

#### 1.4 Checking oil level

- The oil level must be checked at least once every week.
- Vehicle must be standing level.
- Engine at idling speed.
- Before checking oil level, shift into Neutral.

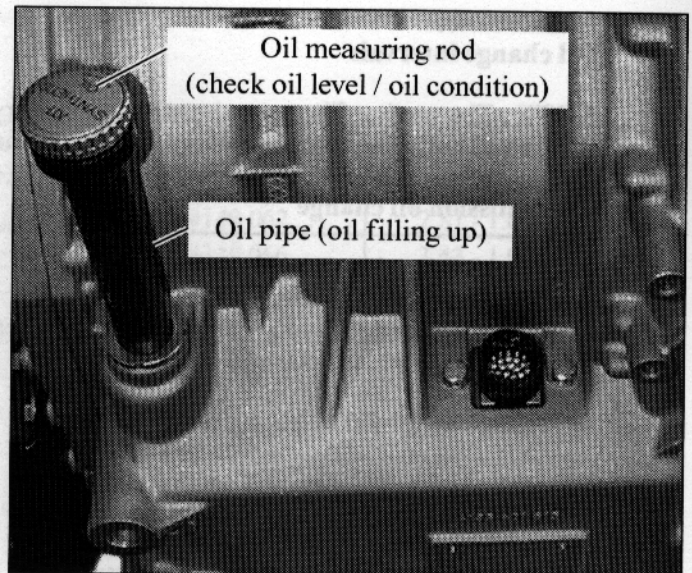
#### CAUTION

An electronic oil level display only provides information. Regular checks must be conducted on the oil dipstick at operating temperature.

Always ensure that the correct oil level is maintained. Too little oil may cause malfunction or failure of the transmission. Too much oil may cause the transmission to overheat.

#### DANGER

Insufficient oil can cause partial or regular retarder failure: i.e. reduced or zero braking action.



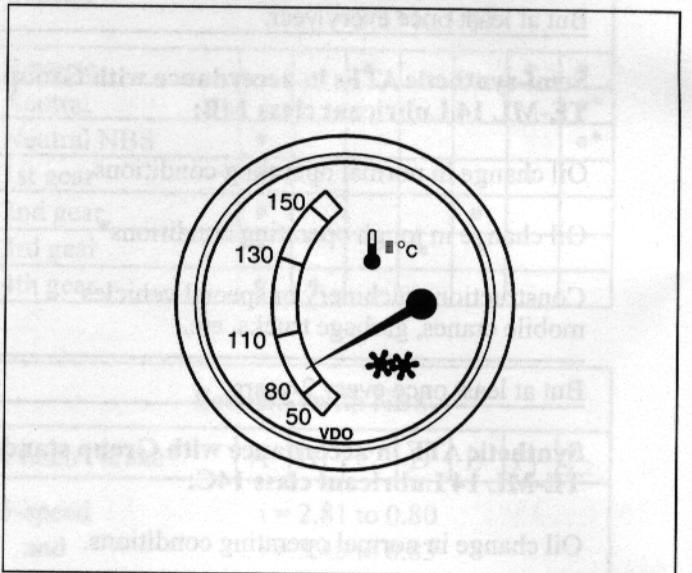
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#### 1.5 Operating temperature

The correct operating temperature at which to check the oil level can be seen on the gauge in the vehicle.

#### NOTE

Before the oil level is checked, the transmission oil must have reached an operating temperature of 180 - 195°F (80 - 90 °C).



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#### 1.6 Adding oil

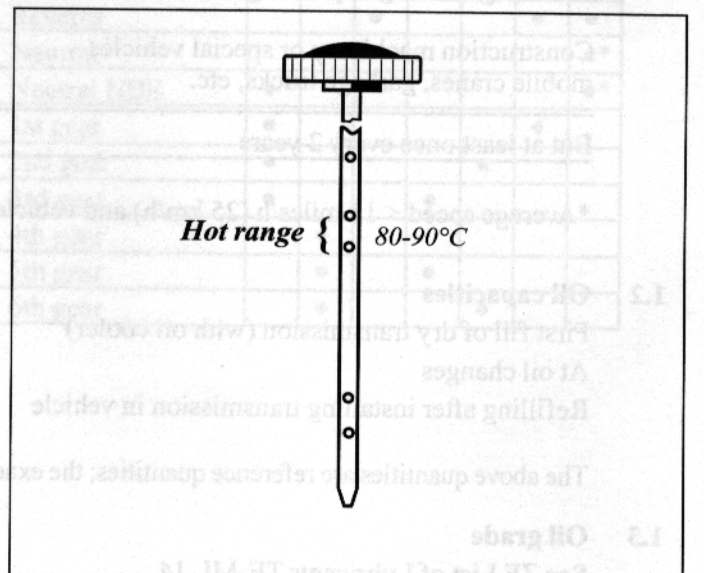
Pour in transmission oil through the same hole as is used for measuring with the dipstick. 1 quart (1 liter) changes the oil level by approx. 0.4" (10 mm).

