



Driving the Euro tractor was more like driving a forklift than a truck, and it is very easy to manoeuvre



NICE AND EASY

Whatever you call them — yard horses, tuggers or yard tugs — with more trailers on large sites has come an increasing need for the terminal tractor. **Matt Wood** examines the offerings from Terberg

In the past there have been some novel approaches to trailer shunting. Moving trailers around tends to bring out the bush engineer in some, old prime movers well past their use by date have found themselves deregistered, stripped of a couple of fuel tanks, and in some cases have had an oxy torch taken to the back of the cab, and 'Hey Presto', a yard tug.

On a personal level, I've even had the pleasure of trying to fire up a clapped out old 10-litre Volvo yard truck on a freezing winter morning, can of Aerostart in hand as the old girl snorted to life in a cloud of white smoke.

It's not a great deal of fun, or very productive for that matter. Also, the novelty of constantly cranking trailer legs up and down soon wears off. I'm sure inhaling the toxic cloud of fumes from the old banger wasn't real healthy either.

The trouble with the 'retired truck' approach, however, is that prime movers aren't designed to be climbed in and out of every couple of minutes and OH&S issues raise their ugly heads with busy drivers having to enter and exit a conventional prime mover via the side steps, as well as climbing on to the chassis to connect airlines. The risk of a hurrying driver coming to grief is extremely high, and that's without mentioning back strain issues from the incessant winding of landing gear crank handles.

So, enter the terminal tractor, yard horse, tugger, or yard tug, choose your terminology. In the past, tugs were a common sight on wharfs or large manufacturing sites such as steel works. But with the advent of large distribution sites, the yard tug has found a growing market due to its ability to provide fast, efficient trailer movements.

In fact, tug manufacturers claim that a yard tug can perform between three to five trailer movements in the time it takes to move one trailer with a conventional prime mover. To date, the lighter 4x2 market has mainly been dominated by the American Kalmar/Ottawa brand and it wasn't until Clark Equipment released the 4x2 Terberg YT220 on to the

Australian market back in 2005 that there was much in the way of competition.

The Terberg brand name may not be an overly familiar one in this country but, in its native Europe, the Terberg group of companies is a major presence in the manufacturing of specialised industrial equipment. With a history stretching back to a Dutch village blacksmith business founded in 1869, the Terberg group now spans businesses from major engineering projects, to working with manufacturers such as Volvo creating specialised heavy haulage prime movers and garbage trucks.

However, in the heavier 4x4 tractor market Terberg has dominated the market both here in Australia and around the world. These heavier spec 4x4 RT tractors are working in demanding steel mill applications here as well as on RO-RO wharf work, and can be specced to handle a GCM of up to 381 tonnes. The Dutch pedigree of these tractors does give them some street cred though, with Rotterdam's Europort being the third busiest port in the world, it makes one hell of a proving ground.

I recently had a chance to spend some time with Terberg's 4x2 YT220 Euro tractor at Woolworth's busy Minchinbury DC in Sydney's outer west, to see how the new tug performed in a real world environment. Before even setting foot in the tug, some major advantages were immediately apparent. The steps on the side of the chassis were fully

enclosed and the cab entry step was devoid of a lip. Considering that it's a vehicle designed to be walked on, this virtually eliminates the likelihood of drivers trapping a foot beside or under a step as they enter and exit the cab. I also noted the hand rails beside the steps and by the driver's door, allowing the driver to virtually stroll up the stairs on to the tug with the prescribed three points of contact, making it a lot harder to trip. I could easily wander around the chassis of the tug without really having to worry about a foot disappearing down a gap in the footplates and pitching me on to the concrete below.

Walking around the tug, all daily inspection points such as oil, hydraulic fluids and coolant were easily accessible at ground level without the need to lift the cab or any

"FROM A DRIVER'S POINT OF VIEW, IT IS AN EASY PLACE TO SPEND A SHIFT."

inspection plates, making pre-shift checks a breeze. Drain cables for the braking circuit were easily found, though this unit is also fitted with an air dryer as standard. In the advent of an accident, an emergency ignition cut off switch was also easy to get to from ground level. The chassis seemed very well put together and gave the overall impression of quality and strength. This YT220 is rated at a GCM of 85 tonnes, making it more than capable for shunting B-double combinations. However, the GCM of the unit easily can be up-rated to 140 tonnes.

Walking into the cab is easy, without having to so much as duck my head as I step through the driver's door. With a twist of the start key the 220hp (164kW) Cummins QSB6.7C fires into life and while the engine noise is undoubtedly present, it is no more intrusive than any other industrial truck I've driven. From the air-suspended ISRI driver's seat, every control is within easy reach and there is no need to lean across the cab to access any controls. The raise and lowering control for the fifth wheel is at my right side with the unlock button for the turntable jaws is situated just in front of it. To my left is the park brake lever and the gear selector for the 5-speed 3000 Series Allison automatic transmission. It's simply a matter of hitting the D button, releasing the brakes and we're mobile.





