

MF 6400



Controlled efficiency

12 models: 90 to 215 hp



MASSEY FERGUSON

**Exceptional comfort and quietness,
exceptional performance
and exceptional choice**



MF 6400 Series: evolving to give you more ...

The MF 6400 Series offers exceptional comfort and versatility in the smaller models with massive power and productivity in the higher horsepower range. And with a wide range of standard and optional equipment, the MF 6400 Series has a model to meet any operating needs.

Control, efficiency and comfort

Depending on model, there is now a choice of either Dynashift Eco or the new Dyna-6 transmission. Both have Speedmatching as standard with AutoDrive as an option, so you can choose the level of automation that suits your needs. Featuring left-hand Power Control, both transmissions are simple to operate, so it's easy to maximise productivity.

A wide choice of hydraulic systems, with up to five electro-hydraulic spool valves (MF 6497/6499), means you can precisely match your tractor to your hydraulic requirements.

There's sleek, modern styling and a superb cab with high-output heating and ventilation, air conditioning or even full climate control.

Top specification seats, the QuadLink™ suspended front axle* and 'dual stage' cab suspension* all further enhance the driving experience and help to maximise productivity.

For unsurpassed control, information gathering and cost-management, the GTA Console running Datatronic III is now available on all models (except MF 6445 and MF 6455). This advanced, user-friendly system greatly simplifies tractor operation and boosts productivity.

The MF 6400 Series has also earned a reputation as one of the quietest tractors to operate. At 71 dB(A), in-cab noise level is exceptionally low; a major contribution to a driving experience that really has to be tried to be fully appreciated.

Wide range, from 90 to 215 hp
Advanced, electronically-controlled engines*
71 dB(A) in-cab noise level
New Dyna-6 or Dynashift 'Eco' transmissions*
Unique, left hand Power Control
QuadLink™ front suspension*
Dual stage cab suspension*

Choose the model for your farm...

* Specifications vary by model and market

Model	Engine	Capacity	ISO hp [†]	With 'Transport Boost' ISO hp [†]
MF 6445	4 cyl. Turbo	4.4 litre	90	–
MF 6455	4 cyl. Turbo	4.4 litre	100	–
MF 6460	4 cyl. Turbo/intercooled	4.4 litre	115	125
MF 6470	4 cyl. Turbo/intercooled	4.4 litre	125	135
MF 6465	6 cyl. Turbo/intercooled	6.0 litre	120	130
MF 6475	6 cyl. Turbo/intercooled	6.0 litre	135	145
MF 6480	6 cyl. Turbo/intercooled	6.0 litre	145	155
MF 6485	6 cyl. Turbo/intercooled	6.6 litre	155	165
MF 6490	6 cyl. Turbo/intercooled	6.6 litre	170	180
MF 6495	6 cyl. Turbo/intercooled	6.6 litre	185	195
MF 6497	6 cyl. Turbo/intercooled	7.4 litre	200	215
MF 6499	6 cyl. Turbo/intercooled	7.4 litre	215	230

[†] ISO TR14396

Spacious, comfortable and efficient

Think of the time and effort you've wasted in searching for switches that are in the wrong place, fumbling for controls that are imprecise or trying to decipher the readings from poor instrumentation... Now take a look at the MF 6400 cab.

Thoughtful design

The pictures here show the spacious, well-planned layout of the cab. There's a bright colour scheme, well-placed switches, superb instrumentation and controls grouped by function. All of the most frequently used controls are mounted conveniently in the armrest, which moves with the seat, so everything always falls readily to hand. What the pictures can't convey is the sensation of quality when you operate a lever which has just the right 'feel' or select a function with almost subconscious ease. For that, you'll have to visit your MF Dealer and arrange a test drive!

Clarity at a glance

The instruments look superb and display information either in digital, analogue or



graphic form to present data in the most appropriate way for optimum clarity.

Quiet power

Another reason for you to test drive an MF 6400 is to experience for yourself the real difference that has been made to sound levels inside the cab. At 71dB(A) under load, working long, hard hours becomes far less stressful and more productive. And the improvement isn't only in the maximum noise level. The tone of the sound has also been 'tuned' to reduce irritation, and vibration levels have been decreased too. The result is a driving experience that really has to be tried to be fully appreciated.

Main picture: Cab interior shown with Dyna-6 transmission. Options shown include AutoDrive, SMS and the GTA Console running Datatronic III.





Maintain output, day and night



Manual air conditioning controls



Optional 'set-and-forget' Climate Control

A breath of fresh air

The heating and ventilation system has more air outlets, improved air distribution and more accurate temperature control. For even greater comfort, there is also a choice of either manually adjusted air conditioning or full 'climate control', which will memorise your chosen temperature setting and return to it at start-up... automatically.

Excellent visibility

A 5.7m² surface area of tinted, heat-reflective glass, narrow pillars and side-mounted exhaust all help to ensure excellent all-round visibility. The large telescopic rear view mirrors are a further aid to safe manoeuvring and transport.

The standard lighting enables high night-time productivity, with Xenon lights available as an option if your business demands a lot of after-dark work.



Sit back and enjoy the ride



The high specification swivelling seat, featuring armrest mounted controls.

Inset: heating switches on optional 'super de-luxe' seat

The standard seat provides exceptional comfort but ride quality can be further enhanced...

High specification seats

The high specification, swivelling seat is fully adjustable including lumbar support, pneumatic height adjustment, plus height and fore and aft adjustment of the right hand armrest so that the armrest-mounted controls can be perfectly positioned. Options include a 'low-frequency', super de-luxe seat

with double pneumatic lumbar support, heating and 'active carbon' seat covering for greater comfort in really hot conditions.

QuadLink suspension

Available as an option, MF's 'QuadLink' suspended front axle further enhances ride comfort and control. It has a compact, simple design that automatically maintains a constant suspension height, regardless of axle load.

The result is increased stability and a significant improvement in driver comfort, productivity and safety... both on the road and in the field.

Operator-controlled

Unlike many other systems, QuadLink is operator-controlled so you can choose whether you want the system on or off. For example, when working in the field with front linkage, where a uniform depth of cultivation must be maintained, it is essential that the operator is able to deactivate the system.



Or when working in a confined space with a loader or with pallet forks, where height control must be precise, again it is desirable to deactivate the system.

Dual Stage suspended cab

To provide the ultimate in ride comfort, MF's new cab suspension system can also be specified on all MF 6400 Series tractors.

The design features 'dual stage' air suspension that can be adjusted, at the flick of a switch, between two ride firmness settings to suit field or road transport conditions. This unique operator-controlled system stabilises cab movement more effectively and also has fewer mechanical links between the cab and 'transaxle', so noise insulation is also improved.

QuadLink and cab suspension switches, giving full operator control



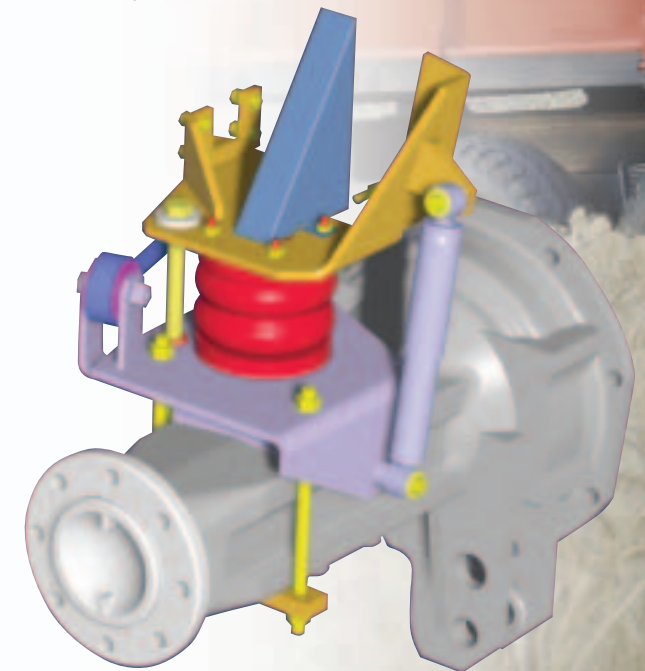
Ride comfort improvement

Compared to a 'standard' tractor, the overall effect of having a high specification seat, QuadLink front axle suspension and cab suspension can be a reduction in vibration by up to 50%*.

