



ELECTRICAL INSTALLATION GENERAL INFORMATION

- A LIST OF THE DOCUMENTS COVERING THE ELECTRICAL INSTALLATION OF A VEHICULE
- **B** DESCRIPTION OF AN ELECTRICAL DIAGRAM
- C HOW TO READ AN ELECTRICAL DIAGRAM
- **D** PARTS LISTS
- E SYMBOLS
- F COLOUR CODE

A - ELECTRICAL INSTALLATION OF A VEHICLE

Documents covering the electrical installation:

- parts lists ;
- identification of wiring and connectors;
- circuit diagram;
- wiring diagram;
- supply and junction box;
- list of fuses;
- table of the bulbs.

B - CONTENTS AND DESCRIPTION OF AN ELECTRICAL DIAGRAM

Contents:

An electrical diagram consists of 2 parts:

- a circuit diagram, complete, for the function concerned;
- the corresponding wiring diagram.

Description:

- The circuit diagram presents the various circuits in a functional way :
 - switches are shown at rest, with the car at a standstill, the anti-theft switch on and the doors closed;
 - single switches must be moved from right to left. In the case where the selector switch is complex, the contact movements are shown in the manner to be considered the most comprehensible;
 - the single electrical elements are shown in the circuit diagram according to the symbols in chapter E.
- The wiring diagram indicates the location of the components, connections and harnesses in the vehicle.

(11)

XM 500-00/1

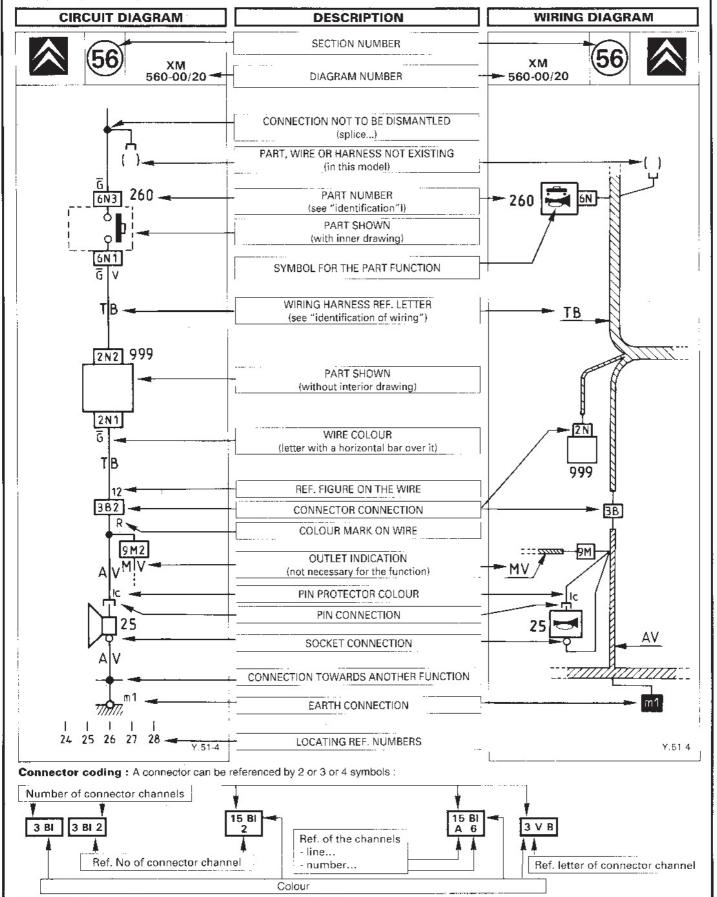
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C - HOW TO READ AN ELECTRICAL DIAGRAM

Circuit and wiring diagrams coding (the following example is fictitious, it should not be used for repair operations).







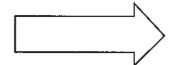
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D - SYMBOLS

- Description of the symbols



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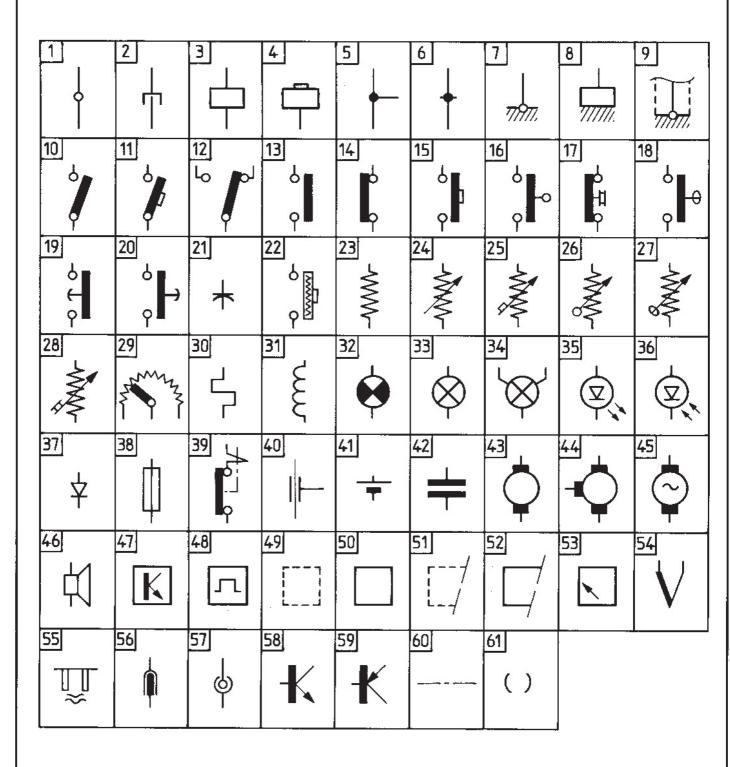




