



To all Dealers and Service Agents

Nov. 1971

PL 92

DS21 with ELECTRONIC FUEL INJECTION

ELECTRONIC CONTROL UNIT & PRESSURE SENSOR

- 1) Since the introduction of the DS21 EFI, several changes have taken place on the E.C.U. and on the Pressure Sensor. Since April 1971 an Air Temperature Sensor has been fitted to the Intake Air Filter.
- 2) Electronic Control Units

<u>Ref.</u>	<u>Citroen No.</u>	<u>Bosch No.</u>	<u>Identification</u>	<u>Observations</u>
A	DX.144-906A	0.280.000.011	none	9/69 to 7/70
B	DX.144-906A	0.280.000.011	1 yellow mark	7/70 to 12/70
C	5D5.402.234K	0.280.000.011	2 yellow marks	1/71 to 4/71
D	DX.144.906B	0.280.000.022	Potentiometer Knob	from 4/71

As replacement parts, the three items A, B and C are being succeeded by:-

E ZC9.851.101U 0.280.000.042 Potentiometer Knob
 ON NO ACCOUNT MUST THE POTENTIOMETER SETTING BE ALTERED.

- 3) Pressure Sensors

<u>Ref.</u>	<u>Citroen No.</u>	<u>Bosch No.</u>	<u>Identification</u>	<u>Observations</u>
Z	DX.144-263A	0.280.100.001	none	9/69 to 7/70 and from 4/71
Y	DX.144-263B	0.280.100.023	Black spot	7/70 to 4/71

A Pressure Sensor DX.144-119A with a green marking was fitted as a replacement part on some cars; if one has to be changed, fit a Black Spot Sensor DX.144-263B.

- 4) Replacement of these units

- It is essential to match the Pressure Sensor to the E.C.U. The following combinations are permissible.

ECU. Ref	"A"	with	"Z"	ref. Pressure Sensor
ECU.	"B"	"Y"	Pressure Sensor	
ECU.	"C"	"Y"	Pressure Sensor	
ECU.	"D"	"Z"	Pressure Sensor	
ECU.	"E"	"Z"	Pressure Sensor	
- If a Pressure Sensor alone is to be changed on a car, the new Sensor must match the ECU on the car.
- If an "E" type ECU is used to replace a "B" or "C" type, the "Y" type Pressure Sensor must also be replaced by a "Z" type.
- The "D" type ECU must only be fitted to cars with Inlet Air Temperature Sensors and "Z" type Pressure Sensors.
- The Bosch code numbers on the ECU's identify the "D" and "E" types which both have potentiometer knobs.
- The reference letters above do not appear on the parts or in the catalogue; they only appear in this Circular to assist identification.



To avoid clogging of the idling screw and duct by induction of the oil vapours coming from the crankcase gas recycling circuit, it is possible to modify the air-intake on the throttle housing by following note MR-144-12 herewith.

DX-IE

DJ-IE

ENGINE

P.T.O.

**Modification
of the
idling circuit**

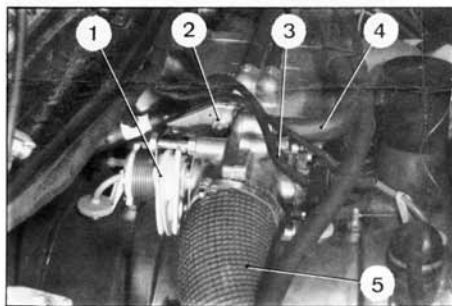


REPAIR METHODS

VEHICLES DX.IE - DJ.IE Modification of the idling air circuit

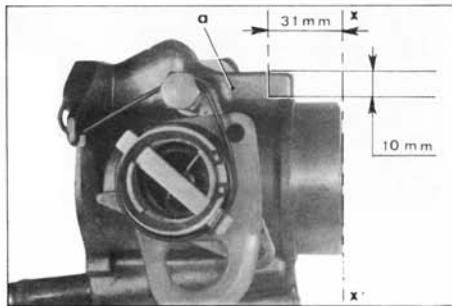
1) To be obtained.

- a) At the Service de Pièces de Rechange :
- 1 three-way union DX. 144-219 A
 - 1 flexible hose DXN. 394-371 A
 - 1 rubber clip DS. 391-127
- b) A metallic pipe A :
- inside diameter 8 mm
 - outside diameter 10 mm
 - length 50 mm



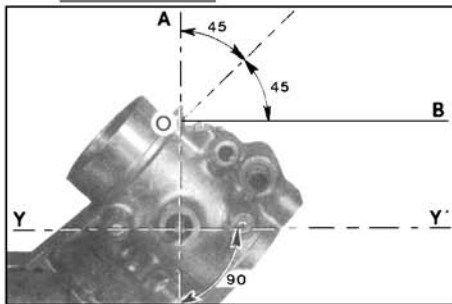
2) Remove the throttle housing :

- Disengage the flexible hose (4)
 - Disconnect the wiring harness (3) of the switch on the butterfly spindle
 - Disengage the duct (5)
 - Unhook the accelerator cable from the plastic cam (1)
 - Disengage the flexible crankcase gas recycling tube (under the inlet manifold)
- Remove the nuts (2) securing the housing on the inlet manifold, and the nut on the exhaust field
- Remove the housing



