

**TCM**

by **UNICARRIERS**

## FG-A1 Series

LPG & Dual Fuel Engine Powered

## FD-A2 Series

EPA Tier 4 Diesel Engine Powered

Pneumatic Tire Models



8,000–11,000 lbs. Capacity



# TCM

by **UNICARRIERS**<sup>®</sup>

For more than 65 years, businesses have relied on TCM brand equipment to deliver superior reliability, unsurpassed performance, and enduring value. The quality of our equipment is matched by the comprehensive support of our global parts and service network. It is part of our unyielding commitment to not just move your goods, but move your entire operation forward.



## Up Your UpTime

Reliability is key and that's no mistake. Design, engineering and relentless testing are part of our DNA. The result is what we expect and what you demand.



## Comfort Zone

Work comes first, but there are amenities that make the experience more pleasurable. And happy drivers are statistically more productive.



## Power & Performance

Our efficient engines and intuitive designs allow you to move in a way that makes sense. The resulting productivity saves you time, money, and driver mishaps.



## Sweet Savings

Our low cost of ownership is something you can take to the bank. We take our commitment to delivering value seriously because we know you do.

Think of your toughest jobs, the heaviest loads, the harshest environments. Think of the long days, hauling, lifting, loading, stopping, and starting. Think of the grime, mud, dirt, and dust. You need a forklift built to withstand all the abuse you dish out. You need a forklift with the industry's best limited warranty\*. You need the FG(D)35-50 Series.



In lumberyards, brickyards, steelyards, warehouses, and factories around the world, this forklift is a workhorse customers count on. It offers more than the best standard, limited warranty in the business. It brings you a low cost of ownership, proven reliability matched to cutting edge innovations, and greater operator comfort that translates into maximum operator productivity. When you consider all this series offers, you'll see that it's the best choice — *the only choice* — for your business.



As you look through this brochure, check out the symbols shown here for features and advantages available on TCM brand equipment by UniCarriers:



### Play It Safe

Your employees' well-being is an imperative. Cleaner emissions and standard protection features provide you with greater confidence in the workplace.



### Control Freak

Our advanced features give you control to promote operator security, manage your productivity, contain costs, or do all these things at once.



### Make It Yours

Choose from a variety of options to customize your ride. If you don't see what you need, contact your authorized TCM by UniCarriers dealer for help.



To learn more, and find a dealer near you, visit [UniCarriersAmericas.com](http://UniCarriersAmericas.com)

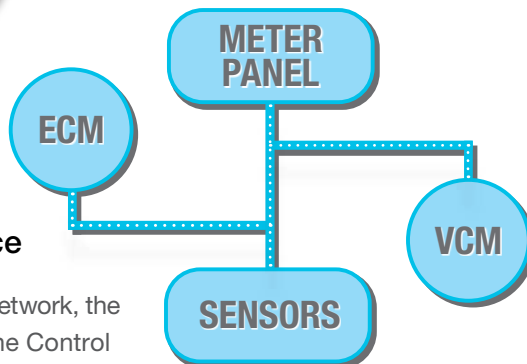
\*Our standard, limited warranty is available on all UniCarriers Class I, IV, and V forklifts.



# Up Your UpTime

Let's face it, you have no time for downtime. That's why you need a rugged, tough machine that can handle your biggest jobs in the worst environments. So, on this heavy-weight series, the main frame members are fabricated from 3/4" steel, with up to 1" thick support brackets, and 1/2" thick steel fenders.

Beyond all that steel, this series offers features that extend service intervals, simplify servicing, and continually monitor both engine and transmission performance. All to keep you going — faster, longer, and stronger.



## An Advanced System To Monitor Truck Performance

Through our innovative CAN-bus network, the Vehicle Control Module and Engine Control Module remain in constant communication monitoring key systems to assure optimum performance and reliable operation.

## Quick Change Artist

On LP and Dual Fuel models, our simplified LP replacement system features a bracket that swings out nearly 90°, then pulls down to a manageable height for faster, easier tank replacement.