N°	Description	N°	Description
1	Socket connection	32	Warning lamp
2	Pin connection	33	Light bulb
3	Connector connection	34	Double-filament light bulb
4	Connector connection (with index for differenciation)	35	Light emitting diode
5	Junction not to be dismantled (splice)	36	Photo-diode
6	Junction not to be dismantled (with other connection possibilities)	37	Diode
7	Socket earthing	38	Fuse
8	Connector earthing	39	Thermal circuit breaker
9	Part body earth connection	40	Screening
10	Switch (non automatic return)	41	Battery cell
11	Manual switch	42	Suppressor
12	Selector switch	43	Motor
13	Switch open at rest (automatic return)	44	2-speed motor
14	Switch closed at rest (automatic return)	45	Alternative power generator
15	Manual contact switch	46	Sound equipment (horn, loudspeaker)
16	Mechanical contact switch	47	Electronic control unit
17	Pressure contact switch	48	Delay unit
18	Thermal switch	49	Part framing (with its circuit diagram)
19	Contact delayed on opening	50	Part framing (without its circuit diagram)
20	Contact delayed on closing	51	Part extract
21	Friction contact switch	52	Part extract
22	Manual contact switch (cigar-lighter with resistance)	53	Indicator
23	Resistance	54	Thermocouple
24	Rheostat	55	Electrodes
25	Manual rheostat	56	Oxygen sensor
26	Mechanical rheostat	57	Supply socket
27	Temperature rheostat (thermistor)	58	NPN transistor
28	Pressure rheostat	59	PNP transistor
29	Rheostat	60	Connection indicating line
30	Shunt	61	No extremity
31	Coil (relay - solenoid)		







XM 350-000/1

FAULT FINDING





Before carrying out any repair operations on the gearbox or torque converter, it is ESSENTIAL to carry out a full and detailed fault finding procedure.

The following charts provide, as a function of gear selector position, a logical test sequence allowing both hydraulic and electrical* faults to be correctly analysed.

POSITION	OBSERVATIONS	SEE PAGE
	Preliminary checks.	3
Р	The engine does not start.Incorrect operation of PARK mechanism.	4 5
R	 The engine starts. The reversing lamps do not work. Transmission snatch on changing from P → R or N → R No drive in reverse, slipping or judder on pulling away. 	6 7 8 8
N	The engine does not start.The vehicle moves forward.	9
D	 No shift from 3 → 4. Slip on shifting from 3 → 4 or 4 → 3. No shift from D → 3 when selected manually. 	10 10 11
D, 3, 2 or 1	 The engine starts. No forward drive. Snatch on engagement N → D. 	11 12 12
D, 3, or 2	 The vehicle remains in 1st gear (no automatic shifts). Gearshift speeds too low (vehicle lacks power) Gearshift speeds too high. Snatch on shifting gear (accelerating or decelerating). Slip on shifting 1 → 2, 2 → 3, 3 → 2, or 2 → 1. The vehicle pulls away in 2nd or 3rd gear. 	13 14 15 15 15 15
D or 3	• No gearshifts $2 \rightarrow 3$, $3 \rightarrow 2$, $2 \rightarrow 1$ or $1 \rightarrow 2$.	16
3 or 2	 Manual downshifts speeds 3 → 2 or 2 → 1 too high or no downshifts. 	16
All positions	Instrument panel display not working.	17
Oil leaks	Source of leaks and remedies	18

* Electrical diagrams : **(59)** XM 591-00/10

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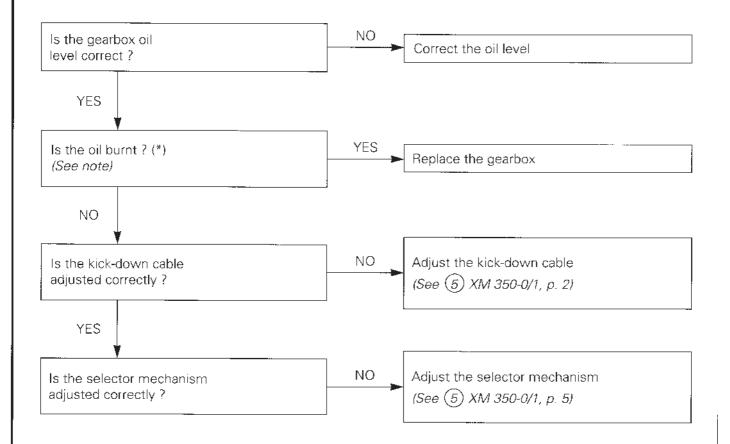
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FAULT FINDING

PRELIMINARY CHECKS AND ADJUSTMENTS



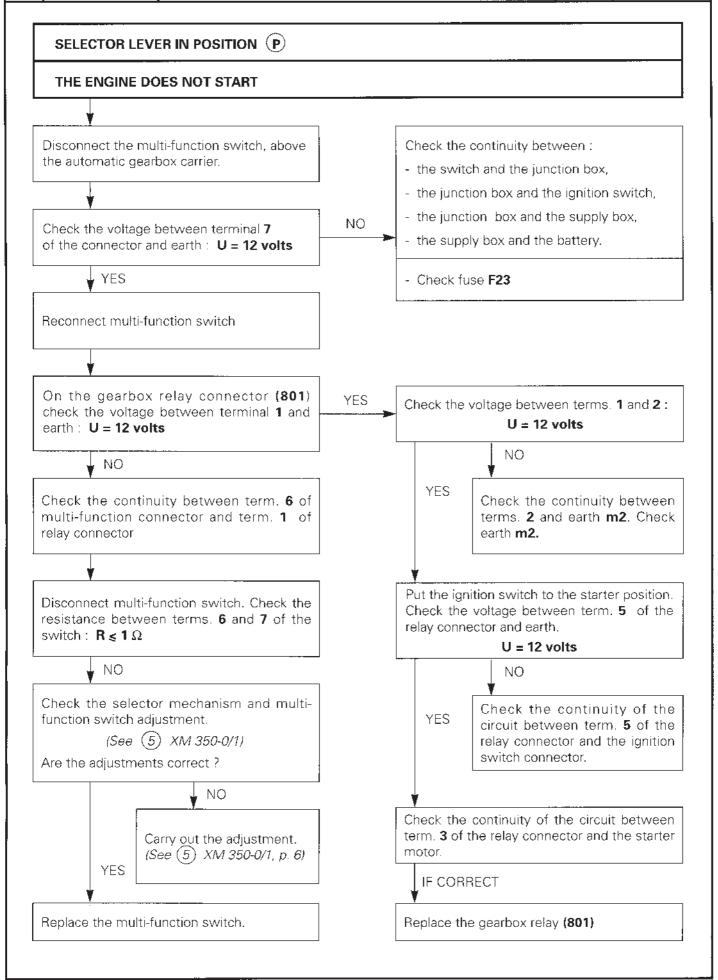
(*) NOTE:

