

Golf clubs are investing significant sums of money in workshop equipment to maintain their increasing levels of machinery. Many already have a full time mechanic (see November's Greenkeeper International), others have a mechanically inclined assistant greenkeeper, and even those without a mechanic are finding the need for a well equipped workshop. At basic level this may be little more than hammer and socket set, most are getting a pressure washer and air compressor. Pressure washing is a contentious issue, between those who believe that cleanliness is next to godliness and those who believe that water is bad news for bearings and electricians and that a pressure washer is the best way of putting water into those parts.

Where much thought is given to mowers and other grass maintenance kit, little goes into buying workshop kit and as a result make and model is less important than price. Total reliability is taken for granted and purchase is often made without consideration of back-up, nor for the exact specification required. With pressure washers specifications run from a simple pump with hose and nozzle to steam cleaner with detergent applicator and adjustable lance. For air compressors the options are from a simple pto mounted pump through electric motor pump and hose to petrol or electric compressors with integral air tanks and automatic control, with or without frame and wheels.

There are health and safety requirements for this equipment and its use, often unknown or ignored, and they should be subject to the risk assessment or audit each club should have undertaken. 'The Pressure Systems and Transportable Gas Containers Regulations 1989 - Statutory Instrument 1989 No 2169' requires that pressure systems are operated safely,

REAL WORLD TEST PRESSURE WASHERS, COMPRESSORS GREENKEEPER INTERNATIONAL

examined to a schedule and maintained on a regular basis, by a 'competent person'.

Relatively new systems will comply with the requirements for marking and documentation, and the supplier should have notified the owner of the requirements. The documentation should also detail the inspection requirements, however documentation gets lost, equipment gets bought second-hand or from 'supermarket' type organisations where notification of the legal requirements may be less conscientious. Any club with aged equipment - say over six years old should look at the regulations to see firstly if they apply and what they will need to do. The British Compressed Air Society, (Tel: 0171935 2464) has proved to be extremely helpful in explaining the requirements and ready to offer advice and assistance.

Workshop equipment is extremely desirable

and very prone to theft, thus it should be protected and marked clearly. It may be possible to fasten it to the fabric of the building, or to a ring concreted into the floor.

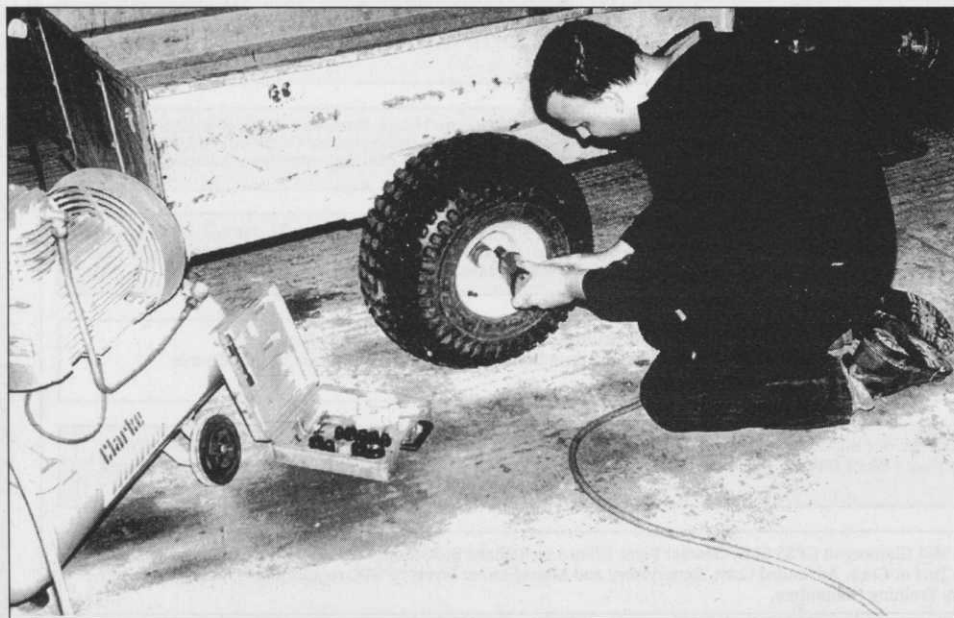
Earlstone Sands GC

Earlstone Sands is new private 18 hole course initially closely linked to the farm, however it has diverged and so needed to buy its own workshop equipment which is housed in a substantial agricultural building. Trevor Windsor is First Assistant Greenkeeper/mechanic and his well equipped workshop includes a new Clarke Hunter 50 portable air compressor as well as a pressure washer, battery charger/starter and an arc welder. It was bought off the peg from a workshop equipment supplier - "the owner just came back with it," Trevor said, and price was about £350.

