
ELECTRICAL - 55

PARTS CATALOG,
SERVICE MANUAL &
SERVICE TIME
SCHEDULE CODE

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SPECIFICATIONS

IGNITION

Firing order 1 - 3 - 4 - 2

Distributor

Type	Bosch — 0-237 . . .
Static advance:	
— Vehicles with carburetor	5°
— Vehicles with fuel injection	10°
Centrifugal advance:	
— Vehicles with carburetor	23° to 27° at 5500 rpm
— Vehicles with fuel injection	16° to 20° at 3500 rpm
Total advance (static and centrifugal):	
— Vehicles with carburetor	28° to 32° at 5500 rpm
— Vehicles with fuel injection	26° to 30° at 3500 rpm
Vacuum advance:	
— Vehicles with carburetor	
with air pump	16° to 18° at 12 in. Hg
without air pump	26° to 30° at 12 in. Hg
— Vehicles with fuel injection	12° to 16° at 11 in. Hg
Air gap	0.011 to 0.019 in. (0.3 to 0.5 mm)
Rotor arm resistance	6000 ohms
Pickup coil resistance	890 to 1285 ohms

Electronic Control Module

Type	Bosch — 0-277-100-029
Current limiter output	4.5 to 6 amps
Input voltage	6 to 18 volts

Coil

Type	Bosch — 0-221-122-012
Primary winding resistance at 68°F (20°C)	1.1 to 1.7 ohms
Secondary winding resistance at 68°F (20°C)	6,000 to 10,000 ohms
Ballast resistor resistance	0.85 to 0.95 ohms

Spark Plugs

Thread diameter and pitch, metric	M 14 x 1.25	
Vehicles With Carburetor	Normal	Resistor
Type	42XLS	R42XLS
.....	W175T30	W175TR30
.....	N9Y	RN9Y
.....	CW7LP	CW7LPR
Gap	0.023 to 0.027 in. (0.6 to 0.7 mm)	0.027 to 0.031 in. (0.7 to 0.8 mm)
Vehicles With Fuel Injection		
Type	Champion RN9Y	
Gap	0.027 to 0.031 in. (0.7 to 0.8 mm)	

STARTER MOTORS

Type and make	Bosch 0-001-212-210	Marelli E 95-0,9/12
Voltage	12 V	12 V
Rated output	0.8 kW	0.9 kW
Direction of rotation, pinion end	clockwise	clockwise
Poles	4	4
Field winding	series	series
Pinion engagement	with flywheel	with flywheel
Control	solenoid	solenoid
Internal diameter of expanded shoes		60.85 to 61.02 mm
Internal diameter of armature		59.95 to 60.00 mm
Mechanical Data		
Brush spring pressure (new brushes)	1.15 to 1.35 kg	1.15 to 1.30 kg
Armature end float	0.10 to 0.15 mm	0.15 to 0.45 mm
Depth for commutator recutting	0.8 mm	0.5 to 0.7 mm
Data for Bench Testing		
Running test ⁽¹⁾ :		
– Current		200 A
– Speed		1900 ± 100 rpm
– Voltage		10 V
– Torque developed ...		0.55 kgm
Lock test ⁽¹⁾ :		
– Current	320 to 410 A	440 to 460 A
– Voltage	8.5 V	7.5 ± 0.1 V
– Torque developed ...	1.25 kgm	≥ 1.4 kgm
Light running torque test ⁽¹⁾ :		
– Current	35 to 55 A	35 ± 5 A
– Voltage	11.5 V	11.4 to 11.7 V
– Speed	6000 to 8000 rpm	6000 ± 500 rpm
Solenoid		
Winding resistance at 20°C:		
Pull-in		0.37 ± 0.01 Ω
Hold-in		1.25 ± 0.05 Ω
Travel of contact plate		3.25 to 3.95 mm
Magnetic plunger travel		12.58 to 15.48 mm
Lubrication		
Pinion splines	Olifiat VS ⁺ Artic (SAE 10 W)	
Contact surface of pinion sleeve	Grassofiat MR 3	

⁽¹⁾ At 20° C

CHARGING SYSTEM

Alternator		
Make and Type	Bosch K1-14 V-65 A 21	Marelli A 125-14 V-55 A
Voltage	12 V	12 V
Maximum output (constant)	65 A	55 A
Cut-in speed, balanced thermally	1100 ± 50 rpm	900 ± 50 rpm
Current flow at 7000 rpm and balanced thermally	≥ 65 A	≥ 55 A
Field winding resistance across slip rings ⁽¹⁾	3.36 ± 0.3 Ω	3.1 ± 0.1 Ω
Direction of rotation (drive side)	Clockwise	Clockwise
Engine/alternator driving ratio	1 to 1.75	1 to 1.75
Rectifier diodes	Built-in diode plate (all)	
Voltage Regulator		
Make and Type	Bosch Electronic, integral with alternator	FIMM "RTT 113 C" Electronic, integral with alternator ⁽²⁾
Alternator speed for adjustments	6000 rpm	6000 rpm
Current for thermal balance	20 to 22 A	20 to 22 A
Regulating voltage ⁽¹⁾	13.8 to 14.2 V	13.8 to 14.2 V
Battery		
Voltage	12 V	
Capacity (at 20-hour discharge rate)	60 AH	

⁽¹⁾ At 25°C.

