

SERIES 75 STEERING-O-MATIC THE LEADING CRAWLER TRACTORS



 **FIATAGRI**





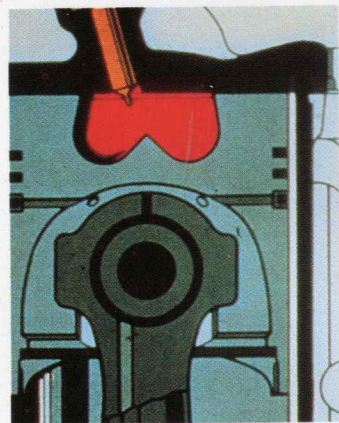
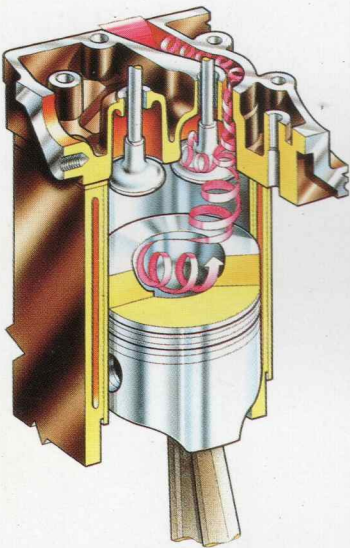
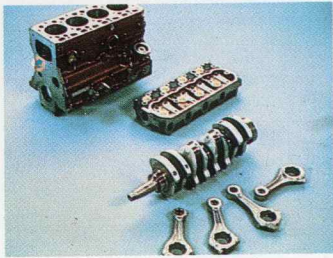
Series 75: the leading crawler tractors

Fiat has been manufacturing crawler tractors for the most difficult agricultural applications since 1932. Stability in hill and mountain settings, good "float" on marshy ground and traction on the hardest clays: these are the prerogatives of Fiatagri crawler tractors. From Italy to Spain and from California to Algeria, Fiat crawler tractors dominate the markets, coming out top of the world rankings for years.

Particularly with the Series 75 models in the 60-80 H.P. power range, Fiatagri has now achieved a decisive increase in the quality, reliability and the handling of its crawler tractors.

Series 75 tractors represent the first real revolution in terms of driver comfort and operational safety in the agricultural crawler tractor.

Fiat Series 8000 engines: powerful, economical and durable

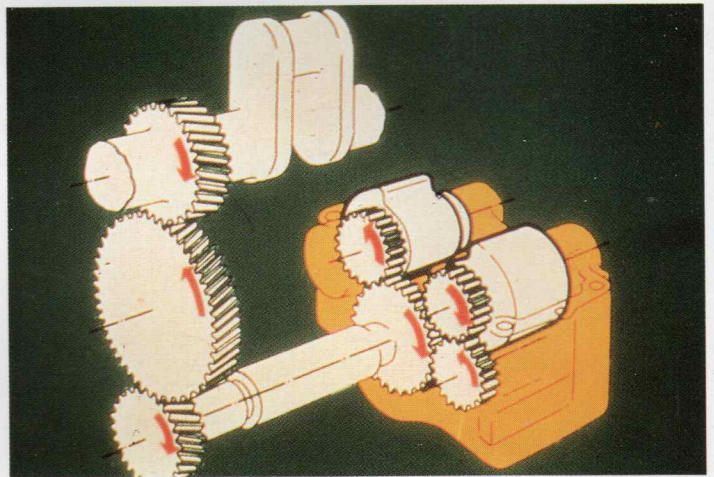
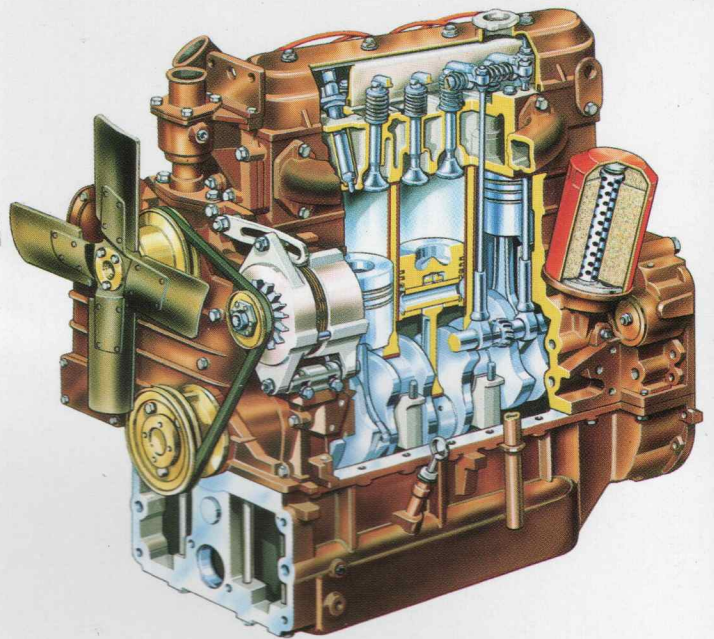