Maximum working pressure is 150psi (10 bar) however Trevor normally operates it at about 90 psi. It is highly portable and not too heavy with a 50 litre capacity air receiver mounted under the 12 cfm (cubic foot/minute) compressor driven by a 1.85kW single phase electric motor to put in the back of a truck. Trevor said this capacity is ample, in volume to take air out to a machine and in output in the workshop to provide enough air to drive an impact wrench, the most demanding item in the workshop. Demand is normally intermittent thus allowing the compressor to recharge the tank between uses. Other than to move it around the workshop its portability has not been needed to date, although Trevor does consider portability important.

The other attachments at Earlstone which snap fit onto the hose include a tyre inflator and a small sprayer. The sprayer designed for paint has yet to be used. Maintenance is simple, a weekly check of the oil level and a change every 500 hours, however for simplicity Trevor expects to make this an annual routine.

According to Trevor, the Karcher HDS 550C



Trevor Windsor tightens a trailer wheel nut using air impact wrench/Clarke Hunter compressor



A Clarke Hunter compressor and air receiver at Earlstoke Sands

pressure washer "is used 20 times a day", as Earlstoke insist that all machines are washed before being put away. The machine has a high specification, and a hot water capability which "can melt a golf ball" i.e. up to 90°C or virtually steam heat. This is provided by the integrated diesel oil burner and although this seldom used it is economic in its use of fuel. The machine has two pressures, a low pressure wash mainly for wetting and applying detergent and the main 150psi jet. Detergent is rarely used. About the only time it is used, Trevor said, was prior to the major overhaul of a machine. The machine operates from single phase electricity and is semi-permanently plumbed in to both electricity and water. Both are switched off at the end of each day, although a simple on/off tap is used to remove the pressure on the hoses when the machine is not in use.

The whole machine has small wheels enabling it to be pulled out from the building when required, but an ample length of pressure hose and a four foot hand lance gives the operator good control and accessibility so that it usually remains just inside the door. Cutting cylinders are washed while spinning and this is very effective at removing all the grass from all the blades. No special wash bay nor waste water sump is used, but in fact because of the high pressure a minimum amount of water is needed, Trevor believed it to be about seven gallons a minute. Operating is seen as being mainly a matter of common sense, and no specific instructions have been issued on using the machine.

Maintenance is virtually nil as most parts are self-lubricating. The machine is now 14 months old, the previous machine was stolen, and it has a perfect service record with no problems. No special precautions have been taken to avoid freezing.

The RAC Country Club - Epsom

Engineer Anthony Worsfold believes in the minimum use of pressure washers although

