

Leyland DAB City Bus



The DAB bus: An Entire System

The DAB bus is produced by Leyland's Danish subsidiary, Leyland DAB. The association began in the 1940's with the importation of Leyland running units by the famous bodybuilding firm of DAB. Continued collaboration has brought Leyland DAB to the markets of the world with something more than a bus – an entire system.

The key lies in the flexible DAB component system, a concept of modular construction. Whether the call is for an underfloor or rear-engined rigid bus, or an articulated vehicle, the modular aluminium bodywork and the basic Leyland running units remain compatible. The system has great appeal to operators who see the virtue of incorporating their own special requirements into the basic DAB concept.

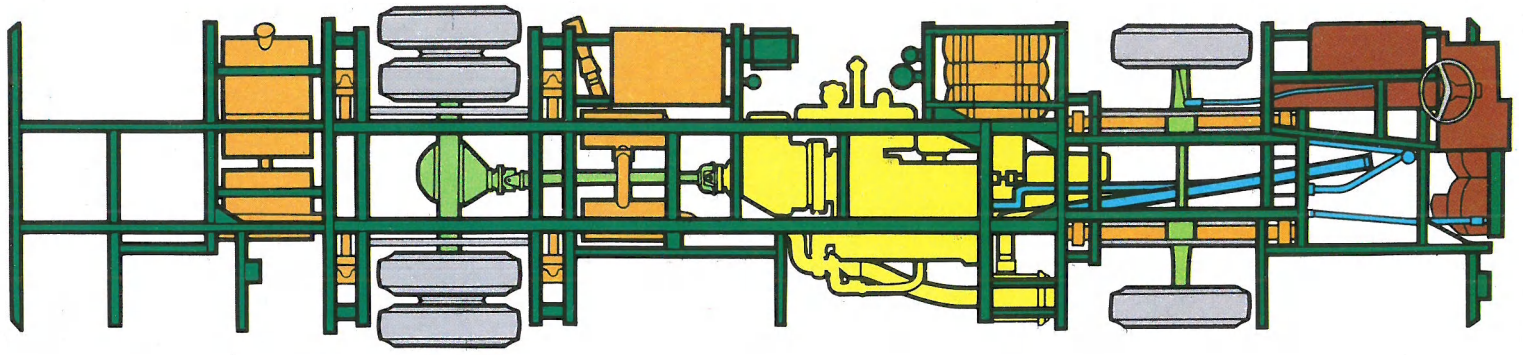
Using modular elements, buses can be built in lengths from 10 to 18 metres. Steel channel section assemblies form the underframe, with front and rear axle assemblies separated by a simple spacer section, and themselves extended by front and rear overhang units. Varying overhangs, step heights and wheelbases are all easily engineered using this innovative method.

Aluminium sections provide a strong, light body frame to which aluminium sheet is added, giving a smooth finish, highly resistant to corrosion.

All DAB buses feature advanced heating and ventilation installations, imperative in vehicles designed to operate in temperatures as severe as minus 25° centigrade. And most DAB buses offer a choice of engine and transmission systems, including the Leyland 690 6-cylinder turbocharged diesel teamed with Leyland's electro-pneumatic 5-speed close ratio semi-automatic gearbox. Other transmission units – ZF or Voith – can be matched with the 690 engine.

An alternative to the Leyland diesel is the Saurer D3KTU turbocharged diesel, matched in DAB vehicles with Voith or Allison automatic gearboxes.





Smooth, Elegant Bodywork

The elegantly styled body of the DAB bus is built from specially developed aluminium sections. External body framing is jig assembled and welded, and then the interior side panelling is welded to the main assembly. The resulting structure is extremely strong and has a high resistance to corrosion. A one-piece roof skin is drawn, from a roll, on to the roof framework. The aluminium sheet is then riveted – one of the few examples of riveting to be found in a DAB body – to the roof sticks.

The main reason for the smooth and sophisticated appearance of the DAB bus is the lack of rivets and beading on the exterior panels. The large aluminium side panels are held in place by a neat and ingenious system, in which they are located into a channel attached to the upright body member. A further special section is bolted to this channel, trapping the side panels between the two. The side panels are lightly heated before assembly and upon contraction are held extremely tightly. No further fixing is necessary and no riveting is used. A flush-fitting fillet completes the assembly. The ease of assembly makes repair of accident damage a very simple operation and

many operators carry pre-painted replacement panels in stock.