- If the gearbox displays a serious fault causing damage or destruction of one of the clutches, the oil will be contaminated and overheated. The oil then becomes "burnt". In this case, the oil becomes discoloured and gives off an unpleasant burn odour.
- To check the condition of the oil:
 - Remove the dipstick without wiping it.
 - Allow several drops of oil to fall onto a piece of blotting paper.
 - The paper absorbs the oil and any impurities present will appear on the surface.

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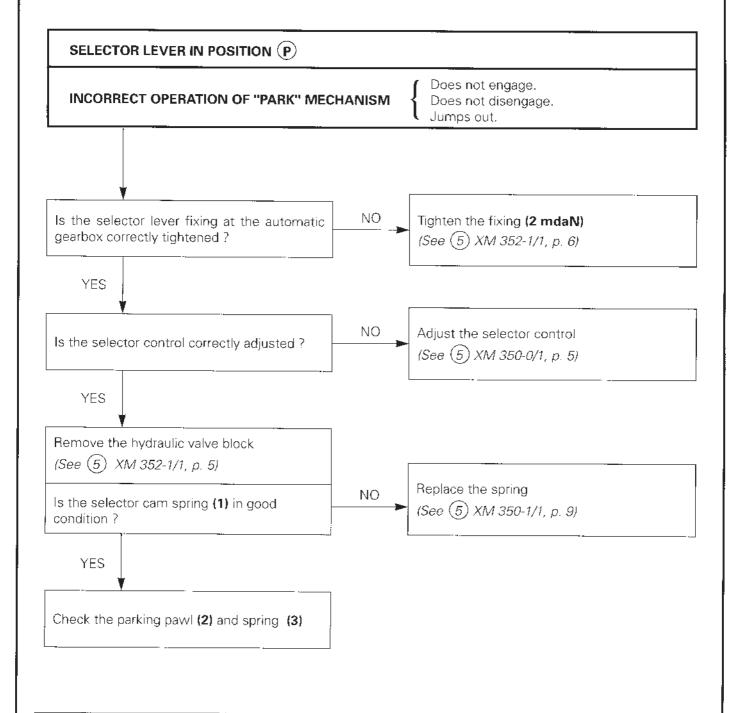