The Fiat group is the world's leader in the construction of Diesel engines for road vehicles and industrial use, producing 300,000 engines per year. This top ranking allows the company to draw on the most advanced research methods currently available during the design and experimentation phases, from mathematical models covering formation of the fuel jet to air-mixing and flame propagation, and differential calculation of the structure of castings: these analyses are backed up by the use of pacesetting technologies — such as lasimetry and optic-fibre photography — **to allow the design engineer always to identify the ideal compromise between reliability and high performance.**

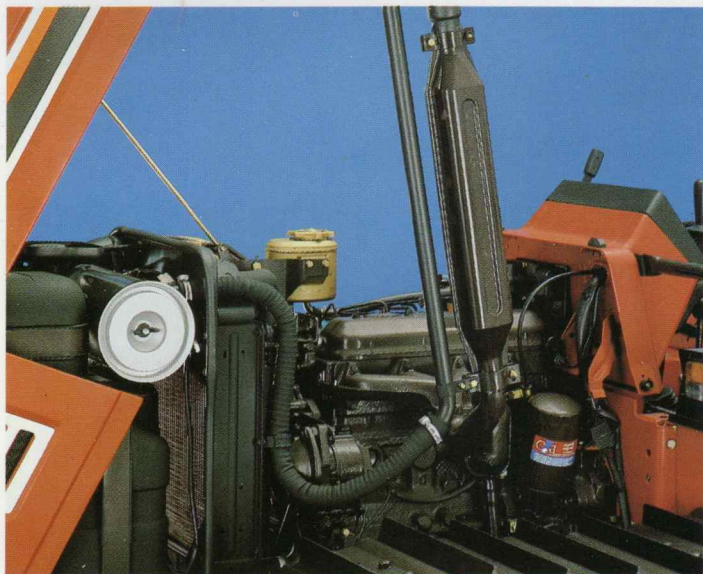
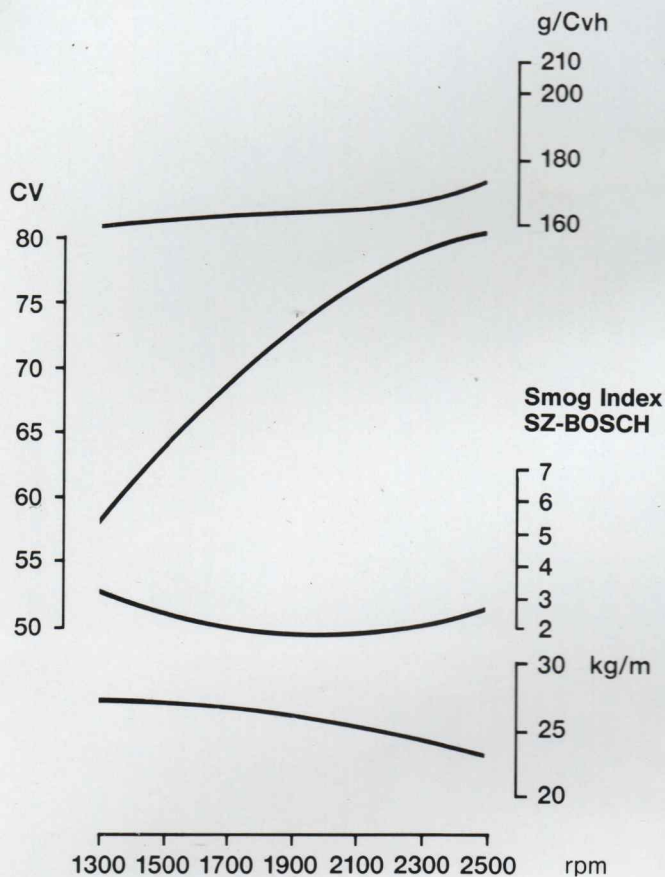
These are the bases behind the development of the Fiat-Iveco 3 and 4 cylinder series 8000 engines mounted on the Fiatagri Series 75 Steering-O-Matic tractors.

Their most striking "strong points" are the following:

1. Modular design with 3 and 4 cylinders with **a high level of standardisation of components** = advantages for the customer in terms of service and cost of spare parts.



FIAT - IVECO 8045 ENGINE



2. Standard cylinder displacement of around 1 litre with standard stroke 115 mm for all engines and bore 100 or 104 mm depending on models = these values represent the ideal compromise, **providing high power and torque**, without increasing fuel consumption and rpm, which would reduce engine lifetime.

