

Retail Therapy

James de Havilland argues the case for buying a mini-excavator instead of hiring and points out what to look for when doing so.

A tracked mini-excavator may not be at the top of most golf courses equipment want lists, but few could deny that there are times when having one of these diminutive machines on site would be of use. From digging out tired bunkers through to clearing ditches, there are numerous uses to which these machines can be put. Although it may well be worth hiring in a machine as and when it is needed, having access to an 'owned' machine can make a great deal of sense.



This 1997 Kubota KX41 has a 1.5 tonne capacity. From a dealer, it will cost around £5,500 with 3,000 plus hours on the clock. This is a popular, and thus expensive, size of machine.

Tracked mini-excavators come in a range of capacities, but for the sake of example, this article we will concentrate on machines of nominal 1.5 to 5.0 tonnes capacities. As a used buy, look for a popular model. These will make a sound choice because both OEM and spurious parts are readily available. This is an important point to consider. Entry level buys may well be pretty long in the tooth, even if they are perfectly serviceable, so it is reassuring to know parts should be relatively easy to obtain at a sensible price.

As an aside, an old backhoe loader, such as the ubiquitous JCB 3CX, may have its place on some courses, but these units are heavy, not as manoeuvrable and are less productive as a pure digger than a dedicated 360 degree mini-excavator. If the sole aim is to dig holes or clean ditches, a 5.0 mini-excavator will out perform a 7.0 tonne capacity backhoe, and is much easier to work in a tight spot. They also benefit from an integral levelling blade, so will be suitable for light grading. This is a useful point when preparing tracks and floors ahead of laying concrete.

Where a backhoe loader potentially scores over a tracked excavator is in its ability to move easily between various sites. That said, a mini-excavator will scale a steep set of ramps to gain safe access to a trailer, with small units weighing within the legal maximum that can be towed behind a 4x4.

With regard to tracks, steel tracks remain popular in the North of

England and in Scotland. If low ground pressure and stability are priorities, look for a machine running on 550mm steel plates. Rubber tracks have gained popularity simply because of convenience. Steel track can damage hard surfaces such as pavements, roads and drives, whereas rubber can cross them without any problem. Rubber track has become increasingly popular, and is likely to be fitted to most mini excavators made from about 1999.

As a used buy, small 1.5 tonnes mini-excavators are the most common. This size is easy to tow on a trailer and because of this they are the most popular capacity with builders and DIY users. Larger capacity machines, however, can make a better buy, and as a rule it pays to buy at the larger end to get the best balance between potential productivity and value. In terms of purchase cost, a small 1.5 tonne machine will be an expensive buy against an equivalent 3.0 tonne unit.

As always it is possible to buy a pup, it can make sense to buy from a dealer. Hydraulic pump failures could cost £1000 to remedy with new parts, track and slew motors costing between £1000 and £2000. That said, Japanese construction kit in general is extremely well made and durable. If a machine looks well cared for, the chances are it will be sound mechanically.

Small Japanese engines are also pretty much bomb proof. Many survive terrible treatment and run sweetly over thousands of hours with little attention. If the engine sounds rough or smokes, walk away. Also check the oil and be wary of units that blow oil from the dipstick.

WHAT TO LOOK FOR

SLEW RINGS AND HYDRAULICS

Important: All hydraulic checks are best done when the unit has reached operating temperature; this will take at least 20 minutes. Cold, thick hydraulic oil can mask problems.

Before starting up the machine, take a look between the cab and undercarriage, looking for leaks from the slew ring. If buying through a dealer, ask if the area has been repaired or checked on older machines. Auction and other buys need to be treated carefully if a leak is spotted. Actual wear on the ring gear and drive pinion are unusual on all but the oldest machines, but a failed motor is possible on younger kit that has been abused.

From the cab, operate all the boom controls at once. This should slow, but not kill the engine. If the engine dies, it suggests a pressure relief valve has failed or that the engine itself is seriously down on power. If the engine does not slow, it would suggest the hydraulic pump is worn. During this test, check for black smoke under load from the engine. Check all hoses and connectors.



PINS AND BUSHES

It is reasonable to allow for a degree of wear in the boom and bucket pivots, but there is a difference between reasonable and more severe wear. The tighter the pivots, the better. Some makes and models will benefit from pin and bush pivots, and these are relatively easy to put right if wear has not been allowed to extend beyond the bush. If a pivot needs to be bored and sleeved, the job can be expensive.