Twin 120mm lift rams help keep things stable under load



Emergency isolator switch is easy to reach at ground level

Running across uneven concrete unladen isn't usually the smoothest of tasks in a yard tug, and whilst no Rolls Royce, I was surprised by the quality of the Terberg's ride. A combination of rubber mounted parabolic springs, telescopic front shock absorbers and an air bag suspended cab take out some of the 'kick' that typifies the ride of this kind of vehicle. The air ride ISRI goes a long way towards helping this as well. With the tug it's simply a matter of backing the unit under a trailer, raising the fifth wheel and backing onto the king pin letting it lock on as you would with any prime mover. At this stage, it's also worth pointing out the cab intrusion barrier mounted outside the cab behind the driver's seat, a major safety benefit if the driver jumps the trailer king pin while



The driver can reach all relevant controls without the need to lean across the cab

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backing under the trailer. This prevents the front of the trailer colliding with the cab and/or the driver.

Once hooked up, all I have to do is pull

the park brake lever on and step out the cabin door, fit the air lines and turn on the air supply taps. As I motor around to the docks with the trailer rolling along behind me, I

notice that a downside of the large windows, which provide excellent visibility, is the radiant heat from the concrete outside, but a flick of the air-conditioner dial starts to cool things down right away.

The left-hand side visibility isn't fantastic, perhaps emphasised by the island cab that typifies this kind of machine; this left me feeling that the left-hand mirror could have been a bit bigger and possibly mounted lower. Once I'd found the dock I needed and the

SPECS

MAKE/MODEL: Terberg YT220

ENGINE: Tier 3 Cummins QSB 6.7 @ 220hp (164 kW)

OPTIONAL: Euro 5 (ADR80/03) Cummins ISBe5 SCR @ 225hp (165 kW)

TRANSMISSION: Allison 5-speed 3000 Series automatic

FRONT SUSPENSION: Rubber block mounted parabolic spring front suspension

TELESCOPIC shock absorbers. Air bag suspended cab. Air ride ISRI driver's seat

FINAL DRIVE AND REAR SUSPENSION: Planetary drive axle, solid mount to chassis (air bag suspended optional)

HYDRAULICS: 120mm twin rams

CHASSIS: 100mm Channel box section

TURNING RADIUS: 6,500mm

GCM: 77 tonnes (upgradeable to 127 tonnes)

coast was clear trafficwise, it only took a few deft swings of the steering wheel to put the trailer between the lines and on the dock. It struck me that other tugs I'd driven had felt more like a bare bones prime mover whereas the YT220 was, in fact, like a forklift to drive. A combination of the small steering wheel, a setback steer axle and a 6.5m turning circle made manoeuvring a 48ft trailer onto a dock as easy as putting a garden variety 6x4 box trailer into a garage.

Unhitching the trailer was just a reverse of the hitching procedure, with the exception of unlocking the turntable jaws with the unlock button. Clark Equipment director Alan Foulkes is keen to point out some of the advantages of the Terberg product, he mentions that ancillaries such as mirrors and work lights can be moved and installed anywhere on the vehicle to satisfy a customer's requirements. The modular nature of the cab gives flexibility in both control and entry door placement. He also adds that the bullet proof Cummins/Allison drive train is both common installation in anything from large forklifts to road going trucks. This makes a virtual non-issue out of parts availability.

For those with an environmental bent, the YT220 is also available with



All pre shift check points are externally mounted and easy to access from the ground. There is no need to tilt the cab or remove inspection plates

the ADR80/03 (Euro 5) compliant 225hp (165kW) Cummins ISBe5, which runs selective catalytic reduction (SCR) to keep emissions down. As an aside, the Euro 5 spec ISB is also the engine of choice in the Bushmaster range of military vehicles made here in Australia.

Clark Equipment handles the sale and rental of materials handling equipment from Bobcat loaders and conventional forklifts to container handlers and has technicians in every state. Placing qualified service personnel around the country. In the case of the Terberg however, the simple, sturdy design and the popular drive train make finding a technician in case of a break down a relatively easy task.



As well as the YT220 tug, Clark also distributes Terberg's 4x4 RT tractors - bigger brothers to the YT220. Toll Shipping already has eight 4x4 RT 323 tugs at 310hp in service with their Bass Strait RO-RO operations. The success of these units has led to Toll ordering nine more 4x4 382 tugs at 335hp.

My encounter with the YT220 Euro tractor left me with the impression that this unit was indeed a well-engineered, yet simple and ergonomic bit of gear. From a driver's point of view, it is an easy place to spend a shift, and from a management point of view, it is a step up in both safety and efficiency.