

# Explorer<sup>3</sup>

90 | 105



## Explorer<sup>3</sup>. A new way of working.

The Explorer<sup>3</sup> represents the evolution of a project that has its roots in the long experience acquired by SAME as a maker of medium horsepower tractors, and is now reflected in a range of machines achieving the perfect balance between technological content, functionality and comfort.

The idea: to create an ideal match between electronic components of the latest generation (fitted where perfection is obtainable only with the precision of digital instruments), conventional mechanical and hydraulic systems (reliability guaranteed by simplicity of operation, user-friendly maintenance and long service life), and care for the well-being of the operator (ergonomically engineered controls combined with attractive design).

The result: a brilliant mix of performance, productivity and comfort that enhances the features of the Explorer<sup>3</sup> range, offering practically three tractors in one.



## Multi-functional and versatile.

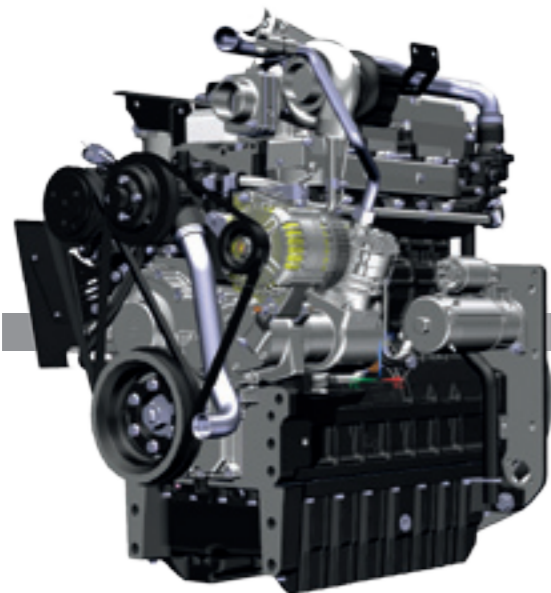
The potential of a tractor is dictated not merely by how much is built into it or by the quality of its components; equally important is its capacity to adapt to different working conditions.

The wide selection of models, the different engineering features and the numerous specification choices of the Explorer<sup>3</sup> range have been defined precisely to meet the different needs of the market and provide an ideal configuration for every kind of activity. The new Explorer<sup>3</sup> models are available with 2 or 4 wheel drive, platform or cab, and a variety of specification options.

Adopting this approach, SAME gives customers the freedom to choose the features they prefer, and exploit the advantages to the full.

Ideal for all aspects of arable cultivation — ploughing and secondary tillage alike — as well as hay-baling and single-pass work with implements mounted front and rear, Explorer<sup>3</sup> models are equally effective as general utility tractors, given their attributes of manoeuvrability and easy handling. These models have a top speed of 40 km/h on the road (also possible in economy mode, with the Explorer<sup>3</sup> 105 GS).





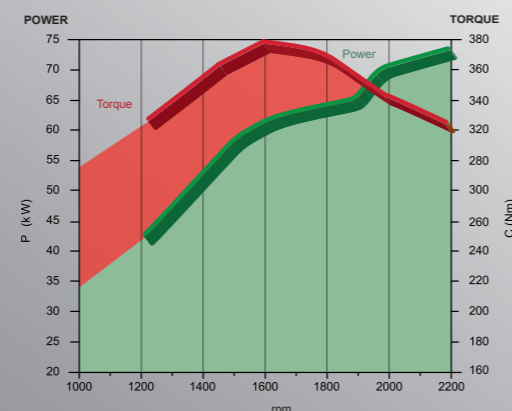
## Reliable, eco-friendly, biodiesel-compatible. The new SAME engine.

At the heart of the Explorer<sup>3</sup> range are superior engines of the next generation, developed and manufactured by Same: Tier 3 compliant, 4-cylinder turbo/intercooled units offering consistently high efficiency combined with low specific fuel consumption. These are features originating from innovative technological developments incorporated into the design: the fuel injection system of the new Same engines is unique in its sphere, featuring individual injection pumps, one to each cylinder. This guarantees instant injection and a high operating pressure, resulting in optimized performance and fuel economy. All engines are equipped with hydraulic roller tappets for precision control of the injection timing advance. When the oil is cold, the plunger is lifted marginally so that the injection can be suitably advanced: besides optimizing combustion efficiency, this also eliminates the annoyance of white smoke, emitted typically by engines when starting up in particularly cold climates.