## A Solid Advantage

The FG(D)35-50 Series is engineered for the toughest outdoor applications, that's why you'll find a solid **one-piece cast steer axle** — not welded — that's sized for use on 11,000 lb. forklifts, but found across all series models, regardless of capacity.

## Keeping Dirt & Water Out

Contamination can damage internal components causing downtime, while impacting performance and handling. These heavyweight forklifts incorporate power steering cylinder boots to protect the steer cylinder rod against dirt, dust and water.



## Protection System

A standard engine and transmission protection system **continuously monitors radiator fluid and transmission oil temperatures**. In the event of excessive heat generation or reduction in oil pressure, truck speed is reduced. This safeguard results in extended engine and drivetrain life.



## Bigger, Better Brakes

The brakes are oversized — actually sized for use on 15,000 lb. capacity forklifts — and use a cast iron backing plate and brake pad mounting. This provides **extra durability and extended brake life** — which means less maintenance and lower costs for you.



## On-board Diagnostics

This series features intuitive on-board diagnostics accessed through its **advanced LCD meter panel**. This system helps technicians quickly identify problems, so the unit is back up on the job faster. It also eliminates the need for a laptop computer or tablet to access error codes.



# Comfort Zone

Operator comfort equals operator productivity. That simple fact was applied to virtually every aspect of the FG(D)35-50 Series' design. From the spacious compartment to the logical layout of the controls, our goal was to reduce fatigue and maximize performance. The ergonomic advantages are easy to see...feel, touch, access, operate, and appreciate.

## The Support Your Drivers Need

Our standard seat includes lumbar support and weight adjustment to give each driver comfortable command. The **full suspension** design offers superior shock absorption for the smoothest possible ride. There are also operator restraint armrests, and a non-cinching seatbelt that allows a wider range of movement.



## Plenty Of Room For Hard Hats

These forklifts feature a high overhead guard with a full 45.1" of headroom. This extra clearance is important for operations requiring hard hat usage, and also creates a more wide-open feeling for operators.

## Sure-footed Handling

The low pedal angles allow **heel-to-toe movement** between the accelerator and brake pedals for easier handling. The brake also features a hydraulic booster that requires less force to engage the brake, reducing operator fatigue even more.





## A Step Up

Operator entry and exit is simplified with a large step that's extra long and deep for more confident footing, and its low height reduces driver effort when entering the compartment.



## Wide Open Spaces

Beyond generous headroom, the operator compartment features plenty of foot and legroom, a small diameter steering wheel, automotive-style controls, and low noise levels. All designed for greater operator comfort and productivity – hour after hour.



## A Very Smooth Idea

The FG(D)35-50 Series features a floating powertrain that includes four independent vibration dampeners to help reduce operator fatigue. Vibration is further lessened thanks to a standard thick rubber, non-slip floor mat.



# Power & Performance

When it comes to delivering the power you need to get the job done, the FG(D)35-50 Series offers more than just brute strength. It brings you multiple engine choices, each perfectly matched



## LP Or Dual Fuel, The TB45 Is A Powerhouse

Powerful and highly efficient, our TB45 engine offers advanced features to drive performance and deliver rock solid reliability. These include electronic fuel injection, and an engine control system that monitors key engine functions to deliver superior fuel economy with reduced emission levels. The FG-A1 Series even includes an advanced Engine/Transmission Protection and Warning System that constantly guards against overheating or loss of oil pressure.

### EMISSION CERTIFICATION LEVELS\*

- HC+NOx=0.5 g/kW
- CO=6.5 g/kW  
(68.4% below EPA standard)

\*CARB model year 2015 engine certification

Mounting Points



## Greater Reliability Is A Very Cool Idea

An extra large, aluminum, cross flow radiator offers maximum heat capacity and greater cooling performance. Mounted to the frame in only two places, resting on two rubber pads to minimize vibration, it **decreases the chance of frame flex torsion** that can cause damage seen with typical 4-point mount designs.



