SI B84 23 06
Phone, Navigation Systems

August 2006
Technical Service

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

SUBJECT
Service Action: Telematics Control Unit (TCU) – MOST-bus Vehicles

MODEL
E60, E61 (5 Series) from 7/03 to 2/06 production

E63, E64 (6 Series) from 11/03 to 2/06 production

E65, E66 (7 Series) from 9/02 to 3/06 production

E90, E91 (3 Series) from 3/05 to 2/06 production with Premium Package (ZPP) or BMW Assist™ (SA 639)

SITUATION
The Non-Volatile Memory (NVM) within the Network Access Device (NAD) may have been corrupted. This may cause the manual and automatic emergency call and roadside call (BMW Assist™) to malfunction. This Service Action checks the integrity of the NAD and if found to be corrupted, corrects it by a special programming repair or by TCU replacement.

Copies of the customer notification letter and Q&A are attached.

To minimize the customer's inconvenience caused by this Service Action, pick up (and deliver after repair) the affected vehicle from the customer's home or provide appropriate alternative transportation.

Customers will be impressed when you return their cars cleaned inside and out and with a full tank of gas. Reimbursement information for the vehicle fueling and valet costs may be found in the Warranty portion of this bulletin.

AFFECTED VEHICLES
This Service Action involves 3, 5, 6, and 7 Series vehicles with BMW Assisttrade; produced from August 28, 2002 to March 31, 2006.

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

PROCEDURE:
CHECKING THE NETWORK ACCESS DEVICE (NAD)
1. Connect a BMW approved battery charger to the vehicle.

2. Connect an OPS/OPPS head to the vehicle and turn the ignition on.

3. Using Progman V22.01.00 or higher, follow the path to the "Retrofits" menu selection. For information on retrofits, refer to the Retrofit section of SI B09 05 01 (Coding, Individualization and Programming).

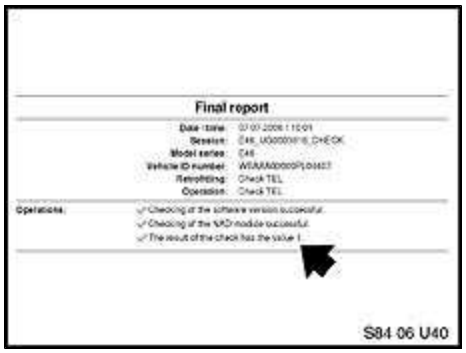
4. At the Status Report screen, select "Cancel Update".

Note: The Status report is only displayed if the vehicle is not at the latest software level.

5. Select "**Check TEL**" in the Retrofit menu.
6. Follow the on-screen prompts.

7. At the screen "Does an active BMW Assist contract exist for the connected vehicle?" select "Yes".

- **Note**: "Yes" must always be selected for this campaign.



8. Follow the on-screen prompts.
9. Check the Final Report for the check value.

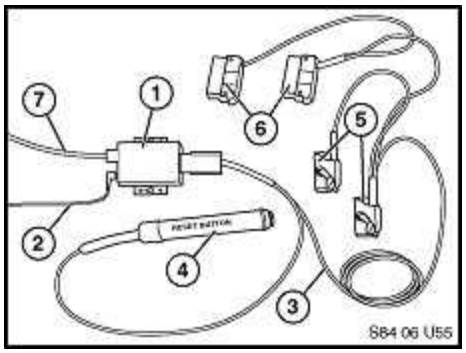
- 0 = The NAD is OK. Proceed to step 28.
- 1 = The NAD within the TCU must be repaired. Proceed to step 10.
- 2, 3 or 4 = The NAD is faulty and the TCU must be replaced. Proceed to step 30.