The intercooler plays a strategic part in the combustion process: by cooling the airflow from the turbo, it enables the engine to generate higher power at a lower operating temperature, and reduces emissions. The low speed setting of the crankshaft ensures less stress and wear on moving parts while at the same time keeping noise levels low, and consequently helping in general to maximize operator comfort. In addition, fluid-dynamic design is optimized by the new geometry of the cylinder heads and combustion chambers and optimized fuel burn, allowing the operator of any Explorer<sup>3</sup> machine to exploit the full potential of the engine and benefit from significant fuel economies.

In its most recent evolution, this engine has been optimized further in terms of efficiency thanks to the introduction of a new proportional viscstatic fan, which in addition to making the engine more efficient also saves energy, as power consumption is reduced by less than 4 HP, significantly improving performance and overall efficiency of the machine.

**EXPLORER<sup>3</sup> 105**  
Torque, power and specific consumption curves



Thanks to a number of unique design features and to the use of first-rate materials in construction, the engines of Explorer<sup>3</sup> machines are not only functional in the extreme but also totally compatible with biodiesel fuel, allowing blend ratios of up to 100% (biodiesel responding to EN 14214:2003 specifications). Biodiesel typically has a higher viscosity than other engine fuels and is chemically more aggressive, but these engines are equipped with a special fuel injection system utilizing immersed pumps, one to each single injector, and a fuel feed circuit with components manufactured from special materials, and consequently able to run on the new fuels without difficulty.

**Electronic engine management** is a standard feature on these engines: an electromagnetic device acts directly on the rack driving the injection pumps, to proportion the injection volume exactly to the load on the engine and the corresponding power requirement, optimizing fuel consumption.

These are all factors that help to increase productivity, day after day. The key operating parameters of the engine are monitored by sensors and relayed to an electronic control unit, which then maintains each parameter at its optimum value by piloting the injection system accordingly. Fuel is metered so that the optimum amount will be supplied at any given moment, helping to maximize performance.

This means optimum utilisation of available power, and particularly low fuel consumption. The ECU also allows the operator to set, save and recall a minimum and maximum speed combination that will simplify the task of negotiating headland turns. Another function of the electronic system is that it incorporates an "Engine rpm control" mode whereby the engine speed is maintained constant even under varying load conditions — ideal for applications requiring uniform P.T.O. and ground speeds. The result: optimum efficiency every time, with additional power saving and much improved fuel economy.



The hand throttle lever and the engine rpm memory save/recall button are positioned on the side console, or in the case of models with electronic hitch control, to the right of the driver on the instrument panel.



## Multi-capable transmission, rapid and precise gearshift.

With the performance of the new Tier 3 engines, and the trademark versatility and reliability of the transmission (forced lubrication with dedicated oil cooler), models of the Explorer<sup>3</sup> range are genuine all round machines able to take on a wide variety of agricultural tasks: soil preparation and harvesting, planting and baling, general yard and transport duties... an Explorer<sup>3</sup> will adapt easily to all kinds of applications involved in the smooth running of a modern farming business. Four configurations are possible for the transmission: a 15+15 mechanical version with 5 speed box and 3 ranges,

and a practical version with 5 speed box and 4 ranges (including creeper), giving 20 forward ratios and 20 reverse. Or, the exclusive HI-LO shift gearbox, which doubles the number of speed choices at a fingertip touch: there are two buttons mounted to the shift lever, which can be used by the operator to change swiftly and easily from any normal speed to a slower speed, under power and without using the clutch pedal, increasing the total number of speeds to 30+30 or 40+40. For ultimate comfort, the gears of the 5-speed box can also be changed smoothly and effortlessly by pushing a

button on the knob of the shift lever, without having to depress the clutch pedal.

Finally, for maximum convenience when fetching and carrying, and driving on the highway, Explorer<sup>3</sup> machines have a top speed of 40 km/h: a real help in the constant effort to save time and reduce fuel consumption. Naturally enough, performance of this kind is complemented by a braking system with disc assemblies operating on all four wheels.



