

McHale F550 fixed-chamber balers:

# Rugged and simple

At first glance, McHale F550 balers might appear to have changed little over their product life cycle – from their launch in 2005 to the 2011 season, when the final machines were built. Under the skin, however, the balers saw significant development for the 2008 model year, with the occasional nip and tuck in between. James de Havilland reports

It's fairly easy to spot the difference between McHale's new F5500 and its predecessor F550 round balers, because the modern-looking F5500 was treated to a striking appearance make-over at launch.

Similarly, it will probably come as no surprise to learn that under those snazzy panels the new F5500 still has much in common with the outgoing F550, which is certainly no bad thing. The F550, after all, has earned a reputation for rugged simplicity, combined with the capability to keep on working with minimal user attention.

In fact, you could argue it would have made far more sense for McHale to have changed the F550's model number in some way for

## USED BALERS

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### Machine data:

**Year: 2007**  
**Bale count: 40,000**  
**Condition: Good**  
**Comment: Standard 500/50-17 tyres. Ideal farm baler. Pay 10% less for a non-dealer buy**

**Price: £13,500 plus VAT**

### McHale F550 fixed-chamber round baler



## USED BALERS

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### Machine data:

**Year: 2008**  
**Bale count: 15,800**  
**Condition: Good**  
**Comment: Standard 500/50-17 tyres. Last of the 17-roller models. Good value for dealer-prepared baler**

**Price: £16,500 plus VAT**

### McHale F550 fixed-chamber round baler



just that the later machines might prove more adept at rolling up drier crops such as hay and straw. This is down to one notable spec addition – the move from 17 up to 18 rollers in the bale chamber for the 2008 model year. The extra roll was installed to help overcome some issues when baling dry, brittle straw and possibly stemmy hay. In certain conditions, particularly on hot days, the 17-roll balers could find it difficult to rotate the material in the bale chamber. Performance in grass for silage/haylage, however, shouldn't be a problem for the older 17-roll machines, so bear this in mind when considering a used buy.

**At this point it's tempting to now draw up a comprehensive list of other key developments introduced for the 2008 season.** Instead, to avoid confusion, these items are detailed separately (see table). Furthermore, McHale, like all manufacturers, will

the 2008 season. Why? Because the 2008-and-on F550 baler benefits from a host of significant developments that might impact on your choice when it comes to deciding

on the most suitable second-hand buy for your business. That's not to suggest the pre-2008 machines are in any way poor balers – far from it. It's



Original gearbox (left) and headstock mounting are beefed up on 18-roll 2008 balers (below). Check all bolts are tight and look for damage. Assess pto shaft for play in joints and that the shaft slides freely.



naturally enough, mean a baler is somewhat neglected by the time it's offered for sale. With this in mind, a McHale dealer tends to be the best source of well-sorted used F550 models. If you can purchase a baler that has had the benefit of post-season dealer attention throughout its life, then the chances are you'll end up with a star buy.

Conversely, assume a non-dealer buy will need work – although those who are handy in the workshop shouldn't find fettling a worn F550 too taxing. That said, unless you know these balers very well, it's still worth

## DATA SHEET

### McHale F550 baler

#### Dimensions and weight

Weight (kg)	3,550
Length/height/width (m)	4.05/2.45/2.55 <sup>1)</sup>

#### Pick-up

Tine spacing (mm)	70
Tine bars	Four (five on later models)
Working width (m)	2.0
Crop roller	Option
Short crop guard	Standard

#### Crop feed

Knife protection	Hydraulic
Theoretical chop length (mm)	65
No. of knives (max)	15
Unblocking system	Drop floor
Knife deactivation	Hydraulic from cab

#### Bale chamber

Number of rollers	17 (18 for 2008)
Width (m)	1.23
Diameter (m)	1.25

#### Net wrap

Net adjustment	Manual
Net roll capacity	Two
Net system	Pivot stretch
Control	Manual or automatic

#### Control

Density adjustment	On-baler valve
Operation	Semi automatic

#### Other

Tyres – standard	500/50-17
Tyres – option	500/50-22.5
Axle	Eight-stud
Road lights	Standard

#### Tractor requirements

Hydraulics	Two double-acting plus free flow return
Minimum hp requirement	60kW/80hp

<sup>1)</sup> on 500/50-17 tyres. Width increases to 2.58m on 500/50-22.5 tyres.

