

PE08-032

BMW

7/21/2008

Technical Service

Bulletins

SIB 125506, SIB 130208

& SIB 130308

PE08-032

BMW

7/21/2008

Technical Service

Bulletins

SIB125506



This Service Information bulletin supersedes SI B12 55 06 **dated May 2008**.

NEW designates changes to this revision

SUBJECT

N54 - Diagnosis for DME FC 29DC/2FBF

MODEL

E90, E92 with N54 produced from 06/06

E93, E60, E61 with N54 produced from 03/07

E82, E88 with N54 from start of production

E71 with N54 from start of production

SITUATION I

The customer may complain of the following:

- "Vehicle loses power while driving" or "Vehicle runs poorly".
- The Service Engine Soon light may be illuminated.
- **NEW** GT1/DIS diagnosis shows fault code 29DC (Cylinder injection cut-out, pressure too low in high-pressure system), and/or 2FBF (Fuel pressure on-release injection, pressure too low); in some cases, also in conjunction with 29F1 (Fuel high-pressure, plausibility) and 29F2 (Fuel high-pressure, fuel pressure undershot).
- In some cases, misfire faults for various cylinders (e.g., FC 20D1, 29CF, 29D2, 29CE, 29D0, 29CC) are also stored in MSD80.

Important:

If fault codes 29F1/29F2 only are stored in the DME, refer to [SI B12 16 06](#) (November 2006).

SITUATION II

The customer may complain of:

- Excessive cranking time before the engine starts (5-6 seconds) on a cold start or after a hot soak.
- In most cases, GT1/DIS diagnosis shows fault code 29DC and/or 2FBF.

CAUSE

Possible causes may include:

- Sensitivity of an injection pump (HDP) diagnostic software.
- Internal failure of a high-pressure injection pump (HDP).
- Failure of an electric fuel pump or a clogged fuel filter.
- Failure of the low or high-pressure sensors.
- Failure of a volume control valve.
- Defective fuel injector.
- Intermittent electrical connection problem (wire and/or connector) in the fuel delivery system.

CORRECTION

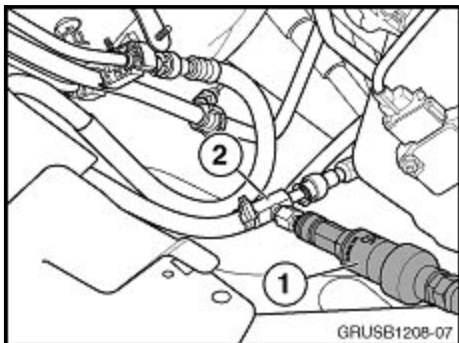
On a customer complaint basis only, and when the fault codes listed above are stored in the DME memory:

On E90 and E92 vehicles

1. Check the vehicle's integration level.
2. If the integration level is found to be "**E089-06-09-540**" or lower, then reprogram and/or recode the complete vehicle using PROGMAN V24.02 or higher (target integration level "**E089-06-12-510**" or higher).
3. Test drive the vehicle after programming to verify the effectiveness of the repair.

NEW On E93, E60, E61, E82, E88 and E71 vehicles or on E90 and E92 vehicles with the integration E089-06-12-510 or higher, where fault codes 29DC and/or 2FBF/29F1/29F2 are found to be stored in the DME:

1. Use the current DIS/GT1 diagnosis software (V53 or higher).
2. Perform all applicable DIS/GT1 test plans, **starting with B1214_DI6KNDR** (Low Pressure Fuel System test plan). This test module may be accessed using the following path: Function selection / Drive / Motor Electronics / Low-pressure fuel system / Test Plan.



3. The low pressure fuel test module requires comparison of the pressure reading from the low pressure sensor with the actual pressure value read via DIS/GT1 with the 25 bar pressure transducer.
4. Remove the front underbody panels.
5. Disconnect the fuel supply line and install special tool 135 270 (PN 83 30 0 491 310), indicated as number 2 on the attached illustration.
6. Connect the 25 bar pressure transducer (1) with the DIS tester or GT1 with MIB. (Remember that the displayed pressure value includes 1 bar of atmospheric

pressure – always deduct 1 bar to obtain a correct fuel pressure reading.)

IMPORTANT NOTE:

The special tool PN 83 30 0 491 310 (M62 fuel pressure adapter hose) was previously sent via the Automatic Tool Shipment Program (SI B04 09 97).

The E9x/E6x N54 Repair Instruction RA13 31 028 (Checking fuel feed pressure N53/N54) **incorrectly** indicates that the special adaptor tool 136 030 should be used during this procedure. The repair manual instruction will be corrected with the next DIS software release.

7. Perform all applicable steps of the Low Pressure Fuel test module B1214_DI6KNDR. Pay attention to all questions being displayed during diagnosis and answer them correctly.

After completion of all diagnostic steps, end the test module and enter the "fault feedback" screen. Enter the result of a diagnosis process into the DiagnosisCode dialog box and obtain a "Diagnostic Code".

