TURBOSTAR

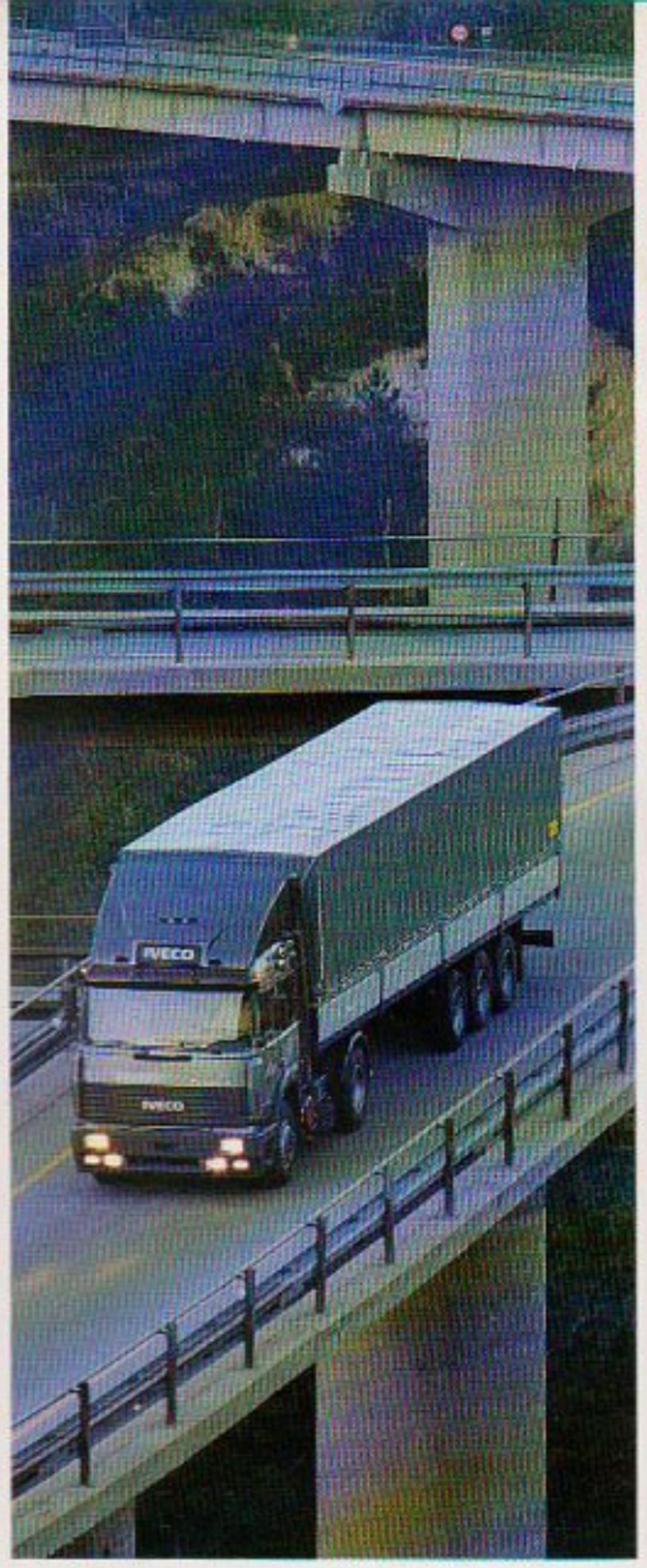
Heavy on-road vehicles

277, 309 and 350 kW engines (377, 420 and 476 HP)

IVECO

High power output and reliability for profitable operation in the most varied conditions.

LEADER IN EUROPE



Trucking on the major national and international routes is hard work however fascinating in many ways, and it demands the best from both men and vehicles.
If drivers are not to be crushed under the weight of thousands of kilometres covered in a wide variety of climatic and environmental conditions, cabs have to be comfortable, veritable "homes from home".
And if the vehicles are to be competitive - with high payloads and low running costs - they need really powerful engines and power trains designed to give low consumption, rugged chassis with low kerb weight, absolutely dependable mechanicals and a long working life.
Iveco is not only present but a leader in this sector too, with its powerful, range-topping, heavy-duty vehicle, the TurboStar, one of the leading lights of international haulage. It has been designed without compromise, to meet the toughest requirements of long distance transport, but it is also, quite simply, the "quality choice" for those who wish to work in greater safety and comfort. Equipped with a cab that is without equal as far as space, comfort and equipment are concerned, the TurboStar comes in more than 20 versions, as truck or tractor, with a choice of three engines, with power outputs of 377, 420 and 476 HP, 5 wheelbases, 4×2 or 6×2 with the original additional third axle.


IVECO
480
TurboStar
IVECO

**A striking personality,
superb aerodynamics
and exceptional roominess**

THE STYLING

The TurboStar cab is "super" in every respect: from roominess to comfort, equipment and safety.
One of the most spacious commercial vehicle cabs on the market today, with an interior area of 2.34 and 1.70 square metres on the two versions, for a total working area of approximately 6.5 cu.m.
The modern, rational design shared by all Iveco vehicles, is enhanced on the TurboStar by its striking elegance and strong personality.
The front has the classic Iveco imprint: grille with horizontal bars, trademark and logo; light clusters encased in the bumpers, fog lights and extra headlights are standard equipment.

Excellent Cx

To improve vehicle drag, in the interest of lower consumption and a quieter drive, the TurboStar cab underwent extensive aerodinamic tests in the Iveco Research Centre wind tunnel.
The result of these tests can be seen in the rounded roof and anti-splash side deflectors, streamlined merging of the bumpers with the grille and lower spoiler; flush door handles and fared wing mirrors.
For its flagship, Iveco has also developed a special spoiler (available on request) that can be adjusted to fit the configuration of the rear part of the vehicle equipment or semitrailer, further reducing Cx to an outstanding 0.53.


190-48


IVECO

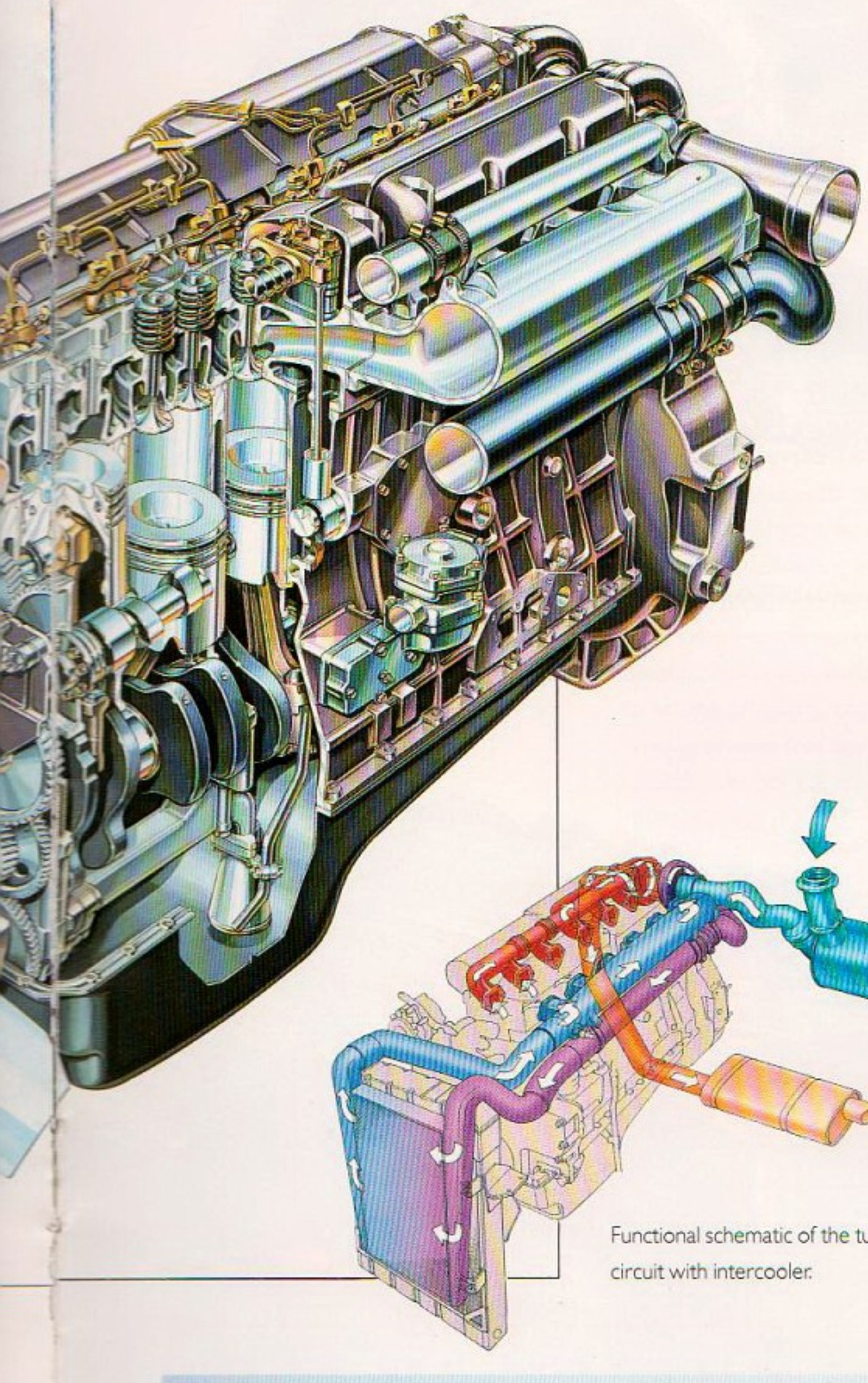
**Elegance and attention to detail,
supreme comfort
and lavish equipment**

THE CAB

Modern and roomy, the TurboStar cab was developed at the Iveco Styling Centre, using the most advanced ergonomic research, very elegant trim and lavish standard equipment.
The facia surface is pleasant to the touch, and scratch and stain resistant, in colour shades that are restful to the eye. The anatomical, comfortable seats are upholstered in top quality fabric in stylishly matching colours, and reinforced with leathercloth in the areas most exposed to wear. The panelling is upholstered with attractive washable materials and great attention has been paid to finishing details.

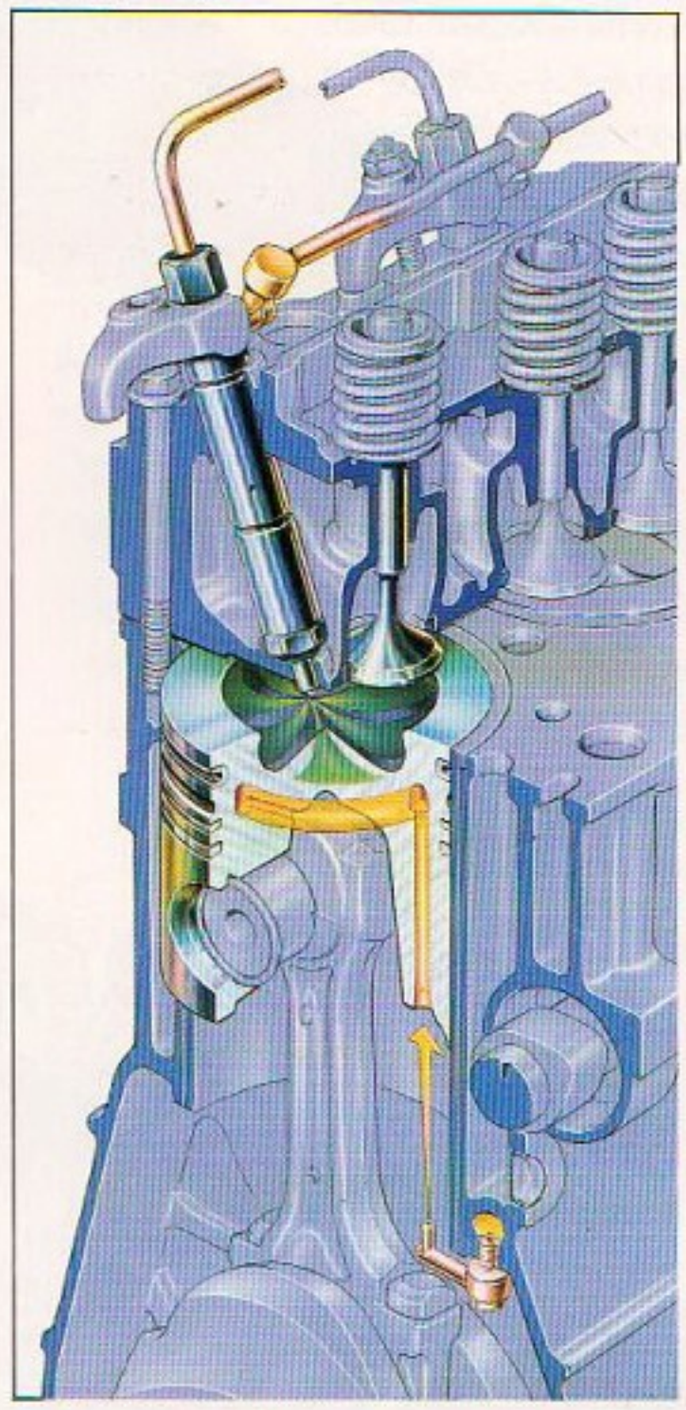
For the driver's off-duty moments, the "night zone" has two wide bunks, which are comfortable and positioned well apart and away from the cab roof: the upper bunk, complete with safety net, can be folded against the rear wall of the cab when not in use.

