

Description and Operation

The new headlamps in the Scorpio comprise a two compartment system. One compartment is for dipped beam and the other is for main beam, and each is fitted with an H1 bulb. The dipped beam is produced by a DE (Triaxial Ellipsoid Reflector) headlamp in which the reflected beams are focused in a converging lens, as in a slide projector. Part of the dipped beam is produced by an additional reflector with a diffusing lens. A lever on the opening in the reflector allows the asymmetrical light beam to be changed to a symmetrical light beam to prevent dazzle when changing from driving on the left to driving on the right. When the main beam is switched on the intensified dipped beam and the side lamps also remain on, eliminating the need for an auxiliary long range driving lamp.

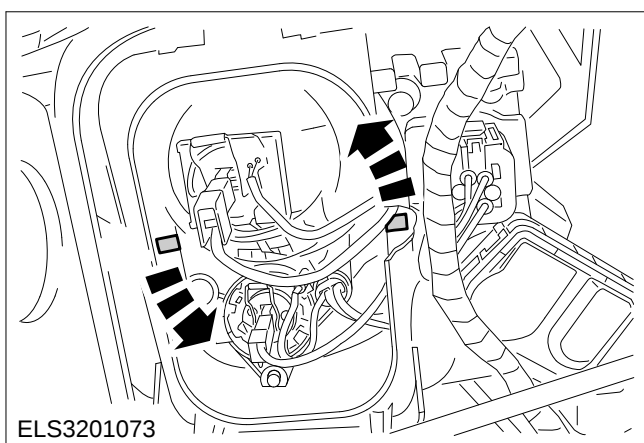
In some territories Scorpio models are equipped with a headlamp levelling system as optional equipment or to comply with legal requirements. To avoid dazzling oncoming traffic, while the dipped beams are on, the required headlamp range can be adjusted continuously according to the vehicle load using a switch in the instrument panel. Each lamp unit incorporates a motor which is activated electrically when the switch is operated, and which moves the pivot mounted reflector to the desired setting by means of an adjusting spindle.

The headlamp levelling switch has two stops. The switch engages in switch position "0", the basic setting. In switch setting "5" the headlamps are inclined at their maximum angle.

The voltage-controlled headlamp levelling system operates by means of voltage-controlled DC motors. A variable resistance (potentiometer) in the headlamp levelling switch sets the voltage (setting). Working on the same principle, the control element in the motor defines a voltage according to the position of the adjusting spindle (actual position).

The integral electronic circuitry in the system compares the setting (switch position) with the actual position (position of the adjusting spindle). Depending on the voltage difference, the reflectors will be swivelled up or down until the two values match.

The basic alignment of the headlamps must always be carried out in switch position '0'.



1. Changing the light field.

- Lever in horizontal position: symmetrical light field.
- Turn the lever approx. 15° anticlockwise: asymmetrical light field.

Description and Operation (continued)

Headlamp Levelling Switch Settings

Load			Switch Setting	
Persons		Load in luggage compartment	Vehicle without self-levelling suspension	Vehicle with self-levelling suspension and Estate
Front seats	Rear seats			
1 – 2	–	–	0	0
1 – 2	–	up to 100 kg	0,5	0
1 – 2	1 – 3	up to 30 kg	0,5	0
1 – 2	3	max. *	1,5	1,0
1	–	max. *	3,0	2,0

* Maximum load details are contained in the vehicle registration document.

When towing a trailer/caravan, higher switch settings may be required (+1).