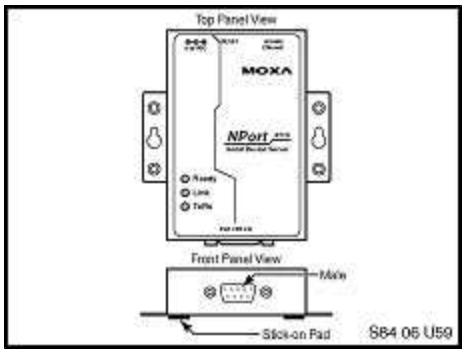
MOXA KIT INFORMATION

MOXA Kit comprises of:

- MOXA box (1)
- Power cable (2)
- MOXA cable (3) with:

- Reset button (4)
- TCU connectors (5)
  - The **blue** connector is for E60, E61, E63, E64, E90, E91 vehicles.
  - The **black** connector is for E46, E53, E65, E66, E83 and E85 vehicles.
- Harness connector (6)
  - The **white** connector is for E60, E61, E63, E64, E90, E91 vehicles.
  - The **black** connector is for E46, E53, E65, E66, E83 and E85 vehicles.





MOXA LED information		
Ready LED	Red	**Steady on:** Power is on and NPort is booting up **Blinking:** Indicates an IP conflict or Program is not responding.
	Green	**Steady on:** Power is on and NPort is functioning normally. **Blinking:** The NPort has been located
	Off	Power is off
Link LED	Orange	10 Mbps Ethernet connection
	Green	100 Mbps Ethernet connection
	Off	Ethernet cable is disconnected
Tx/Rx LED	Orange	Serial port is transmitting data
	Green	Serial port is receiving data
	Off	No data is being transmitted or received through the serial port

S84 06 U60

REPAIRING THE NETWORK ACCESS DEVICE (NAD) USING THE MOXA BOX

10. Connect the following to the MOXA box:

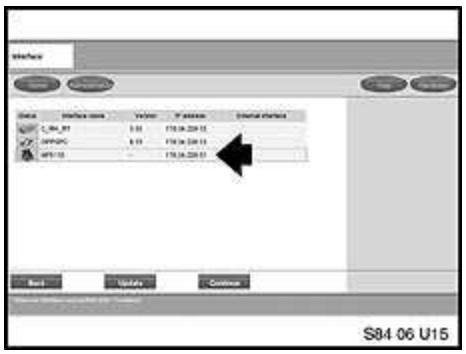
- Power cable (2)
- Work shop LAN cable (7)
- MOXA Cable (3)

11. Connect the MOXA box between the vehicle TCU and the vehicle harness:

- Disconnect the vehicle TCU connector.
- Connect MOXA connector (6) to the vehicle harness.
- Connect the MOXA connector (5) to the vehicle TCU (the TCU need not be removed from the vehicle).

NOTE: The remaining unconnected connectors (5) and (6) must not be connected together, or the procedure will fail.

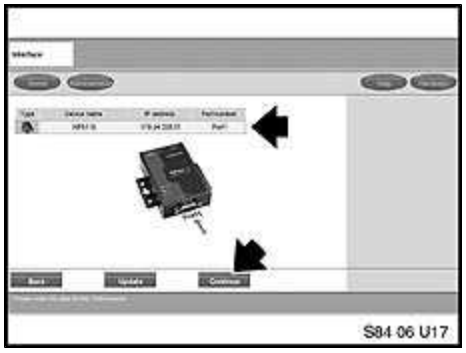
12. From the Progman Homepage screen, using



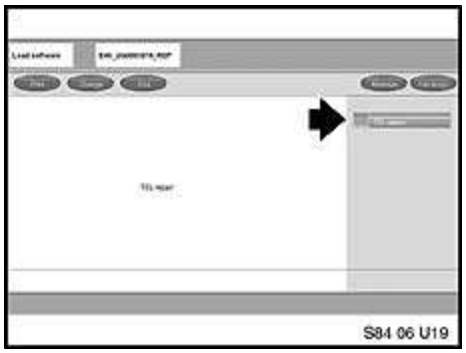
Progman V22.01.00 or higher, select "**New Session**".