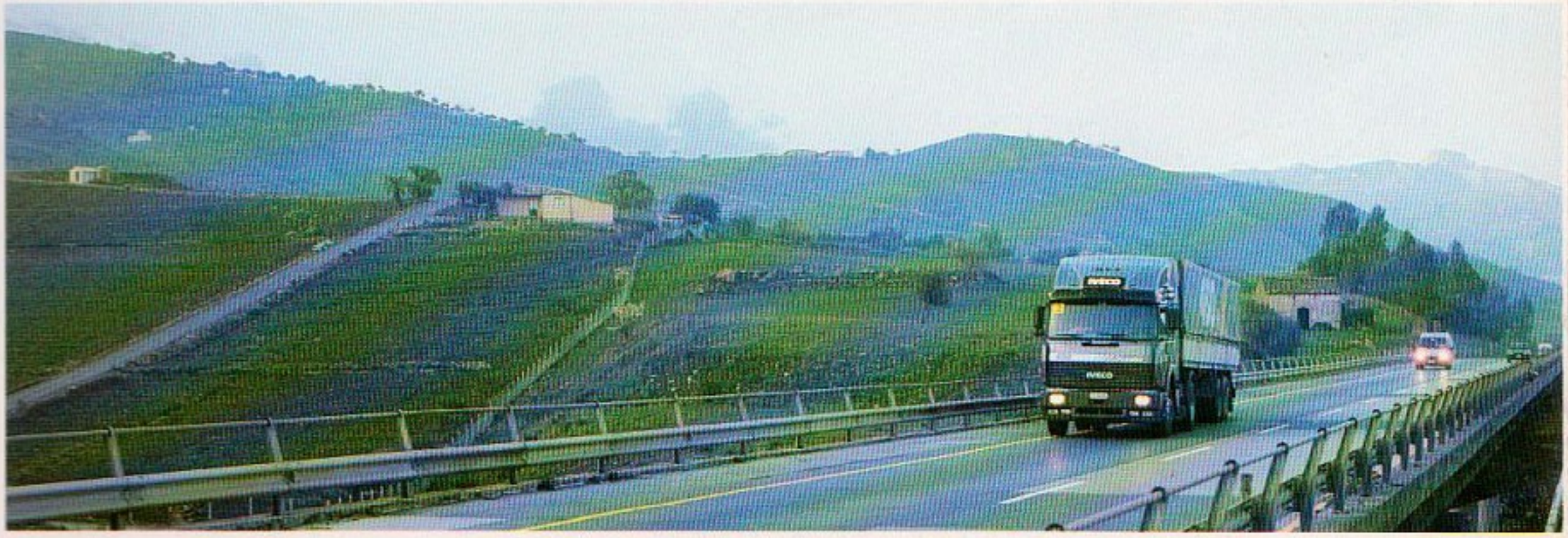
Ceiling radio and CB housing.



Functional schematic of the turbocharging circuit with intercooler.

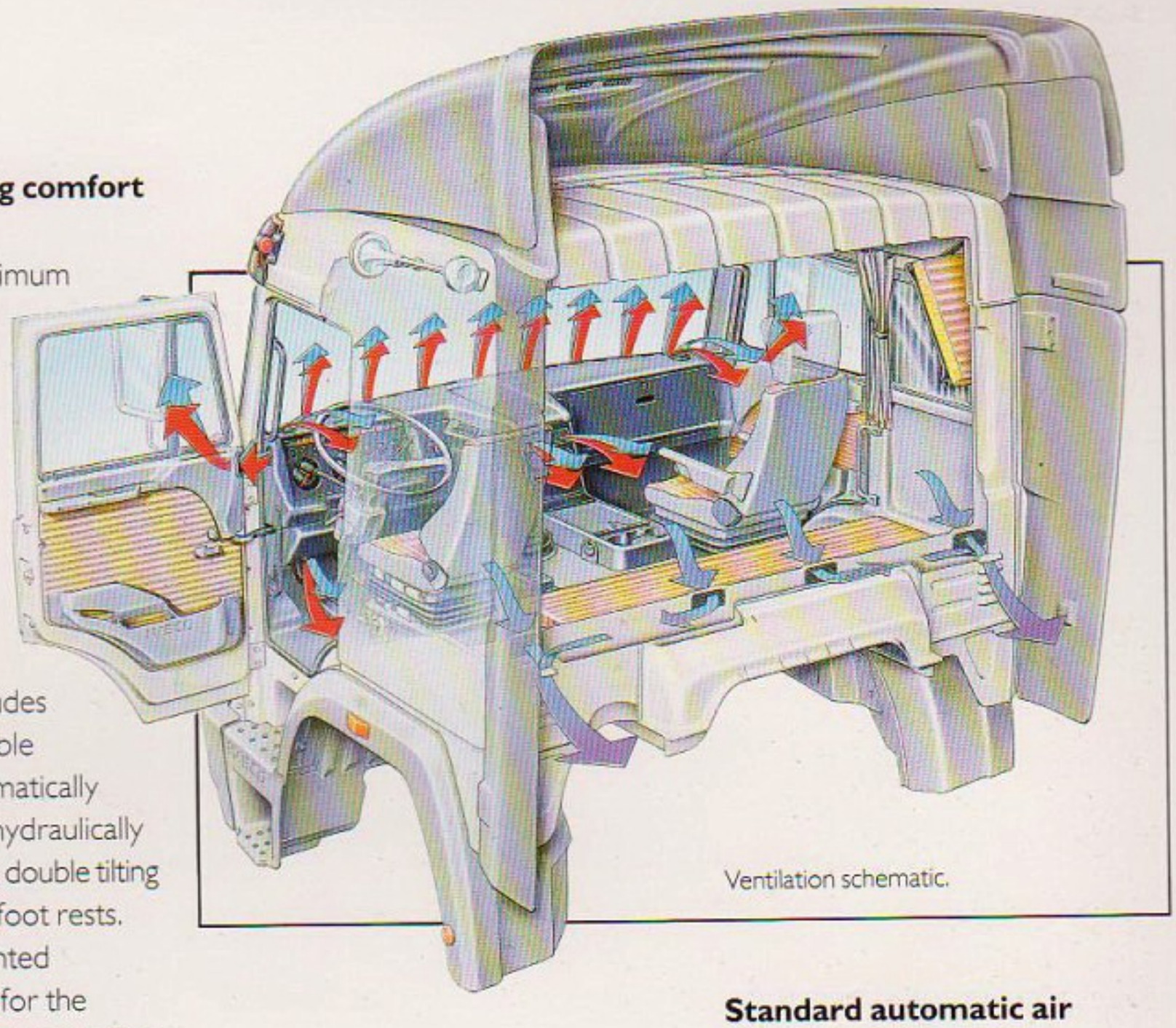
Detail of the direct injection system, and section of the piston with annular cooling passage.





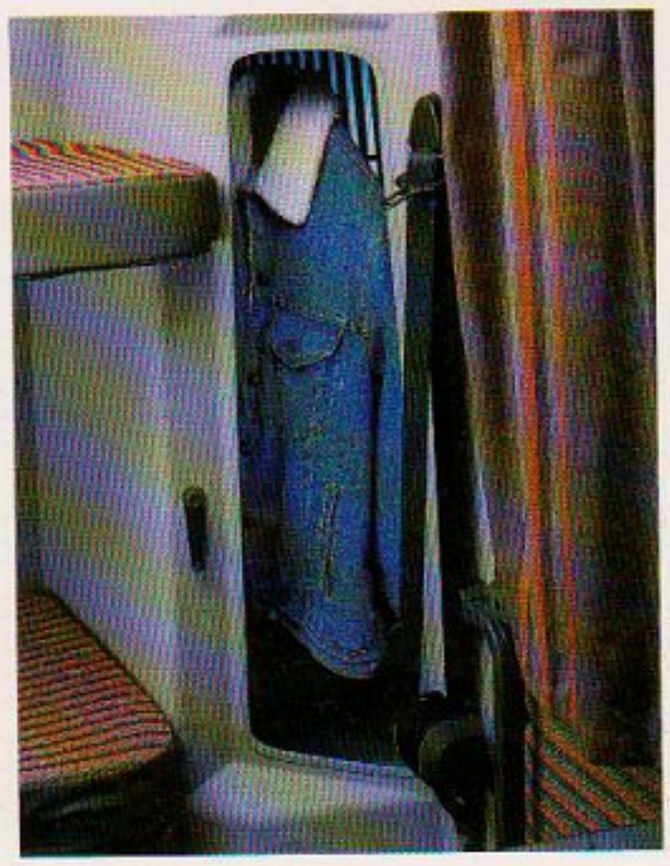
Lavishly equipped for outstanding driving comfort

Designed to provide maximum safety and a pleasurable on-board "standard of living", the equipment includes every possible comfort, starting from the automatic air conditioning integrated in the ventilation/ heating unit of the cab. Standard equipment includes electric windows, adjustable steering wheel and pneumatically suspended driver's seat, hydraulically suspended passenger seat, double tilting arm rests and adjustable foot rests. But there is also a blue-tinted windscreen, roller blinds for the windscreen and side windows, courtesy lights (even on the steps up to the cab), reading light, fold-away table for the passenger, small clothes locker. There are also several oddments recesses and document pockets where everything can be put away tidily, out of sight of prying eyes. On request the cab can also be equipped with a fridge, food warmer, electrically heated seats and removable valuables locker.



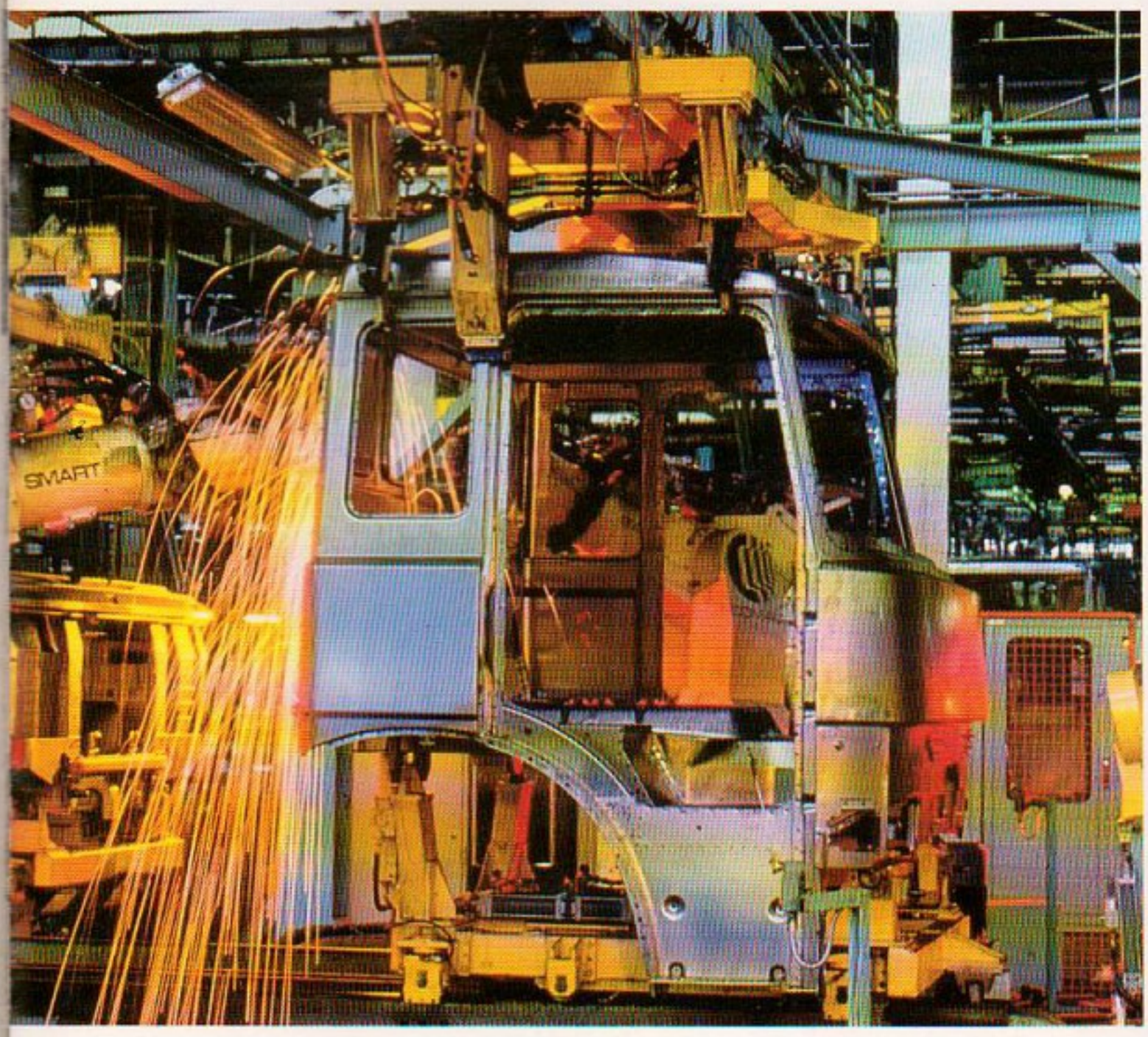
Ventilation schematic.

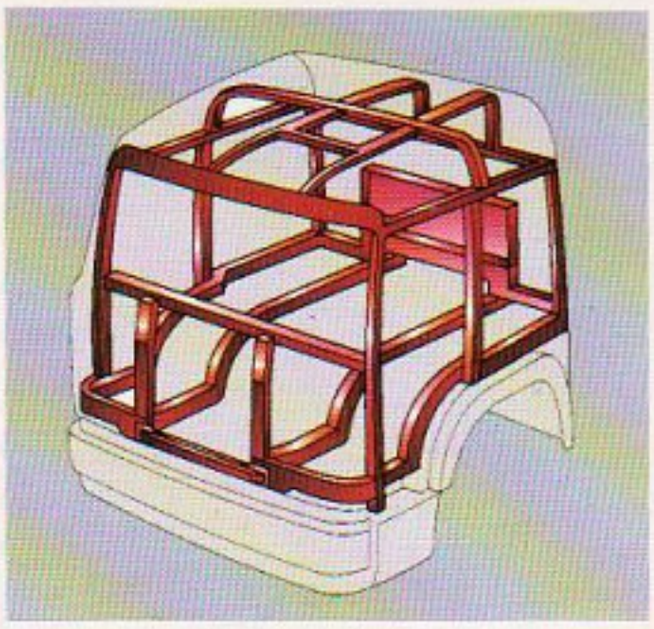
Clothes locker.



