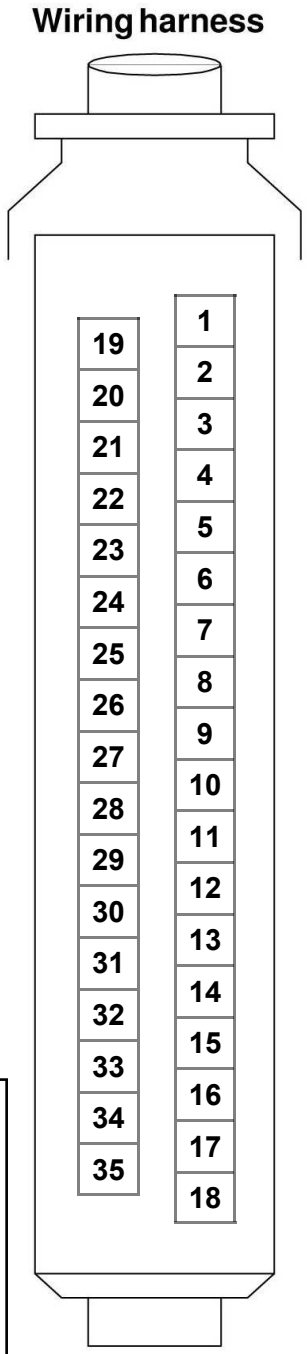
K-Jetronic Continuous Injection (CI). 240 B21F. Lambda ECU Pin Functions.

1. —
2. (GN) Input signal from oxygen sensor (shielded).
3. —
4. (BK) SHIELD (shield for oxygen sensor GN wire).
5. (BK) Ground (external signal ground for shield).
6. —
7. (GR) Input signal from Lambda thermal cutout switch (temp switch).
8. (GR) 12v input from Lambda relay pin 87 (which receives switched power via fuel pump relay pin 87).
9. —
10. —
11. —
12. —
13. —
14. —
15. (BN) Ground (control signal output for frequency valve).
16. (BK) Ground (external signal ground for control signal).
17. (RD) Lead to Lambda Sond test plug.
18. —

Pins 19 — 35 not used.



LAMBDA ECU PART NUMBERS FOR B21F

VOLVO 1276879 (1276721) (1980-81 242 CH 165570-206790, 244 CH 482505-686099, 245 CH 264755-386309) BOSCH 0280800033.

VOLVO 1306411 (1982 242 CH after 206791, 244 CH after 686100, 245 CH after 368310). BOSCH 0280800053.

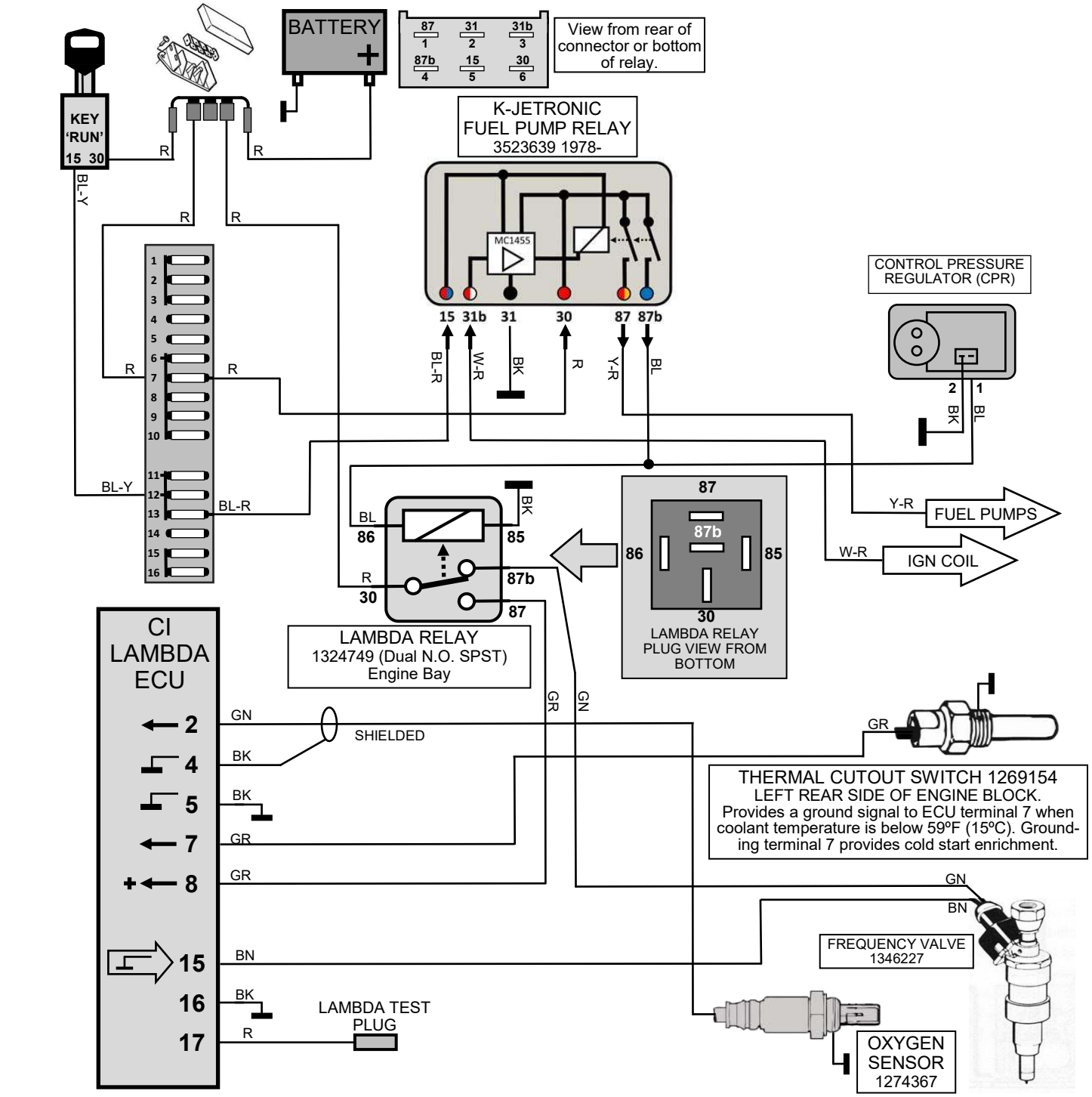
1981 B21F USA Federal. Eng No 498920 (manual trans, 3.73:1); 498921 (auto trans, 3.73:1). B21-5: Engine designation “45” found in VIN.