### OVERSPEED

Available on the Explorer<sup>3</sup> 105, Overspeed allows the tractor to cruise at 40 km/h on the road either in economy mode (staying in top gear), or exploiting the full performance capabilities of the engine, using a lower ratio. With low crankshaft speed, fuel consumption can be reduced significantly, whilst the power of the engine can be exploited at a speed near to that of the maximum rated torque. The effect is ultimately to produce an optimum power curve, better fuel economy and superior driving comfort, thanks to lower levels of noise and vibration.

Finally, the ability of the Overspeed transmission to reach 40 km/h top speed is unaffected by tyre size, a factor significantly increasing the efficiency and comfort of the tractor when driving on the road, with or without a load.

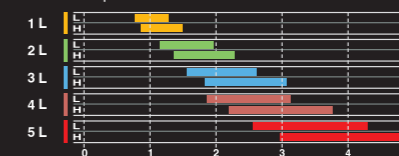


Ground speeds in km/h

Creep speeds



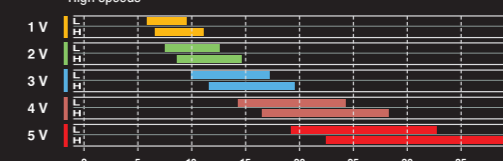
Low speeds



Medium speeds



High speeds



## Hydraulic shuttle: convenient and functional.



### HYDRAULIC POWER SHUTTLE

Enhancing the Explorer<sup>3</sup> transmission system still further is the option of a hydraulic shuttle allowing the drive direction to be reversed swiftly, and under power, at speeds up to 12 km/h: an invaluable aid, for example, when making headland turns and return passes.

The shuttle lever is located beneath the steering wheel. Ergonomically designed and easy to operate, it has a "neutral" position and guarantees total safety in operation, functioning only when enabled by a sensor in the driver seat activated by the body weight of the occupant.

The electrohydraulic shuttle lever incorporates a thumbwheel modulation control with which the operator can select a sharper or softer response from the shuttle, according to the operating requirements.



## Multi-capable, versatile P.T.O.



### PARK BRAKE

The Explorer<sup>3</sup> 105 GS is equipped with a Park Brake system that will ensure the tractor is always securely and efficiently immobilized.

It incorporates a device that locks the brakes under a high mechanical load, and a hydraulic system that releases automatically when starting the tractor.



The versatility of Explorer<sup>3</sup> models is magnified still further when considering the quality built into the power take-off, which is engaged electrohydraulically by an oil-immersed multidisc clutch with pushbutton controls located both in the cab and on each fender, and delivers the full power of the engine with maximum reliability.

Thanks to a wide range of P.T.O. speeds (540/540ECO/1000/1000ECO), Explorer<sup>3</sup> tractors are able to take on a multitude of tasks, both around the yard and in the fields: soil preparation, baling, irrigation, spraying, and much more.

Economy power take-off is particularly advantageous, as it allows the operator to use only as much engine power as effectively needed, which means lower revolutions, less fuel consumed, and fewer emissions released.

In addition, Explorer<sup>3</sup> models are specified with independent ground speed P.T.O., which broadens the operating capability of the tractor, typically when towing drive axle trailers used in harvesting or spreading operations.



Selection of P.T.O. speeds is in the cab, on the right of the driving position.

## Functionality at will.

## Hydraulic system and lift: efficiency in all applications.



On the version with mechanical hitch control, two levers are used to operate the mechanically controlled rear lift links: the yellow lever raises or lowers the implement; the green lever is used to select the type of control (position, draft, mix and float).

On the version with electronic hitch, a control panel with various dials and a rocker switch allows the operator to select: rate of drop, lock/release and adjustment of draft, position and mix control of the electronic hitch.