3. The engines used on these tractors are also installed on trucks, construction machines, power launches and railway locomotives, where they run at 3000-3300 rpm; in agricultural use their speed at full power does not exceed 2500 rpm = **wide margins of reliability and duration**.

4. Maximum torque is provided at 1500 rpm with an operating range of 1000 rpm and a torque reserve of over 20% = engine with high torque reserve and **enormous flexibility**, essential for agricultural service.

5. Specific fuel consumption less than 165 g/HPH = **economical operation** with outstanding performance.

6. Casting and forgings are in special high-strength alloys with reinforced internal structures = **duration, reliability and resistance to stress**.

7. "OMEGA" combustion chamber in the piston head providing high turbulence and perfect air-fuel mixing = **reduced fuel consumption, low smoke levels** and high performance.

8. "Spiral" air intake ducts to accelerate air flow and thus the amount of air present = clean combustion of fuel without smoke and with **total fuel utilisation**.

9. Provision of contra-rotating balance weights on 4 cylinder engines = reduction in vibrations, **increased comfort** and long lifetime for mechanical parts.

10. Pressurised cooling system with permanent anti-freeze, antioxidant and anti-corrosion liquid; cooling of all cylinders at constant, controlled temperature of 90° = **quieter engine and longer lifetime**.

The engines fitted to Series 75 Steering-O-Matic tractors are 3 cylinder for model 60-75 (60 HP; 104×115 mm; total displacement 1931 cm³) and 4 cylinder for the 70-75 (70 HP; 100×115 mm; total displacement 3613 cm³) and the 80-75 (80 HP; 104×115 mm; total displacement 3908 cm³).

Steering-O-Matic: revolutionary steering which optimises driving to increase comfort and productivity

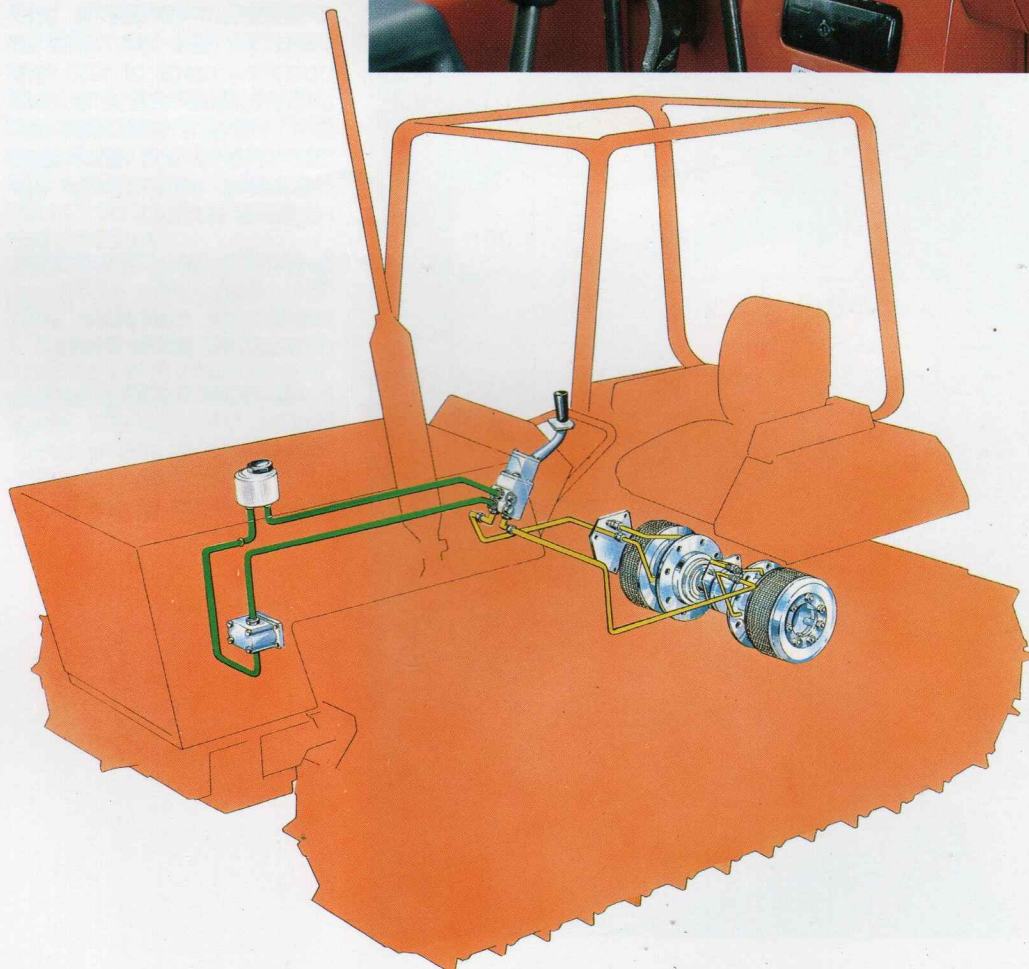
Series 75 crawler tractors, in the 60, 70 and 80 HP models in both basic and "mountain" versions feature a revolutionary steering device: the Steering-O-Matic (device and its location covered by Fiat patents).