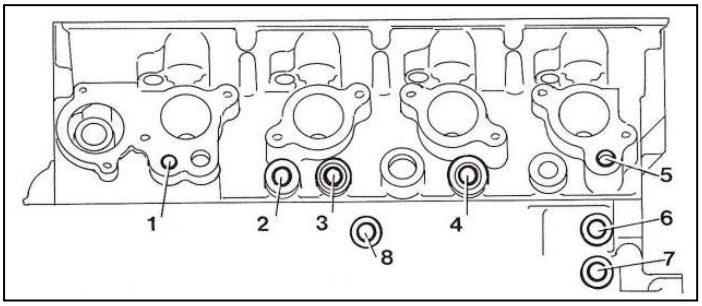
1981 B21F Calif. Eng No 498892 (manual trans, 3.73:1); 498893 (auto trans, 3.73:1). B21F-5: Engine designation “45 found on VIN.

1981 B21F-MPG. Calif, USA Federal. Computer Controlled Ignition (Chrysler). Eng No 498896 (manual trans, 3.54:1); 498897 (auto trans, 3.54:1). B21F-9: Engine designation “49” found on VIN.

1982 B21F CI Engine No 498960 (manual trans); 498961 (auto trans).

K-Jetronic Continuous Injection (CI). 240 B21F.
Lambda ECU Pin Functions.
240 B21F using Constant Idle Speed (CIS) System.