The result is greater comfort when operating for long periods, leading to increased productivity, improved work quality and a more relaxing working day.

* Depending on speed and field or road conditions

'Dual stage' cab suspension system





Increased work-rates with less fuel and quieter operation

Powered by latest generation engines with Electronic Engine Management (EEM)*, MF 6400 Series tractors have high torque with excellent 'constant power' and torque back-up, right down to 1000 engine rev/min.

These characteristics work in perfect harmony with the highly efficient Massey Ferguson transmissions to maximise productivity and fuel economy; at the same time giving outstanding responsiveness and 'driveability'.

Extra power and torque

Compared to previous generation engines, all of the new units offer more power and much more torque.

Constant power

With a 'constant power' range of at least 400 revs, you can maintain 'work rate' at lower engine speed, giving reduced noise and fuel consumption.

Maximum power is at 2000 revs, coinciding with PTO speed, for efficient PTO operation.

Low speed torque

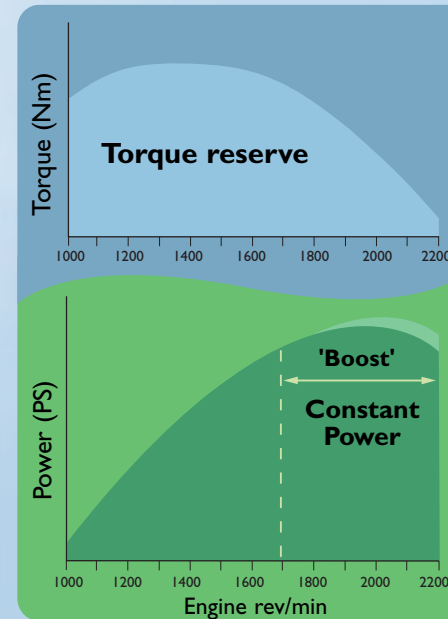
With maximum torque at 1400 revs and exceptionally high torque now extended right down to 1000 revs, pulling away with a heavy trailer, turning at the headland and any low-speed manoeuvre becomes easier, safer.

Electronic Engine Management

MF 6400 Series tractors all feature latest technology engines incorporating Electronic Engine Management (EEM)*. This enables continuous adjustment of the amount and timing of fuel injected, in relation to engine speed and load. The result is lower emissions, more power and improved fuel economy.

EEM also enables a range of advanced engine control functions, including Power Boost (as standard) and optional Engine Speed Control.

* Except MF 6445/6455



High power plus 'Power boost' and 'constant power' down to 1700 rev/min. The torque curve also clearly shows how 'pulling power' is maintained as engine speed falls from 1400 to 1000 rev/min.

Power boost

When 3rd or 4th gear is selected (Dyna-6 models) and in 3rd or 4th gear high range, with ground speed over 10 km/h (on Dynashift models), EEM automatically gives a minimum of 10 hp 'power boost', still further enhancing torque back-up characteristics and work rate.





Use '+/-' to pre-set engine speed and 'A/B' to memorise and select the required setting

Engine speed control

Switches mounted conveniently on the right-hand console, enable engine speed to be pre-set and memorised.

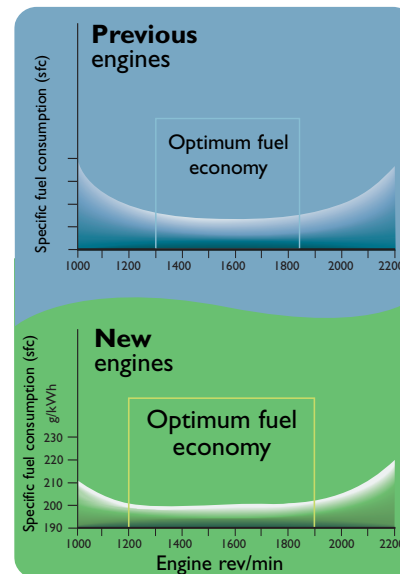
For example when ploughing, your chosen engine speed can be selected at the touch of a 'rocker switch' (direction 'A'), then when turning at the headland, simply press the switch again (direction 'B') and engine speed is reduced. Once back in the furrow, press the rocker switch again (direction 'A') and you're back to full ploughing speed.

The ability to return quickly and easily to precise engine speeds will boost productivity, improve work quality and simplify operation in almost all of your daily tasks.

Improved fuel economy

Electronic engine management constantly monitors a wide range of parameters and makes continual and incredibly fine adjustments to fuel injection. Combined with latest-technology combustion systems, this has given significant improvements, not only in emissions but also in fuel economy.

Whilst lowering the absolute Specific Fuel Consumption (sfc) figure is important, the graph (left) shows how the MF 6400 Series achieves lower fuel consumption over a much wider range of operating conditions.



Compared to previous generation engines, MF's electronic engine management system broadens the operating range within which the tractor is operating at optimum fuel efficiency

Lower service requirements

The latest engines also benefit from 400 hour service intervals, keeping down-time to a minimum and further reducing overall operating costs.

Simply the best mechanical transmissions

Depending which MF 6400 Series model you choose, either Dynashift or Dyna-6 transmissions are available. Both transmissions feature Massey Ferguson's multi-functional left-hand Power Control, a choice of levels of automation and super-smooth on-the-move, clutchless powershift changes.

Left-hand Power Control

The left-hand Power Control lever provides convenient forward/reverse shuttle, powershift changes, range changes and fingertip de-clutching, leaving the right hand free to operate front and rear mounted implements.*

Shuttle operations are more efficient too, with programmable forward/reverse speeds, reducing repetitive tasks and speeding cycle times.

* Dyna-6, in Autodrive transport mode

Left-hand Power Control lever



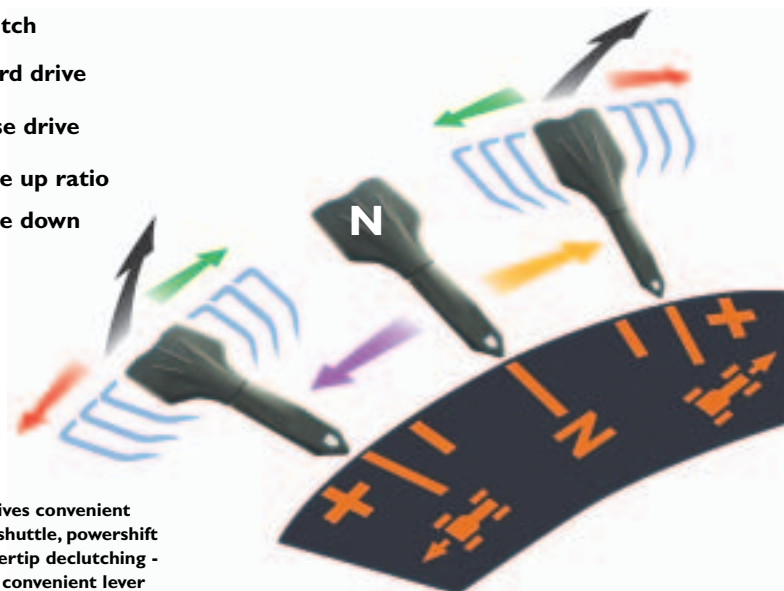
Working with Dyna-6

Dyna-6, uniquely, provides a smooth, 6-speed Dynashift change in each of four gears. So you have a tremendous range of powershift flexibility over a wide speed range, giving maximum field performance.

