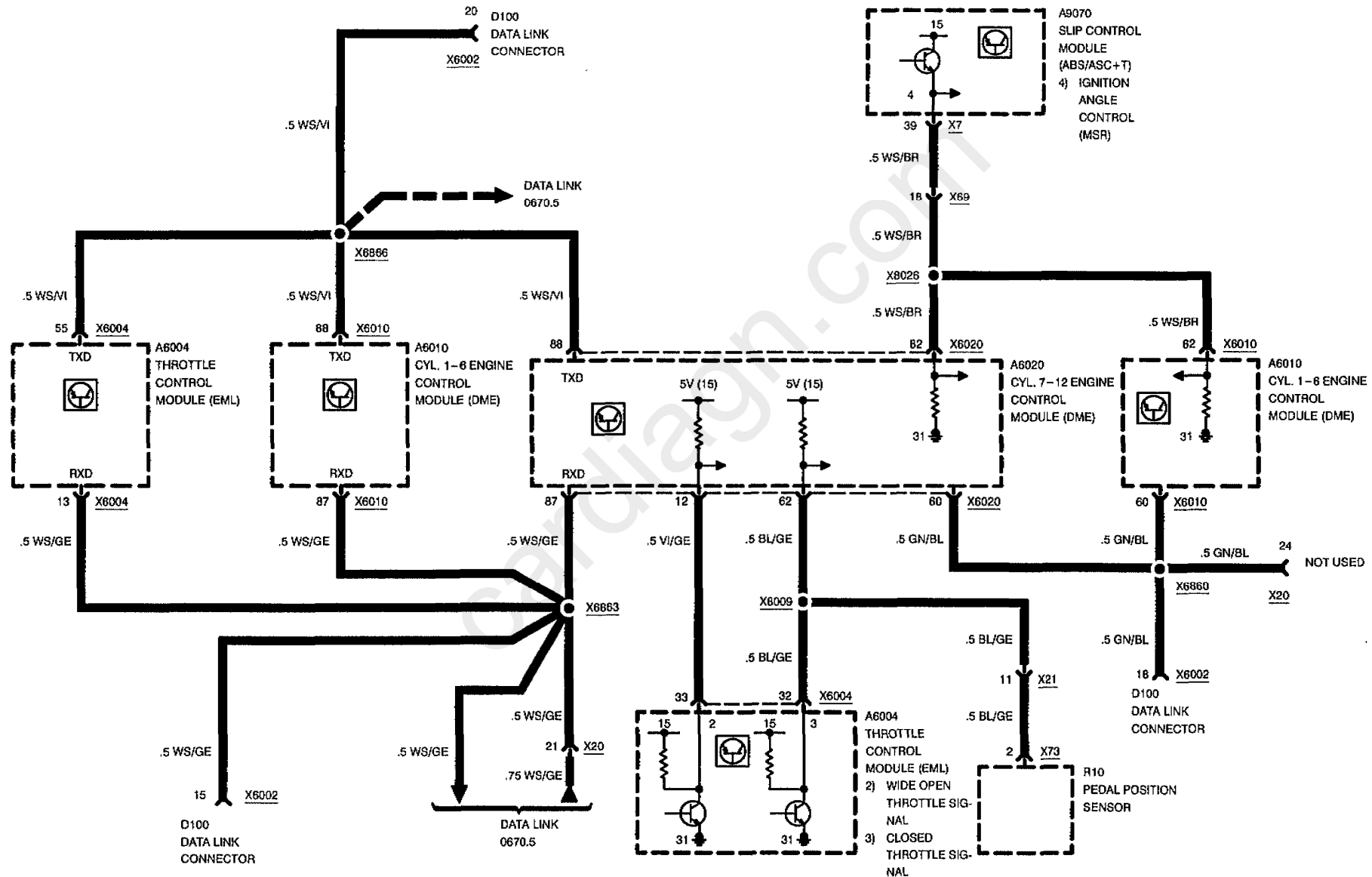
CYL. 7-12 ENGINE CONTROL MODULE





ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

CYL. 7-12 ENGINE CONTROL MODULE



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