

Mc Hale

V660



Year	<b>2009</b>
Condition	<b>Sound</b>
Bale count	<b>72,000</b>
Comment: Hydraulic brakes. Full dealer preparation. Entry level dealer price	
Guide price	<b>£11,950</b>

Mc Hale

V660



Year	<b>2015</b>
Condition	<b>Good</b>
Bale count	<b>43,000</b>
Comment: Three belts. Hydraulic brakes. Manual greasing.	
Guide price	<b>£15,950</b>

Mc Hale

V660



Year	<b>2016</b>
Condition	<b>Good</b>
Bale count	<b>36,000</b>
Comment: Single belt. Hydraulic brakes. Manual greasing. Dealer prepared	
Guide price	<b>£22,950</b>

### McHale V660 and V6750 balers:

# V for Variable as tough as F for Fixed?

In 2009, McHale launched its variable chamber V660 baler. For a company that had long promoted the virtues of a fixed chamber roller baler, this was a bold but ultimately successful move, with V660 and subsequent V series selling strongly. Here we look at the 'chopper' V660 and its direct successor, the V6750

**B**efore taking a look at the subject V660 and V6750 balers, a bit of a recap on McHale baler 'history'. The starting point is the McHale Fusion Integrated baler wrapper, this arriving some 20 years ago with the stand-alone 'F for fixed' chamber F550 balers, which shared the key baling element with the original Fusion, arriving in 2004. The chopper rotor 'V for Variable' V660 was launched in 2009, its non-chopping sibling, the V640, arriving around a year later. By 2019, the V series had evolved into a new range of four models, the non-chop V6740 (bales of 0.60-1.68m) and V8940 (bales of 0.60-1.90m) and the 15-knife chopper feed rotor V6750 and V8950 that produce the same respective bale sizes. Although we consider the V660 and current

V6750 here, much of the info will also apply to the non-chopper models and the current larger bale size V8940 and V8950 (also see Further profi reading).

### Progressive V660 (and V640) development

The original V660 and non-chopper V640 balers will produce the same bale as a current V6750 and V6740. The final run of V660 and V640 models have few differences between the current V6 range, with a greater difference between early models and the last of the line. These key changes include:

- 2009: Launch year. Metal side panels
- 2010: New style composite dual skin side panels
- 2013: Original bale start tension springs

- upgraded from twin to four
- 2013: Both rear tailgate locks fitted with sensors
- 2013: Wiring to sensors detachable. All sensors are the same type
- 2014: Move from a four to a five-bar cam track pick-up
- 2016: Camless pick-up added as an option
- 2016: 540 or 1,000rpm pto choice
- 2016: Feed rotor and side auger size increased in diameter
- 2016: Adaptive Intake eases shock loads when baling uneven swaths
- 2016: Greaseable outer and inner tension arm bearings
- 2018: Net wrap system changed to hydraulic brake system
- 2019: V6 and V8 series launched

Mc Hale

V660



Year	<b>2016</b>
Condition	<b>Good</b>
Bale count	<b>34,000</b>
Comment:	Single belt. Hydraulic brakes. Auto greasing. Dealer prepared
Guide price	<b>£23,950</b>

Mc Hale

V6750



Year	<b>2020</b>
Condition	<b>Excellent</b>
Bale count	<b>10,000</b>
Comment:	Three belt. Hydraulic brakes. Auto greasing. Dealer prepared
Guide price	<b>From £32,000</b>

Mc Hale

V6750



Year	<b>2021</b>
Condition	<b>Ex-demo</b>
Bale count	<b>500</b>
Comment:	Three belt. Hydraulic brakes. Manual greasing. Dealer prepared
Guide price	<b>From £38,950</b>

A key difference between a late V640/V660 and current V6740/V6750 balers is the front access platform. The V640 and V660 have room for one spare roll of net. On current models a larger platform has space for two spare rolls of net. There are a few other detail changes between the models, but none will impact upon the overall performance of the baler.

### Key specifications

Working back from the pto, all models will have a choice of drawbar design, but an adjustable ring hitch is most common. This needs setting so the baler is level when hitched to the tractor.

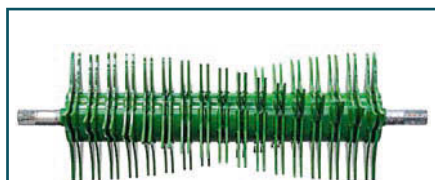
A choice of 540 or 1,000rpm pto is available, the latter more typically specced with the camless pick-up. The higher pto speed is well suited to balers that chop heavy crops. It will not be a common find but is increasing in popularity as it is well suited to higher powered tractors.