With the capability of both Dynashift and range changes being made under load, without the need to use the clutch pedal,

- Neutral**
- De-clutch**
- Forward drive**
- Reverse drive**
- Change up ratio**
- Change down ratio**

Power Control gives convenient forward/reverse shuttle, powershift changes and fingertip declutching - all from a single, convenient lever



Dyna-6 is exceptionally easy to use. And with a choice of either left- or right-hand control, there's real operating flexibility to suit different applications and driver preference.

Right-hand control

The T-shaped gear lever is mounted in the armrest, which is adjustable, so all of the controls are always just where you want them. Simply 'pulse' the gear lever forwards or backwards to change up or down through the six Dynashift ratios. To change range, simply press the range selection button as you move the lever.



On Dyna-6 models, right-hand controls include the 'T-handle' gear lever with a push-button for range selection and either the Speedmatching forward/reverse shuttle 'Comfort Control' (above), or the AutoDrive Controller (below right)

The main range selected is clearly indicated in an LED display in the right-hand console. Dynashift ratio and forward speed are also shown in the right-hand dashboard display.

Dyna-6 Speedmatching

Dyna-6 incorporates Speedmatching as standard. Speedmatching operates continuously and automatically selects the most appropriate Dynashift ratio according to forward speed when changing gear or range. For example, if a tractor is pulling a heavy trailer in 3rd gear in Dynashift ratio 'F', if the operator changes into 4th gear, Speedmatching will automatically select either C or D ratio.

Variable shuttle aggressivity

In front of the LED display is a rotary 'comfort control' that enables you to adjust the rate of engagement of forward/reverse shuttle selection.

Simply turn the control to adjust shuttle take-up to suit your specific operating preferences, achieving the optimum balance between comfort and productivity in a wide range of applications.

Dyna-6 AutoDrive (optional)

When AutoDrive is specified, the rotary AutoDrive Controller enables you to adjust the transmission operating modes, so you can set the gearbox to operate in the most efficient way for the job you're doing.

The AutoDrive Controller has three main settings:

- *Manual*, gives full manual control with Speedmatching switched off.

There is still some electronic management, designed to avoid accidental damage through incorrect gear selection.

- *Speedmatching*: There is a Speedmatching position ('Speed') within both Transport and Field AutoDrive sectors, providing automatic selection of the appropriate Dynashift ratio after a range change has been made.

Gear changes can then be made either individually or rapidly, from A to F range by holding the gear lever (or PowerControl lever)



forwards or backwards. In Transport, sequential changes also include range changes, enabling 24 ratio changes, from 1A to 4F.. at the touch of either the left hand PowerControl lever or the right hand gear lever.

- *AutoDrive (below)*, gives fully automatic upshifting and downshifting of Dynashift changes (Field sector) and both Dynashift and range changes (Transport sector).

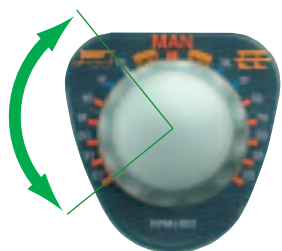
By adjusting the control, you can pre-select the engine speed at which upshifting takes place, between 1600 and 2200 revs.

Downshifting takes place in accordance with both engine speed and load, giving full control and engine braking.

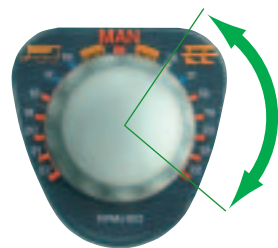
AutoDrive gives you total command of the transmission, with the exact level of automation you require for any application, simply by turning the AutoDrive Controller.



The Autodrive Controller (Dyna-6), can be adjusted to the appropriate setting or moved between sectors at any time, including while operating under load, on-the-move.

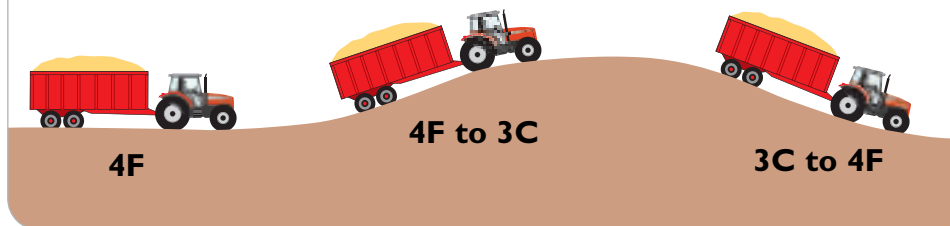


AutoDrive Transport sector



AutoDrive Field sector

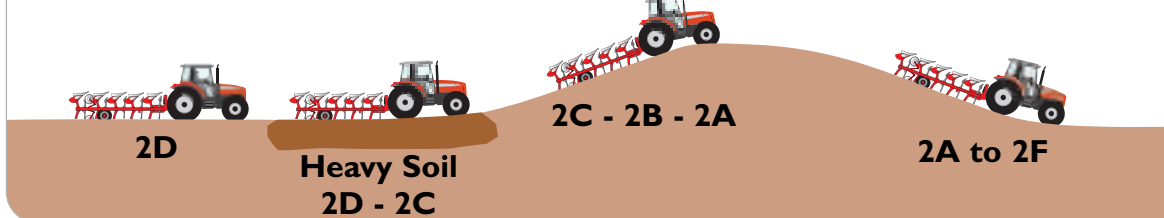
AutoDrive Transport Sector



Left: AutoDrive Transport mode gives fully automated upshifting and downshifting of Dynashift ranges and main gears

Below: AutoDrive Field mode gives fully automated upshifting and downshifting of Dynashift ranges

AutoDrive Field sector



Dyna-6 or Dynashift: simple, flexible and efficient

Dyna-6 working speeds

The Dyna-6 gearbox offers six Dynashift changes in each range, so there's virtually never any need to change range in the field.

Lower fuel consumption

On both Dyna-6 and the Dynashift Eco gearbox, maximum road speed is controlled by the Electronic Engine Management system, so 40 km/h is achieved at only 1880 rev/min*, significantly reducing fuel consumption and giving quieter, more relaxed operation.

On MF 6497 and MF 6499, where market legislation permits, 50 km/h maximum speed is also now available (achieved at 2000 rev/min), enabling rapid haulage and faster movement around large farms and estates.

The Dyna-6 gearbox offers six Dynashift changes in each range, excellent speed overlap and 40 km/h at only 1880 rev/min*

The highly acclaimed **Dynashift Eco transmission is standard on MF 6485, 6490 and 6495 models. Like the Dyna-6 gearbox, it also features left-hand Power Control for exceptional ease of use but offers 32 speeds giving an excellent range of field and transport speeds.**

Working with Dynashift

Dynashift provides a smooth, 4-speed powershift change in each of eight synchronised gears. So you can always choose a gear with all the powershift flexibility you need to cope with varying conditions. And as Dynashift has 'close ratio' steps of only 17%, you can react to any load change, maintaining



Dynashift gear lever has a short, precise movement



Armrest-mounted control of Speedmatching and AutoDrive modes (Dynashift version)

Two levels of automation

Working almost identically to the Dyna-6 systems, two levels of automation are also available on the Dynashift Eco transmission; Speedmatching (standard) and AutoDrive (optional).