- Note: Start the Progman session via the Software Service Station (SSS). Do NOT start a MOXA Progman session via the DISplus or GT-1 using Progman V22.x.

13. Select the correct MOXA box (NP 5110) from the list, and then name the session.



14. Select the MOXA box, then select "**Continue**"

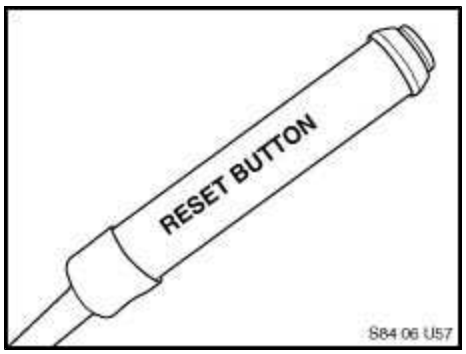


15. Follow the on-screen prompts.
16. At the "TEL repair" screen, select "**TEL repair**".

17. Follow the on-screen prompts.
18. Confirm that all cables going to and from the MOXA box are connected properly.

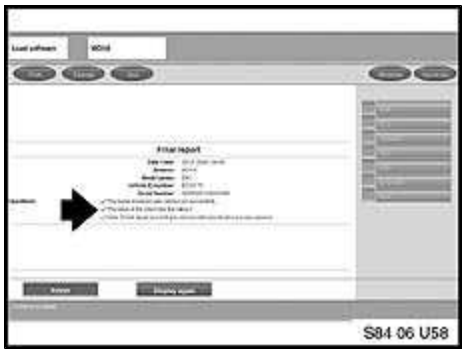
19. Follow the on-screen prompts.
20. When requested, press the "Reset" button for a **minimum of 5 seconds**, then select "Continue".
21. Follow the on-screen prompts.
NOTE:

- You will be requested to press the "Reset" button on up to **four** separate occasions.



- The session will time out after 15 minutes if the "Reset" button is not pressed when requested. Performing the programming overnight will fail because the "Reset" button needs to be pressed for the process to complete successfully.

22. Follow the on-screen prompts.
23. At the "Please start a new vehicle session...." screen, **no action is required**.
Select "Continue"



24. Follow the on-screen prompts.
25. The Final Report will indicate if the repair was completed successfully (**check value = 0**)
26. If the TCU repair failed, it must be replaced.
Proceed to step 30.

27. Turn the ignition off and allow the MOST-bus power down (4 minutes). Disconnect the MOXA harness, reconnect the 54 pin connector on the TCU and reassemble the vehicle as necessary.

Note: Disconnecting the MOXA harness before the vehicle assumes sleep mode may damage the TCU.

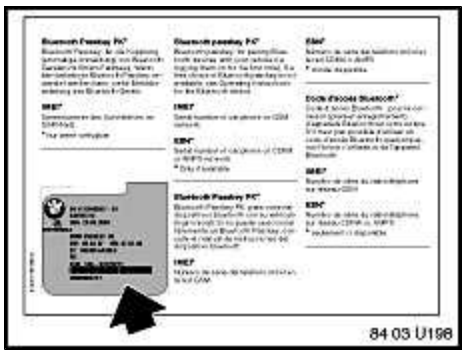
28. Using Progman V22.01.00 or higher, **program and code the complete vehicle**. Refer to SI B09 05 01 "Coding, Individualization and Programming", **Procedure B**. Note that Progman will automatically reprogram all programmable control units that do not have the latest software.

29. After successfully updating the vehicle, follow step 36 below.

TCU REPLACEMENT PROCEDURE

30. Refer to TIS (RA 84 11...) for the TCU replacement procedure.

31. Before installing the new TCU, remove one copy of the Electronic Serial Number (ESN) label and place it on the repair order for reference during warranty claim entry. You will be asked for the new TCU "ESN" when submitting a claim via DCSnet. Refer to SI B01 10 05 for more details.



