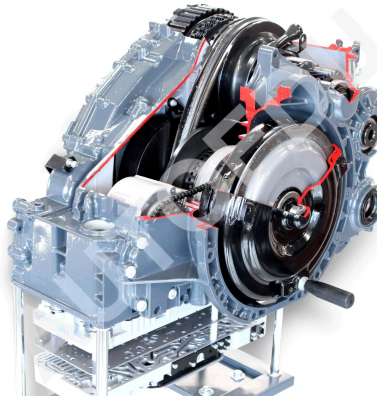




CVT Gearbox with Simulation

Category: Automotive · Model reference: MZM-8036



SPECIFICATIONS

DESCRIPTION

This training unit features a genuine Proton automotive Continuously Variable Transmission (CVT) mounted on a heavy-duty moveable stand, designed specifically for practical student instruction, overhaul procedures, and interactive classroom simulation. The system provides students with hands-on experience in understanding Proton CVT operating principles, primary and secondary pulley ratio variations, steel push-belt drive mechanisms, hydraulic control valve bodies, and wet clutch assemblies. In addition to standard overhaul procedures, this unit features an Integrated Motorized Live-Simulation System. Powered by an electric drive motor, it rotates the transmission input shaft to demonstrate dynamic operation, continuous automatic ratio variation (stepless gearing), and full shift-lever range functional simulation (P - R - N - D). This unit comes complete with a dedicated set of Special Service Tools (SST) designed specifically for Proton CVT servicing to facilitate proper assembly, disassembly, maintenance, dynamic simulation testing, and overhaul training in accordance with OEM manufacturer standards.

2. KEY SIMULATION & DEMONSTRATION FEATURES

Electric Motor Drive Unit: Integrated variable-speed geared electric motor connected directly to the transmission input shaft via a protective flexible coupling to simulate engine rotation safely at controlled educational speeds. **Full Range Shift Selector (P - R - N - D):** Functional mechanical/electronic shift lever unit allowing live operation and switching between Park (P), Reverse (R), Neutral (N), and Drive (D) modes. **Dynamic Ratio Variation:** Demonstrates physical axial movement and continuous belt ratio adjustment between the Primary and Secondary pulleys while rotating under power. **Safety & Protection Enclosure:** Equipped with an Emergency Stop button, overload protection circuit, and transparent high-impact acrylic safety guards shielding all exposed rotating pulleys, belts, and motor couplings.

3. TRAINER LEARNING CAPABILITIES

The trainer enables complete practical demonstrations and hands-on tasks on: Fundamental operating principles and mechanical power flow of Proton Continuously Variable Transmission (CVT). Live operational simulation of Gear Select Modes (P, R, N, D) showing input/output rotation, direction, and mechanical park lock engagement. Identification, layout, and functional analysis of internal Proton CVT components (Primary/Secondary Pulleys, Steel Push-Belt, Wet Multi-Plate Starter Clutch / Torque Converter assembly, Valve Body, and Solenoid Pack). Visual observation of continuous pulley ratio adjustment (under rotation) from low gear ratio up to high-speed overdrive ratio. Hands-on disassembly, inspection, and reassembly training using dedicated Special Service Tools (SST). Pulley holding/alignment, belt tension/inspection, oil seal replacement, and bearing removal/installation procedures. Hydraulic control unit (Valve Body) and solenoid valve structural inspection.

4. TRAINER SYSTEM COMPONENTS & SPECIFICATIONS

A. Proton CVT Gearbox Unit Original Proton Automotive CVT Transmission Assembly (Punch VT3 / VT2 series). Precision cut-away / sectioned model with clear acrylic viewports to expose internal primary/secondary pulleys, push-belt mechanism, and valve body assembly during rotation.

B. Motorized Drive System & Simulation Control Panel Drive Motor: AC Single-Phase 220V/240V Geared Motor with Variable Frequency / Speed Control.

1. Control Panel Module:
2. Master Power ON/OFF Key Switch
3. Variable Speed Adjustment Knob (RPM Control)
4. Digital Tachometer / Speed Display (Input/Output RPM)
5. Main Emergency Stop Button (Push-Lock Turn-Reset)
6. Operational Status LED Indicator Lights
7. Gear Selector Assembly: Floor/Stand-mounted shifter console with clear P - R - N - D position indicator.

C. Mounting & Frame Structure

Heavy-duty square steel tube frame construction with durable industrial powder-coated finish. Ergonomically designed working height for practical overhaul activities and classroom visual demonstration. Four (4) heavy-duty lockable swivel castor wheels for 360-degree mobility and workshop stability. Integrated stainless steel fluid drip tray / catch pan with drain valve located at the base. Full-coverage transparent acrylic safety enclosure.

D. Dedicated Proton CVT Special Service Tools (SST) Kit

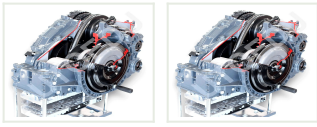
1. Primary & Secondary Pulley Locking / Holding Tool
2. Bearing & Oil Seal Puller / Installer Set
3. Wet Clutch Pack Compressor Tool
4. Differential / Output Shaft Seal Replacer Set
5. Heavy-Duty Dedicated Storage Case / Custom Tool Tray

5. ITEMS INCLUDED IN SHIPMENT

1. Proton CVT Gearbox Assembly with Integrated Motorized Simulation Drive Mounted on Heavy-Duty Stand
2. Control Panel Box & P-R-N-D Shift Selector Unit
3. Practical Lab Activity, Simulation & Overhaul Workshop Manual (Includes step-by-step disassembly/reassembly procedures, OEM torque specifications, simulation operating guidelines, and component identification charts)
4. Parts Breakdown & Explosive View Wall Chart / Diagram

6. OTHER ITEMS REQUIRED (SUPPLIED BY USER)

- Standard 220V–240V AC Single Phase Power Supply Socket
- Standard Workshop Hand Tool Set (Sockets, Ratchets, Torque Wrench, Pliers)
- Proton Approved CVT Fluid (e.g., Proton CVT Fluid VT-FE / Punch CVT Fluid)
- Workshop Parts Cleaning / Degreasing



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