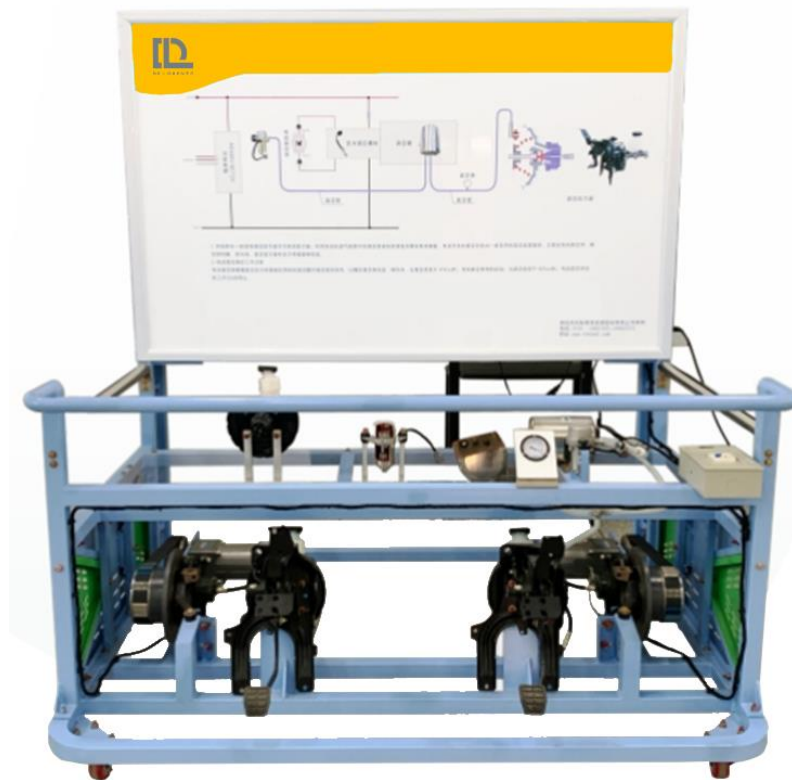




## DEMONSTRATION BENCH VACUUM ASSISTED ELECTRO-HYDRAULIC BRAKE SYSTEM



### DL DM49

#### LEARNING EXPERIENCE

This demonstration bench shows the most common components included in an electric vacuum assisted hydraulic brake system included in electric vehicles. The bench reproduces the same function and control mode of the most popular pure electric vehicles. It represents the connection and control relationship, installation position and operating parameters of each component of an electric vacuum assisted hydraulic brake system. A vacuum meter shows the vacuum degree, it helps trainees to know the principle that vacuum degree affect the working status of vacuum pump. It also helps trainees to develop the fault analysis and processing skills about electric vacuum assisted brake system.

#### MAIN CHARACTERISTICS

This trainer shows the structure and logic control relationship of all main components that can be found in an electric vacuum assisted hydraulic brake system included in electric vehicles powered by new types of energy. All main components are installed on the rack, with the same electrical connection mode as real vehicles. It is convenient for assembly and disassembly, so that students can learn the disassembly points of electric vacuum assisted hydraulic brake components during disassembling and assembling connections.



## GENERAL CHARACTERISTICS

- Dim. mm (HxLxW): 1800x1600x1200
- Weight approx. 150 kg
- Input power supply: AC 220V $\pm$ 10% 50 Hz
- Switchable mode
- Working temperature: -40°C ~ +50°C.

The training bench includes a 4mm aluminium panel, which displays the working principal diagram of the electric vacuum power system. The main components are equipped with points of measurement. A multimeter is suggested for the real time data detection.

## ACCESSORIES

Suggested instruments for best practice:

Digital Multimeter (not included)

## OTHER CHARACTERISTICS

- a) The connecting lines can be scanned with the help of a two-dimensional code, after which, their assembly and disassembly methods and precautions can be completely demonstrated on the screen.
- b) Vacuum meter is connected with the vacuum tank installed on the panel of rack, where the connection and disconnection of vacuum pump current digits can be displayed at the same time.
- c) By pressing the brake pedal, students can observe the control relationship between vacuum meter level and vacuum pump running status; when the vacuum degree decreases to -45Kpa, the pressure sensor closes 12V power supply and the vacuum pump starts to work. When the vacuum degree increases to -80Kpa, the pressure sensor disconnects the 12V power supply and the vacuum pump stops working. Students can master the working principle of pure electric vacuum booster through practical observation.
- d) The training bench is placed horizontally for installing main components.
- e) 4 wheels for moving flexibly are mounted, which also have self-lock device for fixing position.
- f) The training bench is equipped with a brake shield and other safety protecting devices to safeguard students' experiments.
- g) The training panel shows the cutaway view of vacuum pump assembly, vacuum tank assembly and booster pump assembly to clearly reproduce the internal structure of the main components of an electric vacuum assisted system.
- h) The training platform includes a gear induction reduction motor. It drives the brake wheels to rotate through a belt transmission, truly reproduces the characteristics of the wheel speed and the vacuum assisted braking force.



# AUTOTRONICS



- i) The training platform includes a set of non-vacuum booster system. They can perceive the difference between the system and vacuum booster in real time, so that students can understand the role of vacuum booster system in vehicle braking system.

AUTOTRONICS - DEMONSTRATORS