In case no failure can be currently detected in the low pressure fuel system, enter the last option "No fault found" into the dialog box. The obtained Diagnostic Code should be included in the comment section of the warranty claim.

8. After completion of the Low Pressure Fuel test, perform the **High Pressure Fuel System test B1214_DI6KHDR**. This test module may be accessed using the following path: Function selection / Drive / Motor Electronics / High-pressure fuel system / Test plan.

9. Perform all applicable steps of the High Pressure Fuel test module B1214_DI6KHDR. Pay attention to all questions being displayed during diagnosis and answer them correctly.

Important Note:

When comparing the measured fuel pressure with the engine running at idle speed, make sure to let the fuel pressure stabilize for approximately 60 seconds prior to the final reading. Otherwise, an implausible value (around 150 bars) is going to be entered into the test, resulting in inaccurate diagnosis (defective high-pressure pump).

10. After completion of all diagnostic steps, end the test module and enter the "fault feedback" screen. Enter the result of a diagnosis process into the DiagnosisCode dialog box and obtain a "Diagnostic Code".

In case no failure can be currently detected in the high-pressure fuel system, enter the last option "No fault found" into the dialog box. The obtained Diagnostic Code should be included in the comment section of the warranty claim.

Important Note:

When entering the test results into diagnostic feedback, make sure that you scroll down on the selection screen to be able to view all available options. For example, option "(5) Fuel pump defective" refers only to the electric fuel pump failure; option "(8) High-pressure pump defective" provides the right diagnostic code for HDP failure.

11. Make sure that **FASTA data is transmitted** after the completion of all appropriate test modules.
12. **NEW** In case the high-pressure injection pump needs to be replaced, use the updated part P/N 13 51 7 585 655, which incorporates the latest improvements to internal sealing. For the pump replacement procedure, refer to RA 13 51 017, found in BMW TIS.

Important:

When following the RA 13 51 017 replacement procedure, disregard a recommendation to replace an HDP inlet line which has a soldered holder with the one equipped with the "elastomer type of holder". The line replacement applies only to the N53 engine, which is not available in the US market.

13. After replacement, clear the adaptation values of the high-pressure flow control valve in the DME by selecting the path:

- Service Functions
- Drive
- Motor Electronics
- Adjustment Programs
- Clear Adaptations, and then Test plan
- (2): Reset adaptive values.

IMPORTANT PARTS ORDERING INFORMATION

1. It is **NO** longer required to submit a PuMA case to the Technical Hotline when encountering HDP failure as described in this Service Bulletin and diagnosed with DIS/GT1.
2. HDP fuel injection pumps (P/N 13 51 7 585 655) are available from PDCs without any special Technical Hotline authorization required.

WARRANTY INFORMATION

For information only.

The DIS test plans **B1214_DI6KNDR** and **B1214_DI6KHDR** for both low and high-pressure fuel systems must be completed before a high-pressure injection pump (HDP) is replaced.

Warranty claims may be denied:

1. If not supported by diagnostic test plans (transferred via FASTA). Make sure to include the "Diagnostic Code" in the comments section of the warranty claim.
2. If the latest diagnostic software is not used.

PE08-032

BMW

7/21/2008

Technical Service

Bulletins

SIB130208



PERFORM THE PROCEDURE OUTLINED IN THIS SERVICE INFORMATION ON ALL AFFECTED VEHICLES THE NEXT TIME THEY ARE IN THE SHOP FOR MAINTENANCE OR REPAIRS.

SUBJECT

Service Action: Replace the High Pressure Pump

MODEL

E90, E92, and E93 with the N54 engine, produced from 01/17/2007 through 01/25/07

SITUATION

An internal component in the high-pressure pump (HDP) may fail, causing driveability symptoms such as longer starting times or erratic engine operation. It may also lead to a premature failure of the HDP on vehicles at higher mileages.

Should this situation occur, the HDP emergency operation is activated and the Service Engine Soon lamp (MIL) is illuminated.

Note:

In this situation, the vehicle can continue to be driven, even for long distances, without any risk of breakdown.

AFFECTED VEHICLES

This Service Action involves E90, E92 and E93 vehicles with N54 engines which were produced from 01/17/2007 through 01/25/2007.

In order to determine if a specific vehicle is affected by this Service Action, it will be necessary to utilize the "Service Menu" of DCSnet (Dealer Communication System) or the Key Reader. Based on the response of the system, either proceed with the corrective action or take no further action.

The Chassis Number Ranges listed below are **only** for informational purposes and are not to be considered as the only deciding factor.

Model	Chassis Number Range
E90	P100339 – P100668
E90	PA65965 – PA66015
E90	VF49706 – VF52378
E92	P022744 – P033837
E93	PX45170 – PX45288

CORRECTION

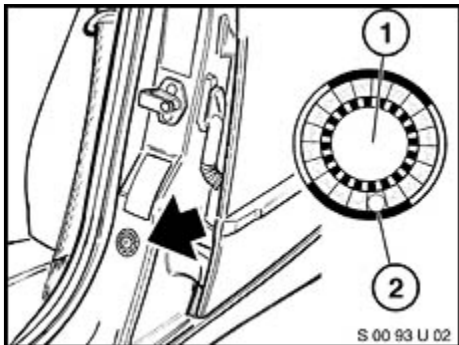
Replace the high-pressure pump.