#### 1.7 Checking oil level at operating temperature

Conditions:

- Vehicle standing level
- Speed range selector at "N" (Neutral)
- Engine idling (approx. 2 minutes)
- Transmission oil 80 - 90°C / 180 - 195°F

The oil level must be between the upper and lower marks of the hot range. If the oil level is not between these marks, repeat check, ensuring that the cap of the dipstick is firmly located in the bayonet socket when the dipstick is inserted.



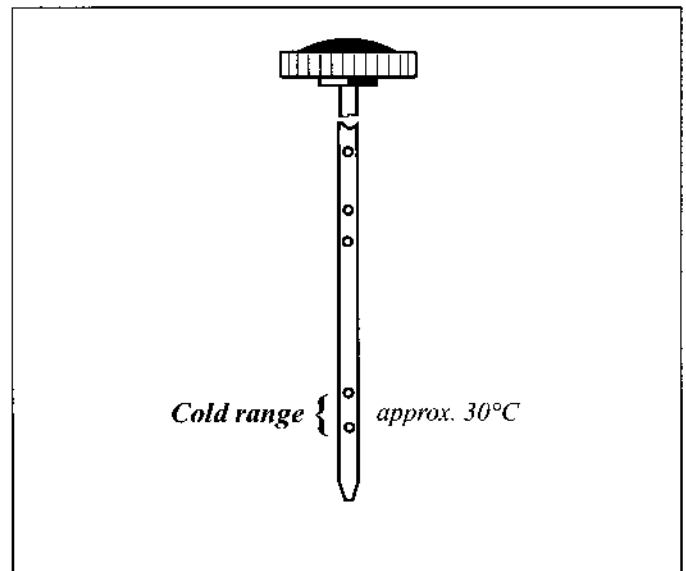
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## 1.8 Checking oil level when cold

Conditions:

- Vehicle standing level
- Speed range selector at "N" (Neutral)
- Engine idling
- Transmission oil ca. 30°C / 86°F

After 3 to 5 minutes running at idling speed, the oil level in the transmission must be between the upper and lower marks for the cold range. If the oil is below the lower mark, add oil immediately. Adjust the final oil level after checking again at operating temperature.



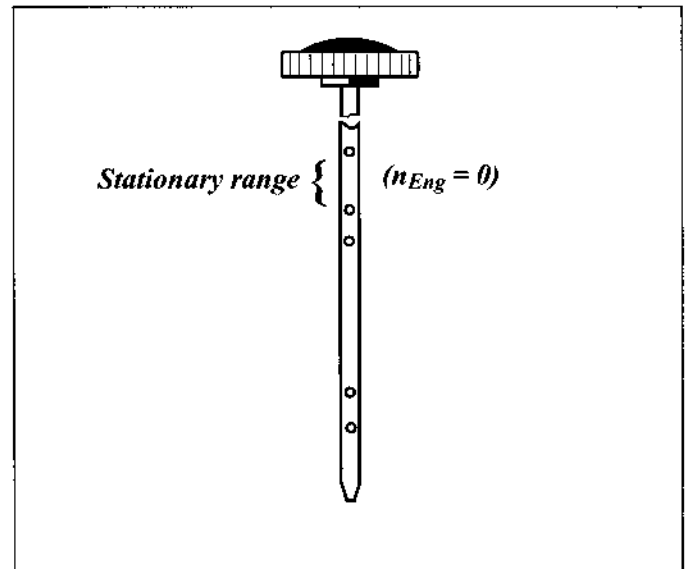
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## 1.9 Checking oil level with engine off

Conditions:

- Vehicle on level ground
- Engine at standstill

The oil level must be between the upper and lower level marks for the stationary range. If the oil level is slightly too high, do not drain off oil. This option is only available in transmissions which have a heat exchanger (attached directly) or those in which the heat exchanger is situated at a lower level than the transmission.



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## 1.10 Checking oil level on versions with heat exchanger higher than center line of transmission

Conditions:

- Vehicle standing level
- Speed range selector in Neutral setting
- Run engine at 1200 to 1500 rpm for 15 to 20 seconds

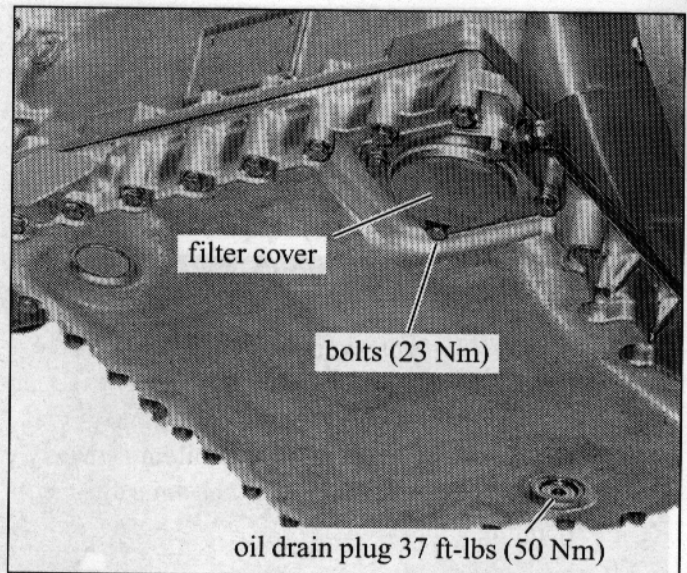
Then within 3 minutes, with engine idling, check oil level as described in "Checking oil level when cold" and recheck as described in "Checking oil level at operating temperature".

