Question:
Why do the parking aid sensors activate when there is no obstruction.
Answer:

System Operation

The 4 sensors, front or rear depending on which is active, send out an ultrasonic signal and then all 4 sensors wait for that signal to be returned. If any of the 4 sensors receive a return signal the park aid module will operate the warning sounder. This return signal has to be sent directly back to the sensor in the same plane as the outward signal for the warning to operate.

Front Parking Aid

The front parking aid sensors are activated when forward gear is selected and the vehicle speed is below 9 mph (15 kph). The system is de-activated when the vehicle speed exceeds 9mph (15kph). The system is re-activated when the vehicle speed falls below 6mph (10kph). The front sensors will detect an object up to a range of 32 inches (0.8m) along the width if the vehicle and 24 inches (0.6m) at the corners. The front parking aid sensors are also activated when reverse gear is selected. Front parking aid can be de-activated by operating the cancellation switch located in the roof console.

NOTE: This also de-activates the rear parking aid sensors.

Reverse Parking Aid

The reverse parking aid sensors are activated when reverse gear is selected. The rear sensors will detect an object up to a range of 72 inches (1.8m) along the width of the vehicle and 24 inches (0.6m) at the corners.

Diagnostics

When the ignition is turned to position II, the system carries out a self-check. If a fault is detected the control module will generate a fault code, a continuous warning tone will be emitted for 3.5 seconds and the system will be de-activated. Therefore unless a fault code is generated and the 3.5 sec warning heard it should be assumed that the system is operating correctly.

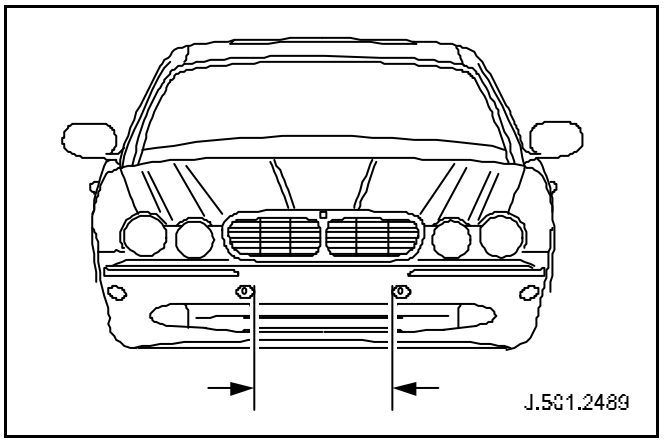
Spurious Warnings

There are some conditions that will activate the system when there is no obvious obstruction. If the vehicle is moving on loose gravel, which has a totally random surface, the sensor could receive a return signal and operate the warning. It is known that anything that emits sound waves at a frequency between 15-150kHz may affect the sensors. Known influences include fire engine klaxons, pneumatic tools, air brakes, high performance motorbike/auto engine exhausts. Any of these can cause the warning sounder to be activated. In harsh weather conditions, such as very heavy rainfall, the volume of water passing over the sensor can cause it to operate. This will also happen if the sensor is covered by ice, frost or grime build-up. In none of these circumstances is there anything wrong with the system. It is how the physics of the system works.

Continuous operation of the front sensors

Some markets did have an issue where the front parking aid sensors operated all of the time. This cause was found to be the front inner sensors picking up the number plate plinth on vehicles fitted with type A & type C plinths. This affected vehicles between vins G00442 & G18389. Service Action S715 was issued to address this concern which was to fit a modified plinth. When fitting a number plate plinth follow the attached procedure. S715 was not launched in North America as modified plinths were put into the vehicles at the port of entry. The final fix, for the issue with the number plate plinth, was the introduction of a new inner sensor, part number C2C 21643XXX, introduced at vin G18389.

Align plinth central between proximity sensors. **Note: do not use any other datum points to align the plinth.**
To find the center line of the front spoiler on cars fitted with front parking aid sensors, measure between the two centre sensors



Align the plinth top edge 15mm away from the bumper feature.