## USED BALERS

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### Machine data:

**Year:** 2009  
**Bale count:** 24,000  
**Condition:** Good  
**Comment:** 500/50-22.5 tyres. Expect high bale count on late models. Dealers offer the best buys

**Price:** £18,000 plus VAT

### McHale F550 fixed-chamber round baler



have implemented the odd design tweak year on year, so it's just the more important changes that appear in our list.

From a second-hand buyer's perspective it's the 17 versus 18 rollers that should be the main consideration. Another development that might also influence your buying choice relates to the 15 knives used to slice incoming forage for haylage/silage. The profile of the blade altered to a slightly longer design, again for the 2008 season, to improve the quality of cut without adversely impacting on the amount of power needed to chop the grass. The new blades are now the standard replacement for all machines, so the new blades can be fitted to older models. In terms of key performance developments,

these are the two to consider – rollers and knives. Other changes are related more to generally improving dependability, though even the very earliest F550 models have a pretty good reliability record.

## Initial buying advice

Be realistic. McHale manufactured the F550 as a straightforward, fixed-chamber baler with 15 retractable slicing blades. The target market includes livestock farmers, the defining aim of the machine's designers being to reduce the need for complex set-up and maintenance. As a direct result, an F550 will continue to produce a decent bale without the most diligent user care, which can,





*Debris can accumulate on lower rollers on early models (far left), although a scraper prevents this build-up on 2008 models (left). If not cleaned off for the new season, the bottom roll can break the net on the first few bales.*

paying a McHale dealer to go through the baler pre-season to ensure that everything is operating as it should. Bottom line: for peace of mind it's probably worth paying at least 10% more for a dealer-sourced F550.

### What to look for

Job one is to establish which type of F550 is going to suit best. For most users, earlier 17-roller models will be fine, but, as you'll

also see, the later 18-roll balers do have some detail developments that might well appeal. Our tip is to go for a later machine if you have a lot of straw to bale.

### Next and most obvious is overall condition.

It follows that a dealer-prepared baler will be cleaned and serviced. Nonetheless, evidence of past care should still be apparent. Tell-tale signs of a more cherished machine include undamaged panels and a respectable appearance overall. Also inspect the bare metal inside the bale chamber and on the rollers.

As with all equipment, try to be methodical when working your way through the baler. A sensible starting point is the pto shaft. McHale would have supplied a Walterscheid wide-angle type, and this should last well if kept greased and not abused in work. A potential issue is some baler operators fail to appreciate that pto shaft life is directly related to how it's treated.

### Points often overlooked:

- Start the baler in a straight line following a blockage. This relieves stress on the wide-angle joints
- Maximum power should only be transmitted through the shaft during a turn of up to 30°
- The pto should be disengaged, even when not under full load, for a turn of 80° and tighter
- The shaft should slide freely and be kept greased. A binding shaft increases wear and power consumption, and it can damage the baler gearbox or tractor pto
- The pto length needs to be matched to the tractor.

The baler drawbar towing eye is a wear item and should be replaced when the liner is worn through. And if the drawbar is bent, have it checked as it could affect how the baler tows. The main gearbox is not known for issues, but the oil should be changed



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*It's easy to spot the blanking plate in original F550 balers (far left); later 18-roller models perform better in dry, brittle straw. Where rollers are dirty, inspect underneath for wear and damage.*

annually and there shouldn't be any leaks. If you can see the oil, it should be clean and bright.

Following crop flow through the machine, the 2.0m wide pick-up is fitted with galvanized stripper bars and has its tines spaced at 70mm and mounted on four tine bars; incidentally, some later model F550s – from 2010 – might sport a five-tine-bar pick-up. Missing tines need to be replaced. The tine cam rollers typically last for around 10,000 bales so should be renewed on a baler as appropriate. If possible, run up the baler and then listen to the pick-up. It should turn over smoothly, with any knocks or scraping hinting at damage.

McHale fitted a Walterscheid clutch to the pick-up drive, the design upgrading from a seven- to a nine-plate design in around 2008. This clutch needs to be greased when serviced at the end of the season, but not excessively. The unit's torque slip setting also increased from 700 to 900Nm.

If the drive is protected by a shear pin, rather than a clutch, you're looking at an early F550. These models also feature a spring knife protection system, whereas all later balers progressed to hydraulically operated knives with hydraulic protection. In reality, though, early F550 balers are a rare find in the UK.

Moving on to the intake rotor, the bearings on all machines built prior to the 2010 season are single race. McHale subsequently upgraded to a twin-race design, and this type is a direct retrofit for the original. Main difference? The single-race bearings last 10,000-20,000 bales, whereas the twin-race design doubles this expectancy to around 40,000 bales. It's tricky to identify slight bearing wear, so assume the bearings need a change if they haven't been replaced in relation to recorded bale count.