A five bar cam track pick-up is likely to be the most common type fitted to a used buy but the A five tine bar camless alternative is well-suited to working at higher speeds and in heavy crops. As a result, it will carry a premium if fitted. A crop roller ahead of the pick-up was made standard early in the production of the V660.

Both V660 and V6750 balers are likely to have a 15-knife chop system, with most users selecting just seven knives in work. A 25-knife option is available, but it is not over common. The selectable knife option allows the operator to choose how many knives are in



You can get a good idea of how hard a baler has been worked by looking at the drawbar and Walterscheid pto shaft. Check the shaft slides in and out freely and pull back the guard at both ends to get a good look at the wide-angle joint at the tractor end and the slip clutch at the other.



The V660, V6750 and V8950 share the same 15-knife chop system, with 17 twin fingers on the rotor (the outer sections do not work over a blade to help ensure a chopped bale retains its shape). Delivering a theoretical length of cut of around 65mm, a selectable 'Knife System' option is also available. This enables 0, 7, 8 or the full set of 15 knives to be engaged. A 25 blade option is available with the choice of running 0, 12, 13 or 25 knives. Theoretical length of cut can be 46mm.



Non-chop V640, V6740 and V8940 models have a 10-twin finger feed rotor. As with the chopper models, drive to the rotor is taken from the main gearbox, with a pair of sprockets separately taking power to the rotor and pick-up. Greaseable double row bearings are fitted to both types of rotor.



The main bevel gearbox is a simple unit, with power divided to drive the pick-up and rotor on one side, the bale chamber on the other. The oil in the box should have been changed at the first service and then at least once a year. Look for leaks at the input shaft seal and check for play. Note easy access to drain plug.



The side augers on the original V660 balers have a slimmer central core, with the very first models having a steel as opposed to white polymer drop floor as pictured. Check for play in the auger bearings.





In 2019, the last year of V640/V660 baler production, McHale changed to a revised side auger design with a fatter centre shaft with the end angled to improve crop flow. This design is carried over to the current V6740 and V6750 models.



The pick-up tine bar bearings can be inspected by removing a bolt on tab located under the drive cover. Early V660 balers have four tine bars, this changing to five in 2012 and retained for the V6750 and other V series baler models with a cam-track pick-up. These bearings need replacing at between 10,000 to 15,000 bales, with new ones typically being fitted to a dealer prepared used buy. The pick-up central support bearing may need renewing at around 35,000 bales, but it is worth replacing on a used buy as a precaution.

use. As this can be done easily manually it is not a common option.

The bale chamber is fitted with three 380mm wide five-ply endless webbed belts as standard, a single 1,180mm belt listing as an option that is fitted to around 30% of balers sold in the UK. The belts are tough but on a machine with a bale count in the region of 50,000 plus may need a bit more of a condition check, paying particular attention for damage.

Other options can include different tyre sizes and brake type. Most UK spec models will have at least hydraulic braking and maybe a moisture kit.

## What to look for – condition

A McHale dealer will prepare a machine for sale, but if you get the chance to view a baler before it has been through the workshop you may get a clue to its past care. These units can pump out a huge number of bales in a season as they are more likely to be used to also bale straw than a fixed chamber F series baler.



Although the pick-up drive works hard, the chain and sprockets in the driveline can last well if kept correctly tensioned and lubricated. If the chain links can be easily lifted from the sprocket, the chain may be worn. It should be replaced with OEM recommended Diamond chain, a low cost alternative possibly having a shortened service life.

It follows that a baler that has been used to chop will have been worked harder resulting in more wear. A look at the bale count will alert you to its past use, but 10,000 bales a season is not unusual. A pre-owned V660 models could have a bale count well in excess of 100,000 bales.

A high bale count is daunting but, assuming you buy a baler that has been well maintained and properly prepared, this does not mean a well-used machine cannot continue to offer reliable service. The key is to look at its overall condition and, if it has been dealer prepared, find out what work has been carried out. Most bits that wear can be replaced, dealers typically offering back-up to help with buying confidence.

As is always the case, there are the pretty obvious general checks you would make before working a baler and these can be used to assess a used buy.

## Start at the pto and work back

All models are fitted with a Walterschied pto shaft with a constant velocity (CV) joint at the tractor end and a slip clutch on the baler. Make sure the sections can slide freely and that the joints are in good order.

