



# Twingo

Type

S/Section

X06

4

12

12

## SPECIAL POINTS CONCERNING THE INJECTION SYSTEM ON TWINGO C3G Engine complying with EU96 antipollution standards

Other sub-section concerned :

17

- |             |         |                |                    |
|-------------|---------|----------------|--------------------|
| • Engine :  | C3G 702 | Basic Manual : | M.R. 305 Section 1 |
| • Gearbox : | XXX     |                | N.T. 2024 - 2211A  |

This technical note covers the injection - depollution system relating to the adoption of **EU 96** standards.

On the whole, the changes are limited to the fitment of a new computer and a new catalyser.

As regards injection fault-finding only the mixture adjustment operating range (# 35) has been increased.  
The command # 35 has now changed to between 93 and 190.



**SPECIFICATIONS AND ADJUSTMENTS**

Vehicle	Engine						Gearbox	Injection type
	Type	Suffix	Bore (mm)	Stroke (mm)	Cubic Capacity (cm <sup>3</sup> )	Ratio		
X 06 4	C3G	702	74	72	1238	9,2/1	Manual	Monopoint Magnéti Marelli

Checks to be carried out engine idling speed *					Fuel (Octane Rating) Minimum
Idling speed (rpm)	Pollutant emissions **				
	CO (%) (1)	CO <sub>2</sub> (%)	HC (ppm)	Lambda (λ)	Unleaded (OR 95)
730 ± 50	0.5 max.	14.5 min.	100 max.	0.97 < λ < 1.03	

(1) At 2 500 rpm the C0 should be 0.3 maximum.

\* For a temperature greater than 80 °C and after the engine idling speed has stabilised at 2500 rpm for approximately 30 seconds.

\*\* For legislative values, see specification depending on country.

Type of fuel supply	Regulated monopoint injection
Fuel pump immersed in fuel tank Type : Walbro	Voltage : 12 Volts Pressure : 1.05 bars Flow : 50 litres/hour minimum
Throttle housing	SOLEX : Ø 32 mm
Pressure regulator integrated in throttle housing	Pressure : 1.05 ± 0.05 bars (not adjustable)
Electromagnetic injector	Voltage : 12 Volts Resistance : Approx. 1.8 Ohms
Idle regulation step motor	Not adjustable. Check using XR 25 # 12 : 2 at 16% in idle regulation (no consumers).  Resistance of each bearing 53 ± 5 Ω
Throttle position potentiometer	Check using XR 25 # 17 In idle regulation : 9 to 45 Full-load : 195 to 245

**SPECIFICATIONS AND ADJUSTMENTS**

COMPUTER	Magnéti Marelli N°	Approval N°	Renault N° *
Magnéti Marelli located in the engine compartment	16231 - 014	77 00 860 324	77 00 874 631


\* Read off Renault Part N° using the XR 25 and enter G 70\*

Temperature in °C (± 1°)	0	20	40	80	90
<b>Air temperature sensor</b>	8770	3370	1440		
Type CTN M.Marelli ; resistance in Ohms	to 10720	to 4120	to 1760	.....	.....
<b>Coolant temperature sensor</b>		3060	1315	300	210
Type CTN Siemens ; resistance in Ohms	.....	to 4045	to 1600	to 370	to 270

NTK oxygen sensor	Voltage delivered at 370 °C : - rich mixture : > 800 mV - lean mixture : 0 to 200 mV
Catalyser (located under the floor)	◇ C56
26 to 36 °C thermostated cartridge paper air filter	Change every 12 000 miles (20 000 km)
Anti-evaporation system	Canister : CAN 13  Bleed canister solenoid valve : Delco Rémy resistance : $35 \pm 3 \Omega$
Ignition	- Advance and power circuit recognition integrated in the injection computer - Ignition coil - Exterior advance correction
Plugs	BOSCH : W9DC NKG : BP5ESZ Gap : $0.9 \pm 0.05$ mm (adjust)

CONFORMITY CHECKING

Engine warm at idling after the cooling fan has been activated at least once.

Functions to be checked	Line N°	Bargraph display	XR 25 command	Reading on central display - Comments
Mixture adjustment active (at idling speed just after engine speed has stabilised at 2500 rpm for more than 3 minutes).	L19		# 05 # 35	The value fluctuates around 0.475 V. The value should be between 93 and 190.