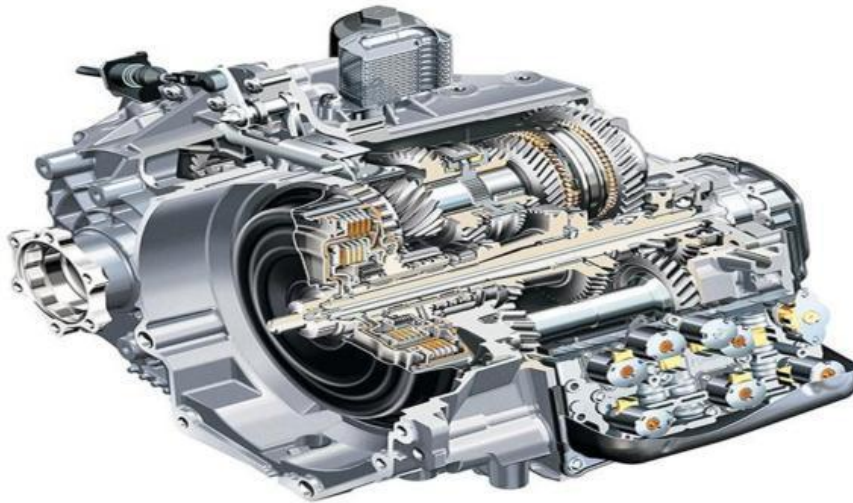


Gearbox



gear — шестерня, передача

gearbox - коробка передач

gearing - зубчатое соединение

road conditions — дорожные условия

forward speed — передняя скорость

reverse drive - обратный (задний) ход

low gear - первая передача

top gear — четвертая (прямая) передача

sliding-mesh gearbox - коробка передач со скользящими шестернями

constant-mesh gearbox - коробка

передач с постоянным зацеплением шестерен

epicyclic (planetary) gearbox - эпициклическая (планетарная) коробка передач

ordinary gearing — стандартное

зубчатое соединение

characteristic feature — характерная особенность

fixed axes - зафиксированные (неподвижные) оси

rotate bodyly — вращаться корпусом

axis - ось

axle — вал

secure — обеспечить

shifting – переключение

in direct line-важно

Task 1. Read and translate the text

The gearbox is placed between the clutch and the propeller shaft. The principal function of the gearbox is to vary the speed of the car movement to meet the road conditions. The gearbox provides four forward speeds and one reverse, as follows:

1. First or low gear;
2. Second gear;
3. Third gear;
4. Fourth or top gear;
5. Reverse gear.

There are many constructional arrangements of gearboxes, which can be classified as follows:

1. Sliding-mesh type;
2. Constant-mesh type;
3. Epicyclic (planetary) type.

The sliding-mesh type is the simplest one and is the oldest historically. The constant-mesh type is the most widely used type. They are termed "ordinary" gearing, the characteristic feature of which is that the axes of the various gears are fixed axes. The gears simply rotate about their own axes.

The characteristic feature of epicyclic gearing is that one gear rotates about its own axis and also rotates bodily about some other axis.

To secure the several speeds of the car the clutch shaft is mounted in direct line with the gearbox shaft. The gearbox shaft carries on it the sliding gears which are used for shifting to secure the forward speeds and the reverse drive.

Task 2. Answer the questions

1. Where is the gearbox situated?
2. What is the function of the gearbox?
3. What speeds does the gearbox provide?
4. What types of gearboxes do you know?
5. Why is the clutch shaft mounted in direct line with the gearbox shaft?

Task 3. Match two parts of the sentences.

- | | |
|---|---|
| 1. The principal function is.... mesh type and planetary type | a) sliding-mesh type, constant of the gearbox |
| 2. The gearbox provides | b) the simplest one and historically oldest |
| 3. Gearbox can be | c) to vary the speed of the car |
| 4. The sliding-mesh gearbox is | d) four forward speeds and one ... reverse |
| 5. The constant-mesh gearbox | e) the most widely used. |