

# Marque of quality

When Michael Kelly of Dunmore in Co. Galway, Ireland, travelled to the UK in 2005 he had his heart set on a classic Steyr. However, he ended up returning home with an ultra-rare Schlüter E7800TV that has subsequently been the recipient of a truly epic refurbishment. Irish correspondent John Kearney looks at what was involved in the project, with pictures by Denis Buckley.

**M**ICHAEL KELLY is no stranger to German tractor engineering. Standing proudly at the back of his workshop in the Co. Galway countryside there is a 1948 Hanomag R40 and an original Deutz D8005, the latter having successfully competed in tractor-pulling competitions in Ireland.

With ambitions to own a more powerful four-wheel drive tractor, Michael, who works in the construction industry, decided he was ready to make another purchase back in 2005. Browsing the internet late one night, he found a Steyr 1090 for sale in J. Brock & Sons' yard at Thaxted, Essex. Soon after, he set sail for England with his motorcycle and headed to Essex to view the Steyr.

When he reached Brock's yard, however, he was immediately drawn to another tractor sitting in the yard – a 1978 Schlüter. "The Steyr was a lovely machine, but it wasn't German," says Michael, who bought the E7800TV without hesitation as a restoration project.

Before work began on the Schlüter, Michael set about researching his tractor's history. It was traded into J. Brock & Sons, along with another identical Schlüter, against a modern John Deere. The exact location of where the tractors came from is unclear, but it's believed they worked on a large arable unit in Scotland.

What is known, however, is what the tractors did. Michael's Schlüter has amassed over 24,000



hours and apparently spent most of its working life attached to a five-furrow, reversible Ransomes plough. In fact, Michael's tractor eventually ended up being a parts donor for the farm's other Schlüter E7800TV.

Another thing that's clear is that the 160hp tractor is an export model, which can be determined by the prefix letter E on the model number that stands, not surprisingly, for Export. In Germany, the model was actually sold as the 1500TV and had 10hp less.

When work began on the tractor the Schlüter's six-cylinder engine was the first item to be overhauled. The tractor was running when it arrived in Ireland, but the engine was badly worn and a number of important parts were missing including the exhaust, alternator, water pump and power steering pump. At this stage, Michael was starting to

Right: Michael Kelly of Carrowmuineagh, Dunmore, Co. Galway is passionate about German engineering and has done a fantastic job of restoring his Schlüter Super E7800TV

Below Right: The Schlüter six-cylinder 7.1-litre engine was completely rebuilt, receiving new pistons, liners, valves and bearings sourced from Germany. The head was also skimmed.

Bottom Left: The 1978 Schlüter E7800TV in J. Brock & Sons' yard in Essex in 2005. It was tired, rusty and missing a number of parts, having been used as a donor for another tractor.

Bottom Right: Tucked away among other machinery, the Schlüter immediately caught Michael's eye. It was running but the engine had clocked 24,000 hours and was very worn.

wonder exactly how he was going to refurbishment the tractor.

The Schlüter was split and work on the engine began. The cylinder head was removed and sent to Engine Spares in Lanesborough, Co. Longford to be reconditioned, which included the head being skimmed and the valves being replaced.

## Full strip-down

Michael carried out the rest of the work on the engine himself. After a full strip-down, he polished the crankshaft and replaced the engine bearings, while new pistons and liners were also fitted. The injectors were also reconditioned as a safety precaution.

The technicians at Engine Spares had apparently never seen a cylinder head like it before, and Michael recalls how they commented on how it had to be one of the most highly and over-engineered engines they'd ever worked on. The heavy build quality of the engine meant that it took two men to lift out the crankshaft, and Michael notes that the main bearing journal was 100mm in diameter, nearly twice that of a normal tractor engine.

Unusually, the valves in the cylinder head feature a double nest of springs that enables high spring loads to be applied to the valve for a given valve spring space. This also means that if one spring

breaks, the other will continue to operate so that the valve will not drop into the cylinder.

The Schlüter's engine is constructed with wet liners and also has valve rotors. The benefit of this is that it improves the valve seating by clearing the seat faces of carbon particles. The engine oil pump is submersed in the sump, which gives instant oil pressure of 30 to 40psi.

Carrying out the engine refurb was actually quite straightforward, but before that could be done Michael had the considerably tougher task of sourcing the vital replacement parts needed to overhaul the 7.2-litre engine. In October 2005 he put together a list of what he needed and drove his Ford Transit to Germany in search of parts. The 3000km trip took him from Dunmore to Rosslare, from where he sailed to Fishguard, before driving to Dover for the Channel crossing.

He stopped over in Strasbourg before finally making his way to Munich, and it was there that he met ex-Schlüter dealer Edwin Alber. Edwin has a vast knowledge of the tractors and was able to supply a new Turbomatic clutch for the E7800TV.

