

KOMATSU

CX50

3.5 / 4.0
4.5 / 5.0 ton **Series**
DIESEL & GASOLINE FORKLIFT TRUCKS



www.Komatsu.com

Printed in Japan 1012-4-03shi

KOMATSU[®]

Form No. BR-CX50-003

Materials and specifications are subject to change without notice
KOMATSU is a trademark of Komatsu Ltd. Japan

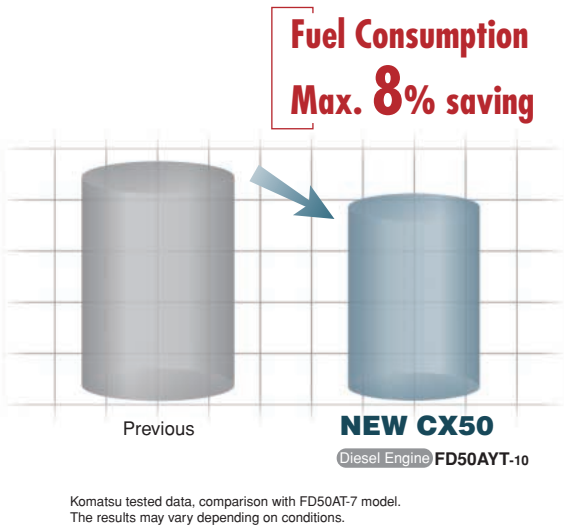
"Reducing Total Operating Costs" with Komatsu Innovative Technologies

The fusion of advanced engines and Komatsu’s unique hydraulic system enables the new CX50 Series to achieve a significant reduction in the total operation costs and facilitates superior work performance. Our innovative machines challenge the conventional concept of the forklift.

Diesel Engine Truck	An optimum engine achieves low fuel consumption and high performance.
Gasoline Engine Truck	A fully electronically controlled engine with a 3-way catalytic system conforms to the latest emission regulations.

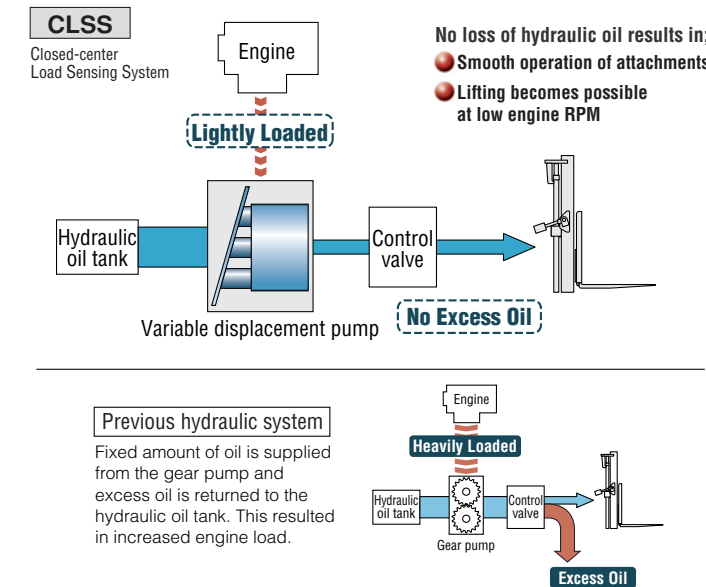
Komatsu's Hydraulic System and the NEW Diesel Engine reduce the Fuel Consumption

In order to minimize hydraulic loss and reduce the engine load, the new CX50 Series adopts the CLSS hydraulic system, a proven technology of Komatsu construction machines. The compact 3.3-liter engine features superior performance and achieves up to 8% less fuel consumption.



The "CLSS" contributes to Low Fuel Consumption and High Productivity

The Hydraulic load is automatically detected and only the appropriate amount of oil is supplied via a variable displacement pump. This system eliminates the loss of hydraulic oil and reduces the engine load.



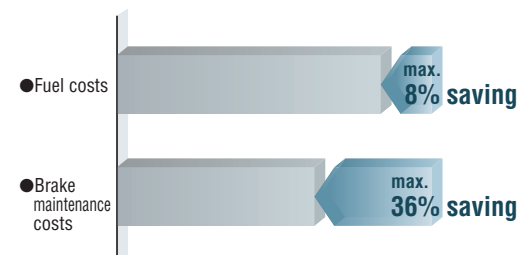
Reduced Total Operating Costs (Diesel)

The sealed wet disc brakes can withstand about 10,000* hours without maintenance, eliminating frequent brake shoes replacements. The reduced maintenance costs and fuel saving provide a total operating cost reduction of about 4% over eight years of usage.

