

TCM

by **UNICARRIERS**

FD-2 Series

Heavyweight Pneumatic Tire
Diesel Powered Models

15,500 lbs. Capacity
17,500 lbs. Capacity
22,000 lbs. Capacity



TCM

by **UNICARRIERS**[®]

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 diesel engine and intuitive design 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.

For your biggest jobs, in your toughest applications, lifting and hauling your heaviest loads, you need reliability. You need the workhorse FD-2 Series. It's so reliable, it comes with the industry's best standard, limited warranty: **2 Years/Unlimited Hours***.



Add in rugged durability and innovative technology, and the FD-2 is the right choice for lumberyards, brickyards, warehousing, recycling, manufacturing — any job requiring brawn and brains. The FD-2 also delivers a low cost of ownership as it raises the standard of heavy-duty performance, all while offering lower emissions. And, for all its brute strength, the FD-2 brings operators unsurpassed comfort. So, if you're looking for a forklift that can do it all, take a close look at the FD-2.

*Contact your local authorized TCM by Unicarriers dealer for warranty limitations and exclusions.



As you look through this brochure, check out the symbol shown above for advantages featured on this UniCarriers equipment.



Play It Safe

Your employees' well being is an imperative. Lower, 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 Your Own

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



Up Your UpTime



Beyond its heavy-duty carriage and robust mast, you'll find that virtually every system on the FD-2 Series is designed to deliver maximum uptime no matter how difficult the environment or the challenge. From proven technology to innovative features, the FD-2 Series brings you a higher level of servicing ease, extended component life, and greater protection to critical components. It's reliability you can count on — and profit from.



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Steering In The Right Direction

The FD-2's rugged steer axle incorporates a steering cylinder housed inside it to protect against possible damage from obstacles on the road surface. It also features a simplified design with a **reduced number of service points** for quicker, simpler maintenance.



Protecting Your Investment

The **advanced Engine Protection System** on the FD-2 automatically reduces engine speed in the event of overheating. The meter panel also features a warning system that alerts the operator to help protect the machine's critical components. For example, the coolant level and air cleaner performance are constantly being monitored by the truck's ECM.



Advanced Features For Longer Life

The FD-2's cyclone air cleaner extends filter life and reduces dust and debris that can get caught in the engine. In addition, a **sensor on the dash panel** indicates if there is inadequate airflow to help prevent loss of performance or overheating.



Easier Access Means Easier Service

To cut maintenance time and costs, the FD-2 offers fast, easy access to key systems. Components that require regular changing or inspection — such as filters, fluids, and batteries — can be accessed quickly and easily. The engine hood has gas-spring supports to open and close easily.



Comfort Zone

When it comes to productivity, comfort isn't a luxury — it's a necessity. That's why the FD-2 Series features enhancements throughout its design to reduce operator fatigue, while improving operator performance. It begins with a spacious compartment, greater visibility, and ergonomically designed and logically positioned controls. But that's only the beginning. From the moment your operators step into an FD-2 Series, they'll know they're stepping up to greater comfort and convenience.



A Step Up

The FD-2 simplifies operator entry and exit with a convenient hand grip and an extra-wide 3-step entry that includes a diamond tread or non-skid step for sure footing.



Visibly Better

Our super-wide carriage provides operators with improved forward and fork tip visibility for greater security and enhanced productivity. This added visibility is matched by generous headroom and plenty of foot and leg-room. There are also automotive-type controls and a small diameter steering wheel — all to reduce operator fatigue, while boosting operator confidence.



A Smoother Ride

The FD-2 features a **floating powertrain** that includes independent dampeners to reduce vibrations that can cause operator fatigue. Vibration is further reduced by rubber shock absorbers located throughout the truck, and a standard thick, rubber, non-slip floor mat.

Greater Support

Operators can ride in comfort and maneuver with greater confidence from the **full-suspension seat**. The seat reclines, and adjusts easily to match its operator's weight. There are even side supports and fore-and-aft positioning for extra-customized comfort.

