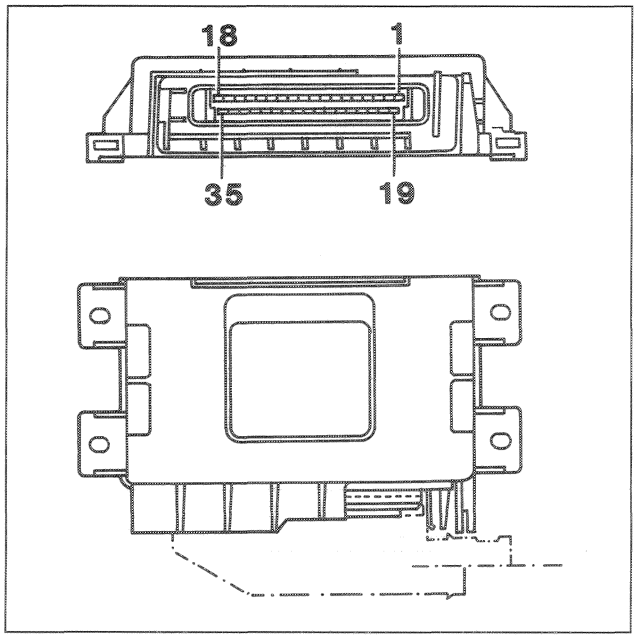
WEBER MARELLI INTEGRATED S.P.I. INJECTION-IGNITION SYSTEM, EEC STAGE 2 (CF2)

Modifications have been made to the injection-ignition and exhaust emission control system as part of our ongoing programme to reduce the harmfulness of exhaust emissions.
New technology, with the aid of the most highly developed computer aided systems, has made it possible to optimise results by designing new sofware for the IAW 16.F EB electronic control unit. The ECU is also smaller and takes up less space.
As before, the task of the electronic control unit is to process signals from the various sensors by consulting maps stored in the ROM memory (extended to allow more detailed control) and extrapolating control strategies for the various system components (injector, idle actuator, active carbon filter vapour control solenoid, ignition coils, I.A.W. system warning light) in order to achieve the results required under the terms of directive 94/12/EC (EEC Stage 2).
The non-volatile memory has also been extended for more effective control of anomalies arising during engine operation. Information processed by the microcomputer within the ECU is mapped inside the RAM and used during fault diagnosis when the vehicle is serviced.
The table below compares levels obtained during emission control. These results are well within the limits imposed by EEC Stage 2 emission control regulations.

	HC+NOX (gr/Km)	CO (gr/Km)
C F2 regs.	0.50	2.20
Levels obtained	0.19-0.20	0.60-0.80

