

SCANIA BR 112



An advanced and stable base on wh

Major features of the finished bus are governed by the chassis on which it is built. Comfort, mobility, running economy and operational dependability are just some of the factors destined to determine the future profitability of the finished bus.

Scania, Sweden's oldest-established manufacturer of both chassis and complete buses, has the in-depth knowledge necessary to offer an economical over-all solution to the specific problems encountered by buses employed in local traffic duties. City, suburban and inter-city traffic imposes additional strains and stresses not only on the bus itself but also on the driver, as well as on the service organization and environment. That is why a special chassis is needed for buses which are intended for local traffic services — the Scania BR 112.

The BR 112 is built on the basis of the very latest technical developments affecting buses employed in local traffic duties and also satisfies all current and planned regulations governing noise level and exhaust emission. Equipped as it is with Scania engine-compartment doors, the BR 112 noise level is as low as only 77 dB (A). In other words, the external noise level is comparable with that produced by ordinary private cars. Effective fuel combustion and high efficiency are guaranteed by the turbocharged engine.

The chassis consists of a front bottom unit with prepared driver's place featuring, among other things, complete instrumentation, and a rear bottom unit with engine, gearbox and transmission. Upon delivery, these two units are temporarily connected by means of a transport frame, enabling the chassis to be given a test run prior to delivery and, moreover, facilitating handling. This transport frame is removed before the chassis is installed in the self-supporting body. Electric cables, controls and pipe systems are dimensioned to fit any wanted wheelbase from 5 to 7 metres.

The chassis is prepared for both a low floor, allowing luggage compartments to be built between the wheel shafts, and an extra low floor without luggage space.

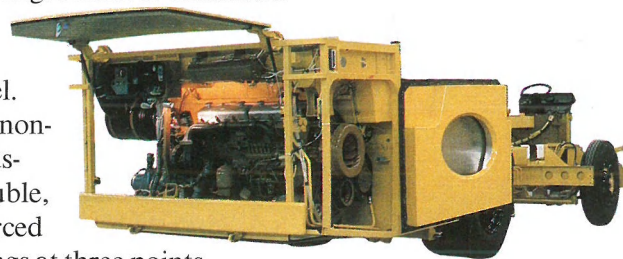
Numerous design features contribute towards the impressively low noise level.

The engine is non-vibratingly suspended in double, amply reinforced rubber bushings at three points.

