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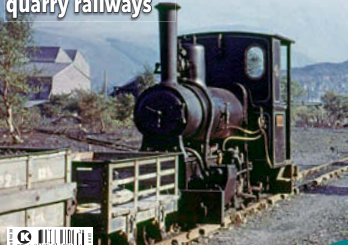
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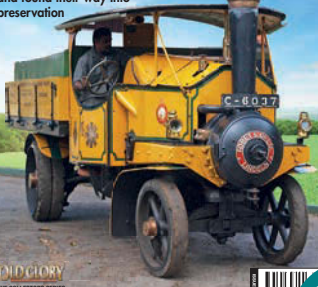
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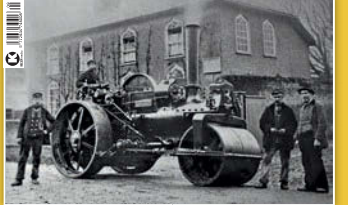
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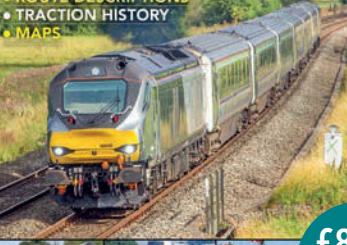
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WELCOME

Welcome to the fifth edition in the *Ferguson and MF Tractor Collection* bookazine series which, this time, focuses on a selection of the larger Red Giants.

Massey Ferguson's impressively successful 100 Series of tractors – known affectionately as the Red Giants – was revealed to an expectant public in 1964, as a four-model line-up consisting of the French-built MF 130, plus the MF 135, the MF 165 and the range-topping MF 175. The latter three were all built at the company's Banner Lane factory, in Coventry and, of those, it was the MF 135 that proved to be the runaway success.

That model continues to be the one that grabs most of the limelight. Its phenomenal sales and near perfect balance between price, performance and practicality, ensured its rapid and widespread acceptance among farmers during its working days. Then, almost inevitably, it went on to cement a place in the hearts of classic tractor enthusiasts around the world, and remains one of the most popular models there is today.

However, another inevitability of the MF 135's all-conquering popularity is that the others in the Red Giants range are often overlooked. Both the models in the original range, and those that followed as the 100 Series developed, typically fell under the MF 135's considerable shadow. In many respects, though, that's a great shame, as the other models offered are all superb tractors in their own rights.

So, the purpose of this bookazine to shine a much-deserved light on models such as the MF 165, the MF 175 and the MF 188, to help set the record straight in terms of the many benefits these fine machines have to offer enthusiast owners today. The collection of article includes fascinating owners' tales, purchase pointers, restoration stories and much else besides. It's content that's designed to fire your enthusiasm for a number of the 'alternative' Red Giant models, and to

encourage you to get involved and help preserve one or more of these classic tractors yourself.

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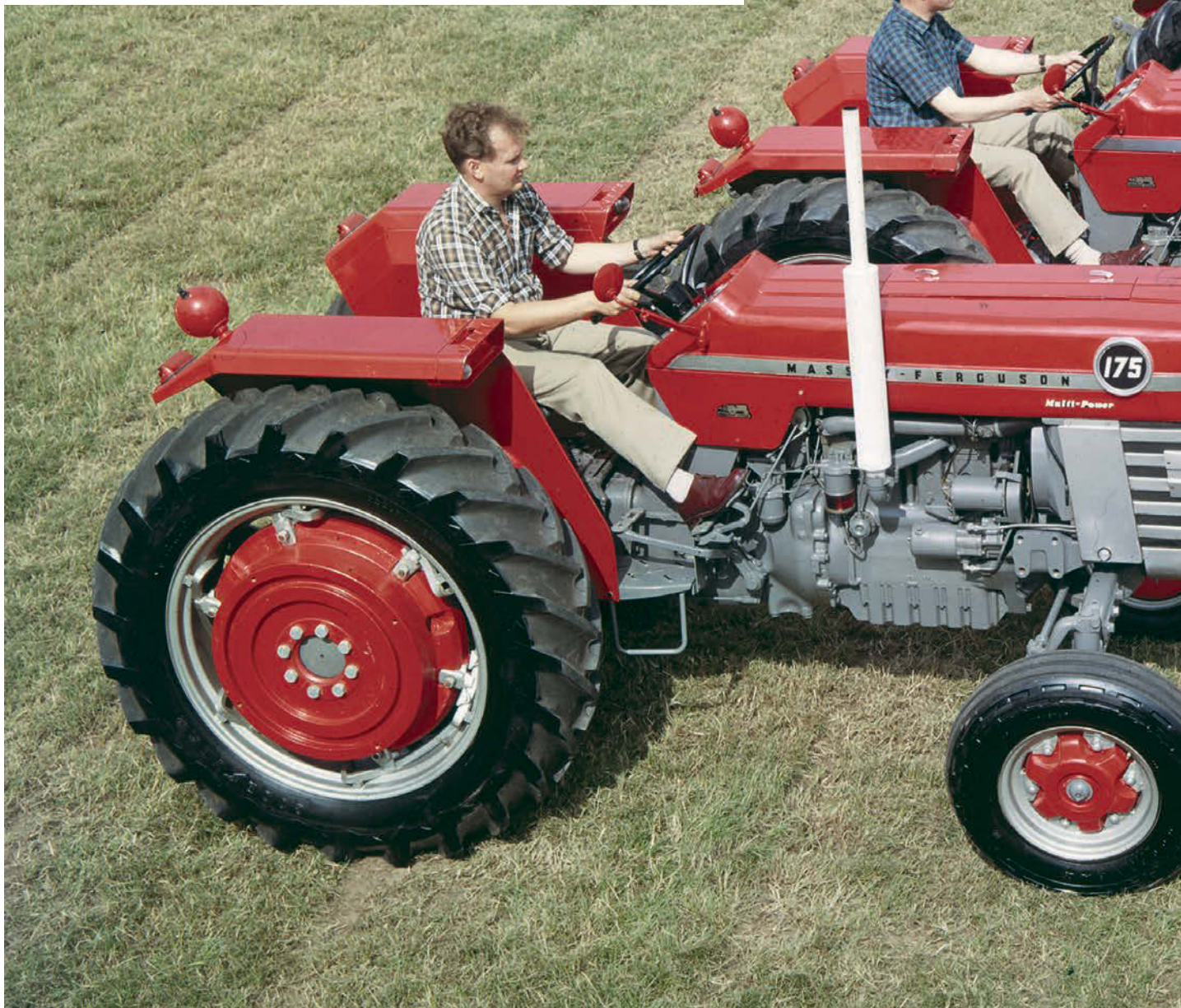
Peter Love meets Massey Ferguson Enthusiast Mick Blunt, and his beautifully-restored MF 188 Super-Spec.



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The rise of the Red Giants

The 100 Series Massey Ferguson range included some of the most popular tractors of their era. **Alan Barnes** explains how the range was launched





A period publicity photograph of the new Red Giant range tractors. (Pic: Agco Archive)

During the late summer of 1964, Massey Ferguson organised its 'Seeing is Believing' tours as one of the first promotional events in the UK for the new 100 Series range of tractors.

That series of nationwide tours could well have been regarded as something of a teaser, as the emphasis of the roadshows was more on the demonstration of existing MF 35 and MF 65 tractors, than on the eagerly-awaited new machines. The events were intended to stimulate the 'end of line' sales of these models, while potential customers for the yet-to-be-released new models were provided with a glimpse of the future, getting the opportunity to see examples of some of the new Massey Ferguson 100 Series tractors.

Practical demonstrations

These tour events were handled by four regional teams, and were practical demonstrations of the company's existing tractors being used with ploughs and a range of other implements. As far as the established MF 35 and MF 65 tractors were concerned, there was really nothing new on show. But the events also showcased the new MF 135, MF 165 and MF 175 models from the soon-to-be-released 100 Series range.

The careful planning of the demonstration tours was just one element of the comprehensive development project that the company had undertaken to bring its new tractors to the market. The planning, marketing and development work had involved some considerable expenditure, with estimates putting the figure spent at around \$40million. But Massey Ferguson believed this outlay not only to be fully justified but also essential if it was to remain a leading tractor manufacturer. It was also estimated that one million hours of engineering time was expended on the DX project, which

RANGE OVERVIEW



The MF 130 was built at the Massey Ferguson factory in France. (Pic: Agco Archive)

included development of the MF 1100 and MF 1130 models, as well as the 100 Series.

As the company stated at the time, the development of the new range had been the 'biggest planning operation in the UK operation's history', and that the 'new models would ensure the prosperity of the company, and all its distributors, for many years to come. They will help us to maintain our leading place in the market, and to maintain full employment.'

Distributor and dealer confidence was a vital factor following the 'issues' with the Grey and Gold Ferguson, and the problematic Standard 23C engine that had gained a reputation for poor starting in cold weather. The use of the Perkins engine in the MF 35 had resulted in a very fine machine that certainly boosted confidence among the sales teams. However, it

“The planning, marketing and development work had involved some considerable expenditure, with estimates putting the figure spent at around \$40million”

was essential for any new range to improve on the existing models.

Mix-and-match approach

By the late 1950s and early '60s, the company had realised that it didn't really have a tractor 'range' as such, but had introduced various models to meet perceived market

requirements. For the higher-powered tractors needed for the North American market, it had introduced various models from Oliver and Minneapolis Moline. This mix-and-match approach wasn't ideal and had resulted in gaps in the Massey Ferguson line-up with no suitable machine to meet particular areas of the market. In addition, this 'mish mash' of models did not have any consistency of specification, which made the existing line-up look rather contrived, which indeed it was.

Technological advances were also being made in tractor development and to protect its market share, the company would need to plan to develop and introduce a comprehensive new range of tractors. By late 1962 the Detroit Experimental or DX tractor programme had been established with the aim of developing



A 1966 example of the MF 130, owned and restored by Craig MacDonald. (Pic: Alan Barnes)

YEAR OF THE RED GIANTS

Massey Ferguson announced that 1965 would be the Year of the Red Giants, and that the world would see: *The most important breakthrough in tractor design ever. Massey Ferguson – first with the Ferguson System – now brings you the most flexible range of tractors ever built. The Red Giants match your needs more exactly and more economically than any tractor range has ever done before.*

The company had heralded the new range as: *The most advanced machines on the market with excellent styling, outstanding performance and a new advanced Ferguson System. There is a model to suit any farm – from the smallest market garden to the largest grain growing estate.*

tractors that could be assembled from components produced all over the world and which would also incorporate an advanced Ferguson System.

INTRODUCING THE RED GIANTS



Bombarding the public with Red Giant publicity was a key aspect of this important model range launch. (Pic: Agco Archive)

RANGE OVERVIEW

In the US the project team of around 150 people included engineers, draughtsman and testers and over 30 prototype DX machines were built. Some of the later DX prototype tractors were brought to the UK for further testing and evaluation in 1963 and during this time the machines were painted all-over Stoneleigh Grey rather than the standard red and grey combination.

Effective teamwork

As the company also recorded at the time: 'Every department in the United Kingdom Company has been involved. While it is impossible to detail all the work, the tractors owe their development to a marriage between the Product Planning Department and Engineering. As a first step, Product Planning sent experts into the field to determine just what farmers need in terms of new tractors. Market and Economic Research Department were also

“By the late 1950s and early '60s, the company had realised that it didn't really have a tractor 'range' as such”

conducting surveys finding out the volume of tractors which the market could absorb.'

On the basis of this research, the designers were given the go-ahead to produce the first prototype machines, which were then subjected to rigorous testing which, in turn, led to modifications to the initial designs.

One additional element to this stage of the development was secrecy, as details of the new models had to be kept away from competing manufacturers at all costs. Prototype machines during testing carried no model numbers and when being photographed the decal plates were blanked out; but concealing the new styling was not



The MF 135 would become the best-selling tractor in the Red Giants range. (Pic: Agco Archive)



The Massey Ferguson 135 was fitted with the Perkins AD3.152 power unit. (Pic: Alan Barnes)

easy. The rounded smooth lines of the FE 35 and MF 35 had given way to a more dramatic angular design unlike anything that the company had previously produced. David Walker noted that: "My colleague, David Lees, was one of the Field Test team and assures me that a number of the prototype chassis were run with MF 35/65 sheet metal which was a good camouflage for the new parts."

It had already been decided that the new range, which was aimed at the worldwide market, would not only be built in the UK but also at the Massey Ferguson plants in the US and in France. As far as the UK launch was concerned the range would comprise four models; the MF 130, MF 135, MF 165 and MF 175 - although only three of these would actually be built in the UK. The MF 130, the smallest model in



A pre-production Massey Ferguson 165 with an MF 29 seed drill, photographed in 1964. (Pic: Agco Archive)



One of the official, post-launch photographs from 1965, showing the MF 165 working with a MF 20 baler. (Pic: Agco Archive)

the range although included in the UK launch was actually built at the company's factory in France.

With the development testing of the prototypes completed and

the designs cleared for production it was necessary to have a full programme ready to introduce the new range to the market. This aspect of the project was the responsibility

of the Marketing Planning Department and one of the most important elements of a launch of this scale was to prepare and make available a mass of promotional

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INITIAL MODEL SPECIFICATIONS				
	MF 130	MF 135	MF 165	MF 175
Engine	Perkins A4.107	Perkins AD3.152	Perkins AD4.203	Perkins A4.236
Cylinders	4	3	4	4
Capacity	1.753 Litre	152.7 cu in	203.5 cu in	236 cu in
HP	30 @ 2250rpm	45.5 @ 2250rpm	58.3 @ 2000rpm	66.4 @ 2000rpm
Gears	8 fwd, 2 rev	6 fwd, 2 rev	6 fwd, 2 rev	6 fwd, 2 rev
Multi-Power	-	12 fwd, 4 rev	12 fwd, 4 rev	12 fwd, 4 rev
PTO Speed	540 @ 1890rpm	540 @ 1684rpm	540 @ 1684rpm	540 @ 1684rpm
Linkage	Category 1	Category 1	Cat 1 & 2	Category 2
Overall length	109in	118in	132in	139in
Overall width	63in	64in	72in	72in
Grd. clearance	55in	12in	14in	17.5in
Turning radius	10ft 7in (with brakes)	19ft 3in	22ft	23ft 6in
Weight	2600lb	3200lb	4476lb	6500lb
Fuel tank	10 gallons	8.5 gallons	15 gallons	18 gallons

material including advertising brochures and technical literature.

Painstaking preparation

The preparation of such material, which involved not only written technical details but also a great number of photographs and drawings, was a time-consuming exercise. The General Marketing Planning Manager, John Varley, brought together a team of specialists taken from several different departments within the company and this group was given the responsibility of preparing all the



The MF 165 came with Category 1 and 2 rated linkages. (Pic: Alan Barnes)



Dealerships and salesmen were thoroughly primed with information to persuade the customer to make an informed choice about their next tractor, such as this MF 165 with discs. (Pic: Agco Archive)

material that would be needed. Ted Everett recalled that his photographic work started in March 1964 with the tractors being photographed at Park Farm at Stareton, which was opposite the Stoneleigh Training School. The pictures of complete tractors and close up details would be used to illustrate the service and instruction manuals as well as the colourful advertising brochures.

Details of their efforts were noted in the company's in-house newspaper. The team, under the leadership of Product and Sales



Many of the Red Giants are still in regular use today, such as this MF 175 in East Sussex. (Pic: Alan Barnes)

Training Manager, Mr Phil Morley, worked for months – often under difficulties and always against the clock to complete the project. Their work, together with that of everyone else concerned with the launch, was co-ordinated by a computer at Birmingham University. The first step in the marketing of any new product is to capture the imagination and enthusiasm of the people who are going to sell it – the distributors and dealers, and the sales staff.

The company decided to present the tractors to distributors at a large-scale convention held in Lisbon, Portugal. A report on the event noted: *The principals of each distributorship, with their wives, together with Massey Ferguson personnel, were flown to Lisbon in a great airlift. Arriving on the afternoon of October 27th, they settled down to a series of presentations designed on original and often amusing lines.*

“Details of the new models had to be kept away from competing manufacturers at all costs”

The events were arranged to provide a crescendo of interest.

Early announcements

On the first day, the distributors were told of new product introductions such as balers and general machines. They were also introduced to a series of merchandising programmes, but with no mention of the tractors. On the morning of the second day the distributors and their wives attended what promised to be a fashion show at Lisbon's attractive Ritz Hotel. However, this was a show with a difference, for the four tractors made their appearance among the models.

Later in the morning the tractors were presented in technical detail using a television presentation based on Franklin Engleman's *Other Man's Farm*. The intriguing feature of the presentation was that Franklin Engleman carried on a conversation from a giant TV screen with MF Executives who were standing in the conference hall.

The technicians involved in the presentation were commended on their split-second timing for the whole programme which was completed with only one, very brief break in the transmission. By the time the presentation had finished, everyone had been given a clear picture of the new tractors, the new implements designed for them, as well as the merchandising plans.

In Part 2 of this article I'll cover the actual introduction of the Red Giants, and how the news about them was spread to the public.

The rise of the Red Giants



Massey Ferguson launched a spectacular PR campaign announcing that the new 100 Series tractors would make 1965 the Year of the Red Giants, as Alan Barnes explains



Massey Ferguson 175 and 165 models on display at a Massey Ferguson Open Day. (Pic: Agco Archive)

Following a successful presentation of the tractors to distributors at a large-scale convention held in Lisbon, Portugal, the next stage in the The Red Giants launch process was to create a body of informed experts who would be able to go out to meet farmers and talk – with authority – about the new range of tractors. Three further UK presentations were arranged, the first taking place on November 30th at the company's Product and Sales Training Department, at Stoneleigh.

These presentations were based on the Lisbon programme (as outlined in Part 1), but concentrated on the more technical details. The first conference was attended by the distributors' sales managers, general managers and branch managers, while subsequent conferences were aimed at providing information for the service managers.

Additional launch details

David Walker was kind enough to provide me with some additional details concerning the demonstrations: "Perhaps the most memorable part of the demonstration involved illustrating the effectiveness of the new Pressure Control weight transfer system. The salesmen were taken down to the field in open trailers, which had been fitted with seats, and each being pulled by a brand new MF 100 Series tractor.

"The field demonstration – which had been set up by the sales training supervisor, John Westrope – would then take place. After the final demo, using the MF 175 on a set of very large and heavy discs and emphasising the benefits of Pressure Control, came the pièce de résistance. The trailers, nine of them, were then coupled together making for a ridiculously heavy load for a single tractor to pull. However, aided by Pressure Control, a single machine lifted them out of the field and returned them to Stoneleigh. Salesman who

RANGE OVERVIEW

were there at the time talked about this feat for years!”

Although some two years of design, development and industry presentations had now been completed successfully, the new 100 Series had yet to be introduced to the general public. Advertising had always had a high profile within the company, and the use of artwork and photography had long been combined to produce brochures that were not only technically informative but also visually attractive.

The company explained: ‘Massey Ferguson advertising has always broken new ground. In 1961 we were the first agricultural machinery company to pioneer the use of big ‘gatefold’ advertisements in full colour. At the same time, we used a barrage of television commercials on almost every station in the country. Since then we have kept well ahead of competitors.’

Effective promotion

‘With the new tractors we have adopted another technique. This involves placing full-page, colour advertisements in two,



The Red Giants at the Royal Smithfield Show in 1964. (Pic: Agco Archive)

mass-circulation national dailies, the *Daily Express* and the *Daily Mail*. These huge spaces give tremendous impact.’

To increase the effect further, the *Daily Express* undertook mass mailing to farmers on December 7th, the opening day of the Royal



The Massey Ferguson 130 was built at Beauvais, France, and remained in production until 1975. (Pic: Agco Archive)



A Massey Ferguson 135 with MF 19 Manure Spreader. (Pic: Agco Archive)



An MF 135 with an MF 829 mower; publicity shots for the launch must have captured the tractors in almost every conceivable situation. (Pic: Agco Archive)

Smithfield Show. An advertisement was also included in every copy of the *Evening Standard* to be sold at the show that day. In addition to the coverage in the national newspapers, a continuous advertising campaign began in the farming press, with four- and eight-page spreads being regularly run during the year following the launch.