⁽²⁾ Some vehicles are equipped with a non-integral regulator.

LIGHTING

Location	SAE Standard	FIAT Std. Part No.
Headlights (high and low beams)	"Sealed Beam"	headlight unit 6012
Front lamps:		
— Turn signal and parking	1034 (3/32 cp)	1/141446/90 (12 V - 5/21 W)
Rear lamps:		
— Turn signal, back-up and stop	1073 (32 cp)	1/41460/90 (12 V - 21 W)
— Tail	1073 (32 cp)	1/41460/90 (12 V - 21 W)
— License plate	67 (4 cp)	1/41459/90 (12 V - 5 W)
Side marker lamps	158 (2 cp)	1/41458/90
Courtesy light	—	1/08630/90 (12 V - 5 W)
Fiber optic cable lamp		
Instrument cluster lights	—	1/41439/90 (12 V - 3 W)
"EX. GAS SENSOR" indicator		
Turn signal indicator		
High beams indicator		
Battery charge indicator		
Low oil pressure indicator		
Fuel reserve indicator		
Parking and tail lamps indicator	—	1/41437/90 (12 V - 1.2 W)
Hazard warning signal indicator		
Low brake fluid level/hand brake ON indicator		
Fasten belts indicator		
Rear window defogger		
Heater control panel light		
Cigarette lighter light		
Ideogram illumination light		
Air conditioner ideogram light		

FUSES

Eight 8-Amp, six 16-Amp and two 3-Amp fuses are located in fuse/relay panel under glove compartment. In addition, one 8-Amp and two 16-Amp fuses are located in separate in-line holders.

Panel Fuses

<p>A (8 Amps)</p>	<p>Stop lights Stop light switch A/C blower relay coil A/C control relay coil Heater fan motor Heater fan switch Instrument cluster lights Dash panel lights Turn lights Turn indicator Hazard indicator Rear window defogger switch Rear window defogger relay coil</p>	<p>H (8 Amps)</p>	<p>Right front marker light Right front park light Left tail light Right license light Left rear marker light Lights-on indicator Digital clock</p>
<p>B (8 Amps)</p>	<p>Windshield wiper/washer switch Windshield washer pump Wiper motor Back-up switch Back-up light Gulp valve thermostwitch Gulp valve electrovalve solenoid Seatbelt timer Seatbelt relay coil Fasten seatbelt indicator Brake indicator Digital clock (display on) Oil pressure warning indicator Exhaust gas sensor indicator</p>	<p>I (16 Amps)</p>	<p>Right headlight motor</p>
<p>C (8 Amps)</p>	<p>Left headlight high beam High beam indicator</p>	<p>L (16 Amps)</p>	<p>Left headlight motor</p>
<p>D (8 Amps)</p>	<p>Right headlight high beam</p>	<p>M (16 Amps)</p>	<p>Rear window defogger Turn/hazard flasher</p>
<p>E (8 Amps)</p>	<p>Left headlight low beam</p>	<p>N (16 Amps)</p>	<p>Coolant fan Horns</p>
<p>F (8 Amps)</p>	<p>Right headlight low beam</p>	<p>O (16 Amps)</p>	<p>Condenser fan motor</p>
<p>G (8 Amps)</p>	<p>Left front marker light Left front park light Right tail light Left license light Right rear marker light Lights-on indicator</p>	<p>P (16 Amps)</p>	<p>A/C blower motor</p>
		<p>Q (3 Amps)</p>	<p>Headlight closing relay coils</p>
		<p>R (3 Amps)</p>	<p>Headlight opening relay coils</p>
		In-Line Fuses	
		<p>8 Amps</p>	<p>Fuel injectors fan motor Carburetor fan motor Seatbelt chime Cigar lighter Power antenna motor Digital clock (power) Courtesy light</p>
		<p>16 Amps</p>	<p>Power window motors</p>
		<p>16 Amps</p>	<p>Auxiliary air regulator Fuel pump</p>

UNPROTECTED CIRCUITS

Alternator, starter, ignition, charge indicator, radiator fan relay winding, radio, parking light switch and headlight control relays, instrument cluster lights, fuel injection relay winding, power window relay winding.

