

ADVANCED

SERVICE / PRODUCT INFORMATION (INTERNAL)

MERCEDES-BENZ OF NORTH AMERICA, INC.

Original



Subject SUPPLEMENTARY BY-PASS COOLING
WATER LINE INSTALLATION TO No.
PREVENT OVERHEATING/6 CYLINDER
FUEL INJECTED ENGINES (1970)
From AIR CONDITIONED

116

Date **OCTOBER, 1970**

File Ref.
Group

20

SERVICE DIVISION

As you know, under adverse conditions, engine overheating sometimes occurs on 1970 6-cylinder injection engines, despite the presence of the supplementary electric fan.

NOTE: OVERHEATING ONLY OCCURS IF THE RADIATOR BLOWS OFF COOLANT OR THE TEMPERATURE INDICATOR IS IN THE RED (DANGER) AREA.

This AS/PI will instruct you in the modification of vehicles where this condition (blowing off coolant) has actually occurred.

NOTE: MODIFICATION KITS SHOULD ONLY BE INSTALLED ON VEHICLES WHERE THIS CONDITION HAS ACTUALLY OCCURED.

A supplementary water line may be installed, connecting to the rear of the cylinder head, and the suction side of the water pump. This will drain some of the extremely hot water out of the engine.

Warranty claims may be submitted under the provisions of the Claims Policies and Procedures Manual for parts plus labor as follows:

280 SE/8, 280 SEL/8, 300 SEL/8 (2.8)
280 SE/8 Cp./Conv.....2.25 hours
280 SL/8.....3.0 hours

WORK INSTRUCTIONS

A. MODELS 280 SE/8, 280 SEL/8, 280 SE/8 CP./CONV.,
300 SEL/8 (2.8)

1. Drain radiator, (save water containing anti-freeze).
2. Remove spark plug from cylinder No. 6.

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3. Remove 95°F (35°C) thermo time switch (4) from the cylinder head (Illustration 1).

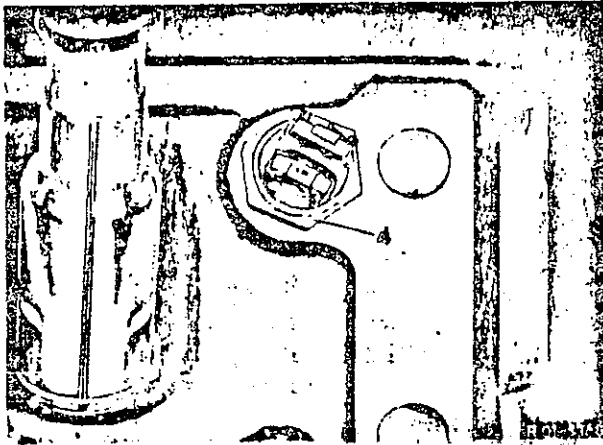


ILLUSTRATION 1

4. 95°F (35°C)
Thermo time switch

4. Install connector (2) with seal instead of the thermo time switch (4) (Illustration 2).

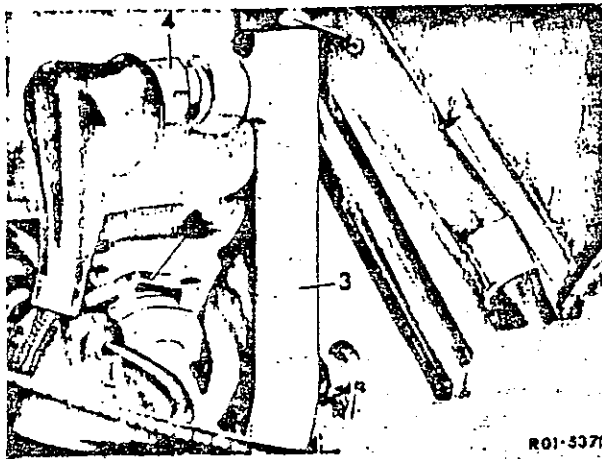


ILLUSTRATION 2

2. Connector
3. Pipe elbow
4. 95°F (35°C) Thermo
time switch
5. Hose

5. Install pipe elbow (3).
6. Screw 95°F (35°C) thermo time switch (4) with seal into the pipe elbow.
7. Install spark plug of cylinder No. 6.
8. Disconnect idle air hose from the intake manifold.
9. Remove lower radiator hose (8) (Illustration 4). Cut out a piece, 1.0 in. (25 mm) long from this radiator hose according to drawing (Illustration 3).