An armrest-mounted switch makes it easy to select automation (Speedmatching) or to change between operating modes (AutoDrive), giving maximum operating flexibility and efficiency. With both systems, automatic changes can be overridden using the Power Control lever.

peak efficiency and improving productivity at all times.

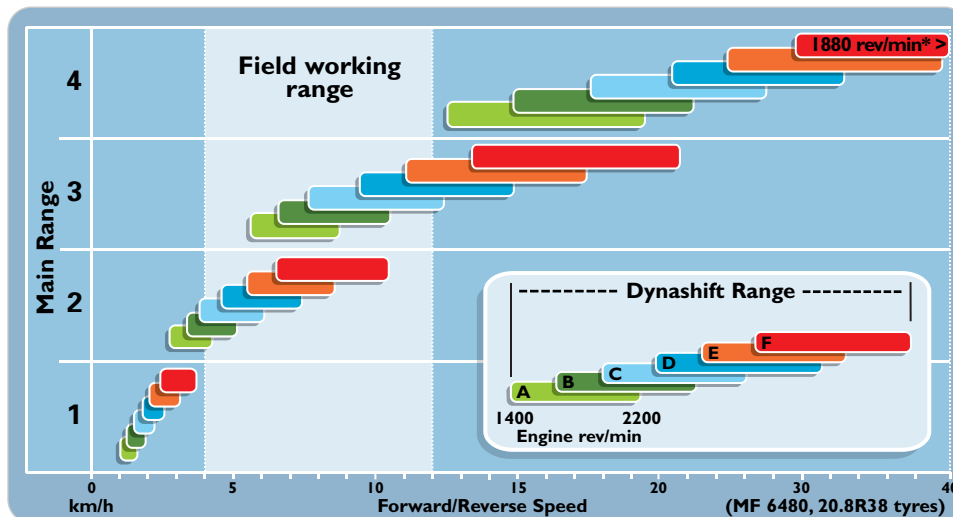
For optimum performance, of the 32 forward speeds at least 15 are in the field working range, so whatever the job, the correct speed is always available. And with matched forward/reverse speeds, shuttle operations are more efficient too.

Power Control

Fully described on page 10, Power Control provides forward/reverse shuttle, powershift changes and fingertip de-clutching, all from a conveniently-placed left-hand lever.

Creep speeds available

Creep and Supercreep speeds are available (depending on model; please see specification), catering for all specialist low-speed applications.



*2000 rev/min on MF 6445/6455

Safe operation

Dynashift is fully protected against inadvertent selection of the wrong range because the Transmission Control system prevents changes from one range to another if the speed of the tractor is too great for the gears to be properly engaged.

Oil-cooled clutch

All models have oil-cooled clutches with a dedicated oil supply, giving smooth operation and durability. Two multi-plate clutches, one for forward drive and one for reverse drive, ensure a controlled, modulated transition from forward to reverse drive.



High productivity power take-off

With very low power losses, the highly efficient MF 6400 Series transmission provides more usable power at the PTO. And with standard PTO speed achieved at only 90% of rated engine speed, there is always power in reserve.

More PTO choice

A wide range of fully independent PTO systems is available, including 540/750/1000 rev/min plus a proportional ground speed option on most models.

Speed selection is by in-cab or external shiftable lever,

with exchangeable flanged shafts. The flanged PTO shaft is extremely strong and provides a simple, 'oil-less' shaft change.

Control for front (optional) and rear systems is grouped conveniently to the right. Additional fender-mounted engagement and emergency stop buttons also give added convenience and safety.

Power with economy

540 and 1000 rev/min PTO speeds are achieved at, or near to 2000 rev/min, which is also maximum engine power. With the benefit of a 'constant power' band of at least 400 revs and the ability, with Dynashift, to

closely match ground speed at

the chosen engine speed, you can always achieve the right PTO speed, forward speed and power – with optimum economy.

Economy PTO

For lighter duty work, '540 Eco' (750) PTO speed is at around 1550 engine revs, further improving fuel economy and helping to reduce in-cab noise levels.





Automated PTO control

In 'Auto' mode, the PTO is automatically disengaged when the linkage is raised (or when travelling at speeds above 25 km/h) and re-engaged when the linkage is lowered.

Further reducing the need for operator input, the Transmission Controller monitors and controls PTO engagement depending on load. This gives a smoother 'take-up', giving improved driver comfort and also helping to protect both implement and tractor from damage due to inappropriate engagement.

Differential locks and 4-wheel drive

The Transmission Controller also takes care of many of the normally repetitive tasks of 4-wheel drive and differential lock operation.

It ensures that you have 4-wheel drive when you need it; when braking and when the differential lock is engaged, and switches it off when you don't; at over 14 km/h.

The system also engages the differential lock when you need it (after initial manual engagement); when the implement is lowered into work and disengages it when you don't;

when the linkage is raised or when using independent brakes and also when travelling at more than 14 km/h.

QuadLink front axle

Both QuadLink 4-wheel drive axle systems (4- and 6-cylinder models) feature a 'high pivot' design for excellent ground clearance. This also helps to maintain good turning angles even with larger tyre sizes.



Fender-mounted PTO controls for added convenience and safety



PTO speed selection, engagement and 'Auto' activation switches are well placed and easy to operate



MF hydraulics: power with precision

MF 6400 Series tractors have a lift capacity of up to 9100 kg. But because power is nothing without control, Massey Ferguson's Electronic Linkage Control system has been continually refined to maintain its position as the industry leader in terms of accuracy, responsiveness, ease of use and reliability.

And with a choice of hydraulic systems providing high flows for both linkage and external services, you can match your hydraulic power requirements precisely.

Highly accurate draft control

Massey Ferguson's digital ELC system gives the highest standards of draft control with more accurate depth settings and better ground contour following. The result is more weight transfer and better traction, giving less wheel slip, reduced tyre wear and fuel consumption and greater output.

Simple ELC panel

With the more frequently used controls armrest-mounted and a straightforward ELC control panel, accurate operation is easy. In addition to all the normal linkage control

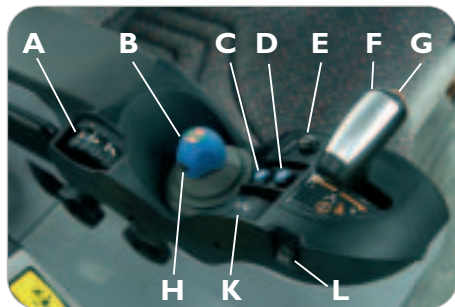
functions, the system also incorporates advanced integrated features. Sensitivity, quick soil engagement and automatic drop speed are all standard.

For faster implement attachment, the rear linkage can also be operated from conveniently mounted push buttons on each rear fender.

Natural layout of controls improves comfort and productivity (Dyna-6 model shown).