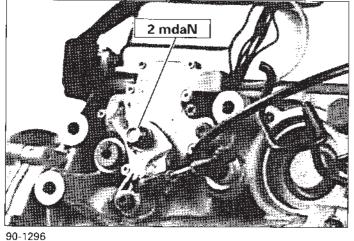


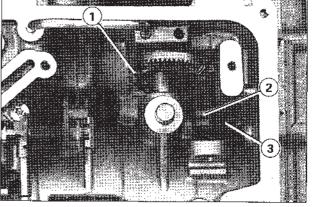






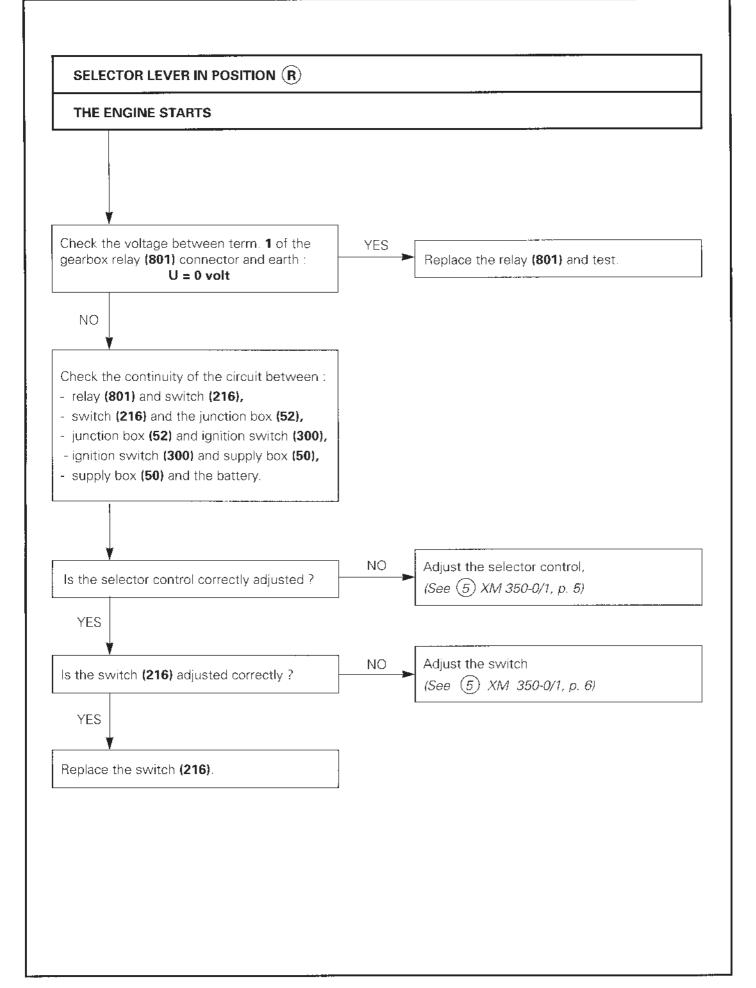




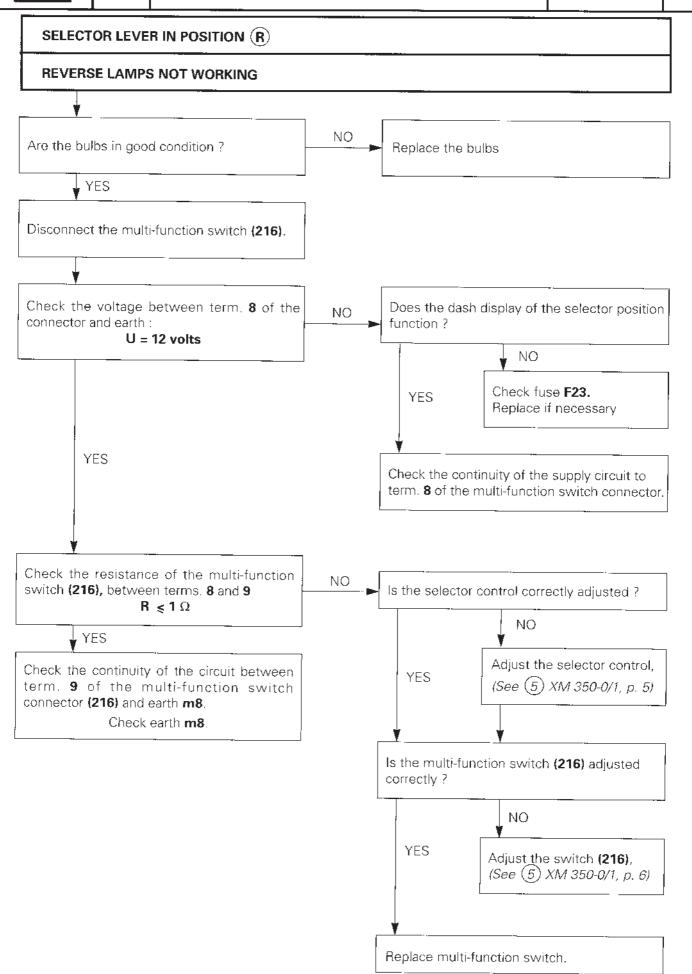






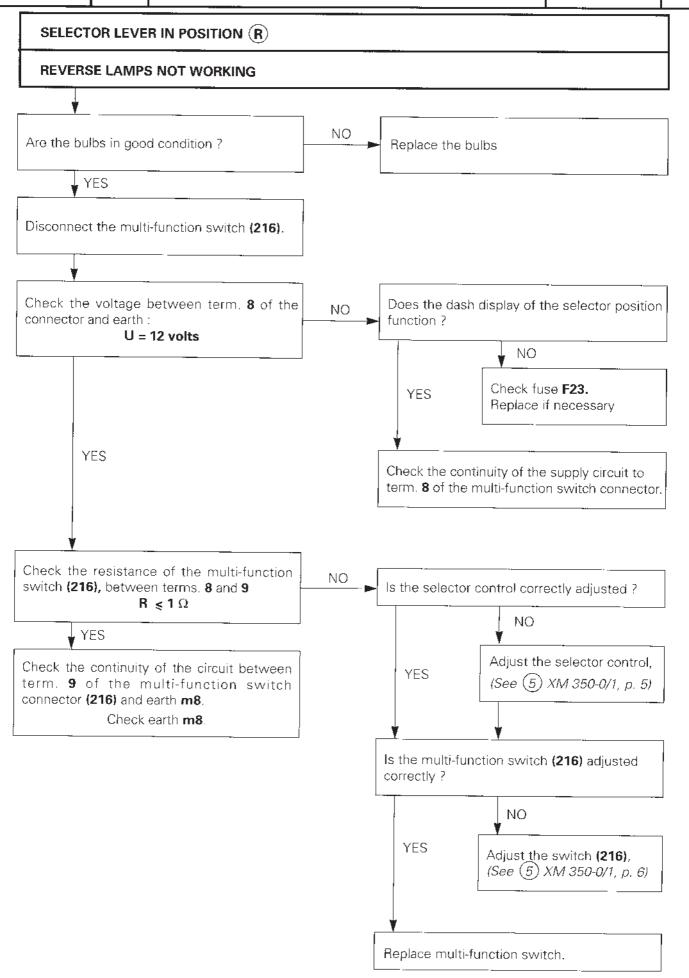


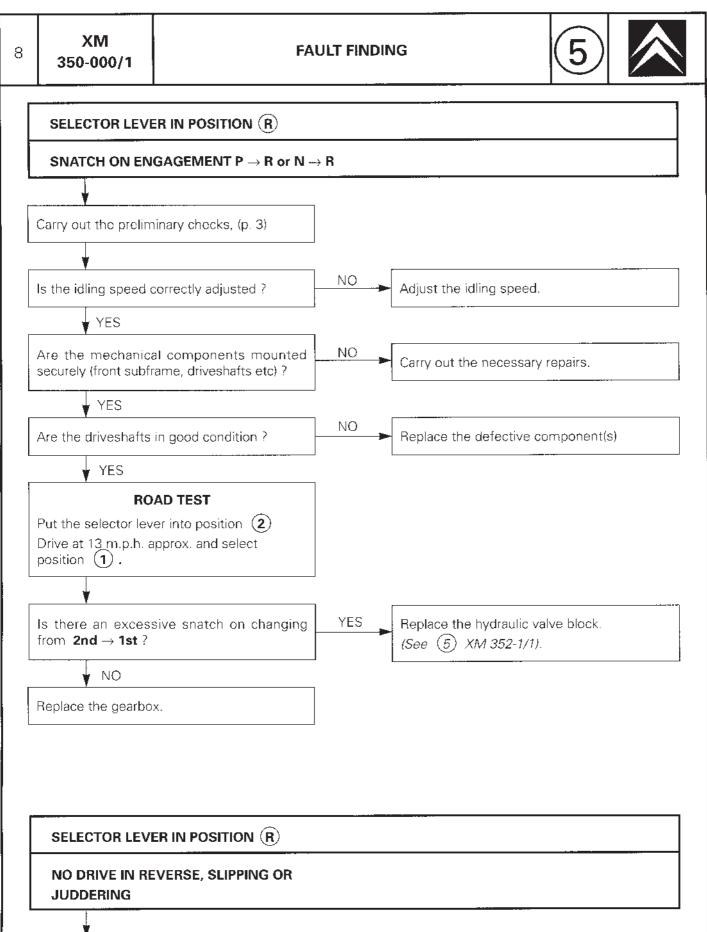


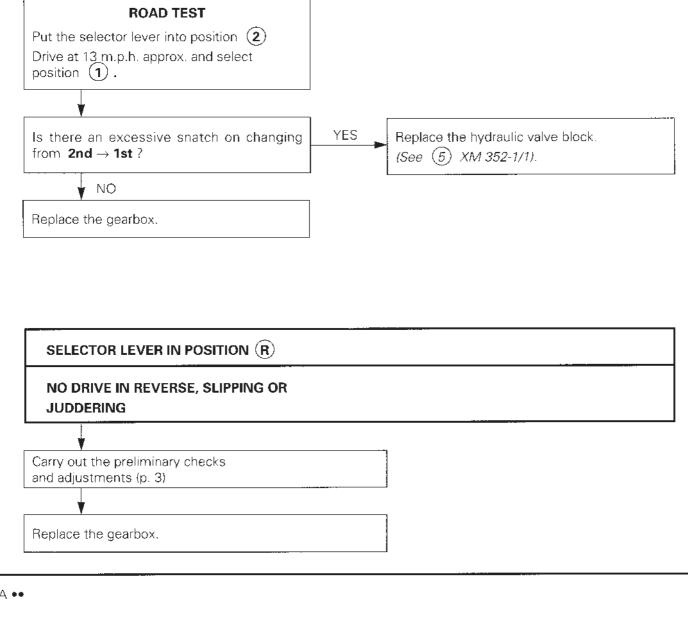












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NO

YES





SELECTOR LEVER IN POSITION (N)

THE ENGINE DOES NOT START

Disconnect the multi-function switch.

Check the voltage between term. 7 of the connector and earth : U = 12 volts

♦ YES

Reconnect the multi-function switch.

At the gearbox relay **(801)** connector, check the voltage between term. **1** and earth :

U = 12 volts

NO

Check the continuity of the circuit between term. **6** of multi-function switch connector and term. **1** of the relay connector.

Disconnect the multi-function switch. Check the resistance between terms. **6** and **7** of the switch :

R ≤ 1 Ω

NO

Check the adjustment of the selector mechanism and multi-function switch. Is it correct?

YES

Carry out the necessary adjustments (See (5) XM 350-0/1, p. 5)

NO

Replace the multi-function switch

Check the continuity of the circuit between:

- the switch and the junction box,
- the junction box and the ignition switch,