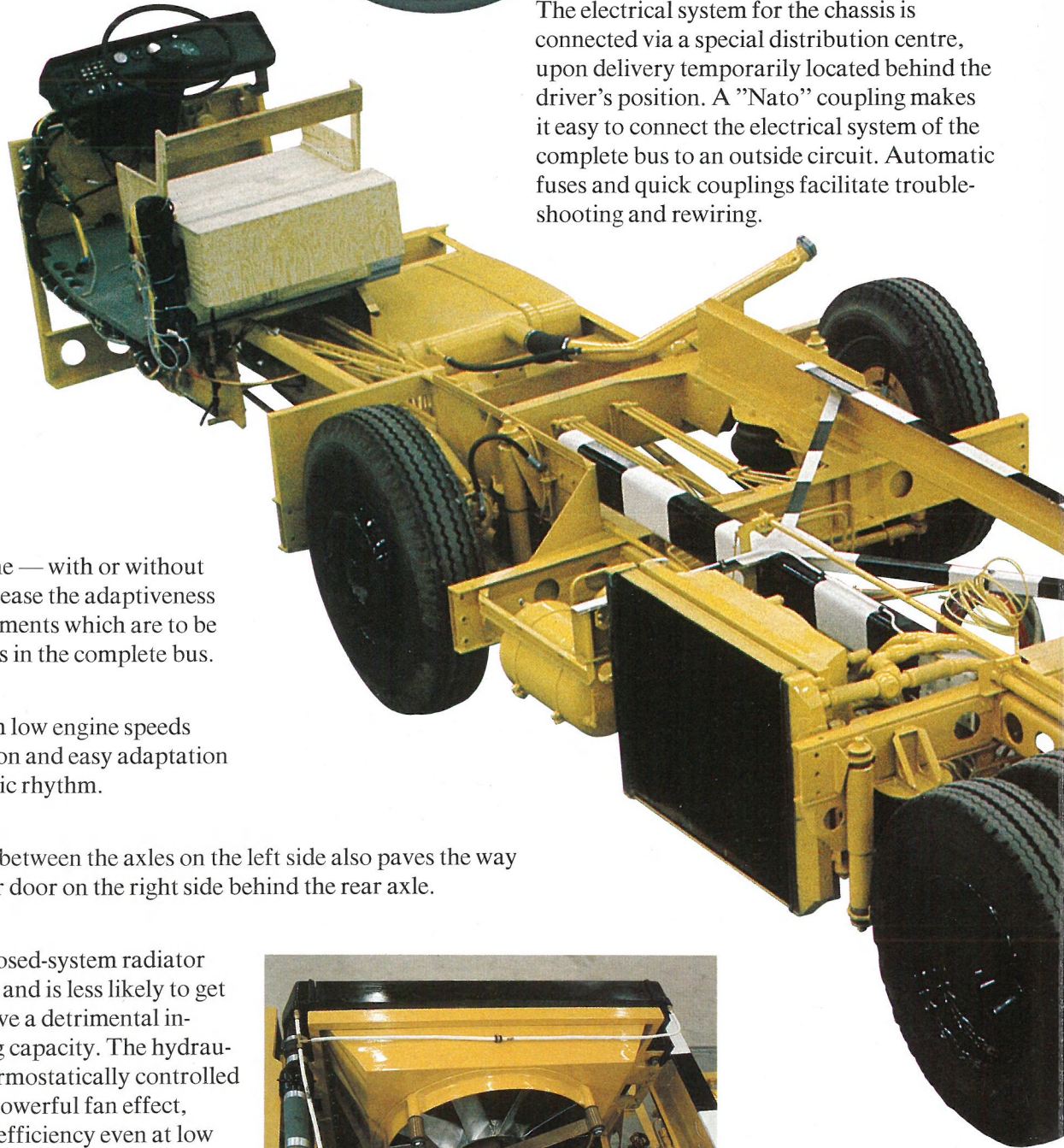
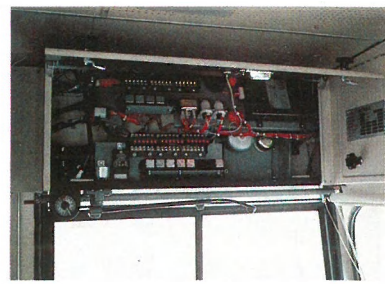
The effective induction silencer reduces annoying intake noise and also eliminates impurities even before the air reaches the air filter. Exhaust noise is effectively suppressed by the dual parallel silencers of a new type. Tapered couplings ensure perfectly tight joints and also facilitate silencer replacement.

The totally enclosed and soundproofed engine compartment is equipped with a special ventilation fan, distinguished by high capacity and remarkably quiet running. The thermostatically controlled, hydraulically powered cooling fan works only when the engine needs to be cooled, the over-all result being a lower noise level, reduced load and a longer service life.

Inspection of components such as the gearbox, induction system and ventilation system is facilitated by provision of large engine-compartment doors on either side, in addition to the rear engine-compartment doors. The three doors in the bottom of the compartment can easily be removed without any tools at all being needed. It is important details like these that make engine maintenance quick, reliable and simple, even for personnel who have not been specially trained.



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The electrical system for the chassis is connected via a special distribution centre, upon delivery temporarily located behind the driver's position. A "Nato" coupling makes it easy to connect the electrical system of the complete bus to an outside circuit. Automatic fuses and quick couplings facilitate troubleshooting and rewiring.