This safe, reliable device is the fruit of specific know-how accumulated by Fiatagri over the years, and provides a significant increase in driver comfort and operating safety. The results from this new concept in steering for agricultural crawler tractors go far beyond the best offered by the conventional mechanical or servo-assisted steering clutch levers.

The Steering-O-Matic system is operated by a joystick in the centre of the dashboard. This is connected to a hydraulic directional control valve, which provides gradual opening and closing of the steering clutches.

A handrail beneath the joystick makes moving it more comfortable.

The Steering-O-Matic operates smoothly and gradually and is extremely simple to use. By moving the joystick partially to left or right the driver obtains direction corrections, to left or right respectively, with the tractor working under load and without using the service brakes. If the joystick is moved fully in either direction, and the appropriate brake is applied simultaneously, the tractor will turn in the direction indicated.





The joystick can easily be moved with two fingers. The driver can therefore carry out all turning procedures with just one hand in any conditions, leaving the other hand free to operate the lift, the supplementary control valves and other controls.

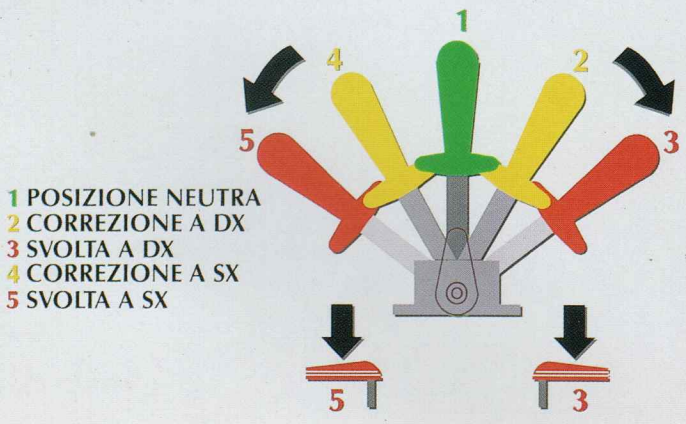
This is even more noticeable in heavy-duty working conditions, such as on downhill slopes. In this case the driver can rest comfortably on the handrail and steer the tractor with the same hand.

The fact that the tractor turns in the direction in which the joystick is shifted makes steering intuitive and error-proof, allowing the driver to concentrate on the implement at the rear with no fear of mistakes. Moreover, small steering corrections are more accurate and immediate since the driver's hand is always on the joystick, which has a stroke of a few centimetres and is operated with negligible effort.

In short, the Steering-O-Matic offers:

- **low-effort operation;**
- **accurate steering;**
- **opportunity for operator to carry out other procedures while steering;**
- **high operator safety thanks to the handrail;**
- **extremely intuitive, simple steering, meaning easy, relaxing drive;**
- **total reliability.**

STEERING - O - MATIC



- 1 NEUTRAL
- 2 RIGHT STEER
- 3 RIGHT TURN
- 4 LEFT STEER
- 5 LEFT TURN

Driving position: ergonomics, safety and comfort

The Steering-O-Matic, 60, 70 and 80 HP models — in the basic and mountain versions — are also equipped with all possible comforts to ensure optimum operator conditions, guaranteeing serene, relaxing work.

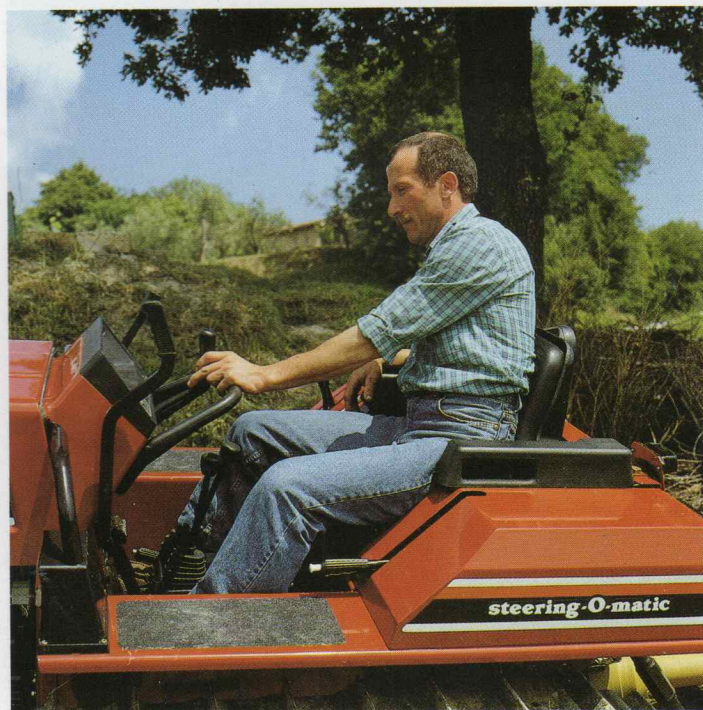
Access to the driving position is extremely easy thanks to the absence of steering clutch levers and the forward location of the gear and range box levers.