TRACKS AND TRACK DRIVE MOTORS

The cost of both rubber and steel track replacement parts have fallen in recent years, but it can still be expensive to put worn track right. It is easy to spot wear in metal track; grab a plate on the track running slack along the top of the carriage and check for play.

Rubber track should be considered in much the same way as a tyre; if there is little or no tread remaining, the track is nearing the end of its life. The drive sprocket teeth should not be pointed. If new rubber track is fitted, the drive sprocket is best replaced at the same time if anything other than lightly worn.

Track motors tend not to give problems, but check the machine steers easily and tracks in a straight line. On older machines, track motors can be an issue; it will usually be more cost effective to buy a sound machine than budget to repair one with failing motors. In general, any running gear problems are pretty easy to identify.

BUCKETS

Used machines should come with at least two buckets, typically a 12 and 18 inch sizes on 3.0 tonne plus machines, but it is reasonable to also



◀ Look carefully for hydraulic leaks. These are best spotted following a running period of at least 20 minutes. Dealers will fix most leak spots prior to a sale, but check before agreeing on a deal.

▼ All pivot points are liable to wear. A degree of play is acceptable, but severe movement can be costly to put right. Again, check what will and will not be fixed before making an offer.



expect to have a ditching bucket as well. This will normally be a 30 or 48 inch item on a 3.0 or 5.0 tonne capacity machine. The latter would also have a 24 inch bucket from new.

New bucket prices vary, but a new set of four will cost around £850, with single items costing around £250. Check the condition of any supplied buckets and try and get as many bucket sizes as part of the deal as possible. Worn buckets can be refurbished.

COSMETICS

Simply look and see what is broken. Ripped seats and damaged ancillaries are to be expected on older kit, but this need not be a major issue. All dealer supplied excavators will have a roll frame as standard.



▲ Drive sprockets should not be worn to a sharp point. When fitting new rubber track, it can make sense to renew the sprocket at the same time.

◀ Wear in metal tracks is easy to spot. Turning the pins to tighten everything up will only work once, so ensure it can be done; new pins and bushes may be needed, and they are not cheap to buy or fit.



◀ Mini-excavators are not difficult to operate, so work through all the controls to make sure everything works.

▶ Japanese made diesel engines have a well deserved reputation for longevity. If the unit smokes heavily or appears down on power, it may be down to a dirty air filter. But it could also mean the engine has been abused, so check.



SUMMARY

Mini-excavators are pretty simple items of kit, although added features make later examples more sophisticated and less non-dealer mechanic friendly. When buying a used example, private buys can secure the best deals, but patient buying through a dealer makes sense for a peace of mind buy.

On non-critical items of kit, buying non-OEM parts can save money and keep an old machine viable. It can pay, however, to stick with genuine engine oil, air and fuel filters.



A Backhoe loader has the ability to move easily throughout the golf course

WHAT CAN YOU EXPECT FOR YOUR MONEY?

The same rules with any item of equipment apply to mini-excavators; better machines will cost more to buy initially but it can be worth spending extra on a sound unit that will not need any immediate repair work. At the opposite end, entry level machines will tend to command at least £3,000 to £5,000 for 1.5 to 5.0 tonne capacities; people know that a mini-excavator has a value, so it is difficult to buy a really cheap machine.

As a rough guide, dealers will typically allow up to 50% back when taking a three year old mini in part exchange, so the same machine will retail for about 60% of its original price. That said, dealers can often buy in machines at better prices, so this rule may not always apply.

Mini-excavator prices, via a dealer, will start at £5,000 to £6,000 for a tidy 1.5 tonne capacity machine. An equivalent 3.0 and 5.0 tonne model will be priced from £8,000 and £12,000 respectively. These are entry level dealer prices, but will secure a machine with a set of buckets and a full dealer pre-sale service and check. If time allows, put in a call to a dealer stating what you want and what your budget is. Patience will almost certainly be rewarded with the best deal.

MAJOR MAKES TO CONSIDER WHEN LOOKING FOR A USED BUY

Kubota: Good product, widely available used, with first class parts support.

Yanmar: Good machines with decent product support.

Takeuchi: Not bad machines, but sporadic support and import into the UK. Parts supply may be variable.

Hitachi: Good history in the UK, but larger 6 to 7 tonne machines are better than smaller models.

Pel Job: Later machines from 2000 fine, earlier models not up to Japanese build standards.

JCB: Worth considering if good support from a local dealer. Do not pay a premium for early models.

BobCat: Machines fine, but support dealer dependant. Good dealers will offer the best buys.

Kobelco: Good excavators, but dealer and importer changes may compromise parts availability and prices.

Volvo: Can command premium prices. Well made.