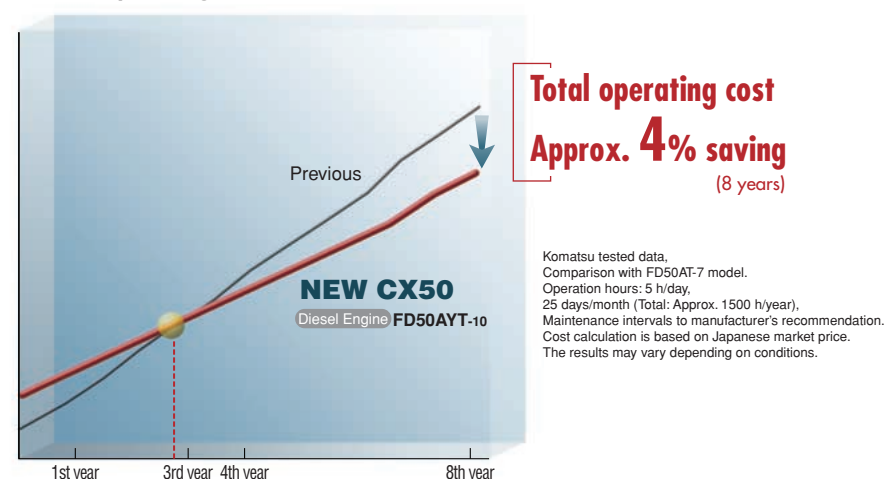
*A periodical check and oil replacement are necessary.

Komatsu genuine engine oil is recommended.

Running cost (Accumulated costs for 8 years) Assuming FD50AT-7 as 100%;



Total operating cost (*Image)

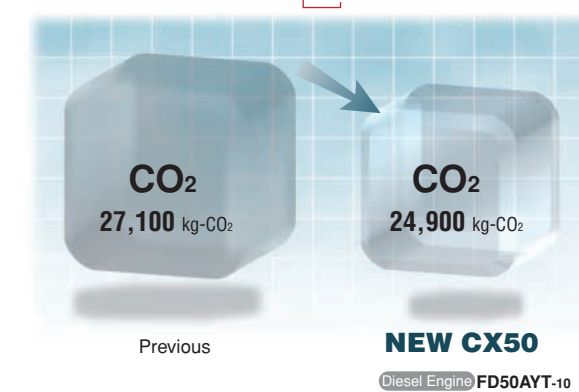


The Advanced Technology offers Reduced CO₂ Emissions (Diesel)

KOMATSU ONLY

The diesel models feature the S4D95LE-3 engine in combination with the efficient CLSS hydraulic system, enabling them to reduce annual CO₂ emissions by about 2.2 tons.

Annual CO₂ emissions
About 2.2 tons reduction



Komatsu tested data, Comparison with FD50AT-7 model.
The CO₂ emission coefficient is given in the Common Guidelines of the Japanese METI and MLIT (April 2006).
The results may vary depending on conditions.

A Clean and Powerful Diesel Engine that features Cutting-Edge Technology

Low fuel consumption and low environmental impact is enabled by a 3.3-liter compact engine. The new diesel engine adopts Komatsu's advanced technologies, a power source in demanding work places.

EPA Tier 2 / EU Stage II Emission Compliant

S4D95LE-3
Displacement:
3,260 cm³
Rated Output:
58.8 kW @ 2,350 min⁻¹
Maximum Torque:
286 Nm @ 1,600 min⁻¹



Gasoline Engine with a 3-Way Catalytic System

An electronic controlled engine with a 3-way catalytic system ensures a clean workplace.

EPA and CARB Tier 2 Emission Compliant

EBT-TB45-1A*
Displacement:
4,478 cm³
Rated Output:
62.5 kW @ 2,400 min⁻¹
Maximum Torque:
272 Nm @ 1,600 min⁻¹

* EBT-TB45-1A for Gasoline.



Superior "Productivity" and "Reliability" satisfy demanding operations

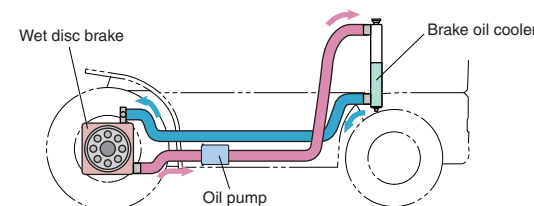
Durable Wet Disc Brakes to withstand Severe Conditions

The wet disc brake is sealed with oil to block dust penetration, providing durable, water resistant and fade resistant characteristics. Smooth, stable braking provides "Productivity" and "Reliability" in demanding operation.