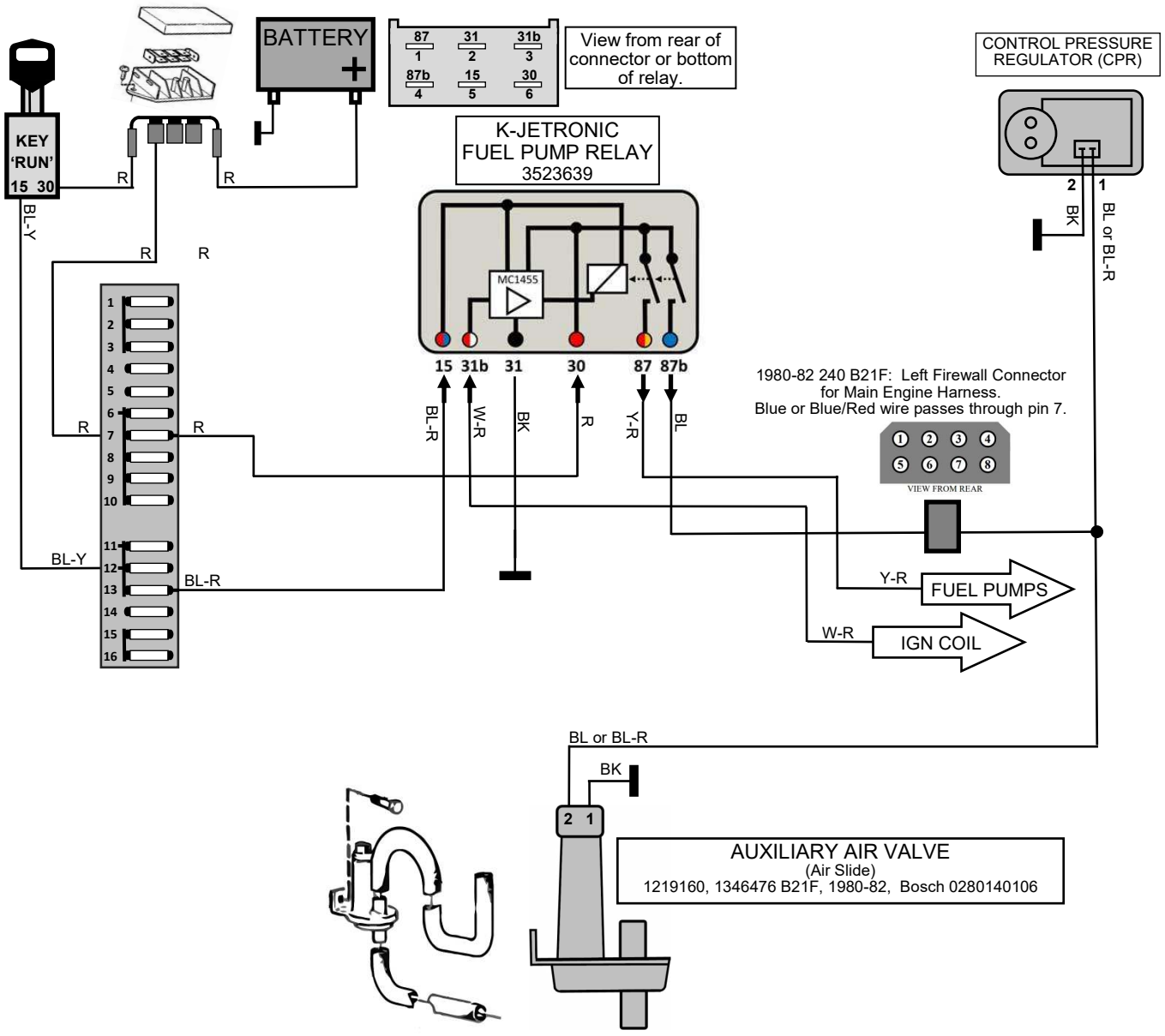
B21F ENGINE CONTROL SENSORS

2. 1269355 Thermostat Valve. Acceleration enrichment (vacuum hoses).
3. 460191 Temperature (dash gauge) Sender. (Y wire).
4. 1219731 Thermal Time Switch (cold start inj) (BL-Y, W wires).
6. (1981) 1306024, (1982) 13406937 CIS Temp Sender (R, BL wires).
7. 1269154 Thermal Cutout Switch (Lambda) (GR wire).

K-Jetronic Continuous Injection (CI).
240 B21F with Auxiliary Air Valve.

(Lambda system not shown in this diagram)

If the later Constant Idle Speed (CIS) System is NOT present, the car will have an Auxiliary Air Valve for cold/warm idle speed control. If the CIS System is present, it will include an Idle Air Control Valve, which is shown in following pages.



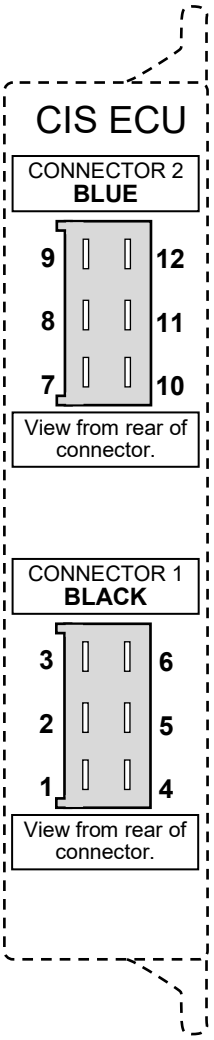
Constant Idle Speed (CIS) System.
B21F with Idle Air Control Valve.
CIS ECU Pin Functions.