### 1.11 Changing oil at operating temperature

- Switch off engine.
- Drain oil through drain hole in oil pan.
- Unscrew filter cover and renew suction filter (see Section 2.1).
- Screw in drain plug (37 ft-lbs/50 Nm) and fit filter cover (17 ft-lbs/23 Nm), see Section 2.1.

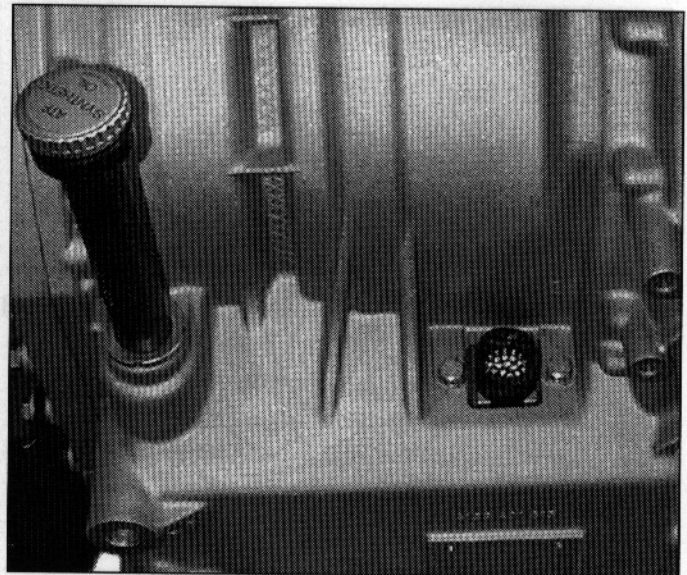
#### CAUTION

When working on a transmission with a converter drain valve, always use genuine oil drain plug. The drain plug controls and closes the converter drain valve.



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- Pull out dipstick and pour in max. 2.65 gal. (10 liters) transmission oil.
- Start engine and immediately, with engine idling, slowly pour in 1 gal. (4 liters) transmission oil.
- Insert dipstick and check oil level as described in "Checking oil level when cold" (see Section 1.8). Adjust oil level if necessary.



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### 1.6 Adding oil

Pour in transmission oil through the same hole

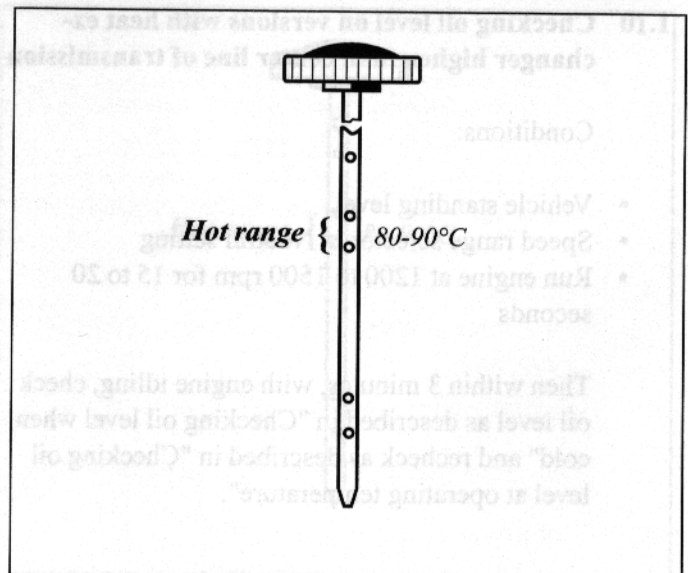
as is used for measuring with the dipstick. 1 quart (1 liter) changes the oil level by approx. 0.4"

- Run vehicle until transmission oil reaches operating temperature (180 - 195°F / 80 - 90°C). Check oil level at operating temperature (see Section 1.7) and adjust if necessary.

### 1.7 Checking oil level at operating temperature

- Vehicle standing level
- Speed range selector at "N" (Neutral)
- Engine idling (approx. 2 minutes)
- Transmission oil 80 - 90°C (180 - 195°F)

The oil level must be between the upper and lower marks of the hot range. If the oil level is not between these marks, repeat check, ensuring that the cap of the dipstick is firmly located in the bayonet socket when the dipstick is inserted.



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