Moreover, the fuel tank is in front of the engine, giving a long forward-backward seat adjustment range.

Control lay-out is optimum: the hydraulic lift, external hydraulic control valve and PTO clutch levers are on the side housings in an ergonomic, instinctive position. The reverser and creeper lever is beside the driver for easier use.

Comfort is ensured by the anatomically shaped, suspended, adjustable seat with screening beneath which protects the operator from heat and vibrations.

The driver is held securely in place by the side housings which surround the anatomically shaped seat. The housings are fitted with arm-rests with hand holds which provide an effective grip.





Driver fatigue is reduced to a minimum thanks to the use of the joystick and the gear-lever with sliding collars, which provide extremely easy gear engagement.

Series 75 crawler tractors are equipped with the Lift-O-Matic, a hydraulic lift raise-lower button, which avoid re-adjustment of draft or position control settings every time the tractor is turned at the field end.

Visibility is excellent, thanks to the styling of the side housings. Moreover, the removal of the fuel tank from the rear allows the driver's seat to be moved considerably further back, giving a much better view of the implement linkage.



Transmission: rugged, versatile and exclusive

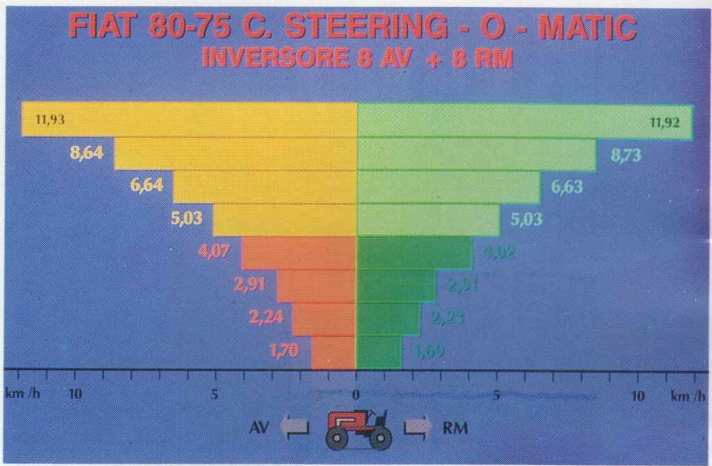
Highly reliable central clutch Series 75 tractors feature a specially-sized, very efficient clutch assembly; in fact, the transmission is fitted with an 11½" dry single-plate clutch for the 60 HP model and an 11½" double-plate clutch for the 70 and 80 HP models. For the PTO (which is fully independent) an 11" single-plate clutch is used on all models. **An exclusive Fiat feature is the transmission clutch control by means of "over centre" lever engagement** which can be modulated thanks to the long stroke and is extremely safe and convenient, since it allows the operator to stop or start the tractor even when on the ground.