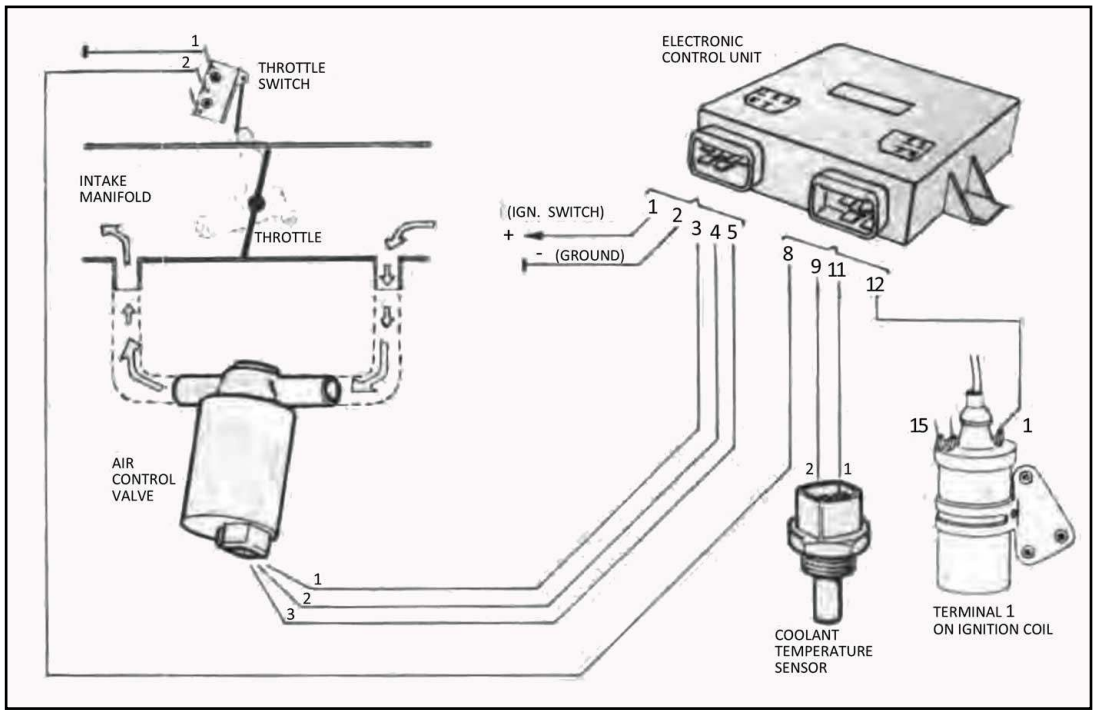
CONNECTOR 1 (BOTTOM)

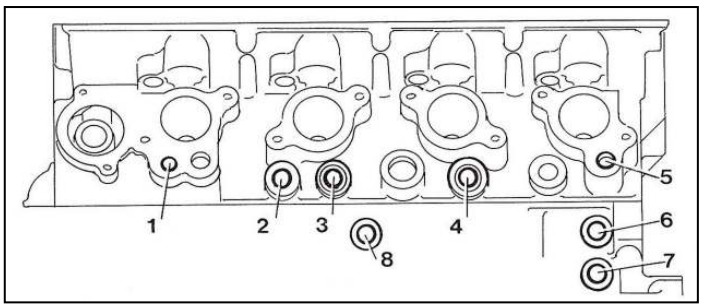
1. (B-R) 12v input from terminal 15 ignition switch.
2. (BK) Ground.
3. (W) Control signal output to idle air control valve pin 1
4. (BN) 12v output to idle air control valve pin 2.
5. (GN) Control signal output to idle air control valve pin 3.
6. —

CONNECTOR 2 (TOP) (BLUE CONNECTOR)

7. — (W-GN or R **if present**) Input signal (12v) from AC for elevated idle.
8. (Y) Input signal (ground) from throttle microswitch 2 (switch open at idle, closed above idle).
9. (R) Input signal from coolant temp sensor (CLT).
10. (BL-W) Lead to idle control service/test plug. Ground to set base idle.
11. (BL) Input signal from coolant temp sensor (CLT).
12. (W-R) Ignition pulse signal input from coil terminal 1 (Neg.)