## Pumping Up The Power

To deliver superior hydraulic response time, these lift trucks incorporate tandem hydraulic pumps — one for lifting and one for steering. The result is increased load lift speeds, and no loss of lifting power when steering and maneuvering the vehicle.

to our heavy-duty transmissions to deliver power with lower emissions, better fuel efficiency, and greater torque. But throughout the FG(D)35-50, in its hydraulics, electronics, and internal components, you'll discover a machine that doesn't just do the job, but does it better, more efficiently, and more economically.



### The ZD30 Diesel: Higher Power/Lower Emissions

This turbocharged, 16-valve, double overhead camshaft diesel features an electronic common rail injection, intercooled exhaust gas recirculation system, and closed diesel particulate filter for emission levels significantly below EPA Tier 4 standards. The ZD30 has **10% greater fuel economy** than our previous model, while the Quick Glow System dramatically improves cold weather starting. The advanced Engine/Transmission Protection and Warning System (*standard on the FD-A2*) also constantly guards against overheating or loss of oil pressure.

#### EMISSION CERTIFICATION LEVELS

- HC+NO<sub>x</sub>=4.7 g/kW
  - CO=0.1 g/kW
  - PM\*=.025 g/kW
- \*Particulate matter

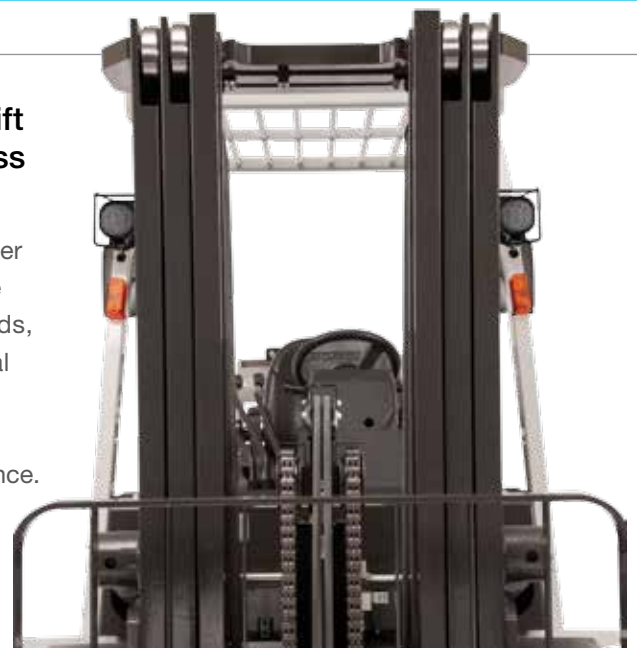


### Heavy Duty...Maxed Out

The FG(D)35-50 features an oversized, heavy-duty differential and drivetrain. **Rated for use on 11,000 lb.** forklifts, you'll find it on all models in this forklift series.

