



**SCANIA LB 140 · LBS 140 · LBT 140**



The 140 is the largest and most powerful truck in the Scania range. Power comes from a Scania 350 h.p. DIN V8, that's no less than 9.2 h.p. per ton at a train weight of 38 tons.

This high engine rating produces worthwhile savings in time, compared to trucks in the 250 h.p. class, by virtue of better climbing performance, acceleration and higher average speeds. Fuel consumption is low in relation to the very high engine output.

The Scania 140 has been developed for heavy duties such as long-distance haulage, forestry work and machine transportation. The chassis comes in three basic versions: the LB140, a four-wheeler (4x2), the LBS140, a six-wheeler (6x2), and the LBT140, which has a tandem-drive bogie (6x4).





## 350 h.p. V8.

Scania is one of the world's oldest motormakers. The 350 h.p. DIN V8-engine was introduced in 1969 - one of the milestones in Scania's history. Others were Scania's first diesel engine, which came out in 1936, and the direct-injection diesel engine of 1950. The V8-engine that powers the 140 range is built for hard yet trouble-free service. Sturdy engine components, some new and thoroughly tested, others of old and tried designs, ensure great dependability. Needless to say, the engine is super-charged - a modern design approach that gives high output and economical fuel consumption.

The pistons are of light alloy, with chromium-plated piston rings. The piston crown is shaped to give optimum fuel economy. When fuel is sprayed in through the five-hole injector nozzle it is efficiently atomized, and the result is uniform combustion and effective utilization of the energy it contains.

The piston crown in a diesel engine is subjected to very high temperatures. In the V8-engine, the piston is cooled internally by oil forced through a nozzle in the connecting rod. Like all other Scania engines the V8 has wet-renewable cylinder liners. They are made with such accuracy that as spare parts they are interchangeable among different pistons. Cylinder liners are sealed against the block by three sealing rings.



Each cylinder is covered by a separate head secured with eight stout bolts. The gasket between the cylinder head and the engine block is of steel.



Scania's cyclone and centrifugal oil cleaners work effectively at all engine speeds and have no loose filters that need changing.



Engine oil is first pumped to a cyclone from where clean oil is passed to engine lubricating points. Contaminated oil is led to the centrifugal cleaner which collects all impurities.



Each cylinder has its own cooling-water circuit, dimensioned according to the distance of the cylinder from the radiator; in this way every cylinder is assured correct cooling at all times.

These are just some of the features that make the Scania V8 so dependable.

You can judge an engine by its appearance, too. The Scania 350-h.p. V8 has an orderly look, and its detail design makes for accessibility, showing that it is a thoroughly thought-out, up-to-date design based on long experience of diesel engine production.



## Transmission dimensioned for heavy hauls.

Scania has long experience of gearboxes and rear-axle gears, and has had synchromesh gearboxes as standard equipment since 1953. Since all important units in the transmission are manufactured, tested and checked by Scania, the transmission is always matched to the transport task of the truck. The clutch, gearbox and propeller shaft are the same on all three basic models in the 140 range. They are well-matched to each other and to Scania's high quality standards.

The GR860 ten-speed range gearbox consists of a five-speed main box and an electrically controlled planetary gear for high- and low-speed ranges. Compressed air supplies the necessary power to change gear. This new all-synchronized gearbox is designed for high engine outputs and high train weights. First gear is lower than in any earlier Scania box and provides good traction for starting with a heavy load.



The double-disc clutch has a large friction area and small dimensions. Hydraulically actuated, it has a compressed-air servo, giving the same precision as mechanical transmission to the clutch, but with considerably less effort on the part of the driver.



The rear-axle gear in the Scania LB and LBS 140 is of the hypoid type, a single-reduction gear with the final-drive pinion vertically displaced from the centre of the crown wheel. This makes the area of contact between the gear teeth larger than on an ordinary single-reduction gear, thus improving strength and durability.



For heavier transport tasks the Scania LB and LBS 140 can be equipped with a single-reduction gear and hub reduction. This hub reduction consists of a planetary gear with wide cylindrical planet wheels, and takes some of the strain off the rear axle gear and drive shafts.