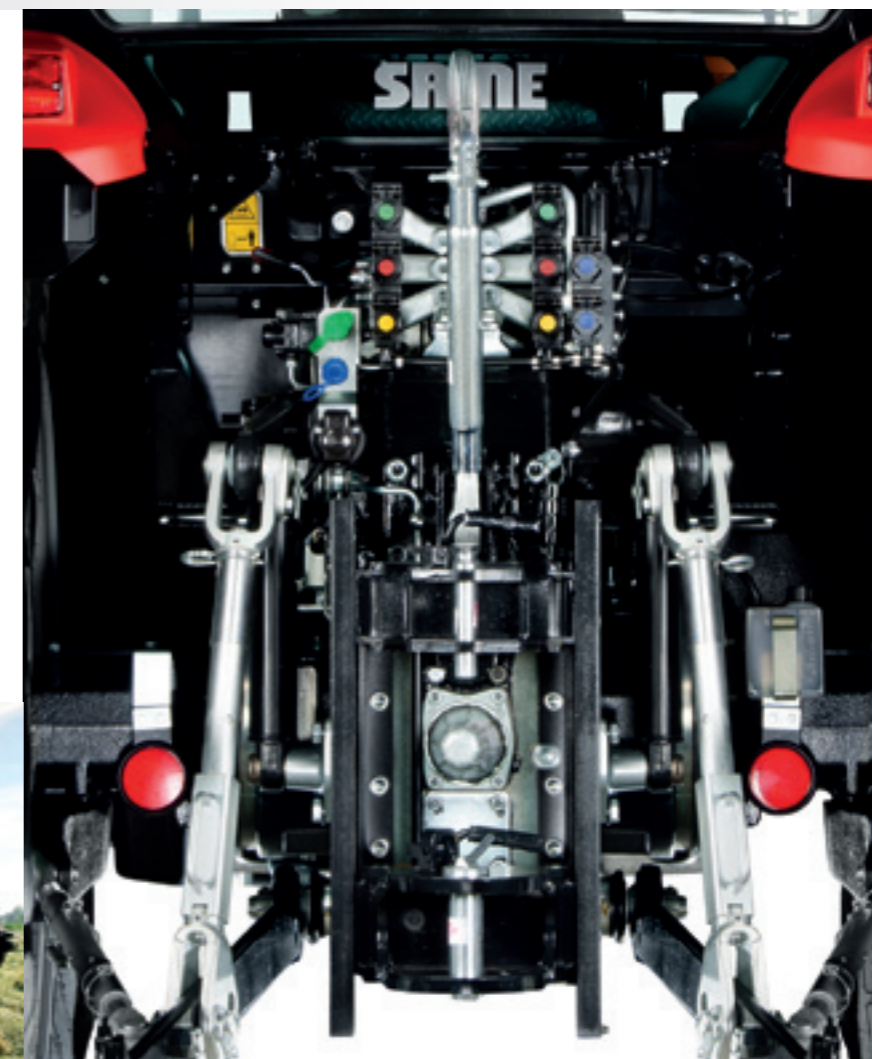
Electrohydraulically operated 2-way ON/OFF spool valve of low rated flow (25 l/min) controlled from a rocker switch; useful for implements requiring positional control (e.g. plough with hydraulic top link, hedge/verge cutter carried on folding arm, etc.).

The blue levers operate the various auxiliary spool valves – single acting, double acting, kickout or detent.



A set of 4 hydrostatically operated oil-immersed disc brake assemblies will bring the Explorer<sup>3</sup> to a halt in complete safety, even when heavily loaded. The steering is light and effortless, thanks to a hydraulic system that includes a separate pump supplying oil to two double-acting rams, positioned to guarantee maximum protection in the event of accidental impact. The steering angle of the front axle is 55° (4WD) or 65° (2WD)

Increased traction is provided by electrohydraulically operated front and rear differential locks (pushbutton control) designed to engage 100% in critical operating conditions.



On Explorer<sup>3</sup> models, the concept of multi-capability also extends to all arable applications where use of the hydraulic lift and spool valves is required: the main hydraulic system, served by an independent pump rated 56 l/min, guarantees high performance and efficient operation of implements using fluid power. With 6-way auxiliary spool valves (3 double acting sections), and now the option of 8 external rear ports (1 electrohydraulic section), the potential

of the hydraulic system is increased even further, optimizing flow control and operational efficiency in the field.

