

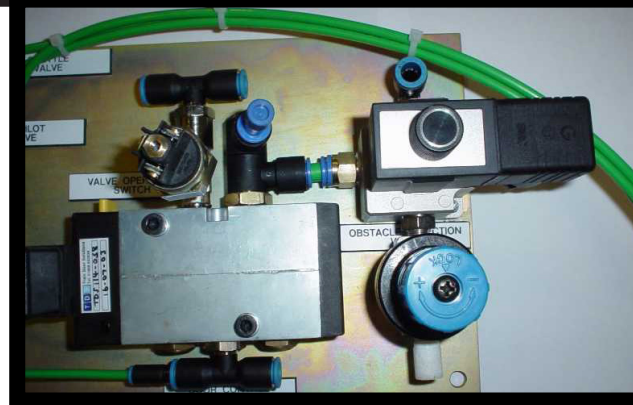


# CLASS 153

## Door Control Upgrade

Great Western Railway.

C6 Overhaul



### OVERVIEW

Train Door Solutions (TDS) designed and supplied an improved external plug door control system for Class 153's in 2003.

The project was sponsored by Porterbrook Leasing to integrate into the C6 overhauls for Anglia Railways, London Midlands and Northern Rail. In 2004, Angel Trains implemented the upgrade on the Wales & Borders fleet.

TDS were able to overhaul the door mechanism with new bearings, guide rollers and lock parts. All the components have proven service history. The parts from TDS have improved the reliability and performance whilst maintaining the functionality and safety of the system. The AEA Technology independently reviewed the door system improvements against mandatory requirements and granted engineering acceptance.

The parts are provided with a full 12 months warranty.

### COMPONENTS

- DOOR ACTUATOR
- DOOR CONTROL PLATE
- DOOR SWITCH
- LOCK ACTUATORS
- LOCK SWITCH
- OBSTACLE DETECTION PRESSURE SWITCH
- END OF STROKE SWITCHES
- FILTER AND REGULATOR UNIT
- VALVES FOR CREW ACCESS DOOR
- ALL NECESSARY FITTINGS AND TUBING
- ALL MOUNTING BRACKETS AND FIXINGS



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### TECHNICAL SPECIFICATION

**CONTROL PLATE:** 5/2 door control valve, 3/2 obstacle detect valve, 5/2 crew disable valve.

**DOOR ACTUATOR:** 40mm rod-less actuator to replace the original band cylinder.

**LOCK ACTUATORS:** A pair of special 20mm piston rod cylinders for operating the two-stage rotary lock mechanism.

**FILTER/REGULATOR:** Combined filter and regulator with integrated pressure gauge and locking adjuster knob on regulator filtration rating 5µm.

**DOOR SWITCH:** Snap action switch with extended travel

**LOCK SWITCH:** Snap action roller switch

**FITTINGS & TUBE:** All pneumatic connections are push-in quick release type. All tubing is nylon in accordance with BS5409.

The new door control circuit reduced the number of pneumatic components and centralised them on a common sub-plate. It also provided an improved obstacle detection system.

CONTROL	ELECTRO-PNEUMATIC
INPUT VOLTAGE	24 VDC
VOLTAGE RANGE	+/- 30% OF INPUT VOLTAGE
TEMPERATURE RANGE	-10°C TO +65°C
OPERATING PRESSURE	6 BAR