The company also produced a special promotional film entitled *The Farmer's Choice*, which was made available to distributors all over the country. This intensive marketing

“The trailers, nine of them, were then coupled together making for a ridiculously heavy load for a single tractor to pull”

and advertising campaign led up to the 'crown of the activity'; the stand at the Royal Smithfield Show where, for the first time, Massey Ferguson would only be displaying its new

tractors. The rest of the range of machinery and implements were illustrated by a display of large, illuminated colour transparencies.

As a follow-up to the Royal Smithfield Show, a series of 'Open Weeks' were arranged at distributors' showrooms, which gave potential customers the opportunity to get a proper, close look at the new models. A team of qualified demonstrators and service engineers were also on hand to provide in-depth, technical information about each of the new tractors, as well as on the range of implements designed to be used with them.

Individual demonstrations

A programme of individual farm demonstrations began early in 1965 and, during February and March, the distributors launched a series of Full Line Show Time demonstrations. For these events, two or three distributors would work together to put on a massive demonstration that would display every item of equipment in the Massey Ferguson range, and there would be working demonstrations of all the cultivating equipment. These events were overseen by the newly-formed product publicity

RANGE OVERVIEW



The MF 135 made an immediate impact, and quickly became the best-selling model of the new 100 Series. (Pic: Alan Barnes)

“A continuous advertising campaign began in the farming press, with four- and eight-page spreads being regularly run during the year following the launch”

department, which ensured that the demonstrations received maximum exposure in the local press, together with extensive radio and TV coverage.

The final marketing effort came through the company's regional offices in Cheltenham, Cambridge, Harrogate and Edinburgh. The regional managers were backed by their area managers, service engineers and parts and service merchandising supervisors along with



MF 135s, such as Trevor Alexander's 1968 model, remain very popular with restorers and collectors today. (Pic: Alan Barnes)

the other specialists at Coventry to 'ensure that a full and well-rounded marketing effort was put behind each new tractor sold. Everyone connected with sales, service and

parts distribution is responsible for seeing that farmers receive absolute satisfaction from the new models.'

Not long after this, the offices in Cheltenham, Cambridge and



The MF 165 was fitted with the four-cylinder Perkins AD4.203 diesel engine and a choice of the standard six-speed gearbox or a Multi-Power transmission. (Pic: Alan Barnes)

Harrogate were closed, and the regional staff relocated to Coventry. But the reps were based closer to their working area. Due to the distances involved, the office in Edinburgh continued. The country was then divided into three regions. 'North' which encompassed anything north of the Lancashire/Yorkshire borders, and included Northern Ireland and the Scottish Islands.

'Central' started at the Lancashire/Yorkshire line, and extended down to the Wash, diagonally down to Coventry and the north side of the Bristol Channel, the whole of Wales and the Isle of Man. The 'South' region was everything below the Wash/Coventry/Bristol Channel line, and included the Isle of Wight and the Channel Islands.

Worldwide launches

While, for the UK, the Royal Smithfield Show was a vital part of the promotion of the new 100 Series, there were similar launches held in other parts of the world. For the North American market, the main event was held at the end of

“Everyone connected with sales, service and parts distribution is responsible for seeing that farmers receive absolute satisfaction from the new models”

1964, in Mexico, and was attended by 5,000 North American dealers.

The Lisbon launch for UK distributors was held in October 1964, and this was followed in November by the Athens Massey Ferguson Olympiad. This was attended by distributor staff from Africa, the Middle East, the Far East, South America and the Caribbean, and was attended by representatives and their wives from 57 countries.

The Athens conference followed months of planning by the export staff who had to overcome the significant problem of assembling a display of over 90 different machines that represented the worldwide

ACKNOWLEDGEMENTS

The use of information and photographs from the Agco Archives and additional details from David Walker is gratefully acknowledged.

operations of Massey Ferguson. Many of these machines were still in prototype or pre-production versions.

Success in this global market was vital as a company spokesman stated: "The Banner Lane factory always exports four out of every five tractors it produces and, to make this possible, we have to satisfy the customer in the Arctic Regions, those in the Sahara Desert, at sea level and at Alpine altitudes. In the export markets, MF has to compete not only with other British manufacturers, but also with at least a dozen major foreign tractor manufacturers in countries where customers have many specialised, local requirements.

"Our new range will help Massey Ferguson to expand sales even more quickly than in the past five years in

RANGE OVERVIEW



The MF 175 was the largest model in the Red Giant range in 1965. (Pic: Agco Archive)



The giant among the Red Giants was the MF 175; here set to 'wide track'. (Pic: Agco Archive)



The MF 175 was 137in in length, 72in wide and had a wheelbase of 84in.

the Export markets, where we have averaged over 12% growth per annum. We now have a much wider range of models. Eight years ago there was only one Ferguson System tractor of 27hp but, now, we have a range of six basic models right up to 92hp. This will cater for the demand for more power."

The reference to a 92hp machine is assumed to relate to the non-selling MF Super 90; a precedent for the soon to be launched MF 1100.

Continued effort

The November Athens Olympiad was followed, in December, by the Royal Smithfield Show while, in January 1965, the launch to the French dealers was held at the Palais des Expositions, in Nice. In February, the German Olympiad at the Hilton Hotel in Berlin introduced the range to Germany. Further major launches were held in South Africa in February and Australia and Canada in March. In Germany the MF 175 had to be re-badged as the MF 177, because the number '175' related to some rather unsavoury legislation.

“The MF 100 Series made a huge and unique contribution to helping mechanise world agriculture and develop farming across the globe”

As the company commented: "This then is the part that marketing plays in launching the new tractors under the name 'Red Giants'. From the moment the designer starts work all through the galaxies of promotion, demonstration, sales and service, we keep a close watch on the product to ensure its success. These tractors are the bread and butter for everyone at MF, for our distributors and for the farmers. Small wonder that we give them so much careful thought and effort."

That thought and effort certainly paid dividends and, in a production run which lasted until 1979, a total of 1,098,025 MF 100 Series tractors were built

MAXIMISING TECHNOLOGY

Maximum use was made of modern communications technology as was noted at the time: 'As a completely new innovation, distributor salesmen were invited to television studios all over the country where they saw a special TV presentation. In addition to introducing the tractors, this gave details about how to sell, making the most of the innumerable sales features built into each machine.'

at the company's Banner Lane plant – the first time a British-made tractor range exceeded the one million mark. Commenting in 2014 Campbell Scott, Director Sales Engineering and Brand Development said: "The MF 100 Series made a huge and unique contribution to helping mechanise world agriculture and develop farming across the globe. They quickly became the world's workhorse and many of the original tractors are still hard at work today on nearly every Continent."

RANGE OVERVIEW

End of an era

When production of the Massey Ferguson 100 Series concluded in 1979, it was the end of an era. Here's a selection of photographs from the AGCO archive that celebrate this hugely successful range

SPECIFICATION: MF 130	
Engine	Perkins A4.107
Cylinders	4
Bore	3.125in
Stroke	3.5in
Power	30hp (@2,250rpm)
Torque	75lb/ft (@1,200rpm)
Transmission	8 fwd, 2 rev
Brakes	Disc
Fuel capacity	10 gallons
Lift capacity	1,825lb
Length	109in
Width	63in*
Height	55in**
Ground clearance	17in
Wheelbase	72in
Turning circle	10ft 7in***
Weight	2,600lb
Front tyres	5.50-16****
Rear tyres	10-28****

* Minimum track
** Over steering wheel
*** Without brakes
**** De Luxe model

KEY FACTS: MF 130

Built: 1965-72

No. produced: 27,527

Factory: Beauvais

Price (new): £710*

*De Luxe model, December 1967

Massey Ferguson's DX range, or the 100 Series of tractors, was heralded by the company as 'the most important break-through in tractor design ever.' The four launch models, along with the others that followed, sold well and proved that the company's bold claim appeared to be justified.

Introduced at the 1964 Smithfield Show, production of the four 'Red Giants', as they were dubbed, got underway in 1965 - with the three larger models built in Britain and the smallest in France.

With Ford's new 6X (pre-Force) range launched at the same time, Massey Ferguson had to work hard to convince farmers that its products were right for them, and made much of the new models' attractive design and specification, engineering quality and performance, operator comfort and safety, comprehensive implement range and the backing of its dealer network.

Luckily for MF, it didn't stray too





SPECIFICATION: MF 135

Engine	Perkins AD3.152
Cylinders	3
Bore	3.6in
Stroke	5in
Power	45.5hp (@2,250rpm)
Torque	119lb/ft (@1,300rpm)
Transmission	6 fwd, 2 rev
Brakes	Drum
Fuel capacity	8.5 gallons
Lift capacity	2,850lb
Length	118in
Width	64in*
Height	54in**
Ground clearance	12in
Wheelbase	72in
Turning circle	19ft 3in***
Weight	3,200lb
Front tyres	6.00-16
Rear tyres	11-28

* Normal track

** Over steering wheel

*** Without brakes

KEY FACTS: MF 135

Built: 1965-79

No. produced: 252,801*

Factory: Beauvais & Coventry

Price (new): £850*

* Coventry

** De Luxe model, December 1967

far from the tried and tested 35 and 65 models, and based its new offerings on the tractors that had gone before. The 130 was derived from the 30, the 135 from the 35 and the 165 from the 65. The 175 was the exception, in that it was an 'all-new' addition.

By adding new and innovative elements to existing designs, Massey Ferguson kept the faith of its loyal customers, but added more thanks to attractive styling and a comprehensive features list – both standard and optional.

Proven engines, hydraulics and transmissions coupled with new tinwork and a sprinkling of new tech, proved to be an attractive, winning formula, and it was clear that MF's strategy was initially better than Ford's – a brand-new product line

from a brand-new factory was sure to experience teething problems.

Ford, as we know, was quick to rectify these issues, and emerged with a superb line of tractors to offer farmers and contractors. Both it and MF continued to work on their respective ranges, and the result was 6Y (Ford Force) and the '8' line or Super-Spec models from Massey Ferguson.

Although the MF 135 retained a constant presence throughout the lifetime of the 100 Series, other models came and went and, by the time the range was phased out in 1979, the models that had been sold by British dealers were as follows: 130, 135, 148, 165, 168, 175, 178, 185 and 188.

By this time, the 500 Series was well established, with production having begun in 1976, and the 200 Series was beginning to come on line.

Here we provide a brief guide to the agricultural-spec models that were sold in Britain, in celebration of a landmark range that certainly struck a chord with buyers in the 1960s and '70s, and continues to command a loyal following today.

RANGE OVERVIEW

SPECIFICATION: MF 165	
Engine	Perkins AD4.203
Cylinders	4
Bore	3.6in
Stroke	5in
Power	58.3hp (@2,000rpm)
Torque	169lb/ft (@1,300rpm)
Transmission	6 fwd, 2 rev
Brakes	Disc
Fuel capacity	15 gallons
Lift capacity	2,850lb
Length	132in
Width	72in*
Height	62in**
Ground clearance	14in
Wheelbase	82in
Turning circle	22ft***
Weight	4,400lb
Front tyres	6.00-16
Rear tyres	11-32

* Normal track
 ** Over steering wheel
 *** Without brakes



KEY FACTS: MF 165

Built: 1965-79
No. produced: 182,237*
Factory: Beauvais & Coventry
Price (new): £1,035*
 * Coventry
 ** De Luxe model, December 1967

SPECIFICATION: MF 175

Engine	Perkins A4.236
Cylinders	4
Bore	3.875in
Stroke	5in
Power	66.4hp (@2,000rpm)
Torque	190lb/ft (@1,200rpm)
Transmission	6 fwd, 2 rev
Brakes	Disc
Fuel capacity	18 gallons
Lift capacity	3,375lb
Length	139in
Width	72in*
Height	65in**
Ground clearance	17.5in
Wheelbase	84in
Turning circle	23ft 6in***
Weight	6,500lb
Front tyres	6.00-19
Rear tyres	12-36

* Normal track
 ** Over steering wheel
 *** Without brakes



KEY FACTS: MF 175

Built: 1965-67
No. produced: 22,676
Factory: Coventry
Price (new): Unknown

SPECIFICATION: MF 178

Engine	Perkins A4.248
Cylinders	4
Bore	3.977in
Stroke	5in
Power	72.5hp (@2,000rpm)
Torque	212lb/ft (@1,300rpm)
Transmission	6 fwd, 2 rev
Brakes	Disc
Fuel capacity	18 gallons
Lift capacity	3,900lb
Length	136in
Width	72in*
Height	67in**
Ground clearance	17.5in
Wheelbase	84in
Turning circle	23ft 6in***
Weight	6,500lb
Front tyres	6.00-19
Rear tyres	12-36

* Normal track

** Over steering wheel

*** Without brakes

KEY FACTS: MF 178

Built: 1967-71

No. produced: 30,424*

Factory: Beauvais & Coventry

Price (new): £1,245**

* Coventry

** Dual clutch transmission model, December 1967



KEY FACTS: MF 168

Built: 1971-79

No. produced: 11,164*

Factory: Beauvais & Coventry

Price (new): £2,137**

* Coventry

** Standard specification, December 1972



SPECIFICATION: MF 168

Engine	Perkins A4.236
Cylinders	4
Bore	3.875in
Stroke	5in
Power	69hp (@2,000rpm)
Torque	200lb/ft (@1,250rpm)
Transmission	12 fwd, 4 rev
Brakes	Disc
Fuel capacity	17.5 gallons
Lift capacity	4,000lb
Length	138in
Width	72in*
Height	93.25in**
Ground clearance	17.25in
Wheelbase	87.5in
Turning circle	26ft***
Weight	5,487lb**
Front tyres	6.00-19
Rear tyres	12-36

* Normal track

** With flexible clad cab

*** Without brakes

RANGE OVERVIEW

SPECIFICATION: MF 185

Engine	Perkins A4.248
Cylinders	4
Bore	3.977in
Stroke	5in
Power	75hp (@2,000rpm)
Torque	219lb/ft (@1,300rpm)
Transmission	8 fwd, 2 rev
Brakes	Disc
Fuel capacity	17.5 gallons
Lift capacity	4,000lb
Length	136in
Width	72in*
Height	94in**
Ground clearance	16in
Wheelbase	81.75in
Turning circle	22ft 8in***
Weight	5,595lb
Front tyres	7.50-16
Rear tyres	12-38

* Normal track

** With flexible clad cab

*** Without brakes

KEY FACTS: MF 185

Built: 1971-79

No. produced: 40,095*

Factory: Beauvais & Coventry

Price (new): £2,063**

* Coventry

** Standard specification, December 1972



KEY FACTS: MF 188

Built: 1971-79

No. produced: 21,325*

Factory: Beauvais & Coventry

Price (new): £2,382**

* Coventry

** Standard specification, December 1972



SPECIFICATION: MF 188

Engine	Perkins A4.248
Cylinders	4
Bore	3.977in
Stroke	5in
Power	75hp (@2,000rpm)
Torque	219lb/ft (@1,300rpm)
Transmission	12 fwd, 4 rev
Brakes	Disc
Fuel capacity	19 gallons
Lift capacity	4,600lb
Length	142in
Width	75.25in*
Height	94in**
Ground clearance	16in
Wheelbase	87.75in
Turning circle	Unknown
Weight	7,082lb
Front tyres	7.50-16
Rear tyres	12-38

* Normal track

** With flexible clad cab

KEY FACTS: MF 148

Built: 1972-79

No. produced: 10,974*

Factory: Beauvais & Coventry

Price (new): £1,787**

* Coventry

** Standard specification, December 1972

SPECIFICATION: MF 148

Engine	Perkins AD3.152S
Cylinders	3
Bore	3.6in
Stroke	5in
Power	49hp (@2,250rpm)
Torque	131lb/ft (@1,400rpm)
Transmission	12 fwd, 4 rev
Brakes	Drum
Fuel capacity	10.5 gallons
Lift capacity	3,200lb
Length	129in
Width	64in*
Height	90in**
Ground clearance	11in
Wheelbase	Unknown
Turning circle	21ft***
Weight	4,264lb
Front tyres	6.00-19
Rear tyres	11-32

* Normal track

** With flexible clad cab

*** Without brakes



In the footsteps of **Red Giants**

Following the initial launch of the 'Red Giant' 100 Series range in 1964, and the immediate success of the MF 135. Alan Barnes looks at how things evolved after that



The Massey Ferguson '5' and '8' line tractors, complete with French-built 1080. (Pic: AGCO)

Modifications and refinements were introduced across the MF 100 Series during the late 1960s, and these included an upgrade to the MF 175, which was released as the MF 178, although the changes were marginal to say the least. Technically, this tractor was the first of the '8' line series that the company brought to the market in the early 1970s.

Marketed as the new Super-Spec tractors, three models were

unveiled at the Royal Smithfield Show in 1971; the MF 148, MF 168 and the MF 188 and, with the new safety legislation now in place, tractors for the UK market featured safety cabs as standard. These new models - the second generation DX developments - in no way replaced the earlier models, and production of the original 100 Series range continued alongside the new Super-Spec tractors at both the UK and French factories.

Various changes

Outwardly, the basic tractors appeared little changed from the existing 100 Series models, but there had been some minor changes made to the styling, with a slightly deeper radiator grille. Also, the shell-type rear mudguards seen on the MF 135 were withdrawn as they couldn't be used with the roll-over protection and safety cab. However, they were still available for the export models, which didn't have the cab requirement. Beneath the

bodywork, though, there had been some important upgrades as far as the brakes, hydraulics and engines were concerned.

The new Super-Spec tractors had a longer wheelbase, which had been achieved by the addition of a six-inch spacer between the gearbox and the rear axle. This also allowed a larger cab to be fitted than the one used on the '5' line tractors. This basically used the same uprights for the safety frame, but the roof frame was six inches longer to match the spacer, and the cab doors were also lengthened to match. The extra length of the tractors pushed the centre of gravity further forward, which made the front weighting more effective and the tractors more stable, especially when using heavy, mounted implements.

Take a brake

The increase in length not only created more legroom for the driver, but also allowed the new models to be fitted with new, oil-immersed

“There had been some important upgrades as far as the brakes, hydraulics and engines were concerned”



In open-platform 'mode' the 148 was, it has to be said, a handsome beast. However, the operator was, of course, at the mercy of the elements. (Pic: AGCO)

100 SERIES EVOLUTION

disc brakes. The design engineers at Maudslay Road had addressed the issue of heat dissipation and more effective brakes and developed brakes that, rather than using a pair of friction discs, had a pile of friction discs. David Walker, a former Banner Lane employee, kindly explained the details of the new brakes: "The discs in the 'pile' were each about $\frac{3}{16}$ inch thick with a plain steel interplate, about $\frac{1}{8}$ inch thick, in between, thus increasing the friction area considerably. The expanders were still the same and they operated in exactly the same manner.

"The major benefit was that the whole assembly ran in about three gallons of oil, which filled most of the rear axle and the centre housing, and dissipated heat all over the back of the tractor, giving much more consistent and certain braking in all conditions." Another benefit of the new design was that the life of the oil seals was extended, as the overheating and rear axle oil leakage experienced with the old 'dry' brakes had been virtually eliminated. The new design delivered a marked improvement in performance when compared to the earlier, dry-type, Girling-Ausco disc brakes.

David also mentioned the useful addition of a hydraulic selector valve, which was mounted on the front of the rear axle top cover. "This enabled the operator to either operate the linkage lift system in the normal manner, or divert the flow to a feed pipe to tip a trailer. This little device had three selectable positions and was operated by a small lever with a red knob that showed clearly where the oil was going. I thought it was a very neat, tidy and pretty well fool-proof device.