A Cooling System to achieve Increased Braking Stability

The oil in the wet disc brake system is circulated through the brake oil cooler. This mechanism ensures stable braking under a heavy work load and prevents deterioration of the braking force due to raised oil temperatures.



A Cushion Valve improves the Brake Feeling

Komatsu's unique cushion valve enables a controlled braking force that precisely reflects the pressure on the brake pedal. The braking behavior is thus improved.

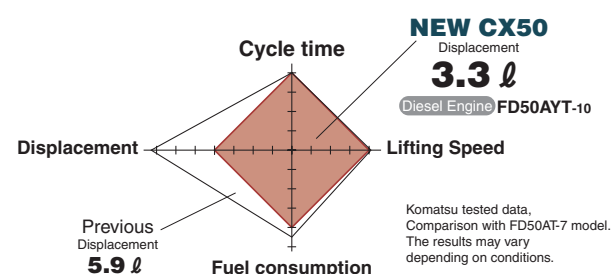
- Steady breaking is always achieved.
- Overheating of the brakes is prevented.
- Rough stopping is prevented when braking.
- Downtime and maintenance costs are reduced.

First-class Productivity is achieved

First-class Cycle Time

The diesel models adopt a compact 3.3-liter engine with the advanced CLSS hydraulic system to achieve high productivity and a first class cycle time. The gasoline engine model also achieves a superior cycle.

- The NEW CX50 Series achieves high productivity equivalent to the previous CX Series.



- Lifting Speed (Loaded)

Diesel Engine FD50AYT-10

455 mm/s

Gasoline Engine FG50AT-10

440 mm/s

- Traveling Speed (Unloaded)

Diesel Engine FD50AYT-10

24.0 km/h

Gasoline Engine FG50AT-10

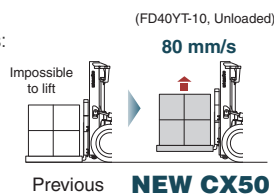
24.5 km/h

The CLSS enables Lifting at Low Engine RPMs

The CLSS makes it possible to lift the load for fine height adjustment without increasing the engine speed.

Reduced engine RPM in the following cases:

- Fine adjustment of fork height
- Lifting fork tips before starting
- Fine adjustment for side shifting



The CLSS enables advantages such as:

- Smooth traveling during hydraulic operation
- Superior productivity is also featured when fitted with attachments
- Fuel consumption reduction up to 8% (Diesel)

Fully Hydrostatic Power Steering for Superb Maneuver

The FHPS (Fully Hydrostatic Power Steering) mechanism facilitates fully stationary steering as well as switchback operations using the small diameter steering wheel. The system has a superior response capability so that the operator can pick up or place cargo flexibly even in a narrow space.

Excellent Durability for Demanding Work

Rugged Design with High Rigidity

The high rigidity mast, frame, front and rear axles ensure outstanding reliability even when performing heavy-duty work.

[Mast]

A heavy mast rail profile for excellent rigidity.

[Frame]

Increased thickness of the counterweight mounting section.

[Front axle]

The proven design of the Komatsu wheel loaders is adopted.

[Rear axle]

The durability of the Power Steering cylinders is improved.

Improved Reliabilities for the Hydraulic and Electrical Systems

The main hydraulic pipe connectors are face-sealed using O-rings. Waterproof connectors are provided to the main harnesses and the system controller in order to provide higher resistance to water and dust. Hydraulic and electrical piping systems are in separate configurations to improve the reliability and servicing.



The Compact 5.0 ton model

The compact 5.0 ton model features a shorter wheelbase and swift mobility while maintaining the power and speed capable of achieving high productivity.



Advanced Design in Pursuit of "Safety and Comfort"

Effective Safety Mechanisms

"Operator Presence Sensing system" (Diesel:Optional / Gasoline:Standard)

The Operator Presence Sensing system incorporates a Lifting/Traveling interlocking function. This is a safety function for disabling traveling and lifting mechanisms when the operator is not correctly occupying the seat. An alarm buzzer sounds if the operator leaves the seat while traveling.

*The traveling interlocking function only disengages traction and does not automatically apply the brakes.
*Operator Presence Sensing system: ISO3691-1 compliant



Lifting interlock lamp on the meter panel



When the operator leaves the seat, Operator Presence Sensing system is activated

Parking Brake Alarm



A double action type brake lever to prevent mishandling

A Neutral Start Function for Preventing a Sudden Start

The engine cannot be started unless the F-R switch is in the neutral position.



