

SPECIAL REPRINT

Sturdy workhorse

Field test of Jungheinrich TFG 425
LPG fork lift truck

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Field test of Jungheinrich TFG 425 LPG fork lift truck

According to the manufacturer, the new Jungheinrich DFG/TFG 425–435 series counterbalanced trucks are dynamic, inexpensive and above all low-maintenance, while suited for operations in any climate zone. We chose the TFG 425 with 2.5 ton capacity as our test truck to see how well the series stood up to those claims.



More than a year has passed since Jungheinrich expanded its product range by adding a series of diesel and LPG torque converter forklifts. The premium manufacturer had come to the conclusion that uncomplicated, IC engine fork lift trucks would continue to enjoy strong global demand, particularly in view of the unbroken popularity of wear-resistant diesel and LPG fork lift trucks in countries whose production

processes are not yet up to western industrial standards.

The harsh conditions frequently encountered in those countries require trucks with a simple design and high spare parts availability at an attractive price. Jungheinrich's portfolio also includes truck types designed for tough, long-term applications. However, those trucks are equipped with hydrostatic drive and similar features that make them too cost-inten-

sive and advanced for the countries in question. In addition, operators often do not do well with this type of highly developed truck.

Jungheinrich met these challenges and after an extensive development phase introduced the TFG and DFG truck series with capacities between 2.5 and 3.5 t to the market. Although more simply designed than other series, these trucks are still Jungheinrich at their core. This includes our test truck, the



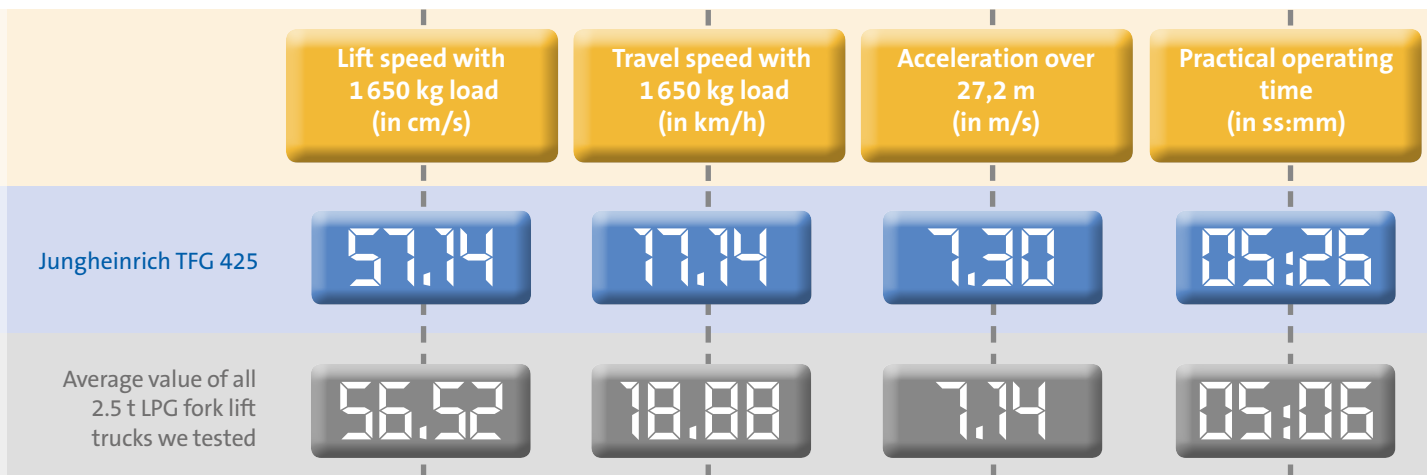
01 The entry / exit is generously dimensioned, pleasantly low and free of sharp edges



02 There is sufficient space available to comfortably operate the pedals, crawl speed and brake as well as the accelerator



03 Visibility through the triplex mast is very good. The cylinders, chains and hoses have been positioned to optimise visibility



TFG 425, with fuel gas operated engine, triplex mast (lift height 4 700 mm) and a few extras such as a safety glass windscreen. Our test truck is also equipped with an exhaust pipe on the counterweight, pointing upward. In the standard version the exhaust pipe is located beneath the counterweight, making for an unrestricted rear view, but at the same time stirring up more dust on loose surfaces due to the flow of exhaust gas.

The test truck makes a solid but definitely not lumbering impression. Rugged, high-quality materials have been used. Our initial impression is that of a truck ideally suited for varied applications and a long service life.