The baler gearbox divides drive to the pick-up and feed rotor on one side and to the bale chamber on the other. The oil should have been changed at the prescribed first 50-hour service interval and annually after that. The key check is to see if there is play in the input shaft and to also look for any weeping from the seal. This is not a problem area so ask questions if you spot any play.

Follow the driveline to the pick-up, removing the covers to look at the chains. If the tensioner is at its maximum, budget to renew the chain, making sure the drive sprockets are in good order. The five tine-bar pick up has galvanised pick-up bands. Look for damage. The tines and related cam track bearings are obviously wear items, the latter being good for a season or 10,000 bales plus. A Walterscheid nine-plate clutch protects the pick-up drive and it needs to be greased at

the end of the season. The unit's torque is set in the factory and cannot be adjusted. It is important not to over grease this unit as it will cause the clutch to slip too easily.

The crop roller should turn freely with no catch points in its rotation. These items can get damaged, a slight bend causing stalling in work. The sealed bearings last well. The feed rotor on these balers are tough items with the flights welded on both sides for strength. Most used buys will have a double row drive side bearing that should easily last 50,000 bales.

## Getting the chop

When all the knives are engaged, theoretical chop length can be as low as 65mm with 15 knives or 46mm with 25. With all the blades engaged, squeezing a tonne plus of grass into a bale is easily possible. All models come with an adaptive intake and a drop floor to allow intake blockages to be cleared from the tractor seat.

The bale chamber is fed crop from the feed/chopper rotor, with a single lower and pair of top rollers starting the bale off. As the volume of material increases, the tension of the belts is initially applied via a pair of springs on each side of the chamber, hydraulics adding pressure as the bale forms to ensure the total pressure applied remains consistent. The



A six tine-bar camless pick-up was first offered as an option on V660 balers from around 2016 and is an increasingly popular choice on current V series balers. Well suited to faster working speeds and heavy crops, the design is maintenance free. The pick-up is the same 2.10m working width. Tines work hard and stripper bands can get damaged, so inspect carefully.



A pair of easily checked 'rubber' blocks provide a cushion for the drop floor, enabling clumps of crop to pass under the feed / chopping rotor with a reduced chance of blockage. If the intake does block, the drop floor can be lowered from the tractor cab to allow it to clear.



A slip clutch protects the feed / chop rotor from overload damage, scorched yellow paint on the housing suggesting repeated slipping. The drive chains run over white polymer tensioners. Check these are in good order. Chains work harder on a chopper baler and will need replacing at between 25,000 to 35,000 bales. Note tubes for the lube system to the bearings. If there are no signs of grease here it could suggest a blockage at some point and the possibility that the bearings have not been greased properly.



A continuous oiling system is used on all V640 / V6740 and V660 / V6750 balers. All models have centralised grease points (inset lower) with an automated system as an option (arrowed). The oil tank (inset upper) needs a top up every 300 bales.





# USED MACHINERY

## MCHALE V640/V660 (FROM LATE 2018) AND V6740/V6750 VARIABLE CHAMBER ROUND BALERS

MODEL	V640 / V6740	V660 / V6750
<b>PICK-UP</b>		
Working Width	2.10m	2.10m
Tine Bars -cam track	Five	Five
Tine Bars -camless	Six	Six
Tine Spacing	70mm	70mm
Short Crop Guard	Standard	Option
Crop Roller	Option	Standard
Pick Up Guide Wheels (pneumatic)	Standard	Standard
Knives	-	15 (25 option)
Theoretical Chop Length	-	65mm (46mm option)
Knife Protection	-	Hydraulic
Knife Deactivation	-	Hydraulic from Cab
Drop floor	Standard	Standard
Base price	£51,109	
<b>BALE CHAMBER</b>		
Bale size range	0.60 - 1.68m	
Chamber width	1.23m	1.23m
Chamber feed	15 knife chopper rotor	15 knife chopper rotor
Net System	High performance netter	High performance netter
Net Roll Capacity	1 + 1 (1+2 V6740)	1 + 1 (1+2 V6750)
Bale Kicker	Standard	Standard
<b>TRANSMISSION</b>		
Drive protection	Cam Clutch	Cam Clutch
Pick-up protection	Slip Clutch	Slip Clutch
Chain Lubrication	Continuous	Continuous
Bearing Lubrication	Centralised (auto option)	Centralised (auto option)
Belt drive system	Primary drive single roller	Double drive twin roller
<b>RUNNING GEAR</b>		
Axles	Eight-stud	Eight-stud
Brakes	Hydraulic or air (option)	Hydraulic or air (option)
Tyres Standard	460/65/20	500/50/22.5
Tyres Optional	500/50/22.5 or 560/45/22.5	560/45/22.5
<b>DIMENSIONS AND WEIGHT</b>		
Length	4.80m	4.80m
Width	2.54m-2.58m	2.54m-2.58m
Height	2.75m	2.75m
Weight	4,430kg	4,540kg
<b>TRACTOR</b>		
Min. hydraulic flow	30 l/min at 180bar	30 l/min at 180bar
Hydraulic System	2 double acting, free flow return	2 double acting, free flow return
Min. PTO power	55kW / 73hp	60kW / 80hp