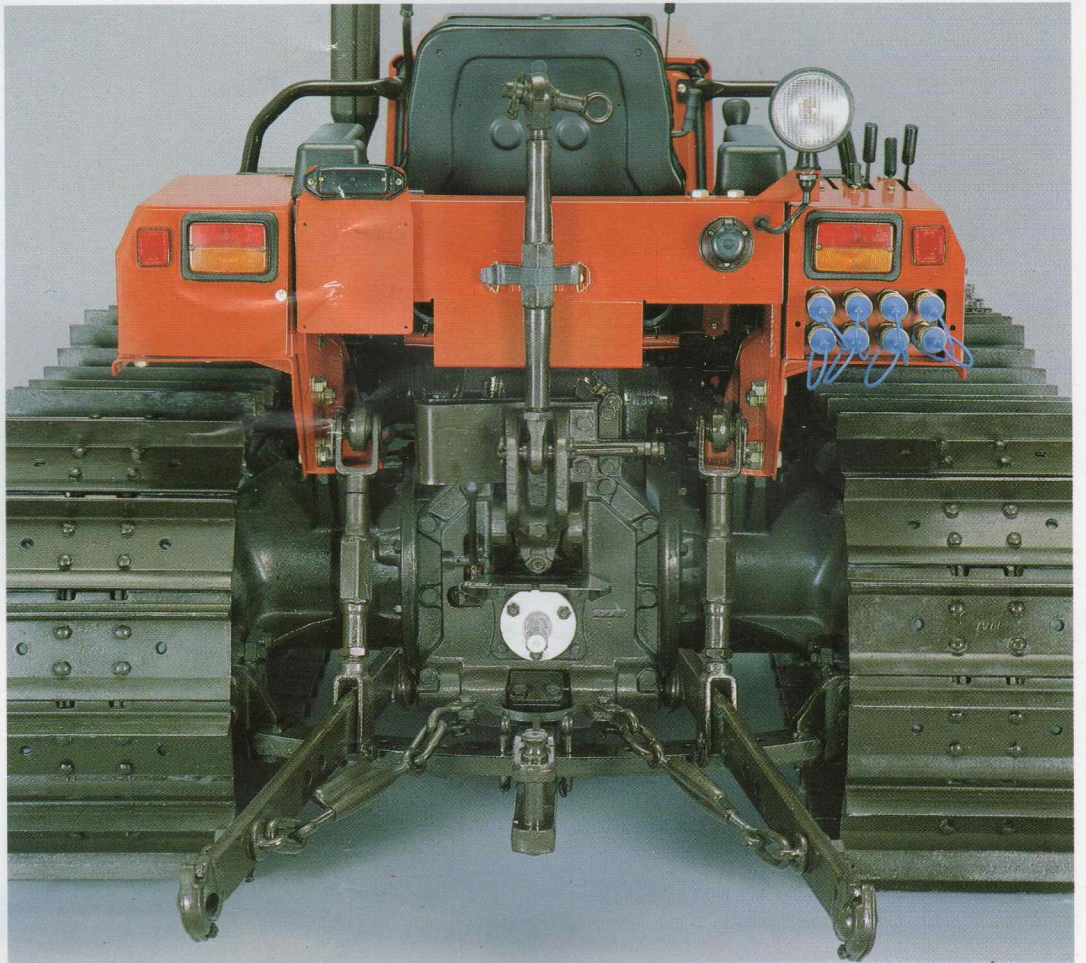
The gearbox with constant-mesh gears and sliding collars, an innovatory design used on all Series 75 tractors, allows easy gear engagements even when the tractor is moving, while also ensuring longer gearbox lifetime. The standard gearbox offers 8 forward and 4 reverse gears. On request, the tractors can be fitted with the creeper, **providing 16 forward and 8 reverse gears** (from 0.4 km/h in creeper first gear to 11.9 km/h in fast fourth gear) **or the gearbox with reverser offering 8 forward and 8 reverse gears**, in which the reverse gears have the same speeds as their forward equivalents. The reverser is especially useful when turning at the field end, in para-agricultural work (with dozer or front-loader) and in non-operative returns in reverse gear, a procedure often required in hill and mountain operations. **The reverser and creeper control is ergonomically located on the driver's right.**

The rear transmission units consist of the large-size bevel gear pair with "gleason" spiral teeth, two **generously-sized steering clutches** with 8 to 10 driven plates per side, in addition to independent full-enclosure band **brakes** and cascade final drives: a set of components providing absolute guarantees, appropriately adapted to the various versions and power ratings.



REVERSER 8F + 8R





Hydraulic lift and PTO: power and completeness

The hydraulic lift fitted to Series 75 Steering-O-Matic tractors is sophisticated and accurate, allowing the operator to use mounted and semi-mounted implements optimizing its utilization. Powered by a gear pump providing a flow rate of 34.5 litres per minute at a pressure of 190 bar, the lift has the following functions:

- **position control;**
- **draft control;**
- **mixed position/draft control** (exclusive to Fiatagri);
- **float position**, for implements which rest on the ground;
- **vario-speed**, to regulate lift sensitivity with draft control;
- **regulation of implement** lowering speed in relation to its weight;
- **safety lock retaining** implement in raised position during transport;

- **Lift-O-Matic (patented by Fiatagri)**, to avoid altering the regulation of lift draft and position control settings every time the tractor is turned at the field end.

