ERA Self-diagnosis

**Functional Description**

Self-diagnosis after ERA is started (in ERA state).

Enabling conditions (a):

a. ERA is working properly;

Trigger conditions (a):

a. In ERA state

Execution output (a&b&c&d):

a. Every time the ignition switch is turned on (hw.KL15ON), ERA needs to activate the self-diagnosis function and conduct a self-diagnosis; ERA starts self-diagnosis when the vehicle is turned on. Self-diagnosis lasts about 30s.

b. In ERA state, ERA performs self-diagnosis every cal.ERASelfTest (Default 1min TBD);

b. The ERA needs to switch to internal battery power supply at cal.ERASelfTest (Default 1min TBD).

c. Self-diagnosis includes the following items:

- proper operation of GSM/UMTS communication module interface;

- proper operation of GNSS receiver;

- sufficient charging level of backup battery;

- proper operation (correct connection) of external GNSS antenna (if installed);

- proper operation of airbag collision CAN signal (automatic RTA detector);

- proper operation of UIM;

- proper operation of microphone;

- proper operation of speaker;

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- proper operation of airbag crashed CAN signal (automatic RTA detector );

- proper operation of UIM;

- proper operation of microphone;

- proper operation of loudspeaker.;

d. After a fault is detected cal.ERASelfTestNum (Default 1 times TBD) within each power-on period, the ERA records the fault to the internal EEPROM; And control the System into the System Fault state, control the LED state (refer to the Ecall switch indicator drive)

Exit conditions/Exit conditions：

NA

Notes：

①If the ignition is off after the software downloading is complete, the ERA shall update the software image in non-volatile memory, and then perform a self-diagnosis cycle.

②If the ignition is on after the software downloading is complete, the ERA shall update the software image in non-volatile memory, and perform a self-diagnosis cycle after the ignition is turned off.