

Product Name :
Power Steering System (Electrical) Set

Product Code :
NSL0039



Description :

Electromechanical Power Steering Trainer

Technical Specification :

Electromechanical Power Steering Trainer

The Electromechanical Power Steering Trainer is a fully functional educational system designed to demonstrate the operation, diagnostics, and performance of modern electric power steering (EPS) technology. It replicates a complete electromechanical steering system, enabling students and technicians to gain practical experience in steering control, electronic diagnostics, and system troubleshooting under simulated driving conditions.

The trainer incorporates all major steering system components, including the steering wheel, steering column, steering torque sensor, electric assist motor, steering angle sensor, motor speed sensor, and power steering control unit. It accurately simulates the operation of a modern EPS system, allowing users to study steering assistance, active centering, and electronic control strategies.

A built-in **16-pin OBD diagnostic connector** enables communication with professional automotive diagnostic scanners for reading and clearing fault codes, monitoring live data, and performing system analysis. A dedicated vehicle speed simulation potentiometer allows users to vary simulated driving speeds, demonstrating how steering assistance changes under different operating conditions.

The trainer also illustrates advanced steering functions such as active steering return, power assistance during steering input, and compensation for road gradients and crosswind conditions. Integrated sensors continuously

monitor steering torque, steering angle, and electric motor speed, providing real-time data for analysis and diagnostics.

Key Features

- Fully operational electromechanical power steering training system
- Complete steering assembly with steering wheel and steering column
- Electric power steering motor with electronic control unit
- Steering torque sensor for steering effort measurement
- Steering angle sensor for steering position monitoring
- Motor rotor speed sensor for motor performance analysis
- Integrated **16-pin OBD diagnostic connector**
- Vehicle speed simulation using adjustable potentiometer
- Real-time live data monitoring and diagnostic capability
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Fault code reading, clearing, and troubleshooting

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Demonstration of active steering centering and variable steering assistance

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Heavy-duty training frame for classroom and laboratory use

Educational Experiments

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Electric power steering system operation

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Steering torque measurement and analysis

-

Steering angle monitoring

-

Vehicle speed influence on steering assistance

-

Electronic control unit communication

-

Live sensor data monitoring

-

OBD diagnostic procedures

-

Fault code detection and clearing

-

Electronic steering system troubleshooting

-

Power steering motor performance evaluation

-

Steering system calibration and testing

Applications

-

Automotive engineering laboratories

-

Vehicle electronics training

-

Electric power steering diagnostics

-

Automotive service technician education

-

Technical and vocational training

-

Mechanical engineering demonstrations

-

Automotive maintenance workshops

-

Research and development laboratories

Industries Served

-

Automotive Training Institutes

-

Engineering Colleges and Universities

-

Technical Education Centres

-

Vehicle Service and Repair Workshops

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Automotive Research Laboratories

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Vocational Training Institutes

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Fleet Maintenance Training Centres

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Industrial Skill Development Centres

Naugra Export

Website: www.naugraexport.com, **Email:** sales@naugraexport.com

Address: 6148/6, Guru Nanak Marg, Ambala Cantt, Haryana, India, **Phone:** +91-0171-2643080, 2601773