Main right-hand controls (Dyna-6):

- A. ELC Height/depth control switch
- B. SMS joystick
- C. SMS memory switch
- D. SMS On/Off switch
- E. One-touch headland management button
- F. Dyna-6 gear lever
- G. Range selection
- H. SMS 3rd function switch
- K. ELC lift/lower switch
- L. ELC 'Quick entry' button



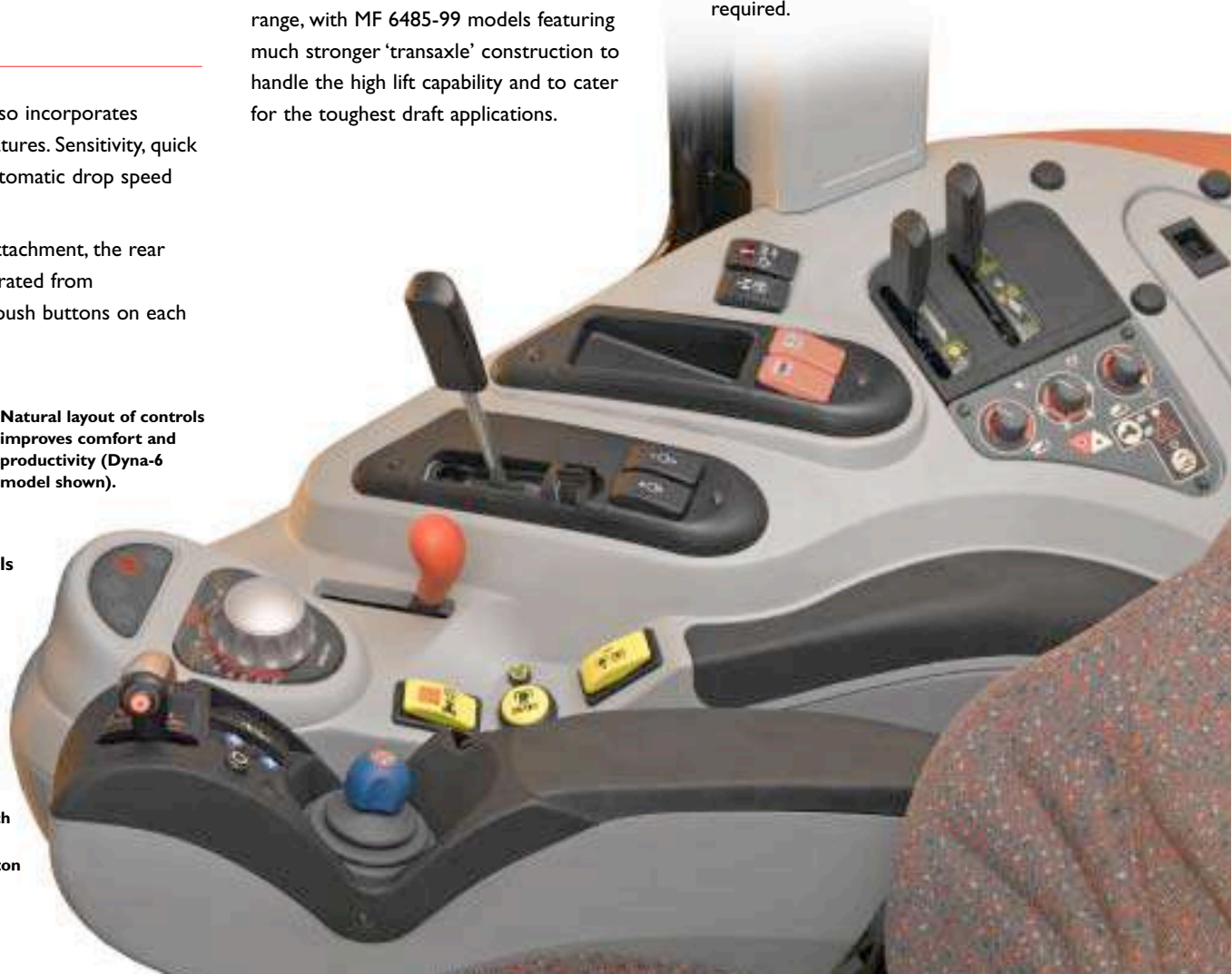
Powerful hydraulics

Depending on model, there is a choice of 'Open Centre', 'Twin Flow' (load sensing) and 'Closed Centre Load Sensing' (CCLS) hydraulic systems, each providing high oil flow and pressure for the linkage and external services.

Lift capacity is excellent throughout the range, with MF 6485-99 models featuring much stronger 'transaxle' construction to handle the high lift capability and to cater for the toughest draft applications.

Load sensing hydraulics

The Twin Flow and Closed Centre Load-Sensing hydraulic systems provide high oil flow for both linkage and external services, with virtually instantaneous response. And as flow and pressure are automatically regulated according to demand, there's no wasted power - or fuel, used in pumping oil that's not required.



On MF 6497/99, armrest-mounted fingertip control of the spool valves can be specified



Auxiliary spool valves

Implement hook-up is easy too, with 'decompression couplers' that enable equipment to be connected and disconnected under pressure. They are also angled outwards for easier access.

With a choice of mechanical or electro-hydraulic valves, SMS or, on MF 6497/99, armrest-mounted fingertip control switches, complex equipment can be controlled more easily and effectively than ever.

Power beyond

Built into the Twin Flow and CCLS spool blocks is the 'Power beyond' facility. Extra flow and return pipes provide oil flow directly from the pump, enabling additional remote spool valves to be connected, without occupying the existing couplers.

Rear axle and linkage

The rear axle and 3-point linkage are highly specified. Twin external lift rams, high visibility pick-up hitch and drawbar, quick-attach hook top and lower links, external linkage control on both rear fenders, twin variable float telescopic stabilisers and three spool valves (two on 4-cylinder models) are all standard equipment.



Active Transport Control (ATC)

When driving across the headland or transporting heavy mounted equipment, implement 'bounce' can occur.

Active Transport Control is integrated into the ELC system as standard. It is a shock-absorbing system that minimises the 'pitching' action – automatically adjusting for different implement weights. This gives smoother, safer, faster transport and, by reducing shock loads through the lift rams and hydraulic circuits, also minimises the risk of damage to the lift system.

Integrated Active Transport Control improves control at the headland and gives faster, safer transport of mounted equipment

Powerful linkage and hydraulics provide up to 9100 kg lift capacity (MF 6485 with height-adjustable hitch shown). Inset: MF 6470 with automatic pick-up hitch.

ATC is independent of the transport lock and can be controlled either manually or automatically, whereby it is linked to the ELC lift/lower switch. It is then activated when the implement is raised and deactivated when the implement is lowered.

ATC and QuadLink

ATC operates in conjunction with the (optional) QuadLink suspended front axle to give exceptional stability when transporting or operating mounted equipment at speed, giving greater comfort, safety and productivity.



Advanced Field and Headland Management Systems

From the precision of the MF ELC system to the most sophisticated programmed control of complex front- and rear-mounted combination equipment, the MF 6400 Series has among the most comprehensive Field and Headland Management Systems available today.

Whichever level you choose, the result is simply a more relaxing, more productive working day.

Spool Valve Management System (SMS)

Available as an option on all MF 6400 models the Spool Valve Management System gives easier, more precise, memorised control of two electro-hydraulic, proportional spool valves.

SMS: accuracy and simplicity

SMS enables external hydraulic oil flow rates to be memorised and controlled via an armrest-mounted 'joystick'. Simply move the multi-directional joystick to set the required

hydraulic function and flow, then press the memory button. Each subsequent time that the same function and flow is required, a single movement of the joystick is all that is required.