- the junction box and the supply box,
- the supply box and the battery.
- Check fuse F23

Check the voltage between terms. 1 and 2 U = 12 volts

NO

YES Check the continuity of the circuit between term. 2 and earth m2. Check earth m2.

Turn the ignition switch to the starter motor position. Check the voltage between term. **5** of the relay connector and earth:

U = 12 volts

, NO

Check the continuity of the circuit between term. **5** of the relay connector and the ignition switch.

Check the continuity of the circuit between term. **3** of the connector and the starter motor

YEŞ

Replace gearbox relay (801)

SELECTOR LEVER IN POSITION N

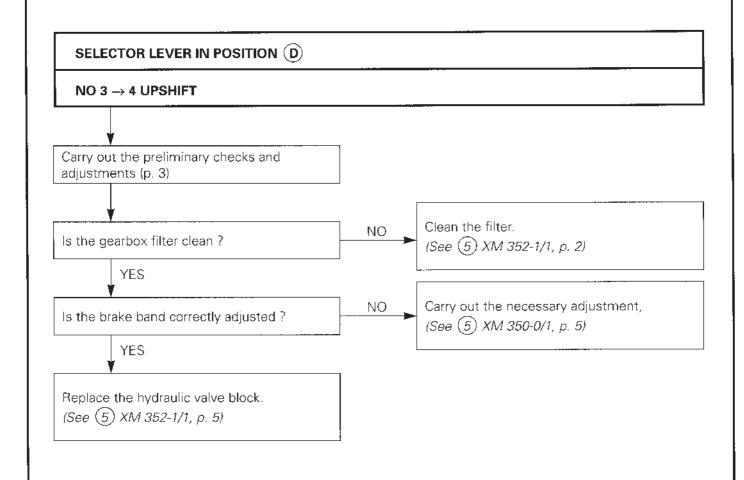
THE VEHICLE MOVES FORWARD

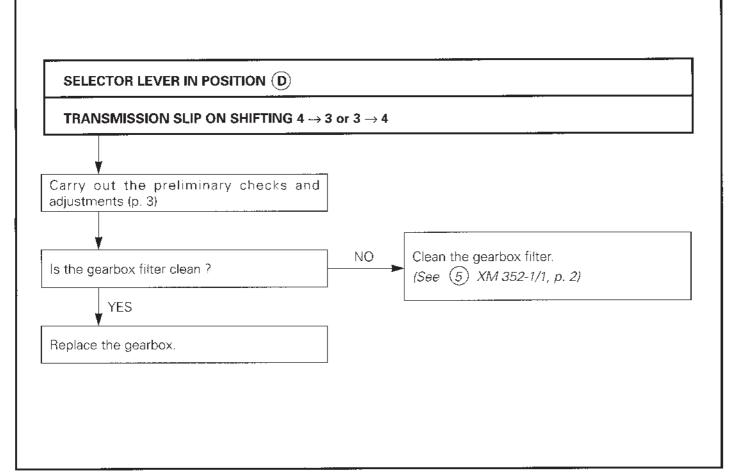
Carry out the preliminary checks and adjustments (p. 3)

Replace the gearbox.









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NO SHIFT D \rightarrow 3 WHEN SELECTED MANUALLY

Carry out the preliminary checks and adjustments (p. 3)

Replace the valve block (See (5) XM 352-1/1, p. 5)

SELECTOR LEVER IN POSITIONS (D) (3) (2) (1)

THE ENGINE STARTS

₩ NO

Check the voltage between term. 1 of the gearbox relay (801) connector and earth

U = 0 volt

YES

Replace the relay (801) and test.