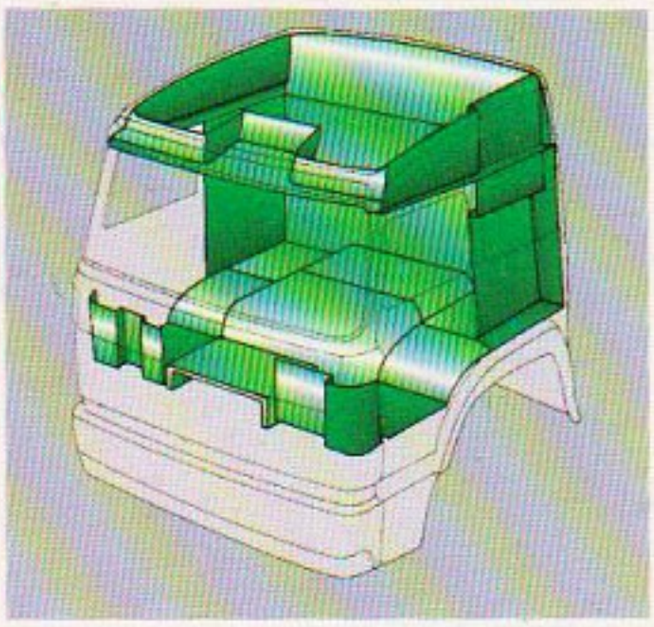
Standard automatic air conditioner/heater

This is an "integrated" unit, which works in parallel with the vehicle's own ventilation/heating system, using the same heater ducts and air ports. It keeps cab temperature at the desired level automatically, regardless of the external atmospheric conditions. In the Winter it also provides rapid demisting of all windows. Of generous proportions (5500 kCal/h) to guarantee high functional efficiency in all climatic conditions, it represents not only an element of comfort but also an important safety feature.

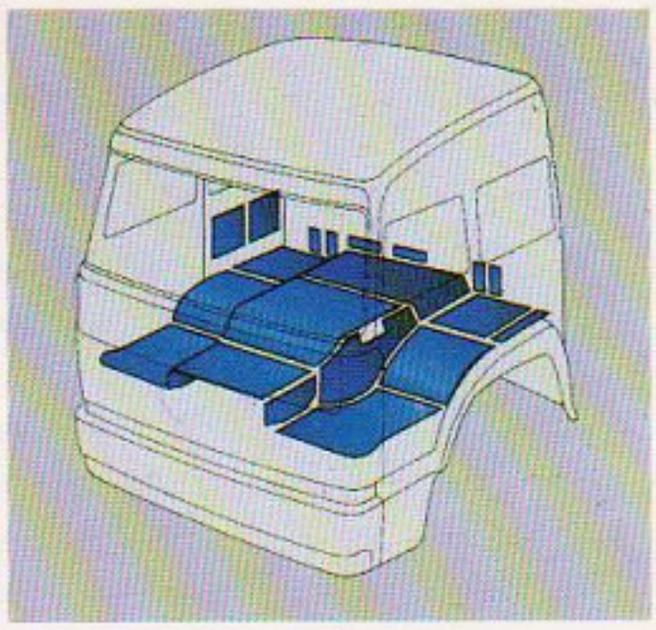




Cab structure schematic.



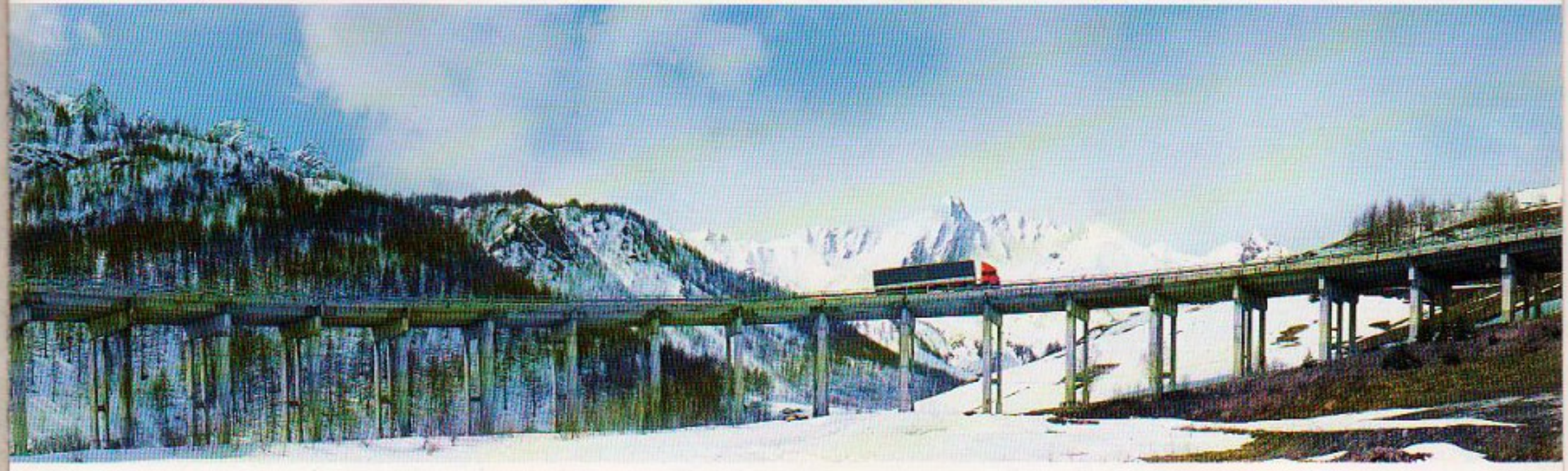
Application of soundproofing panels and upholstery.



Application of noise-deadening bonding sheets.

A sturdy structure for the utmost safety

Built with an extremely sturdy, highly rigid frame in boxed steel sheet parts, the TurboStar cab meets all the international passive safety requirements.



Controls of the high efficiency heating/ventilation unit.

Exceptionally quiet driving: 70 dB at 80 km/h!

The TurboStar cab sets a new record for on-board acoustic comfort: 70 dB at 80 km/h is incredibly low for a heavy-duty commercial vehicle.
The whole cab structure is soundproofed with special heat-bonded panels which become one with the steel panelling after painting.
The interior is totally isolated from the external environment (with highly efficient sealing strip, and no direct passage from the engine compartment to cab).
The ceiling, floor and panels are lined with highly sound-absorbing insulatings materials.
The very mechanical characteristics of the vehicle help to lower noise levels: the low engine revs, turbocharging with intercooler, rigid drive shaft, etc.

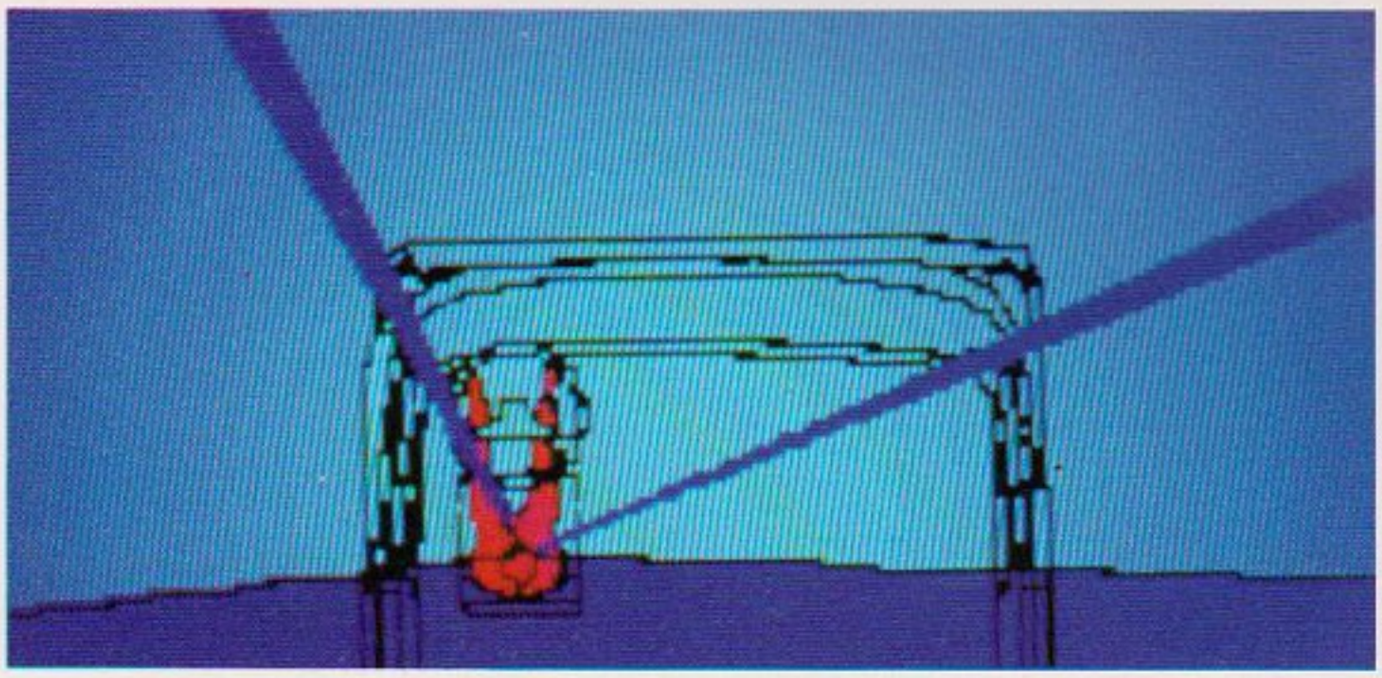
"Suspended" cab for comfort and safe driving

The cabs of the TurboStar range are suspended on four points, a technique developed by the most sophisticated computerised calculation and simulation techniques. The designers set themselves two goals: high stability (anti-roll, but also anti-pitch, in acceleration and deceleration) for greater comfort and improved road sensitivity.
The cab is effectively isolated from high frequency vibrations, the main cause of fatigue for long distance truck travellers, by its sophisticated suspension system that includes front lever wishbones, integrated with coil springs, hydraulic shock absorbers and anti-roll torsion bar, and rear cross member supported at each end by coil springs and hydraulic shock absorbers.

Ergonomics and fully comprehensive equipment in the cab

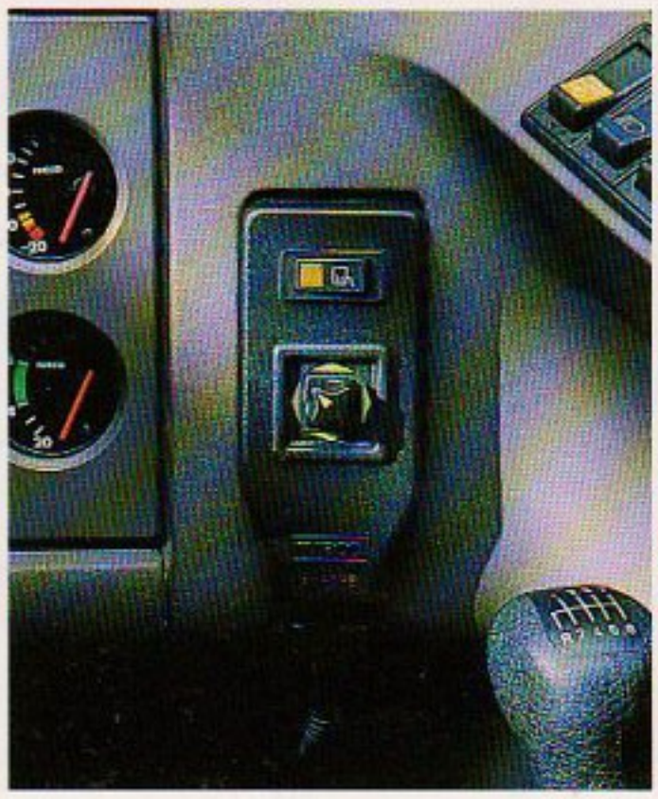
DRIVING

The functional, comfortable driving position is without doubt one of the TurboStar's many trump cards.
The facia is designed along aeronautical lines, with all the instruments immediately visible and grouped according to function.
The instrumentation includes tachograph, rev counter (with low consumption area indicated in green),



gauges and telltales to control the main engine functions, the brake circuit and the air suspension (where fitted).
The controls for the direction indicators, lights and windscreen wash/wipe are grouped on three easy-access stalks. The switches of the different on-board services are illuminated and grouped within easy reach of the driver's right hand, arranged in an ideal semi-circle so that they are easily reached by a simple movement of the arm.

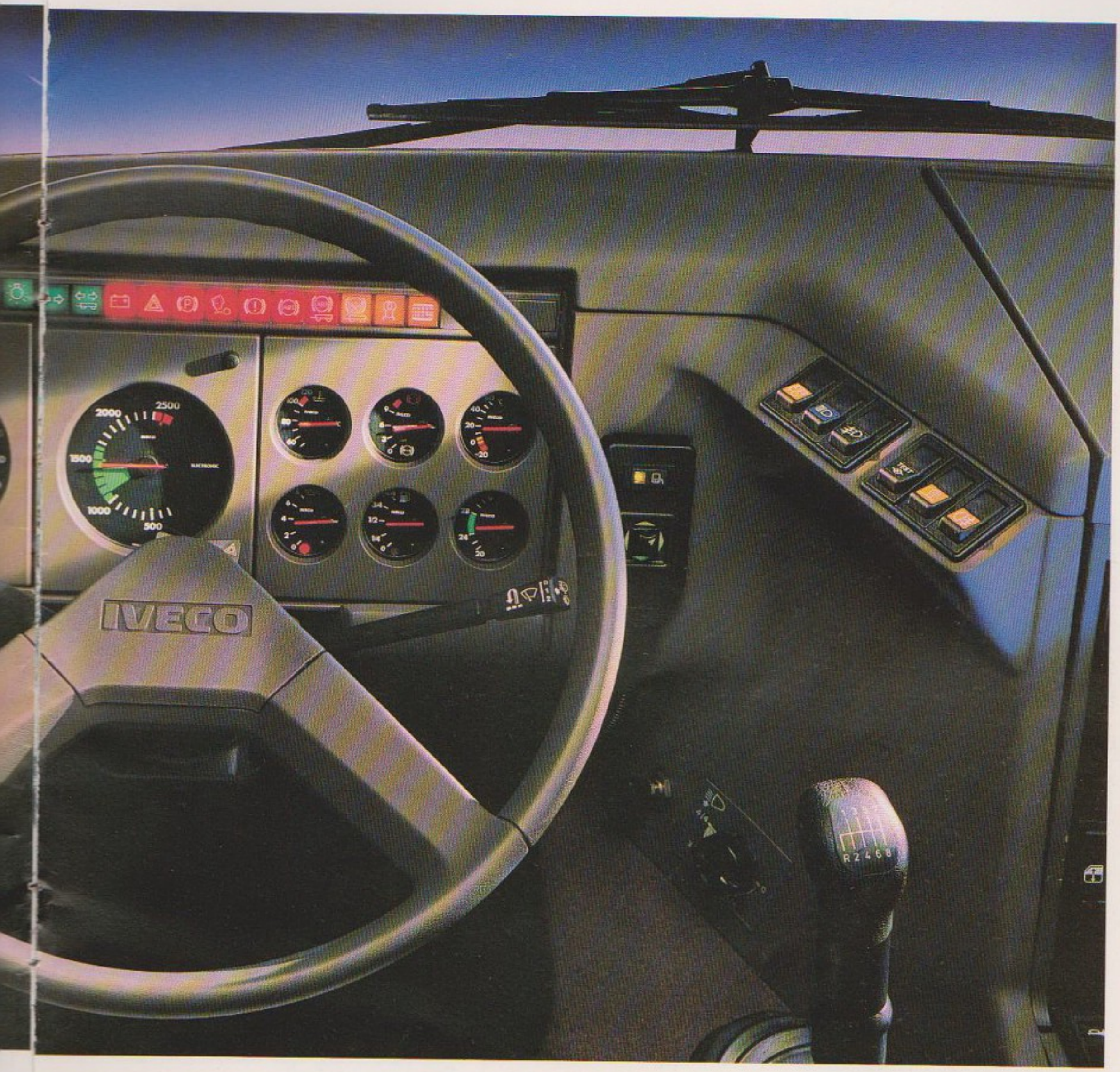
Excellent visibility, thanks to the large glazed area and the slim pillars.