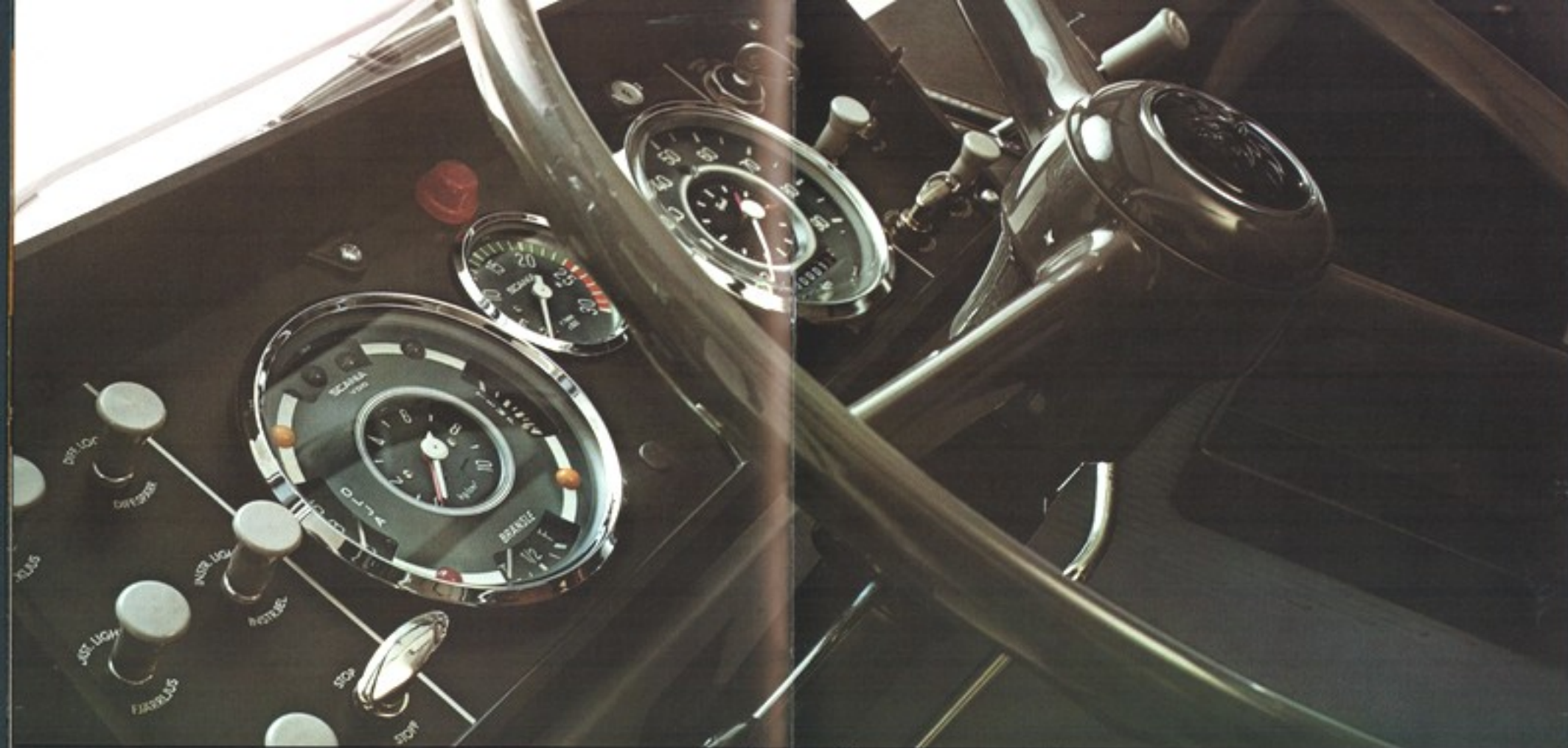
The LBT140 has a bogie in which the drive goes to both bogie axles. Since the LBT 140 is used for the very heaviest haulage jobs in forestry and machine transportation, it needs the extra traction which this bogie design possesses.

The differential lock, fitted as standard to all Scania's, makes it easier to keep going on slippery roads. It immobilizes the differential and makes the drive wheels rotate at the same speed. The LBT 140 has three differentials and three locks, so that all drive wheels can be locked at the same speed. These differential locks are totally enclosed in the rear axle and protected against damage.