Check the continuity of the circuit between

- relay (801) and multi-function switch (216),
- switch (216) and the junction box (52),
- junction box (52) and the ignition switch (300),
- Ignition switch (300) and the supply box (50),
- supply box (50) and the battery.

Is the selector control adjusted correctly?

NO

Adjust the selector control, (See (5) XM 350-0/1)

Is the mutli-function switch (216) adjusted correctly?

♦ YES

Replace the multi-function switch (216).

NO Adjust the switch (216), (See (5) XM 350-0/1).

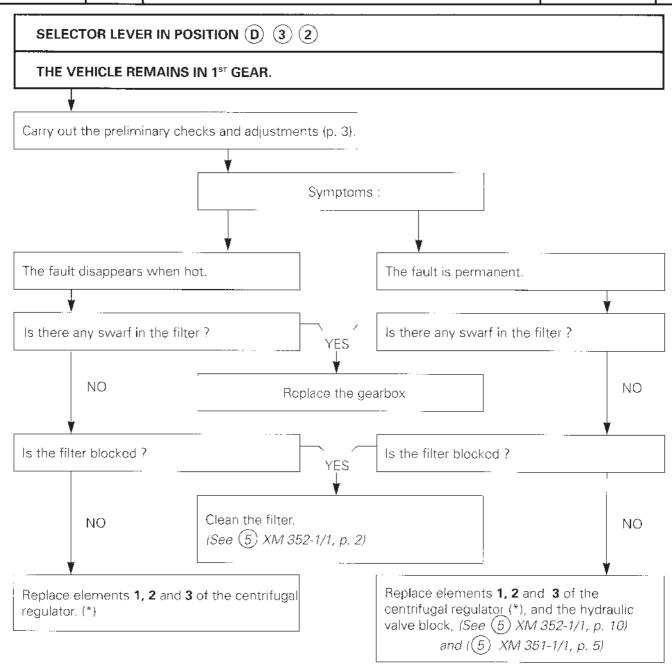




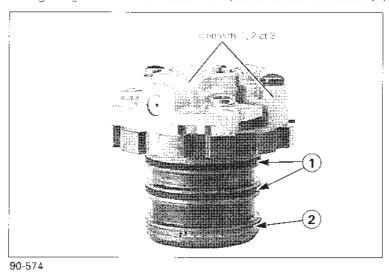
SELECTOR LEVER IN POSITION (D) (3) (2) (1) NO FORWARD DRIVE. Carry out the preliminary checks and Replace the gearbox. adjustments (p. 3) SELECTOR LEVER IN POSITION (D) (3) (2) (1) SNATCH ON ENGAGEMENT $N \to D$ Carry out the preliminary checks. Adjust the idling speed. NO Is the idling speed adjusted correctly? (See (5) 350-0/1, p. 2) **₩** YES NQ Are the mechanical components mounted Carry out the necessary repairs. securely (front subframe, driveshafts etc.)? ¥ YEŞ NO Replace the driveshaft(s) as necessary. Are the driveshafts in good condition? YES **ROAD TEST THE VEHICLE** Select position (D) Drive the vehicle until 4th gear is selected Shift from 4th-3th by kicking down or selecting manually. Replace the valve block. Is there an excessive snatch when shifting YES from 4th to 3rd? (See (5) XM 352-1/1, p. 5) NO Replace the gearbox







(*) Removal of the centrifugal regulator necessitates the replacement of the sea's (1) and the ring (2).



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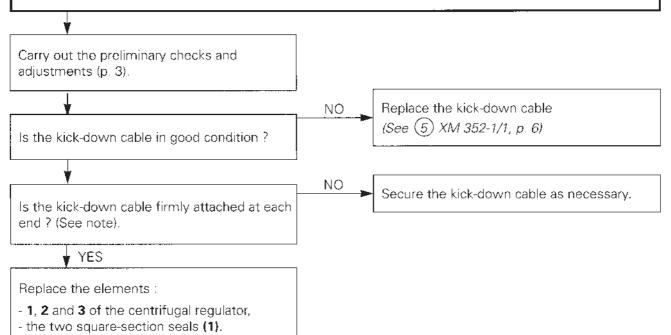
FAULT FINDING

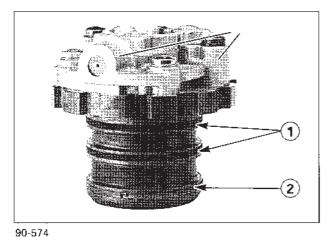




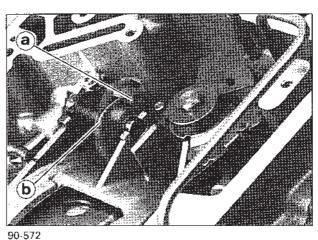
SELECTOR LEVER IN POSITION (D) (3) (2)

GEAR SHIFT SPEEDS TOO LOW AND LACK OF POWER.





- the rectangular-section ring (2).



NOTE:

- 1.) If the cable is disengaged at « a »:
 - Disconnect the inner cable from the throttle quadrant.
 - By pulling the inner cable, an excessive travel of the crimped ferrule may be observed.
- 2.) If the cable is engaged at **« a »** but has sprung out of its locating groove at **« b »**:
 - Disconnect the inner cable from the throttle quadrant.
 - By pulling the inner cable, the crimped ferrule follows its nomal travel but does not return correctly when released.



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SELECTOR LEVER IN POSITION (D) (3) (2)

GEARSHIFT SPEEDS TOO HIGH.

Carry out the preliminary checks and adjustments (p. 3).

Replace the hydraulic valve block. (See \bigcirc XM 352-1/1, p. 6).

SELECTOR LEVER IN POSITION (D) (3) (2)

SNATCH ON SHIFTING GEAR ON ACCELERATION OR DECELERATION.

Carry out the preliminary checks and adjustments (p. 3).

Replace the hydraulic valve block. (See \bigcirc XM 352-1/1, p. 6).

SELECTOR LEVER IN POSITION D 3 2

TRANSMISSION SLIP ON SHIFTING 1 ightarrow 2, 2 ightarrow 3, 3 ightarrow 2 or 2 ightarrow 1

Carry out the preliminary checks and adjustments (p. 3).