32. The second ESN label of the TCU should be affixed over the existing label in the Owner's Manual insert (P/N 01 49 0 157 963).

33. Complete the TCU installation.

34. Using Progman V22.01.00 or higher, **program and code the complete vehicle**. Refer to SI B09 05 01 "Coding, Individualization and Programming", **Procedure A.**

35. Proceed to step 36.

Note: It is **NOT necessary to obtain a replacement authorization number** as outlined in SI B84 23 05 (Enhanced Support for BMW Assist™ Telematics Control Unit (TCU) with Bluetoothreg; & CPT9000 Phone Systems) prior to replacing the TCU if the NAD recovery procedure outlined in the SI does not repair the NAD.

INITIALIZATION & TEST OF BMW ASSIST SERVICES

36. BMW Assist must be initialized in the below scenarios:

- E65, E66, E90, E91 vehicles from 3/05 to 8/05 production.
- E60, E61, E63, E64 vehicles from 7/03 to 8/05 production.
- If the TCU is replaced on any vehicle (except pre 3/05 production E65/66 vehicles).

Refer to SI B84 15 03 (BMW Assist™ Initialization) for the BMW Assist initialization procedure.

- **The vehicle mu**st be in the Verizon Wireless Network for the initialization procedure to work properly. If the vehicle is not in the Verizon Wireless Network perform the outlined procedure and then follow these additional steps. For a complete list of BMW centers outside of the Verizon wireless network refer to SI B84 15 03.
- Create a PuMA case to received TCU shipping authorization.
- Remove the TCU from the vehicle.
- Send **via FedEx** the TCU and a copy PuMA case to:

BMW of North America, LLC.

Attn: Body Electrical Technical Hotline (TCU Reactivation B84 23 06)

1 BMW Plaza

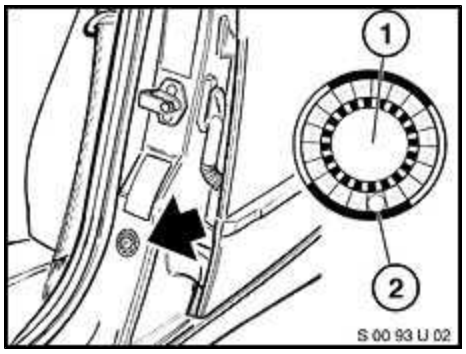
Montvale, NJ 07645

(201) 573-2000

- BMW of North America, LLC will initialize the TCU and ship it out on the same business day it was received.
- After receiving the TCU back from BMW of North America, reinstall the TCU and place a BMW Assisttrade; call as outlined in step 37.
- All shipping charges (both ways) are to be billed to the dealer's Fed-Ex account. On the warranty claim, submit the Fed-Ex shipping charges (double the amount provided to you by Technical Hotline to cover shipment both ways) in the sublet section (using sublet code 4).

37. Test the BMW Assist™ service for proper operation by placing a test call (press the Roadside Assistance "Wrench" button). Make sure the BMW Assist Response Center has received the correct MIN/MDN, VIN and location of the vehicle. Have the representative update their records as needed.

LABEL INSTRUCTIONS



This Service Action has been assigned code number **473**. After the vehicle has been checked, and corrected if necessary, obtain a label (SD 92-295) and:

a. Emboss your BMW dealer warranty number in the middle of the label (1);

b. Punch out code number **473** printed on the label (2) 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.

PARTS INFORMATION

TCU Part Number	E-Series	Production Range	Quantity
84 10 9 126 660	E60, E63, E64	7/03 – 8/04	1 (If Necessary)
84 10 9 120 760	E60, E63, E64	9/04 – 2/05	1 (If Necessary)
84 10 9 122 446	E60, E61 E63, E64, E90, E91	3/05 – 2/06	1 (If Necessary)
84 10 9 120 920	E65, E66	9/02 – 2/05	1 (If Necessary)
84 10 9 122 662	E65, E66	3/05 - 3/06	1 (If Necessary)

WARRANTY INFORMATION

Reimbursement for this Service Action will be **via normal claim entry** utilizing the following information.