Extractable pushbutton control panel for adjustment and heating of external wing mirrors.

Perfect visibility

Driving visibility is perfect in all directions, enhanced by the panoramic windscreen in laminated safety glass, with huge side windows and large rearview mirrors.
The external wing mirrors are adjusted using a push button control panel lodged on a flexible support on the facia; it can be extracted so that the driver can adjust the mirror from the driving seat.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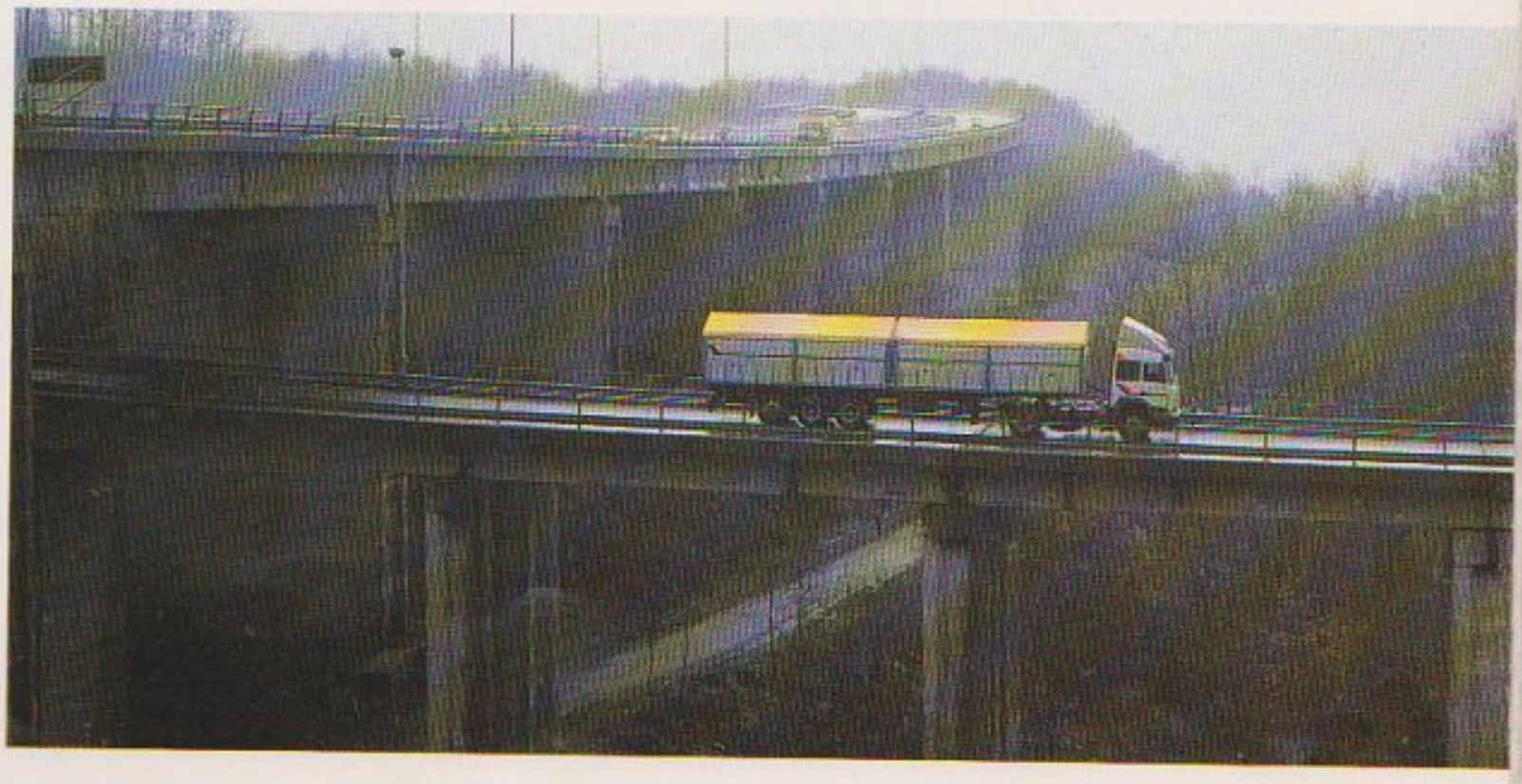


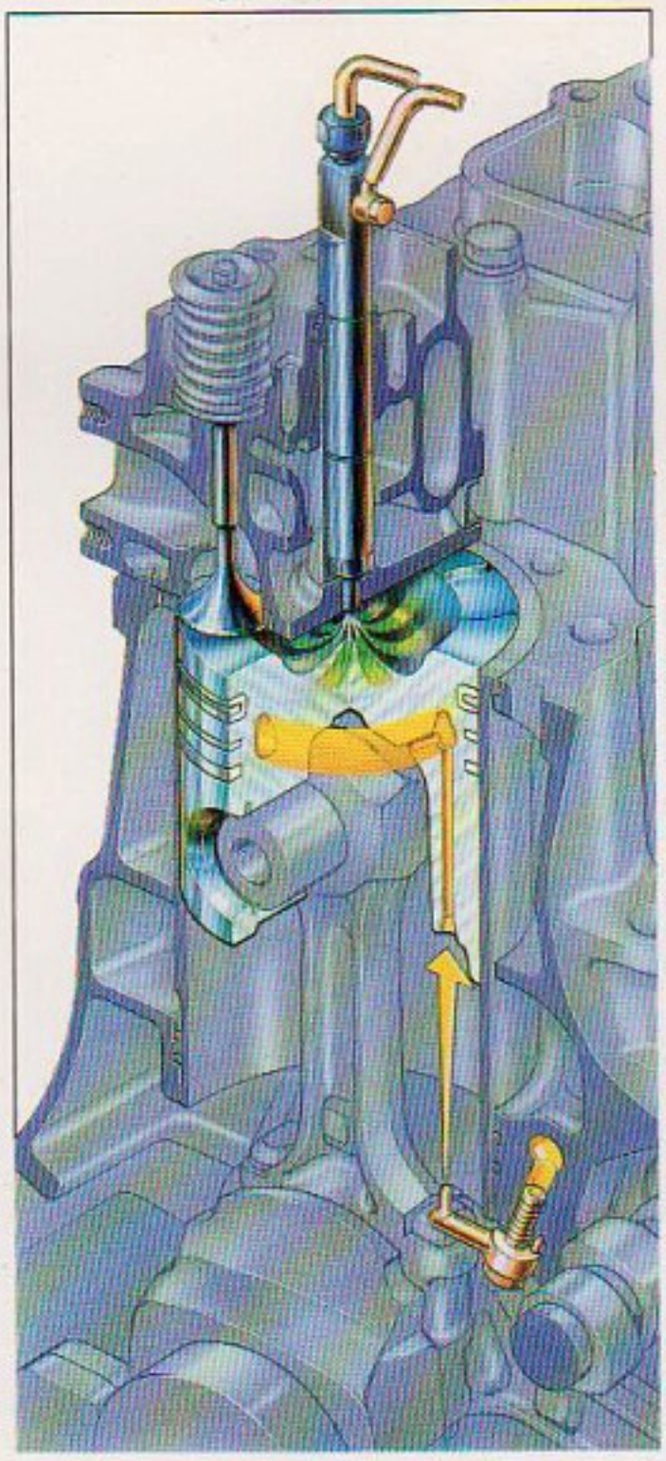
377, 420 and 476 HP turbo engines and turbo-intercooler
The right power for every application

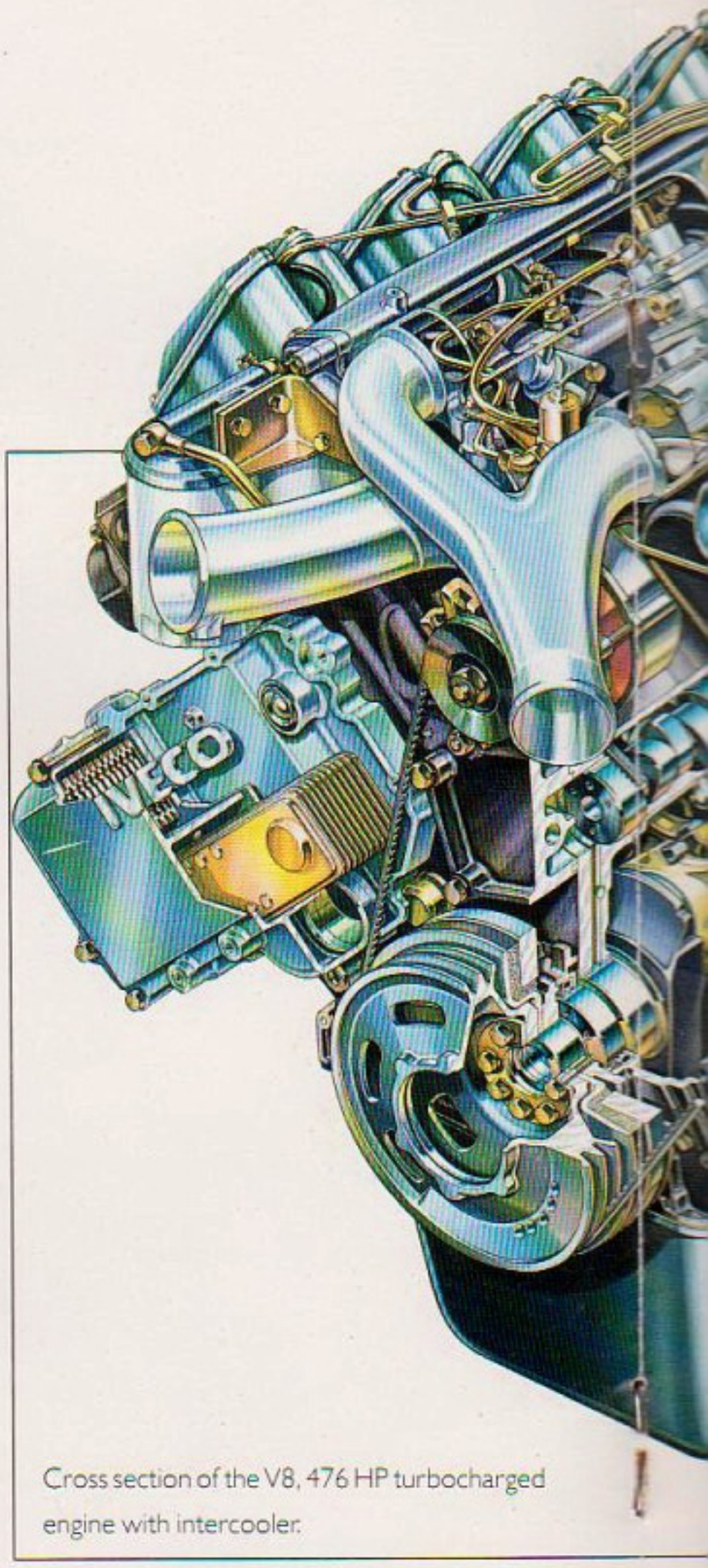
THE ENGINES

V8 turbocharged engine with intercooler, 17.2 litres delivering 476 HP

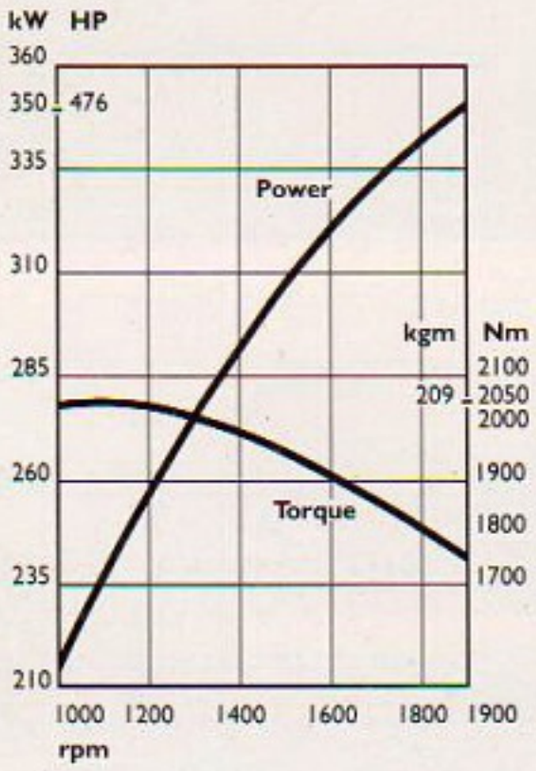
This is the most powerful engine in the TurboStar range. A turbocharged version, with intercooler, of the well-known V8 17.2 litre Iveco engine, it powers the 190.48.
An engine for high commercial speeds, with a high power reserve, that stands out for its low consumption and excellent pick-up, making for low running costs.
The maximum power output is 350 kW (476 HP) at 1900 rpm, with a maximum torque of 2050 Nm (209 kgm) at only 1100 rpm.