On pre-2008 machines, the rotor drive chain is tensioned via a ratchet system. It can be

physically difficult to move the adjuster lever onto the next tooth, to achieve the desired level of tightness, but don't worry: a little slack in the chain isn't a problem. Keep an eye on it and try adjusting again

when the machine has done a bit of work. Thankfully, later machines benefit from a more user-friendly tensioning system. The net wrap set-up is another area of the machine that enjoyed subtle tweaks to its

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## McHale F550 developments – 2008 model year

The listed changes are the main differences between 17- and 18-roll baler models made for the 2008 season. A few launch F550 models, released in late-2005, have a spring-loaded, as opposed to hydraulic, knife protection system, but these will be a rare find. Pick-up drive protection might also come from a shear pin rather than the more normal slip clutch.

### Changes for the 2008 season:

- 1** Move from 17 to 18 chamber rolls, the extra roll fitting in place of a blanking plate. Revised roller drive.
- 2** Main drive chain changes from standard 100H to high shock load Diamond. The Diamond name is stamped on links and a common retrofit. Same 20B 1¼ inch pitch for other chamber drive chains.
- 3** Beefier pick-up slip clutch has setting slip pressure increased from 700 to 900Nm, so it's less liable to slip in really heavy swaths.
- 4** Auto-lube system upgrade. Grease system is essentially the same, but chain lube is swapped to a continuous-drive pump.
- 5** Cleaning strip is added to bottom chamber roll.
- 6** Panel covers on rear make it easier to keep the baler clean.
- 7** Revised gearbox mount has extra strength.
- 8** Longer knives improve the crop slice but don't consume noticeably more power.

### Other changes:

**2011:** Twin-race feed roller bearings replace single-race originals. Bearing life expectancy is doubled, from 10,000-20,000 bales up to 40,000. New bearing type is a direct retrofit.

design for the 2008 model year, with the net guide bar increasing from a twin- to a four-bar unit and the net wrap holder adopting an adjuster on both ends to secure the roll on side slopes.

#### Key checks include:

- Ensuring that the trip system, net feed and knife pivots are free. If the tension pivots (see picture) are stiff, the net won't feed correctly
- Removing any rust or nicks on the net guides before first use in a season



*Original net wrap box adjusts from one end and has a single-arm net guide (left), whereas later 2008 balers (below) gain two adjusters in the box and a twin-arm net guide.*  
On all machines, ensure net guides are cleaned of any rust before starting work.



*Blanks (green, below) should be installed whenever knives are removed. Original blades are slightly shorter than the post-2008 current design (black), which is now the standard replacement for all models. Balers have 15 blades but are often used with fewer.*

- Freeing the knife from its tensions springs. Raise it and allow it to drop. It should fall with a loud clang. If not, the pivots are stiff and need attention. Indeed all pivot points can stiffen in storage or rust if the baler has been cleaned and stored wet. It's simple enough to fix stiff components, and this needs to be done because they can cause issues if left unresolved. As an aside, McHale recommends the use of 1.25m wide edge-to-edge net.

**Moving on to the driveline, it's relatively easy to check chain tensions.** The main drive chain is 100H pitch, with McHale specifying a higher grade Diamond chain from 2008. The earlier chain is typically not a problem, although the later replacement represents

a good choice for those wanting to make heavy bales or looking for longer chain life. All other chamber drive side chains are 20B pitch and should again be assessed for tension. As to wear, look at the tensioners. If they're fully extended it suggests the chain in question is nearing the end of its life. Which leads us on to the lubrication system. On pre-2008 season F550 balers the chain oiler pumped oil each time the rear door was closed. In contrast, a driven pump is installed on later machines, and this pumps oil all the time the rollers are running. On

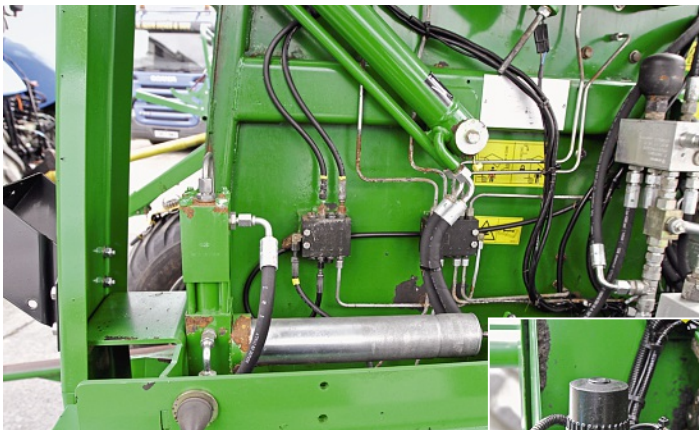


both systems, ensure you can see oil in the main feed pipe and that the oiling wicks are moist. A dry chain is a sign of a blockage. Switching attention from oil to grease, the high pressure automatic greasing system is essentially the same on all models and isn't





