

Reference Manual



E63 / E64 **LIFE CYCLE IMPULSE**



Technical Training

The information contained in this manual is not to be resold, bartered, copied or transferred without the express written consent of BMW of North America, LLC ("BMW NA").

Table of Contents

E63/E64 Life Cycle Impulse

Subject	Page
Introduction	3
Body	4
Exterior	4
Front Lights	5
Rear Lights	6
Interior	7
Drive	8
Engine	8
Transmission	8
Chassis and Suspension	8
Electrical Systems	9
Lane Departure Warning System	9

Life Cycle Impulse

Model: E63 and E64

Production: From 9/2007 Production

OBJECTIVES

After completion of this module you will be able to:

- Identify the changes made in the E63 and E64.
- Explain the operation of the lighting on the E63 and E64 LCI.

Introduction

The BMW 6 Series Coupé and Convertible redesign will be launched in autumn 2007. The E63 and E64 now incorporate model year upgrade features that were introduced in March 2007 on the E60 and E61. They include the following features:

- Lane departure warning
- Favorites buttons
- Active cruise control with Stop & Go function.

The topics listed above have already been described in detail in various other product information documents and are therefore not dealt with any further in this document. The table below details which product information publications deal with the various topics.



The model year upgrade will also see the introduction of crash-sensitive head restraints as standard. Crash-sensitive head restraints can reduce or completely prevent cervical vertebral column injuries from rear impacts.

The crash-sensitive head restraints are explained in a separate product information document.

Body

Exterior

The front apron of the E63/E64 LCI features wide web sections while the spoiler lip has a distinctive shape. The round headlights include the daytime driving lights function while the direction indicator lights now feature LED technology.

In the same way as the spoiler lip, the side sill panel features a new shape, giving the appearance that the vehicle is lower set when viewed from the side.

The trailing edge of the rear spoiler has also been newly designed giving the BMW 6 Series a wider appearance. The direction indicator lamps in the rear lamp clusters also feature LED technology. The lower light units are designed narrower and wider thus boosting the width impression.

In addition to these design modifications, the BMW 6 Series additionally features textile inner wheel arch trim panels, a completely tight bonnet seal and a closed underbody.

A distinctive feature in the rear area of the E63 LCI is the third brake light which is now also integrated in the rear lid on the Coupé as was previously the case on the Convertible (E63/E64 LCI common part).



Front Lights

The front turn signal indicators on the E63 and the E64 are now composed of 26 LEDs on each side. Four more LEDs are used for the side marker lights on each side.

The light module operates the turn signal indicators. It provides the power supply and monitors its outputs for overload/circuit breaks. If an overload or circuit break occurs, the light module issues a Check Control message.



Check Control Icon	Meaning	Explanation
	Front right indicator failure	Indicator Front right indicator has failed. Have the fault checked by your nearest BMW dealer.
	Front left indicator failure	Indicator Front left indicator has failed. Have the fault checked by your nearest BMW dealer.

The function of the LEDs in the turn signal indicators and side marker lights is monitored by electronic circuitry. The electronic circuit board is located on the top of the indicator casing.

The flashing indicator signal is provided by the light module. The electronic circuit board provides the actual power supply for the LEDs.

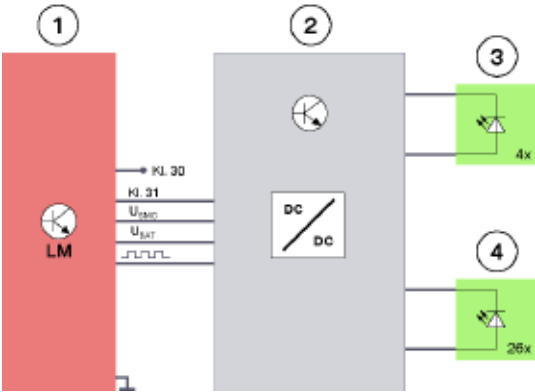
If an LED fails, the electronic circuit board completely switches off the power supply for all of the LEDs. The light module then detects the lower power consumption and initiates the Check Control message.



