

GF54.30-P-2013GZ	Output acoustic warning messages, function	19.6.06
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MODEL 164

### Acoustic warning function

The acoustic turn signal indicator (A1h2) is integrated within the instrument cluster (A1). It is a type of contactless relay.

The turn signal flasher is always accompanied by an acoustic clicking sound generated in the same rhythm. The audible turn signal indicator is actuated differently depending on function:

### Turn signals

The signal for actuating the audible turn signal indicator comes from the steering column module (N80) via the interior. If one of the turn signals fails, the audible turn signal indicator is actuated at twice the normal frequency.

Via the CAN-interior the information turn signal lamp defective from the control unit which actuates the defective turn signal lamp.

### Hazard warning flashers

The signal for actuating the audible turn signal indicator comes from the upper control panel control unit (N72/1) via the interior CAN.

### ELECTRONIC ALARM SYSTEM flashers

The signal for actuating the audible turn signal indicator comes from the front SAM control unit (N10) via the interior CAN.

### Warning signal

The instrument cluster is equipped with a warning buzzer (A1h1) that responds to various malfunctions and operating states by generating an acoustic warning signal with a frequency of around 2048 Hz and a duration of approx. 0.2 s.

### A warning chime is emitted:

- When a fault or warning message of medium or top priority occurs. In addition a message is displayed in the multifunction display (A1p13).
- When the seat belt warning lamp (A1e9) lights up. This indicator lamp is not provided in all national markets. The signal to actuate comes from the restraint systems control unit (N2/7) via the interior compartment CAN.
- The brake fluid level and parking brake warning lamp (A1e7) light up if the vehicle starts to move before the parking brake is released.

The signal for actuation comes from the front SAM control unit via the interior CAN.

- If the transmitter key (A8/1) is inserted in the EIS [EZS] control unit with "circuit 15C" (N73) and the driver door is open, there is the

CAN message "status information - transmitter key" and "ignition Off" (via interior CAN from EIS [EZS] control unit) and the door contact signal is transmitted by the rear SAM control unit (N10/8).

- When the standing lamps are on, the transmitter key (A8/1) is withdrawn and the driver door is open (lights warning). The "ignition key status information" comes from the EIS [EZS] control unit via the interior CAN. The door contact signal from the rear SAM control

unit as well as the standing lamp signal from the front SAM control unit are present.

- when the vehicle exceeds a speed of 120 km/h (only Gulf States version, code 623). The acoustic warning signal is canceled as

soon as the speed drops back below 117 kph.

- When the speed set on the variable speed limiter is exceeded, e.g. due to inertial acceleration.

The displayed speed is used. The adjusted maximum speed comes from the ME-SFI [ME] control unit (N3/10) via the CAN engine compartment via the CDI control unit (N3/9).

### **Sequence of seat belt reminder warning**

In countries with a legally specified seat belt reminder warning the seat belt warning lamp is always actuated for the first  $t = 6 \text{ s}$  ( $\pm 2 \text{ s}$ ). In the national versions USA, Canada, Korea and the Gulf States the warning phase starts from a recognized Engine start (terminal 61 ON) and in the national version already from terminal 15 ON. There are the following warning tone phases for the seat belt reminder warning:

#### **Warning tone phase 1**

- If the vehicle drives off, the first warning tone phase starts to run in the background. However the warning tone is first output as of a speed of  $v \geq 25 \text{ km/h}$  via the speaker inside the instrument cluster. In the first phase the warning tone is output as an individual tone (gong), which is repeated at a low volume every  $t = 2 \text{ s}$ . The first warning phase runs for a maximum of  $t = 20 \text{ s}$  and then changes automatically into the second warning tone phase.

#### **Warning tone phase 2**

- If the first warning tone phase has expired (after  $t = 20 \text{ s}$ ) the second warning tone phase begins. However the warning tone is first output as of a speed of  $v \geq 25 \text{ km/h}$  via the speaker inside the instrument cluster. In the first phase the warning tone is output as an individual tone (gong), which is repeated at a low volume every  $t = 1 \text{ s}$ . The second warning phase runs for a maximum of  $t = 20 \text{ s}$  and then changes automatically into the third warning tone phase.

#### **Warning tone phase 3**

- If the second warning tone phase has expired (after  $t = 40 \text{ s}$ ) the third warning tone phase begins. However the warning tone is first output as of a speed of  $v \geq 25 \text{ km/h}$  via the speaker inside the instrument cluster. In the third phase the warning tone is output as an individual tone (gong), which is repeated at a low volume every  $t = 0,4 \text{ s}$ . The third warning phase runs for a maximum of  $t = 20 \text{ s}$  and then changes automatically into the fourth warning tone phase in vehicles with EURO-NCAP.

In vehicles with expanded NCAP the seat belt reminder warning is deactivated automatically after the third warning tone phase has expired.

#### **Warning tone phase 4 (EURO-NCAP)**

- If the third warning phase has expired (after  $t = 60 \text{ s}$ ) the fourth warning tone phase begins. However the warning tone is first output as of a speed of  $v \geq 25 \text{ km/h}$  via the speaker inside the instrument cluster. The warning tone in the fourth phase is a continuous signal (audible beep), which is output permanently in a high volume. The fourth warning tone phase lasts for  $t = 93 \text{ s}$  and remains active for this period, even if the vehicle has come to a standstill in the meantime. The seat belt reminder warning is deactivated automatically after the fourth warning tone phase.

**i** Additional information on the function of the seat belt reminder warning is contained in the function of the supplemental restraint system (SRS).

	Display speed, function		<a href="#">GF54.30-P-3025GZ</a>
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