

SERVICE BULLETIN No **80-28**DATE: 4/20/87

**SUBJECT: ELECTRICAL TEST PROCEDURE FOR MARELLI MICROPLEX  
IGNITION SYSTEM**

**VEHICLES: TESTAROSSA-MICROPLEX MED 120B  
328 GTB/GTS, 3.2 MONDIAL AND 3.2 MONDIAL CABRIOLET-  
MICROPLEX MED 806A**

**INTRODUCTION:**

Attached there are two Electrical Test Procedures that can be utilized when troubleshooting the Marelli Microplex Ignition System. These tests are to be performed using the special interconnector (25 pin-Ferrari P.N. 95970020) connected in series with the Microplex Ignition Control Unit.

There are two separate test procedures. One for use on Testarossa vehicles and one for 8 cylinder cars with 3.2 engines. Please utilize the appropriate test procedure and follow closely the instructions in sequence listed under "Important Notes".



ELECTRICAL TEST PROCEDURE FOR  
MICROPLEX IGNITION SYSTEM - MED 120B  
(TR - 12 CYL.)

EQUIPMENT / SPECIAL TOOLING

- Interconnector - Ferrari P.N. 95970020
- Digital Volt / Ohm Meter
- Ex. Alltest Multimeter No. 3510

Important Notes:	Test No.	Meter Setting		Correct Theoretical Value	Item Being Checked	Notes
		Pin (-) (+)	Dial			
Install Interconnector Microplex Disconnected Electrical Checks Made w/ignition Off	1	2	1 OHM	600 - 1000 Ω	Resistance of TDC Pick - Up	If 0 Ω or greater than 1500 Ω , replace sensor
"	2	3	16 OHM	600 - 1000 Ω	Resistance of Tachimetric Pick - Up	If 0 Ω or greater than 1500 Ω , replace sensor
"	3	11	17 OHM	0 Ω - Less Than .2 Ω	Ground for Microplex Advance Curve Family Identification	If greater than .2 Ω , check for proper elec. conn. and grd. at ign. coil
"	4	11	18 OHM	∞	Advance Curve Family Identification	
"	5	11	23 OHM	∞	Advance Curve Family Identification	
Turn Ignition Key ON Microplex Disconnected	6	11	13 Volt - DC	11 - 13 V	Voltage Supply to Microplex	If less than 11 - 13 V check cond. of batt. & elec. conn.
Turn Ignition Key OFF Reconnect Microplex Start Engine - IDLE	7	11	19 Volt - DC	12 - 14.5 V 0 V	Voltage Signal to Microplex from Throttle Microswitch ( Idle Position) Off Idle Signal to Microplex from Throttle Microswitch	Check the idle position adjustment of micro-switch. Check elec. conn.
"	8	2	1 Volt - AC	>.10 V	Voltage Output of TDC Pick - Up	If less than, check the position of sensor. (.4-.7mm)

ELECTRICAL TEST PROCEDURE FOR  
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Important Notes:	Test No.	Meter Setting		Correct Theoretical Value	Item Being Checked	Notes
		Pin (-) (+)	Dial			
Turn Ignition Key OFF Reconnect Microplex Start Engine - IDLE	9	3 16	Volt - AC	> 1.5 V	Voltage Output of Tachimetric Pick - Up	
"	10	10 9	Volt - DC	2.8 - 3.5 V	Microplex Output to Power Module 7/12 Bank	If 0v, replace Microplex ECU.
"	11	15 14	Volt - DC	2.8 - 3.5 V	Microplex Output to Power Module 1/6 Bank	If 0v, replace Microplex ECU.
"	12	11 24	Volt - DC	.20 - .35 V	Output Signal to Tachometer	
Turn Ignition Key OFF Remove Interconnector Reconnect Microplex						

ELECTRICAL TEST PROCEDURE FOR  
MICROPLEX IGNITION SYSTEM - MED 806A  
(3.2 - 8 CYL.)

EQUIPMENT / SPECIAL TOOLING  
- Interconnector - Ferrari P.N. 95970020  
- Digital Volt / Ohm Meter  
Ex. Alltest Multimeter No. 3510

Important Notes:	Test No.	Meter Setting		Correct Theoretical Value	Item Being Checked	Notes
		Pin (-) (+)	Dial			
Install Interconnector Microplex Disconnected Electrical Checks Made w/Ignition Off	1	2 1	OHM	600 - 1000 Ω	Resistance of TDC Pick - Up	If 0 Ω or greater than 1500 Ω, replace sensor
"	2	3 16	OHM	600 - 1000 Ω	Resistance of Tachimetric Pick - Up	If 0 Ω or greater than 1500 Ω, replace sensor
"	3	11 17	OHM	Less than .2 Ω	Ground for Microplex Advance Curve Family Identification	If greater than .2 Ω, check for proper elec. conn. and grd. at ign. coil
"	4	11 18	OHM	∞	Advance Curve Family Identification	
"	5	11 23	OHM	∞	Advance Curve Family Identification	
"	6	11 19	OHM	Less than .2 Ω ∞	Idle Signal to Microplex from Throttle Microswitch (Idle Position) OFF Idle Signal to Microplex from Throttle Microswitch	Check the idle position adjustment of micro-switch. Check elec. conn.
Turn Ignition Key ON Microplex Disconnected	7	11 13	Volt - DC	11- 13 V	Voltage Supply to Microplex	

ELECTRICAL TEST PROCEDURE FOR  
MICROPLEX IGNITION SYSTEM - MED 806A  
(3.2 - 8 CYL.)  
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Important Notes:	Test No.	Meter Setting		Correct Theoretical Value	Item Being Checked	Notes
		Pin (-) (+)	Dial			
Turn Ignition Key OFF Reconnect Microplex Start Engine - IDLE	8	2 1	Volt - AC	> .20 V	Voltage Output of TDC Pick - Up	If less than, check the position of sensor. (.4-.7mm)
"	9	3 16	Volt - AC	> 2.0 V	Voltage Output of Tachimetric Pick - Up	
"	10	10 9	Volt - DC	2.8 - 3.5 V	Microplex Output to Power Module 5/8 Bank	If 0v, replace Microplex ECU.
"	11	15 14	Volt - DC	2.8 - 3.5 V	Microplex Output to Power Module 1/4 Bank	If 0v, replace Microplex ECU.
"	12	11 24	Volt - DC	.20 - .35 V	Output Signal to Tachometer	
Turn Ignition Key OFF Remove Interconnector Reconnect Microplex						