Detail of the direct injection system and cross section of the piston with annular cooling passage.

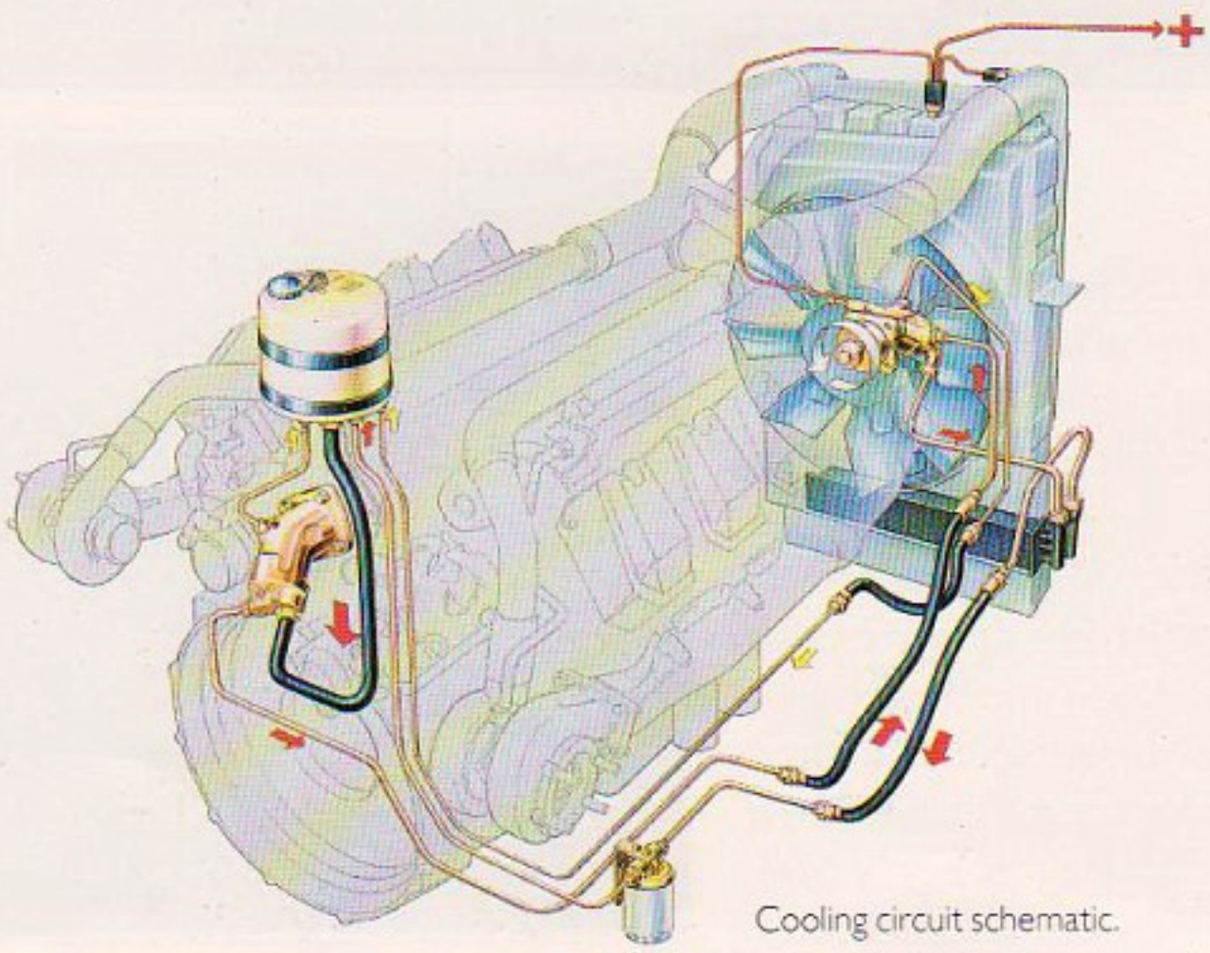




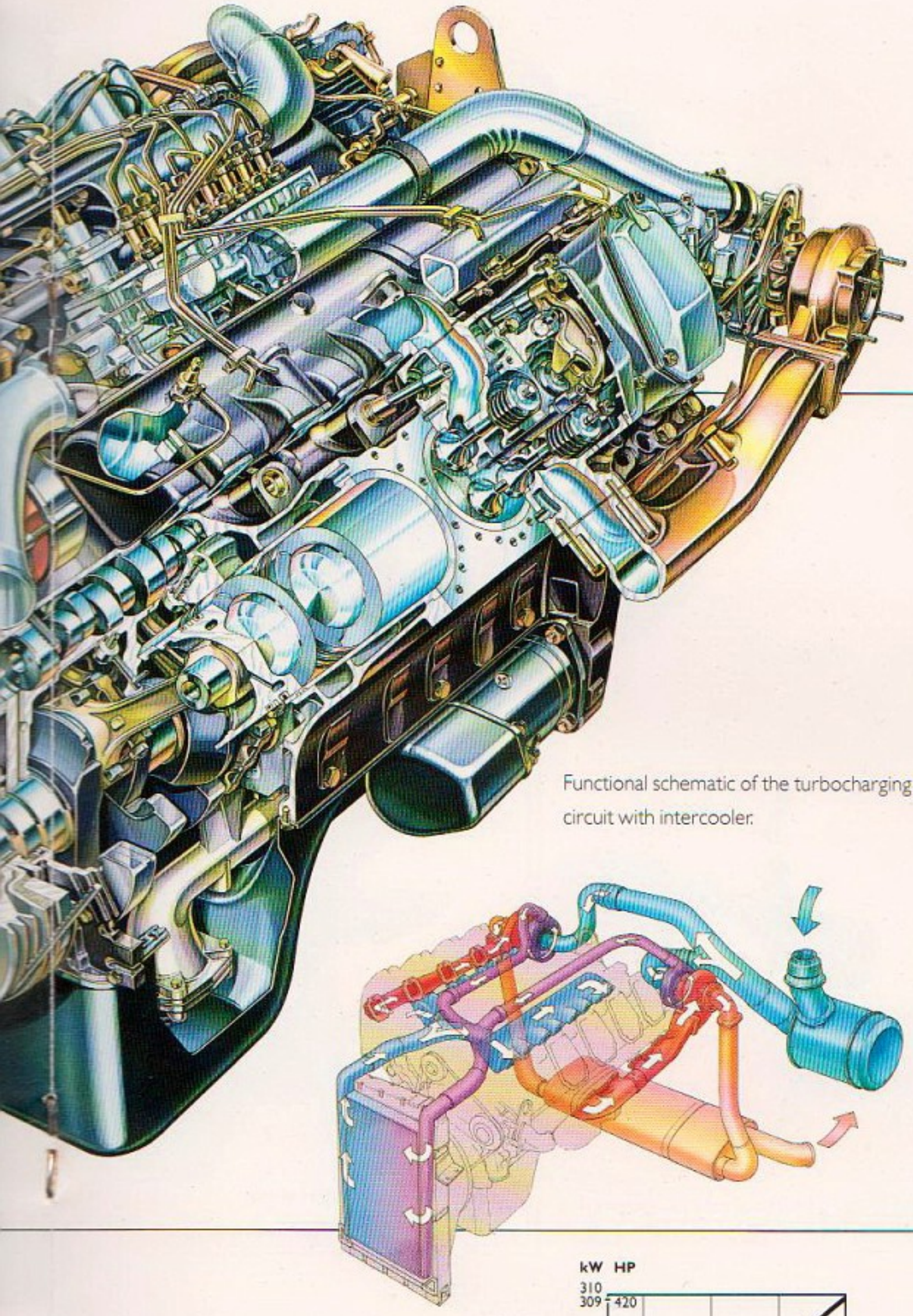
Cross section of the V8, 476 HP turbocharged engine with intercooler.



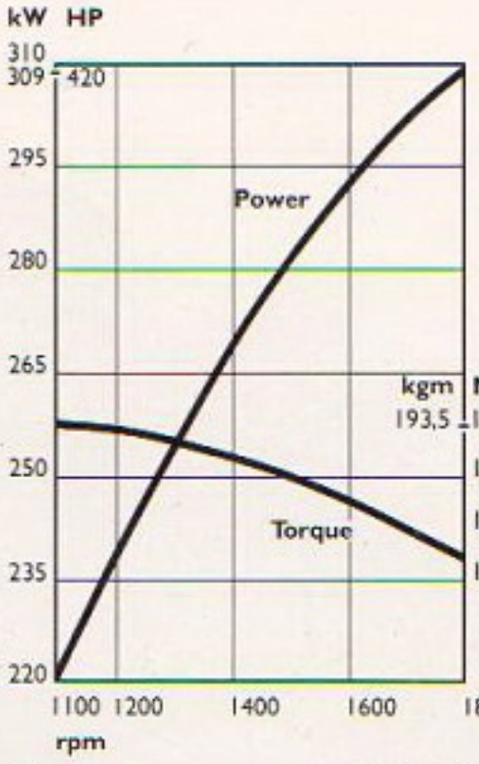
Maximum power output 350 kW (476 HP) at 1900 rpm.
Maximum torque 2050 Nm (209 kgm) at 1100 rpm (EEC 88/195).



Cooling circuit schematic.



Functional schematic of the turbocharging circuit with intercooler.



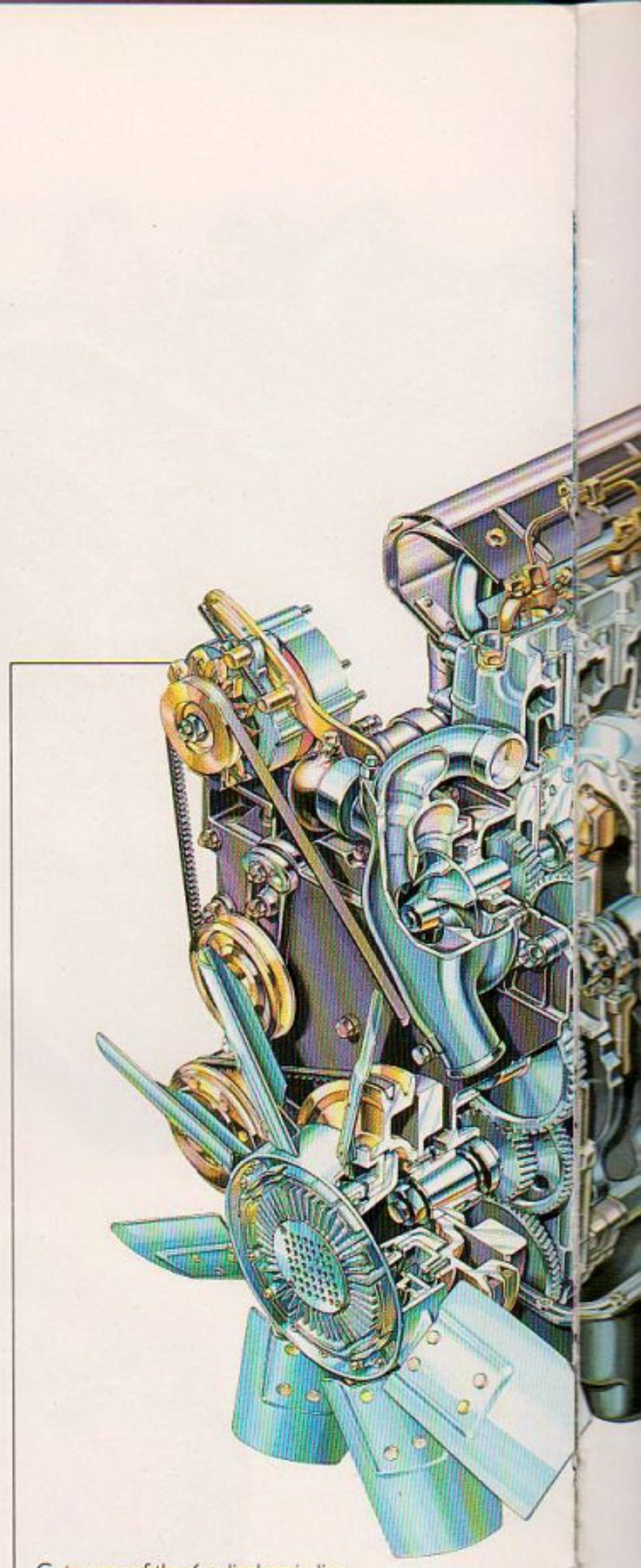
Maximum power output 309 kW (420 CV) at 1800 rpm. Maximum torque 1900 Nm (193.5 kgm) at 1100 rpm (EEC 88/1269)

420 HP V8 turbocharged engine

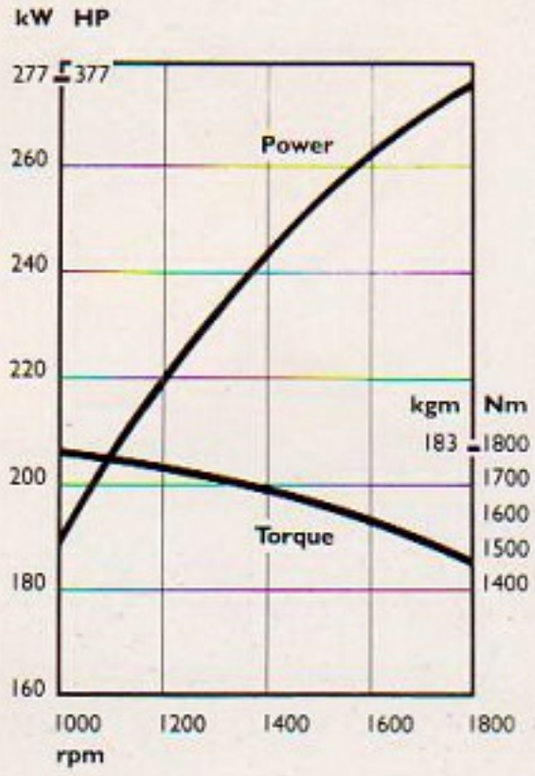
The 190.42 mounts a turbocharged version of the 17.2 litre V8 Iveco engine.
A well-proven engine which provides the perfect combination of low consumption and high commercial speeds on all routes and applications.

