

SI B63 06 16 Lights July 2016 Technical Service

HALOGEN HEADLIGHT ADJUSTMENT PROCEDURE

MODEL

F30 (3 Series)

F31 (3 Series Sport Wagon)

SITUATION

Halogen headlights may be misaligned (aimed too low or high).

CORRECTION

Re-adjust the headlight (only low beam)

PROCEDURE

After the headlight unit is replaced or when a headlight of a vehicle in the shop is misaligned; the headlight must be aligned.

1. To perform the headlight alignment you can use a headlight aligner or follow the attached procedure.



The headlight aligner machine must meet the BMW specification and recommendation. The machine must be suitable to the lens specification. BMW headlight lens specification can be obtain from the label on the headlight. For example, the picture shows the lens is specified VOL and SAE. For the information on BMW approved alignment machine, refer to the below link.

- 2. Adjust the headlight by following ISTA procedure:
 - REP 6310PRF "Test requirements for headlights vertical aim adjustment"
 - REP 6310004 "Adjusting headlights"

Note: The recommended and tested headlight aligner can be purchased from BMW Center Solution website:

http://www.bmwcentersolutions.com/

WARRANTY INFORMATION

Not applicable.

ATTACHMENTS

View PDF attachment B630616_Adjustment_Procedure.

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PROCEDURE

Headlight aligner not available

Required equipment:

- Laser level (such as Bosch GLL 2)
- Smooth white wall next to a floor level for approximately 11m
- Measuring tape (10m)
- Black adhesive tape (such as electrical tape)
- Battery charger if needed

Follow the procedure below:

- I. Preparation for measurement
 - A. Park the vehicle perpendicular to the wall. Ensure the following:
 - Vehicle is unloaded with no heavy items left in trunk.
 - Wheels are pointed straight ahead.
 - The BMW hood emblem is 8 meters from the wall. (distance of wheel center can be marked with tape on the ground, and labeled with model, to facilitate measurement in the future)
 - Vehicle ignition is on with the headlight switch set to on (position 2).
 - The area is adequately dark to clearly see the required light pattern on the wall.



• The vehicle is level (a levelling laser should go through the center of each wheel +/-2mm). Layers of poster board under the front or rear tires may be necessary to achieve vehicle leveling.



- B. Connect the battery charger to ensure adequate system voltage.
- C. Begin on the driver's side of the vehicle. Place an opaque object in front of the passenger headlight so that no light from that headlight is visible on the wall.
- D. Measure the center height of the bulb by projecting the laser through the headlight.



- This is necessary as options such as sport suspension or alternative wheels can influence ride height.
- Be certain the laser goes through the center of the bulb.
- Arrange the laser so that a portion of its beam is projected on the car and the wall.
- It may be necessary to turn the headlights off to see the laser on the wall.





- E. Mark the height of the laser beam on the wall with the lower edge of a piece of tape.
- F. Place another piece of black tape on the wall with the upper edge 53mm below the bottom edge of the tape placed in the previous step.



II. Adjustment



- A. Adjust headlight (6mm hex key) level until the cutoff (level left side of the beam pattern) is even with the upper edge of lower tape. The relevant portion (indicated by the orange dot on the graphic) is to the left of the non-linear portion of the beam edge.
 - If the cutoff is at the tape line, it meets BMW specifications and should not be adjusted higher as this could result in excessive glare for oncoming traffic.
 - If the cutoff is above the tape line it is misadjusted and should be lowered to reduce glare for oncoming traffic.
- B. Confirm that the setting has taken effect:
 - a) Turn the light switch to position 0 and back to position 2. The beam edge should remain at the indicated level.
 - b) If the measurement is not confirmed, readjust and repeat until the setting takes effect.
- C. Repeat from step I.C (above) for the passenger side of vehicle.
 - Move the opaque object to the driver's side headlight to isolate the light pattern to the passenger side.
 - The measuring and adjustment point remains to the left of the cutoff, as shown in the picture above.