3) Modify the throttle housing :

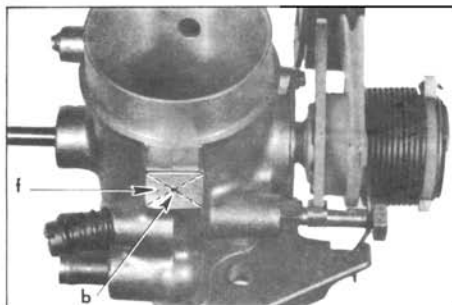
- a) At the boss « a » (see opposite) cut a groove by saw parallel to plane XX', 31 mm from this and 10 mm deep.



- b) Make a notch by sawing two grooves on planes OA and OB (see figure)

These grooves must meet at the end of the last saw groove (10 mm deep)

The plane OB must be parallel to plane YY' (plane passing through the butterfly spindle and the holes securing the butterfly spindle switch)



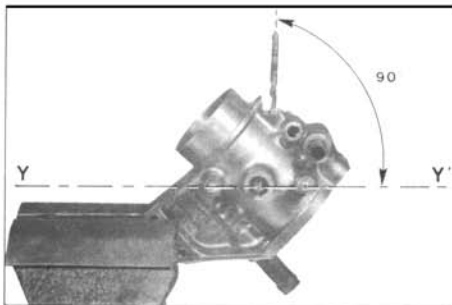
- c) On face «f» of the notch (plane OB) trace and mark with a centre-point the centre «b» of this face.

- d) At point «b» and perpendicular to face «f» (plane OB) drill a hole of diameter 6 mm

This hole must come out onto the idling air tube (seen through hole «c»)

The end of the drill must stand at least 2 mm. below the edge of hole «c»

If it does not, adjust the position of the housing until, at the final drilling of 10 mm, the end of the drill is at minimum tangent to the edge of hole «c»

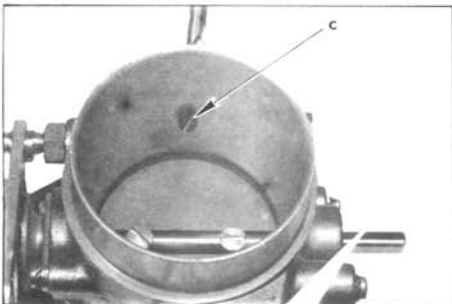


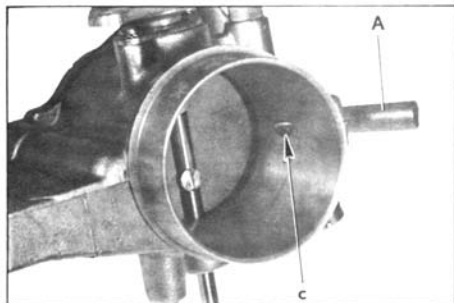
- e) Clean the pipes carefully and blow through with compressed air.

- f) Prepare tube A

- Saw one of the ends to a bevel angle of 45°
- Remove grease carefully
- Apply activator LOCQUIC-T (PR. N° GX. 01. 461. 01. A) to the bevel end of tube A

Allow to dry completely

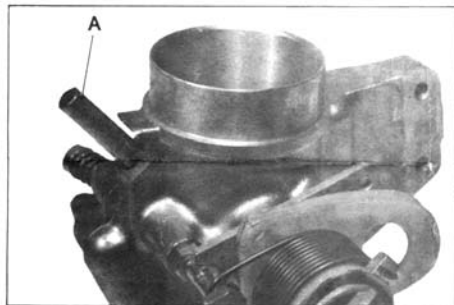




- g) Spray the activator LOCQUIC-T in the hole and allow to dry completely.
Smear the edges of the hole and the bevel end of tube A with LOCTITE N° GX. 01. 460. 01 A
Place the tube in the hole and position it so that the bevel end blocks hole «c»
Allow to dry for approximately one hour

OBSERVATIONS :

- Hole «c» may be filled by means of a product such as METALIT . After hardening smooth carefully with abrasive paper.
- If LOCTITE is not available it is possible to fit tube A in a press : in this case drill to 9,75 mm (instead of 10 mm)



- h) Clean carefully and blow through the tubing with compressed air

4 Assemble the modified throttle housing

- a) Work in reverse sequence to that indicated in paragraph 2. (Fit a new seal between housing and manifold)
- b) Cut the flexible hose (2) controlling the supplementary air at a point «d», as near as possible to the air filter
Insert the three-way union DX. 144-219 A
- c) Prepare the flexible hose DX. N 394-371 A
Cut the end, of inside diameter 10 mm making the hose 700 mm long.
- d) By means of this modified hose, connect the three-way union to tube A of the throttle housing
Attach the modified hose to the duct (1) by means of the clip DS 391-127.

IMPORTANT

Position the modified hose and tube (2) so that no point along their length is at a lower level than that of tube (3) of the air-filter.

