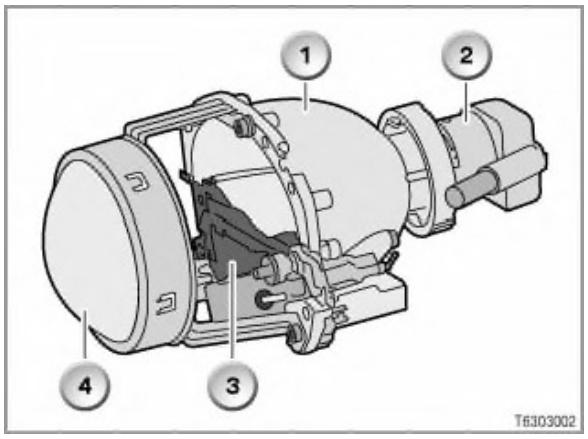
Bi-xenon lights are an advanced development of the xenon lights. Bi-xenon lights allow the xenon lights to be switched to main-beam.

Construction

The bi-xenon lights is generated by the following components:

- The xenon-headlight control unit with
- Ignition device and bulb for bi-xenon headlights
- Mechanical screen in front of the bulb for redirecting the dipped headlights when main beam is switched on (with lifting solenoid).
- Return spring for mechanical screen



The illustration shows the bi-xenon headlights on the E60 as an example:

1. Reflector
2. Ignition device
3. Mechanical screen in front of the bulb for redirecting the dipped beam when main beam is switched on
4. Lens

The following bulb types are available for bi-xenon headlights:

- D2-S bulb: bulb and ignitor are two components
- D2-R bulb (for MINI and Rover L30): bulb and ignitor are two components
- D1-S bulb: bulb and ignitor form a single component: from E87 and E90, on E60 and E65 from model upgrading 03/2005.
- D1-R bulb: not used at present

How it works

When the dipped headlights are switched on, the mechanical screen is positioned vertically in front of the bulb (see illustration). This deflects the beam of the xenon lights down.

When main beam is switched on, the mechanical screen in front of the bulb is folded forward (viewed in the direction of travel). The screen is then horizontal.
This redirects the beam of the xenon headlight to main-beam headlights. The rays of lights are able to shine uninterrupted to the front and to make use of the complete area of the reflector and the lens.

The mechanical screen in front of the bulb is actuated as follows: The solenoid is actuated as soon as main-beam headlights are switched on. The solenoid moves the screen to the horizontal. If the solenoid for the mechanical screen cannot be actuated, the screen will be pulled back to the vertical position by the return spring. The beam will thus be as per dipped headlights.