6-cylinder-in-line, 13.8 litre, 377 HP turbocharged engine with intercooler

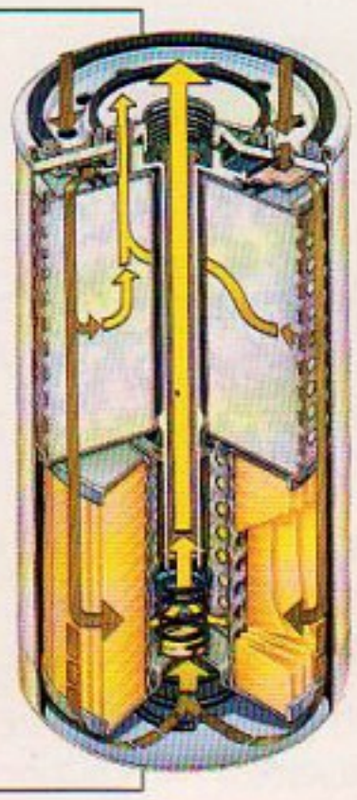
This engine powers the 190.36, and is suited to long distance and international transport. Quite at ease in every application, it can reach the maximum combined payloads permitted in Europe with a particularly good performance/consumption ratio.
Six cylinders in line, 13.8 litres capacity, quiet and ecological thanks to its low exhaust emission level, it combines excellent performance with outstanding reliability and long life.
Maximum power output is 277 kW (377 HP) at 1800 rpm, the maximum torque is 1800 Nm (183 kgm) at only 1000 rpm.
These performance figures are achieved by the adoption of the intercooler in the turbocharging circuit, as well as by excellent components and optimal calibration.



Cut away of the 6 cylinders in line,
377 HP turbocharged engine with intercooler.



Maximum power output 277 kW (377 HP)
at 1.800 rpm.
Peak torque 1800 Nm (183 kgm)
at 1.000 rpm. (EEC 80/1269)



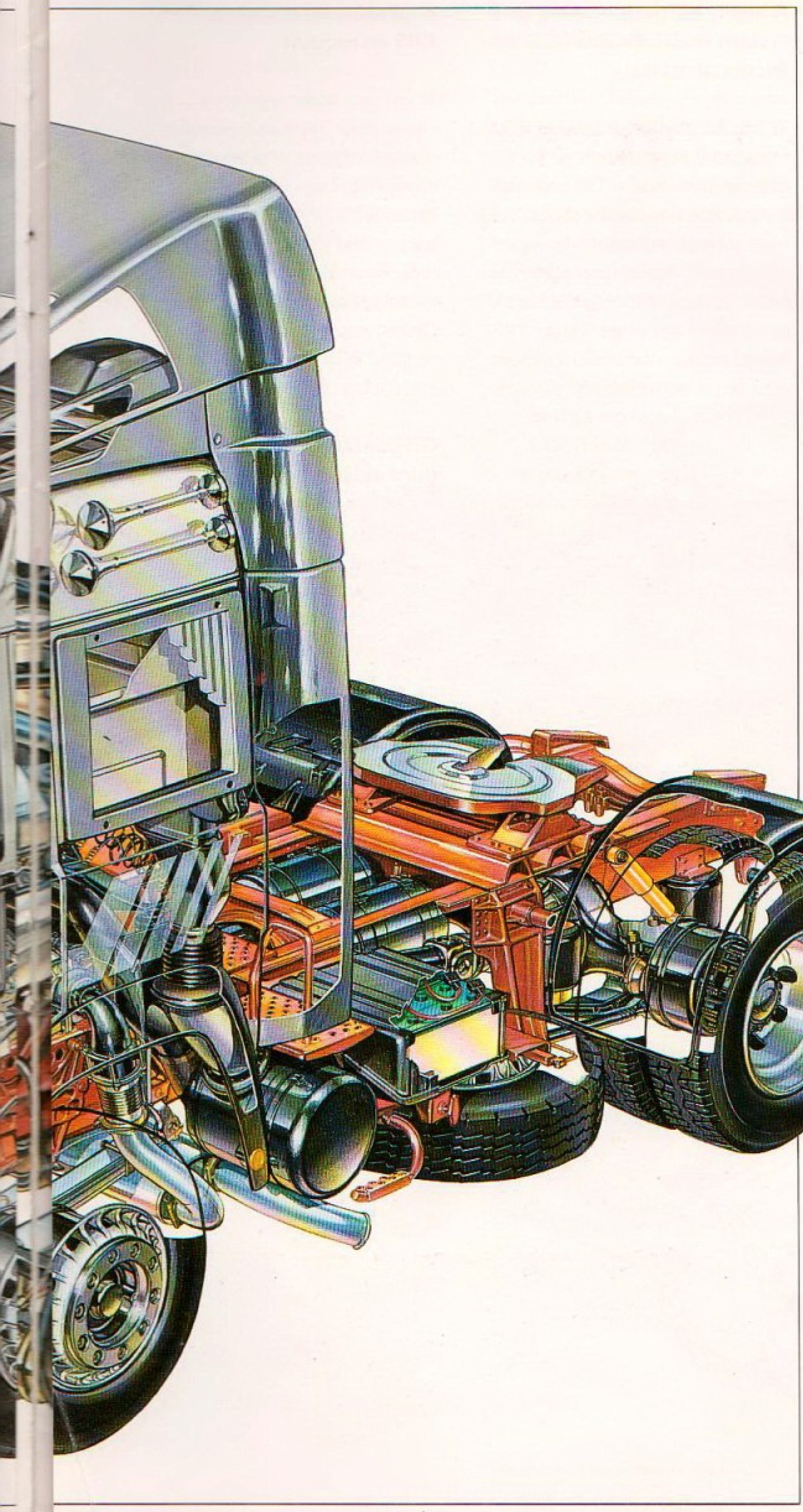
Cross section of the
"easy change" double
filter engine oil cartridge.

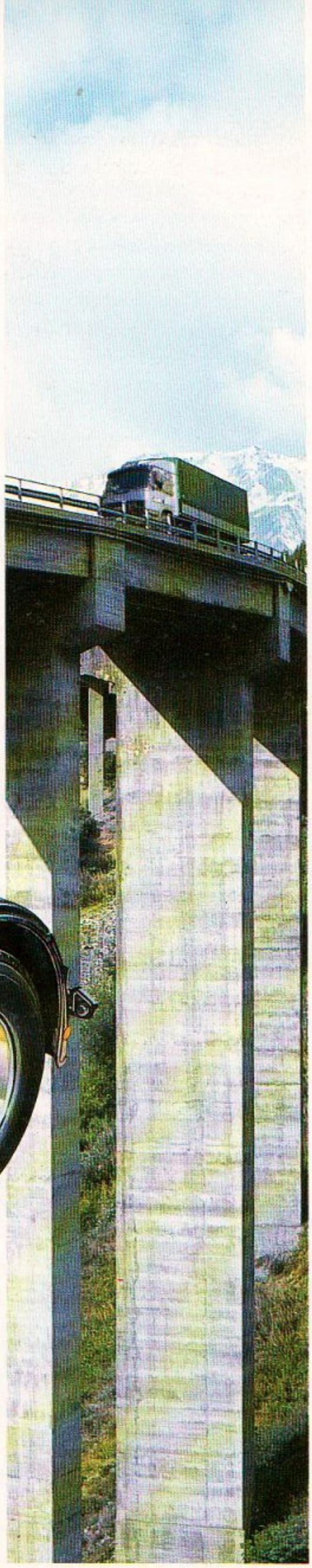
Top quality frame and mechanicals for peak performance and excellent reliability

THE ANATOMY

Performance and payloads up to the maximum permitted by law, with low consumption, comfort, economical running and sturdiness. In other words, high efficiency and excellent reliability. These are the characteristics behind a commercial vehicle's success with the public, particularly in the heavy vehicle sector. These are the characteristics which make the TurboStar a European best-seller in the most prestigious bracket of the road transport market. Characteristics that are born out of the advanced conception of all the mechanical components and from the overall "quality" of a vehicle designed and produced without cutting corners. Starting from the frame, a robust structure in high strength steel, with a high yield point, with channel-section side members linked by riveted cross members, to combine high load capacities and low vehicle weight with excellent flexibility (which makes for better grip, particularly on bad surfaces). The power train is a decisive feature. Its various components have been optimised to match engine output and torque, in the search for the most favourable economy-performance ratio.

See-through diagram of the TurboStar 190.48 PT tractor with air-type rear suspension.





Parabolic or air suspension

The TurboStar offers parabolic spring suspension as standard equipment, with dual rate telescopic hydraulic shock absorbers and stabiliser bars front and rear.
On request the vehicle can also be fitted with self-levelling air-type rear suspensions. This makes it possible to vary the ground clearance of the rear part of the vehicle directly from the cab, for easier handling of semi-trailers and palletised van bodies.

Low section tyres

Standard equipment includes low section 315/80 R22.5 M tyres, giving greater driving comfort, lower weight, less rolling resistance (and hence lower consumption) and better driveability.

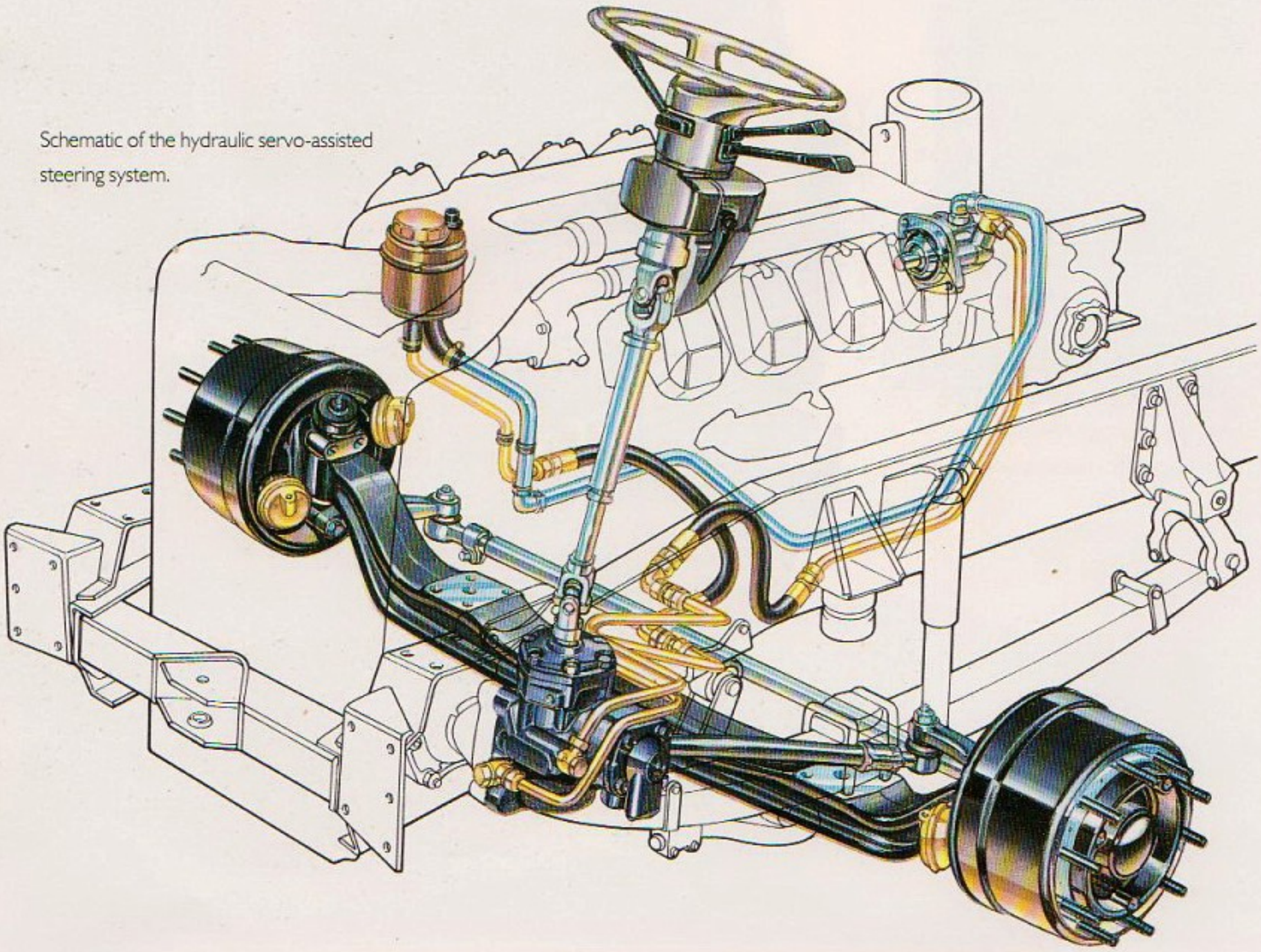
Worm and roller steering with circulating bearings and hydraulic servo assistance

The steering system is of the worm and roller type with circulating bearings and hydraulic servo assistance, for pinpoint steering and easy manoeuvring. The geometry of the front suspension has been optimised to limit the reactions transmitted from the wheels to the steering wheel, and to ensure that any changes in stability do not adversely affect the steering.