Comparison of emission levels



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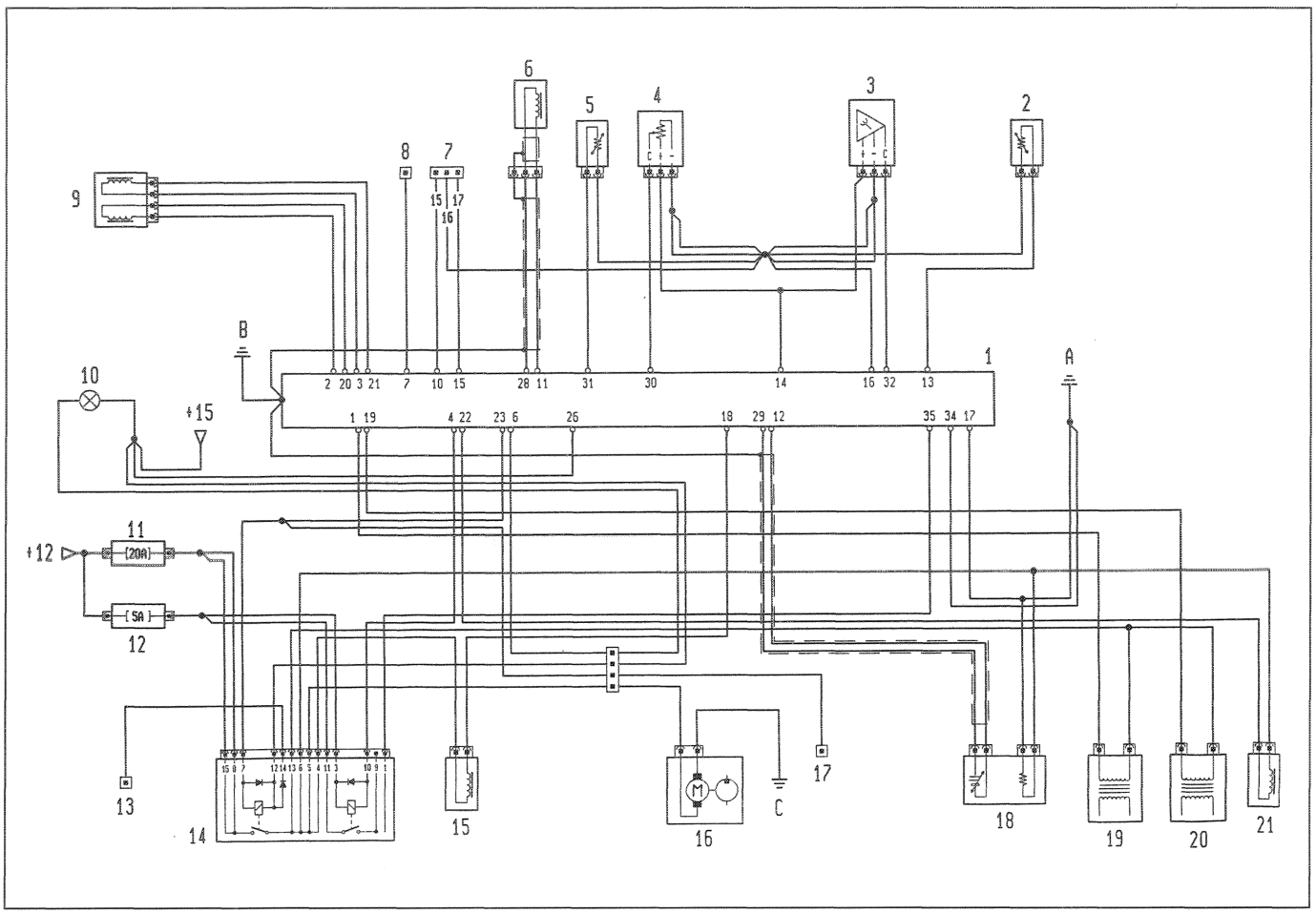
Electronic control unit IAW 16.F EB

Despite its modest size, this new electronic control unit contains a bigger memory to enable faster monitoring of system functions.
It is connected to the system by means of a 35 pole socket and protected against false polarities and short-circuits. Injection and ignition map settings have been altered to limit fuel consumption, and thus harmful exhaust emissions, still further.

I.A.W. INJECTION-IGNITION SYSTEM WIRING DIAGRAM (showing connections to electronic control unit)



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1. I.A.W. injection-ignition electronic control unit
2. Engine coolant temperature sender unit
3. Absolute pressure sensor
4. Accelerator throttle position sensor (potentiometer)
5. Air temperature sender unit
6. Rpm and TDC sensor with shielded sheath
7. Diagnostic socket for Fiat Lancia Tester
8. Car alarm signal
9. Idle speed adjustment step motor
10. Injection system failure warning light (bulb)
11. 20A fuse for ignition-injection system
12. 5A fuse for electronic control unit
13. Charging lamp connection for contact-type ignition switch
14. Dual relay for injection ignition system
15. Injector
16. Electric fuel pump
17. Rev counter signal (where fitted)
18. Hot Lambda probe with shielded sheath
19. Ignition coil for cylinders 1 and 4
20. Ignition coil for cylinders 2 and 3
21. Petrol vapour cut-off solenoid

A. Power earth on engine
B. Power earth on bodywork
C. Power earth on chassis