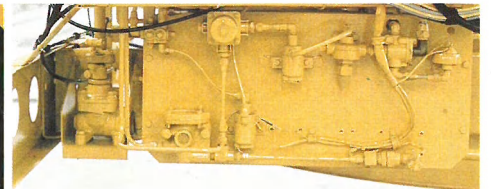
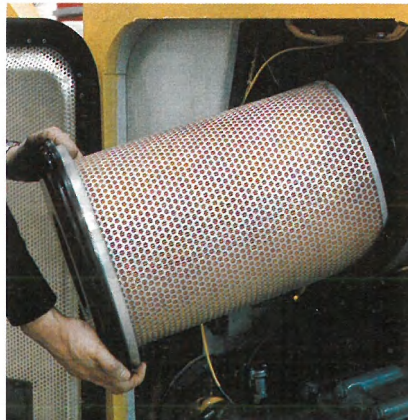
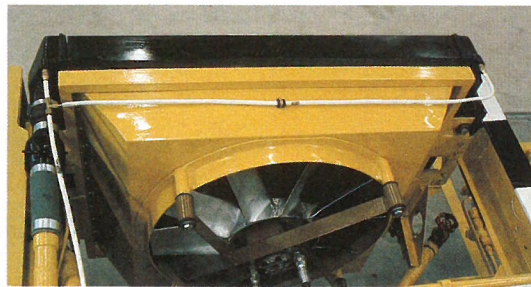
Two alternative engine — with or without turbocharging — increase the adaptiveness to the specific requirements which are to be satisfied by the chassis in the complete bus.

Full torque right from low engine speeds gives rapid acceleration and easy adaptation to the prevailing traffic rhythm.

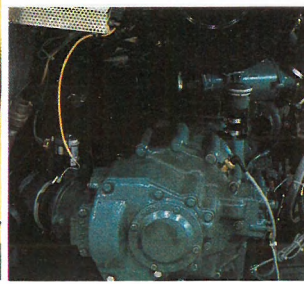
Siting of the radiator between the axles on the left side also paves the way for provision of a rear door on the right side behind the rear axle.

The mid-mounted, closed-system radiator simplifies attendance and is less likely to get dirty, which could have a detrimental influence on the cooling capacity. The hydraulically driven and thermostatically controlled cooling fan, with its powerful fan effect, provides full cooling efficiency even at low engine speeds. This is a contributory factor to the low noise level.

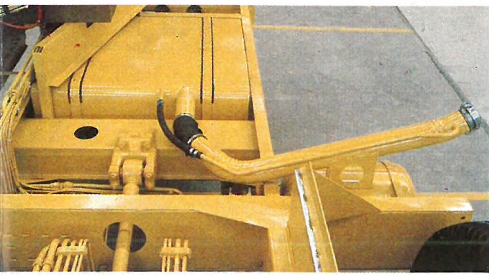
An air filter with a very large active filtering area effectively stops impurities. This is a factor of fundamental importance, assuring a long service life and troubleless operation. An easily observed warning indicator on the filter tells when it is time to change the filter insert.



The valves and couplings of the compressor are clustered in a central unit, easy to reach and simple to adjust.



Three alternative, fully automatic gearboxes make it easy for the driver to keep pace with the irregular rhythm involved in local traffic. The load on the road brake is reduced with the aid of a retarder, or retardation programme, which gives the automatic gearboxes an extra powerful exhaust brake. Ample torque amplification ensures high tractive effort when starting and accelerating.