Where dependable accuracy is required, the rear lift of Explorer<sup>3</sup> machines will ensure that a hitched implement can be controlled with absolute precision, whether mechanically or electronically (model 105). Also available with the electronic rear lift is an automatic P.T.O. option, which engages and disengages unassisted when the implement is

raised or lowered. Designed particularly with strength in mind, the rear lift has a rated capacity of 4300 kg (Explorer<sup>3</sup> 90) to 5200 kg (which in the case of the Explorer<sup>3</sup> 105 can be increased to 6200 kg by fitting optional assistor rams). Implements are hitched to the lift links with unprecedented ease, using a pushbutton-operated, proportional up/down control.

Pushbutton electrohydraulically operated 100% locking front and rear differentials on version with mechanical hitch control.

Pushbutton electrohydraulically operated 100% locking front and rear differentials on version with electronic hitch control.



## Interior: designed for comfort.

On board an Explorer<sup>3</sup> there is a feeling not only of rational and ergonomic ease, but of well-being and satisfaction too.

With excellent weight distribution, an optimum balance between low centre of gravity and high ground clearance, and high visibility in all directions, the feeling of safety and stability is evident. And there's more. A good look at the lines of the hood, the profile of the light clusters or the layout of the driving position will reveal an attention to detail and an insistence on style that go well beyond any thought of pure functional efficiency.

In effect, the aim was not only to demonstrate the quality of the Explorer<sup>3</sup> in terms of substance, but also to give a visually pleasing preview of its excellence.

Be it a platform or a cab version, every Explorer<sup>3</sup> model is designed to ensure that work will be a comfortable and pleasant experience for the operator.

All monitoring and controls of the Explorer<sup>3</sup> are easily locatable by virtue of distinctive shapes and colours, and positioned logically and ergonomically on a console to the right of the driving seat. In addition, the more frequently used controls are grouped together in such way that they can be identified at a glance and operated more swiftly. The digital instrument panel has a selection of indicators and warning lights giving the driver total visual control over the operation of the tractor, with illuminated displays that are easy to see in any ambient light.

Values indicating ground speed, P.T.O. revolutions, lapsed time and distance covered are displayed in real time, providing the operator with immediate information on work rate and progress.



The digital display shows information quickly and reliably.

## EXPLORER<sup>3</sup>

The upholstered seat with air suspension and safety belt adapts perfectly to the weight and height of the occupant.

In platform versions of the Explorer<sup>3</sup>, the entire platform structure is suspended on silent-block mounts, and with pendant type pedals, adjustable steering wheel and hydraulically actuated clutch and brake circuits, a fully-equipped and ergonomic workplace is created. The driver is shielded from direct sunlight by a canopy that clips onto the ROPS. Cab versions offer additional comfort, thanks to an enclosure with a high level of sound insulation and effective climate control. The powerful air-conditioning system ensures that a comfortable working climate and constant temperature are maintained inside the cab, which is fitted with a generous number of interior air vents, adjustable for direction and flow.

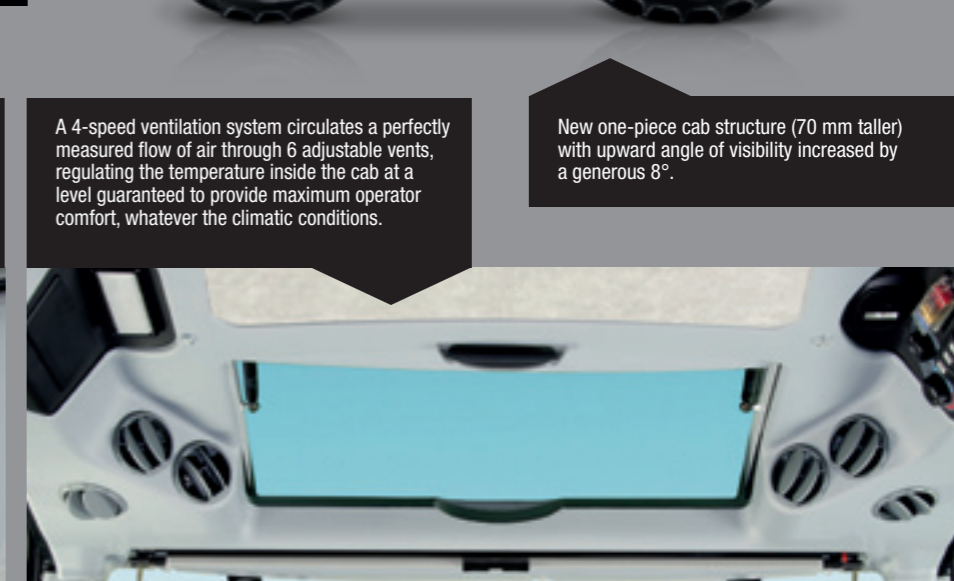
The cab equipment is rounded off by tinted window glass and a windscreen sunblind, and where frequent use of front loader type implements is envisaged, there is also the option of a "high visibility" roof: this will ensure a clear view when operating a front-mounted blade or bucket.



