

Leyland



NATIONAL



Batch of National buses en route to
Trinidad

NATIONAL - ONE OF THE WORLDS FINEST CITY BUSES



NATIONAL

NATIONAL CITY BUS

The National is an integral built vehicle providing strength and low body maintenance cost. The build system allows vehicles to be produced quickly — a major advantage where rapid fleet replacement or expansion is required.

Leyland National was designed around the passenger as a safe and easy-to-use bus, a vehicle with real passenger appeal.

The Leyland National is available in overall lengths of 10.6 or 11.6 metres. Both models are powered by the quiet and economical Leyland TL11H turbocharged engine.

Passengers board through a wide, well-lit, low step 369mm (14.53 in) entrance with plenty of level platform space to stand on while they are paying fares. The entrance is even wide enough to allow two-way passenger traffic if required. Wide aisles with flat, non-slip flooring aid movement towards the rear of the bus and there are plenty of hand grips, well placed for ease of use and safety. An optional centre door improves passenger flow, ample luggage pens are available at the front entrance and a low midway step leads to the rear saloon.

Throughout National there is an air of well-lit spaciousness.

Large windows enable both seated and standing passengers to see out with ease. Tasteful decor and clean-lined interior trim help to provide an environment of well-being and enable passengers to feel relaxed. Well-distributed glare-free lighting means that passengers can read with ease throughout the bus.

There is comfort too in the design of the passenger seats. These conform to UITP standards, provide maximum all-round support with plenty of leg room and space for hand baggage.



NATIONAL-THE MOST VERSATILE BODY SYSTEM IN THE WORLD

Comfort is provided for the passenger by the highly-efficient automatic temperature control unit, carried in a roof pod. This passes air at a pre-selected temperature across the windows and body sides. Windows keep mist-free and a comfortable temperature is maintained.

Interior noise levels on National are low — 86dB (A).

National offers drivers unparalleled standards in their working conditions. The opinions of drivers who were consulted at the design stage have enabled Leyland to provide an environment that is comfortable, practical, efficient and safe.

Thanks to the raised floor of the driving compartment and its careful positioning, the driver has an unobstructed view of the passenger entrance, and a clear view of the kerb and road ahead through a laminated double curvature screen specially designed to reduce reflections.

Controls are light and easy to use, and prioritised.

Fare collection equipment can be well-sited clear of instruments and controls. There is plenty of space in the clean and well thought out driving compartments: space for knees and ample space for the comfortable driving seat.

This is fully adjustable to provide an ideal position for each individual driver. Screening around the driver's compartment reduces night-time glare from the interior lights and helps reduce draughts. A heating unit for the driver's compartment operates under his personal control.

The National utilises Leyland's tried and tested TL11H turbocharged diesel engine, mounted at the rear. An 11.1 litre unit producing up to 183 kW (245 bhp) at 2100 rev/min and 969 Nm (715 lbf ft) of torque at 1300 rev/min.

Three door bodywork on the Leyland National



Ergonomically planned driving compartment with prioritized controls



NATIONAL

The cooling system uses a front-mounted radiator and thermostatically controlled hydraulic fan providing efficient cooling.

The transmission system is the well-proven Leyland 5-speed Hydracyclic gearbox with integral retarder. It is available in a close or wide ratio form with fully or semi-automatic control. The transmission gives smooth changes and prolongs brake liner life.

National has dual line, full air, primary braking system with a total lining area of 5006 cm² (776 in²). Spring parking brakes offer further safety with 2787 cm² (432 in²) of effective lining area. The integral gearbox retarder provides further braking effort and reduces brake wear.

Full air suspension provides outstanding ride comfort. The front suspension consists of two rolling lobe air bellows, leading arms, a Panhard rod and two shock absorbers. The rear arrangement includes a V frame with Panhard rod, two rolling lobe air bellows and four shock absorbers.

A high level of standardization and component interchangeability assists the extremely economical maintenance of the vehicle.

The rivetted construction enables repairs to be carried out quickly and easily and all skirt panels etc. are non structural.

This body assembly provides fast access to all mechanical and structural components. The entire engine and gearbox unit is reached through wide hinged doors at the sides and back of the vehicle and can be rolled out rearwards on a trolley for major servicing. Other engine ancillaries are accessible through side panels.

The National has an advanced electrical system. It is a 24 volt negative earth circuit using pre-assembled harnesses, flat 7-core cable and special plugs to prevent incorrect assembly. Sectioned wiring enables fast fault tracing and quick replacement.

The battery carrier swings out from beneath the driving compartment floor for ease of servicing.

Leyland National is the result of detailed collaboration between Leyland Bus and the operator and is undoubtedly the World's finest fully integral single deck bus.

Leyland National — one of the World's finest city buses.

Jig built construction of National side frame



National bus operates in Venezuela



B21 - THE CHASSIS FOR OVERSEAS OPERATORS

B21 — the chassis alternative

For those operators requiring the mechanical benefits of the National but with the flexibility to body the vehicle locally, Leyland produce the B21.

The B21 is the understructure of the National with exactly the same characteristics of low floor height, excellent ride, power and performance. The vehicle has also proved highly efficient as a high floor coach with luggage accommodation beneath the floor between the axles, due to the inbuilt stability of the low main frame.

The design allows for the principal dimensions to be varied in order to meet local legal requirements, axle loadings and operators individual requirements.

The B21 uses the same superb full air suspension system giving a smooth ride, free from pitch and roll, and also enables saloon floors to be kept low. The other benefit is that entrance/exits can be made wide and easy to negotiate.

Power comes from the fuel efficient Leyland turbocharged engine developing up to 183 kW (245 bhp) at 2100 rev/min and producing impressive torque right across the speed range peaking at 969 Nm (715 lbf ft) at 1300 rev/min.

Drive is transmitted via a charged fluid coupling to the Leyland Hydracyclic gearbox. A hydraulically operated development of the famous Pneumocyclic transmission — Hydracyclic can cope easily with the higher torque of the turbocharged TL11 and provide the same high standards of smooth gear change, reliability and performance.

The inbuilt hydraulic retarder provides retardation down to 3.2 km/hr (2 mile/hr) and is automatically operated by depressing the brake pedal.

Other carry over features from the National are the powerful smooth air brakes, the front mounted radiator and cooling system, power steering, ergonomic driving position and controls, and heavy duty axles. B21 has a gwv of 17100 kg but both front and rear axles are designed beyond this loading.

B21 — all the virtues of the National in a chassis.



Every Leyland Bus is backed by total product support.

Sales operations are controlled from the Leyland Headquarters by the Export Sales Department staffed by specialists with long experience of customer requirements.

On the service side Leyland have a team of service engineers who work alongside customers ensuring that service procedures are fully understood. For large contracts resident service engineers can also be made available by arrangement.

Leyland has one of the most sophisticated Parts systems in the World ensuring maintenance of spare parts quality and speedy delivery to all parts of the World. They also advise operators on recommended spares stock holdings to suit their operations.

A comprehensive series of training courses are operated by Leyland Bus covering all aspects of bus maintenance. In addition on site training can be arranged.

As a major manufacturer of bodywork we are able to work directly with you on the design of bodywork for your vehicle plus advising on the maintenance of the bodywork.

Should you require to assemble the bodywork locally we will be happy to discuss how this can be achieved.

In conjunction with the British National Bus Company we can offer a full consultancy service on all aspects of bus operation. From fleet planning, through route planning, scheduling, terminal and garage planning, computer system, maintenance etc.

When you buy Leyland there is over 80 years experience of service to bus operators throughout the World behind you.

Leyland

BUS

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