Original auto-lube grease and chain oiler system (left) works every time the rear door opens. In contrast, post-2008 greaser (below) operates in the same way, but the chain oiler (below, inset) moves to the nearside of the baler and has full-time drive from the end of the feed rotor.

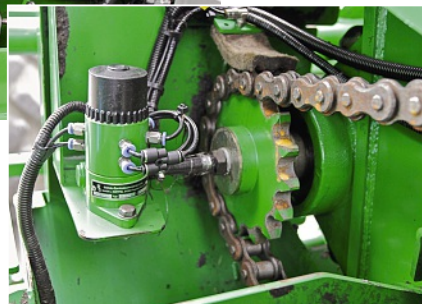


known for suffering problems. It effectively measures the grease in line with bearing requirements and distributes the grease to individual bearings through dedicated steel pipes. Critical point here is to ensure that any air trapped in the system is purged.

The main rollers are tough and, on a farm-operated baler, unlikely to show signs of deterioration. A really high bale count contractor machine might well need to have the bearings checked on the lower rollers, but, as a rule, the other roller bearings can last the life of the baler. Key to this longevity are the seals in the ends of the rolls. These have spirals on their outer edge that help eject any debris from the end of the roller. If these seals are damaged, then dirt might work its way into a bearing. So if a bearing fails, check the seal as well.

The bottom roller over the bank of knives has a scraper on all 2008-season balers. This is to keep the roller clean, particularly in soft grass crops with a high sugar content. In these conditions, grass tends to build up on the bottom roller and can cause net wrap issues where a scraper isn't fitted. If an F550 repeatedly splits the first few bales following storage, a dirty roller is typically the culprit.

To maintain machine outputs, McHale has a simple and effective drop-floor system to



Net knife pivot needs to allow the unit to drop with a distinct bang. As with all elements of the net wrap system, check the pivot points are free. Serrated knife cuts the net in the 'V'. If blunt, the net is inclined to tear. The knife is easy to renew.

clear any crop blockage. Though not typically a problem area, it still pays to drop this floor to establish that it works and closes correctly. As previously outlined, it's important to restart the baler in a straight line once a blockage has been cleared; otherwise expensive pto shaft damage may result. And back at the rear, the baler door pivots

need to be greased. The grease points are located up on the top of the baler so there's a risk of them being missed. Take a look. If the opened door shows signs of play, the pivots need renewing.

## Hydraulics and electrics

Knife pressure setting is 40–50 bar, this corresponding to the red section of the gauge on the baler. If pressure reads too high, it's down to not fitting the hydraulic hose to the free flow return of the tractor. In all other respects, the F550's hydraulics are very simple. There are two diverter valves, with a tap to lock the hydraulics manually when the rear door is in its open position.

As for the electrics, there are three relays and three sensors:

- Door open
- Knives up
- Net cut

In addition, there's an electronic clutch to engage the net wrap cycle. If all the electrics fail, the baler can still be operated as long as there's power available to engage the net drive. Which just leaves the in-cab controller – a basic, no-frills unit that's only likely to cause issues if the wiring is damaged.

**Summary:** Used F550 balers tend to fall into two camps. First are the two- or three-year-old machines with high bale counts, offered for sale by contractors or larger farms. Then there are the farmer balers that could well have a relatively low annual bale count but are also likely to be older. Interestingly, as a used buyer, you might find there's not too much difference in the asking price.

Normally it pays to go for a lower bale count machine. But the F550 is a very simple and rugged unit, so the suggested approach is to assess the machine's overall condition and the work required to bring it up to good order. If your intended annual workload is down at the lower end of the scale (less than 4,000 bales), it might make sense to go for the younger, higher count unit. As always, condition is king – more so than the baler's age or number of bales on the clock.

And one final point to note. Remember that the fatter 22.5 tyres only increase the baler's transport width by a modest 30mm – from 2.55 to 2.58m – and this extra rubber is well worth having in a catchy season.

*Thanks to T Alun Jones, Carmarthenshire, and Martyn Williams, McHale*