"In terms of the actual hydraulics, initially the existing Mk.1 version – as in the '5' line series – was used, but this was superseded by Bob Yapp and Jim Dean's newly-introduced Mk.2 and Mk.3 hydraulic pumps, which had higher pumping



The Flexi-cab offered more protection and was, in the opinion of some, better than the rigid-clad option.



The 'bells and whistles' cab was attractive, but rather noisy. (Pic: Alan Barnes)

capacities and strengthened internal linkage, plus a new $\frac{3}{4}$ in control valve, which were significant developments."

Massey Ferguson, in its details of the Super-Spec tractors, stated that the hydraulics featured: 'New heavy-duty links, increased lift capacity and Pressure Control.' Essentially, this was the Advanced Ferguson System hydraulics with two-way Draft Control, Position Control, Pressure Control and constant pumping.

Drawing strength

Fitted as standard was a heavy-duty $3\frac{3}{4} \times 1\frac{3}{8}$ in swinging drawbar, which could work in two positions, either 10in or 14in. The big plus with this was the ability to carry 4,500lb loads, as opposed to the 1,500lb of the earlier version, which conformed to British Standards regarding carrying capacity, but was often grossly overloaded.

Fully-independent PTO was selected using a lever positioned



The 168 was well liked, partly due to its excellent Perkins A4.236 engine. (Pic: AGCO)

next to the driver's seat, mounted on the transmission housing. The PTO could be selected with the engine running, whether or not the tractor was actually moving. When it was disengaged, a hydraulically-operated brake stopped the shaft turning, but it could also be turned by hand when the engine was stopped, which was a great help when hitching up PTO-powered implements.

As far as the auxiliary hydraulics were concerned, a high-capacity pump was fitted to the Super-Spec models that, combined with the linkage pump, boosted the oil flow to 9.4-gallons/minute at 2,000rpm. For external hydraulic operations there was a choice of one or two single- or double-acting spool valves. Quick-release hose couplings were also supplied to link up with rams to power implements such as disc harrows with hydraulically-controlled depth wheels, tipping trailers or indexing ploughs.

The new MF 148 was fitted with the Perkins AD3.152S three-cylinder diesel engine, which hadn't been used in the MF 135, hence its higher rating. The S-spec engine, although having an identical capacity as the AD3.152, had a huge number of non-interchangeable parts

“The significance of the Super-Spec ‘8’ line models shouldn’t be under-estimated, and they were certainly not just up-rated add-ons to the 100 Series”

compared to the low-power version. The new engine had new pistons, valves, a different cylinder head and a completely different fuel-injection system. The MF 168 fared much better, and was fitted with the superb Perkins A4.236, which had

also been used in the MF 175. The MF 188 received the Perkins A4.248; the engine that had been fitted in the earlier MF 178.

The A4.236 was an impressive and smooth power unit and had benefited from the adjustments that Perkins had made to the basic design, as David Walker explained: “The A4.236 was the original version from which the A4.212 had been derived, and the A4.248 was simply the A4.236 but with 0.10in bigger bore and was a version that worked.

“I always felt that the A4.236 engine was the smoothest of the lot, vindicating the original design parameters. With the combination of increased working room from the transmission spacer, the Perkins A4.236 engine and the newly-introduced wet brakes, I always thought that the MF 168 was a lovely machine to drive, even if it didn’t have quite the power of the bigger engine 100 Series versions.”

The engines were protected against the harmful effects of dust and dirt by a dual-element dry air cleaner. This provided efficient filtration and was unaffected by heavy dust build up and could be easily serviced, being accessed behind the roundel badge on the left hand side of the bonnet.

Balanced performance

The four-cylinder engines had been prone to vibration and, to overcome the problem, a Lanchester balancer was fitted in the sump; a modification fitted to both the A4.236 and A4.248 engines.

As far as the transmission was concerned, the three Super-Spec models featured, as standard, the Multi-Power gearbox, which provided 12 forward speeds, four reverse and ‘on-the-move’ gear changing. However, the tractors could also be ordered with the eight-speed manual gearbox, if the customer preferred.

For the first of the 100 Series tractors, a cab had been available

100 SERIES EVOLUTION



With 71hp (DIN) available to the operator, the A4.248-engined MF 188 was a lively performer. (Pic: AGCO)

as an option. This was manufactured by Duple in Blackpool and was a steel-framed construction clad with fibreglass panels, but which had no roll-over protection. With the introduction of safety cab legislation, the Super-Spec models had to be fitted with roll-over safety protection to meet the requirements of UK legislation. The initial design work for the new safety frame was undertaken by Dennis Livingstone and his engineering team at Maudslay Road. The result was an immensely strong, open-aspect structure made from square tube. However, while it may have withstood the impact in a roll-over accident, it wasn't particularly weather-proof.

A further decision was also needed regarding the covering for the cab, and there were two fields of thought on this aspect; a rigid covering or a flexible one. In the event, it was decided to cater for both types with the Sirocco cab used to meet the needs of customers requiring a flexible cab. These were manufactured by Tarvin, a company based near Chester and, basically, plastic sheets

with clear sections for windows were added to the sides and rear of the metal safety cage. A glass windscreen was fitted at the front. While it may have kept the worst of the weather out, the design, in common with pretty well all of the first generation safety cabs, did little to reduce noise levels for the operator.

Compared to the designs that came later, the cabs of the Super-Spec tractors could arguably be described as rudimentary, although the prime factor to meet the safety requirements was achieved. In its advertising, the company sounded a positive note: 'The safety cab will make life easier. It consists of stylish, sound-insulated flexible cladding attached to an approved, Massey-Ferguson safety frame. The handsome, rigid cladding is available as an option.' Perhaps the use of the words 'stylish' and 'handsome' could be regarded as rather wishful thinking!

The all-rigid safety cab fared no better with regard to noise levels, as the steel-panelled construction manufactured by GKN Sankey was arguably noisier inside than the



The six-inch transmission spacer was one of the Super-Spec models' most noticeable features, providing more room for the driver, better access and improved weight distribution. (Pic: AGCO)

Sirocco flexible cab. Although some work was later carried out in an attempt to reduce some of the noise, it wasn't really until the introduction of the 500 Series – and its quiet cabs – that interior noise levels were reduced to any great degree.

Watching brief

The neat dash held the usual array of instruments and gauges neatly grouped around the steering wheel. They included tractormeter, ammeter,



Four-wheel-drive versions of the MF 168 and 188 were built in France. (Pic: AGCO)

oil pressure, coolant temperature and fuel gauges, plus a vacuum warning indicator. This instrument informed the operator when the filter should be cleaned to prevent driving with a blocked filter, which reduced output and wasted power. The Multi-Power control was positioned to the left-hand side while the two gear levers were set side-by-side on the transmission, where space was also left for the addition of a creeper gear lever. To the left of the gear levers was the handbrake, which operated on both rear wheels, for parking.

A heavy-duty, three-piece front axle was used, and this could be adjusted in four-inch stages to provide track widths from 52 to 68 inches. Manual steering was standard, but all models could be fitted with power steering as an option, and four-wheel-drive versions of the MF 168 and MF 188 were built in France, but never marketed in the UK.

The development of the Super-

“The major benefit was that the whole assembly ran in about three gallons of oil... and dissipated heat all over the back of the tractor”

Spec tractors had largely been completed by the end of 1969, and the new '8' line could well have been brought to the market earlier. It's likely that the launch was delayed until 1971 and full production until 1972, due to the adverse economic conditions at that time. By the time production of the range ended in 1976, there were increasingly optimistic expectations that the worldwide economy would improve, but the days of the 100 Series were coming to an end and the new 500 Series had been brought to the market.

However, the significance of the Super-Spec '8' line models shouldn't be under-estimated, and they were certainly not just up-rated add-ons to the 100 Series. The design and engine modifications really laid the foundation for the 500 Series, which retained the stretched chassis and longer wheelbase of the '8' line models.

The new MF 550 effectively replaced the MF 148 and the MF 135, the MF 575 replaced the MF 168 and the MF 188 was superseded by the MF 590. With the engines, hydraulics and chassis for the 500 Series being virtually the same as in the '8' line, it could well be argued that it was only the new cab and restyled bodywork that distinguished the new range of Massey Ferguson tractors from its predecessor.

* The information and photographs provided by David Walker, Ted Everett and the AGCO archives is gratefully acknowledged.

OWNER'S TALE

ONE OF MANY!

Tom and Julia Fellows recently completed the restoration of a **Massey Ferguson 148**, and **Peter Love** recounts their story

Tom Fellow's father has been part of the East Sussex 'working' tractor scene since the days of the SCHVPT pioneering Guestling working events that were

staged by Billy Wells, Bernard Pike and others. These led on to the famous Dave Selmes 'Step Back in Time' event, which, sadly, after many years of success, lost its way. Today,

we have Rural Past Times, at Horns Cross, in East Sussex which the Fellows family supports.

Tom gave the 148 its post-restoration debut at the Rural Past

What a great combination for all to see at the Rural Past Times show.



Times event back in 2018, after some last-minute finishing touches that included fitting the sprayed-up footboards and other cab parts. It was a pleasure to see the tractor parade in the ring, complete with the family's Massey Harris 712 dung-spreader in tow.

An enviable collection

However, Tom's connection with Massey Ferguson and Ferguson tractors goes back much further than this. The first tractor that he



The small fleet of Fellows MF miniatures, with the French MF 130 in the background.

drove was a Ferguson TE-A 20, with that momentous event occurring in Northiam, East Sussex, when he was just five years old. At the time his father had a range of blue tractors as well as an Allis Chalmers B, a David Brown 25D, an Oliver 80 and a range of Fergusons.

But, as time went on, things changed when a Massey Harris 744 arrived and the emphasis moved to the Massey family line. Today, between them they own the MH 44 (Stanley's tractor), a 55 prairie monster plus various Fergusons - MF 65, 130, 175, 1200 and so on. But Graham and Tom would like to add a Pacemaker, and Graham hankers after a Massey Harris 25.

That's not all, as the pair own a fine fleet of horticultural Massey Ferguson 'baby 100 series' machines, including the 7, 10, 12 and 14. Tom is a builder/carpenter, working with his father, and they specialise in barn conversions. So, over the years, they've discovered many interesting machines lying neglected and forgotten in sheds

and barns. Often, the owners are only too pleased to see these abandoned machines go to a good home, and it's great to see the 'baby' fleet out and about at various East Sussex and Kent shows.

A family passion

Tom and Julia were married in 2012, at All Saints Church, in Beckley. Tom needed a conveyance to the church, so out came his grandfather's Ferguson TE-F 20 diesel, which had worked at Lowgate, in Peasmarsh, East Sussex. The tractor had been kept going over the years, but

“Over the years, they've discovered many interesting machines lying neglected and forgotten in sheds and barns”

needed attention as the number three big-end shell had turned on the crank, and gone

egg-shaped. Luckily, the crank was ground and came good and, with new shells and a top-end overhaul, all was good again. The panels were fine and following a respray, the outfit was ready for the happy day.

One thing about the Fellows family is that the members love to use their machines; they aren't simply reserved for posing on the rally

OWNER'S TALE



Seen at the Biddenden Tractorfest, where the 148 was very much admired.



The tractor was in quite a state following its run-away accident.

field! They're also not too precious about overall appearance. So, if a tractor doesn't need painting, then

it's not painted! The current fleet includes an early Massey Ferguson 175 that needed work, particularly



The engine shows no oil leaks thanks to a combination of the work carried out by Richard Griffin and Tom Fellows.

to the Multi-Power pump and clutch plates, but the panels were good. This project provided Tom's first painting experience and, although it turned out well, he explained that he learns from job to job. After a good rub down, on went a coat of zinc phosphate followed by Bonda Primer, which can be bought from Brewers Decorating Centres. High-build primer was applied next, followed by MF synthetic top-coat, which Tom says goes on very well. He prefers



The tractor running on its 28in rear wheels. Tom has now acquired a set of the correct, 32in rims.

this to the two-pack paint system, which he says chips too easily.

In 2007, an MF 130 came along that had been new to Biddenden All Girls School, so the Fellows are just its second owner. Tom says it's really hard to get bits for these tractors, especially panels. In fact, this one needed a new nose cone after a mishap along the way. However, water was found in the oil and, after

“The brakes were totally worn out, which was the primary reason why it had finished up in the pond! ”

an engine strip-down, the liners were found to be cracked. A full engine rebuild followed, plus much



The rear wings needed some attention but, after careful work, came up well.

more work besides. As always, the brakes were a problem and still require constant adjustment, but the tractor has excellent speed for a road run!

An unlucky charm

When it comes to the 148, Tom was in a pub when he first heard about it from his friend, Richard, who had rescued it from a pond. Unfortunately, the 148 had got out of control and finished up in the water! At the time, Richard was sorting out the tractor for the owner, who kept it outside and used it for topping. After the pond incident, the back end had filled with water and needed draining and fresh oil. The brakes were totally worn out, which was the primary reason why it had finished up in the pond!

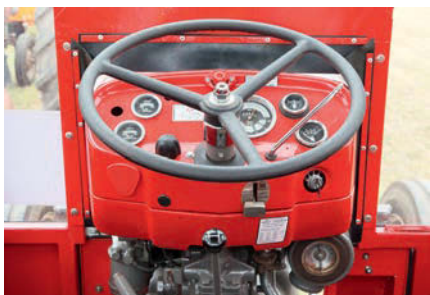
Even though it was part of the MF top line, this example was certainly not kept like that. The owner had no sympathy for it and forgot to use anti-freeze. This led to Richard having to fit a short block and, at the same time, rebuilding the rest of the engine and replacing the clutch.

When the owner got the tractor back, he unfortunately had another accident, when he ran over a sheep, its owner (broken pelvis) and then crashed through a hedge and into a ditch, badly damaging the front axle. Incidentally, the tractor was running on 11.2 10 x 28in rear tyres and 7.50 x 16s



The front end assembly looking stunning, all back together.

OWNER'S TALE



The Multi-Power transmission and steering assembly were given the works during this restoration.

on the front, rather than 32in rears and the more common 19s on the front.

Tom took a gamble and bought the tractor from Richard in the winter of 2016. It was a hard slog to return the machine to running order, but he felt it was worth the time and effort. The front axle came off first and a new centre beam was purchased, together with a right-hand stub axle, new king pins, bushes, bearings, seals and track-rod ends. The steering box needed the works and the steering wheel was replaced. The parts were mostly supplied by Acorn Tractor Spares, Mayhill Tractor Spares, Sparex, Queensbury Tractor Spares in Scotland and, lastly, local MF dealers, Agwoods.

Gearbox matters

Turning to the Multi-Power transmission, Mayhills supplied a new pump and new steel clutch plates (Agwoods) that were needed. In the hydraulics, the spool-valve O rings were replaced and more. The hydraulic quadrant, control and linkage needed the works, as they were found to be very rusty and worn, which wasn't helped by being kept in the open. At the back end, the linkage and adjusting link were overhauled, new low link arm bushes were fitted and new check chains went on. As for the engine, this was in good order, although the radiator and water pump were replaced – remembering to add anti-freeze to guard against future frost damage.

Having looked at the cab options that could be fitted to a 148, the Scottish Duncan cab was one of those offered at the time. Tom found a



Although the tractor didn't win an award at Biddenden, it was much admired and certainly stood out from the crowd.



The rear end required a thorough overhaul.



Tom Fellows with his just finished 148; a cracking result, especially given the fact that he was working within a limited budget.

good example that included the rear glass panel that's normally missing, but the unit still needed restoring. While all this was going on, the paint process that we mentioned earlier was adopted all the way through. As the

electrics were being sorted, half of the loom could be used and other bits were incorporated into it. The starter was in good order and the dynamo was also fixed.

After its arrival, the Duncan cab

“ He now has the right 32in rear wheels and tyres for the tractor, and says you can certainly tell the difference ”

was stripped down and given the works. Then, following a trial fitting, the correct brackets came from Sam Neil from Northern Ireland who, with his son, personally delivered them, as he had other things to collect in east Kent. The glass in the cab is so important to be in good condition. Tom was lucky, needing just the windscreen, which was made by Art Joinery of Rye.

With the tractor running, the cab sorted and the 'D'-section rubbers fitted (which has stopped most of the vibration in the cab area), everything was looking good. The tractor then went on to win a top award at the New Romney Ploughing Match. However, not everyone's a fan of the Duncan cab, including Tom's Julia, but she will live with it. It's certainly different, and shows another form of cab that was fitted on these tractors in the early 1970s. It has kept the tractor authentic as, by law, this period of tractor would have had a cab from new.

Since taking the photographs for this feature, a swap has been made with an MF 135 owner who Tom met at Tractorfest. He now has the right 32in rear wheels and tyres for the tractor, and says you can certainly tell the difference with them on. He regrets painting the fuel tank grey instead of black, but didn't realise at the time that he had the colour wrong. He still has to fit the headlining in the cab as well as the windscreen wiper motor and cover. Tom also has the 'deluxe' MF cigarette lighter to fit, then the job will just about be finished.

All-in-all, it's good to see the younger generation tackling restoration projects like this one with such vigour!



Since this photograph was taken, the roof lining has been fitted and this area has been painted.

VIVA MASSEY!

Enthusiast **Tom French** has added a Spanish MF 147 vineyard to his superb collection of Massey Ferguson tractors. **Bob Weir** went to East Ayrshire to hear about its restoration

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The Spanish-built MF 147 is a rare sight in the UK.

Tom French's collection will be well-known to vintage vehicle enthusiasts who are used to seeing his custom red DAF XF transporter at rallies. Since he acquired his 1958 MF 65 in 2002, his stable of Masseys has come on in leaps and bounds. Tom also owns a fleet of trucks decked out in the T French & Son livery, which have become a familiar sight on Britain's roads. The area around Cumnock is one of the largest opencast mining operations in the UK, and Tom's family has worked there for many years.

"Opencast mining has been big business since the closure of the deep coal pits, and the shortages caused by the miners' strike that took place in the 1980s," he explained. "Fortunately, we were able to expand our operations at the right time. There have been a few ups and downs in recent years, but we are still heavily involved."

Tom comes from a farming background, and his business and

home are still on the original site of the family smallholding at Cronberry, just to the east of Cumnock. He managed to overcome some challenges with the local economy to become one of the most successful businessmen in the area. His father used to run a grey Fergie, and he has been a big fan of Massey Ferguson for many years.

“It's something a bit different from the usual Masseys, and that's what I'm looking for in my tractors”

Roll call

As well as the MF 65, Tom's collection also includes the Spanish 147, a 1958 MF 35 (four-cylinder); a 1960 MF 35 (three-cylinder); a 1965 MF 2130; a 1968 MF 165; a 1971 MF 135 Mark III; a

TOM'S MF 147 SPECIFICATION

Year	1978
Serial No.	7T4X 175092
Engine	Perkins AD3.152S
Cylinders	3
Bore/stroke	3.6in/5in (91mm/127mm)
Power	45hp
Displacement	152cu in (2,500cc)
Transmission	8 forward, 2 reverse
Tyres	Front: 5.00x15
	Rear: 11x28



The steering wheel centre cap and tractormeter prove the tractor's Spanish origins.



If the family ever runs out of storage space, at least this one of his tractor collection can be driven into Tom's hallway and parked under the stairs!

1973 MF 148; a 1973 MF 158 and a 1975 MF 185. In recent years, he's specialised in tracking down MF models that have either been built, or worked, on the Continent. He has already visited the Massey Ferguson plant at Beauvais in France, as a member of the Friends of Ferguson Heritage club.

He said: "I use a number of different sources to find the tractors, including the internet and auctions. The specialist magazines can also be helpful, although I've learned the hard way that you have to take some of the glowing descriptions found in adverts with a pinch of salt. I believe the 147 is the only one of its type in the UK."