## Comfortable driving position.

The cab is the driver's workplace. So like all other workplaces it should be comfortable and safe. Scania has put a great deal of extra care into the design of the 140 cab. Instruments and controls are arranged right in front of the driver, where they are easy to reach. The comfortable seat is adjustable to suit every driver. A heating and ventilating unit gives an indoor climate whatever the weather. Warm in winter and cool in summer.

Good insulation keeps sound levels down and the cab free from vibrations.

A central warning lamp on the instrument panel registers oil pressure, brake air pressure and generator charging all in one. Besides the warning lamp there are dial instruments that can be read at a glance. They include a rev counter enabling the driver to make better and more economical use of his engine resources.



The cab is easy to climb into. Doors open a full 90° and on both side of each door there are stout handrails.



This seat is better than your driver's favourite armchair. He can easily adjust it to suit his weight, and can also vary the backrest angle, seat height and position.



The curved windscreen is carried down deep and gives splendid close-up visibility. Three wipers driven by a powerful two-speed electric motor, sweep a large area and keep the windscreen clear even in the worst weather. Electric windscreen washers are part of the standard equipment.



The front cover is opened for daily inspection. Inside, and readily accessible, are oil dipsticks for the engine and power steering, the oil filler for the engine and clutch servo, the anti-freeze bottle for the brake system and the cold-start control.