Replace the gearbox.

SELECTOR LEVER IN POSITION (D) (3) (2)

THE VEHICLE PULLS AWAY IN 2ND OR 3RD GEAR.

Carry out the preliminary checks and adjustments (p. 3).

Replace the elements 1, 2 and 3 of the centrifugal regulator.





SELECTOR LEVER IN POSITION (D) (3)

NO GEARSHIFTS FROM 2 \rightarrow 3, 3 \rightarrow 2, 2 \rightarrow 1 or 1 \rightarrow 2

Carry out the preliminary checks and adjustments (p. 3).

Replace:

- elements 1, 2 and 3 of the centrifugal (*) regulator,
- the valve block.

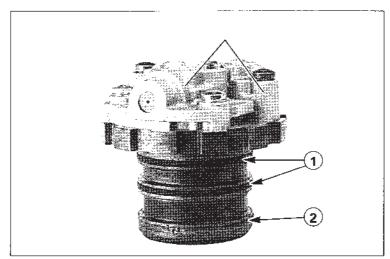
SELECTOR LEVER IN POSITION (3) or (2)

MANUAL DOWNSHIFT SPEEDS TOO HIGH OR NO DOWNSHIFTS 3 ightarrow 2 or 2 ightarrow 1

Carry out the preliminary checks and adjustments (p. 3).

Replace:

- elements 1, 2 and 3 of the centrifugal regulator (*)
- the valve block.
- (*) The removal of the centrifugal regulator necessitates the replacement of the seals (1) and ring (2).



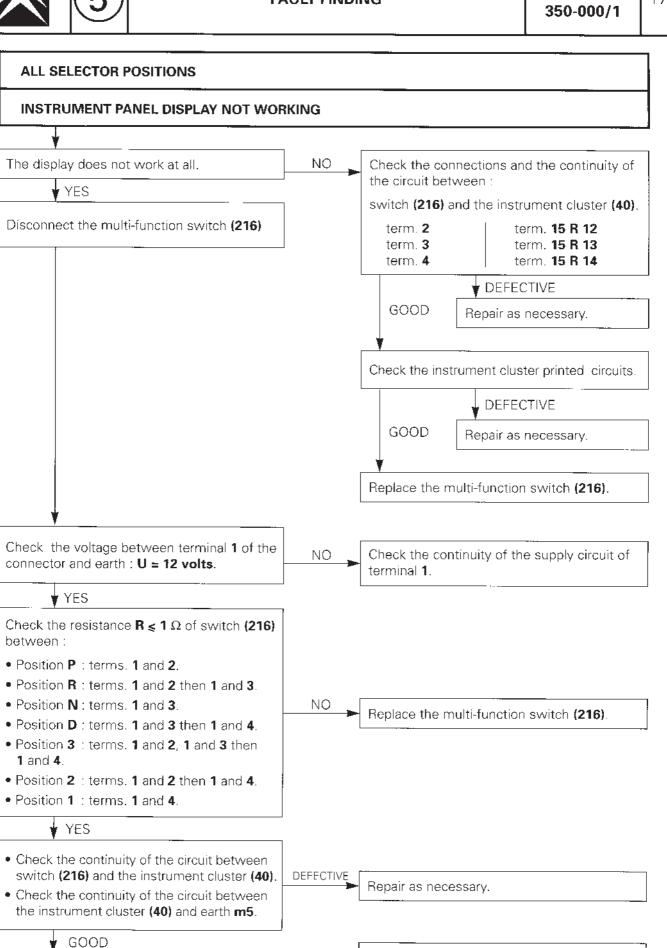
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Remove the instrument panel.



Check the condition of the printed circuit and

the bulb of the display illumination. Check the supply circuit of the bulb

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FAULT FINDING





OIL LEAKS

The oil level of this type of gearbox is of the utmost importance. It is ESSENTIAL therefore to rectify immediately any leaks found.

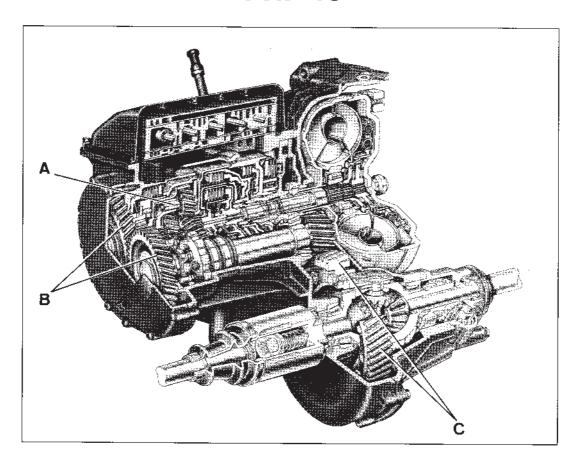
After carrying out any repairs involving the gearbox or its lubrication, always check and correct the gearbox oil level.

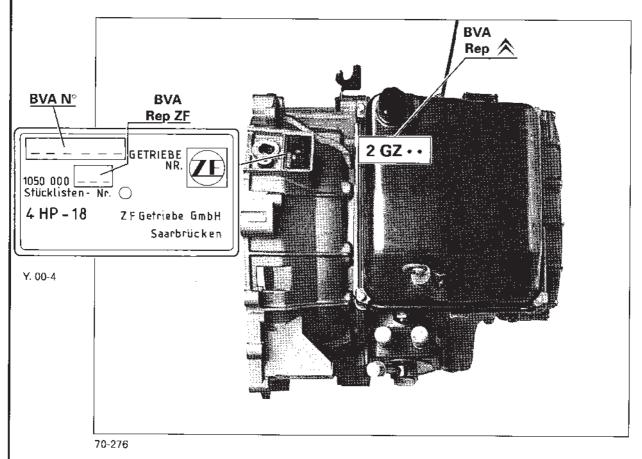
SOURCE OF LEAKS	REMEDY
Gearbox breather	Oil level too highIncorrect oil typeReplace the breather seal
Blanking plug for "PARK" mechanism relay lever shaft	- Replace the seal
Heat exchanger	- Check the fixing for tightness - Replace the seals - Replace the exchanger if necessary
Sump seal	- Check the tightness of the fixing screws - Replace the seal
Side cover seal	- Check the tightness of the fixing screws - Replace the seal
Selector shaft	- Replace the seal
Brake band adjusting screw	- Replace the "O" ring on the shaft
Kick-down cable	- Replace the "O" ring after removing the cable
Pressure take-off blanking plugs	- Replace the seals
Torque converter oil seal	- Remove the gearbox and replace the seal
Gearbox bell housing seal	- Remove the gearbox and replace the seal
Torque converter	- Remove the gearbox and replace the torque converte