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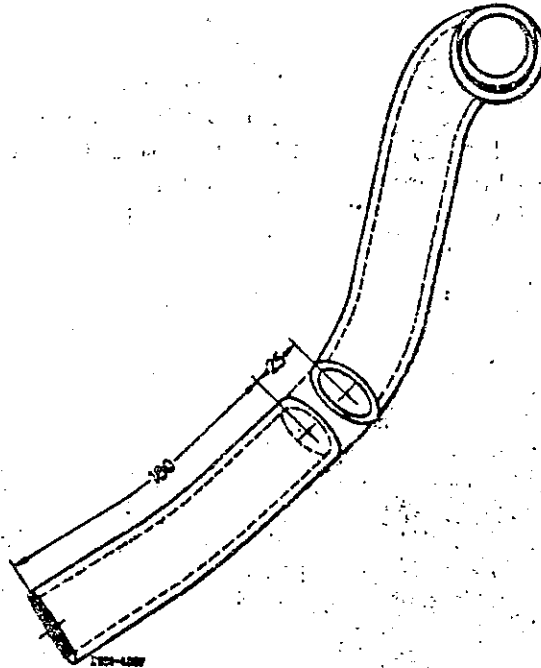


ILLUSTRATION 3

25 mm = 1.0 in.
180 mm = 7.1 in.

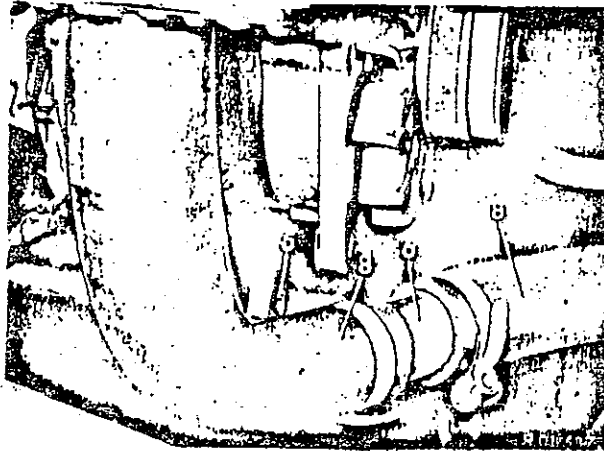


ILLUSTRATION 4

5. - Hose
6. Tee-fitting
8. Radiator hose

10. Insert Tee-fitting (6) into the cut-off radiator hose with two hose clamps (Illustration 4).

CAUTION: TIGHTEN THE HOSE CLAMPS AFTER THE RADIATOR HOSE IS INSTALLED SINCE A REPOSITIONING OF THE TEE-FITTING AFTER INSTALLATION MAY BE REQUIRED.

11. Install radiator hose (8) with Tee-fitting (6).

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12. Place the hose (5) which is 55 in. (1,400 mm) long, from the pipe elbow (3) (Illustration 2) to the Tee-fitting on the right hand side of the engine and fasten with cable straps (Illustration 4). The routing is to be performed in such a way that the hose will not chafe or create noises.

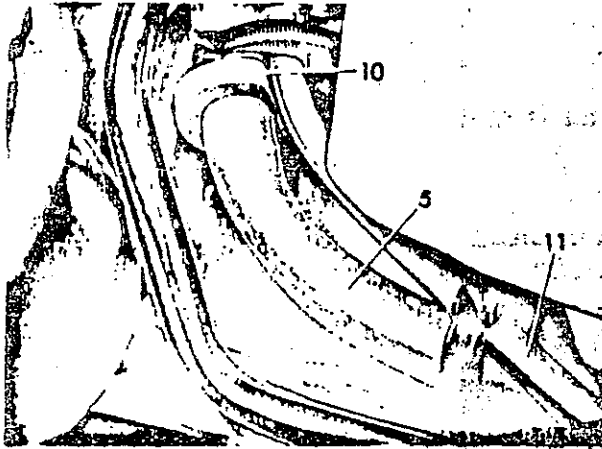


ILLUSTRATION 5

- 5. Hose
- 10. Rubber ring
- 11. Supplementary air line for starter valve

13. Connect idle air hose.
14. Refill radiator. Since the radiator hose (5) leads over the cylinder head cover, the coolant level is at this point higher than in the radiator. In order to prevent air pockets when refilling the radiator, bend the hose slightly backwards, downward and squeeze.
15. Run engine, check for leaks and replenish water, if needed.