The 1978 vineyard model - or viñero, to give it its Spanish name - was bought on the internet in October 2010, at a specialist auction in the town of Ocana, which is a short

OWNER'S STORY

EBRO FACTS

The Ebro is the second longest river on the Iberian Peninsula and, in 1938, it was the scene of one of the fiercest battles of the Spanish Civil War. It's also the name of one Spain's most important commercial vehicle manufacturers.

Ebro's parent company, Motor Ibérica, was set up in 1954, to build British Ford trucks under licence, based on the popular Thames Trader. During the late 1960s and early '70s it acquired other companies, including the Spanish branch of Perkins engines. When Massey bought 32% of the company in 1966, it was making four-wheel-drive utility vehicles as well as medium-size trucks and buses.

Ebro then began making new designs for Massey as well as existing Massey models under licence. At the same time, it continued to make a variety of badge-engineered commercial vehicles, of up to 27 tons in capacity. Nissan Motors eventually entered the fray in 1979, and Massey sold its interest to the Japanese company the following year.

distance from Madrid. Tom's son, Tom, and his grandson (also Thomas) drove all the way to Spain with a trailer and van to bring the tractor back to Scotland; a distance of more than 3,000 miles. An indication, if one was ever needed, of Tom's commitment to collecting unusual Massey Fergusons.

"The auction was being run by Ritchie Bros, based in British Columbia, Canada," he recalls.

"They hold sales all over the world, and send me regular catalogues. I spotted the 147, and my daughter Liz-Ann bought it at the online sale.

"I had a word with a couple of local hauliers about bringing it back to Scotland, but they weren't really interested. Most of the lorries going to Spain these days are refrigerated vehicles, and not really suitable for carrying a tractor. However, by coincidence, one of our dump trucks based in Holland needed some repair work, so we decided to tie this job in with picking up the Massey.



At first glance it could be a narrow MF 135, but then there's that Ebro decal! As you'd expect, the Perkins three-cylinder engine is as reliable as always – even in Spanish guise!



Tom French Snr. (left) with Tom French Jnr. and the diminutive Ebro.

My son Tom and some friends took a van and trailer over to the Continent with the spare parts for the truck, carried out the repair and proceeded on down to Spain. It was quite a trek, and it took them several days to complete the journey."

Moment of truth

Having got the 147 back to Ayrshire, Tom was keen to give the tractor a full and thorough inspection. He said: "The Massey was in reasonable condition given its age, but needed a bit of attention. Fortunately, we

have our own workshop on site, and were able to do the majority of the jobs ourselves. We recently expanded the workshop to carry out commercial vehicle MoTs, so it's fully equipped. The restoration eventually took the best part of two years as we had a lot on the go at the time, and the work had to fit in with the rest of our schedule.

"As we normally do with our classic Masseys, we took out the engine and gave it a full overhaul. There were a few oil leaks so, while we were at it, we replaced all the seals.



Despite the compact dimensions, there's still enough room for a three-point linkage.

Then we sorted out the hydraulics, and the tractor has been completely rewired. Sometime in the past, the Massey had been fitted with a crude cab, and this was removed. I think it was of Spanish origin, and the wings extended out over the wheels. It didn't really look the part, so we decided it was surplus to requirements. The rest of the tinwork was in surprisingly good condition. We don't know anything about the history of the machine, but it probably spent most of its life in Spain."

Once the tractor had been restored, Tom sent it off for a new coat of paint. He said: "I've used several specialists over the years, and currently have an arrangement with Ben Craig down at Harby, near Melton Mowbray.

We've arrived at a system that works quite well. When we go down to the Newark show in November, we also stop off to see Ben. We take a tractor

“In recent years, he's specialised in tracking down MF models that have either been built, or worked, on the Continent **”**

down on a trailer that's ready for a respray, and bring the newly-painted one back to Scotland."

The tractor certainly looks the business, and the Ebro decals make it stand out from the crowd. According to Tom it's also easy to drive, and the

reliable Perkins is up to the mark. "It's something a bit different from the usual Masseys, and that's what I'm looking for in my tractors," he said. "We've also saved it for posterity, which is no bad thing."

Tom has never been one for letting the grass grow under his feet, and as I was on the point of taking my leave, he let slip that he has another three tractor projects on the go. "The first one is an early FE 35 grey/gold," he explained, "I also managed to pick up a French-built MF 42, which is currently being restored. Perhaps the most interesting machine is a MF 165 'Highlander' forestry conversion by James Jones & Sons, of Larbert."

So, it looks like it's 'all systems go' at Cronberry, at least for the foreseeable future.

A FINE PAIR!

Most restorations start with a tractor, but Kevin Hughes' Massey Ferguson project began with nothing more than a cab, as Justin Roberts discovers



Among his many virtues, Kevin Hughes can boast of being a helpful sort of chap. "I'll leave the Landini parked by our entrance," he told me on the phone. "You'll see where we are then." But, as it turned out, the Landini was somewhat superfluous as a marker because, as I crested a slope in the road, my attention was immediately caught by two incredibly smart looking tractors parked in the yard ahead.

Certainly, there was the later machine positioned on the verge, but I noticed it only when swinging into the gateway as my attention was focused entirely on the bright red Massey Fergusons waiting in the glorious spring sunshine.

It's said that first impressions can be deceptive but that was certainly not the case here, for a closer look only reinforced the idea that something approaching perfection was present in these two examples from the Massey Ferguson stable. Someone had obviously spent a great deal of time and effort bringing them back to life, and that someone was the aforementioned Kevin, who introduced himself and

confirmed that he was, indeed, the one responsible.

Giant progress

But first, let's have a look at the tractors themselves before considering how they came to their present condition. The larger of the pair is a 185, first registered in 1977. It has 9,500 hours on the clock and was sourced from a dealer in Roscommon, back in April 2010.

The 185 model first rolled off the production line in the early 1970s

“Something approaching perfection was present in these two examples from the Massey Ferguson stable”

and competed with the Ford 5000 (6Y), International Harvester 674 and John Deere 3020, among others, for sales in the UK. Powered by the 4.06-litre Perkins A4.248 engine, it produced 70.5hp at the PTO. Overall, it was considered a good, reliable tractor, although its slightly longer



Kevin Hughes evidently works to a high standard with his tractor restorations.

brother - the 188 - was thought to be better balanced for field work.

The smaller machine in Kevin's smart duo is a 148, fitted with the three-cylinder, 2.5-litre Perkins AD3.152 Series S motor that provided a maximum of 37hp DIN at the PTO. This example was built in 1976 and, like its stablemate, was used first in the UK before somehow arriving at a golf club in Middleton, Co Cork, where Kevin found it on grass tyres and in a generally sorry state.

Its contemporaries would have included the David Brown 885 while, over at Ford, the 3000 was the nearest match in the power stakes.



Who needs indicators?

OWNER'S TALE



Purchased in April 2010, the MF 185 was the subject of a six-month restoration.

The 148 shared much with the 135, although it was available with either a 12 forward, four reverse Multi-Power transmission, or an eight forward, two reverse transmission and a six-inch spacer between the clutch housing and gearbox.

Forty years on from that era, these two Masseys have found a new lease of life and an assured future as collectors' items, such is the standard of restoration.

Working downwards

It was the chance gift of an old cab that first started Kevin off on the trail of a 185 upon which to fit it. While most people would probably seek a tractor and then the appropriate parts, the usual order of things in this case was turned around due to the fond recollections of working with an 185 in his youth when his father, Tom, would borrow one from the local dealers each silage season.

The tractor used would have the distinctive white 'Flexi-cab,' which was little more than a frame with

canvas surround (roll-over protection wasn't required in Ireland until the late 1970s). His modern quest for a similar tractor was answered by a dealer in Roscommon who had a rather tatty example available with the 'rigid-style' cab that, in its day, cost a mere £60 more than the basic soft top.

“Its contemporaries would have included the David Brown 885 while, over at Ford, the 3000 was the nearest match in the power stakes”

Purchased in April 2010, the tractor was brought home and given a good service before being put to work for the summer, making silage and hay for both himself and his neighbours. Even though it appeared bruised and battered – with holes in its wings and bonnet – it proved to be very sweet-running

and reliable, giving not a spot of bother during those months. So it was decided that a full restoration would be undertaken over the winter. The old girl deserved nothing less!

The first job after moving it into the workshop was the removal of the old rigid cab, which was placed in the corner and may well be used as part of a future project. Next the engine was gifted a new head gasket, water pump and one or two other little fittles, for it was working well enough without any great attention being required. Indeed, the suspicion is that the motor had already been rebuilt in the not too distant past and, with the head off, everything appeared to be A1 with not a mark or ridge to be found in the bores.

Time-consuming process

'If it ain't broke then don't fix it,' goes the maxim, so the head went back on and the tractor was then stripped down to its skid unit for painting and,



Despite its pristine appearance, the 185 still gets put to work on the family farm from time to time. (Pic: Kevin Hughes)

according to Kevin's family, that's when he disappeared into the workshop and rarely surfaced, other than for sustenance, for the next six months.

It was a big job, for he'd elected to remove all the old paint by hand using various wire brushes, discs and scrapers before applying four coats of primer and then five of colour to both the grey and red areas. However, before he could start painting the tinwork, there was a fist-sized hole in the side of the bonnet that had to be patched, by letting-in a fresh piece of sheet steel.

Other remedial work had to be done to the mudguards and it was these two jobs that took up a great deal of time. The cab frame that he'd been given was hardly pristine either, nor were the wheel rims which were beyond repair, so had to be replaced. Such was the attention to detail that Kevin re-shod

the tractor with brand new tyres of the correct size, masking the painted rims carefully before fitting to avoid the risk of tyre lever damage.

Finishing line

Each and every component that would originally have been painted on the tractor was cleaned, re-

“It was abundantly clear that these two machines had found not just a good home, but the respect they deserved”

coated and dried on a 'washing line' that stretched the length of the workshop. Tom, who was often volunteered to help, recalls the constant turnaround and re-

hanging of items as fresh coats were applied to each, and this part of the operation lingers in his memory above all others.

Due to work commitments, Kevin was unable to actually start the project until New Year's Eve in 2010, with a target of completing it in time for a nearby tractor run in July. If this sounds ambitious, then it certainly was, but the dedication, time and patience devoted to the job is evident in the finish, which really is quite superb. And yes, he did meet the deadline; except for the doors, which weren't quite up to his exacting standards on the day of the run.

Once the tractor was painted and assembled, including a new PTO shaft and seal, there was the windscreen to be fitted together with a completely-new canvas set. The glass was something of a nightmare while the covers slipped

OWNER'S TALE

on like a glove and came complete with engine shrouds (to direct warm air into the cab), plus a wee slot at mudguard-height to allow the driver to manually indicate turning signals by extending his arm through it!

Were tractor manufacturers really so far behind the times in the late 1970s? It's hard to credit now but it does appear that they were. This, however, was the last manifestation of the Flexi-cab in the UK and Ireland, so it was more of a hangover from the previous years.

And another

Having got the 185 up and running again, Kevin felt the need for another project and so, when he found a smaller 148 being sold online, he went down to Cork with a trailer and fetched the rather sorry-looking tractor back within a day of seeing it advertised. The restoration process followed much



Although not the worst tractor you've ever seen...



... Kevin's exacting standards (and the need to earn a living) meant that the MF 148's restoration took nearly a year. (Pics: Kevin Hughes)



Kevin's father, Tom, at the wheel of the immaculate MF 148. Note the equally-impressive MF 11 fertiliser spreader.

the same pattern, although it took nearer a year this time rather than the frantic six months that was devoted to the 185.

The engine was once again found to be sound and requiring little attention, other than a new head gasket, full service plus a replacement water pump and starter motor. New wiring looms were installed on both machines, as were radiator grilles and a dynamo to ensure all worked as well as they looked.

In the case of the 148, the bonnet wasn't holed, but had received a fair knock, which had distorted rather than dented it. This was straightened far more easily than Kevin had at first feared, which was quite a weight off his mind but, if the front was coming together nicely, then the rear was proving slightly more costly, with both mudguards being deemed to be beyond repair.

Little Masseys of this size were popular as yard-scrappers, so sourcing second-hand mudguards

that were anywhere near serviceable proved an impossible task, so a new pair was sourced from the AGCO 10+ range, which proved to be both better built and more accurately shaped than other, non-genuine, alternatives.

The lift arms were also found to be non-original, and the hitch was but a shadow of what it should have been; most probably due to towing a gang mower around the golf greens. The former was replaced while the latter was built up with weld to ensure all was good again.

Both restorations bear all the hallmarks of not just enthusiast ownership but someone with a burning desire to get things right, and return the tractors back to factory condition. Authenticity was a major concern, and Kevin has made every effort to keep the pair as original as possible. This not only extended to buying genuine MF items where they were still available, but also to taking old parts as a pattern for fabricating new ones.

The front grille guards are a perfect case in point, with a nearby engineering workshop fabricating the items for the 185, and Kevin pressing his metalworking skills into use to shape and form the steel bar for the 148. It has not only been a labour of love, but also a great lesson in restoration skills, which he hopes to put to use in the future. During the last couple of years he's taken a full-time course in welding, and can now tackle most jobs that farming can throw at him. Indeed, he now fabricates bale-handling equipment himself, which includes linkage-mounted carriers and spikes

As the tractors were being put away in the barn, the spring sun bouncing almost painfully off the polished surfaces, it was abundantly clear that these two machines had found not just a good home, but the respect they deserved and, having been worked on so intensively, both would be quite able to deliver another 40 years of service, I'm sure!

One of the favourite things for tractor enthusiasts to do on a sunny Sunday morning, is to get out on a road run; often raising money for charity in the process. This is Charles Clark aboard his 'working clothes' MF 165, with a trailer-full of passengers, enjoying The Mad Jack Fuller Road Run, in East Sussex.





COLLECTING CLASSICS

FRENCH CLASSICS ARE CONTINENTAL

Mention Massey Ferguson to enthusiast **Tom French** and a smile lights up his face. Bob Weir went north of the border to see the recent additions to his superb collection



Tom's MF 147. Ebro is a Spanish trademark, and a subsidiary of Motor Ibérica.

Tom French is no slouch when it comes to acquiring all things red and grey, and he's been at it now for over 13 years. His collection is one of the best in Scotland, and his colourful red transporter has become a familiar sight at tractor shows on both sides of the border.

Although the family business is primarily haulage and open-cast mining, Tom comes from a farming background. His recently refurbished depot at Cronberry, on the outskirts of Cumnock, East Ayrshire, is located on the original site of the family smallholding. He's been interested in old tractors for many years, and has been a big fan of Massey Ferguson since he was a boy.

"I suppose it all started when I was a lad," he explained. "My father had a Ford-Ferguson, which he eventually swapped for a petrol/paraffin TE-20. I always thought they were great tractors and very reliable."

Ruby Red search

Although Tom has always had an eye for a Massey Ferguson, in recent years he's concentrated on acquiring 'Ruby Reds'. He has spread his contacts net far and wide, and uses a wide range of sources, including specialist magazines like *Classic Massey & Ferguson Enthusiast*, auctions and the internet. This has allowed him to pursue his current passion for collecting European models like the 132, 147 and the 1080.

Tom will go to great lengths to secure his prize and son, Tom Jnr, is also willing to lend a hand. The 1978 Spanish viñedo (vineyard) model is a perfect case in point. The tractor was bought via the internet in October 2010 at a specialist auction in the town of Ocana, a short distance from the capital, Madrid. Tom Jnr drove all the way down to Spain with a trailer and van to bring the tractor back to Scotland, a distance of over

N.º SERIE 1602 002113 AT		MATRICULA	
DELEGACION PROVINCIAL DE CUENCA		CU-20648-VE	
ESTACION N.º 1602		DESTINO AGRICOLA	
Número de identificación 7T4X175092			
Clasificación del Tractor Agrícola: 5000		Grupo: 3	N.º CERTIFICADO
TRACTOR AGRICOLA		Subgrupo: 1	98/00784
Marca: MASSEY FERGUSON Tipo: 147 EBRO Variante: 2RM Denominación comercial: 147 EBRO Peso en vacío (Kg): 1450 PMA (Kg): 2083 PMA 1.ª E (Kg): 893 PMA 2.ª E (Kg): 1190 PMR (Kg): 5800 Remolque con frenos de servicio: - Hidr. o neumáticos: ***** - Mec. independientes: 3000 (*) - Mec. de inercia: 4350 (*) Remolque sin frenos de servicio: 1200		Dimensiones neumáticas: Delanteros: 2 Traseros: 2 N.º 5.50-16 12.4-28 Min. 6.00-16 12.4-32 Máx. Anchura máxima: 2280 mm. Longitud máxima: 3000 mm. Altura máxima: 2300 mm. Motor: Marca PERKINS Tipo AD3-152S N.º cilindros/cilindrada 3/2478 Potencia fiscal 13,50 CVF Potencia inscripción --/45 Kw/CV Velocidad máxima 030 Km/h Obligación de estructura protección SI NO	
Observaciones:			
El Vehículo cuyas características se reseñan, cumple en esta fecha las prescripciones que para circular por las vías públicas señala el vigente Código de la Circulación y reglamentación pertinente. Por el Organismo Inspector:  Fecha: 13-01-98 Valadera por: 13-01-99 Al tractor agrícola reseñado le ha sido montada la estructura de protección.			
marca modelo contraseña de homologación (Fecha, firma, sello de la Empresa y nombre del firmante)			
Sociedad inscrita FECHA DE MATRICULACION 01/10/78 . DUPLICADO POR CANJE. (*) PMR MAX. SEGUN R.D. 1467/81 EN SUS D.T. 5ª Y 10ª (BOE 173 DE 21/JUL/81). DISPONE DE FRENO DE SERVICIO MECANICO DE PEDAL Y FRENO DE ESTACIONAMIENTO MECANICO			

The 147's Spanish certification.

3,000 miles: a sure sign of Tom's commitment to collecting unusual Massey Fergusons!

Fortunately for Tom the 147 proved to be worth all the effort and after a brief makeover, was soon part of the collection. Not all of Tom's tractors involve such logistical problems, however, and European Masseys can occasionally be found closer to home. His 1080 is a case in point.

"The MF 1080 is a local tractor

and was originally sold in 1974 by the Tweedies dealership down in Dumfries," he explained. "It was bought by Alex Irvine, the well-known ploughing champion, to use on his farm at Twynholm, in Galloway, and stayed there all its life. I acquired the tractor when he finally retired and sold the farm."

The MF 1080 is a standard tread model and was built at Beauvais in France during the early 1970s. It's equipped with a Perkins 5.2-litre

COLLECTING CLASSICS



Like all of Tom's tractors, the Massey was refurbished at the family yard, in Cronberry.

Tom's family had to go to some lengths to bring this MF 147 back from Spain.



MF 147 SPECIFICATIONS

Engine:	Perkins AD3.152S
Cylinders:	3
Bore/stroke:	3.6 x 5in (91 x 127mm)
Power:	45hp
Displacement:	152 cu in (2.5 l)
Transmission:	8 forward and 2 reverse

four-cylinder diesel engine, and can deliver 80hp. The tractor is also fitted with Multi-Power transmission, so offers 12 forward and four reverse gears.

Tom said: "It was a big tractor for its day, and was certainly up to the task. You don't see many of them about nowadays and I was happy to add it to the collection. It was also a case of the right tractor at the right time. When we recently finished constructing our new office building, I was looking for something to display in the foyer. The MF 1080 seemed to fit the bill perfectly, although the tractor is allowed out on occasions."