B21F ENGINE CONTROL SENSORS

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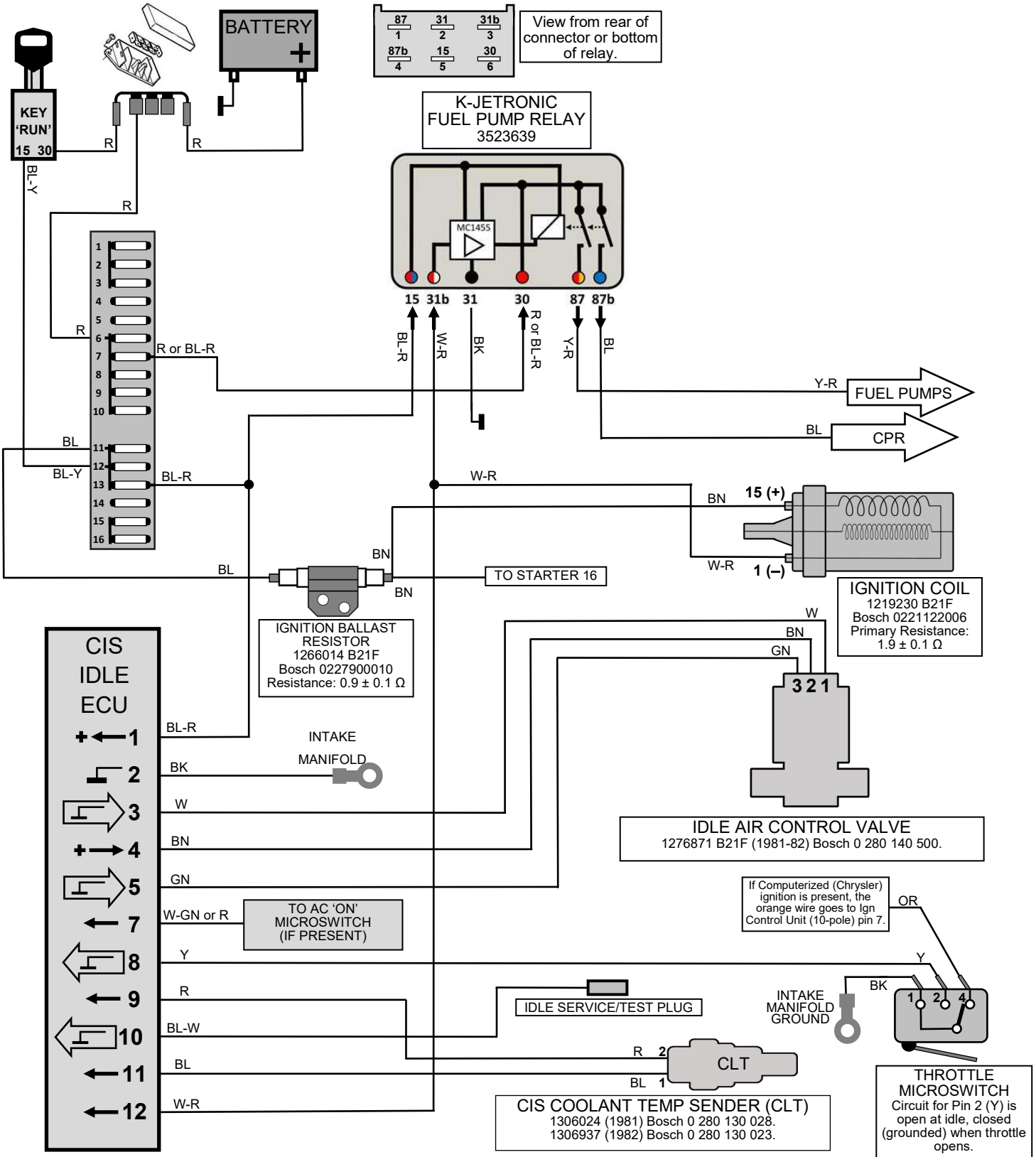
3. 460191 Temperature (dash gauge) Sender. (Y wire).
4. 1219731 Thermal Time Switch (cold start inj) (BL-Y, W wires).
6. (1981) 1306024, (1982) 13406937 CIS Temp Sender (R, BL wires).
7. 1269154 Thermal Cutout Switch (Lambda) (GR wire).

Constant Idle Speed (CIS) System.
B21F with Idle Air Control Valve.
CIS ECU Pin Functions.