B. MODEL 280 SL/8.

1. Drain radiator.
2. Remove spark plug from cylinder No. 6.
3. Remove 95°F (35°C) thermo time switch (4) from the cylinder head (Illustration 6).

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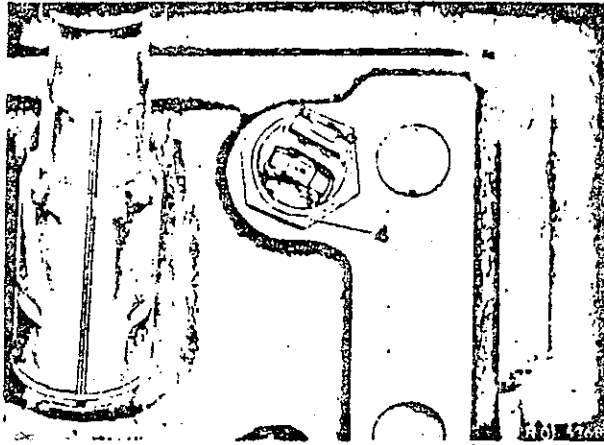


ILLUSTRATION 6

4. 95°F (35°C) Thermo time switch

4. Install connector (2) with seal instead of thermo time switch (4) (Illustration 7).

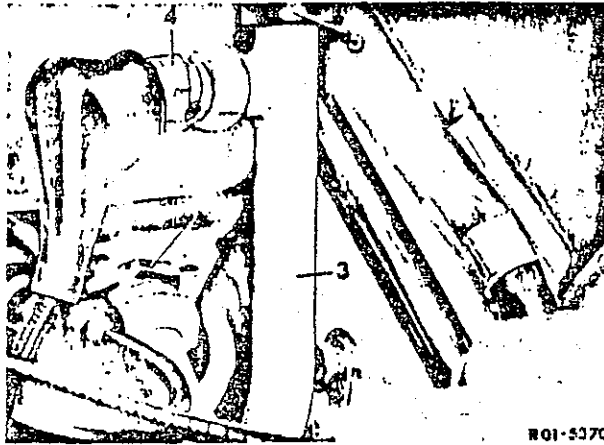


ILLUSTRATION 7

2. Connector
3. Pipe elbow
4. 95°F (35°C) Thermo time switch
5. Hose

5. Install pipe elbow (3).

NOTE: WATCH FOR POSITION OF PIPE ELBOW - MUST NOT TOUCH HOOD

6. Screw 95°F (35°C) thermo time switch (4) with seal into pipe elbow and connect.
7. Install spark plug of cylinder No. 6.
8. Disconnect hose leading to the coolant expansion tank from radiator.
9. Disconnect idle air hose from intake manifold.
10. Remove alternator.
11. Remove lower radiator hose (8) (Illustration 4). Cut out a piece, 1.0 in. (25 mm) long, from this radiator hose, according to drawing (Illustration 8).

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Change 20.

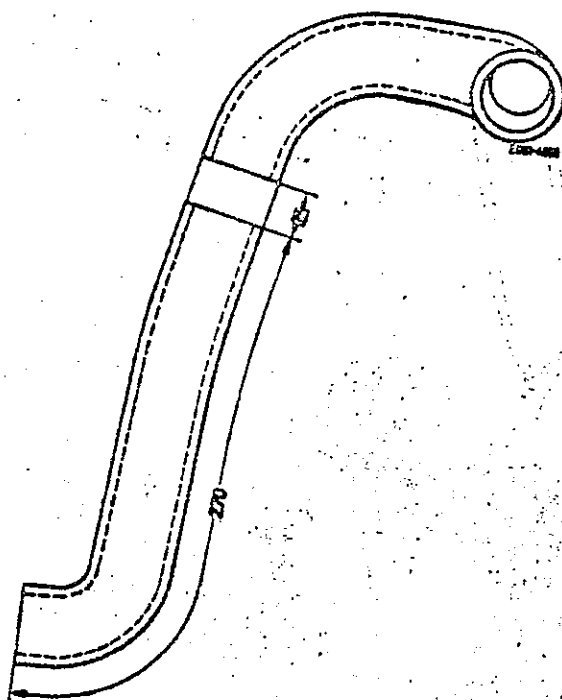


ILLUSTRATION 8

25 mm = 1.0 in.
270 mm = 10 5/8 in.