The smooth finish also allows efficient cleaning by automatic washers by eliminating areas of dirt collection behind beading. The extra cost of this alloy framing and panelling is only a fraction of the alternative cost of repairing a corroded steel body.

Sophisticated Interior Trim and Design

Inside the vehicle considerable attention has been paid to appearance and insulation. The aluminium side panels are covered with plastic trim, the lower section of which is also bonded to the heavy-duty laminated timber floor. Throughout the bus all joins in this material are welded, which eliminates dirt traps and prevents water seepage when the bus interior is cleaned.

Seat trim can be in PVC or moquette to customer specification.

The location of the passenger seats provides a further example of the ingenious use of aluminium section. A shaped channel in the inside of the body panelling serves as the location for the outer edge of the seat where it



adjoins the body. On the aisle side, a location point is provided by a U channel attached to the floor in a simple but effective manner. Cast aluminium seat sides are specially coated with coloured nylon to match the interior decor.

Choice of Advanced Heating and Ventilation Systems

Two forms of heating are available for the saloon interior. Hot water from the engine cooling system is taken through an exhaust boiler and the heated water is then used to provide hot air for the demisters. The hot water is then piped through radiators fixed below the seats and running the length of the bus. As an option a heat exchanger can be fitted to blow warm air through floor level ducts in the central gangway. A further option allows the fitting of an oil-fired heater which can be used to heat the engine cooling system. This can also be used for pre-heating the saloon and the engine where conditions make this desirable.

The saloon interior temperature is thermostatically controlled. On city buses, with multiple doors which are opened frequently, a heat exchanger is located opposite

the doors and connected to a quick-acting thermostat. Warm air is then blown into the saloon to counteract the influx of cold air. On inter-city vehicles and also on coaches the temperature can be maintained from the hot water radiators and these may be manually or thermostatically operated.

In the search for improved insulation and ventilation a forced air ventilation system has been incorporated into the ceiling of the saloon. All windows are fixed and are double-glazed on inter-city vehicles. To minimise the effects of condensation a plastic formed window pan fitted to the inside of the vehicles creates an air pocket where condensation can be trapped and dispersed.

A Pleasure to Drive

Considerable thought has been given to the driver's compartment, which includes an ergonomically designed seat and specially-designed instrument panel. Power assisted ZF steering is fitted as standard. Either semi-automatic or automatic transmission can be specified. Full demisting facilities are incorporated and a small radiator is fitted close to the driver's feet. A microphone is available



for public address and another good example of DAB ingenuity is the readily visible radiator water level indicator on the front dashboard. The entire driving compartment is finished in materials which minimise reflection from the interior saloon lighting.

Proven Leyland Running Units

A range of tried and tested running units brings life to the DAB bus. Leading the choice of power units is the Leyland 690 6-cylinder turbocharged diesel, an 11.1 litre engine producing 213 PS (158 kW) at 2000 rev/min and torque of the order of 86.4 kgf m (850 Nm) at 1300 rev/min.

With the 690, operators can specify Leyland's 5-speed close ratio semi-automatic gearbox with electro-pneumatic controls, the Voith D851 3-speed automatic gearbox with torque converter and integral retarder, or the ZF HP500 automatic gearbox, again with converter and retarder.

An alternative to the Leyland engine is the Saurer D3KTU 6-cylinder turbocharged diesel. This unit displaces 11.95 litres and offers 250 PS (185 kW) of power at 2200 rev/min and some 102 kgf m (1000 Nm) of torque at

1300 rev/min. The Saurer engine is ideally matched with either the Voith D851 gearbox or the Allison HT740 automatic gearbox with torque converter and integral retarder. Front and trailer axles on DAB buses are of the well-liked Leyland 'T' beam type plated to 7100 kg, while a Leyland-Eaton 1900 Series spiral bevel single speed unit provides a robust rear axle plated at 11000 kg.

Operator Support

Wherever you operate, Leyland's worldwide network of subsidiary companies and highly trained dealers is available to provide you with on-the-spot advice and help with any problem. Dealing with Leyland means dealing with integrity and experience. Our interest does not end when we sell a vehicle. Through helpful, positive support, we want your vehicle to perform efficiently and safely and to be where you want it to be. On the road and repaying its investment.



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