V8940 and V8950 models produce bales from 0.60 to 1.90m and feature an adjustable bale kicker as standard. (Outline specification for guidance only. Manufacturer's data)

diameter of the bale is adjusted from the cab. McHale uses what it describes as a 'Double Drive' on the chopping V660 and V6750. This essentially consists of a secondary drive roller at the top of the baler to help ensure the belt does not slip when baling heavy, damp or difficult crops. The system is not

known for problems but check the bearings to the rollers and the cleaning auger are in good order. A dealer prepared machine may have new bearings fitted to these and the other chamber rollers so ask. A dealer can supply parts to renew anything worn. McHale use 100H Diamond drive chains on

The chain oiler uses felt pads, as opposed to the brushes used on early V660 balers. Check the pads are saturated in oil. Some users prefer to use a high tack chainsaw oil to engine oil, suggesting it offers improved adhesion. Automatic lubrication oils the chamber, rotor and pick-up drive chains plus the pick-up cam track and drive gears.



The pick-up is suspended via a pair of spring-loaded hydraulic cylinders. The pick-up wheels provide anti-scalp protection as opposed to support in work. Take a good look at this area of the baler as operator abuse can lead to damage to include broken springs. Also look for leaks in the pressurised oil lines, typically caused by something, such as a large stone, catching under the pick-up.



The knives in the chopping rotor can be sharpened with an angle grinder, but this needs to be done carefully to avoid taking away too much metal or overheating the metal. If possible, check the blades against a new one. Blunt knives obviously consume power, new blades repaying their cost by saving fuel.

the main drive. Chopping places more stress on the driveline but expect the chains to last in excess of 20,000 bales, with 30,000 not being unusual. Good quality chain oil, such as a sticky chainsaw guide bar lube, plus keeping an eye on chain tensions will help longevity. A complete set of new OEM drive chains will



*It is a good sign to see a full set of new spare blades and filler plates on a used baler, but often the spare set have been used and are retained as emergency spares. Look them over.*



*Up until 2018, V660 and other models in the McHale range used the established mechanical net wrap system with belt driven roller and bar guides. The bars benefit from a light going over with emery cloth if they are rusted, with any nicks in the bars needing to be removed to avoid net snag. The net wrap cut system is simple and robust but, over time, the nut that releases the net hook wears and will need renewing.*



*From 2019, McHale switched to a new hydraulic net brake system, this enabling net to be fed into the bale chamber more easily at the start of wrapping with the system progressively applying a braking force. It can be adjusted from the tractor cab to suit different qualities of net, to include allowing greater tension to be applied to a high tensile net. This in turn can be exploited to reduce the length of net consumed to wrap the bale.*

cost around £950 plus fitting. Spurious alternatives may have been fitted on a non-dealer serviced baler. Look for the diamond stamp on the chain links. If a progressive grease system for the bearings is fitted, make sure it is functioning correctly. The standard manual greasing system is common, and some prefer this as part of their daily checks.

### Wrapping up

The original net wrap is a double-bar tension system. When correctly maintained it is





## USED MACHINERY



In work, the pictured spirals on the cleaning auger roller will clear debris from the belt rollers. Debris collects in the area, balers stored wet possibly suffering corrosion on the rolls that will typically be worn off in work. The double drive system fitted to V660 and V6750 chopper balers includes an extra belt drive roller above the pictured plain roll, this helping ensure the belt does not slip when rolling a heavy bale of chopped material.