### A Mast That Can Lift Your Entire Business

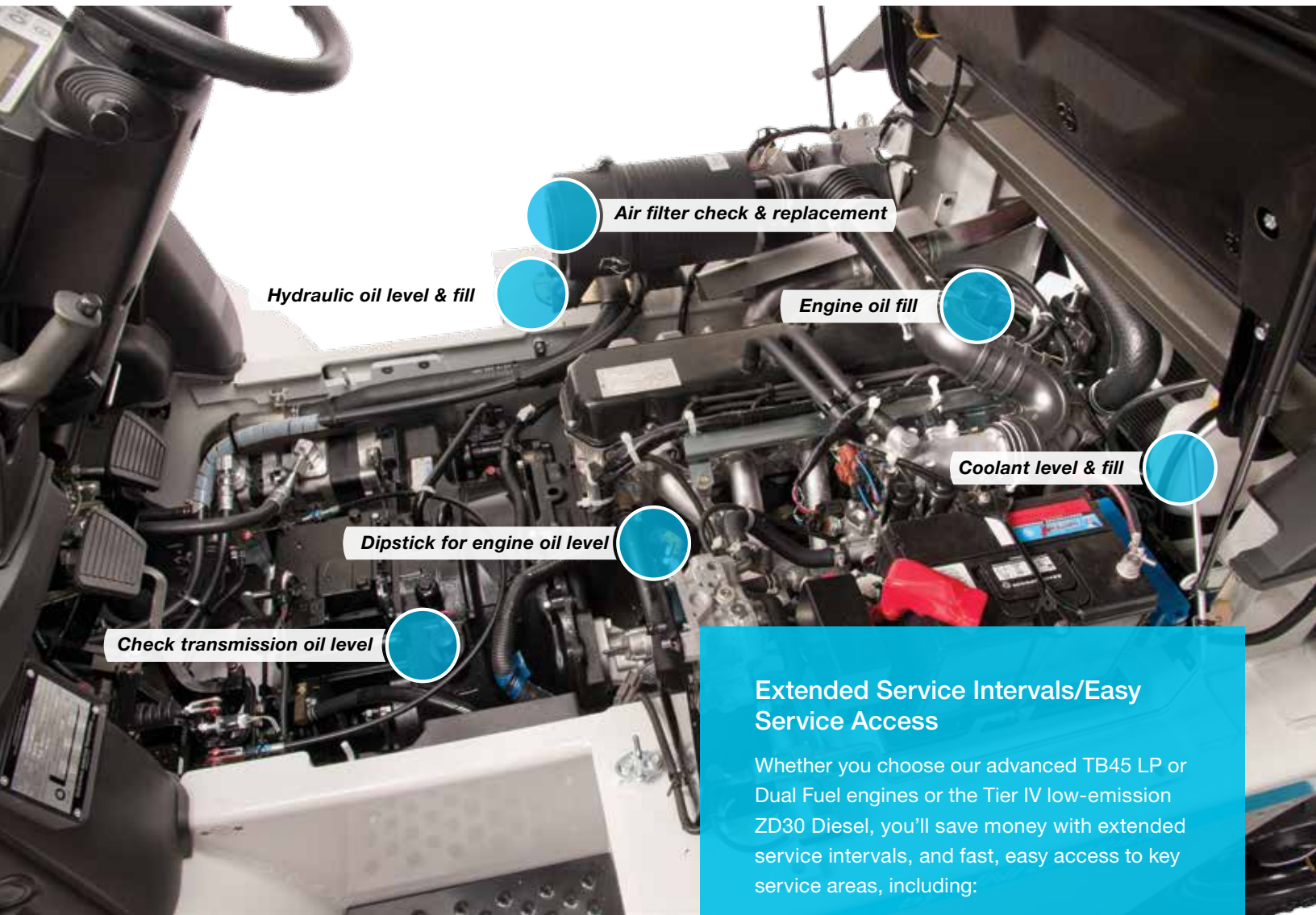
The robust mast construction features larger rail dimensions to more easily handle heavy loads, and provides exceptional reliability and enhanced visibility to the load for greater operator confidence.





# Sweet Savings

The rugged design of the FG(D)35-50 Series not only excels in the toughest environments, but saves you time, effort, and expense, day after day. Our commitment to cutting your costs begins with our fuel-efficient engines, onboard diagnostics, and ergonomic compartment layout. But, it can also be seen in its key components and innovative options. Advantages that drive up productivity and profits, while driving down costs.



## Extended Service Intervals/Easy Service Access

Whether you choose our advanced TB45 LP or Dual Fuel engines or the Tier IV low-emission ZD30 Diesel, you'll save money with extended service intervals, and fast, easy access to key service areas, including:

- Easy Oil Filter Replacement
- Fast Fan Belt Adjustment
- Accessible Radiator

TB45 engine shown.