Sure Stopping Power, Even In An Emergency

The low pedal angles allow **heel-to-toe movement** between the gas and brake pedals. Plus, the FD-2 features a full hydraulic powered brake system for sure stops and less operator fatigue. The system even provides emergency braking power in the event the engine is stopped.



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Power & Performance

At the heart of the FD-2 Series is one of the most powerful, durable and efficient diesels in its class. This turbocharged, electronically controlled engine pours out massive torque at low rpm, and yet, it's among the cleanest engines available — producing very low emissions. We've matched this rugged power plant with an arsenal of proven components, like a rugged transmission, triple hydraulics, and an extra large cooling system — all to turn the power of the FD-2 Series into profits for your business.

Higher Performance Right From The Start

The FD-2 features an Electronic Glow System for superior cold weather starting. And once an FD-2 gets going, it moves fast thanks to a heavy-duty, electronic, two-speed transmission that delivers efficient power transfer. The result? Some of the fastest lift speeds in the industry.



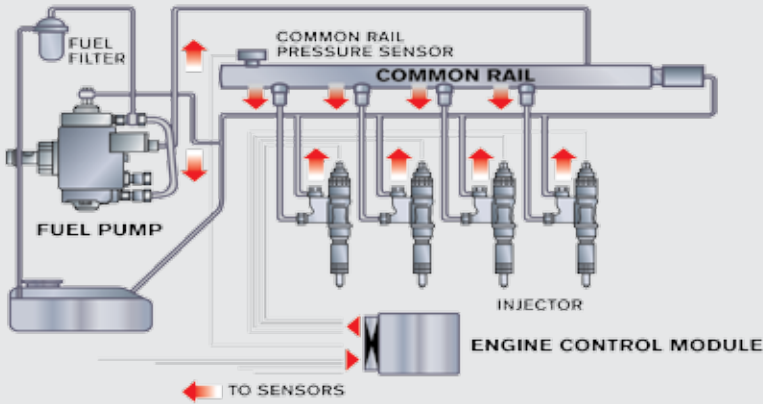


Triple Hydraulic System

The FD-2 features a triple hydraulic pump system — one for lifting, one for steering, and one for braking. The result? The operation of one function doesn't impact the performance of another. For example, there is no loss of lifting power when steering or maneuvering your FD-2.

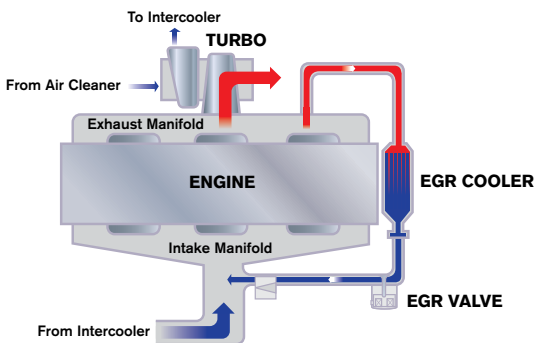
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Common Rail Fuel Injection For Uncommon Performance

The FD-2's advanced engine technology includes a common rail fuel injection system, which uses the optimal amount of fuel at the ideal time, resulting in greater power with improved fuel economy.



More Power With Lower Emissions

The engine's turbocharger creates more power by compressing the inlet air and forcing it into the chamber. This constant pressure boost occurs over the entire rpm range, for **greater torque at even low speeds**. An intercooler raises power further, while offering a substantial reduction in nitrogen oxides and particulate matter emissions through its **Exhaust Gas Recirculation system** — thanks to this innovative technology, the FD-2 emits low exhaust levels.



Another Cool Idea

The highly reliable cooling system on the FD-2 is designed to keep its cool even under heavy usage and high temperatures. The system includes a large, heavy-duty radiator that is rubber mounted to **reduce flexing and absorb vibration**.



A Mast That Can Lift Your Entire Business

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 FD-2 Series offers you a lot of power, including the power to save money. Whether it's the durability of its chassis and mast, its heavy-duty components, its design innovations that simplify and extend maintenance, or its ergonomic compartment layout that lifts productivity, the FD-2 Series is engineered to raise your profits, while lowering your costs.