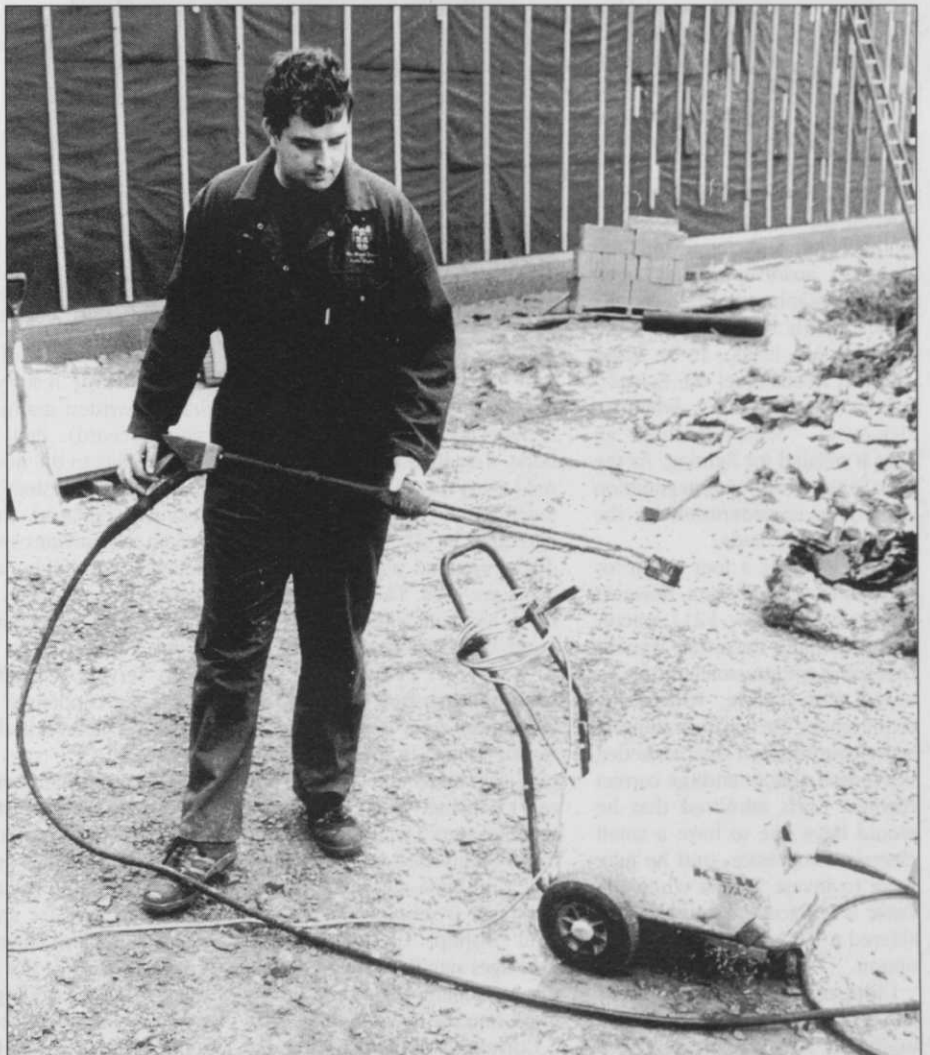
the club has two machines, neither of which has a water heater, nor is detergent used. His preference for cleaning is to use a hand held water hose or an air jet. Where a machine is required to be degreased he used a degreasing

fluid - from the degreasing tank in the workshop. Typical of the equipment for which the pressure washers are used are de-thatching reels and sprayers. One of the pressure washers is kept at the chemical store specifically for washing sprayers, this is powered by a small Honda petrol engine as the site is remote from an electric supply.

The RAC club has a permanently plumbed air pressure system based on a FIAC compressor air receiver with a 200 litre capacity and a 4hp motor. Tony uses the system extensively for power tools as well as for tyre inflation and cleaning, in particular he has air ratchets, wrenches and nut runners, and there is also a seldom used spray gun.

Chippenham GC

Chippenham is in the situation that the greenkeepers shed is many hundreds of yards from the nearest source of mains electricity. The club was quoted a price of £4,000 or £5,000 to connect it and decided that it was not worthwhile. A small Honda Genset was used, however this was not very satisfactory as it



Charlie Gaisford with a Kew 17A2K at Manor House

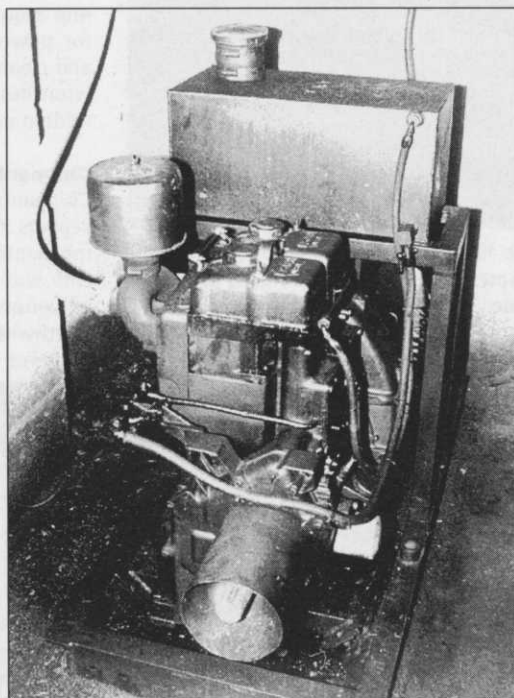
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had insufficient capacity, however one of the members had a redundant Lister/Newage generating set and about five years ago he gave this to the club for the cost of removal. This twin cylinder diesel skid mounted unit has a rated output of 7kVA at 240 volts, a not inconsiderable output which allows Course Manager Chris Sealey to run most of the equipment and lighting he needs without restriction. This unit is now bolted on a concrete pad in a small shed behind the main building. Noise level is not significant, however Chris tries not to use it when golfers are on nearby holes and in fact, the major use is for lighting in the winter months, however it is also used to run power tools, and more importantly, (to most of the greenkeepers), a microwave. The power available means that it could be used to run a small arc welder. However Chris tries to minimise the amount of work carried out as the building is also used for storing sand, and he reckons sand and machinery repair don't fit well together.