## You're In Control

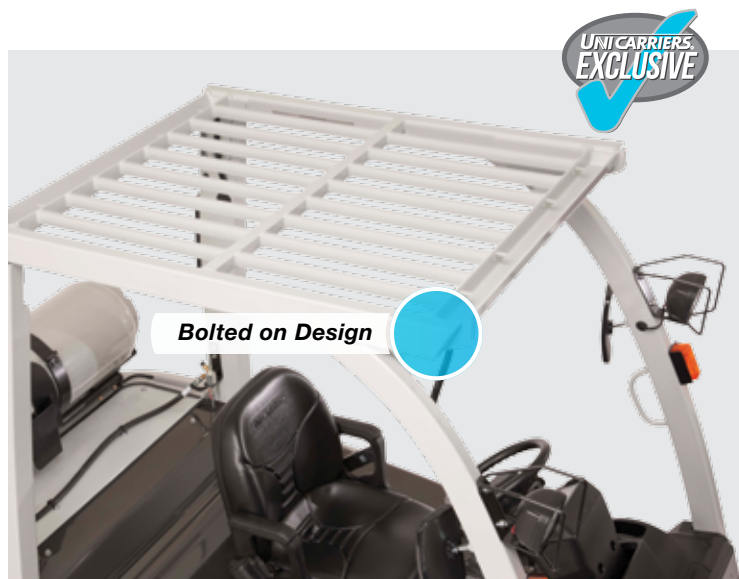
The FG-A1 Series' optional controlled acceleration feature increases fuel efficiency and reduces tire spin by adjusting acceleration.

The FD-A2 Series (ZD30 diesel engine) includes controlled acceleration as a standard feature accessible through the meter panel.

## Control Speed And Costs

With available High/Low Travel Speed Control, a technician can set maximum high/low speeds. In fact, you can designate speed settings for varying applications – without sacrificing torque or RPM. That can mean greater fuel savings for you and a more secure working environment for everyone.

Optional feature on FG-A1 models powered by TB45 engine.  
Standard feature on the FD-A2 models and accessible through the meter panel.



## Our Overhead Guard Reduces Your Overhead

Our five-piece overhead guard takes 75% less time to make needed replacements versus most competitors' single-piece, welded-on guards. That cuts downtime and costs.

## Long Life LEDs

Everything about this forklift series is designed for longer life and greater savings, including the standard LED headlights that deliver greater visibility while being more economical and cost-effective over the life of the machine.



# Play It Safe

Chances are, creating a secure working environment for your employees is a priority for you. It was also a priority for us in designing and building this forklift series. This unyielding commitment to protecting the work environment can be found in the rugged frame of the FG(D)35-50 Series. It can also be seen in the lower emissions of our advanced engines, and the spaciousness and ergonomic layout of our operator's compartment. Creating a more secure workplace, without sacrificing performance, is what these forklifts are all about.



## Seat-Actuated Operator Presence System

Our operator presence system is among the most comprehensive and sophisticated in the industry. Activated within 3 seconds after the operator leaves the seat, it automatically locks the mast's lift and tilt functions, shifts the transmission into neutral, alerts the driver to set the parking brake, and prompts the driver to engage his seatbelt before restarting.

## Authorized Users Only

Our standard four-digit PIN access system helps prevent unauthorized truck usage. This system allows you to register up to five PIN-codes to **control operating access** to the machine. It also offers an important reporting function: a readout of the operating hours logged by each code or operator.



ZD30 engine model shown.



## A Stable Approach To Operator Confidence

Rated for use on 11,000 lb. capacity trucks, but standard on all models across this series, the high roll center rear axle places the articulation point high on the axle, closer to the truck's center of gravity. The result is enhanced stability and greater control during operation.