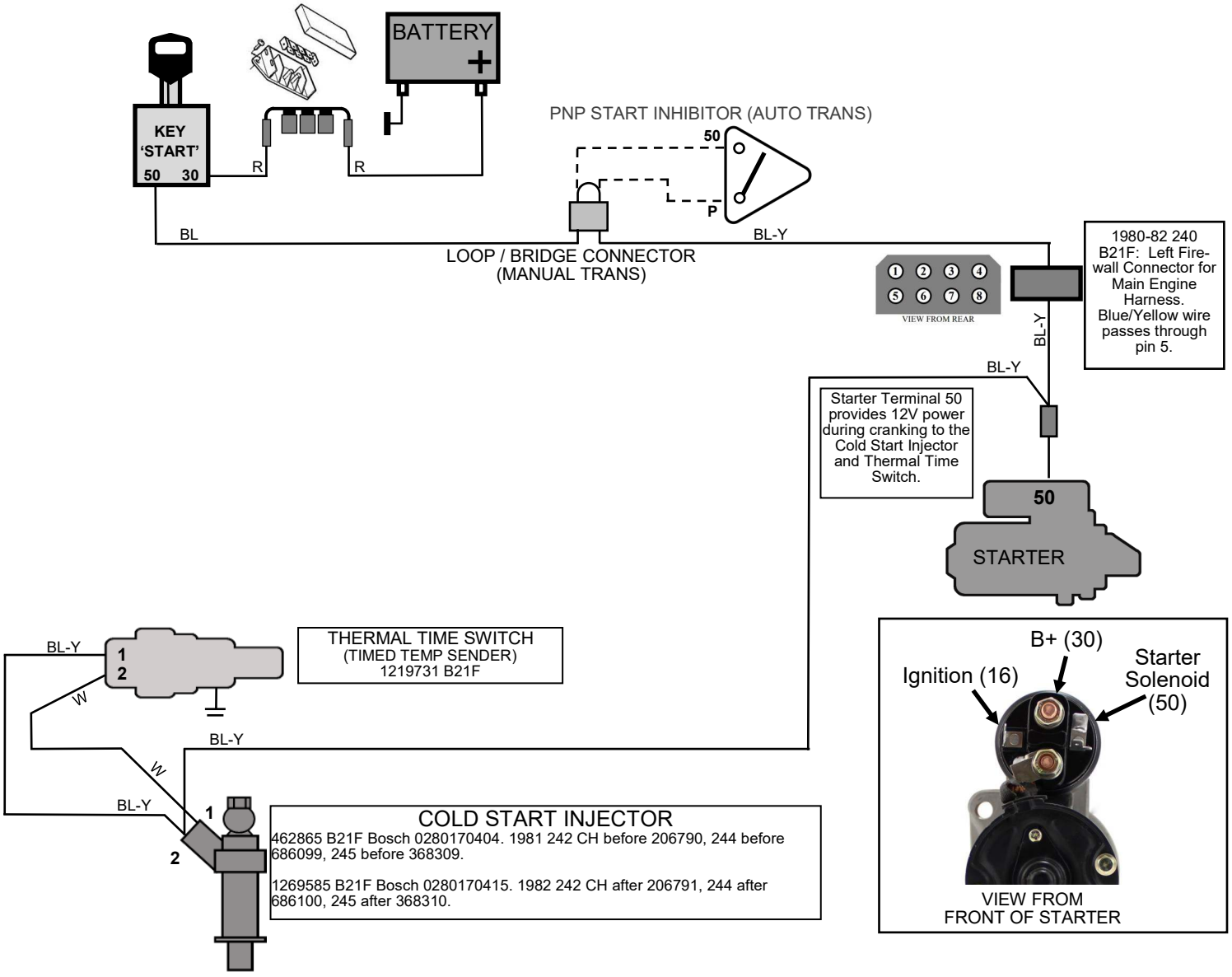
CIS ECU PART NUMBERS B21F

1981 B21F Calif. Eng No 498892 (manual trans); 498893 (auto trans). ECU 1276897, BOSCH 0 280 220 003.

1981 B21F-MPG (Calif/Federal) Eng No 498896 (manual trans); 498897 (auto trans). ECU 1306544, BOSCH 0 280 220 002.

1982 B21F CI Engine No 498960 (manual trans); 498961 (auto trans). ECU 1317499, BOSCH 0 280 220 005.

K-Jetronic Continuous Injection (CI).
Cold Start Injector Circuit.