A choice of gears for every need

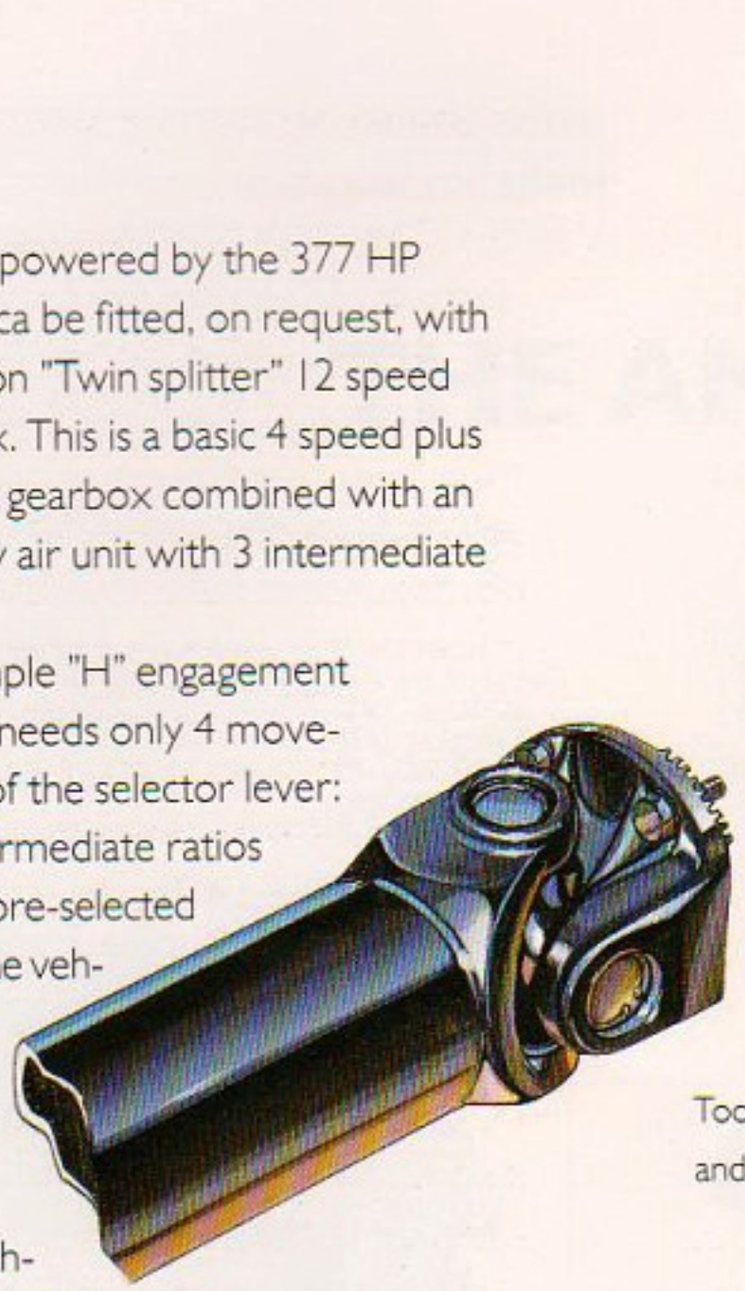
The TurboStar Offers the ZF "Ecosplit", 16 speed synchronised gearbox as standard equipment. The 16 speeds available are derived from a basic 4-ratio gearbox combined with an integral epicyclic unit for selection of two different ranges: in this way 8 basic speeds are obtained, and can be selected by a conventional double "H" system of engagement with electropneumatic control. A "splitter" provides an intermediate ratio for each gear; engagement and disengagement are preselected by a switch under the gear lever knob, and the splitter is controlled electro-pneumatically when the clutch pedal is depressed. Optional equipment, on models with the 420 and 476 HP engines, includes the Fuller 13 speed, fast mesh gearbox.

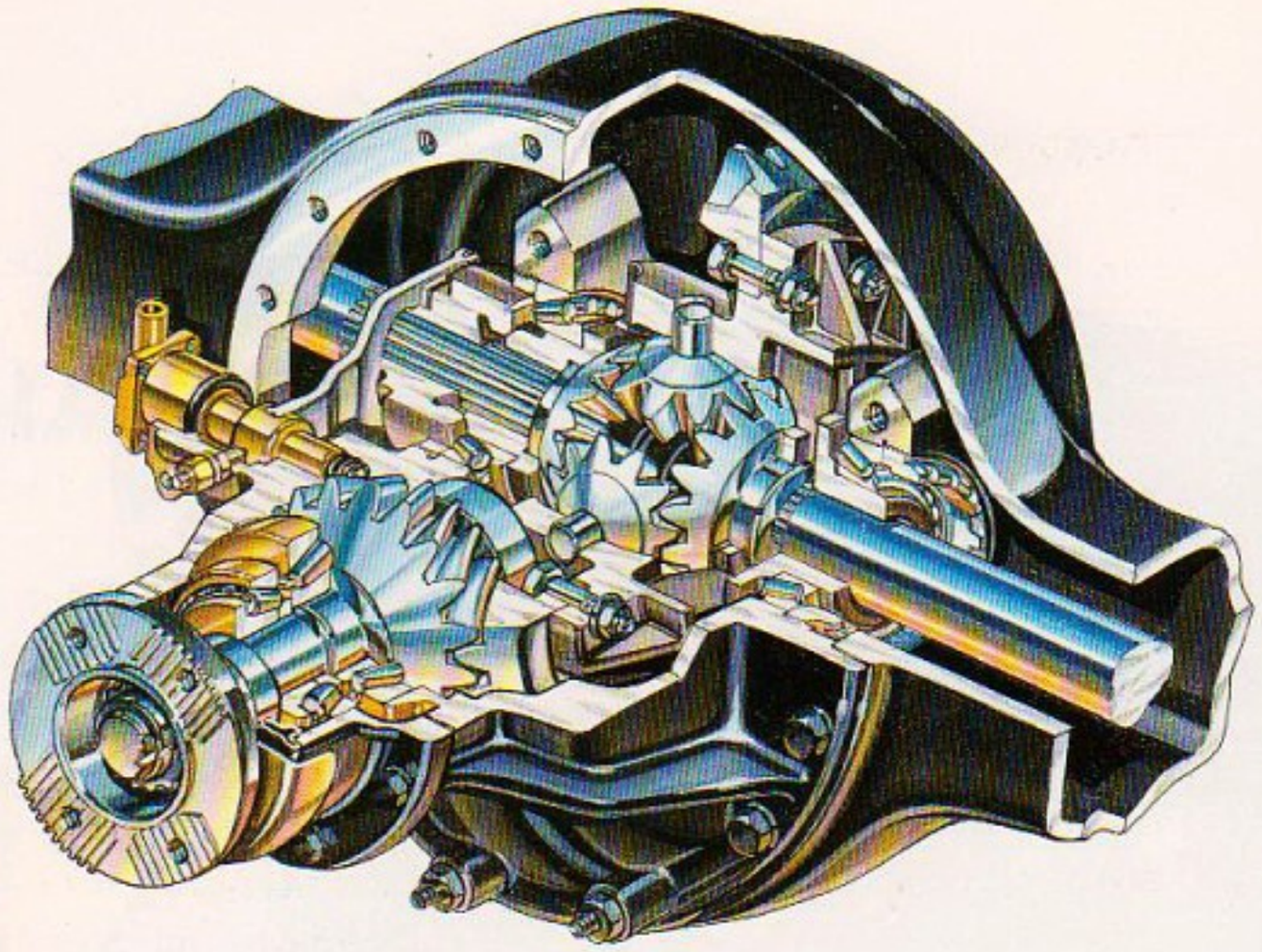
Schematic of the hydraulic servo-assisted steering system.



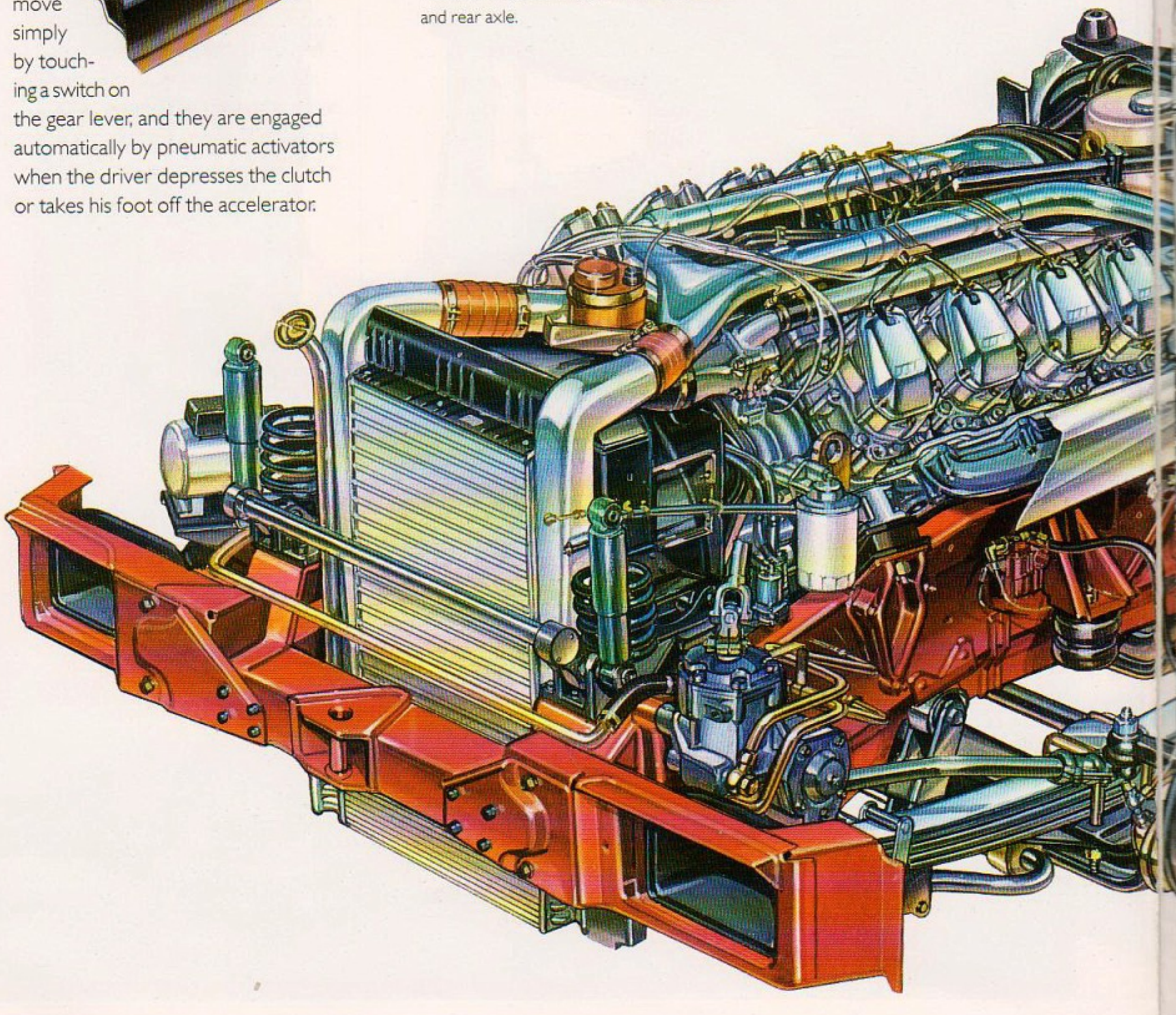
Models powered by the 377 HP engine, ca be fitted, on request, with the Eaton "Twin splitter" 12 speed gearbox. This is a basic 4 speed plus reverse gearbox combined with an auxiliary air unit with 3 intermediate ratios.

The simple "H" engagement system needs only 4 movements of the selector lever: the intermediate ratios can be pre-selected when the vehicle is on the move simply by touching a switch on the gear lever, and they are engaged automatically by pneumatic activators when the driver depresses the clutch or takes his foot off the accelerator.





Toothed flange coupling between drive shaft and rear axle.



Simple reduction rear axles

The rear axle of the TurboStar is a sturdy simple reduction Rockwell axle. Lower weight, simplicity and therefore greater reliability, longer life, easy maintenance, higher efficiency with lower consumption; these are the advantages of a layout which also provides a wide range of axle ratios to suit the operating requirements of the vehicle.

Servo-assisted asbestos-free clutch

The clutch is of the single plate type with pull-action diaphragm spring, self-centering bearing and vibration damper. The hydraulic control, with automatic wear adjustment, requires less effort on the clutch pedal, and makes periodical adjustment unnecessary.