Michael's next port of call was Michael Egelseer, who bought the entire parts supply from Schlüter when the company went into liquidation in the early 1990s. Here he was able to purchase all the parts he needed to restore the power unit to its former glory.

As the refurb continued at Dunmore, other jobs



that had to be taken care of included fitting a new core to the radiator and rebuilding the front axle. Apart from some help from Jim Mullins, who fabricated a new trunion pin and new brass bushings for the axle, Michael again did most of the work himself, including fitting new seals and bearings. He also tackled the rear axle where the seals leading into the brakes were replaced.

Before his attention turned to the cosmetic work, Michael had to carrying out some precision engineering, fabricating a new toolbox as well as front mudguard brackets and the wing mirror brackets. Meanwhile the battery box, which was also missing, was fabricated by Larkin Engineering at Tuam, Co. Galway, using the original dimensions taken from a parts catalogue.







**Above: The novel hydraulically pivoting tip-back driver's cab was first introduced in 1976 and provides superb access to the tractor's gearbox, clutch and back axle.**

**Above Right: A trip to Germany was needed to bring the 160hp Schlüter engine back to full power. The long-stroke, slow-revving 7.1-litre motor delivers max torque (618Nm) at just 1300rpm.**

**Main Picture: For ease of maintenance and repairs, the Super Silent cab tilts back hydraulically and the hinged engine bonnet lifts forward.**

When the engine was refitted to the Schlüter it was once again time to start searching for parts. First was the exhaust; Michael had copied the exact dimensions of an original exhaust he came across while in Germany and got MulMuf Exhausts in Co. Sligo to fabricate an replica for him.

But sometimes only the original parts will do and during the summer of 2007 Michael yet again drove to Germany for spares for his tractor. This time he started at Theopold-Parts at Lemgo where he obtained the lights and decals. In fact he was unable to get any decals for the E7800TV, but came away happy with the graphics for a Super 1500TVL.

Michael then returned to Edwin Alber where he was able to get most of the other missing parts including the power steering ram, alternator, water pump, power steering pump and the rev-counter drive gear.

Back in Ireland, he began sandblasting the entire tractor to prepare it for spray painting.

Schlüter tractors featured a distinctive colour scheme that, since the 1960s, included two dominant colours: silver for the chassis

and parts of the cab, and red for all the tin work. Cream, meanwhile, was used for the wheel rims.

While Michael was putting the Schlüter back together he was constantly amazed by the build quality of the tractor. He discovered simple, ingenious features like a grease nipple on the release bearing on the clutch underneath the tractor and another grease nipple on the throttle linkage attached to the diesel pump. It's evident these Rolls-Royce tractors really were designed to last.

## Several years

After several years of refurbishment work, a trip to England and two visits to Germany amassing more than 5000 miles, hundreds of new parts and gallons of paint, the Schlüter is now an amazing sight. And since its renovation, Michael has only put a leisurely 100 hours on the clock taking part in shows, rallies, road runs and tractor pulling competitions. As the only Schlüter E7800TV in Ireland, the tractor is a rare site when it does venture out of the barn.



**Above: The rear lift has a capacity of six tonnes and is fitted with a category III linkage. Michael believes his tractor previously pulled a five-furrow Ransomes plough.**

**Below Right: After clocking a massive 24,000 hours during its working life, this Schlüter now leads a more leisurely life taking part in tractor pulling, tractor shows and rallies.**

A big advantage of Schlüter tractors was the very good access to the engine, gearbox and both axles. This was facilitated by a hydraulically pivoting driver's cab and a hinged bonnet covering the engine. Needless to say, this operation now works perfectly on Michael's tractor.

Another distinctive feature of the Schlüter is the design of the cab that has inclined windscreens similar to those on the driver's platform of a combine, while another distinguishing feature is the sliding doors on both sides of the voluminous cabin. In the cab, the E7800TV features a 12 forward and six reverse ZF transmission, which is capable of a rapid 40kph an hour. While the gearbox itself was untouched during the restoration work, the Turbomatic clutch was replaced. Fitted with rear 520mm wide tyres on 38in rims, the 6.6-tonne tractor really has quite a presence.

The Schlüter badge consists of a bear with a letter S – standing for Schlüter – at the front. The bear signifies endurance, power and heavy-duty working ability, and Michael's attention to detail can be seen on the cab door where the German words Die Barenstarken can now be seen. Translated as The



## Schlüter history

Schlüter was a German tractor brand that was founded in 1899 by Anton Schlüter and operated from a manufacturing Plant at Freising, Munich. The company was run by three generations of the Schlüter family right up until the 1980s.

The firm was particularly notable for building the first German 100hp tractor in 1964 and the first 500hp tractor in 1978. Schlüter tractors were, and still are, renowned for their high build quality, high-power, attention to detail and hand-built ethos.

