



This Service Information bulletin supersedes SI B64 03 05 **December 2007**.

**NEW** designates changes to this revision

#### **SUBJECT**

**Air Conditioning System Poor Performance**

#### **MODEL**

E60, E61 (5 Series) with 6 cylinder engines only

#### **SITUATION**

The customer may experience one of the following conditions:

1. The air conditioning system has permanent insufficient cooling, especially during idling or while driving in heavy traffic conditions with high outside temperature even when the system is set to "MAX" A/C.
2. No cold air from air conditioning during the first 2 minutes of operation after starting the engine. After this time the system seems to work properly.

#### **CAUSE**

1. Compressor failure due to damaged internal control valve.
2. This is considered normal system operation. When the vehicle is parked for extended periods, liquid refrigerant can migrate into the compressor. It may take up to 2 minutes to displace the liquid refrigerant from the compressor before starting normal operation.

#### **NEW PROCEDURE 1**

In most cases, this problem can be duplicated. Perform the following A/C system performance test as per Repair Manual RA 64 50 ...

1. Connect a DIS/GT1 to the vehicle.
2. Position a thermometer with a separate gauge approximately 5 cm below the headliner at the top of the B-pillar. Position the gauge so that it can be easily read.
3. Start the vehicle up and heat up the vehicle interior as follows:
  - o A/C button is not activated during the heating up period.
  - o Set the recirculated air mode.
  - o Select the air distribution mode for the footwell and defrosting.
  - o Maximum heat temperature setting.
  - o Maximum blower speed.
  - o Close all doors and windows.

- Run the engine at approximately 2000 rpm until the normal engine temperature has been reached, and then continue with idle mode.
4. As soon as an interior vehicle temperature of 50° C (122° F) has been reached, turn on the "MAX" A/C button to activate the cooling down period.
  5. After 3-4 minutes, the evaporator temperature sensor (as read using the DIS/GT1 through "Control Module functions/Diagnosis Requests") should read 10° C (50° F).
  6. If the value is not reached, recover the refrigerant charge from the system and note the amount drawn off.
  7. If the amount drawn off is correct, replace the compressor if the rest of the electrical system tests okay. If the system charge is low, troubleshoot the system for leaks.
  8. Replace the integrated drier.
  9. Evacuate the system for approximately 1 hour.
  10. Recharge the system and retest operation.

## PROCEDURE 2

Do not replace any parts. This is considered normal operation of the system. Explain to the customer that this condition may occur if the vehicle is parked for extended periods (greater than 8 hours). Over time liquid refrigerant can drain back into the compressor when the vehicle is parked. If the A/C system were to function at 100% right from startup the compressor would be damaged. The system is then started up gradually to prevent this from happening and extending the life of the compressor. Normally the system is functioning at 100% after 30-60 seconds, but in extreme conditions it may take up to 2 minutes for the system to function at 100%.

## PARTS INFORMATION

Part Number	Description	Quantity
Refer to EPC	A/C Compressor	1
Refer to EPC	Integrated Drier	1

## **NEW** WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty or the Certified Pre-owned Program for procedure 1 only.

### Defect Code: 64 52 00 14 00

Labor Operation:	Labor Allowance:	Description:
64 10 012*	3 FRU	Checking function of air conditioning
64 50 525	Refer to KSD	Discharging, evacuating and filling air conditioner (if necessary)
64 53 517	Refer to KSD	Replacing dryer element for air conditioning system (If necessary)
64 52 523	Refer to KSD	Replacing compressor for air conditioner (if necessary) without Dynamic Drive

64 52 524

Refer to KSD

Replacing compressor for air conditioner (if  
necessary) with Dynamic Drive

\*Main Work - use this labor operation number when this is the only repair being performed, or if this is the main repair when performed along with other repairs at the same time. If this is not the main repair, refer to KSD for the associated (+) labor operation code.

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