Little is known of the past history of the set and there are no manuals nor servicing recommendations, however it has been totally reliable, although it now needs a little servicing to fix the various oil leaks. It is hand cranked to start, fuel use is low – "about a bucket a day when on tick-over" – which is about all that is needed for lighting. As the club lease is up for renegotiation shortly no consideration for the future is being made.

The club uses a foot pump for most of its tyre inflation, however it also has a Zetor 5211 tractor and like many European tractors this has a compressor built in. To access this feature, which is a requirement for trailer braking in some countries, all that is needed is a length of hose and the correct fittings. Chris admitted that he would have like to have a small electric compressor, and he may have to invest in one when the Zetor is replaced he had not considered a PTO driven compressor option.

Chippenham bought a Krcher K1750G cold water pressure washer in May from local dealer John Miller, it is portable and



A Lister/Newage gen set at Chippenham GC

powered by a 5hp Briggs & Stratton Quantum engine. When Greenkeeper International visited it was awaiting repair having burst a seal, but it is normally used every day to clean off greens machines. This machine has detergent incorporation and both degreasing and traffic film detergents are used. The brush attachment has been used but proved not to be robust enough.

Manor House Golf Club at Castle Combe near Bath

Manor House is still using shipping containers and other temporary housing while their new greenkeepers facility is being built. Mains electricity is laid on and a full time mechanic, Charlie Gaisford, is employed, however Paul Bishop, Course Manager envisages significant upgrading of the equipment when they shortly move into the new building.

Currently there is a 'Snap-on' air compressor manufactured in

1983 with a tank of about 100 litre and little history (it should have a written maintenance and safety record). Paul anticipates moving this to the new workshop and having it tested. Charlie has recently replaced the pressure switch the previous switch having become unreliable, and it now maintains pressure at around the 100psi mark. Rated working pressure is 10 bar – about 150psi. The main service requirement is to drain any condensed water, and check the oil level in the compressor.

Apart from the obvious use for tyre inflation the system is used extensively for running impact drivers and ratchet drivers, however Charlie also has a small drill which he uses for smaller tasks when it is more convenient than an electric drill. For larger and more extensive drilling an electric drill is used, mainly to avoid the nerve stressing of having the compressor constantly cutting in

and out. With fitting out the new workshop there will also be a pneumatic tyre changer and a paint sprayer. The use of an air jet to remove dry grass is seen a better and safer option than using water where possible.

KEW 17A2K Pressure washer is a handy mobile 230v cold water machine about eight months old and has a maximum 150 psi pressure. It has operated during that time without trouble, it is used on a regularly daily basis when mowers and other machines come in. It is also particularly useful for removing the paste after backlapping.

Manor House has the chemical injector kit and a washing brush. The injector kit is used with a traffic film detergent which is bought ready for use in a 25 litre drum. Paul said that prior to the KEW the club had a 'steam cleaner' however when the boiler he did not see the need to replace this ability although he admitted that 'steam' could be useful for some cleaning jobs. He found that used carelessly or by inexperienced operators it will remove paint.

With the new building there will be three hose points running from the club's irrigation system which operates at 10bar. These will be placed alongside a specially build wash bay so that all grass clippings, sand and other rubbish will be collected in a sump for weekly removal while the water is taken to a soakaway. The pressure washer will still be needed and in any case the irrigation is off for the winter.

WHAT I'D LIKE FOR CHRISTMAS



Chris Carpenter, Brookmans Park GC:

"To wake up on Christmas morning and have a bunker free course."

