



MANUAL GEARBOX

Réf : ANA-BVM



This teaching kit is used to study gearboxes both from the functional (adaptation to the engine and the vehicle, calculation of ratios, study of synchronization) and structural perspectives (drivetrain, design, rotation guides, sealing, etc.).

It is particularly well suited to teaching functional and structural analysis, mechanical and technological aspects and to practical exercises.

It is widely used in BEP and BTS courses (French National Education).

Présentation :

The kit comprises:

A chassis on casters with:

- A cutaway gearbox with a variable-speed rotational drive (normal and extra slow speeds).
- The gearbox controls.



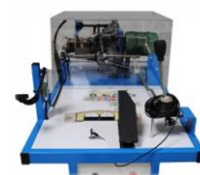
- A clutch and the control mechanism, the transmissions.



- The gearbox controls.



- A control panel (meter, accelerator, and clutch pedals, gear lever).



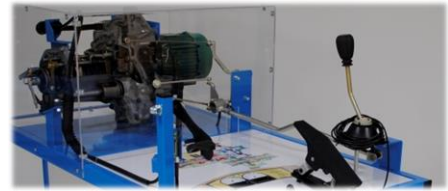
A discreet and totally integrated measurement system comprising:

- Speed and position sensors.
- An acquisition PCB inside the chassis and connected to a PC by a USB cable.

Software, with:

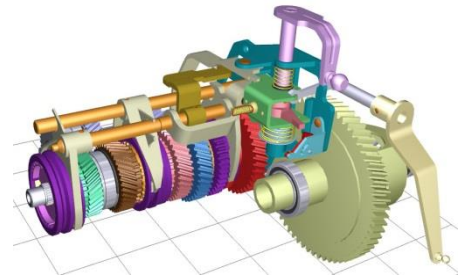
- A section to discover the gearbox (2D and 3D)
- A section used to animate the 2D images of the gearbox on the screen in real time.
- A section used to take measurements during the various operating phases, and during synchronization in particular.
- A replay function of the measurements that animates the internal parts of the gearbox (synchronization ring, gears, etc.).

Teaching activities:



After completing these activities, trainees will be able to:

- Locate the components on the vehicle.
- Locate and identify the various components of a gearbox.
- Analyze the function of the gearbox (calculation of ratios, ranges, adaptation to the engine and the vehicle).
- Identify the various components of a synchromesh.
- Demonstrate the need for a synchromesh.
- Analyze the various phases of the synchromesh.
- Analyze the malfunctions of a synchromesh.



The structure of the model adopts a very concrete approach to the study of a gearbox. Moreover, the software can be used to analyze the ratios and, in particular, the synchromesh, in very close detail.



The measurements are “replayed” in order to analyze the gear shift phase (speed of the gears before shifting, required speed, action of the synchromesh, etc.)

The digital models provided can be used to perform a concrete and precise study of each of the parts.

General characteristics:

<u>Energy (V):</u>	<u>Dimensions (mm) :</u>	<u>Weight (Kg) :</u>
Electric 220/50 Hz	Length= 1300 Width= 700 Height= 1000	100

Software and documentation supplied on USB key

Options :

- Protective bag

CAP

BAC PRO

BTS

SUP

POIDS LOURDS - AUTOMOBILE - AGRICOLE