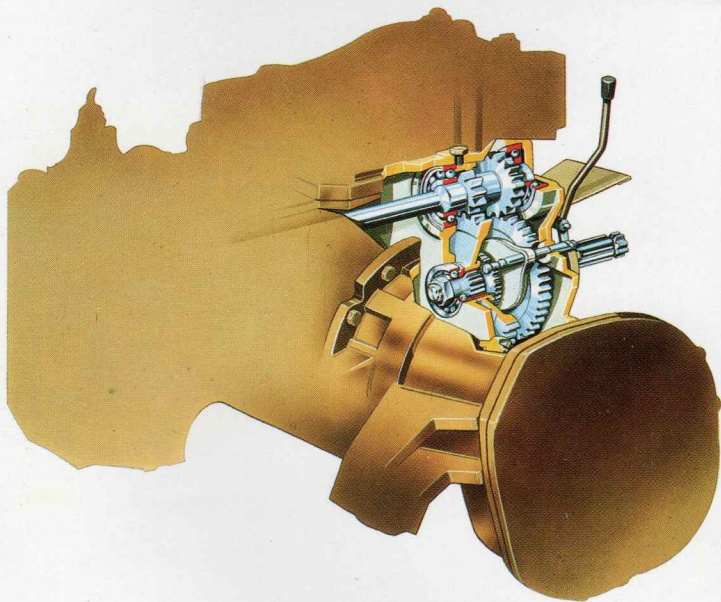
Exuberant maximum lift capacity: from 3285 kg in the 60-75 model to 3720 kg in the 80-75.

The combination of these features gives the Fiatagri lift the greatest completeness and versatility available from crawler tractors today.

The hydraulic system is completed by the availability of four external hydraulic control valves which can be converted to single-double acting, one of them with automatic release and return with float (useful for example with front loaders or dozers). The quick couplings are push-pull type for more practical, secure operation.

Fiatagri PTO: high performance and simple construction.

The PTO — another essential feature making these truly multipurpose tractors — is of fully independent type, operated by a special long-stroke lever on the operator's left. It is supplied as standard with speed 540 rpm, corresponding to an engine speed of about 2200 rpm, or is available on request at 540/1000 rpm, corresponding to an engine speed of 2400 rpm. The 1 3/8" shaft has 6 or 21 splines.



Crawler tracks for operation anywhere with maximum safety

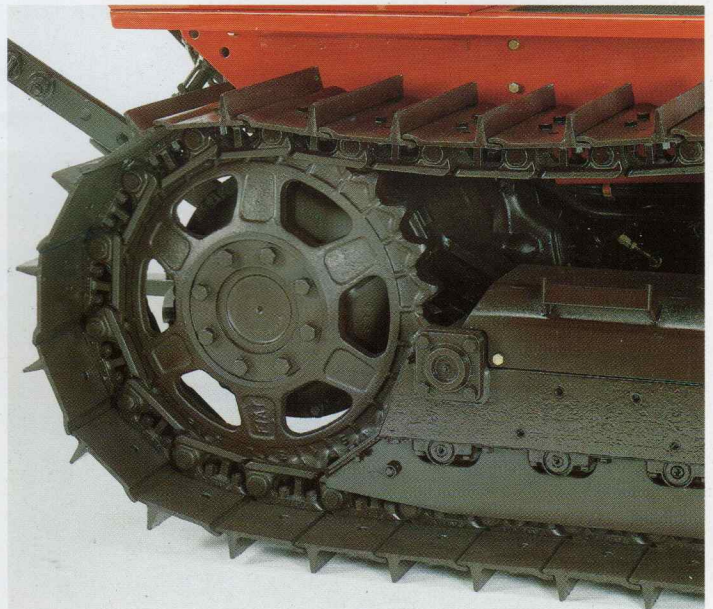
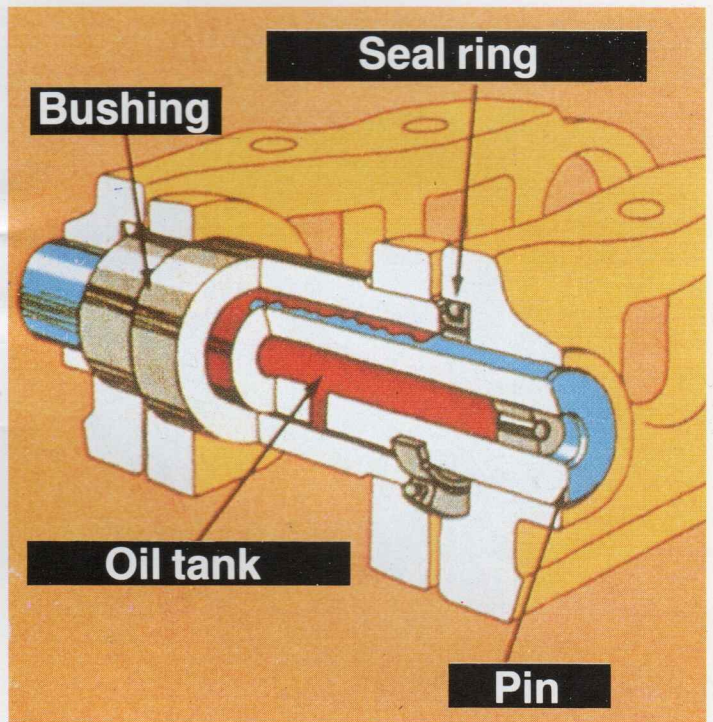
Series 75 tractors are fitted with tracks designed to enhance all the well-known advantages of crawler drive systems, which provide operation where tyred tractors cannot be used because of critical grip or stability conditions. In fact, crawler tractors "float" better, do not compress the ground, and generate more tractive force with less slip. What's more, they provide safe operation on steep slopes, whether up and down or across the gradient. Series 75 crawler tracks feature:

- **Track frames** hinged at the rear from a bar secured at the front of the final drives; front idler with replaceable plates, with 5 or 6 track rollers depending on the model and 1 supporting roller per side; oil-immersed track-idlers with "long life" seals; hydraulic adjustment of track tension idler and front suspension with sturdy leaf-springs.

- **Drive sprockets** with odd number of teeth for even wear, with "spoke" structure for better soil expulsion.

- **33,36 or 37 labyrinth-hinged track shoes** depending on model, with width between 310 and 400 mm depending on version.

- **"Long-Life" track chains.** Fiatagri crawler tractors are equipped with track chains which guarantee long lifetime. In particular, the 80-75 model can be fitted on request with "Long-life" permanent lubrication of the hinge-pins to eliminate track noise and increase operator comfort and track chain life.



Technical specifications

Model	Weight *	DIN HP	Engine	Transmission	Steering and clutches	Hydraulics	PTO	Crawler tracks
60-75 Steering-O-Matic	3290 kg	60	FIAT 8035.05 Diesel 3-cylinders, diameter and stroke 104 x 115 total displacement: 2931 cc	Main clutch: dry double plate ** with over- centre engagement	Side steering clutches (2) with 10 driven plates each hydraulic "Steering- O-Matic" control	Hydraulic lift with: position control draft control mixed draft/position control Vario-Speed, lowering speed regulation, implement lock, Lift-O-Matic	Fully independent Modulating lever control 540 r.p.m. with 1 3/8" shaft with 6 splines	Oscillating track frames with 4 track rollers and 1 supporting roller Long-life oil-immersed track idlers Hydraulic track tension control 33 shoes per side measuring: 310 mm (basic version) 360 mm (mountain version) Track chains with labyrinth hinges
60-75 Steering-O-Matic Mountain	3410 kg							
70-75 Steering-O-Matic	3550 kg	70	FIAT 8045.06 Diesel 4 cylinders diameter and stroke 100 x 115 total displacement 3613 cc	8 FR. + 4 RV. Reverser 8 FR. + 8 RV.	Creepers 16 FR. + 8 RV.	Up to 4 auxiliary external control valves	Optional: 540/1000 r.p.m. with 21 splines and external selection lever	Oscillating track frames with 5 track rollers and 1 supporting roller Long-life oil-immersed track idlers Hydraulic track idler regulation 36 shoes per side measuring: 310 mm (basic version) 360 mm (mountain version) Track chains with labyrinth hinges
70-75 Steering-O-Matic Mountain	3670 kg							
80-75 Steering-O-Matic	4100 kg	80	FIAT 8045.06 Diesel 4 cylinders diameter and stroke 104 x 115 total displacement 3908 cc					

* Weight of tractor in operating trim, with tanks full

** Single-plate for 60 HP



The Fiatagri service, Original spares and servicing system. An assurance for customers all over the world.

The San Matteo, Modena, Spares Centre is the heart of the Fiatagri Service. It extends to 2 hectares under cover and can handle more than 3000 orders a day. Its warehouses hold 21 million items classed under 60,000 headings, all original spare parts designed, inspected and checked to guarantee reliability and operating efficiency.

The Spares Centre is linked to the Service School, where workshop foremen and service mechanics are trained to serve the distribution network and customers throughout the world.

Fiatagri's sales organisation is active in more than 100 countries through branches, dealers and importers, guaranteeing the same efficiency and the same operating continuity of its vehicles everywhere.

Product quality, efficient service and dynamic organisation are the key features of the Fiatagri image and the success of Fiat's tractors:

- No. 1 in Europe for 10 years.
- No. 1 in the world for 4WD.
- No. 1 in the world for agricultural crawlers

In Italy, one farmer out of two chooses Fiatagri.

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To be sure of getting accurate, detailed and up-to-date information, an intending buyer should consult his nearest dealer.



**Fiatagri is the Agricultural
Tractor and Machinery
Division of FiatGeotech S.p.A.**

Stampato n. 60324261
Printed in Italy

Arti Grafiche U. Soncini - Guastalla (RE) - 2/90