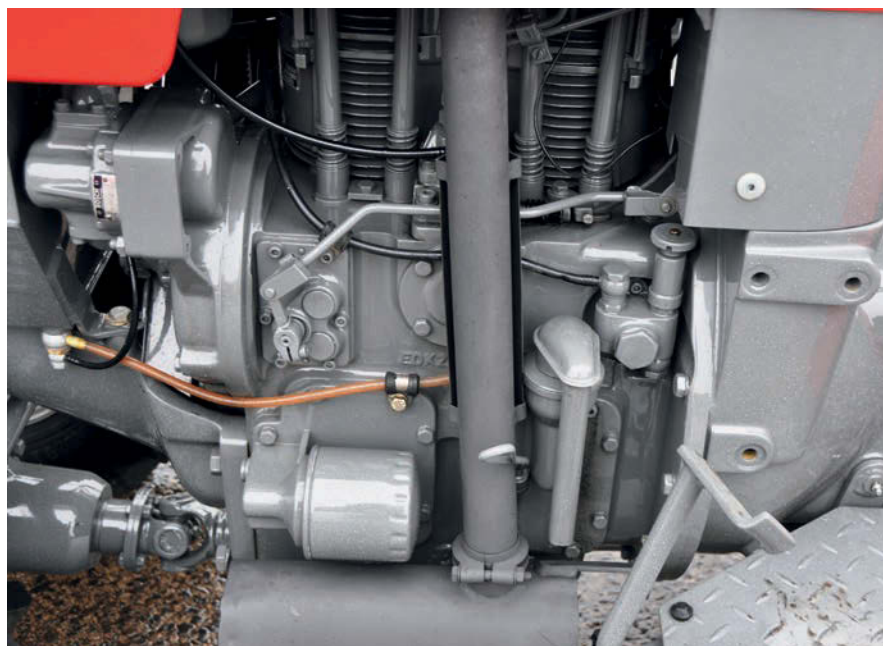
Short lifespan

Although the majority of Ruby Reds had lengthy careers, some models were destined for a short lifespan. The 132 (Narrow) is a good example. During the early 1970s, Massey Ferguson was riding the crest of a wave and in the process of strengthening its global grip. The company had already acquired a 30% stake in the German tractor manufacturer Eicher, based in Bavaria, and went on to complete the purchase in 1973. Tom first came across the 132 while on a trip to a tractor show in Holland.

"I like to go the rallies on the Continent when I get the opportunity, because you never know what might show up," he said. "On this particular occasion, I happened to spot the MF 132. Nothing came of it at the time, but I made a mental note for the



The MF 132 was built by Eicher in what was then West Germany, but was only in production for a couple of years.



The two-cylinder EDK2 could deliver 34hp at 2,150rpm.



The Eicher air-cooled, two-cylinder engine.

COLLECTING CLASSICS



Massey was happy to rely on German engineering, and just altered the tinwork.



The business end of the MF 132.

future. When I returned to the rally the following year, I had a chat with the owner. He wasn't ready to sell the tractor at that stage, but at least I'd made my interest known. The effort paid dividends because the following year we met up again and were able to come to an arrangement.

"Like all my tractors, I also did a bit of research on the 132, although information was a bit thin on the ground. This model was only built in Germany between 1975 and 1976, so there are only a few examples around. Apparently, when Massey bought Eicher, it was happy to keep using the German engines and the rest of the mechanics, and just changed the tinwork. The Narrow is equipped with an Eicher EDK2 air-cooled 1.96-litre, two-cylinder diesel and can deliver 34hp at 2,150rpm. It has six forward and one reverse gear."

Once the tractor had arrived in



The MF 1080 enjoys pride of place in the foyer of Tom's new office block, at Cronberry.

MF 1080 SPECIFICATIONS	
Year:	1974
Engine:	Perkins A4.318
Cylinders:	4
Bore/stroke:	4.5 x 5in (114 x 127mm)
Power:	80hp
Displacement:	318 cu in (5.2l)
Transmission:	12 forward and 4 reverse Multi-Power (partial power shift)



The rear end of the 1080 is very well-equipped.



This 1080 was originally owned and driven by well-known ploughing champion, Alex Irvine.

Scotland, Tom was able to give it a close inspection. The family has a well-equipped workshop on site to handle the company's fleet of trucks, including commercial vehicle MoTs.

According to Tom, the tractor was in good condition and so didn't require a lot of work. The Massey is now a part of Tom's fleet and is regularly taken to shows.

THE HISTORY OF EICHER TRACTORS

The first Eicher tractors were built at the Forstern factory in Bavaria during the 1930s. The brothers Joseph and Albert Eicher came from an agricultural background. They were also engineers and keen to take advantage of the modern machinery that was being developed during the inter-war years. Their inventions included an automatic mower and three-wheeler tractor.

Following the end of World War Two, Eicher built one of the first air-cooled tractors. This raised the company's profile and made it one of the most important tractor manufacturers on the Continent. In 1959 the company expanded

into India and, by 1965, that side of the operation was completely in the hands of Indian shareholders, and went on to become Eicher Motors Ltd. In 2005 the company sold the tractor part of the business to TAFE (Tractors and Farm Equipment Ltd) of Chennai, which still makes Eicher tractors.

The European company was eventually acquired by Massey Ferguson in 1973, although it later sold the business on. Eicher subsequently went through several bankruptcies and was eventually acquired by Dromson. It now builds specialised tractors for vineyards.

ON THE STRAIGHT AND NARROW

If Ferguson, and then Massey Ferguson, thought it worth building narrow versions of their tractors, then there will always be collectors interested in them. **Alan Barnes** meets just such an enthusiast



An MF 158 Mk.3 narrow version publicity photograph. (Pic: Agco Archive)

In 1948, Ferguson introduced a narrow tractor designed for use in hop gardens and orchards, which was basically a variation of the standard TE-20. The model was designated the TE-C 20 and the modifications for the narrow tractors were carried out by the Lenfield Engineering Company, based in Kent. The first factory-built Ferguson vineyard model was brought to the market as the TE-K 20, and was launched in May, 1952.

As well as the narrowed track, alterations were also made to the half-shafts, the lift linkage and the front axle. In addition, the bonnet was lengthened to accommodate the re-positioned radiator, which had been moved forward by four inches.

Narrows continue

The production of narrow version tractors continued with the advent of Massey Ferguson, which held the view that 'once the basic tractor had been designed, it opened the way to modify and adapt it for various specialist tasks.'

Since the introduction of the first TE-K 20, tractors for specialist applications – such as vineyard, orchard and fruit operations – have featured strongly in the MF range. Initially, specialist machines were versions of agricultural tractors, but were soon developed as bespoke units to suit the needs of specific applications. In 1960, Massey Ferguson acquired Landini of Italy, which enabled the specialist range to be taken to new levels with the addition of crawler technology to the MF portfolio. Developments on specialist tractors have revolved around the need for these machines to fit into tight spaces, work on difficult or unusual terrain and carry out multiple tasks, often in delicate crop environments.

Working in difficult terrain, or with delicate crops, wasn't actually one of the prime reasons that Ray Cleggett and Dennis Belton chose to add a narrow version MF 158 F



The MF 158 F looks quite at home on a smallholding.

to their collection of classic tractors. As Ray recalls: "This Massey, which is the narrow version fruit tractor, was previously owned by a friend of ours who found it particularly useful in his landscape gardening business, as it could be easily used in small gardens. When he moved away from the area in 2004, he gave the Massey to Dennis and me, and we added it to the restoration queue of machines that were waiting to receive attention."

Zero history known

"Other than the fact that it wasn't exactly in pristine condition and that

it had once worked in the Midlands, we knew absolutely nothing about the working history, or any of its previous owners," Ray continued. "Most of the narrow version MF 158 tractors were sold in Europe, and I don't think that many were brought into the UK, so it is something a little bit different, and it certainly makes a change from doing-up another MF 135! One other point in its favour was that it had a cab, which would make it useful on road runs, as it always seems to rain on the days when those events are held!"

In fact, it was a wet road run that



The tractor spent two years in storage before the restoration work started. The original, vertical exhaust is still in place in this photo.

OWNER'S STORY



The tractor was split to rebuild the clutch.



Restoration in progress.



The old exhaust was subsequently replaced.



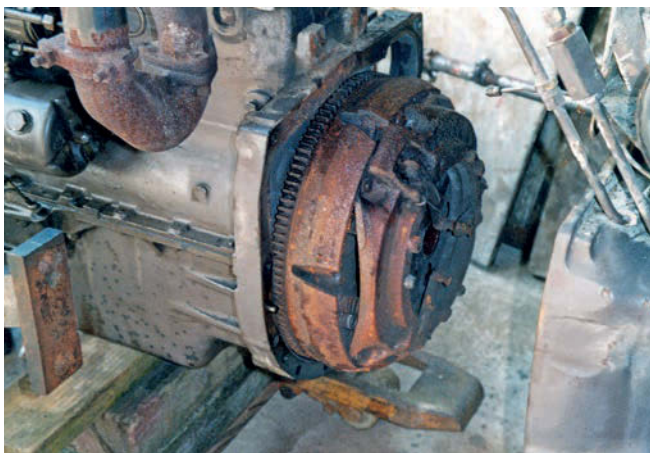
The radiator was in good condition so was simply flushed through.

stirred Ray and Dennis into starting work on the 158, which had been left in one of their storage sheds for over two years. "We had kept it under cover all that time, so it was in practically the same condition as when we collected it in 2004 - well,

perhaps it did have a bit more dust on it. The only thing we'd done to the tractor was to remove the front loader, which we'd never intended to use.

"We already knew that the engine was sound and had been test run.

The main mechanical problem seemed to be some issue with the clutch. Once the cab and panels were removed, the Massey was split to reveal some serious wear to the clutch, and it was obvious that the whole thing would have to be rebuilt.



The clutch parts showed severe wear and so had to be replaced.



The cab frame proved to be in excellent condition, with just a little surface rusting.

“This Massey, which is the narrow version fruit tractor, was previously owned by a friend of ours who found it particularly useful in his landscape gardening business”

The required parts were ordered from Landtek, which was a good source for tractor parts, but which is no longer in business. The engine was given the once-over and, unlike some of the restoration projects we've completed in the past, the four-cylinder Perkins A4.203 diesel engine was in excellent condition. As the tractor runs so well, we'd like to claim that we completely stripped down and rebuilt the engine but, in truth, other than replacing the filters, changing the oil and giving it a good clean, no other work has been carried out."

Functioning hydraulics

"Although the back end was very dirty, once it had been power-washed all the hydraulics checked out fine and everything was in full working order. So, with nothing to do at the back, we feared the worst when it came to the front end, as regular working with a front loader can sometimes result in problems. However, once again, everything proved to be in good order, with very little wear to the steering or front axle. It looked as though the only significant mechanical problem we were facing was the worn clutch and, once the parts had been obtained, the rebuild of that was relatively straightforward.

"The tractor had been fitted with a vertical exhaust but we felt that, as a fruit tractor, a horizontal exhaust would be more appropriate. So the old one was removed and the exhaust re-routed to run down from the engine and underneath the cab



The MF 158 Mk.3 narrow version. (Pic: Agco Archive)

to the rear of the tractor.

"While Dennis and I like to do as much of the restoration work as possible, we do find the electrics rather a struggle. The wiring on the MF 158 is a case in point, as I very much doubt whether the tractor had left the factory with the tangle of wires that we discovered tucked behind the dash. Obviously, some ad hoc changes had been made to the tractor's wiring over the years, and this probably accounted for the lights coming on when the switches were turned to off! We didn't have the benefit of an original wiring diagram and, even with one, I doubt whether we'd have been able to sort out the mess ourselves. So it didn't take us long to decide to call in the cavalry, and we enlisted the expertise of Eric Selby, who re-wired the whole tractor for us.

"All the tyres were in reasonable condition and were usable, but they were removed while the hubs were cleaned and repainted. With the work on the chassis more or less



The driver's view of the dash.

completed, everything was rubbed back, cleaned, primed and given its grey top coats and, with the wheels also back on, we could move on to the cab and the panels.



Apart from replacing filters, a service and a repaint, the Perkins A4.203 needed nothing more.

OWNER'S STORY



The rear-end hydraulics were in good condition. A three-point Cat 1 or Cat 2 linkage was standard on the MF 158.

Minimal corrosion

"An inspection of the cab frame revealed only minor surface rusting in a few places, which was easily dealt with, and the old paint was rubbed back and the cab frame primed and repainted. The window rubbers were sound, as was all the glass, which cleaned up very nicely, and was re-fitted once the cab had been painted. Door hinges proved to be OK and the roof was also sound and, after being given a thorough clean, it was primed and painted white.

"Fortunately, the original bonnet top, sides and front grille could all be re-used, although some repair work was needed to remove wear and tear knocks, scrapes and dents from the tinwork. The front grille and headlight surrounds also cleaned up very well and, once the front weight bar had been rubbed down and repainted, it looked almost as good as new. With the panels repaired, the old paintwork was removed and the panels were primed and painted and left in the shed to dry. The refurbished cab was reunited with the rest of the tractor, and the interior fitting-out was then completed.

"The repainted bonnet and panels were fitted and the new transfers applied. These had been sourced



The cab will keep Dennis nice and dry during wet road runs.

“We feared the worst when it came to the front end, as regular working with a front loader can sometimes result in problems”

through Attwoods at Sutton Valence, in Kent, who had also been very helpful with providing a number of drawings and diagrams of various parts.

"The completed Massey was given a test run, which caused some

alarm as there seemed to be some rather strange and certainly un-Massey-like noises coming from the vicinity of the back axle. Fearing that something serious had happened with a hub, we were about to start taking the back end apart when we realised that the wheel nuts hadn't been tightened properly. So, once we'd put that basic mistake right, I'm happy to say that the tractor ran perfectly. Since then Dennis has driven it on a number of road runs and, even though the cab has no heater, it's a much better option than an open-platform Dexta when out on a wet and windy road run!"



The MF 158 F was given to Ray and Dennis in 2004.

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HEAD-TO-HEAD

RED VS BLUE!

Ben Phillips compares the MF 165 and the Ford 4000 – two of the most powerful mainstream tractors available in the 1960s – and attempts to pick his favourite

The Massey Ferguson 165 replaced the MF 65, which was the MF 35's bigger brother. It was fitted at first with a Perkins four-cylinder diesel engine producing 58hp, while the Ford 4000 had a three-cylinder diesel engine that delivered 55hp. The Perkins motor was well tested as the

65 had used a very similar engine, but Ford's motor was an all new unit and, as a result, problems were present almost from the start.

At a practical level, accessing the engine on the 165 is difficult as the bonnet is bolted firmly down. A centre flap opens to get to the water and fuel filler points,

while a further flap under the dash provided access to the battery. The Ford, however, has a bonnet that, on one side, lifts easily to reveal a battery tray that'll swing out to allow an excellent view of the engine.

It was easy for customers to determine which MF model



Red, grey, silver and black were the colours of the 100 Series Massey Ferguson tractors; the 165 was at the higher end of this successful range.



A blue and grey livery made Fords of this period instantly recognisable. The 1000 Series was introduced in the mid-1960s.

replaced their old one as all the company had done was simply to put a '1' in front of the '65'. But Ford was more worried that its new numbering system could confuse buyers so, on the early 4000, it was decided that the model would carry the 'Major' name, linking it to the popular, previous model.

Having a good, clear dash is an important aspect for any tractor driver, and the 165 certainly delivers on that front. A group of five, easy-to-read gauges informs the driver about everything from engine speed and fuel level to water temperature. The 4000 adopted a more modern approach, with a rectangular instrument panel providing essentially the same



The front of the MF 165 featured the famous three-triangle MF badge. Two round headlamps and a detachable section on the grille made up the distinctive front.



The word 'Ford' picked out in bright red paint, was prominently positioned on the 4000's upper grille section. The whole grille could be removed by undoing a couple of bolts.

HEAD-TO-HEAD



The early Perkins A203 four-cylinder diesel engine was tried and tested and proved reliable. It was the benchmark power plant of the era.



The Ford engine had been newly-developed and suffered with well-documented problems. Note the use of the word 'Major', which was included to reassure customers who might be unsure about the new 1000 Series model range.



The Massey Ferguson 165 has a well-equipped dash featuring five useful gauges; tractormeter, fuel level, ammeter, water temperature and oil pressure.



The Ford 4000 features a more modern-looking, rectangular instrument binnacle that encloses a tractormeter, fuel level and water temperature gauges, plus oil pressure and charging circuit warning lights.



The 165's bucket seat can be tilted or tipped, and features relatively comfortable cushion pads.



The durable, plastic-covered Ford seat does tip slightly, but is harder and not as comfortable as the 165's design.



The hydraulic system on the MF 165 was a continuation of the excellent set-up that Harry Ferguson had developed years earlier.



The rear of the Ford looks rather basic and uncluttered in comparison with the 165's



The rear wheels on the MF 165 featured centres that had dishes that could be split, allowing for a greater variety of widths.



This extra step fitted to the early 165 makes getting on much easier, as the tractor is quite high.



The Ford design feature a single, solid centre dish; the rims were 36in in diameter, which is 4in larger than those on the 165.



Trying to remove the starter motor on the Ford 4000 is tricky due to the location of these fuel filters and the injector pump.

information but, instead of relying on dials, the designers opted for charging and oil pressure warning lights. Another important factor for any driver is a comfortable seat, and the 165 had the best available at the time, featuring a two-section cushion set. The seat found on the 4000 is slightly different; a hard-plastic grooved cover that wasn't as comfortable and also didn't look as nice.

Technical specifications

	Massey Ferguson 165	Ford 4000
Engine	Perkins 203 4-cyl diesel	Ford 3-cyl diesel
Power	58hp	55hp
Brakes	Dry disc	Wet disc
Front wheels	6:00/16	6:00/16
Rear wheels	11/32	11/36

Massey Ferguson was famed for its hydraulics, and the 165 boasted response control. However, the lifting rate couldn't be varied whereas, on the Ford, it could; when the hydraulic lever was lifted, it sped-up automatically. However, whether this was a good system or not remains a subject for debate.

By the mid-1960s lighting kits were being offered on all tractors. Manufacturers understood that farmers would probably have to use their tractors in the dark, and both Massey Ferguson and Ford were quick to embrace this idea, and fitted generous lights. The 165 had headlamps in cowls on either side of the front grille while on the Ford they were fitted behind the grille, making them slightly less vulnerable to knocks or breakages. Both models featured front-facing side lights positioned on the front of the wings, and rear-facing ones at the back. In addition, the MF 165 featured a good plough lamp that lit up the working area behind the tractor very well.

Which would I choose?

Well, after having restored examples of both these models over the years and, despite plenty of thought, I can't pick a definitive winner between these two great machines. I like certain aspects of both tractors, and dislike other things about them which, overall, tends to even things out.

ANOTHER MF 165 SAVED

Ben Phillips reports on his cosmetic restoration of a very original, 1966 Massey Ferguson 165

The tag line for the publicity campaign in 1965 for the new 100 Series Massey Fergusons was *The Red Giants Are Here* and I was delighted to get this very original 165 in for restoration.



This very early Massey Ferguson 165, owned by David Tidy, was built in 1966 and, although it wasn't in great mechanical order due to a frost-damaged cylinder head and block, the tractor was essentially original.

The wings were the correct ones (with the aluminium grab handles) however, the whole lot was daubed with paint; someone had gone over all the tinwork - including the rear

lights - with red paint that was the wrong shade.

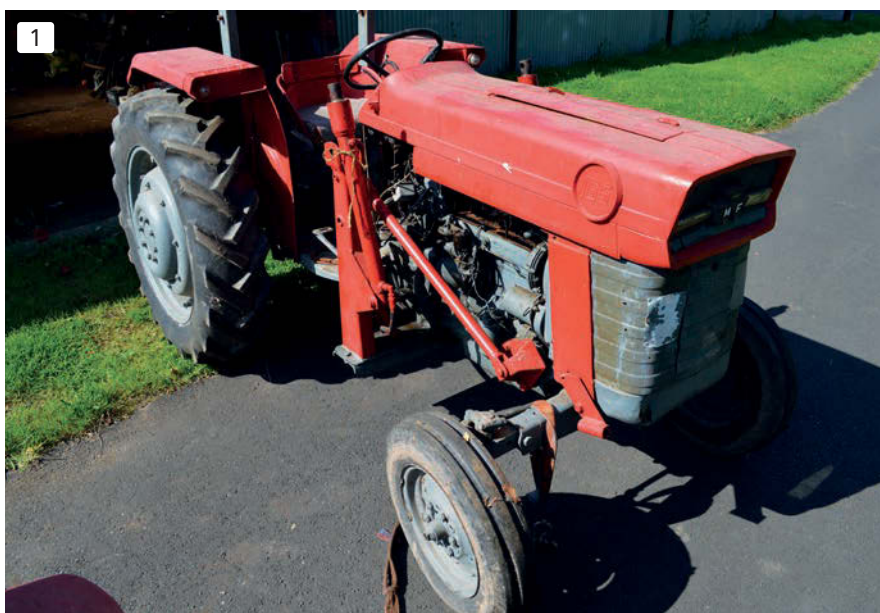
The bonnet was in reasonable shape, but wasn't bolted down to the grille, which was straight but had been badly repainted, and there were two plastic blanking plates where the headlights should have been. A genuine MF loader was fitted and painted in red and grey, even though it should have been all red.