The Schlüter brand was first imported into the UK in 1978 by a subsidiary of Rustons Engineering of Huntingdon, Cambridgeshire that traded as Reco-Schlutrak Ltd. Two of the first tractors to come into the country were bought by Cambridgeshire farmer Oliver Walston, who had seen them operating in Germany. The E7800TV tractors that were ordered by Mr Walston cost more than £22,000 each, but he considered this money well spent because of the brand's high-quality, hand-built approach.

At 160hp, the E7800TV sat right in the middle of Schlüter's Super Range export tractor offering in the late 1970s. The five four-wheel drive models available also included the Super E6600V (115hp), the Super E7200V (135hp), the Super E9500TV (200hp) and the Super E2500VL (240hp).

Reco-Schlutrak made much of the quality aspect and suggested the Schlüter was the Rolls Royce of tractors at every opportunity. The company was confident that in the long term farmers would turn away from mass-produced tractors and turn to quality machines that would last a lot longer.

Initially Reco-Schlutrak offered only Schlüter's Super Range and the Profi Trac range with equal-sized front and rear tyres that offered two models with 240hp or 320hp. By 1980, however, the Compact Range with five models from 80-110hp was also available. Prices at the time started at £14,700 ex-works and ex-VAT, and finished at a quite astounding £74,100.

Reco-Schlutrak claimed to have never lost a sale on price, although the company did admit to problems with supply as only 25 tractors a week were being built by the German factory and forward ordering over many months was required to bring a regular retail supply to the UK. Indeed, right from the outset, the company was suggesting that the fact Schlüter also built its tractors in batches of one model meant that delivery could be anything from two to nine months.

In the end, Reco-Schlutrak only operated for five years. The company found its relationship with the German-speaking factory becoming increasingly strained, while competitive brands in the UK also started offering larger tractors eroding Schlüter's advantage. The German tractor maker continued in business, but stopped making its own engines in 1991 and eventually went bankrupt in 1993. A full account of Schlüter's history can be found in the August 2011 issue of CLASSIC TRACTOR.







**Left: Schlüter claimed that its Super Silent cab provided driving comfort that was second-to-none. It was certainly spacious and functional, but also very Spartan.**

**Main Picture: The German 'Die Bärenstarken' decal on the door stands for The Bear Force. The bear in Schlüter's emblem (inset) signifies endurance, power and heavy-duty working ability.**

Bear Force, Michael had this emblem remade and fitted it to the Schlüter so there's no mistaking the originality of the tractor.

Despite the mammoth nature of the project, Michael hasn't been put off from tackling another tractor. In fact, he has recently acquired a cab-less Schlüter Super 650 four-wheel drive model from 1965. Although he has managed to start the engine, this tractor is going to be another considerable restoration project. In fact, Michael has jokingly suggested that a Ford Transit van may not be big enough for the next load of parts that will be required from Germany! That sounds ominous and most likely expensive.

Clearly a busy man, Michael is also secretary of the Dunmore & District Vintage Club, which last year set a world record for the most single-chop forage harvesters all working in the same field at the same time. This year the club hopes to set a new, larger record on 5 August by hosting 100 single-chop foragers working at the same time in a 35-acre field. Perhaps not surprisingly, Michael's Schlüter will be in the midst of the action powering a trailed forage harvester. It is certain to be a sight and a day to behold.



#### On the internet:

Photographs taken during the restoration of Michael's Schlüter and videos of it ploughing can be found on the Dunmore & District Vintage Club's website at: [www.dunmorevintage.com](http://www.dunmorevintage.com)

## Useful contacts\*

- Power steering ram, alternator, water pump, power steering pump, Turbomatic clutch: Edwin Alber, Buffenhoffen, Munich, Germany. Tel: (0049) 7575 2882.
- Original engine spare parts: Michael Egelseer Traktoren, Germany. Tel: (0049) 8122 97830.
- Lights, bodywork decals: Theopold-Parts, Lemgo, Germany. Tel: (0049) 5261 189191.
- Cylinder head overhaul: Engine Spares, Lanesborough, Co. Longford, Ireland. Tel: (00353) 43 332 1155.
- Clutch parts: Voith Turbo Ltd, Croydon, Surrey. Tel: 0208 667 3032.
- Front axle overhaul: Jim Mullins Engineering, Dunmore, Co. Galway, Ireland. Tel: 00353 93 38093.
- Exhaust fabrication: MulMuf Exhausts, Tubbercurry, Co. Sligo, Ireland. Tel: 00353 71 918 5846.
- Paint: B. & C. Paint, Galway, Ireland. Tel: 00353 91 752177.
- Tyres: Park Tyres Ltd, Co. Galway, Ireland. Tel: 00353 93 60400.
- Bearings and seals: Central Bearing Supplies, Athlone, Co. Westmeath, Ireland. Tel: 00353 90 647 2064.
- Cab Upholstery: Woolies Trim, Peterborough, Cambridgeshire. Tel: 01778 347347.
- Battery Box Fabrication: Larkin Engineering, Tuam, Co. Galway, Ireland. Tel: 00353 93 24504.