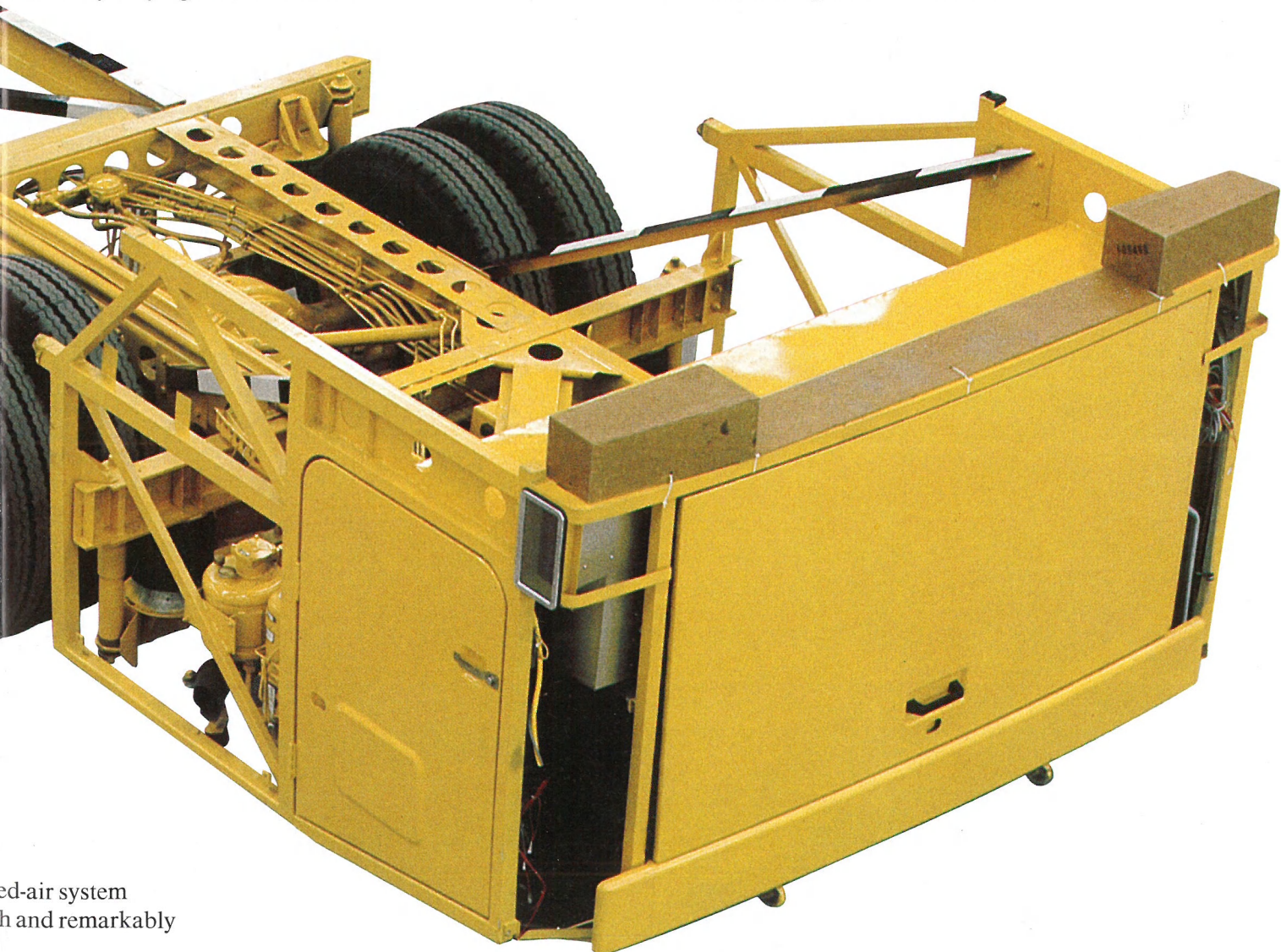


The 285 dm³ fuel tank, located towards the front and provided with surge baffles, contributes to well-balanced distribution of weight.

A new system for effective removal of moisture and dirt (a so-called Air dryer) in the compressed-air system assures reliable functioning and eliminates the need for maintenance. In addition, there is no need for a separate wet tank.

Air suspension all round ensures comfortable ride features. Six adjustable shock absorbers and widely spaced spring brackets provide for stable and sway-free running. In addition, a constant ground clearance is guaranteed through level valves, the implication being that mobility is not affected by varying load conditions.