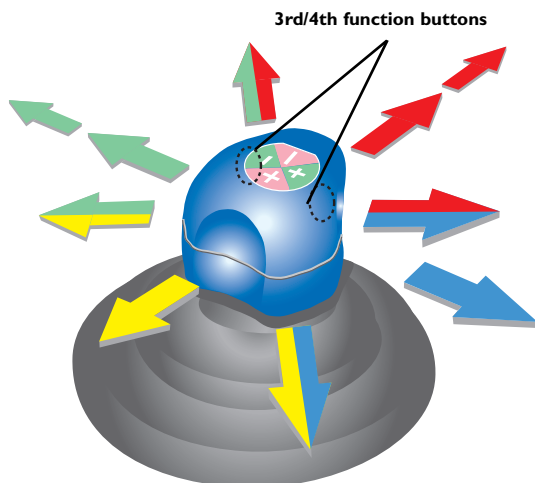
The benefits of SMS

Once the settings have been input, simply move the joystick in the required direction and allow it to return to its 'neutral' position – then let SMS do the work for you! The combination of memorised flow rates and timing with one-touch operation gives greatly simplified field, and especially, headland manoeuvres when operating complex equipment or front and rear combinations.

And, of course, SMS is ideal for faster, more efficient front loader operation too.

The multi-directional SMS joystick controls flow to individual spool valves, split flow to two valves, timing and float functions.

A convenient keypad is used to 'navigate' and input settings in ITCS. Information is displayed in the left-hand display on the instrument console.



Integrated Tractor Control System (ITCS)

ITCS is available as an option on all MF 6400 Series tractors. It provides an 'entry' level of 'field and headland management', ideal if all of the functions of Datatronic III are not required.

ITCS enables you to manage:

- Wheel slip control

ITCS (fitted as standard when Datatronic III is specified) links with the Transmission Controller and ELC system sensors to provide wheel slip control, giving increased traction and improved performance with draft controlled implements.

Wheel slip control maintains high quality work, increases output, reduces tyre wear and protects soil structure. Once switched on, on the ELC panel, within ITCS you can set maximum permitted wheel slip and monitor actual wheel slip in the left-hand display.

- SMS (the Spool Valve Management System) Programme SMS via the touch-sensitive ITCS keypad for even finer adjustment of oil flow, plus precise pre-set kick-out timing.

- Linkage/external services oil flow priority Control, as a precise percentage, the split of oil flow to the linkage and spool valves to ensure optimum efficiency for different applications.

- 'Mini' headland control

The mini headland control interacts with engine speed control to automatically change between A and B engine speeds as the linkage is raised and lowered.

The delay in engine speed change after linkage lift/lower activation can be accurately programmed via the keypad, with a read-out, in seconds, clearly displayed on the left-hand screen.

More information with ITCS

ITCS also gives a read-out of both 'trip' and total fuel usage, and displays pre-set engine speeds, forward speed and PTO speed.





GTA Console makes settings and adjustments easy. Legibility is good in all ambient light conditions. Inset: SD memory card slot for data transfer

It enables automated operation of complex equipment and also gathers and records information in multiple memories. The data recorded can be displayed on the GTA Console and can also be transferred to the office computer via an SD (Secure Digital) card.

GTA 100 and 200 software

Once the data has been downloaded via the SD card, PC-based GTA 100 (standard) and GTA 200 (optional) software can be used for record keeping and analysis:

GTA 100 Communicator - enables machine use and job data to be managed, viewed and exported to third party farm management programmes. It also enables tractor settings to be made on the PC for uploading to the tractor via the SD card.

The GTA Console
The GTA Console is Massey Ferguson's new operator interface for tractor management and implement control.

It features a full-colour screen which can be adjusted for brightness and contrast for clear legibility day or night. For simple operation, there are six buttons for function selection and a large rotary knob for adjusting settings.

Datatronic III and the GTA Console

Now running on the GTA Console, Datatronic III is available on all MF 6400 models (except MF 6445/55).



GTA 200 software enables a range of reports to be produced

GTA 200 Record Keeping - allows machine performance data to be allocated to a specific job or field to produce a range of reports, also enabling accurate crop traceability.

Datatronic III also forms the basis of the next level of the MF 6400 Series' advanced field and headland management control systems, including Dual Control and Trailed Implement Control:

Dual Control

When using semi-mounted ploughs, Dual Control automates furrow entry and exit, aids setting the plough and improves evenness and control of work. Controlled and monitored via the standard ELC panel and Datatronic III, Dual Control automatically moves the plough's furrow/depth wheel in relation to the lower links, so Draft Control keeps the plough parallel to the ground instead of raising only the front furrows.

The result is simple operation, plus the full benefit of wheelslip control when operating semi-mounted ploughs.

Dual Control for front linkage

Front Dual Control operates in a similar way, giving automated depth and entry and exit points with front and rear linkage-mounted equipment.

Trailed Implement Control (TIC)

Trailed Implement Control is a unique system for optimising productivity when using trailed equipment.

TIC uses wheelslip data to automatically regulate working depth. It is operated via the standard armrest-mounted ELC controls with set-up and monitoring via either the Integrated Tractor Control System or Datatronic III.

Dual Control simplifies operation with semi-mounted ploughs



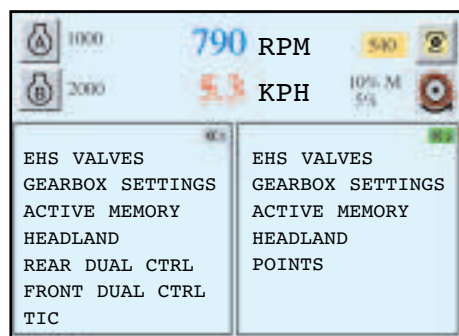
Fully programmed headland and implement control with Datatronic III

Datatronic III is controlled from a main menu divided into six application areas: **Work, Settings, Headland, EHS valves, Memories and Dual Control.**

Detailed below is a brief summary of some of the features accessed from within each of these main categories.

Work menu

This application is used to display and control a wide range of tractor settings and parameters. At the top of the screen, engine and PTO speed, forward speed and wheel slip information is displayed. In the lower section, a wide range of tractor functions can be displayed and controlled.



The Work screen enables you to monitor and programme virtually all of the tractor's electronically controlled functions

Settings menu

The Settings menu primarily enables you to set the GTA Console for the correct brightness - day or night, language, time, units of measurement and buzzer volume.

Headland menu

This menu, quite simply, gives access to the most comprehensive headland management system available today.

It enables either manual or automatic programming of up to 35 operations (from a choice of 41), including 'quick soil engagement', to be activated at the touch of a single button. The sequence can be easily modified at any time and once in the field, can be started, stopped or over-ridden at any time; *giving total flexibility and total control.*



Complex headland sequences of up to 35 operations can be programmed, including flows, timings, function activation and deactivation

Automatic programming

Simply start the 'record' sequence, select 'Auto' mode, then perform the operations of

the headland manoeuvre, either static or in motion. The sequence of each action will be recorded and a time allocated for the complete manoeuvre.

Manual programming

With the tractor static, simply start the 'record' sequence, then set the required functions, actions, flows and timings on the GTA Console. In both modes, the programmed sequence can be edited at any time.

Memories menu

The Memory function enables you to store the parameters of up to six different implements.

Each can be given a name and have a specific headland sequence recorded and replayed at the touch of a button. During each operation, information relating to hours worked, area worked, fuel usage, distance covered and much more, can be recorded.

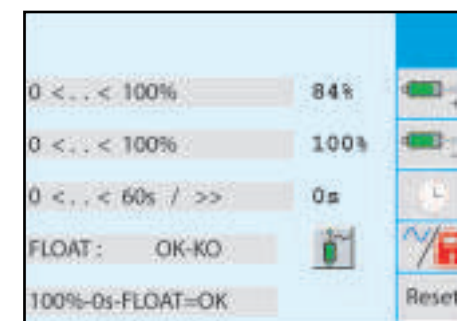
The data is invaluable for contractors and cost-conscious farm managers alike.