I won't be detailing the mechanical side of this restoration here; suffice to say that the engine was tackled

first and, because it was frost-damaged, a new block and cylinder head were required. The brakes were also overhauled and the whole tractor was sandblasted by Pukka Blast, which runs a mobile service.

Quick start

Once I had the tractor in primer and undercoat, I started to build it back up. I always like to get the engine started at the earliest opportunity after an overhaul, as this allows for the oil to circulate around the



This Massey Ferguson 165 arrived with me looking rather forlorn. Here the loader it came with had already been removed.



The side view of the 165 shows there's a lot to be done, but all the tinwork was salvageable.

RESTORATION



This is probably the worst angle. However, unlike so many other examples this example's bonnet front and grille hadn't been knocked about.



The grille was plastered with the wrong shade of grey and the headlights had been replaced by plastic squares riveted into position.



The rear lights were the original, Hella units, but were too bad to salvage. This one's lens had been covered in paint, for some reason...



... while, on the right, the lens was missing altogether, as was the bulb holder.



The sidelights were in better condition, although the glass was cracked in places. As with the rears, the bulb holders would never hold a current.



None of the dash gauges were salvageable. However, when I restore a tractor I prefer to use new gauges anyway, as they always look so much better.



The hydraulic arms were also scrap; they had obviously worn so much in the past that somebody had welded the detachable ball ends into place.



I soon had the tractor stripped and ready to be sand-blasted. By this stage it looked even more of a mess as more rust was now visible.



No, this isn't a photograph of the skid unit coated in grey primer, it's bare, sand-blasted metal, and doesn't it look better?



This shows how far a tractor needs to be stripped down before it's ready for sand-blasting. In fact, even more stripping was to follow, as the engine fitted was scrap... but that's another story!



All panels were treated to a coat of primer, two coats of undercoat then three coats of MF Red. They were then left for a week to harden.



The skid unit went through the same painting process as the panels, and was built up as much as possible before the final coats.

new parts. Although all the moving components are doused in oil during a rebuild, this isn't the same as when the oil pump is working to properly circulate the essential lubricant. Remember, though, that

a drive around on a tractor without its tinwork fitted needs to be undertaken with great care; the rear wheels are dangerously close to the driver, without the mudguards for protection.

In this case, all the tinwork could be saved, which was amazing; normally there are always some sections that are too rotten, bent or twisted for viable repair. One wing was slightly corroded, but a new section was

RESTORATION



The tractor soon started taking shape once the wheels and wings were fitted. Note the bonnet in the background, waiting to be fitted.



Factory-fresh! This view of the 165 shows the early colour features off to best effect. The tyres are the right size, allowing the tractor to sit correctly.



The silver rims contrasting with the red centres make for a perfect colour combination. The rears were re-assembled with all new bolts and nuts.



I always paint the manifolds in heat-resistant black. A clamp on the silencer was fitted before it went home.



The new rear lights were certainly better than the old ones; the reflectors were missing when the tractor arrived here.



The front wheels were the same colour combination as the rears, but were trickier to paint. A lot of masking tape was used!



The original starter and dynamo were probably OK. However, if replaced later, they would be black as this was a standard Lucas colour.



The upper grille and badge bar is typically damaged so often needs replacing; the rubber strip around the edge is essential.



Some of these emblems are just round with a decal stuck in the centre. This version is from Anglo Agriparts, with numbers embossed.



Unfortunately, the original glass Lucas lights couldn't be reused, so these reproduction ones were bought and looked OK.



Another feature on the original MF 165 models was this step ring, and it certainly helps getting onto the tractor.

soon seam-welded into place. This repair was made behind the rear main upright which, on the 100 Series Masseys, is a very common failure point. Dirt from the tyres blocks the drain holes and, once moisture starts to build up, corrosion is the inevitable result. This type of problem is typically highlighted at the sand-blasting stage, when a hole will often be blown through the rust-weakened metal.

The bonnet was rippled slightly in one place; it looked like someone had smacked it with a hammer from the inside. I did the same thing from the top, but I put a hard section of metal underneath to give it something to hit against. It was soon near enough level and a skim of filler got it as level as could be expected.

Three coats of MF Red over the

whole tinwork and three coats of Stoneleigh grey had most of the tractor done. The wheels on the early 100 Series models saw the rims painted in silver and the centres in red. This was fine on the rears as the centre sections were unbolted from the rims, but the fronts needed careful masking, which was somewhat awkward to do. I painted the red centre first, gave it a week to harden, then masked it off using low-tack masking tape while I went

over the rim with silver mist. The final effect of this colour scheme looks really good.

Attention to detail

Another colour scheme reserved for the early, bigger 100 Series models is found on the side panels of the battery box, where the bottom corner section is painted in Stoneleigh Grey, while the rest is finished in red. These colour combinations certainly required a lot of careful masking, and it would have been easier not to follow the original colours, especially as those combinations were dropped for the later 165s. But, as soon as this tractor arrived in my workshop, I knew that an authentic paint job was required, and I couldn't wait to replicate them.

The Massey Ferguson 165 isn't a big tractor by today's standards but, back in the 1960s, it was one of the larger models available. It's certainly a very imposing machine and one on which the driver enjoys a high and commanding seating position, which is great, whatever you're doing.



A familiar family 'face'; the 100 Series tractors all had silver light surrounds and a black and silver grille.



On original MF 165s, the bottom corner of this panel was grey (later ones were red). It took more work to paint like this, but originality was important.



From this angle you can see how good the ground clearance is on the MF 165. The front axle adjustment was, as usual, seized.



A new seat cushion set is always fitted as the originals are typically either ripped and damaged, or missing altogether.



I fitted the loader last as I wanted some photographs of it finished without the frame in the way. But, once fitted, it looked great.



All of the dash gauges were new, as was the steering wheel. The MF badge in the centre suited it perfectly.



The inner check chains were bought from Sparex, they were exact copies of the originals and were zinc-coated.

WORKING CLASSIC

JUST THE JOB!

Having moved to Kent with his unusual and rather specialised business, Dinny Konig wanted a tractor to work on his new ranch, as Howard Sherren reports



Dinny Konig had this MF 165 professionally restored for use on his Alldog Ranch.

Ever since 2002, the Alldog Company has provided London dogs with daycare, walking, grooming and overnight stays. Run by Dinny Konig and his wife Leila, as the business and the family grew, their vision changed to provide the ultimate, luxury country retreat for stressed-out urban dogs to unwind.

The Alldog Ranch became a reality and the perfect location was found in 2007, situated in 17 acres on the flat lands of Romney Marsh, in Kent. Dinny and Leila bought the property

and immediately went about rebuilding the site to suit their needs and those of their clients.

Dream becomes reality

Two years on, in 2009, the dreams became reality when the ranch opened. The Alldog Ranch is different to most other dog-sitting locations as it's a unique country retreat for dogs that provides constant attention and affection as dogs receive supervision and socialisation at all times.

The ranch is ideal for short or long stays, so owners can enjoy a care-free (and guilt-free!) time away from their dogs. Dinny and Leila provide a pick-up and drop-off service to and from London in their specially-fitted van on Mondays and Fridays. Alternatively, clients may drop off and pick up their dogs, but by appointment only.

With 17 acres of grassland for the dogs, (and children) to play on, they needed to keep it maintained. A 10-acre field was properly fenced and this became the dog exercise area.



Despite the finish, the tractor is expected to earn its keep.



Basking in the evening sunshine, the MF 165 looks great.

As many of you will know, grass seed (especially when dry) can be very harmful to dogs if it gets stuck in the animals' paws, so this had to be managed. When the seed gets moist they begin to grow and the resultant growth has been known to travel all the way up a dog's leg!

From day one, Dinny knew he needed a tractor to use with a topper to mow this area on a regular basis. As he grew up on a farm in Ireland, Dinny knew it had to be a Massey Ferguson as they were so popular when he was young.

He looked for about six months before he finally found a 130 in very good order. He was immediately drawn to this little beauty, and was lucky enough to buy it very cheaply.

Sad decision

However, after working the MF 130 for just a month, Dinny sadly realised that he would need something bigger. It was struggling to pull his five-foot topper and he also knew he needed a wider topper to cover more ground. He put it on eBay and received a lot of interest.

The first man who saw it, bought it, for about double what Dinny had paid. "Although everybody gave me a lot of stick for buying a 130, I cried when she left," explained Dinny. "I

spoke to one bloke about doing some work on her and when I told him it was an MF 130 he laughed and hung up!"

Dinny was back to square one, without a tractor, so made the decision that an MF 165 would be the

“As Dinny hadn't got the time or facilities to give the new purchase an overhaul, he set about finding a restorer to do the job”

right machine for the job. After some more searching and consideration he found a 1965 165 (first engine version) all the way down in Cornwall.

"I liked it, as it was also a French-built one, so it looked a little different," said Dinny. "It wasn't in great shape sadly, although someone had attempted to paint it."

As Dinny hadn't got the time or facilities to give the new purchase an overhaul, he set about finding a restorer to do the job. He gave it a good work-out on the topper and found not only the clutch but PTO needed work, which would mean a fair bit of time was needed to put it right.

After spending many hours assessing previous restorations and various

restorers' capabilities, the tractor was booked in and sent up to the north-west, some 400 miles away. There it would receive a full restoration with no expense spared! An engine overhaul, clutch replacement, seals sorted, stripped to bare metal, painted, new wings, wiring, gauges etc. It was going to be just right!

Sadly, when the tractor returned, it wasn't as good as he was promised, and Dinny was rather disappointed. The tractor hadn't been stripped down to the bare chassis, new parts hadn't been used, wear in parts hadn't been rectified and there were even areas that hadn't been cleaned properly before painting.

Needless to say, the tractor was going back, so Dinny was left without a tractor for even longer. However, when it came back, it was in cracking shape.

He has a nine-foot topper on it now and it does the field in little more than an hour. It starts on the button, even in snow, and pulls his trailer with ease. As a result, Dinny couldn't be happier and feels it's been money well spent.

"I still dream of my MF 130, but the MF 165 does us proud," smiles Dinny. "I also collect red-based farm toys and I still have everything I had when I was a kid, still in the box!" Born Massey mad, always Massey mad!

OWNER'S STORY

A RARE FIND

**Willie Carson searches out an unusual Massey Ferguson 168,
with an original shuttle transmission**

With its beautiful patina,
this 8 Line Red Giant is
still doing a day's work at
44 years old.





Priced at £2,137, the MF 168 cost £124 more than its smaller brother, the MF 165.

The history of Roy Baxter's mixed beef and cereals farm in the Bann Valley, Northern Ireland, is a bit of a grey area. Well, maybe just a little bit grey... mostly it's red and grey! Roy explains: "My father farmed 50 acres here, and the first tractor I remember was the wee grey Ferguson TE-D 20. It was bought new in 1954, together with a two-furrow Ferguson plough, and it did all the work until he bought a Massey Ferguson 35X at a dispersal sale in the early 1970s. There were only 1,500 hours on the clock and it had been looked after very well, so it wasn't cheap. The bidding went to £550 and everybody thought he was mad to pay so much, but it's still here so it was a good investment."

A long line of MFs

This was the start of a long line of Massey Ferguson tractors that have worked the land on the Co. Antrim farm. "The next tractor to appear was a Mk.1 MF 165 with no cab. This



Purchased originally for loader duties in a coal yard, Roy's 168 left the dealership without a pick-up hitch.

OWNER'S STORY



The dash will be familiar to Red Giant drivers. There are just 3,056 hours recorded on the tractometer.

tractor had 4,000 hours on the clock, but had been reconditioned with a brand new A4.203 engine and new tyres, and cost £1,800. It spent a lot of time on the MF 71 side-mounted, single-chop, forage harvester.

"After my father had died, I was taking up the reins and decided to move up to a double-chop for silage harvesting, so I needed more horsepower and bought an MF 590 2WD with a red cab, and an MF 80

“When Roy was an impressionable schoolboy, his neighbour bought a new Massey Ferguson 168 with a GKN Sankey cab”

loader, costing £1,800. That tractor spent a lot of its time on the Kidd 246 at silage time, or pulling the slurry tanker.

"I started going across the water to the Cambridge machinery auctions and, on one of my trips, I met a tractor dealer from Perth called John Craig. At the time I was looking for another tractor and he said he had a very clean 2WD MF 690 for sale. I was very interested so I arranged tickets for my wife and me to fly over to Scotland to see this tractor, and have a few days away at the same time. Before we left, I rang to let him know that we were on our way, only to hear that John's father, knowing nothing about our trip to Perth, had sold the tractor to someone else. He was decent enough about it and sent us



The heavy-duty clevis drawbar was just one of the upgrades from the 165's standard specification.



The Cameron Gardiner loader bracket is a substantial piece of engineering.

the cost of the flights, but that wasn't the last time that I heard from him."

When Roy was an impressionable schoolboy, his neighbour bought a new Massey Ferguson 168 with a GKN Sankey cab. "It was used to power a New Holland double-chop forage harvester, which was taking it to the limit of its capabilities, but I thought it was a great tractor." The 168 was the mid-range offering in MF's Super-Spec range of tractors, which augmented the original Red Giants line-up.

Marketed as a step up from the successful 165, it incorporated

several up-grades in power, performance and convenience.

More power

The engineers at Perkins increased the engine's stroke length and pushed output up to 69hp, creating a very willing workhorse with 12 forward gears available, thanks to Massey Ferguson's change-on-the-move Multi-Power transmission, which was fitted as standard. A six-inch spacer was inserted between the gearbox and the back axle, which gave further advantages. Firstly the centre of gravity of the



Even the original ploughing light is present on this time-warp machine.



Multi-Power was standard on the 8 Line tractors. The 168 could also be ordered with a 'down-spec' eight-speed 'box.

tractor was moved forward which, with redesigned lift arm geometry, increased the hydraulic lift capacity to an impressive 4,000lbs.

Another result of this extra machine length was evident in the cab. Climbing in through the door, the easy access afforded by the six-inch wider doorway is very noticeable. Add to that the longer footplates, and the extra space between the

“A six-inch spacer was inserted between the gearbox and the back axle, which gave further advantages”

seat and the steering wheel, and the advantages become very obvious. The driver is also treated to the more comfortable Float-O-Matic suspension seat. It was all looking very good for the Super-Spec Eights.

Roy explains how he realised his dream of owning a 168 like the one he'd seen in his neighbour's yard. "In July 2006, John Craig rang to say that



The long lever operates the shuttle gearbox, with equal speeds in forward and reverse gears!

he had a really clean 1976 MF 168 for sale, with a Cameron Gardiner loader and a shuttle gearbox. Would I be interested? I made the trip to Scotland and agreed to buy it if John arranged delivery to Northern Ireland. He put it on a trailer and towed it to the docks at Cairnryan, drove the tractor onto the ferry and met me in Larne. I paid him the money and he went back as a foot

passenger. I was 15 when I saw my first 168, but I was nearly 50 when I finally bought one of my own. Some things can take me a while!"

Well maintained

Roy was just the third owner of this well-maintained piece of Banner Lane history. "It was originally sold to a coal merchant in Alloa, Clackmannanshire, in Scotland,

OWNER'S STORY



The condition of the tinwork on Roy's 168 is indicative of the careful maintenance the tractor received from its former owner during the 25 years its spent working in Perthshire.



The MF 168 was fitted with 36in rear rims as standard, however, Roy's tractor has 30in rims with Goodyear 16.9 R 30 tyres.

where it was used for loading railway trucks. After three years it was traded in and got bought by a Perthshire farmer, who kept it for the next 25 years. The clock showed about 3,000 hours, and everything about the tractor backed that up. The pedals are still tight on their pivots and show little wear on the treads, the tinwork is still original and

even the basic sound-deadening is in remarkably good condition, considering its age.

"I had very little to do to it when I bought it, apart from fitting a new PTO brake kit (it's the same kit as used on the 590) and tidying up the rims. I sand-blasted and resprayed them and fitted new Goodyear tyres. However, after a while the



The Perkins A4.236 engine was an improvement on the A4.212 unit used to power the 165.

engine started to show signs of wear, presumably from working in the dusty environment of a coal yard in its early life. So I had it rebuilt and have had no bother with it since then. I've used it as my sprayer tractor, and for general duties like topping the cattle grazing in the summer. It came with the Cameron Gardiner loader, but I have an MF 50D for loader work, so I took the loader off the 168. It's still a useful tractor."

But what makes this 168 so interesting is what sits behind the

“I'm very content with my 168. Just like the TE-D 20 and the 35X, this one's a keeper”

main transmission. The inclusion of the six-inch spacer in the Super-Spec tractor design allowed MF's engineers to experiment with various other gear train possibilities. One option was to use the space to fit a creeper 'box, while another was to install a transfer 'box for 4WD conversion. However, Roy's 168 is fitted with yet another adaption; a forward/reverse shuttle. This is such a rare option that it's taken some detective work by former Massey Ferguson employees to unearth its history.

Retro-fitted

One thing's certain; Roy's 168 would have rolled off the Banner Lane production line with the standard six-inch spacer, just like all the rest. So the fitment of the shuttle was probably undertaken by the



The heavy-duty, 'three-bolt' front axle and 7.5in front rims were upgrades on the 165's spec.



Roy's MF 168 now enjoys semi-retirement. It might be time to bring out the MF 71 single-chop!



The optional GKN Sankey cab dominates the profile of the 8 Line tractors. Sirocco's Flexi-Cab was the standard fitment. The extra six inches made cab access much easier.

Classic Massey and Ferguson Enthusiast would like to thank former MF employees Chris Clack and John Kirkham for their help in the research for this feature. Chris was MF regional sales manager and John was service manager for Scotland.

mechanics at the MF distributors in Scotland. The kit was available for both MF 100 Series 5 and 8 line tractors, but adapting a 168 would have involved fitting longer brake rods and a Super-Spec cab to allow for the increase in length. The shuttle kit would have been ordered from Central Parts Operation in Manchester, and been fitted according to instructions included in the relevant Service Bulletin.

Fitting involved blanking-off the reverse selector on the main transmission (imagine the possibilities if there were two ways to engage reverse!), installing the shuttle 'box housing in place of the six-inch spacer, and completing the task by fitting a new 1-2-3 gear knob on the main gear selector. This was not a cheap option and would have been out of reach for most farmers, so it would have mostly been of interest to more industrial applications, such as a coal yard. During the 1970s there were loading shovels available with clutchless direction change – a much more attractive option, so there would have been little demand for a gearbox lacking any form of synchromesh such as this. Due to its basic design, its rarity was assured from the minute it left the drawing office.

Roy is content with his Super-Spec Red Giant. "I've kept the loader brackets on the tractor since they are part of its history, and I can use the loader as a back-up if necessary. I would like to fit a period-correct pick-up hitch, but I'm struggling to find one. A 690 hitch would fit but it wouldn't look right. Apart from that, I'm very content with my 168. Just like the TE-D 20 and the 35X, this one's a keeper."