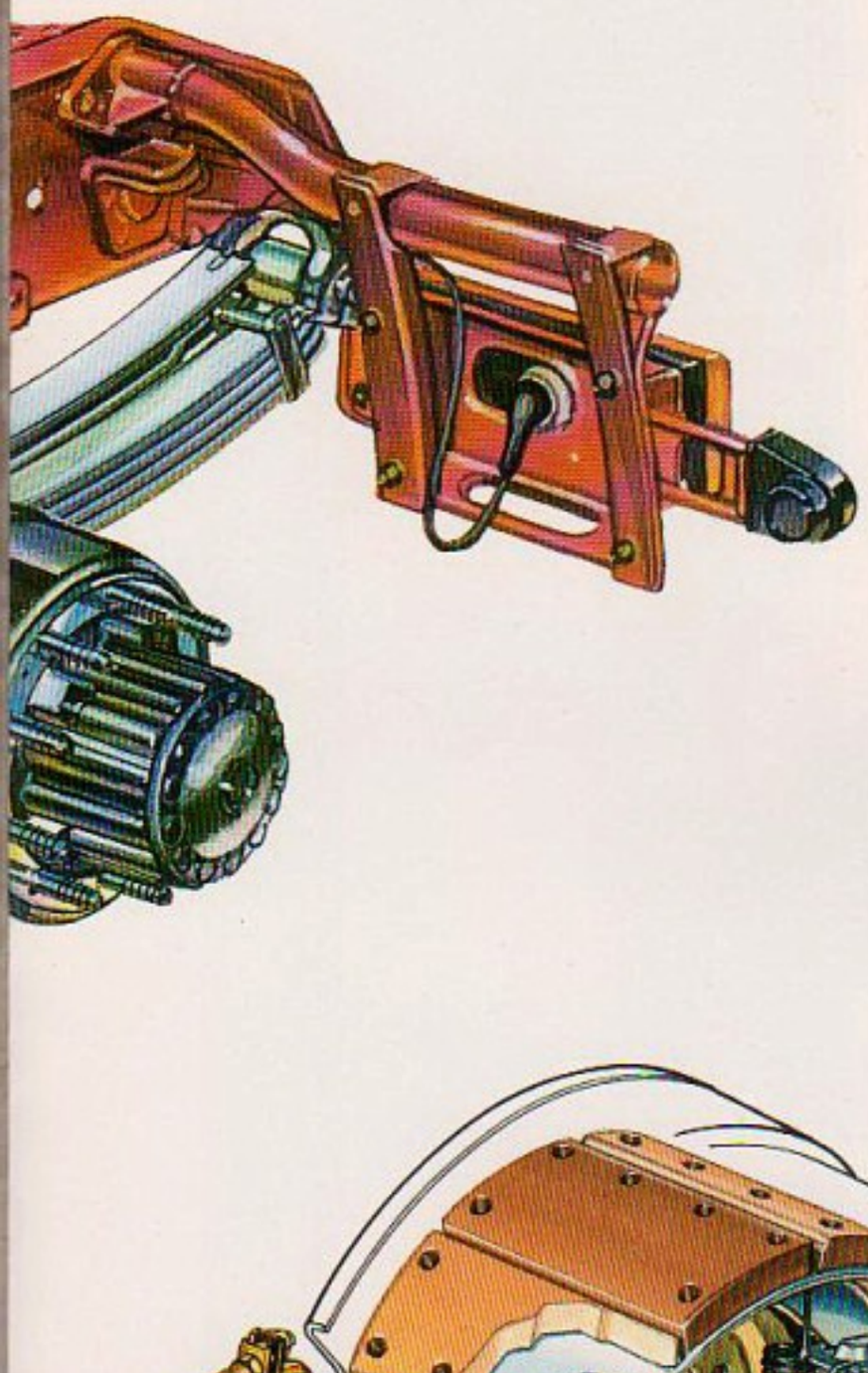
"Compact" drive shaft

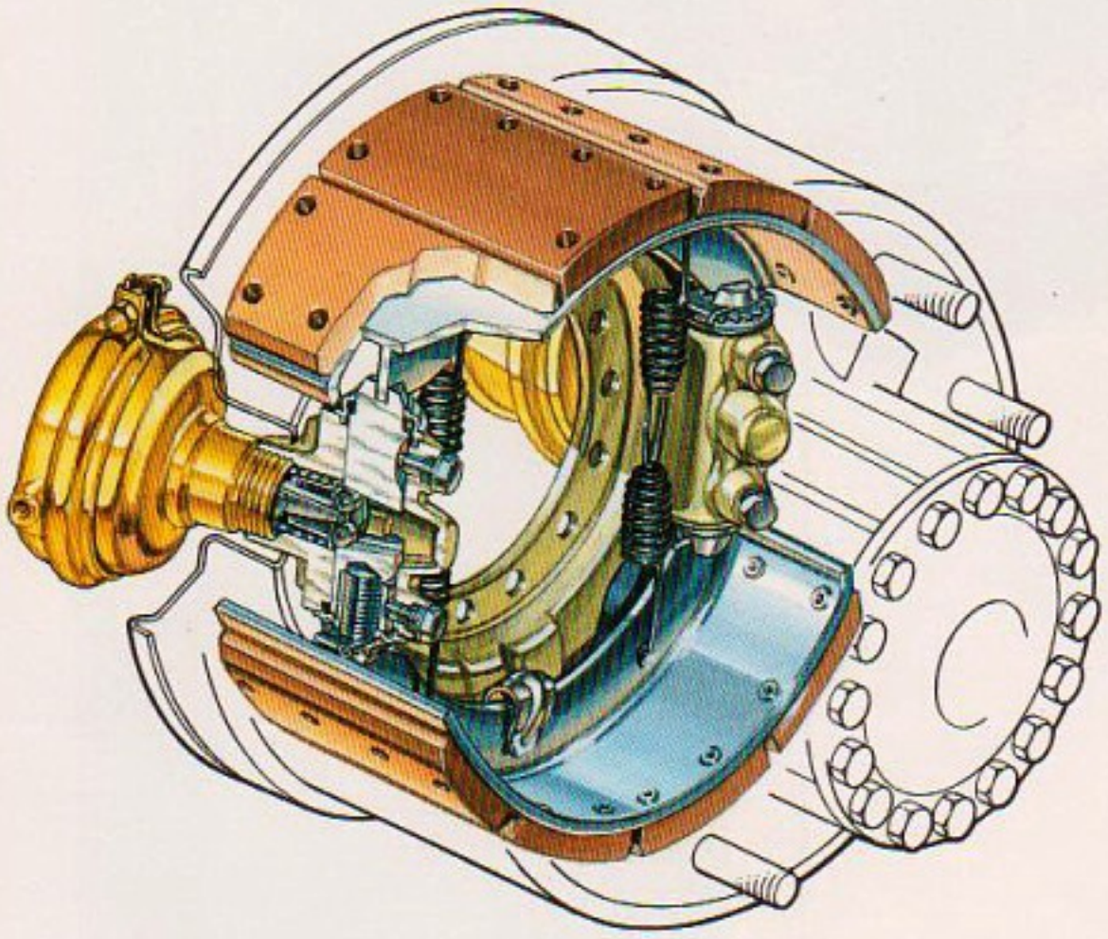
The "Compact" drive shaft offers considerable advantages: lower weight, increased torsional and flexional resistance, greater dynamic efficiency, lower noise levels, and less maintenance.

The chassis of the TurboStar 190.48 T,
complete with power plant and suspension.

A highly efficient braking system with asbestos-free frictional material

The braking system is an air-operated Duo-Duplex unit with three independent circuits. The drums incorporate two leading shoes (Stop-Master type), and automatic wear adjustment. This solution guarantees better braking efficiency, constant pedal effort and longer life for the linings, because the brake shoes are actuated at both ends and so work evenly over the whole surface.
The system uses anti-corrosion polyamide hoses and includes an automatic condensate elimination device. The air tanks are protected internally against corrosion by a special paint finish.





Drum brakes with leading shoe (Stop-Master type) and automatic wear adjustment.

Engine brake as standard, ABS on request

The engine brake is standard equipment. This is an important decision in terms of safety and comfort, because with the engine brake, the vehicle's braking circuit is under less strain, gear changes are reduced while commercial speeds over downhill routes are increased.
On request, the TurboStar can also be fitted with the ABS electronic antilock braking device.

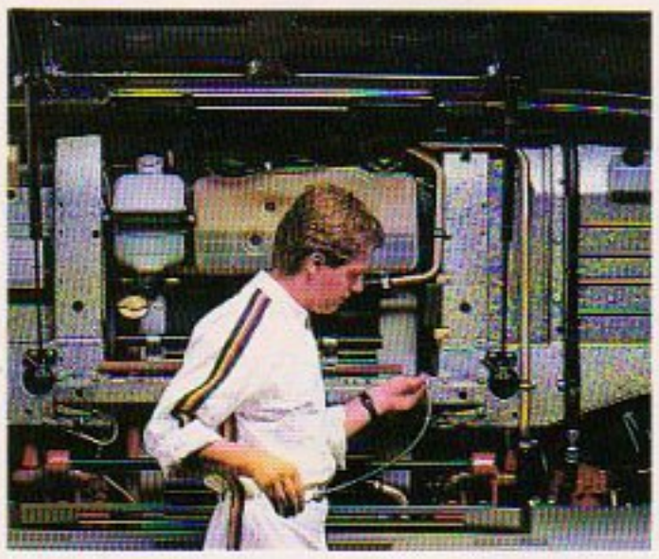
Original Iveco additional third axle

The 240.36 and 240.48 versions of the TurboStar also come in a 6×2 chassis/cab configuration with an Iveco original additional third axle, single wheel self-steering, and pneumatic lifting.
In this same configuration we also find the 24 tonne GVW cab-only versions and 44 tonne GCW versions.
The third axle has mixed suspension, with an air spring connected to a three-leaf asymmetric parabolic leaf spring with rocker anchorage. Suspension stability is controlled by a self-levelling valve; for better grip and vehicle handling in small spaces or on bad surfaces, the axle can be raised from the cab.
It is also important to note that this third axle is an original component, designed and manufactured by Iveco, to guarantee uniform braking on all axles, plus the "security" of Iveco original spare parts and after-sales service.

Reduced maintenance for shorter down times and more profitable operation

MAINTENANCE

The reduction of down time for maintenance contributes enormously to the profitability of a modern commercial vehicle.
The TurboStar is way ahead in this respect, thanks to the top quality of the product and to its modern engineering which makes it possible to reduce routine maintenance jobs and to simplify them to the utmost. For example, clutch and brakes are self-adjusting, while the drive shaft is of the simplified maintenance type. By simply lifting the front grille there is immediate access to coolant expansion tank, engine oil reservoir, brake fluid and windscreen wash reservoir gauges and filler caps; the air filter is immediately accessible and can be removed from its housing simply by unhooking the cover. The cab tilts 65°, giving full access to all the front mechanicals.



The electric system control unit is located in the cab, in a protected spot, but easily accessible.
It is a printed circuit type with a limited number of connections and constructed with waterproof, threaded plugs, the wires being "sunk" in protective plastic sheaths.

A widespread, competent network to assist the customer, before, during and after his purchase

SERVICE

The quality of the product is not measured only and exclusively in terms of the vehicle itself; it is a global service, a service that creates the quality of the brand.
Iveco's entire sales policy has been built around this basic philosophy.
An Iveco vehicle is never alone, whether it is on a large international truck route or on the streets of a small provincial town.
With this philosophy Iveco has created a far-flung, competent sales and service network. Every year the technical training school organises no fewer than 800 training and refresher courses for the technical staff of the dealers and authorised workshops.
As a result the service network can provide the customer not only with expert technical service for his vehicle, but also the necessary advice to make the best decision, from initial financing to programmed maintenance. Iveco Service today means a comprehensive network of 3,500 centres (dealers and authorised workshops) with over 30,000 specialist technicians in more than 100 countries the world over.

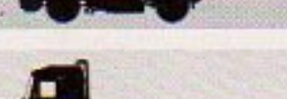
The main purpose of original Iveco spare parts is to maintain unaltered the technological asset represented by the vehicle; this goal can only be achieved by the manufacturer's own knowledge of the project as a whole, and only Iveco can therefore guarantee reliability and continuity of service.

The box with the white and blue stripes contains much more than a mere spare part. Original Iveco spare parts, with the "Iveco Original Controlled Quality" logo contain the same efficiency and safety as the vehicle itself.

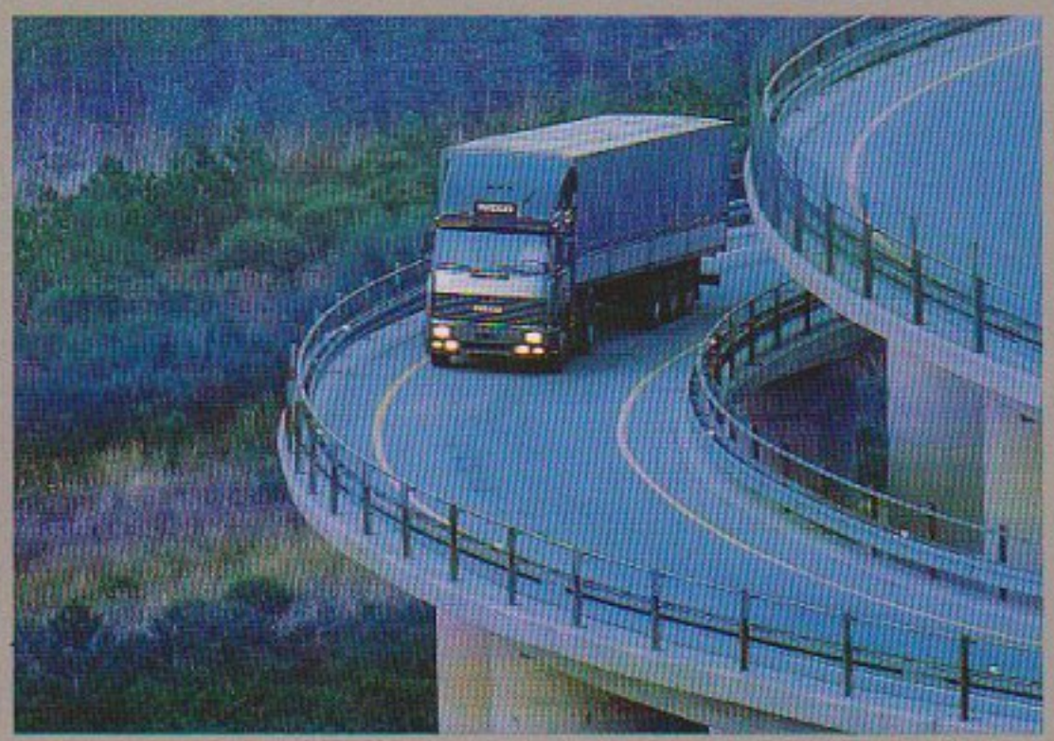
20 different versions to meet every operating requirement as profitably as possible

THE RANGE

Europe's leading representative in the heavy vehicle sector of road transport, the TurboStar comes in a range of fully 20 versions, designed to satisfy the most varied operating requirements. There are three engines, all turbocharged and developed according to the "maxi couple" technique with "soft" turbocharging: a V8, 17.2 litre unit in two versions, 476 or 420 HP, and a 6-cylinder-in-line, 13.8 litre, 377 HP unit.
The TurboStar is available as a truck or tractor, including a version with air-type rear suspensions (indicated by the letter "P" in the name), in 4×2 configuration for GVWs up to 19 tonnes, and 6×2 for GVWs up to 24 tonnes.
The 6×2 vehicles have a single third axle which is self-steering and lifts pneumatically, an Iveco original.
The range is completed by a choice of six wheelbases: 4000, 4400, 5005 mm for the 4×2 trucks; 4200 + 1350 and 4800 + 1350 for the 6×2 trucks; 3485 and 3800 for the tractors.

MODEL		ENGINE	WHEELBASE
	190.36 (4×2)	IVECO 8210.42 Turbocharged with intercooler 377 HP	4000 4400 5005
	190.36 T (4×2)		3485 3800
	190.36 P (4×2)		5005
	190.36 PT (4×2)		3485 3800
	240.36 (6×2)		4200 + 1350 4800 + 1350
	190.42 (4×2)	IVECO 8280.22 S Turbocharged 420 HP	4000 4400 5005
	190.42 T (4×2)		3485 3800
	190.48 (4×2)		4000 4400 5005
	190.48 T (4×2)	IVECO 8280.42 Turbocharged with intercooler 476 HP	3485 3800
	190.48 P (4×2)		5005
	190.48 PT (4×2)		3485 3800
	240.48 (6×2)		4200 + 1350 4800 + 1350

T = Tractor **P** = Rear air suspension



Iveco, with its 200 models and 1000 versions, from 3 tonnes GVW to the maximum permitted weights, is one of the few manufacturers in the world to have such an extensive range of commercial vehicles from light, medium and heavy on-duty road vehicles to construction and quarry trucks, fire fighting, defence and special vehicles, and off-road vehicles.
Iveco combines technologically advanced production with effective programmes for roadside assistance, maintenance, genuine parts and 24-hour service - all designed to ensure profitable transportation.

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