1	ROTARY HARROW		
KM	31234 M	33168	Reset
	80.6 L	86.0	
	5:20 H	5.40	
	9.37 HA	3.0 M	
	9.12 L/HA	Ø = 8.65	
	1.94 HA/H	Ø = 1.76	
	14.6 L/H	Ø = 15.2	

A typical Memory screen, showing fuel usage, hours worked, area worked and distance travelled

Electro-hydraulic spool valves menu

The EHS Valves menu is used to set the operating characteristics of up to four electro-hydraulic spool valves. You can enable or disable 'float' and accurately set ram extension and retraction, flow rates and kickout timing.



Dual Control menu

This menu enables fully programmed command of front and rear Dual Control and Trailed Implement Control, so maximum output and work quality can be achieved with a minimum of operator input.



Memorise implement heights, entry and exit points and flow rates; replay at the touch of a button

...and more high-productivity options

Front linkage and PTO

Using front/rear implement combinations is known to give significant time savings with consequent benefits in fuel usage, manpower utilisation and reduced soil compaction.

Front linkage with 2.5, 3.5 and 5.0 tonne lift capacity is available to suit tractor horsepower. Front PTO is also available and the option of external lift/lower buttons, for added convenience.

Extra visibility

'Steep nose' bonnet

A 'steep nose' bonnet design is available on MF 6445 and 6455. The extra visibility is ideal for front loader work and single pass operations with front mounted equipment.

Visio roof

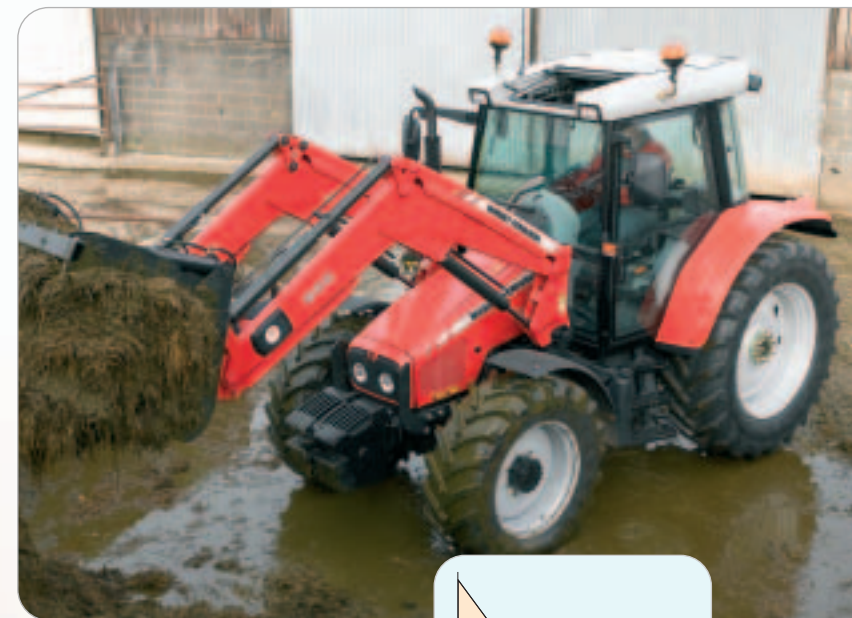
The Visio roof is an opening glass roof panel that provides greatly improved upward visibility from the normal seating position, which is particularly useful in front loader operation when, for example, stacking bales to maximum height.

Panoramic cab (right)

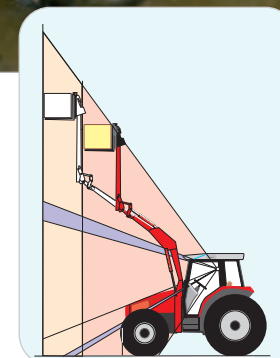
MF 6445 to MF 6480 models are also available with the Panoramic Cab.

The pillarless design of the right-hand side of the cab and the clear polycarbonate window provide a perfect view of side-mounted equipment. Having all of the benefits of the standard cab, Panoramic models are also available with the steep nose bonnet design and the Visio roof.

Below and main picture:
Front linkage and PTO
can significantly increase
productivity



'Steep nose' hood design
and Visio roof provide
enhanced visibility



MF 6400 Specifications: ● Standard ○ Optional – Not applicable/available ^ Also available as a 'Steep Nose' model ■ Also available with Panoramic cab

		MF 6445 [^]	MF 6455 [^]	MF 6460 [■]	MF 6465 [■]	MF 6470 [■]	MF 6475 [■]	MF 6480 [■]	MF 6485	MF 6490	MF 6495	MF 6497	MF 6499
Engine power													
@ 2200 rev/min	*ISO hp (kW)	90 (67)	100 (74)	115 (84)	120 (87)	125 (89)	135 (98.5)	145 (106)	155 (113)	170 (125)	185 (137)	200 (147)	215 (158)
With transport boost	*ISO hp (kW)	—	—	125 (89)	130 (95)	135 (98.5)	145 (106)	155 (113)	165 (120)	180 (132,5)	195 (143)	215 (158)	230 (169)
Max. torque @ 1400 rev/min	*Nm	380	415	471	500	492	565	590	650	720	780	883	926
Specific fuel consumption [†]	g/kWh	210	209	208	217	207	215	214	204	200	200	200	200
*ISO TRI4396 † Optimum specific fuel consumption (Manufacturer's test)													
Engine													
Water cooled, direct injection diesel	Make	Perkins	Perkins	Perkins	Perkins	Perkins	Perkins	Perkins	SISU Diesel	SISU Diesel	SISU Diesel	SISU Diesel	SISU Diesel
Type		1104C-44T	1104C-44T	1104C-E44TA	1106C-E60TA	1104C-E44TA	1106C-E60TA	1106C-E60TA	66.ETA	66.ETA	66.ETA	74.CTA	74.CTA
Capacity/number of cylinders	litre/no.	4.4/4	4.4/4	4.4/4	6.0/6	4.4/4	6.0/6	6.0/6	6.6/6	6.6/6	6.6/6	7.4/6	7.4/6
Aspiration:	Turbo/Intercooler	●/—	●/—	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
Clutch													
Operation and control		Forward and reverse, multi-plate, oil-cooled clutches with hydraulic actuation and electronic control											
Transmission													
Dyna-6 semi-powershift gearbox with 24 forward and 24 reverse speeds, left hand 'Power Control' of 6-speed Powershift, plus Speedmatching		●	●	●	●	●	●	●	—	—	—	●	●
AutoDrive: Speedmatching, plus AutoDrive, giving manual, semi- or fully-automated Dynashift changes		○	○	○	○	○	○	○	—	—	—	○	○
Creep speeds: Additional 12F/12R Creep speeds or 24F/24R Supercreep speeds		○	○	○	○	○	○	○	—	—	—	○	○
Dynashift Eco synchromesh gearbox with 32 forward and 32 reverse speeds, left hand 'Power Control' of 4-speed Powershift plus Speedmatching		—	—	—	—	—	—	—	●	●	●	—	—
AutoDrive: Speedmatching, plus AutoDrive, giving manual or semi-automated Dynashift changes		—	—	—	—	—	—	—	○	○	○	—	—
Creep speeds: Additional 16F/16R Creep speeds		—	—	—	—	—	—	—	○	○	○	—	—
Power take-off - rear													
Operation and control		Independent, electro-hydraulic with fender-mounted start/stop control and headland automation											
Speed change:													
Shifttable, flanged - external/in-cab control		●/○	●/○	●/○	●/○	●/○	●/○	●/○	●/○	●/○	●/○	●/○	●/○
PTO speed @ engine rev/min													
540 rev/min (6 spline shaft)	rev/min	2000	2000	2000	2000	2000	2000	2000	1900	1900	1900	1900	1900
1000 rev/min (21 spline shaft)	rev/min	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Ground speed PTO		○	○	○	○	○	○	○	○	○	○	—	—
Economy PTO		○	○	○	○	○	○	○	○	○	○	○	○
540 or 1000 rev/min	rev/min	1550	1550	1550	1550	1550	1550	1550	1520	1520	1520	1520	1520
Shaft diameter, 35 mm (1 ³ /sin)		●	●	●	●	●	●	●	●	●	●	●	●