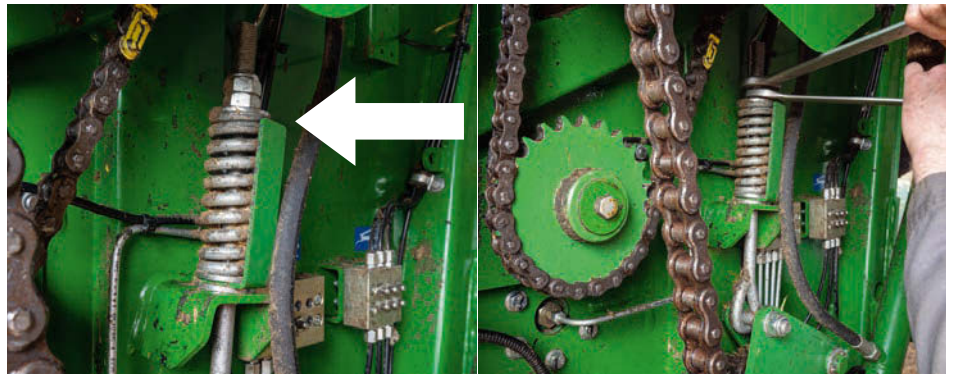


Incoming material is fed into the chamber via a pair of fixed rollers, with a third upper roller helping to shape the material as the belts expand to accommodate the growing bale. The lower roller bearings work hard, so ensure they are in good order, particularly on a baler with a high bale count.



From around 2012 the sensors fitted to the baler were changed to a design that unscrews from the wiring harness, making swapping out a failed item easier and less costly. All the sensors are of the same type. Both tailgate locks have a sensor on later V640/ V660 and V6740 / V6750.

reliable, but it does need to be in good order. When looking it over, check the rubbing surfaces are smooth and free of nicks. If they are lightly rusted, a few minutes rubbing them down with emery paper will help prevent net snags on the first few bales of the season. Actual net tension is applied via a gas strut which moves the net tension bars. The hydraulic brake net wrap system, from 2018, is easier to use as the tension and the amount of net used to wrap the bale can be



The roller drive chain tension is set by adjusting a spring, the correct setting seeing the top of the washer sitting level with the setting plate (arrowed). This is a simple setting to adjust (right) so be wary if a large adjustment is needed as it could suggest a lack of service attention.

easily adjusted from the control box. It is relatively easy to swap between tractors with different types of hydraulics, all balers having connections to allow hooking up to tractors with two double acting spools and a free flow return. A tractor of around 100hp plus is recommended, the listed guide power relating more to pto than overall tractor power. For chopping, 125hp is better but many balers will be worked by a tractor with considerably more. This can see the baler worked hard, the swath swallowing ability of any baler being easier to exploit with a powerful tractor up front.

**Summary:** A comprehensive baler run-through will take a dealer half a day. Consider this if you are looking over a baler that is offered as a private sale or has come straight out of work.

As to used prices, you are going to have to dig deeper to secure a dealer sourced buy, with sound V660 models sold with a season's warranty likely to be priced at between £20,000 for an older model, with £25,000 plus securing a later V660 in decent order. A V6750, even with a high bale count, will be a rare used find, but expect those that are on offer to be priced upwards of £32,000. A non-chopper baler of similar bale count will command around £3,000 to £6,000 less but prices vary regionally. Balers offered for private sale can command strong money. As a guide, hold



McHale's proven Expert Control Plus controller is used on V640, V660 and current V6740 and V6750. A lube check alarm for both grease and oil levels is included so there is no excuse for dry chains and oil starved roller bearings.



V640, V660, V6740, V6750, V8940 and V8950 balers are fitted with three 380mm wide five-ply webbed belts as standard, with a single 1,180mm belt as an option (left) for the V6 models only. The latter is a popular choice for baling well-chopped or brittle materials, such as lucerne, as it minimises losses. The belts are not known for problems but check for damage, particularly on balers that have worked over flint.



back around £5,000 to have a non-dealer buy checked and serviced.

With thanks to: Chris Mead, PE Mead & Son, Tring, Kevin Ludgate and Alex Way, Oliver Landpower, Luton, Western Farm Services, Knighton and Kieran Hughes, McHale UK.



A choice of 540 or 1,000rpm input was offered from new, the latter allowing greater torque to be transmitted through the machine and so suiting chopping heavy material. The rpm decal indicates the most economical pto speed range. Two pressure gauges, for bale density and knife pressure, are not marked but in work both should be in the green area.



Standard tyres are 500/50-22.5 and are the most common fit. Wider 560/45-22.5 tyres are available, with non-chopper V640 or V6740 models having a slimmer 460/65-20 tyre as standard. An eight-stud axle was fitted from around 2014, but brakes remained an option although and 95% in UK will have hydraulic brakes. Air brakes are now an increasingly popular option.

Before looking into the chamber, lock the tailgate in its raised position using the tap on the front of the baler. If you need to work on a baler, ensure you read the operator's manual and ensure all safety procedures are followed.