The high visibility roof provides a clear and unobstructed view overhead. The glass hatch occupies almost the entire front half of the cab roof, giving the operator absolute visual control when using a front loader.

A 4-speed ventilation system circulates a perfectly measured flow of air through 6 adjustable vents, regulating the temperature inside the cab at a level guaranteed to provide maximum operator comfort, whatever the climatic conditions.

New one-piece cab structure (70 mm taller) with upward angle of visibility increased by a generous 8°.





## A powerhouse easy to maintain.

Long servicing intervals and ease of maintenance are assured, given that all the main service points on the tractor can be accessed in moments: the side panels are easily removed (no tools required) and the hood is opened simply by pressing a button. All the main engine service points are located on the right hand side, and immediately accessible. The engine oil filter and engine oil level can be checked without opening the hood. And to save time and expense, the recommended oil change intervals are particularly long: 500 hours for the engine oil, and 1200 hours for the transmission oil.



For maximum ease of maintenance, the radiator/cooler pack is equipped with a fly-screen that traps dust and other foreign matter.



The external air-conditioning radiator is easily accessible for routine cleaning purposes.



Routine maintenance checks are simplified. The hood opens simply by pushing a button on the front grille.



The battery disconnect switch ensures that electronic components can be serviced in complete safety.



With the engine air cleaner easily accessible, the filter can be serviced faster and without difficulty.



Topping up the engine coolant is simple and safe.

EXPLORER<sup>3</sup> 105



# TECHNICAL DATA

## EXPLORER<sup>3</sup> 90

## EXPLORER<sup>3</sup> 105

Version	2RM	DT	2RM	DT
<b>ENGINE</b>	SDF 1000.4 WTI EURO III		SDF 1000.4 WTI EURO III	
Cylinders/Displacement	4/4000		4/4000	
Air intake	Turbo/intercooled		Turbo/intercooled	
Rated power at rated engine speed (2000/25/EC)	88/65		102/75	
Revolutions at maximum power	2300		2300	
Maximum torque	345		376	
Speed at maximum torque	1600		1600	
Torque rise	28		21	
Cooling	liquid-oil			
Engine control (governor)	electronic			
Air cleaner	dry type with safety element and dust unloader			
Silencer	under hood with exhaust pipe on cab upright			
Fuel tank capacity	litres 160			
<b>DIMENSIONS and WEIGHTS (with rear tyres)</b>	420/85 R34		480/85 R34	
Max. length without lift links	mm 4080		4200	
Width min-max	mm 1950 - 2200		2050 - 2230	
Max height at ROPS	mm 2710		-	
Max height at cab	mm 2740		2790	
Ground clearance	mm 450		500	
Wheelbase	mm 2350	mm 2370	mm 2400	mm 2380
Front track width min-max	mm 1630 - 2134		1630 - 2134	
Rear track width min-max	mm 1594 - 2130		1594 - 2130	
Weight with cab min-max	kg 3257 - 3480	kg 3567 - 4120	kg 3637 - 3860	kg 4067 - 4620
Weight with ROPS	kg 2917 - 3140	kg 3227 - 3780	-	-

