

Saab 99 EMS, 1973





The Saab 99 EMS - an exclusive model with spirited performance

This is the Saab 99 EMS – of 1973 vintage. (The model was first presented in the beginning of 1972 and received much praise from the motoring press and appreciable interest from demanding prospective buyers).

We have found no reason to introduce major modifications. The colour is the same. The specially designed, strong, cast aluminium wheels and the strong steel cord tyres remain unaltered, as do the halogen headlamps with H4 bulbs, headlamp wipers, the black windscreen wipers. And, best of all, the Swedish-made, two-litre engine developing a maximum of no less than 110 hp (measured according to the realistic DIN standards).

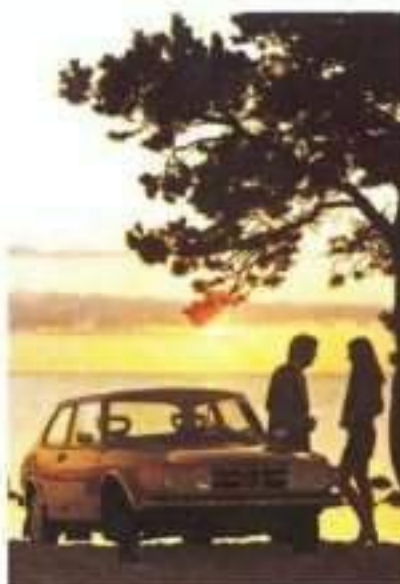
Most of the novelties are designed to increase further the safety and comfort.

As an example, we have modified the front springs by making them pivot-mounted at the bottom so that they move in a straight line instead of in an arc and can thus absorb bumps in the road surface – silently and softly but firmly.

Inside the doors, we have fitted substantial, longitudinal steel beams to provide additional protection in the event of a collision from the side.

We have laid moulded and thicker carpets on the floor, we have made the instrument dials even clearer, we have modified the steering gear so that it is now easier to turn the steering wheel, particularly when manoeuvring at low speed.

And we have provided the car with a separate roof lining – an effective one-piece, impact-absorbing unit, made of moulded glass fibre and covered with light, washable polyester velour.





Comfort and sporty verve elegantly and safely combined

The emblem EMS appears scattered here and there in and on the car – in the hub of the steering wheel (which has a leather-covered rim), in the centre of the grille (which is slightly special on this model), on metal plates on the metallic body finish (which is a coppery reddish-brown and is known as Coral). E stands for the engine being equipped with electronically controlled fuel injection. M stands for manual gear change. S stands for special.

The Saab 99 EMS is doubtless a special model. It is manufactured in a definite type of body. It is painted with a distinctive paint. It is available only with our most powerful engine.

Its acceleration is in the same class as the sporty external appearance of the car. And the top speed is ample for the fast tempo on the numerous and long Continental motorways. The Saab 99 EMS will manage a comfortable 106 miles/h (170 km/h) when the need arises. And it will accelerate to 62 miles/h (100 km/h) in about 12 seconds.

The engine develops a high torque within a wide range of speeds. This offers good low-speed performance and eliminates the need for constant gear changing. The EMS is not a nervous car, even if we like to call it sporty.

The electronic fuel control unit – the little grey box on the left-hand wheel arch – ensures that the engine is always provided with the correct amount of low-octane fuel (94 octane is sufficient) to suit the load conditions.

Finally, safety has really been given prominent attention. The roadholding properties are at least as good as that of any other Saab model. The passenger space is truly abundant – the elbow room in the back seat is more than 5 ft (154 cm). The EMS can be called a semi-estate car. The back seat can be folded to provide an enormous luggage compartment with a flat floor and a length of 5 ft 7 in (172 cm). The bumpers give credit to the name. They can withstand heavy knocks without being damaged. The heating and ventilation system is designed to suit cold, Scandinavian winters. The seats have fully collapsible backrests. The driver's seat can be raised or lowered and inclined forward or backwards. In addition, it is provided with automatic electric heating which is switched on when the ignition is switched on, if the temperature is below 57°F (14°C).



The wheels of the EMS are of low pressure die-cast aluminium, with exceptional toughness. The wheels have passed gruelling tests which included driving without tyres on unsurfaced roads.



The rev. counter allows the driver of the EMS ample scope for obtaining the best performance from the engine in all gears.



The Saab 99 models have gained widespread praise for the driver's place and for the instrument panel, with its recessed non-reflecting instruments and well-arranged controls. The rim of the steering wheel is leather covered.

The EMS engine has an overhead camshaft, light alloy cylinder head, five-bearing crankshaft, short piston stroke and many other refinements which render it sufficiently tough to withstand rough usage. The clutch is located at the front and the gearbox is below the engine.

Technical particulars of the Saab 99EMS

ENGINE

General description

4-cylinder water-cooled in-line engine with chain-driven overhead camshaft. The cylinders are inclined at 45° to the right. The cylinder block is of special alloy cast iron and the cylinder head is of light alloy. Five crankshaft main bearings and five camshaft bearings. The engine is of cross-flow type, with the induction pipes on one side of the cylinder head and the exhaust manifold on the other.