12. Install Tee-fitting (6) into the cut-off radiator hose with two hose clamps (Illustration 9).

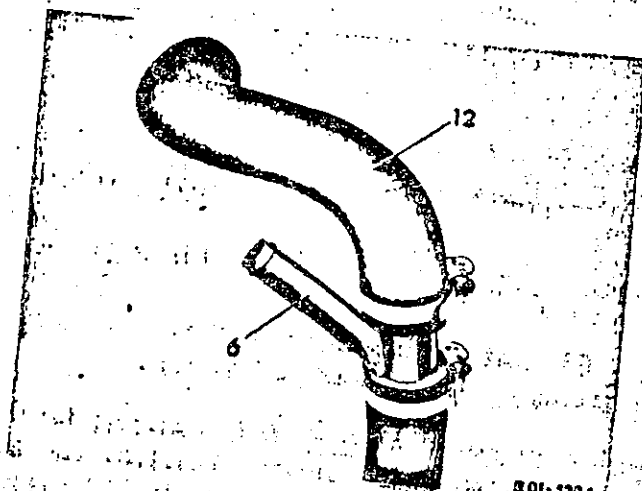


ILLUSTRATION 9

6. Tee-fitting
8. Radiator hose

CAUTION: TIGHTEN HOSE CLAMPS AFTER RADIATOR HOSE IS INSTALLED, SINCE A REPOSITIONING OF THE TEE-FITTING AFTER INSTALLATION MAY BE REQUIRED.

13. Install radiator hose (8) with Tee-fitting (6).

14. Cut hose (5) to a length of 45.31 in. (1,150 mm) and place hose from pipe elbow (3) (Illustration 7) to Tee-fitting on right hand side of engine, fasten with cable straps (Illustration 10). Routing is to be performed so that hose does not chafe or create noises.

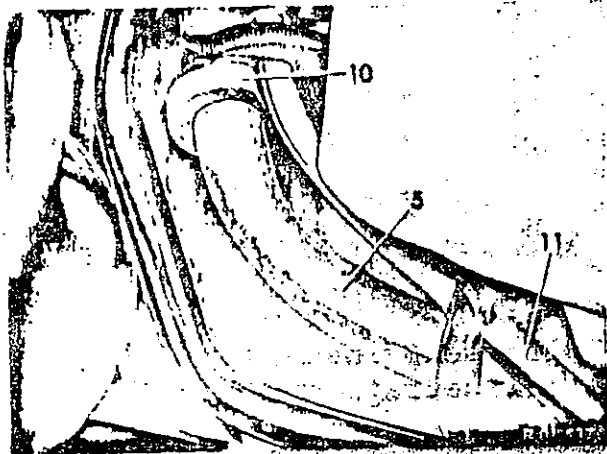


ILLUSTRATION 10

- 5. Hose
- 10. Rubber ring
- 11. Supplementary line for starter valve

15. Install alternator.
16. Connect idle air hose.
17. Connect hose to coolant expansion tank on radiator.
18. Replenish radiator water. Since the radiator hose (5) leads over cylinder head cover, coolant level is at this point higher than in radiator. In order to prevent the formation of air pockets when refilling radiator, bend hose slightly in downward position and squeeze several times.
19. Run engine, check for leaks, replenish water, if needed.

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The Parts Kit needed, Part No. 130 586 ~~OF~~ 20, for all models, contains the following individual parts:

QUANTITY	DESCRIPTION	PART NUMBER
1	Pipe elbow	130 200 02 19
1	Tee-fitting	130 200 00 54
1	Connector	130 203 00 05
1	Rubber ring	110 987 05 41 <i>NO</i>
2	Hose clamp	916001 034000
3	Cable strap	001 997 43 90 <i>NO</i>
1	Seal	007603 014104
2	Hose clamp	916001 020000
1	Hose (.71 in. ID x 1.0 OD x 55 in. Long)	N 271 DBL 6254

The above mentioned kit can be ordered from your local Mercedes-Benz Parts Depot.

MERCEDES-BENZ OF NORTH AMERICA, INC.
Service Division

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