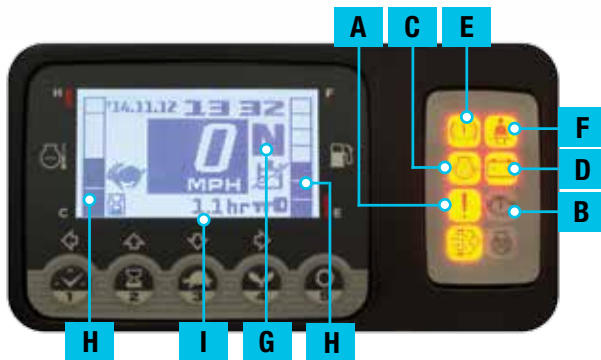
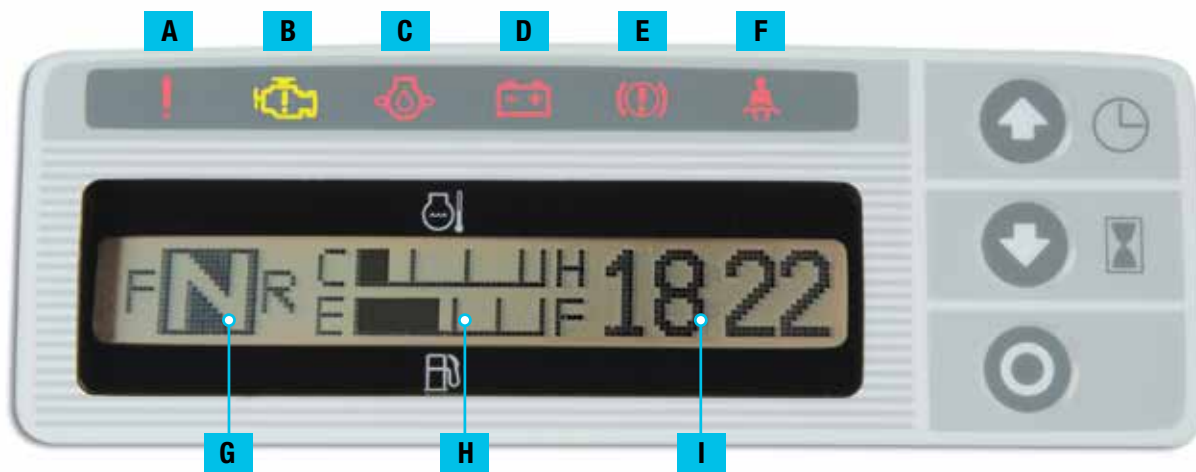
## Less Fatigue Means More Control

The FG(D)35-50 Series is designed to keep operators alert and in full control of the forklift. Among its many features to prevent operator fatigue are: an adjustable full suspension seat; responsive hydrostatic steering; heavy insulation to reduce noise and engine heat; ergonomically positioned controls; and an automotive-type floating powertrain that reduces vibration.



# Control Freak

When it comes to controlling the vehicle and controlling costs, this forklift series has the innovative technology and features you and your operators are looking for. There are alerts and controls that can manage costs, prevent downtime, improve productivity, and create a more secure workplace for everyone. With these forklifts, you're always in control.



While the standard meter panel varies based on engine, the functions and features are largely the same:

- A** Multipurpose warning
- B** Check engine warning
- C** Oil pressure warning
- D** Charge warning
- E** Parking brake warning
- F** Seat belt warning
- G** Directional indicator
- H** Fuel & water temperature gauges
- I** Multi-function display:
  - Hour meter
  - Clock/calendar
  - Speedometer
  - Programmable service reminder
  - Warning indications
  - Error codes

## More Information Equals More Control

An interactive meter panel provides critical performance data, warnings and error codes in a multi-function LCD display. This advanced system also allows technicians to perform on-site diagnostics without the need for a laptop computer, tablet or handset tool.

The LCD display offers:

- Security PIN Access for up to 5 different operators
- Maximum Travel Speed Control
- Individual Operator Hours

## Get Maximum Control By Setting Maximum Speeds

With our High/Low Travel Speed Control drivers can toggle from maximum pre-sets in one area, then adjust to slower speeds, to adhere to your corporate safety requirements.

Our Power/Economy Controlled Acceleration restricts acceleration to maximize fuel economy and minimize tire spin. Gradual acceleration is also essential when operating in confined areas or moving fragile loads.

(Above features are standard on FD-A2 models and accessible through the meter panel, optional on FG-A1 models.)



## Back-Up Alarm

Our standard back-up alarm provides notice to pedestrians and other drivers.



## Parking Brake Alarm

A warning buzzer alerts drivers if they leave the seat without setting the parking brake.

## Adjustable Steering Column

An infinitely adjustable steering column with a small diameter steering wheel gives your drivers maximum control of the forklift.



# Make It Your Own

This rugged, powerful forklift series comes with a wide array of standard features that maximize uptime and productivity. If you don't see what you're looking for, contact your TCM by UniCarriers dealer for more options.