RED GIANT RECALL

Alan Barnes admires a fine example of the largest model in Massey Ferguson's initial line-up of 100 Series tractors – the MF 175



Graham Fellows' tractor is equipped with Pressure Control which, when used in conjunction with the coupler, can aid traction significantly.

With a couple of dozen tractors, two living vans and numerous pieces of farm machinery in his collection, I asked Graham Fellows which of the tractors would he take with him if he was cast away on a desert island.

There was no hesitation when he selected his MF 175. This was just as well as we had just moved that particular machine away from his display at the Rural Past Times rally at Sedlescombe, and into a quieter area for some photographs.

Graham and his family have a small farm near Peasmarsh, in East Sussex, where he not only keeps his collection of agricultural machinery and tractors, but also uses them all through the year for ploughing, harvesting and some building work. Even the tractors

that have been restored to show condition are often put to work as and when the need arises.

The 1966 MF 175 Multi-Power was added to his collection in 2001, and

“I always thought that it was a great machine and, while 66hp may not seem to be that powerful today, the MF 175 was the top-of-the-range model in its day”

was bought at a Cambridge auction. Graham recalls: “The Massey was a runner, fitted with a loader and, apart from the Multi-Power not

working, it seemed to be a pretty straight tractor. According to the documents it had worked from new on a farm in Cambridgeshire, and I was only the second owner.”

Teen idol

Graham was no stranger to the MF 175, as he'd driven one as a teenager when he worked on a farm a few miles from his home. “I always thought that it was a great machine and, while 66hp may not seem to be that powerful today, the MF 175 was the top-of-the-range model in its day.

“This was the first Massey I'd driven that was fitted with the new Pressure Control system, which took a bit of getting used to but really was very effective when it came to trailer work



The MF 175 was described by Massey Ferguson as a 'heavy class model' and, with its cast wheel centres and willing engine, it certainly had lugging ability on its side. (Pic: AGCO)

involving driving up and down steep slopes. Gently easing the control lever allowed you to keep complete control over the load on the back."

In the late 1950s and early 1960s the majority of the leading tractor manufacturers were concentrating on the production of what would be regarded today as small- and medium-sized tractors. These machines had certainly met market requirements until that time but even the largest and most powerful of them seldom topped 50hp.

However, the face of the agricultural industry was beginning to change and, with many farms increasing the sizes of their fields by removing thousands of miles of hedges, the call for larger, more powerful tractors was inevitable.

The tractor manufacturers weren't slow in recognising the need for increased power and, by the beginning of the 1960s, had already modified existing designs to meet the demand for more power. Their design and development teams were also working on a new generation of larger tractors. By the mid-1960s, most of the major players in the UK market had introduced new models that produced more than 50hp.

In 1964, at the Smithfield Show,

Massey Ferguson presented its new range of tractors that featured machines from 30hp upwards. The heavyweight in the line-up was the 66.4hp MF 175, which was unveiled at the end of 1964. Full production began in January 1965 with tractor serial number 700001; the first to come off the Banner Lane production line. A total of 5,671 were built that year.

Sensible evolution

It could be argued that Massey Ferguson's new flagship model

wasn't entirely new, as the design of the tractor arose from the TO 35 developed in America during the 1950s. The Massey Ferguson 100 Series, which comprised the British-built MF 135, 165 and 175 models, together with the French-built MF 130, were all developed from previous models; the MF 25 in the case of the MF 130 and the MF 35 and MF 65 as far as the other models were concerned. The use of proven components and reliable engines meant that the new models hit the ground running and, compared with other new model introductions, teething troubles were rare.

Powering the new MF 175 was a completely-new Perkins A4.236 four-cylinder, direct-injection diesel engine, rated at 66.4hp at 2,000rpm. It was paired with either a six forward and two reverse manual transmission as standard, or the optional Multi-Power gearbox. This increased the speed in each gear by some 30%, as well as offering 12 forward and four reverse gears.

With the new 100 Series tractors came improved hydraulics. As the company advertising literature for the MF 175 stated: 'In this model are the world's most advanced hydraulics - based on the original



For those that didn't require cast wheel centres, standard pressed-steel versions were available. (Pic: AGCO)

MODEL PROFILE

and never-equalled Ferguson System. Massey Ferguson's exclusive Pressure Control extends the Ferguson System weight transfer principle to trailed implements and four-wheel trailers.'

The advanced Ferguson System, with the new Pressure Control system, was an optional extra and was claimed by the company to be the 'Greatest advance in tractor hydraulics since the original Ferguson System'. It transferred weight from the implement and the front end of the tractor, and limited the oil pressure in the system to any pre-selected maximum.

Clever protection

When used with external hydraulic services it protected the implement cylinders and hoses, and prevented strain on the tractor relief valve.

The hydraulic system – with a four-cylinder piston-type linkage pump – provided two-way draft control, response control, position control and pressure control. Heavy-duty category II three-point linkage with adjustable top link was also fitted.

The Multi-Power 'change on the go system' was available on the MF 175 as a factory-fitted option, and those tractors with Multi-Power had auxiliary hydraulics as standard. The auxiliary system comprised a high-capacity pump with oil cooler to supply oil for external services through spool valves. The pump was adjacent to the linkage pump and was driven from the PTO shaft.

The tractor was fitted with 7x4in double-disc brakes on each half-shaft, which could be operated together or independently by twin foot pedals. A handbrake was fitted as standard. A differential lock was standard, and was operated by a pedal positioned close to the driver's right heel.

The dash displayed a full set of instruments, which included a fuel gauge, an easy-to-read tractormeter that showed low-range speeds in the lower sector and high-range



Dan Fellows rolling with the MF 175 fitted with cage wheels. These were popular during the 1960s and '70s, and represented a cheaper and lighter alternative to traditional duals, while still spreading the tractor's weight and minimising compaction. A large number were produced by Bettinson of Lincolnshire in either three- or five-star format, depending on the size.

speeds in the upper sector, plus gauges for standard PTO and belt speeds. There was also an ammeter, plus temperature and oil pressure gauges. The full array of headlights, sidelights and tail lights were all built in, and were fully compliant with the Road Traffic Regulations of the time.

“There has been no cause to touch the Perkins engine, which has run without a problem since the day I bought it”

The side and tail lights, together with the reflectors, were built into the mudguards, and there was an additional, adjustable-angle plough lamp at the rear.

Cast centres

The front and rear wheels were fitted with heavy cast centres, and the rear

track setting had power adjustment and could be changed from 54 to 90in, while the front track could be moved between 48 and 72in. Front tyres were 6.00-19 six-ply with 12-36 six-ply at the rear. The MF 175 was also available with pressed-steel wheels, that were lighter than the cast versions.

Standard equipment also included power steering, swinging drawbar, cushion seat and a vertical exhaust. Optional equipment included a cab, a sprung suspension seat, a heavy-duty belt pulley, a front frame and weights, an automatic hitch and a horizontal exhaust.

The MF cabs were glassfibre on a steel frame and featured slide-opening side windows, while a roller blind with inset window was available for the rear of the cab. The doors could be removed if required during hot weather, while the top of the cab was also detachable.

The MF 175 measured 139in in length, 72in wide over normal track,



An MF 175 working with a five-furrow MF 86 semi-mounted plough. The plough was available with four to six furrows, and was well matched to this tractor. Note the track-width settings and interesting front tyre pattern. (Pic: AGCO)

65in over the steering wheel, had a wheelbase of 84in and a ground clearance of 17½in. Its operating weight was 6,500lb and the fuel tank could hold 18 gallons.

Production of the MF 175 was relatively short-lived, beginning in January 1965 and ending in April 1967 (with Serial Number 722679), when the tractor gave way to the MF 178. While the MF 135 proved to be the most popular tractor in the 100 Series, its 'big brother', the MF 175, certainly met the needs of those wishing to have a more powerful machine.

As Graham recalled: "I have fond memories of working with the MF 175 back in the early 1970s, although I thought that with its increased power, the MF 178 which followed it was an even better machine. However, when the chance of buying an MF 175 at the auction came along, I made up my mind that this was one tractor that was definitely coming home with me, although I certainly wasn't going to pay silly money for it.

"There was some interest in the tractor on the day but, fortunately, my bid was successful and so the tractor came back to Peasmarsh. This was probably the first time

that the machine had actually left Cambridgeshire."

Pumped up

"While the tractor was generally in good condition with all the tinwork being sound and the engine running very well, there was the problem with the Multi-Power to sort out. Initially I'd thought of fitting a new pump but it seems that the early machines from 1965 and 1966 were fitted with a type of pump that was subsequently discontinued, and later tractors used a different model.

The problem was that the later-type pump, which seemed to be readily available, wasn't compatible with a 1966 tractor, and my attempts to find the correct-type replacement were unsuccessful. In the end I sent the pump to a firm in Coventry, where it was rebuilt. I fitted a new clutch plate in the Multi-Power unit and also replaced the main clutch plate.

"With the Multi-Power now operational, the tractor could be put to work and was used with discs, a baler and the front loader was useful for moving building materials. I also have a set of Massey Ferguson pallet forks, which attach to the rear of the

My thanks to Graham for providing the details of his MF 175 and to Ted Everett at AGCO for providing a selection of images from the archives.

tractor and these are regularly used to offload building supplies.

"There has been no cause to touch the Perkins engine, which has run without a problem since the day I bought it and, apart from fluid and filter changes, it has been left alone. After all, if it ain't broke, don't fix it! I did fit new brakes and, following a problem with the hydraulics, I rebuilt the main hydraulic pump.

"The tractor is fitted with a heavy-duty front axle and I couldn't get the correct-pattern bushes when it came to replacing them, so had to buy a standard set and get them machined to fit. The front tyres were also replaced with a new set, but the rears were on the tractor when I bought it and they seem to have a good few years' wear left in them.

"All the tinwork is original and I completed a full repaint in 2012 and, even though the tractor is used on the farm every week, the overall finish is still in pretty good condition. I've also fitted a new exhaust, as the one fitted to the tractor when I bought it wasn't the correct type.

"At the moment, a set of cage wheels are fitted to the rear wheels to spread the load and prevent soil compaction when we're using the tractor with a set of MF 52 11ft 6in discs. The discs are quite heavy, but with the advantage of Pressure Control, the MF 175 has no problem handling the discs, even on some quite steep slopes.

"In store at the farm I also have a suitable Massey Ferguson cab, which I may fit in the future. However, as an open-platform tractor and with the loader removed, I think that it's a very stylish machine and I'm very pleased to have it in my collection. For general work around the farm and when handling building materials in the yard, I think it's a marvellous machine, and this 'Red Giant' will certainly be staying here for the foreseeable future."

MODEL SPOTLIGHT

THE MARVELLOUS MF 178!

Massey Ferguson's 100 Series was renowned for its reliability and productivity and although it was the 135 that was the big seller, the largest models weren't too bad, either!

This arty shot shows a Massey Ferguson 178 at work with an MF 86 semi-mounted five-furrow plough. In 1968, an MF 178 Multi-Power had a list price of £1,320 and the plough with 'N' bases and G-P skims cost £397-10-0. (Pic: AGCO)



When Massey Ferguson introduced the so-called Red Giants, it was the 175 that topped the range – a ‘heavy class’ model to take on the toughest jobs that farmers and contractors could throw at it, but its reign was short-lived.

After just three years in production, and with 8,510 rolling out of Banner Lane, MF pulled the plug on the 175, replacing it with the 178. Only 20 MF 178s were built in the crossover year of 1967, with production proper getting underway in 1968.

Ironically, the 178 didn’t fare much better in terms of its production run and numbers built but, like the 175, it was a good tractor. Perhaps both models were too big for the average farm, as production of the 135 and 165 continued eight years after the 178 ceased to be built – but that’s a story for another day.

Massey Ferguson made much of the 178’s credentials, having this to say in promotional literature for the model: *‘Powered by a new 72.5hp direct injection diesel engine, the new MF 178 makes short work of heavy cultivations, even on large acreages. It all means plenty of lugging capacity thanks to the use of the advanced Ferguson System, plus Pressure Control, which converts the absolute maximum of horsepower into useful work. It will tackle jobs which only crawlers have been able to do up to now.’*

Developed from the 175, the 178 offered more power and while retaining the features of its predecessor – such as optional Multi-Power transmission, Ferguson System hydraulics and Pressure Control – refinements made it a better all-round tractor.

Although primarily designed for heavy draft work, such as ploughing and cultivating, power steering, an adjustable front axle and PAVT rear wheels as standard made it an attractive proposition for row-crop work. With 64.8hp developed at the PTO, it was a great tractor on

SPECIFICATIONS

	MF 175	MF 178
Engine	Perkins A4.236	Perkins A4.248
Cylinders	4	4
Power	66.4hp*	72.5hp*
Bore	3.875in	3.977in
Stroke	5in	5in
Displacement	236cu in	248cu in
Torque	190lb/ft @1,200rpm	212lb/ft @1,300rpm
Rated speed	2,000rpm	2,000rpm
Clutch	Dual: 11in primary 9in secondary	Dual: 12in primary 10in secondary
Transmission	6 fwd, 2 rev or Multi-Power: 12 fwd, 4 rev	6 fwd, 2 rev or Multi-Power: 12 fwd, 4 rev
Brakes	7x4in double discs on each half shaft	7x4in double discs on each half shaft
Fuel capacity	18 gallons	18 gallons
Lift capacity	3,375lb	3,900lb
PTO	540rpm @ 1,685erpm	540rpm @ 1,685erpm
Length	139in	136in
Width	72in**	72in**
Height	65in***	67in***
Wheelbase	84in	84in
Turning circle	23ft 6in****	23ft 6in****
Weight	6,500lb	6,500lb
Front tyres	6.00-19	6.00-19
Rear tyres	12-36	12-36
No. produced	22,676	30,424

* Max. gross

** Normal track

*** Over steering wheel

**** Without brakes

***** UK production run

rotovators, forage harvesters and the like, too.

Up to two double-acting spool valves could be specified, and tractors supplied with the optional Multi-Power transmission and combining valve had a total hydraulic output of 9.4gpm – great for loader work.

In 1971, Massey Ferguson halted production of the 178 at Coventry and began building the 168

(69hp) and 75hp 185 and 188, while maintaining production of the 135 (45.5hp) and 165 (62hp). The 148 (49hp) started rolling off the line in 1972.

Here, with the help of AGCO’s Ted Everett who took many photographs of the tractor for brochures and other promotional material, we’re looking back at the Massey Ferguson 178, five decades after production truly got underway.

MODEL SPOTLIGHT



Demonstrating the MF 37 flexible-tine cultivator was another role for the 178 tractor. Available in single- or three-section form, the 53-tine model seen here was said to be suited to both the 178 and 1100 tractors. It had a working width of 18ft 3in (5.56m) and a transport width of 9ft 10 in (3m). (Pic: AGCO)



The MF 85 three-furrow reversible was a heavy plough, weighing in at approximately 1,500lb. Fitted with 'N' digger bases, it was designed to plough at a depth of 12in. (Pic: AGCO)



This famous photograph shows Arnold Shepherd putting a 178 through its paces with an MF 18 trailer on Burma Road, at Stoneleigh. With the Multi-Power transmission, the tractor's top speed was 18.83mph. (Pic: AGCO)



Fitted with the optional cab, costing £74 (1968), and wider rear tyres, this 178 is demonstrating the usefulness of Pressure Control. Note the front weights. (Pic: AGCO)



Taken in October 1968, this photograph shows Bill Sargent with the 178 and an MF 32 three-furrow reversible plough. Despite the tractor's adequate lift capacity, a transport wheel was supplied as standard to take the weight off the three-point linkage. (Pic: AGCO)

A POWERFUL CHOICE

Dan Harris takes an in-depth look at the MF 178; a 100 Series model that's been almost forgotten and, consequently, can be quite hard to find



The MF 178 is an imposing, 72.5hp machine when fitted with cast iron wheel centres.

The MF 178 isn't a widely understood model but, at one time, this was the flagship of the Coventry-produced 100 Series tractor range, before it was replaced by the MF 185 in 1971.

Massey Ferguson launched the 100 Series range at the Smithfield Show in December, 1964. The new range was dubbed 'The Red Giants' and featured no fewer than four new models, ranging from the diminutive MF 130 and the medium-horsepower MF 135, through to the larger MF 165 and finally

the flagship MF 175. The MF 175 although bigger than the 165 was still very much a development of the MF 65, with the most significant difference being the new Perkins A4.236 engine, developing 66.4hp.

Ford, Massey Ferguson's main competitor on the other hand, had developed an entirely new range of tractors and a purpose-built factory in Basildon in which to assemble them. The Ford 6X series – or 1000 Series – was launched at the same time as the Red Giants and, perhaps due to the radical new

design, suffered just a few teething problems. Ford responded by upgrading the entire range to the 6Y 'Ford Force' in 1968, increasing the power output of its Ford 5000 model by 10hp in the process.

Massey Ferguson must have been aware of the developments over in the Ford stable, because Perkins developed two new engines based on the A4.236 platform to compete with the increased power output of the Ford models. The Perkins A4.212 was a shorter, 4.5in-stroke version powering the Mk.2 MF 165, while



The right-hand side of the Perkins A4.248 engine, which looks identical to the A4.236 lump used in the MF 175.



All MF 178 tractors featured a replacement element-type engine oil filter canister from the factory.



Multi-Power models feature an oil cooler immediately behind the grille door – check for leaks here.

the A4.248 was an increased-bore version of the A4.236. With the increased power output available, the MF 175 was relaunched as the MF 178, in 1968.

Excellent engine

The Perkins A4.248 engine is one of the best MF tractor engines of all time, and was specified in various models over a 30-year lifespan. This engine features a 101mm (3.977in) bore and, importantly, a 127mm (5in) stroke that assists in generating 287Nm (212 lb/ft) of torque at a lowly 1,300rpm. As per the original



With advanced hydraulics and built-in weight, the MF 178 was designed for heavy draft work.

A4.236 design on which it's based, a Lanchester balancer unit is included in the specification, ensuring no untoward vibrations during operation.

There are no specific issues with this engine and, with careful maintenance (the original engine service interval was 125 hours), 8,000-10,000 hours of operation can be expected before a major rebuild is required. Before starting the engine, check the dipstick, not only to determine an oil level within working limits, but also to gauge how dirty the oil is. Try to

“The Perkins A4.248 engine is one of the best MF tractor engines of all time, and was specified in various models over a 30-year lifespan”

see the engine start from cold, as a prompt cold-starter tends to indicate an engine that's in fine fettle. These engines should only require heat in the depths of winter.

Once started, the engine should pick up cleanly with little visible smoke; if opening up the throttle is creating black plumes, or oil is blowing out of the dipstick, then a rebuild is probably required. The odd oil leak is to be expected with a Perkins engine, but it really shouldn't be dripping from any

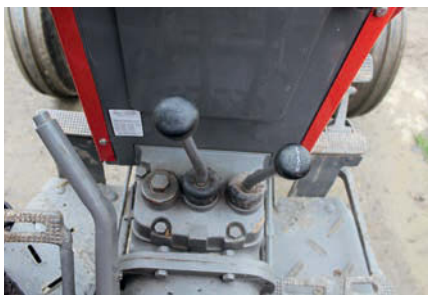
gasket interface. The condition of the radiator can be assessed by removing the front grille door with a flat-headed screwdriver. If the tractor is a Multi-Power model, then the radiator will be obscured by the transmission oil cooler and, therefore, is best viewed from the fan side.

Clutch condition

All models are fitted with a dual clutch as per many tractors from this period. The primary disc is 305mm (12in) while the secondary PTO plate is 254mm (10in). Engagement of the PTO can only be achieved by fully depressing the clutch pedal through both stages. Check that the clutch is adjusted correctly by engaging the PTO drive, and confirm the drive disengages when the is fully depressed. Also check for free play when the pedal is released, otherwise rapid wear may have occurred.