Defect Code	00 84 31 01 00

Select one of the following labor operations:

Labor Operation:	00 56 194	Check the NAD (Vehicle at the latest integration level)
Labor		

Allowance:	All vehicles	7 FRU	Check value "0" from step 9
Labor Operation:	00 56 195		Check NAD, flash recover the NAD via the MOXA and perform a complete vehicle encoding (Vehicle at the latest integration level)
Labor Allowance:	E60	19 FRU	Check value "1" from step 9
	E61	18 FRU	
	E63, E64	22 FRU	
	E65, E66	20 FRU	
	E90	18 FRU	
	E91	20 FRU	
Labor Operation:	00 56 196		Check NAD, replace the TCU and perform a complete vehicle encoding (Vehicle at the latest integration level)
Labor Allowance:	E60 except M5	16 FRU	Check value "2, 3 or 4" from step 9
	E60 M5	15 FRU	
	E61	14 FRU	
	E63, E64	19 FRU	
	E65, E66	16 FRU	
	E90	13 FRU	
	E91	14 FRU	
Labor Operation:	00 56 197		Check NAD, flash recover the NAD via the MOXA (TCU failed to program correctly), replace TCU (Vehicle at the latest integration

			level), program and code the complete vehicle because the TCU was replaced.
Labor Allowance:	E60	20 FRU	Check value "1" from step 9
	E61	19 FRU	
	E63, E64	23 FRU	
	E65, E66)	21 FRU	
	E90	18 FRU	
	E91	20 FRU	
Labor Operation:	00 56 198		Check NAD, program and code the complete vehicle
Labor Allowance:	All vehicles	16 FRU	Check value "0" from step 9
Labor Operation:	00 56 199		Check NAD, Program and code the complete vehicle (Including programming of the CAS)
Labor Allowance:	All vehicles	17 FRU	Check value "0" from step 9
Labor Operation:	00 56 200		Check NAD, program and code the complete vehicle (Including programming of the NAV)
Labor Allowance:	E65, E66	19 FRU	Check value "0" from step 9
Labor Operation:	00 56 201		Check NAD, program and code the complete vehicle (Including programming of the CAS and the NAV)
Labor Allowance:	E65, E66	20 FRU	Check value "0" from step 9
Labor Operation:	00 56 202		Check NAD, flash recover the NAD via the MOXA, program and code the complete vehicle
Labor Allowance:	E60 except M5	25 FRU	Check value "1" from step 9

	E60 M5	24 FRU	
	E61	24 FRU	
	E63, E64	28 FRU	
	E65, E66	26 FRU	
	E90	24 FRU	
	E91	26 FRU	
Labor Operation:	00 56 203		Check NAD, flash recover the NAD via the MOXA, program and code the complete vehicle (Including programming of the CAS)
Labor Allowance:	E60)	26 FRU	Check value "1" from step 9
	E61	25 FRU	
	E63, E64	29 FRU	
	E65, E66	27 FRU	
	E90	25 FRU	
	E91	27 FRU	
Labor Operation:	00 56 204		Check NAD, flash recover the NAD via the MOXA, program and code the complete vehicle (Including programming of the NAV)
Labor Allowance:	E65, E66	29 FRU	Check value "1" from step 9
Labor Operation:	00 56 205		Check NAD, flash recover the NAD via the MOXA, program and code the complete vehicle (Including programming of the CAS and the