TRANSMISSION	
Drive clutch	oil-immersed, hydraulically operated
5-speed synchromesh gearbox x 3 ranges	15 FWD +15 REV (min speed: 1.78 km/h)
	30 FWD +30 REV HI-Lo (min speed: 1.53 km/h)
5-speed synchromesh gearbox x 4 ranges (with creeper)	20 FWD +20 REV (min speed: 0.52 km/h)
	40 FWD +40 REV HI-Lo (min speed: 0.45 km/h)
	40 FWD +40 REV HI-Lo - OVERSPEED (min speed: 0.45 km/h) (105GS)
Maximum speed	km/h 40
Shuttle	mechanical, synchronized
Rear differential lock	hydraulic, under power
Lubrication	electrohydraulically operated pressure
BRAKES AND STEERING	
Braking action	all-wheel, with oil-immersed discs on each hub, hydrostatically operated
Parking brake	independent or electrohydraulic (105GS)
Trailer brake	hydraulic braking valve air-braking system
Hydrostatic power steering	with independent pump
Steering angle	2WD/4WD 65°/55°
FRONT AXLE	
Four wheel drive engagement	mechanically operated electrohydraulically operated
Front differential lock	mechanical, electrohydraulically operated
Front ballast weights	8 x 40 kg suitcase quick hitch 400 kg

FRONT P.T.O.	
Clutch	oil-immersed multi-disc
Speed	rpm 1000
Operation	pushbutton electrohydraulic
REAR P.T.O.	
Clutch	oil-immersed multi-disc
Speeds	rpm 540-1000
Operation	540-540 ECO-1000-1000 ECO ground speed P.T.O. with independent shaft pushbutton electrohydraulic
HYDRAULIC LIFT	
Rear lift	mechanical / electronic (Explorer <sup>3</sup> 105)
Max lifting capacity	kg 4300 (Explorer <sup>3</sup> 90) 5300 / 6200 with assistor rams (Explorer <sup>3</sup> 105)
Pump flow rate	l/min. 56
Auxiliary spool valves	n° ports 4 / 6 / 8
3 point linkage (lift links + top link)	fixed link ends auto-hitch ends
RH lift link and top link	mechanically adjusted with double acting cylinders
Front lift	original built-in frame maximum lifting capacity 1800 kg
DRIVING POSITION	
Platform	flat, suspended on silent-block mounts ROPS with two uprights and sun shade
Cab	original, with 4 posts, sound-insulated and pressurized, opening windscreen, rear screen wiper, air filter, 4 work lights with "high visibility" roof
Cab climate control	air conditioning, with dust filter, ventilation, heating and forced recirculation
Instrumentation	analog - digital
Driver seat	mechanically adjustable with seat belt air suspension with seat belt

### 40 FWD + 40 REV TRANSMISSION WITH HI-LO - SPEEDS IN KM/H AT 2300 ENGINE RPM WITH 16.9 R 34 REAR TYRES

1 SRL	1 SR	2 SRL	2 SR	3 SRL	3 SR	4 SRL	1 LL	4 SR	5 SRL	1 L	5 SR	2 LL	2 L	3 LL	3 L	4 LL	4 L	1 NL	5 LL	1 N	5 L	2 NL	2 N	3 NL	3 N	4 NL	1 VL	4 N	5 NL	1 V	5 N	2 VL	2 V	3 VL	3 V	4 VL	4 V	5 VL	5 V	40.0*
0.44	0.51	0.59	0.68	0.78	0.91	1.11	1.29	1.48	1.50	1.73	1.75	1.99	2.32	2.65	3.09	3.20	3.73	3.77	4.30	4.40	5.02	5.09	5.72	5.93	6.67	8.15	9.50	9.52	10.99	11.10	12.80	12.82	14.94	17.03	19.87	24.26	28.30	32.71	38.16	40.0*

The above specifications refer to the highest available specification package. For standard equipment and options, refer to the current price list and ask your local dealer for details.

\*\*\* = TOP SPEED IN BOTH NORMAL AND ECONOMY ENGINE MODES (110 GS)  
N.B.: REVERSE SPEEDS ARE SLIGHTLY HIGHER THAN THE CORRESPONDING FORWARD SPEEDS.

### LOCAL DEALERSHIP

# SAME

Rely on us.

SAME DEUTZ-FAHR ITALIA S.p.A. \_ Viale Cassani, 15 \_ 24047 \_ Treviglio (BG) \_ Italy \_ Ph: +39 0363 4211 \_ www.same-tractors.com

The use of SDF original lubricants and coolants is recommended



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