Neutral indicator for at-a-glance information

A Wide Angle Center Mirror enables an Easy Rearview



ISO-Compliant Enhanced Overhead Guard for Operator's Protection

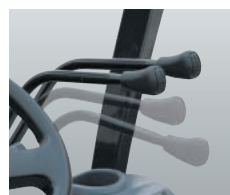
A Safety Mechanism that prevents starting the engine unless the brake pedal is pressed

Secure Operation Controls improve Operator Work Efficiency

Secure Lever Controls with Minimum Movement



Finger-tip operation with the electric F/R lever



Control lever with an excellent hand fitting profile

A Smaller Steering Wheel ☐ Permits Widened Front Visibility

Use of a smaller steering wheel and redesign of the dashboard have improved the visibility of the bottom of the fork, thus further facilitating the lifting operation.

Steering wheel diameter: 300 mm



Improved Brake Feeling

Komatsu's unique cushion valve enables control of the braking force in proportion to the pressure on the brake pedal and improves the brake feeling.



KOMATSU ONLY

Comfortable & Fatigue-Free Operation Even Over Long-Hour Operation

Dual Floating Structure Reduces Vibrations

A unique dual vibration cushioning mechanism reduces vibrations in the compartment, steering wheel, control levers and the mast. Any vibrations transmitted from the engine or road surface are quickly absorbed. The mechanism is friendly to both operator and load.



KOMATSU ONLY

●Suspension cab
The entire cab is isolated from the frame.

●Power train floating
The engine and transmission are isolated from the frame.

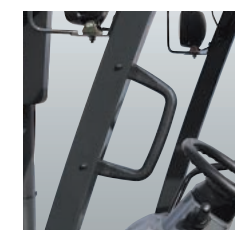
Suspension Seat for Improved Comfort at Work

The deluxe suspension seat features improved vibration resistance and reduces the burden on the body.



- Six-step reclining backrest
- 170 mm slide distance backward and forward
- Seat cushion adjustment dial
- The retractable seat belt

Smooth Getting On/Off



Enlarged assist grip



Improved design of engine hood and step

Comfortable Reversing by Preventing Exposure to Hot Air/Exhaust Gas

Two counterweight air outlets are provided on the left and right sides and an exhaust pipe outlet is provided at a lower position so that the operator is not exposed to hot air from radiator or to exhaust gasses when reversing.

KOMATSU ONLY



Exhaust outlet

Clean Exhaust Air with a 3-Way Catalytic System (Gasoline)

The 3-way catalytic system purifies the nitrogen oxide (NOx), hydrocarbons (HC) and carbon monoxide (CO) emissions.

The Low Noise Design

The low-noise design of the engine and the fully sealed floor reduce offending noise volumes during operation.

Careful Design Facilitates Inspection and Servicing

Filter Layout Optimization for Improved Serviceability

A fully-opening floor plate.

Easy Radiator Cleaning

Wide Opening Engine Hood with a Lock for Easy Servicing



Engine hood locking provides safety servicing

Model



Compact model

This model is designed specifically for operating in restricted spaces. The load center is 500 mm.



Standard model

This model is designed to perform a broad range of general-purpose applications. The load center is 600 mm.

Optional Specification Truck

LPG specification truck

Komatsu offers both single fuel (LPG) and dual fuel systems (LPG/Gasoline) for the LPG Specification truck.

Mast

2-stage free view mast

The mast enables a wide view with excellent forward visibility.

2-stage full free view mast

This is ideal for sites with height limitations, where the large free lift is required.

3-stage full free view mast

The mast extends in three stages and high level loading is easily performed.

Attachments

Side shifter

The fork may be shifted sideways together with its backrest, both to the right and to the left.

Fork positioner

The operator is able to adjust the fork spread width from the operator's seat.

Hinged fork

The fork tilts up/down using its hinge as a fulcrum.

Load stabilizer

The load is securely held from the top by the pressure plate of the load stabilizer.

Bale clamp

This attachment is recommended for handling packed pulp or raw cotton. The bale is efficiently held from both sides by the bale clamps.

Fork clamp

This attachment is effective for handling packed cotton and rough textile loads by grabbing them firmly from both sides.

Block clamp

This attachment can pick up concrete blocks without using pallets.

Rotating fork

Used together with the fork inserted container, this attachment is used for transporting items such as powder, fluids, etc. The fork is rotated in order to discharge the load.