Our Overhead Guard Reduces Your Overhead

Beyond ample headroom, the five-piece overhead guard takes **75% less time to make needed replacements** versus competitive designs using a single-piece, welded-on guard. That cuts downtime and costs.



Boltless Floorboards

Ready access to key components can save you time and money during routine maintenance. That's why the FD-2 makes those components readily accessible. The front and rear floorboards can be removed and reinstalled quickly and easily without any tools to gain access to the transmission and hydraulics.



Engine Compartment

Operators and service technicians can access the engine with ease using the remote engine hood release lever. Two gas spring assists make opening the hood easy, and, of course, no tools are required.

On the FD-2, all routine maintenance points are readily and easily accessible for quick servicing, including:



- Oil check
- Radiator fluid
- Engine Control Module
- Dual fuel filters
- Oil filter
- Battery compartment
- Electrical system



Matching Work Conditions

The FD-2 features a transmission mode selection switch that changes the shift speed pattern of the transmission, allowing your operator to **select the best mode for the current working conditions**. Operators can choose a Normal Mode, Gradient Mode for working on slopes with heavy loads, and a High Speed Mode for longer trips. This feature improves both operating efficiency and fuel economy.



Play It Safe

Safety is everybody's business, and when it comes to safety, the FD-2 Series is all business. From greater visibility to better handling, from lower emissions to enhanced reliability, the FD-2 Series helps you create a more productive workplace without sacrificing safety. Whether your operators are running the truck or exiting it, the FD-2 Series has a system in place to help protect them and everything — and everybody — around them.



Operator Presence System

This comprehensive safety system includes a seat-actuated power interrupt with mast-lock, automatically preventing lift and tilt operations if the operator leaves the seat. The return-to-neutral feature minimizes forklift movement if the operator leaves the truck while still in gear. Other audible and visual warnings come standard, including a parking brake alarm.





A Good Start

A neutral start mechanism prevents the engine from being started unless the directional control lever is in the neutral position. This prevents the truck from moving abruptly when the starter switch is turned.



A Less Fatigued Operator

The FD-2 includes an array of features designed to prevent operator fatigue: from the adjustable, full suspension seat to responsive hydrostatic steering, to heavy insulation that reduces noise and engine heat, to ergonomically positioned controls, to our floating powertrain that reduces vibration, the FD-2 is designed to keep operators alert and in control.



Right In View

Designed for maximum clarity, and featuring indicators that are brightly lit with long-life LEDs, the instrument panel is easy to read and simple to understand — so operators can focus on their jobs.



Deluxe Light Package Is Our Standard

The FD-2 features overhead guard-mounted headlights to enhance operator visibility. Our Deluxe Light Package includes front turn signals mounted on front pillars for high visibility, and a rear light combination that includes brake, turn, and backup lights, as well as reflectors. There are also dual rearview mirrors for greater operator confidence.



Control Freak

The FD-2 Series is engineered to give you and your operators more control. When it comes to your operation, the FD-2 Series can help you better control costs, downtime, and workflow. For your operators, it offers innovations that give them more control when handling loads, maneuvering, and servicing the vehicle. Whether you're running the operation or operating the forklift, you're always in the driver's seat with an FD-2 Series.





Information At A Glance

The easy-view meter panel enhances driving ease and provides constant status on critical systems. The highly visible gauges give an accurate readout on fuel and coolant temperatures, and include an hour meter and error codes. The bright LED warning lights give up-to-the-second alerts on:

- Low engine oil pressure
- Fuel gauge with low fuel level
- Engine pre-heating glow plug
- Coolant level
- Seatbelt
- Engine coolant temperature
- Battery charge
- Neutral transmission
- Parking brake
- Check engine
- Air cleaner



Adjustable Steering Column

The FD-2 is equipped with an infinitely adjustable tilt steering wheel — its small diameter design and spinner knob give drivers precise control of the machine during travel.



Precise Handling

The FD-2 includes a separate inching pedal for small, precise movement. The open floorboard area also offers more foot and legroom, while the **low pedal angles allow heel-to-toe movement** between gas and brake pedals for easy handling.