PROCEDURE

Please refer to TIS Repair Instruction RA 13 51 017: Removing and installing, or replacing high-pressure fuel pump (N54, N53).

PARTS INFORMATION

Part Number	Description	Quantity
13 51 7 585 655	High-pressure pump	1
11 61 7 547 242	Profile seal set	1
13 53 7 582 770	ASA bolt M8X17.5 - AL	1

LABEL INSTRUCTIONS

This Service Action has been assigned code number **514**. After the vehicle has been checked and/or corrected, obtain a label (SD 92-335) and:

- A. Emboss your BMW center warranty number in the middle of the label (1);
- B. Punch out code number **514** (2), printed on the label; and
- C. Affix the label to the **B** pillar as shown.

If the vehicle already has a label from a previous Service Action/Recall Campaign, affix the new label next to the old one. Do not affix one label on top of another one because a number from an underlying label could appear in the punched-out hole of the new label.

WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty.

Defect Code: **00 13 76 01 00**

Labor Operation:	Labor Allowance:	Description:
00 57 894	E90, E92 17 FRU	Replace the high-pressure pump
00 57 894	E93 19 FRU	Replace the high-pressure pump

[Copyright © 2008 BMW of North America, LLC]

PE08-032

BMW

7/21/2008

Technical Service

Bulletins

SIB130308



PERFORM THE PROCEDURE OUTLINED IN THIS SERVICE INFORMATION ON ALL AFFECTED VEHICLES THE NEXT TIME THEY ARE IN THE SHOP FOR MAINTENANCE OR REPAIRS.

SUBJECT

Service Action: Replace the High-Pressure Pump

MODEL

E90, E92, and E93 with the N54 engine produced from 06/01/2006 through 10/28/2006

SITUATION

An internal component in the high-pressure pump (HDP) may fail, causing drivability symptoms such as longer starting times or erratic engine operation. It may also lead to a premature failure of the HDP on vehicles at higher mileages.

Should this situation occur, the HDP emergency operation is activated and the Service Engine Soon lamp (MIL) is illuminated.

Note:

In this situation, the vehicle can continue to be driven, even for long distances, without any risk of breakdown.

AFFECTED VEHICLES

This Service Action involves E90, E92 and E93 vehicles with N54 engines which were produced from 06/01/2006 through 10/28/2006.

In order to determine whether a specific vehicle is affected by this Service Action, it will be necessary to utilize the "Service Menu" of DCSnet (Dealer Communication System) or the Key Reader. Based on the response of the system, either proceed with the corrective action or take no further action.

The chassis number ranges listed below are **only** for informational purposes and are not to be considered as the only deciding factor.

Model	Chassis Number Range
E90	FV75004 – FV75116
E90	KY60007 – KY60964
E90	PA65001 – PA87847
E92	P021102 – P032114
E92	PV80038 – PV83999
E93	PX45010 – PX45013

CORRECTION

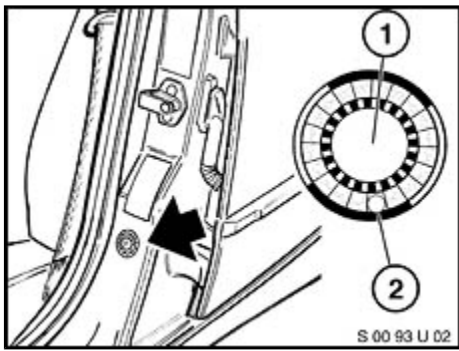
Replace the high-pressure pump.

PROCEDURE

Please refer to TIS Repair Instruction RA 13 51 017, Removing and installing, or replacing high-pressure fuel pump (N54, N53).

PARTS INFORMATION

Part Number	Description	Quantity
13 51 7 585 655	High-pressure pump	1
11 61 7 547 242	Profile seal set	1
13 53 7 582 770	ASA bolt M8X17.5 - AL	1

LABEL INSTRUCTIONS

This Service Action has been assigned code number **518**. After the vehicle has been checked and/or corrected, obtain a label (SD 92-335) and:

- A. Emboss your BMW center warranty number in the middle of the label (1);
- B. Punch out code number **518** (2), printed on the label; and
- C. Affix the label to the **B**-pillar as shown.

If the vehicle already has a label from a previous Service Action/Recall Campaign, affix the new label next to the old one. Do not affix one label on top of another one, because a number from an underlying label could appear in the punched-out hole of the new label.

WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty.

Defect Code:	00 13 77 01 00	
Labor Operation:	Labor Allowance:	Description:
00 57 904	E90, E92 17 FRU	Replace the high-pressure pump
00 57 904	E93 19 FRU	Replace the high-pressure pump

[Copyright © 2008 BMW of North America, LLC]