Roll clamp

Rolls of paper or cylindrical objects are safely and securely handled by this attachment. It is possible to rotate the clamped load through 360 degrees.

Options

Engine & power train related

- Pre-cleaner
- Exhaust gas purifier (catalytic muffler) (Diesel)
- Spark arrester
- Upward exhaust muffler
- Radiator screen
- Right forward/reverse lever
- Automatic transmission (4.5 & 5.0 t)
- LPG swing down bracket (LPG)

Exterior

- Canvas cabin
- Steel cabin
- Steel cabin with cooler
- Heater
- Tilt cylinder boots
- Power steering cylinder protector plate
- Fuel cap with key
- Seat heater
- Front glass with wiper
- Rear view mirrors (pair)
- Resin overhead guard cover
- Fire extinguisher

Electrical equipment

- Back-up chime
- Mast mount type head lights
- Rear working light
- Yellow strobe light
- Red strobe light

Meters & gauges

- Air cleaner element warning lamp
- Fuel level warning lamp
- Cooling water level warning lamp
- Battery electrolyte level warning lamp
- Speedometer with alarm
- Load checker
- Mast tilt angle gauge
- Individual key switch

Tyre-related

- Elastic cushion tyre
- Color non-marking tyre
- Double front tyre



Steel cabin with cooler



Upward exhaust muffler



Front glass with wiper

Major equipment

●: Standard ○: Option -: N/A

		CX50 Series	
Engine		Diesel	Gasoline/ LPG
CLSS (Closed-center Load Sensing System)		●	●
Wet disc brake		●	●
Engine-related	EPA Tier 2/EU Stage II equivalent Diesel engine	●	-
	EPA Tier 2 compliant Gasoline engine	-	●
	Turbo-charger	●	-
	3-way catalytic system	-	●
	Large capacity radiator	●	●
Traveling-related	Dual floating structure	●	●
	New operator's seat with suspension	●	●
	Small diameter steering wheel	●	●
	Tilttable steering column	●	●
	Electric forward/reverse lever	●	●
	Combination switch (turn signal light & light switch)	●	●
	Indicator auto-return mechanism	●	●
	Full-open step	●	●
Meters	Paper binder at engine hood	●	●
	Glove box at dashboard	●	●
	Meter panel	●	●
	Hourmeter (6-digit)	●	●
Indicators	Engine cooling water temperature gauge	●	●
	Torque converter oil temperature gauge	○	○
	Fuel gauge	●	●
	Lifting interlock lamp	-	●
	Engine oil pressure warning lamp	●	●
	Charge warning lamp	●	●
	Neutral indicator	●	●
	Brake fluid pressure warning buzzer	●	●
	Air cleaner element warning lamp	○	○
	Fuel level warning lamp	○	○
	Cooling water level warning lamp	○	○
	Battery electrolyte level warning lamp	○	○
Electric components	Sedimenter warning lamp	●	-
	Glow indicator	●	-
	Large capacity alternator	●	●
	Quick auto glow system	●	-
	Neutral start function	●	●
	Auto fuse	●	●
	Low maintenance battery	●	●
	Engine key stop function	●	-
Mechanism	Halogen headlight	●	●
	Rear combination light	●	●
	Back-up buzzer	●	●
	Operator Presence Sensing system	○	●
	Sedimenter with priming pump	●	-
	Cyclone air cleaner (double element)	●	●
	Parking brake with release button	●	●
	Fully hydrostatic power steering	●	●
Exterior	Steering knob synchronizer function	○	●
	Non-asbestos parking brake linings	●	●
	Key-off lift lock	●	●
	Floor mat	●	●
	Assist grip	●	●
	Overhead guard with front/rear conduits	●	●
	Wide angle center mirror	●	●
	Rear view mirrors (pair)	○	○
	Full shield solid-state engine hood	●	●
	Easy-removable floor panel	●	●
	Easy-removable radiator cover	●	●
	Engine hood lock	●	●
	Radiator reservoir tank	●	●
	Resin dashboard cover	●	●
	Jacking points	●	●

Note*: EBT-TB45-1A for Gasoline, EBT-TB45-2A for Gasoline/LPG, EBT-TB45-3A for LPG specification.

The top view shows the forklift from above, with dimensions $b1$, $b3$, $b10$, Wa , and θ . The side view shows the forklift from the side, with dimensions $h4$, $h3$, $h1$, $h2$, $h6$, s , $lm1$, $lm2$, x , y , $L1$, $L2$, α , and β .

[illegible]

Aisle Width shown in this table are not inclusive any operational clearance

** With standard load backrest