Customer complains about excessive oil consumption due to repeated oil level messages in instrument cluster

Topic number	LI18.00-P-054770
Version	2
Function group	18.00 General
Date	02-29-2016
Validity	Engine 112.96x Engine 113.98x /99x, Engine 156.98x Engine 157.98x Engine 133.98x Engine 176.98x Engine 177.98x Engine 178.98x Engine 275.98x Engine 277.98x Engine 279.98x Engine 285.98x
Reason for change	M157, M133, M17x, M277 and M279 added

Complaint:

Customer complains about excessive oil consumption due to repeated oil level messages in instrument cluster.

Cause:

Different causes resulting in increased oil consumption.

Note:

See Remedy.

Attachments	
File	Description
Meßblatt für Ölverbrauchsmessung -(Gewichtsmethode-) PKW, GW.pdf	Test sheet for oil consumption test - (Weighing method) Cars

Remedy:

Influences on oil consumption

Engine 176 / 177 /178

Usage-related influences:

- The load spectrum is significantly higher than on comparable production engines

- Dependent on driving profile (sporty driving style)

- Increased mileage in sporty driving style (potential for increased wear)

Design-related influences:

- Engines with high charging

- Reduced friction losses

- Turbocharger

Engine 133

Usage-related influences:

- The load spectrum is significantly higher than on comparable production engines

- Dependent on driving profile (sporty driving style)

- Increased mileage in sporty driving style (potential for increased wear)

Design-related influences:

- Engine with high charging

- Reduced friction losses

- Turbocharger

Engine 157

Usage-related influences:

- The load spectrum is significantly higher than on comparable production engines

- Dependent on driving profile (sporty driving style)

- Increased mileage in sporty driving style (potential for increased wear)

Design-related influences:

- Engine with high charging

- Reduced friction losses

- Turbocharger

Engine 156

Usage-related influences:

- The load spectrum is significantly higher than on comparable production engines

- Dependent on driving profile (sporty driving style)

- Increased mileage in sporty driving style (potential for increased wear)

Design-related influences:

- Engine with higher rpm design ranges
- Increased piston diameter
- Reduced friction losses

Engines 112.96x, 113.98x/99x, 275.98x, 285.98x, 277.98x, 279.98x:

Usage-related influences:

- The load spectrum is significantly higher than on comparable production engines
- Dependent on driving profile (sporty driving style)
- Increased mileage in sporty driving style (potential for increased wear)

Design-related influences:

- Increased stroke (113.98x/ 99x)
- Reduced friction losses
- Number of cylinders (275.98x, 285.98x, 277.98x, 279.98x)
- Turbocharger (275.98x, 285.98x)

Extract from operating instructions:

"Depending on the driving style, the vehicle consumes a maximum of 0.8 l oil per 1000 km.

The oil consumption may be higher if the vehicle is new or if you frequently drive with high engine speeds.

You can only properly assess the oil consumption after driving for a considerable distance."

Oil consumption measurement:

Note:

An oil consumption measuring drive should only be performed after the engine break-in period of at least 10,000 km.

An oil consumption measuring drive must always be performed if an oil consumption complaint is received.

To achieve the most accurate measurement result possible perform a "consumption measuring driving using the weighing method".

Note:

1. Use engine oil approved in the Specifications for Operating Fluids.

2. Perform weighing of engine oil at start and finish under the same ambient conditions:

- Engine at operating temperature (engine oil temperature approx. 80 °C).

- The oil must be weighed at the same location at the start and finish of the drive, ideally in a maintenance pit.

- The engine oil drainage time must be the same both before and after the measuring drive.

- Use the same receptacle before and after the measuring drive.

- The oil must also be drained from the oil filter before and after the measuring drive (by removing the oil filter).

- Do not drain the oil out of the oil cooler; this oil quantity is not taken into account.

Note:

Do not forget the second oil pan (if applicable) when draining the engine oil.

3. Fill out Test Sheet for Oil Consumption Test (in attachment).

4. Driving distance for oil consumption measuring drive:

In order to obtain an accurate result according to the complaint, the oil consumption measuring drive must be performed by the customer over a measurement distance of at least 1000 km.

The customer should not add any oil during the measuring drive.

If during the measuring drive an oil warning message occurs, the measuring drive ends and the consumption measurement is evaluated early; this is then noted accordingly on the consumption test sheet.

Repair:

If the engine oil consumption is > 0.8 l/1000 km, as measured by the weighing method, proceed as follows:

Engine 157

Remove/install/replace pistons

See testing and repair information in WIS: Group 03.10

Engine 156

Remove/install/replace pistons

See testing and repair information in WIS: Group 03.10

Engines 112.96x, 113.98x/99x, 275.98x, 277.98x, 279.98x, 285.98x:

1. Inspect cylinders with light probe

See testing and repair information in WIS: Group 01.40

Note: Assess the cylinder barrels. If the cylinder barrels are OK, continue with step 2.

2. Remove/install/replace pistons

See testing and repair information in WIS: Group 03.10

Additionally for engines 275.98x, 277.98x, 279.98x, 285.98x:

Remove/install/replace turbocharger

WIS-References			
Document number	Title	Note	Allocation
BB00.40-P-0223-02A	Specified engine oils (service) - overview		Remedy
BB00.40-P-0229-05A	Multigrade engine oils (specification 229.5)		Remedy
AH01.00-P-0300-01VA	Service information, evaluating cylinder barrels		Remedy
AH01.00-P-0300-01AMG	Service information, evaluating TWAS cylinder barrels		Remedy
WB65.16LIT7401Z	Oil consumption measurement sheet		Remedy