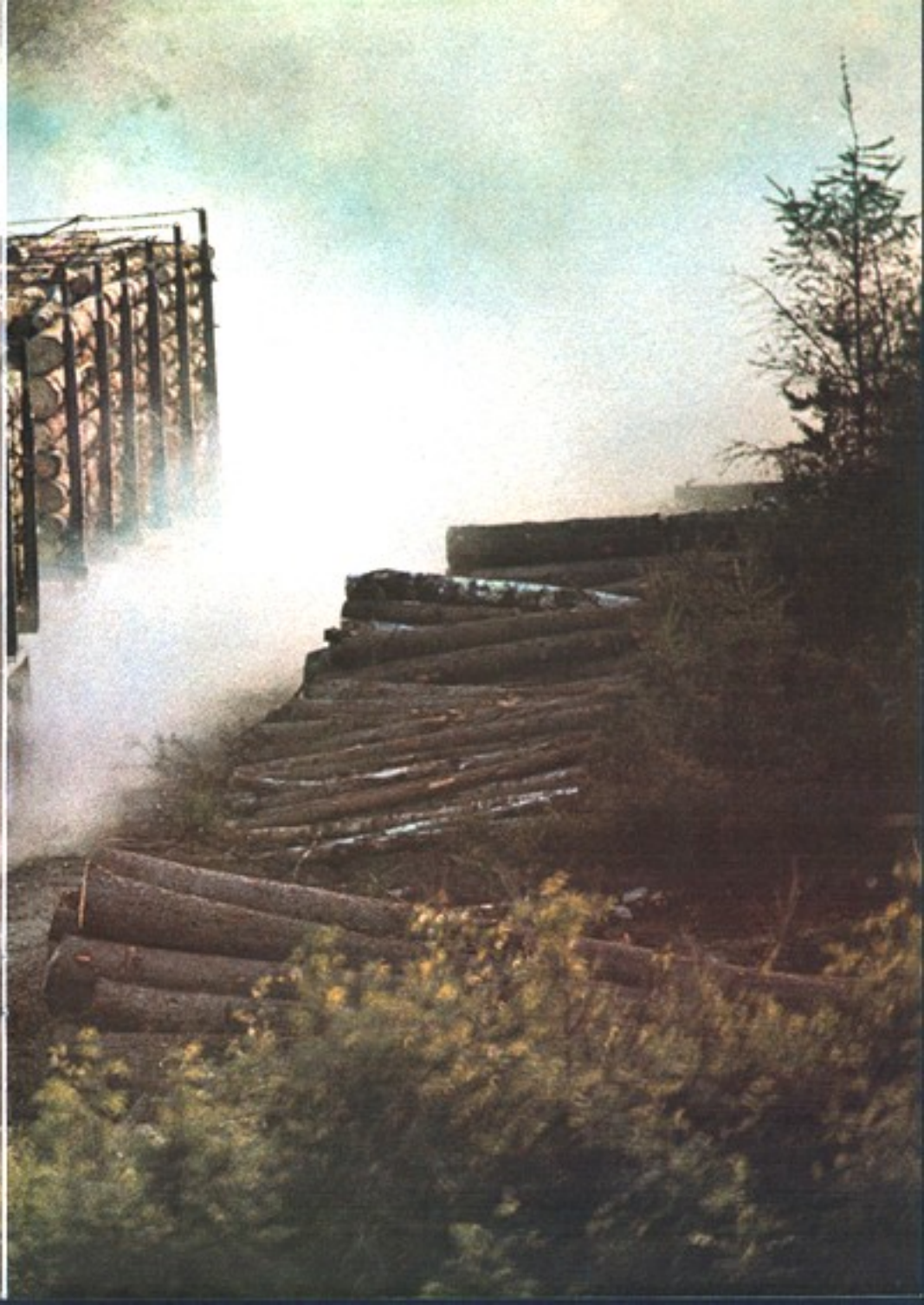


At full volume, 450 cubic metres an hour, the air in the cab is changed twice every minute. The heater is rated at no less than 10 kW and is thermostatically controlled. Defroster nozzles extend along both the windscreen and the side windows. Airflow through the cab can be increased still further by opening the roof ventilator.



If the engine and gearbox need more extensive service, that's easy. The cab tilts through 60°. The hydraulic tilting mechanism and its double locks make it impossible for the cab to drop back or tilt by accident.









## Flexible and strong.

The four-wheel Scania LB140 is strong enough to take a superstructure and a heavy load without frame reinforcements; strength combined with torsional resilience. Frame and springs work in harmony so that the wheels always follow irregularities in the ground, giving the truck optimum traction.

The LBS and LBT140 have double frames. These

frames are cold-pressed to a uniform height throughout the vehicle and are so strong that they normally need no stiffening. Crossmembers are riveted to sidemember webs, leaving the top of the frame completely free from strength-reducing rivet holes. Frames can twist as much as 10° without affecting the rubber-suspended cab.



The long front springs are combined with double-acting telescopic dampers. The power steering, the dampers on the front axle and the long front springs make driving a pleasure.



The LB 140 has progressively acting rear-axle springing which becomes harder the more the truck is loaded.



The LBS140 has a smooth-running bogie balanced so that the driving axle always carries somewhat more of the load than the trailing axle. This improves traction in adverse updown conditions and at the same time reduces stresses on transmission components.



The LBT140 has a tandem-drive bogie with the driving axles supported by powerful springs on a common carrier axle. Acceleration and braking forces are taken up by reaction rods. These rods are carried in maintenance-free rubber. This elastic suspension absorbs lurching, swaying and torsional movements.





## Testing gives safety.

Continuous tests on Scania's test track and high uniform quality in manufacture result in a truck that is safe both for its driver and fellow road-users. An unpleasant experience such as a blow-out isn't a catastrophe, the power assisted steering enables the driver to keep his truck firmly on the road. The safety cab provides security for the driver. Then there's four-fold braking safety - two-circuit direct-acting air brakes,

spring parking brake and exhaust brake. And road safety thanks to a restful driving position with easy-to-read instruments and well-sited controls. Scania's all-steel safety cab has passed the most stringent tests.

These include swinging a 1-ton weight against the front windscreen pillars and cab rear from a distance of 3 meters. A 15-ton static load is also evenly distributed on the roof. During these tough tests the cab doors must remain

closed. Every Scania has laminated glass in the windscreen. No dangerous flying splinters in the event of breakage.

Powerful dual-circuit direct-acting air brakes have separate circuits to front and rear axles. They more than satisfy the Swedish regulations requiring the brake cylinder farthest from the engine to be 75% full within 0.6 seconds.



Brake drums with large cooling surfaces keep fatigue at bay. The stout brake linings can withstand severe and protracted usage. Total brake area is 5500 cm<sup>2</sup> for the LB, 7700 for the LBS and 8950 for the LBT.



Brake cylinders are of the diaphragm type. The handbrake is built into the footbrake cylinders. It is applied by powerful coil springs and released by compressed air.



The handbrake is effortlessly actuated by simply moving a small lever on the instrument panel.





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