Generously designed work area

We put our TFG 425 with a capacity of 2.5 t through an extensive practical test. The entry / exit area of the truck (fig. 01) is free of restrictions and covered with solid plastic including an anti-slip profile. It provides access to a bottom plate, also spaciouly sized, with a thick rubber mat that reduces vibrations and transmitted noise. The footwell is generously dimensioned (fig. 02) so the pedals, crawl speed and brake as well as the accelerator can be operated without difficulty. The tilt angle and spring pressure of the pedals are optimally adjusted.

The Grammer driver's seat features precise adjustment and the mechanical levers for mast and fork operation are easy to reach. The levers are just as rugged as the rest of the truck and are included in the standard version. All operating concepts (SOLO-, DUO- and MULTI-PILOT) including armrest are also available for this truck series.

The mast was redeveloped and optimised for visibility (fig. 03). As noted previously, our test truck is equipped with a triplex mast with free lift and integrated sideshift. It features excellent cushioning and is practically torsion-free.

Reliable and easy operation

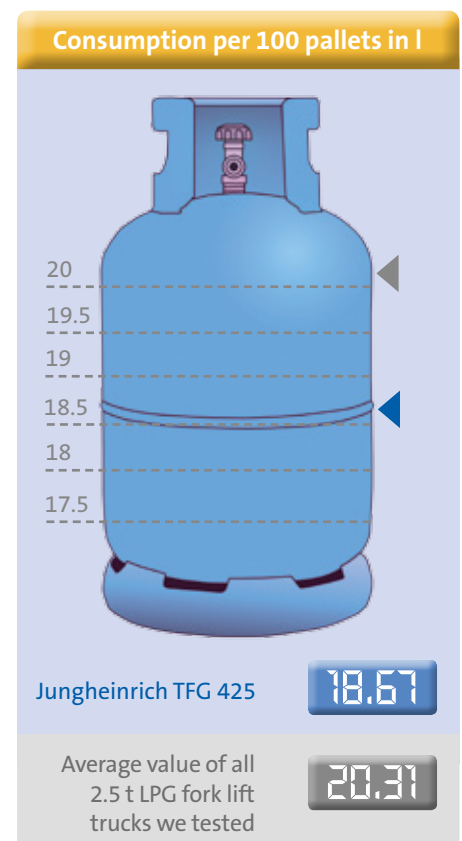
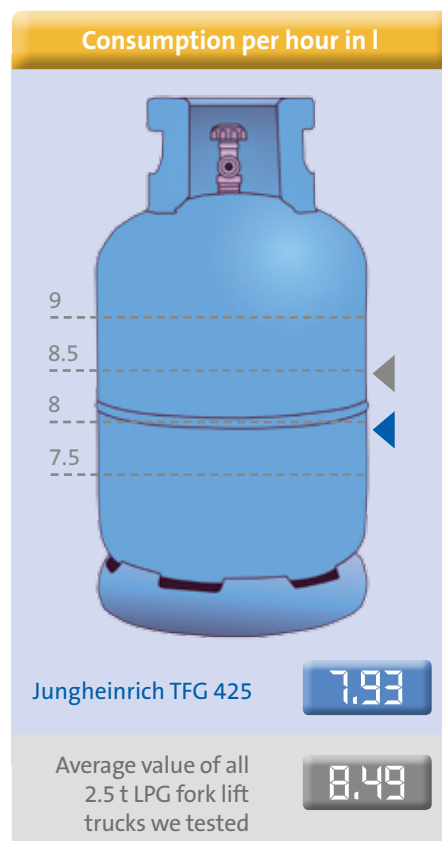
The travel direction lever of our test truck is located on the slim, infinitely variable steering column (fig. 04). It is responsible for operation of the torque converter and the transmission. If the operator exits with travel direction activated, the previously set travel direction is automatically switched back to a neutral state.

The mast functions can only be performed if the operator is sitting in the seat. If the operator leaves the truck without the wheel stop activated, a warning signal sounds.

The electrical wheel stop itself is operated by a switch (fig. 05) and holds the truck 100 per cent in position on the spot. The service brake features powerful operation. The brake system consists of multi-disc brakes immersed in an oil bath. Due to the enclosed housing it is practically maintenance-free.

Convenient maintenance included

Low maintenance costs in general were a prime consideration in the requirements specification for the development of the DFG/TFG series. Our test truck features





04 The slim steering column (with the travel direction lever on its left side) is infinitely variable



05 The grey switch activates the electrical wheel stop of the maintenance-free brake system



06 The engine compartment, which houses the economical drive, can be easily reached without using any tools

DFG/TFG series. Our test truck features excellent accessibility to the engine (fig. 06) and torque converter. The engine cover can be opened up wide and the two side elements can be removed without tools.