In city traffic, the brakes are applied frequently rather than heavily. This imposes particularly exacting demands on the tank and compressor capacity of the brake system. The BR 112 is equipped with generous pressure tanks and a relieved compressor, which replaces consumed air at the rate of 830 dm³ per minute. The implication of a relieved compressor is that a valve directly diverts surplus compressor capacity when this is no longer needed to fill the air tank. By this means, wear on the compressor is decreased, and consequently the compressor will have a long service life and run without any trouble. The braking force will be uniform since the brakes are self-adjusting and because a built-in retarder or retardation programme comes into action upon application of the brakes. The braking area is 6450 cm².



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Low entry and exit steps, unobstructed aisles, double doors at the front and between the wheel axles and provision for a door behind the rear axle assure quick passenger circulation, short bus-stop times and on-schedule traffic.



With the engine mounted at the rear, a roomy and quiet workplace can be provided for the driver. Three alternative, fully-automatic gearboxes and easy-to-read instruments with symbols that are easily understood make the driver's task easier. Sturdy, power-assisted brakes provide ample braking power in response to very low and easily applied pedal pressure.

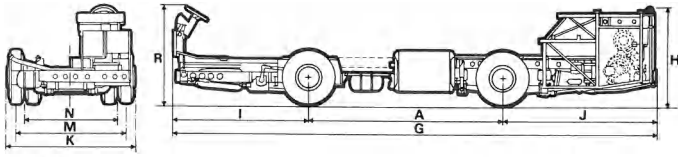
The 54° steering lock makes it easy for the bus to draw up alongside and move away from bus stops. Power steering and only a few steering-wheel revolutions between wheel locks enhance manoeuvrability.

The generous opening angle of the engine-compartment door enables work to be carried out in comfortable postures. Double light points in the engine compartment provide ample and effective lighting. A special control panel in the engine compartment contains start and stop controls for the engine, as well as a safety protector, which prevents the engine from being started from the driver's position while work is in progress in the engine compartment. Other items incorporated in this panel are an oil pressure gauge, automatic quick fuses and a fire warner.

The performance of a local traffic bus depends on how well it can be tailored to a specific transportation requirement. The Scania BR 112 offers a modern and versatile solution proposal which can easily be matched to your transportation needs. Every single detail has been thoroughly tested and, like other Scania products, enjoys a unique reputation around the world for wear resistance and reliability in every operating situation.



Standard design and optional equipment for the Scania BR112

Engine	Scania D11/DS11
Number of cylinders/displacement	6/11 dm ³
Cylinder bore/stroke	127/145 mm
Output DIN 70020	149 kW (203 hp) at 2 200 r/min/184 kW (250 hp) at 2 200 r/min
Torque DIN 70020	760 Nm (77 kpm) at 1 200 r/min/995 Nm (101 kpm) at 1 300 r/min
Cooling system, volume	approx. 65 dm ³
Oil capacity	approx. 21 dm ³
Starting motor	approx. 4.4 kW (6 hp)/24 V
Alternator	80 A
Transmission	Fully-automatic 2-speed, 3-speed with retarder or 4-speed with retardation programme
Rear axle/rear-axle gear	AD90/RV 653
Gear ratio	3.73:1, 4.88:1 alt 5.57:1
Max. speed at 2 200 r/min	70—110 km/h.
Suspension	
Front: max. axle load	Air suspension: 6 000 kg
Rear: max. axle load	Air suspension: 10 500 kg
Brakes	Dual-circuit, direct-acting air brakes
	Total braking area: 6 450 cm ²
Steering	Hydraulic power steering
Wheels	7.50—22.5
Tyres	11R22.5
Batteries	2×12 V in series
Fuel tank	1×285 dm ³ or 1×220 dm ³
Weights and dimensions	
	
Front overhang (I)	2 610 mm
Rear overhang (J)	2 895 mm
Chassis length, transport version (G)	9 255 mm
Wheelbase, transport version (A)	3 750 mm
Wheelbase, complete bus, optional from	approx. 5 000 to 7 000 mm
Height at rear end (H)	1 885 mm
Chassis weight	6 040 kg
Max. total weight	16 500 kg

SCANIA
SCANIA-BUSSAR AB, SWEDEN