Clutches do wear, especially if a front loader has been fitted at some point in the tractor's life, although a clutch is capable of many hours of trouble-free operation if it's not been abused with an operator resting his or her foot on the pedal! Check for clutch slip by driving in a medium range gear and applying the brakes momentarily: the engine should die away quickly. Clutch slip of the secondary plate can realistically only be checked by driving a PTO implement under load.

BUYING GUIDE



The basic gearbox is a standard, dual-range, six forward, two reverse arrangement, controlled by centre-mounted gear levers.

How's the gearbox?

Two options of gearbox were offered on the MF 178 tractor; either the six forward, two reverse standard-fit unit, or Massey Ferguson's legendary 12 forward, four reverse Multi-Power that was an option. Legendary – in that it gives you an on-the-go splitter, allowing changes under power, at the flick of a switch – but also legendary in danger if you start to descend a hill in 'low', as engine braking is only available in 'high'. Multi-Power is an overdrive arrangement so speeds in each of the basic gears are approximately 30% faster in 'high', resulting in a comfortable maximum road speed of 19mph.

Neither gearboxes have synchromesh and, therefore, careful timing on changing up and double-declutching on the way down is required to avoid embarrassing yourself on the road. Incidentally, the handbook suggests that you should bring the tractor to a standstill before changing gear! The standard gearbox is a robust unit and not known for giving any trouble, although a maximum road speed of around 15mph is slow by any standards. A good proportion of the models were produced with the Multi-Power transmission.

Multi-Power models default to 'low' with no engine braking should there be a problem with the system. When assessing a tractor so-equipped, the change to 'high' should be prompt when the dashboard-mounted lever is pushed upwards. Another very



If the Multi-Power is inoperative, then all that may be required is the replacement of the transmission filter element.

good test is to drive the tractor up a hill and depress the clutch through the first stage, without applying the brakes. Then, if the tractor 'hill holds' until the clutch is released again, there's probably nothing wrong with the system.

If the Multi-Power isn't working correctly, then the problem could be as simple as a low transmission hydraulic oil level. Alternatively, the transmission hydraulic filter above

“Multi-Power models default to 'low' with no engine braking should there be a problem with the system”

the engine oil filler could be blocked, necessitating replacement of the paper element filter. The issue could, of course, be caused by a multitude of other possibilities, such as a worn auxiliary hydraulic pump, leaking input shaft oil seal or a worn Multi-Power clutch, all of which require an extensive strip down and replacement of potentially expensive components.

Rear axle and PTO

The rear axle is the same as the MF 175's unit which, itself, was based on the one fitted to the MF 65, albeit with three planetary gears in each epicyclic final reduction unit, rather than two. Inboard of the planetary reduction gears are the 7x4in dry disc brakes which, by this stage, were getting a little long in the tooth. The



Shift to 'high' for engine braking; Multi-Power doubles the number of gear ratios, but does have some quirks.



The PTO lever can be a stretch, as per this example, if the extension handle isn't fitted.



Check the planetary reduction hubs for leaks; seal replacement is quite involved, but not impossible.

brakes are adequate for purpose, but do have a tendency to snatch if the actuator balls are worn, with overhaul requiring removal of the trumpet housings to correct any fault.

As expected, the tractor is fitted with a pedal-operated differential lock as standard, the pedal being located to the rear of the right-hand footplate, adequately tucked away to prevent accidental actuation. Although the system is robust, correct operation can be checked by depressing the pedal with the tractor in a straight line on a hard surface, and steering left. The pedal should remain locked while the tractor continues straight forward, scrubbing the front tyres.



Two levers but with three functions on the hydraulic control quadrant; draft, position and pressure control.



Heavy-duty Category 2 lower links are specified with a 2,900lb (1,769kg) lift capacity.

The differential lock pedal should release when the steering is either returned to straight ahead, or the clutch pedal is depressed.

Only a single option PTO was offered, with the lever having three positions - neutral, ground speed PTO or engine speed proportional PTO, which gives 540rpm at an engine speed of 1,685rpm. With nearly 65hp available at the PTO at 540rpm, the MF 178 could handle just about any PTO implement available in the UK at the time of launch and, no doubt, would have been deployed to operate power-hungry double-chop foragers and 80in rotavators. The PTO system is mechanically reliable but a little dated against offerings of independent PTO from other manufacturers, such as Ford.



Power-assisted steering is fitted as standard; check the level of the reservoir on the plug to the left-hand side.

The MF 178 was fitted with a swinging clevis drawbar as standard to enable the attachment of trailed machines. An automatic pick-up hitch was offered as an option and, unlike on previous models, didn't rely on the 'T bar' and stays for operation. Either chains or rods are used to connect the arms protruding from the hydraulic cross shaft to the drawbar frame carrying the crook; a catch arrangement is provided to permit the frame to be locked once the upper travel limit is reached. The weakness in the system is the pressed-steel arms, which can bend under heavy use.

Advanced hydraulics

The basic specification advanced Ferguson system features two-way draft control, position control and pressure control as standard, and was the undisputed champion of tractor hydraulic systems on the market at the time. Operation of the system is simple, with two separate levers on the hydraulic control quadrant; the one closest to the driver operates the position and pressure control function, while the outer one operates the draft control. A third lever, on the transmission case, is used to set the response control.

Although hydraulic flow output of 3.1 gallons per minute (14.1l/m) at 2,000rpm from the linkage pump wasn't as high as some competitors at the time, the 3,900lb (1,769kg) lower link maximum static lift was competitive. The tractor is fitted with heavy-duty Category 2 lower links as standard, meaning reducer inserts



Response control (the implement rate of drop) is preset using this lever on the transmission casing.



This tractor features a loader diverter valve in place of the combining flow selector valve.

are required if you intend to operate Category 1 machinery.

The pressure control feature was primarily intended to be used in conjunction with the special coupling, which enabled a chain to be wrapped around the drawbar of a trailed implement to transfer weight to the tractor's rear wheels. It was claimed by Massey Ferguson that up to an additional 11 drawbar horsepower was available by using the pressure control coupler for trailed implements. Pressure control is effectively just an adjustable relief valve and, therefore, it has other uses such as limiting the pressure to external services.

Multi-Power tractors come complete with an auxiliary hydraulic gear pump, necessary for actuating the transmission high ratio clutch, but with the added benefit that additional oil flow of up to 6.3 gallons per minute (28.6l/m) is available for external services. This flow can be combined with the flow from the linkage pump when the combining valve is fitted to the hydraulic top cover, to produce a combined flow of 9.4 gallons per minute (42.7l/m) which makes front loader rate of operation impressive.

BUYING GUIDE



By the launch of this model, the cast aluminium 'triple triangle' badge had been replaced by a plastic one.



The 12x36 cast PAVT wheels were standard equipment; care is required when handling these items.



The model number medallions are plastic; MF was starting to penny-pinch towards the end of the 1960s.



A heavy-duty, track-adjustable beam axle was specified, with additional gussets against the kingpins.

The world-renowned Ferguson system is reliable but, where possible, check the output from the system by lifting an appropriate implement or using a pressure gauge. Should the linkage be jerky in operation, then this is an indicator of either a low transmission oil level, or a blocked suction strainer which, on this model, can only be accessed by removing the hydraulic top cover. The link arm pins and components will usually be found to be worn, but replacements are plentiful from a multitude of suppliers.

Front axle and steering

All tractors were two-wheel-drive from the factory, and it would be an exceptional find to locate a 178 fitted with an aftermarket 4WD system, such as that offered by Selene of Italy. The front axle is a heavy-duty version compared to the likes of that on the MF 165, featuring gussets between the beam and the kingpin legs. The telescopic,



Notice the spacers between the front axle carrier casting and the engine, on this model.

extendable kingpins are retained by three bolts rather than two, while track adjustment is in the range of 48-72in, which was useful for row crop operations.

The steering arrangement was modified during the production run, and originally featured a high-level drag link and a front axle carrier casting inherited from the MF 65, via the MF 175. But, very soon after production started, the axle carrier and steering arrangement was standardised with that of the MF 165, putting the drag link in a lower position. This arrangement necessitated the use of spacers between the axle carrier casting and the engine to retain the correct wheelbase.

Power-assisted steering was fitted as standard, and features three-and-a-quarter turns lock-to-lock. When viewing a potential purchase, check for correct operation by ensuring that at no point in the steering travel does it feel that the power assistance is not working. If there is a tight spot, at best the control linkage is out of adjustment, but it may be that the control valve actuating linkage is worn and requires replacement.

Check for worn bushes and ball joints in the system, especially the bushes where the steering shaft passes through the axle support, as wear will produce steering wobble.

The tractor was initially offered with 12x36 power-adjustable variable track (PAVT) rear wheels, with cast centres and cast 6.00x19 front wheels as standard. But 15x30 and 12x38 cast PAVT rear, and 7.50x16 cast centre fronts were offered as options. The PAVT cast centred rear wheels look the business, but rim condition is important as new ones aren't available. Pressed-steel wheels were also available as an option and, in later production, the front cast wheels disappeared altogether.

Platform and cabs

Climbing aboard the operator platform is easy thanks to the provision of a step below the left-hand footplate, and the handy positioning of grab handles at the front edge of the square-top mudguards. Once aboard, the majority of the controls fall close to hand, but the PTO lever is quite a reach unless the extension lever is fitted. The dashboard gives a clear display with a gauge for every function, instead of warning lights.

The MF 178 will be found with one of three original seat options. The cushioned pan and backrest (deemed the 'deluxe' seat) was fitted as standard equipment. Originally, the 'Float O Matic' suspension seat was offered as an option, but this was quickly replaced by the later

MF 178 SPECIFICATIONS

Engine	Perkins A4.248 direct injection diesel
Bore and stroke	101x127mm (3.977x5in)
Rated engine speed	2,000rpm
Max power	72.5hp
Max torque (at 1,300rpm)	287Nm (212lb. ft)
PTO power (at 1,685 engine rpm)	64.8BS (48.3kW) at 540rpm
Clutch (Dual)	12/10in (305/254mm) primary/ secondary
Gearbox	6x2 Standard or 12x4 Multi-Power
Hydraulic linkage functions	Draft, position and pressure control
Maximum static lift	3,900lbs (1,769kg)
Linkage pump output	3.1 gal/m (14.1 litres/m)
Auxiliary hydraulics output	6.3 gal/m (28.6 litres/m)
Combined hydraulic flow	9.4 gal/m (42.7 litres/m)
Brakes (mechanically actuated)	7x4in (178x102mm) Dry disc
Front track adjustment	48-72in (1.22-1.83m)
Rear track adjustment	54-90in (1.37-2.29m)
Wheels, standard	Front 6.00-19, Rear 12-36
Wheels, optional	Front 7.50-16, Rear 12-38 15-30 14-30 14-34
Fuel tank capacity	18 gal (457 litres)
Weight (inc. fuel, oil and water)	6,500lbs (2,948kg)
Length	11ft 4in (3.54m)
Width (normal track)	6ft (1.83m)
Wheelbase	7ft (2.13m)
Turning circle (unbraked)	23ft 6in (7.163m)

type 100 Series suspension seat, which featured a black vinyl-covered, high-level pan instead of a separate backrest. This later seat is the most comfortable, and is easily adjustable for position and stiffness.

Massey Ferguson was still offering the Duple fibreglass cab when the MF 178 was introduced. It's now a very rare cab and any example found is likely to require extensive repairs to the fibreglass after 50 years of service. The Duple cab isn't a safety cab, and when the safety cab regulations came into effect in 1970, Massey Ferguson offered the Sirocco-manufactured flexi-cab instead. This cab would go on to be specified until the end of 100 Series production.

The flexi-cab is fitted with polyester vinyl cladding, with or without engine covers, enabling warm air from the engine to be directed to the cab in winter. Fortunately, the cladding

“It would be an exceptional find to locate a 178 fitted with an aftermarket 4WD system”

arrangement can quickly be tailored to summer or winter conditions, including being completely stripped in minutes, rather than hours. I can only recommend keeping an



This later-type suspension seat is very comfortable and original-style, embossed covers are now available.



View from the driver's seat; a clear dashboard layout uses gauges rather than warning lights, and all controls fall conveniently to hand.

original cab if fitted, not only for legal and safety reasons, but also to preserve the originality of the tractor, especially as replacement steelwork and cladding are currently available.

What to pay?

The MF 178 isn't an overly popular model from the 100 Series range, probably because of its size. But that doesn't mean that it's cheap. Expect no real difference in price between a standard or Multi-Power gearbox model with running, off-farm machines coming in at approximately £2,900, through to £6,500 for an average, restored example. Naturally, the price of a genuine original machine will be higher at £8,000-£9,000. Concours, show tractors can be expected to sell for £12,000+.

OWNER'S STORY

A FINE JOB

Peter Love meets Massey Ferguson enthusiast **Mick Blunt**, and his beautifully restored MF 188 Super-Spec



The Super-Spec 188 was made at Banner Lane and Beauvais factories, and was the top-of-the-line tractor from Massey Ferguson in its day.

Mick Blunt left school at 15 and went to work on Mrs Hutchinson's extensive 500-acre Home Farm at Great Chart, near Ashford in Kent. Here, after some time spent mucking out the pigs, he became a tractor driver. The farm ran a pair of MF 65s and a couple of 165s, with one of each being equipped with Multi-Power.

After Mrs Hutchinson had retired from farming, the neighbouring farm, belonging to the Boyds, took on the land and Mick worked for them for a while. But the 65s were moved on and, in their place came two Internationals,

a 276 and a 434. Then, when he was nearly 19, Mick went to work for the BET-owned East Kent Bus Company, as a bus conductor. But,

“Mick was alerted to a promising-looking 1974, 6,758-hour MF 188 being sold at one of Cheffins' Cambridge Machinery Sales”

after six months of that he realised he needed to get back onto the land, so moved to Browns Plant

at Biddenden, where he drove its Massey Ferguson 50B, which he greatly enjoyed.

Back again

However, he got fed up with the work again, and decided to return to Boyds at Great Chart, where he then stayed for 11 years. This is where he came across the Massey Ferguson 188, which he instantly liked, with its Multi-Power, wheelweights, PAVT wheels and more. However, the farm then switched to Ford, buying its tractors from Invicta Motors at Canterbury. Mick then drove a 7600, a 7700 and then a so-so TW-20,



The rigid beam MF 30 three-furrow plough has been given a full restoration by Mick, including a new trailed wheel.



The 188's rear end with hitch in place and the 106.25x18.75mm linkage arms with the 25mm lift rods that were offered with floating slots for wider implements as an option.



Those PAVT wheels are something else and did their job well when new. But, over the years, the slide mechanism on the cast steel rims with cast steel centres were known to seize through lack of use.

before he left in search of higher wages as an HGV driver.

He joined Tarmac Roadstone, driving an Scammell Crusader eight-wheeler with Rolls-Royce power. A few years later he moved on to Dairy Crest, as a relief driver, where he drove a whole fleet of different



The hours total on the 188 is 6,758; only the amp meter gauge has been replaced.

Leyland rigids around various farms. Other jobs followed until, in 1997, he went out on his own to become a groundworks contractor, which worked out well.

When Mick turned 50 he decided he wanted to get into tractor preservation, and the first tractor he bought was an MF 165. This was followed by a French MF 1080, which arrived from Derbyshire in 2009 and was restored the following year. Next he fancied an American Massey Ferguson 1150, and his search unearthed a clean example being sold on eBay by a dealer based in Elizabeth, Pennsylvania. So Mick made a telephone enquiry



Ticking over so well and with no oil leaks; this is how all restored tractors should be.



The electrics have been updated with an alternator. Note the correct, period decal on the power steering pump housing.



The king pin assembly was rebuilt during the restoration, and included new bearings as well as track rod ends.

and discovered that the tractor's pedestrian parking brake had to be fixed before it could be sold.

He then spoke to the then UK tractor importer, Terry Danson, from Ontario, Canada, who explained that 99% of USA tractor dealers are very straight, and are always open about the condition of the tractors they're selling. So Mick got back in touch with the dealer, did the deal and saw the machine finally arrive in the UK six months later.

OWNER'S STORY

SPECIFICATION: MF 188

Engine	Perkins A4.248
Power	71hp (DIN)
Cylinders	4
Bore	3.98in (101mm)
Stroke	5in (127mm)
Capacity	248cu in (4.06 litres)
Transmission	12 fwd, 4 rev (Multi-Power) 8 fwd, 2 rev
Brakes	Oil-cooled discs
PTO	Independent, 540rpm
Linkage	Heavy-duty Category 2
Lift capacity	4,600lb (2,064kg)*
Length	142in (3,606mm)
Width	75.25in (1,911mm)**
Height	94in (2,387mm)***
Ground clearance	16in (406mm)
Weight	7.50x16
Front tyres	Front 6.00-19, Rear 12-36
Rear tyres	12-38, 14-34 or 15-30

New arrival

Next to arrive was a good-looking 1996 Massey Ferguson 8130 with the Perkins 155hp turbocharged engine and Dynashift 32-speed transmission. This is Mick's contracting tractor at present. Then, soon after that, Mick was alerted to a promising-looking 1974, 6,758-hour MF 188 being sold at one of Cheffins' Cambridge Machinery Sales. He bought it and,

once he'd got the running tractor back to Kent, the first job was a thorough assessment.

Outwardly it looked like a clean example, then he discovered that the Multi-Power system wasn't working, so he booked it in with Agwoods of Dover to get that sorted. That company went right through the hydraulics, fitting a new main pump and auxiliary unit, and that did the trick, bringing the Multi-Power transmission back to life.

But that was just the start. Although the panels were generally clean, the heavy-duty front axle needed a full overhaul, with new pins and bushes being required. Then it was decided

to replace the clutch, which involved splitting the tractor. However, the rest of the transmission system and brakes were found to be in good order, as was the engine.

The rear lights had some problems with the lenses, but an original Butler's lamp was found eventually on eBay to match the one that Mick already had. Next the tractor was taken to greenhouse specialist Des Boughton, based near Canterbury, where Mick sand-blasted the whole tractor then as soon as it was back from that, the whole lot was sprayed with etch coating followed by high-build primer. However, the major panels and wings were taken to a professional who did a



All ready for some more work; Mick found this rigid beam Massey Ferguson 46 two-furrow reversible plough near Boston, in Lincolnshire.



The outfit oozes class; the front tombstone features a 62.5mm spacer to give the tractor more stability, and was standard on this model.

fantastic job, but Mick's painting of the skid unit is excellent, too.

Wheels and tyres

The wheel weights and PVT rear wheels were carefully refinished, and the process also included the purchase of a set of new Firestone

“Mick never thinks that a tractor is ever complete until it has an implement on the back so, to this end, he acquired a Massey Ferguson three-furrow reversible 30 plough”

420/85R34 radial tyres and tubes for the rear wheels, and 7.50x16 Firestones for the fronts. A single spool valve was placed on the rear and a Richard Sherratt seat cover was fitted to the sprung seat. All the instrument gauges remain original except one, and the main restoration work was completed in the spring of 2018.

However, Mick never thinks that a tractor is ever complete until it has

an implement on the back so, to this end, he acquired a Massey Ferguson three-furrow reversible 30 plough from a seller in Boston, Lincolnshire. This has been fully restored, too, with various parts - including the landside heads and moleboards - being replaced as necessary. Coincidentally, he also bought a very desirable, MF 46 two-furrow reversible plough from the same

seller, and that's been superbly restored, as well.

So what of the future? Well, Mick tells me that he's looking for an MF 1200; one that needs work, but is basically complete. When he eventually finds the right example - which I'm sure he will - there's no doubt that the machine will be brought beautifully back to full working order, and I'm looking forward to seeing it already!



Fitted with the Perkins A4-248 engine that's said to produce 75hp at 2,000rpm, the MF 188 - like all the 8 series range - carries a spacer at the back of the gearbox and rear housing.



The tractor looks superb following Mick's exacting restoration. It would have been supplied new with a cab.

This 1967 MF 165 belongs to Brian Woolgar, and is seen here proudly flying the Union flag while on the 2022 Arlington Tractor Run.