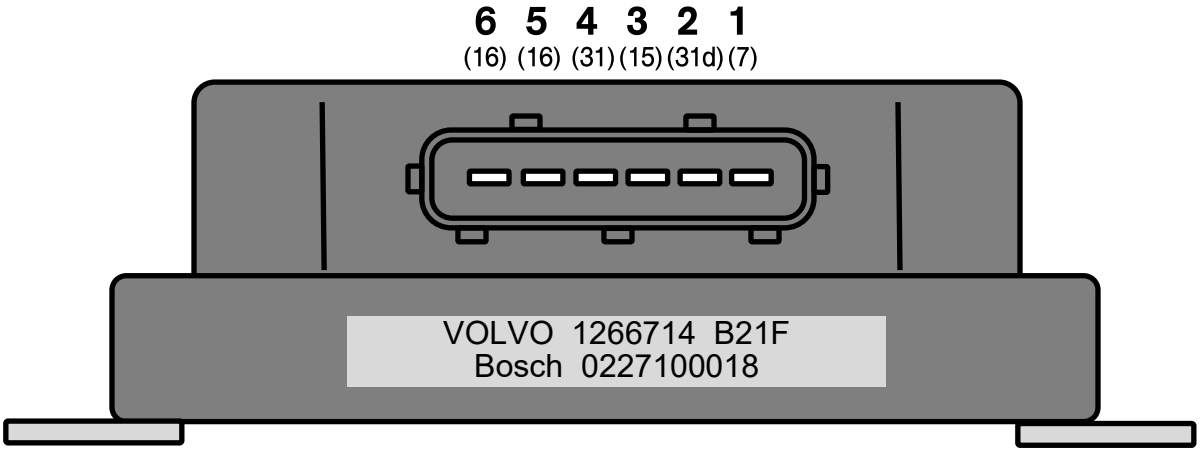


The COLD START INJECTOR will assist the starting of the engine when cold. It's activated when the starter motor is activated. The length of time that this additional injector sprays is determined by the engine's temperature, which is seen by the THERMAL TIME SWITCH.

The THERMAL TIME SWITCH, when cold (below 86-95ºF), provides the ground path to activate the cold start injector. It has a bimetal strip, which is then heated by voltage from the starter motor during cranking. As the strip heats, over a period of about 8 to 10 seconds, the legs on the bimetal strip separate and the ground path is disengaged, deactivating the injector. A moderately warm engine may only require a few seconds before this circuit becomes deactivated. A hot engine will likely already have an open circuit and the injector will not activate.

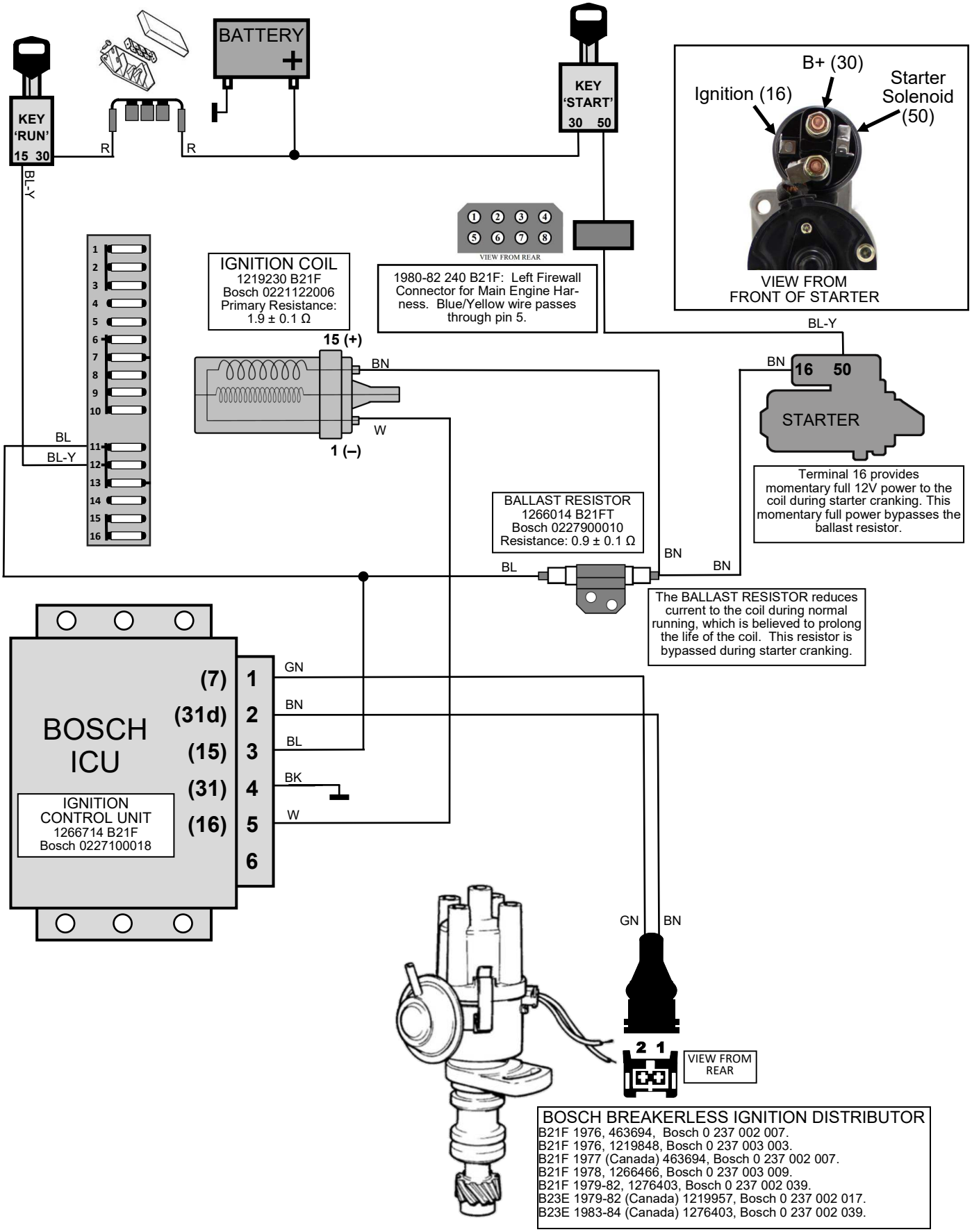
An IMPULSE RELAY was later introduced for the 1982 B21FT. It was intended to help provide enhanced cold start injector operation to assist during warm starts, such as when the car has been parked for up to a couple of hours. During warm start cranking, the impulse relay will engage after about 1.5 seconds. It will then gives 0.1 second of injection with 0.3 second intervals.