The bottom plate can also be removed in a few seconds simply by releasing the accelerator plug. Both the diesel and the fuel gas variant come with a tried and tested Kubota engine. It is quite striking how quietly and smoothly the drive works. A decisive feature of this univer-

sal industrial motor concept is the worldwide availability of replacement parts. The enclosed cooling system and high degree of oil filtration ensure a high level of availability, even under harsh conditions.

Performance profile

Our test truck was stable and sturdy in operation, lending it a predictable quality. The truck owes its sturdiness in part to the premium Xtreme solid rubber ty-

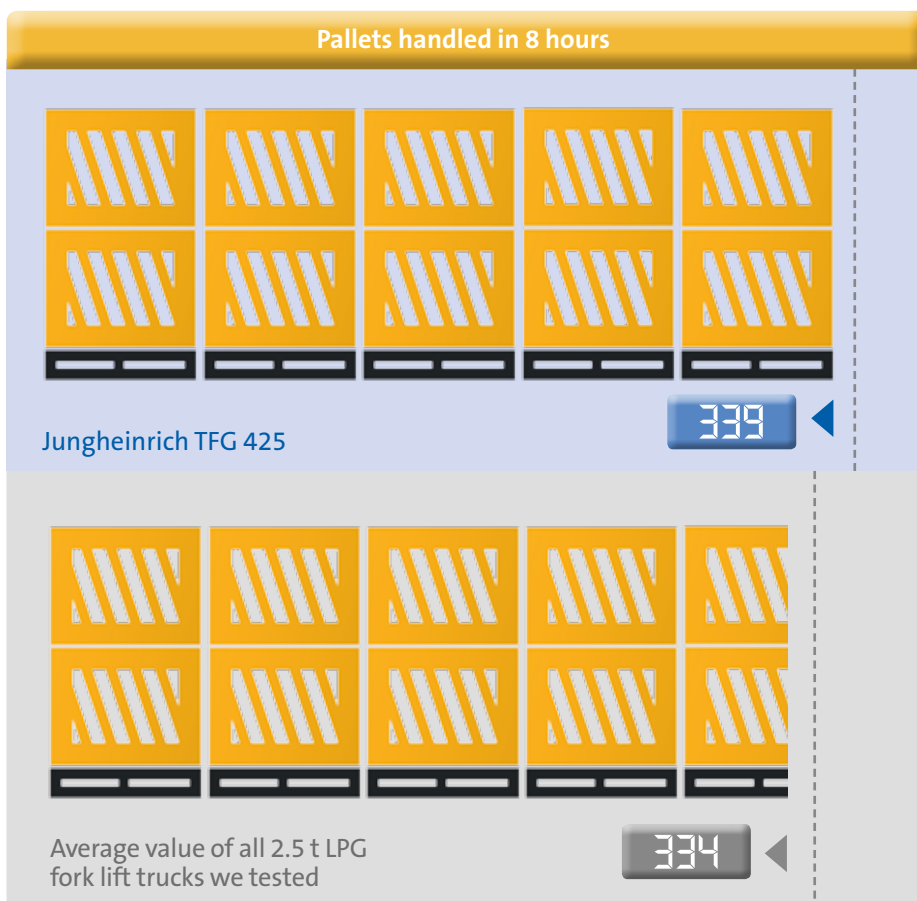
res from Solideal., which give the truck a high degree of stability, but also produce a light rattle when driving with unladen fork on pavement or uneven terrain.

The energy consumption of the truck is in line with what has distinguished Jungheinrich for many years: economy. The consumption of our test truck was about seven per cent less in comparison to the average values in this class.

Conclusion

The TFG 425 is truly a truck for the world market: Uncomplicated and rugged with the qualities you can expect from the Jungheinrich brand. This truck is maintenance-friendly and features above-average performance. Potential improvements: a paper compartment, possibly mast cushioning at floor level and at maximum lift and a hand-grip on the inside of the far rear roof pillar. We would also like to see the exhaust pipe moved to the left side of the counterweight to provide better visibility while reversing. Of course this criticism does not apply to the standard version with the exhaust pipe mounted under the counterweight.

Text/Photos: Theo Egberts, Andersom Testing
Graphics: VFV, Sonja Schürmer



Evaluation

- + Operator comfort
- + Stable and predictable handling
- + Performance
- No mast damping at floor level