

# **HYDRAULIC RETARDER**

Réf: SYS-RH



The hydraulic retarder is a braking system located on the propeler shaft (gear boxes output). The vehicle kinetic energy is converted in hydraulic then calorific energy into a temperature exchanger. Many technical and economic advantages done of this type of retarder are a device very used by Trucks manufacturers.

#### **Presentation:**

- A stand with accurate sight of the set (engine gear box retarder) and the driving dash board.
  - On this stand are located :
  - The calculator and its connection
  - The sensors (control, temperature) with their connectic
  - A Renault connection to connect the computer
     « DIAGNOSTICA »
- Four potentiometers with a switch simulating
  - The water temperature
  - The engine speed
  - The slope percentage of the vehicle running
  - The speed vehicle
- Indicators allow to see
  - The engine water temperature
  - The speed vehicle
  - The slowing down power percentage developed by the device
- On lateral side a window with disworking simulation (locked)
- A simulation device allowing to get a dynamic behaviour of the vehicle, coherent with different parameters.





## **Pedagogic activities:**

After studying the simulator, the students will be able to:

- Know and locate all components on the system
- Analyse the working system :

The simulator can reproduce the true situation of ill down on the vehicle more or less important, and actuate the retarder in order to watch the deceleration and the system behaviour.

The integrated acquisition board allow to realize parameters acquisitions with computer tools when the training level requires it.

Realize diagnosis process :

The teacher can realize failures with the special box located on the side of the simulator. These failures can be resolved by the students:

- With the computer tool Renault "DIAGNOSTICA"
- Or by means of the blink code
- Or by traditional tool "electric multimeter"

The student is in front of a didactic system with a working as nearest as the reality. This simulator is intented to several level from BEP to BTS. A documentation on CD rom is supplied with the simulator.

### **Approached subjects:**

- Dynamic of the vehicle in slowing down phasis
- Smattering on take on board of electronic systems
- Sensors, preactuators, actuators
- Control in cyclic variable rapport
- Hydraulic circuits study (schematization, mechanic of fluid)
- Diagnosis with intelligent and conventional system
- Acquisition of measures (with traditional device or box failure)

# **Charateristics:**

Energy (V): Dimensions (mm): Weight (Kg):
220 volts Length= 1100

50 Hz monophased Width= 700 65

Height= 1600

#### **Options:**

- Slip-cover
- USB data acquisition and exploitation Car&Box

□CAP ⊠BAC PRO ⊠BTS ⊠SUF

POIDS LOURDS