MF 6445^{▲▲} MF 6455^{▲▲} MF 6460[■] MF 6465[■] MF 6470[■] MF 6475[■] MF 6480[■] MF 6485 MF 6490 MF 6495 MF 6497 MF 6499

Front Power take-off and linkage (○)

Operation and control	Independent, electro-hydraulic. 6 or 21 spline, 35 mm (1 3/8 in) diameter PTO shaft. 1000 rev/min @ 2040 engine rev/min												
Linkage lift capacity	kg	2500	2500	2500	2500/3500	2500	2500/3500	2500/3500	3500	3500	3500	3500/5000	3500/5000

Linkage and hydraulics

Linkage control	Electronic control of draft, position, Intermix, height/depth, rate of drop, 'quick soil engagement' and Active Transport Control.												
Max oil flow/pressure													
Open Centre	litre/min / bar	●58/200+42/17	●58/200+42/17	●58/200+42/17	●58/200+42/17	●58/200+42/17	●58/200+42/17	●58/200+42/17	—	—	—	—	—
Twin Flow (load sensing)	litre/min / bar	○100/200	○100/200	○100/200	○100/200	○100/200	○100/200	○100/200	●100/200	●100/200	●100/200	●100/200	●100/200
Closed Centre (load sensing)	litre/min / bar	○110/200	○110/200	○110/200	○110/200	○110/200	○110/200	○110/200	○110/200	○110/200	○110/200	○110/200	○110/200
Lower links, quick-attach hook end		●	●	●	●	●	●	●	●	●	●	●	●
Maximum lift capacity, at link ends	kg	5850/7100	5850/7100	5850/7100	7100	5850/7100	7100	7100	9100	9100	9100	9100	9100

Auxiliary hydraulics

Spool valves - type	Single/double acting mechanical Spool valves. Angled couplers with connect/disconnect under pressure function												
- number as standard		2	2	2	3	2	3	3	3	3	3	3	3
Optional, all models	Up to 4 single/double acting mechanical spool valves with flow divider, detent/kick-out, zero leak or float facility												
Optional, CCLS models only	Spool Valve Management System (SMS), up to 4 (5, with optional fingertip control, MF 6497/99) single/double acting electro-hydraulic spool valves with flow divider, detent/kick-out, zero leak or float facility												

Steering

Hydrostatic, tilt/telescopic steering column		●	●	●	●	●	●	●	●	●	●	●	●
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Brakes

Oil-cooled, single plate discs, hydraulic actuation													
With power assistance		—	—	○	●	○	●	●	●	●	●	●	●
Less power assistance		●	●	●	—	●	—	—	—	—	—	—	—
Trailer brakes; hydraulic, pedal-operated		●	●	●	●	●	●	●	●	●	●	●	●

4WD front axle

'Hydralock' differential lock		●	●	●	●	●	●	●	●	●	●	●	●
QuadLink suspended axle		○	○	○	○	○	○	○	○	○	○	○	○

'Standard' wheels and tyres (Full range available, please consult your Dealer)

Front		340/85R24	340/85R28	340/85R28	380/85R28	380/85R28	380/85R28	420/85R28	480/70R28	480/70R28	420/85R30	420/85R30	480/70R30
Rear		420/85R34	420/85R38	420/85R38	460/85R38	460/85R38	460/85R38	520/85R38	580/70R38	580/70R38	520/85R42	520/85R42	620/70R42

Track adjustments (with 'standard' wheels and tyres)

Front - 2WD (not available in UK)	m	1.54-2.33 ○	1.54-2.33 ○	1.54-2.33 ○	—	—	—	—	—	—	—	—	—
- 4WD/QuadLink	m	1.41-1.90	1.41-1.90	1.55-2.03	1.55-2.03	1.55-2.03	1.65-2.13	1.65-2.13	1.65-2.13	1.65-2.13	1.65-2.13	1.65-2.13	1.65-2.13
Rear	m	1.50-2.11	1.50-2.11	1.70-1.95	1.70-1.95	1.59-2.21	1.59-2.21	1.68-2.32	1.68-2.32	1.68-2.32	1.68-2.32	1.68-2.32	1.68-2.38

Weights and dimensions (approximate, with 'standard' wheels and tyres, 4WD model less fuel)

Weight , Minimum, no ballast	kg	4150	4220	4570	5240	4610	5400	5470	6550	6590	6770	7070	7550
Dimensions (Less front weights)													
Overall length, to lower link ends	m	4.23	4.23	4.27	4.52	4.29	4.52	4.56	5.00	5.00	5.00	5.07	5.07
Overall height - over cab	m	2.78	2.82	2.82	2.90	2.86	2.90	2.94	3.06	3.10	3.10	3.10	3.10
Minimum width	m	1.98	1.98	1.98	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.55
Wheelbase	m	2.46	2.46	2.55	2.78	2.55	2.78	2.78	3.00	3.00	3.00	3.00	3.00
Turning circle; diameter, less brakes, 2WD/4WD	m	7.4/8.4	7.4/8.4	7.7/8.9	-9.6	-8.4	-9.6	-10.0	-11.4	-11.4	-11.4	-11.4	-11.4

Fuel capacity	●/○ litre	130/200	130/200	130/200	270/—	130/200	270/—	270/—	380/—	380/—	380/—	380/—	380/—
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Design, testing and manufacturing

Massey Ferguson has a long tradition of innovation and engineering excellence. Based on continual questioning and analysis of farmers' needs, our products are designed, tested and built using the latest manufacturing techniques to enhance your productivity, efficiency and convenience.



World's largest distribution network

With a network of more than 5000 dealer outlets in over 140 countries, Massey Ferguson can claim to have the world's most comprehensive farm machinery distribution network, dedicated to providing local service of the highest calibre.



Financial support

Massey Ferguson retail finance schemes are widely available to help fund machinery purchase. With the emphasis on flexibility, these schemes are tailored to customers' specific business needs and to take account of cash flow and seasonal business cycles. Depending on the market, financial options include leasing, hire purchase, contract hire and loan facilities.



manager service contract

manager service and repair contract

Imagine a 5 year period of known running costs, operating at a level of optimum machinery uptime. Your Massey Ferguson dealer provides vital support to assist with the important task of budgeting expenditure. A manager service and repair contract details the hourly cost for routine maintenance and repair cover carried out on your machine by your dealer. A machine is less likely to fail if maintained by skilled Massey Ferguson technicians operating to the manufacturer's routine maintenance schedule.

There is no substitute for having a team behind you equipped with the latest technology in diagnostic and testing equipment plus years of experience and training, which means they service your machinery with a 'preventative eye', thus minimising risk of future failure.

Every effort has been made to ensure that the information contained in this publication is as accurate and current as possible. However, inaccuracies, errors or omissions may occur and details of the specifications may be changed at any time without notice. Therefore, all specifications should be confirmed with your Massey Ferguson Dealer or Distributor prior to any purchase.



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