Bosch Breakerless Electronic Ignition for B21F.
Ignition Control Unit (ICU) Pin Functions.



1. (7) (GN) Engine speed input from distributor Hall generator.
2. (31d) (BN) Signal ground for Hall generator input.
3. (15) (BL) 12v input from ignition switch terminal 15.
4. (31) (BK) Ground.
5. (16) (W) Control signal output to coil terminal 1 (negative).
6. — (not used)

Bosch Breakerless Electronic Ignition for B21F.
Ignition Control Unit (ICU) Pin Functions.



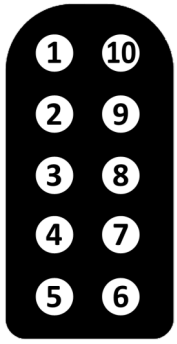
BOSCH BREAKERLESS IGNITION DISTRIBUTOR
B21F 1976, 463694, Bosch 0 237 002 007.
B21F 1976, 1219848, Bosch 0 237 003 003.
B21F 1977 (Canada) 463694, Bosch 0 237 002 007.
B21F 1978, 1266466, Bosch 0 237 003 009.
B21F 1979-82, 1276403, Bosch 0 237 002 039.
B23E 1979-82 (Canada) 1219957, Bosch 0 237 002 017.
B23E 1983-84 (Canada) 1276403, Bosch 0 237 002 039.

Computer Controlled Ignition (Chrysler designed) for B21F MPG. Ignition Control Unit (ICU) Pin Functions.

Knock Sensor Circuit (pin 6) is not used.

The **B21F MPG** for 1981-82 was a B21F with a computer controlled (Chrysler) ignition, Constant Idle Speed System (CIS), and lower numerical rear differential (3.54:1).

1. (W) Control signal output to coil terminal 1 (negative post).
2. (BL) 12v input switch (from terminal 15).
3. (GN) 12v output to Hall generator in distributor.
4. —
5. (Y) Engine speed input from distributor Hall generator.
6. —
7. (OR) Input signal from throttle microswitch, grounded when throttle closed.
8. —
9. (BK) Signal ground for distributor power and Hall generator input.
10. (BK) Ground for control unit (to crimp ring bolted to engine).



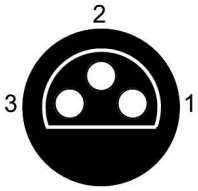
VIEW FROM REAR OF CONNECTOR

Distributor Pin Functions.

This distributor can be quickly identified by the ROUND connector, a WHITE distributor cap, which is secured with two screws, and no vacuum canister.

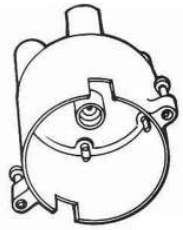
VOLVO PN 1306059 Distributor. ROUND 3-pole Connector.

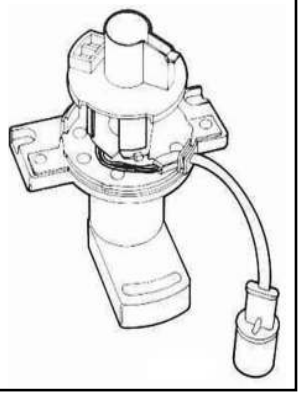
1. (Y) To ICU Pin 5. Engine speed input from distributor Hall generator.
2. (GN) To ICU Pin 3. 12v output to Hall generator in distributor.
3. (BK) To ICU Pin 9. Signal ground for distributor power and Hall generator input.



Round Connector
View from Rear

WHITE CAP





Computer Controlled Ignition (Chrysler designed) for B21F MPG.
Ignition Control Unit (ICU) Pin Functions.

Knock Sensor Circuit (pin 6) is not used.