

SERVICE BULLETIN No

80-29

DATE: 4/20/87

**SUBJECT: ELECTRICAL TEST PROCEDURE FOR FUEL INJECTION SYSTEM-
BOSCH K-JETRONIC WITH LAMBDA (8 CYLINDER)**

**VEHICLES: 1984-1985 308 QV, MONDIAL QV, MONDIAL CABRIOLET
1986-1987 328 GTB/GTS, 3.2 MONDIAL AND 3.2 MONDIAL
CABRIOLET**

INTRODUCTION:

Attached please find the above Electrical Test Procedure that can be utilized when troubleshooting the Bosch K-Jetronic with Lambda fuel injection system. These tests are to be performed using the special interconnector (35 pin-Ferrari P.N. 95970024) connected in series with the Bosch electronic control unit.

Please follow closely the instructions in sequence listed under "Important Notes".



**ELECTRICAL TEST PROCEDURE
BOSCH K - JETRONIC WITH LAMBDA
(F105E040 & F105C040 ENGINES)**

EQUIPMENT / SPECIAL TOOLING
- Interconnector - Ferrari P.N. 95970024
- Digital Volt / Ohm Meter
Ex. Alltest Multimeter No. 3510

Important Notes:	Test No.	Meter Setting		Correct Theoretical Value	Item Being Checked
		Pin (-) (+)	Dial		
Ignition Key OFF ECU Disconnected	1	5	7	OHM	Coolant Temperature Switch Water Temperature Below 54 - 60° C Water Temperature Above 54 - 60° C
"	2	5	6	OHM	Remove diode for cold start injector and insert jumper wire. Continuity of idle contact on throttle microswitch.
"	3	5	12	OHM	Continuity of W.O.T. contact on throttle microswitch. Resistance should be infinite and become zero with throttle opening above 60° from idle. NOTE: If oil temperature is below 15° C, reading will be 0 Ω
"	4	4	2	OHM	Internal resistance of oxygen sensor, which changes greatly with temperature.
"	5	Chassis Ground 5 Chassis Ground 16		OHM	Ground connection for ECU.
ECU Disconnected Ignition Key ON Fuel Dist. Safety Sw. Disconnected	6	5	8	Volt - DC	Voltage Supply to ECU from Bosch protection relay.

ELECTRICAL TEST PROCEDURE
 BOSCH K - JETRONIC WITH LAMBDA
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Important Notes:	Test No.	Meter Setting		Correct Theoretical Value	Item Being Checked
		Pin (-) (+)	Dial		
Turn Ignition Key OFF Reconnect ECU Reconnect Safety Sw. Reconnect Cold Start Diode Start Engine - Let Idle	7	15	8	Volt - AC	60% Duty Cycle (Open Loop) - (F105C040 Engines) Water Temp. < 57° C Oil Temp. < 25° C
					65% Duty Cycle (Open Loop) - (F105E040 Engines) Water Temp. < 59° C Oil Temp. > 25° C
					50% Duty Cycle (Open Loop) Water Temp. < 57° C Oil Temp. > 25° C
					Closed Loop Water Temp. > 59° C Oil Temp. > 25° C Catalyst Temp. > 300° C
				7.4 V ± .2	
				7.6 V ± .2	
				6.4 V ± .2	
				5.3 - 6.3 V ± .15	
				7.4 V (F105C040) 7.6 V (F105E040)	WOT Enrichment (Jump Pin #12 & #16 to simulate, with a jumper wire).
"	8	4	2	Volt - DC	Voltage Signal from Oxygen Sensor.