The engine, clutch, gearbox and differential are integrated into a complete and compact power unit. The clutch is located at the front and the gearbox below the engine.

Dimensions and performance

Cylinder bore: 90 mm (3.54 in)

Piston stroke: 78 mm (3.07 in)

Compression ratio: 8.7:1

Max. output, DIN: 110 hp (81 kW) at 5500 rev/min

Max. torque, DIN: 17 kgf m (167 Nm) at 3700 rev/min.

Lubricating system

Forced oil circulation. Full-flow oil filter. Closed-circuit crankcase ventilation. Oil capacity, including filter: 6 pints (3.5 l).

Fuel system

Bosch Jetronic electronically controlled fuel injection. Electric fuel pump. Recommended octane value of the fuel: 94. The fuel tank capacity is 9.9 imp.gals (45 l).

Cooling system

The cooling system is of the pressurized type. Cross-flow radiator with separate expansion tank. Intermittent, electric motor driven cooling fan (thermostatically controlled). Coolant volume, including heating system: 16.7 pints (9.5 l).

Electrical system

12 V, 60 Ah battery. Alternator. Max. charging current: 55 A. Starter motor rating: 1 hp (0.7 kW).

POWER TRANSMISSION

General description

Single, dry plate clutch, hydraulically actuated. The drive is transmitted to the gearbox through a primary gear train. The gearbox has four forward speeds and comprises an integral differential and final drive reduction. The lubricating system of the gearbox is entirely separate from that of the engine. The universal joints of the drive shafts are permanently lubricated and the outer universal joints are of the Rzeppas constant velocity type. The front wheels are driven. The theoretical speed at an engine speed of 1000 rev/min in top gear is 19 miles/h (30 km/h).

Ratios

Primary ratio: 1:1

Overall ratios, engine to driving wheels: bottom 13.37:1, 2nd 8.06:1, 3rd 5.41:1, 4th 3.89:1, reverse 14.70:1. Final drive ratio: 3.89:1.

CHASSIS PARTICULARS

Brakes

Diagonally split, two-circuit hydraulic foot brake system with vacuum servo assistance. Self-adjusting disc brakes front and rear. Approx. 80% of the braking effort at the front wheels. Total brake area: 358 in² (2310 cm²). The handbrake acts on separate drums on the front wheels.

Suspension, springs

Transversely mounted, V-shaped wishbones and pivot-mounted helical coil springs with progressive action at the front.

Light, rigid rear axle guided by two leading and two trailing arms and a transverse rod. Helical coil springs.

Double-acting, telescopic shock absorbers front and rear.

Steering

Rack and pinion steering gear, 3.7 turns between locks. Jointed and telescoping steering column. Turning radius: 17.1 ft (5.2 m).

Wheels and tyres

Cast aluminium wheels of special design. Rim size: 5 J FHA x 15".
165 SR x 15" tubeless radial ply tyres with steel cord.

DIMENSIONS

Outside dimensions

Overall length 14 ft 4 in (4370 mm)

Overall width 5 ft 6.5 in (1690 mm)

Height, unladen: 4 ft 8.7 in (1440 mm)

Wheelbase: 8 ft 1.4 in (2473 mm)

Track, front: 4 ft 7.1 in (1400 mm)

Track, rear: 4 ft 7.5 in (1410 mm)

Front overhang: 2 ft 11.7 in (907 mm)

Rear overhang: 3 ft 3.0 in (990 mm)

Inside dimensions

Effective headroom, front: 3 ft 2.4 in (975 mm)

Effective headroom, rear: 3 ft 1.7 in (958 mm)

Hip room, front: 4 ft 3.9 in (1318 mm)

Hip room, rear: 4 ft 3.4 in (1305 mm)

Shoulder room, front: 4 ft 5.5 in (1358 mm)

Shoulder room, rear: 4 ft 7.2 in (1403 mm)

Elbow room, rear: 5 ft 0.6 in (1540 mm)

Luggage boot capacity, SAE: 12.2 ft³ (347 l)

Total volume of luggage boot: 23.3 ft³ (660 l)

Length of luggage compartment with back seat folded down: 5 ft 7.7 in (1720 mm)

WEIGHTS

Unladen weight with full tank: 2490 lb (1130 kg)

Max. loaded vehicle weight: 3440 lb (1560 kg)

Highest permissible weight of trailer –

a) with brakes: 2425 lb (1100 kg)*

b) without brakes: 1100 lb (500 kg)*

Highest permissible load on roof rack: 220 lb (100 kg)*

*Where local law doesn't state otherwise. The figures are for the domestic Swedish market.

The manufacturer reserves the right to change the specifications and equipment described in this brochure without prior notice.

SAAB-SCANIA

Saab Car Division, Nyköping, Sweden.