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XM INJECTION		→ O.PR 4935 2 GZ 80 093	O. PR 4936 → 2 GZ 85 104	01/91 → 2 GZ 95 123
XM V6	D à G DIRAVI	04/90 → 2 GZ 78 092	07/90 → 2 GZ 88 106	01/91 → 2 GZ 97 125
XM V6	DàD DIRASS	04/90 → 2 GZ 79 097	07/90 → 2 GZ 90 108	01/91 → 2 GZ 93 127
XM Turbo D12	Moteur P8A	04/91 - → 2 GZ 87 118	10/91 → 2 GZ 5 A 132	
XM Turbo D12	Moteur PHZ	04/91 → 2 GZ 91 132	10/91 → 2 GZ 5 A 108	
XM INJECTION		09/91 → 2 GZ 95 123		
XM V6	DIRAVI DIRASS	09/91 → 2 GZ 97 125		

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2 GZ 80	1	0,387			0,092	10,36	* 10,68	plastique
2 GZ 85	2	0,709	56	18	0,169	18,98	* 19,58	25
2 GZ 95	3	1	x	×	0,238	26,77	* 27,55	x
195/60 R 15 1,875 m	4	1,351	55	77	0,321	36,17	* 37,11	21 Vi
195/65 R 15 * 1,930 m	R	0,347			0,082	9,29	* 9,55	* 20 Ve
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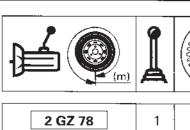
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AXBXC

0,100



11,60





2 GZ 88
2 GZ 97
205/60 R 15 1,920 m

1	0,387
2	0,709
3	1
4	1,351
R	0.347

5918xx5377

0,184	21,25
0,260	29,97
0,351	40,50
0,090	10,40

(DIRAVI) ACIER 25 ×



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D9





2000

2 GZ 79	1	0,387			0,100	11,60	(DIRASS) plastique
2 GZ 90	2	0,709	59	18	0,184	21,25	
2 GZ 93	3	1	×	×	0,260	29,97	25
205/60 R 15	4	1,351	53	77	0,351	40,50	1 ×
1,920 m	R	0,347			0,090	10,40	20 Ve



C: 1,88/1



D9





≃ 2000

2 GZ 87	1	0,387			0.110	10.77	plastique
2 02 07	_ '	0,367			0,110	12,77	pidotiquo
2 GZ 91	2	0,709	56	21	0,202	23,40	
2 GZ 5A	3	1	×	×	0,285	33,00	25
195/65 R 15	4_	1,351	55	75	0,385	44,60) x
1,930 m	R	0,347			0,099	11,45	20 Ve



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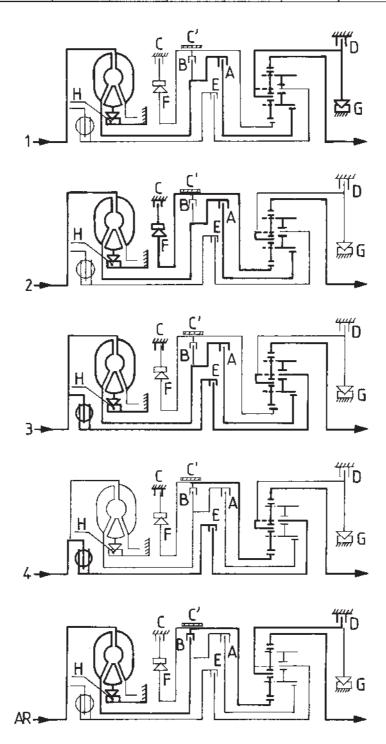
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RAPPORT	EMBRAYAGES			FREINS			ROUES LIBRES		
RAPPONT	Α	В	E	Ċ,	D	С	F	G	H
1	•				•			•	•
2	•			•		•	•		•
3	•		•			•			•
4			•	•		•			
M. AR		•			•				•



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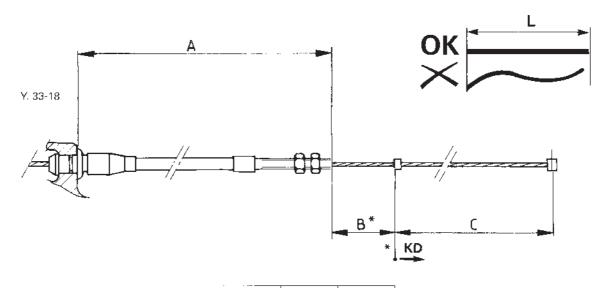


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VA INTECTION	1 → 2	2 -> 3	3 → 4	4 → 3	3 → 2	2 → 1
XM. INJECTION	49 à 55	87 à 107	134 à 152	122 à 144	75 à 97	45 à 50

XM. V6	1 → 2	2 → 3	3 → 4	4 → 3	3 → 2	2 → 1
	55 à 62	98 à 120	150 à 169	136 à 160	84 à 108	51 à 56

XM. Turbo D12	1 → 2	2 → 3	3 → 4	4 → 3	3 → 2	2 -> 1
	45 à 52	91 à 98	125 à 145	110 à 132	87 à 94	39 à 47



	A ± 2	B ' 0	Cis	
XM. INJECTION	938	43	84	2 GZ 80 2 GZ 85
AW. INSECTION	1005	43	87,5	2 GZ 95
XM. V6	1005	46	96,5	
XM. Turbo D12	1075	46	273	