			NAV)
Labor Allowance:	E65, E66	30 FRU	Check value "1" from step 9
Labor Operation:	00 56 206		Check NAD, replace the TCU, program and code the complete vehicle
Labor Allowance:	E60	21 FRU	Check value "2, 3 or 4" from step 9
	E61	20 FRU	
	E63, E64	24 FRU	
	E65, E66	22 FRU	
	E90	19 FRU	
	E91	19 FRU	
Labor Operation:	00 56 207		Check NAD, replace the TCU, program and code the complete vehicle (Including programming of the CAS)
Labor Allowance:	E60	23 FRU	Check value "2, 3 or 4" from step 9
	E61	21 FRU	
	E63, E64	25 FRU	
	E65, E66	23 FRU	
	E90	20 FRU	
	E91	21 FRU	
Labor Operation:	00 56 208		Check NAD, replace the TCU, program and code the complete vehicle (Including programming of the NAV)
Labor Allowance:	E65, E66	25 FRU	Check value "2, 3 or 4" from step 9

Labor Operation:	00 56 209		Check NAD, replace the TCU, program and code the complete vehicle (Including programming of the CAS and the NAV)
Labor Allowance:	E65, E66	26 FRU	Check value "2, 3 or 4" from step 9
Labor Operation:	00 56 210		Check NAD, flash recover the NAD via the MOXA (TCU failed to program correctly), replace the TCU, program and code the complete vehicle
Labor Allowance:	E60 except M5	26 FRU	
	E60 M5	25 FRU	
	E61	25 FRU	
	E63, E64	29 FRU	
	E65, E66	27 FRU	
	E90	24 FRU	
	E91	26 FRU	
Labor Operation:	00 56 211		Check NAD, flash recover the NAD via the MOXA (TCU failed to program correctly), replace the TCU, program and code the complete vehicle (Including programming of the CAS)
Labor Allowance:	E60	27 FRU	
	E61	26 FRU	
	E63, E64	30 FRU	
	E65, E66	28 FRU	

	E90	25 FRU	
	E91	27 FRU	
Labor Operation:	00 56 212		Check NAD, flash recover the NAD via the MOXA (TCU failed to program correctly), replace the TCU, program and code the complete vehicle (Including programming of the NAV)
Labor Allowance:	E65, E66	30 FRU	
Labor Operation:	00 56 213		Check NAD, flash recover the NAD via the MOXA (TCU failed to program correctly), replace the TCU, program and code the complete vehicle (Including programming of the CAS and the NAV)
Labor Allowance:	E65, E66	31 FRU	
Labor Operation:	84 99 000		For centers outside of the Verizon Wireless Network
Labor Allowance:		2 FRU	

TCU shipping charges for BMW centers outside Verizon Wireless network

All shipping charges (both ways) are to be billed to the dealer's Fed-Ex account. On the warranty claim, submit the Fed-Ex shipping charges (double the amount provided to you by Technical Hotline to cover shipment both ways) in the sublet section (using sublet code 4).

Additional Programming Information

If the measures plan in Progman specifies that programming should be repeated and/or control units should be replaced proceed as follows:

- Print measure plan and final report.
- Refer to KSD for additional labor information.
- Additional costs associated with programming should be charged to the defect code listed in this bulletin.

REFUELING COST

BMW of North America, LLC, will provide reimbursement to have the gas tank topped off once, as required, for each vehicle affected by this Service Action. Attach the appropriate receipt to the work order.

Defect Code	**85 99 00 66 NA**	**Refuel vehicle**
Sublet:	Actual cost to top off the fuel tank	
Sublet code:	4	

VALET COST

BMW of North America, LLC, will provide reimbursement for vehicle valet services (pick up & delivery) for each vehicle affected by this Service Action. Attach the appropriate receipt to the work order.

Defect Code	**99 99 77 77 NA**	**Valet Service**
Sublet:	$25.00	
Sublet code:	4	

RENTAL VEHICLES

Retailers participating in the Retailer Administered Customer Assistance Program and the BMW Service Loaner Car Program may self-authorize claims for reimbursement of rental costs from independent rental agencies in certain situations. For more details refer to SI B01 07 03.

ATTACHMENTS

view PDF attachment **B842306Customer_Letter**.
view PDF attachment **B842306Q&A**.