### Side Shifter

Operators will experience greater efficiency due to fewer required moves when storing and retrieving loads.



### Fire Extinguisher

Overhead guard mounted ABC Type 2-1/2 lb fire extinguisher offers an extra measure of protection.



### Tilt Cylinder Protection

Cylinder Boots provide extra protection against contaminants that can cause premature wear on cylinder packing.



### Dual Tires

Dual drive tires offer enhanced stability when high or heavy loading is required.



### Operator Conveniences

Select from a variety of equipment, including rear work light and strobe.



### Clamp Release

Interlock switch is paired with all clamping attachments. Consult Factory for specifications.



### Power/Economy Controlled Acceleration\*

Restricts acceleration rate to maximize fuel economy and reduce tire spin.



### Ground Speed Control\*

Select maximum travel speed settings based on operator skill level or application.



### Accumulator

Ideal when handling fragile loads. Feature absorbs shocks transmitted from uneven or cracked floors.

\*Standard on FD-A2 (ZD30 engine) models; optional on FG-A1 (TB45 engine) models.

● Standard ○ Optional

— FG-A1 — — FD-A2 —

## Option Availability

	LP	DUAL FUEL	DIESEL
<b>VEHICLE MANAGEMENT</b>			
Vehicle Control Module (VCM)	●	●	●
Interactive LCD meter panel display	●	●	●
Operator security PIN access	●	●	●
On-board diagnostics and service reminder	●	●	●
Engine coolant temperature gauge	●	●	●
Oil pressure, transmission fluid and low coolant warning lights	●	●	●
Low LP fuel warning light	●	●	
Fuel gauge (gas, diesel)		●	●
Air cleaner warning light	●	●	●
<b>POWERTRAIN</b>			
Electronic Engine Control System	●	●	●
Engine/transmission protection and warning system	●	●	●
Floating powertrain for reduced vibration	●	●	●
Three-way catalytic converter	●	●	
Travel speed control (high/low maximum speed selector)	○	○	●
Controlled acceleration (power/economy selector)	○	○	●
Radiator screen	○	○	○
<b>PROTECTION/SECURITY</b>			
Operator presence system	●	●	●
Back-up warning alarm	●	●	●
Fire-extinguisher	○	○	○
<b>BRAKE</b>			
Parking brake with warning buzzer	●	●	●
Hydraulic boosted brakes	●	●	●
<b>HYDRAULIC SYSTEM</b>			
Single lift control lever	●	●	●
Single tilt control lever	●	●	●
<b>OPERATOR CONVENIENCES</b>			
Full suspension seat with weight & lumbar adjustment	●	●	●
LED headlights (mounted to overhead guard)	●	●	●
Rearview mirrors	●	●	●
Rear LED combination light package	●	●	●
Rear LED work light	○	○	○
Strobe light	○	○	○
Low overhead guard (88.6")	○	○	○

## Specifications

ENGINE MODELS	TB45	ZD30
	4.5 LITER / GAS, DUAL FUEL	3.0 LITER TURBO / DIESEL
Displacement – cu. in	273	180
Rated Output (Horsepower) – hp/rpm	95.6 @ 2450	73.7 @ 2400
Rated Torque – ft-lb/rpm	209.4 @ 1600	181 @ 1800

Built Like No Others.  
Backed Like Nothing Else.



**Quality, performance, reliability and efficiency** – we believe that the same attributes that make a great forklift are also essential elements of an exceptional company. As a result we've built an organization that overlooks no detail in manufacturing material handling equipment that delivers the highest level of **performance and value** – and that stands behind our products with comprehensive service and support.

Our products are designed to produce maximum productivity without compromising operator safety. **They're built to exacting standards to maximize uptime.** They're scrupulously tested to ensure strict tolerances are met – and offered by a network of highly skilled, highly professional dealerships committed to customer satisfaction.

And when it comes to the environment, we put the same passion and energy into creating an effective sustainability initiative as we put into engineering our products.

At UniCarriers, our mission is to **continuously move performance standards upward** – and to provide the support you need to **move your business forward.**

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For more information, contact your TCM by UniCarriers representative.

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