Electronic circuit board on E63/E64 turn signal indicator

Index	Explanation
1	Electronic circuit board

No retrofit option is offered for vehicles built before the model year upgrade.



Index	Explanation
1	Light module
2	Electronic circuit board for turn signal indicator/side marker light
3	Side marker light
4	Turn signal indicator

Schematic circuit diagram for E63/E64 front turn signal indicator

Note: The function of the LEDs is only monitored when the LEDs are switched on. If a diode fails, the legally required minimum luminosity can not be guaranteed. Therefore, the turn signal indicator has to be replaced. That applies both to the front and the rear turn signal indicators.

Rear Lights

The rear turn signal indicators on the E63 and E64 similarly use LEDs as their light source.



Interior

In the interior, specifically targeted redesign as well as new material and color compositions point the way to the future. As already implemented in the spring on the E60/E61 LCI, the controller, control elements for air conditioning and audio system as well as the door openers are of a higher grade design.

The controls for the air conditioning/Controller have been given a new trim design (Chrome Pearl Gray). The accent surrounds on the instrument cluster and the gear lever knob have been matched to the new trim design.

The 6 Series Convertible is available with leather trim with sun-reflective technology that can reduce the surface temperature by up to 20°C with the sun shining on it.

The round instruments in the instrument cluster now feature chrome rings. An oil temperature gauge is integrated in the rev counter.

The interior rear-view mirror is new and can now also accept the camera for the optional lane departure warning.

The crash-active head restraints that reduce the risk of cervical vertebra (neck) injuries are also fitted new in the BMW 6 Series.



Drive

Engine

The well-proven N62B48O1 engine with 270 kW(367 bhp) output and a maximum torque of 490 Nm is retained in the BMW 650i.



Transmission

As already known from the E60/E61 LCI, the E64/E64 LCI is fitted with the electronic automatic transmission designated GA6HP24Z TU.

An automatic gearbox and a 6-speed sports automatic gearbox are available.

The gearshift paddles on the steering wheel on the 6-speed sports automatic gearbox have been redesigned (same as SMG paddles). The rev counter is dynamic, i.e. in sports mode pointer activation is tighter thus suggesting a faster increase in engine speed.

Chassis and Suspension

The lightweight chassis and suspension of the BMW 6 Series combines a high degree of driving stability with precision steering response, optimum grip and long-distance comfort. No technical changes have been made as part of the model redesign.

The rim offset for the "Wheels with mixed tires" option has now been reduced by 4mm, thus increasing the rear track of the correspondingly equipped E63/E64 LCI by 8 mm.

Electrical Systems

The E63/E64 LCI now features several drive assistance systems known from other model series. Active cruise control with stop & go function and lane departure warning are now optionally available for the BMW 6 Series.

Favorite buttons - 6 freely programmable buttons will be added to the iDrive as from autumn 2007. The CID features new graphics and high-contrast presentation. The 6 Series Coupé and Convertible are also available with the adaptive headlight including turn-off light function with variable and speed-dependent light distribution.

The BMW Individual High End audio system is now also optionally available for the E63/E64 LCI.

The center console features a USB interface as standard.

Lane Departure Warning System

The lane departure warning function used on the E60/E61 has now been adopted on the E63/E64.

The lane departure warning is switched on and off using a button on the steering wheel.

When the ignition is switched on, the lane departure warning system always reverts to the status that was active when the ignition was last switched off.



The lane departure warning can be switched on as of terminal 15 ON. The system is available from a speed of 70 kph upwards.

The lane departure warning system is also primed if lanes are detected. If the lane departure warning is switched on at speeds under 70 kph, a message will appear on the instrument cluster for 3 seconds indicating availability above a speed of 70 kph.

The way in which the activation speed is indicated has slightly changed.

In future, an indication of the lane departure warning activation speed is only shown when the lane departure warning is activated by pressing the button.

The warning standby indication, on the other hand, has not changed.

The lane departure warning control unit and the camera are located respectively on the glove compartment device mounting bracket and the rear-view mirror, as on the E60.