Greater Maneuverability

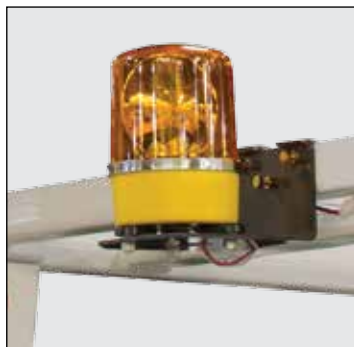
With rugged, dual drive, pneumatic tires, the FD-2 offers ground hugging traction and smooth handling when traveling. The hydrostatic power steering system also provides superb maneuverability, with fast, precise response to navigate loads through tight areas.



Make It Your Own

The rugged FD-2 Series comes with a wide array of standard features that maximize uptime and productivity. We also offer a complete menu of options to customize your forklift to your specific requirements. Check out this list, and if you don't see what you're looking for, contact your TCM by UniCarriers dealer for more options.

- Wide Hook Type Carriage – 94.9 in. (2410mm) Wide
- Sideshifter, Integral & Hook Type – 66.9 in. (1700mm) Wide
- 4-Spool Valve & Lever
- Clamp Release Interlock – required with clamping attachments
- Mast Tilt Gauge
- Tilt Cylinder Boots
- Radiator Screen
- Vertical Exhaust
- Air Intake Pre-Cleaner
- Double Element Air Cleaner
- Rear Work Light
- Rotating Beacon – Amber



Rotating Beacon



Air Intake Pre-Cleaner



Rear Work Light

Specifications

Model	Load Capacity* lbs. (kg)	Overall Width in (mm)	Min Outside Turning Radius in (mm)	5.2 Liter 4-Cylinder, 16-Valve Diesel Engine		
				Displacement cu in (L)	Output Hp (kW) @ rpm	Torque ft-lb (Nm) @ rpm
FD70-2	15,500 (7000)	78.5 (1995)	133.1 (3380)	316.9 (5.2)	117 (87) @ 2000	359 (486.7) @ 1500
FD80-2	17,500 (8000)	85.2 (2165)	142.9 (3630)	316.9 (5.2)	117 (87) @ 2000	359 (486.7) @ 1500
FD100-2	22,000 (10,000)	88.4 (2254)	152.8 (3880)	316.9 (5.2)	117 (87) @ 2000	359 (486.7) @ 1500

*Based on 600mm load center



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Standard Equipment



Here is just a partial list of the standard features on the FD-2 Series.

Vehicle Management

Engine Control Module (ECM) to monitor engine performance
Easy-view meter panel with critical system checks & warnings

Durability Features

Wide carriage
Robust mast

Servicing Ease

5-piece overhead guard
Boltless floorboards
Gas spring assist engine hood
Easy-access filter/fluid service points

Powertrain

Common rail fuel injection with turbo charger and intercooler
Automatic 2-speed transmission
Engine temperature protection system
Floating powertrain for reduced vibration
Transmission mode selector
Heavy-duty, cushion-mounted radiator
Hydraulic oil cooler (17,500 lb. capacity only)
Large engine oil filter and dual diesel fuel filters
Electric glow system
Cyclone air cleaner

Protection/Security

Operator Presence System:
Seat actuated auto-mast lock system
Automatic return-to-neutral
Seatbelt warning
Parking brake warning

Steering System

Adjustable tilt steering column
Small diameter steering wheel with spinner knob
Hydrostatic power steering
Rugged steer axle steering cylinder

Brake

Parking brake with warning buzzer
Hydraulic brake system with pressure accumulator
Inching pedal

Hydraulic System

3-spool hydraulic control valve
Hydraulic load sensing valve system
Triple hydraulic pumps mounted on transmission to reduce power consumption

Operator Conveniences

Full suspension seat
Deluxe standard light package with:
Overhead Guard mounted headlights/front turn signals
Rear combination lights – tail, brake, and back-up
Back-up alarm
Rearview mirrors
Cushioned floor mat
Heel-to-toe pedal design



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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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