## Major equipment

		DX50 Serie
	Engine	
Net	disc brake	•
	EPA Tier 3/EU Stage IIIA compliant Diesel engine	•
ı	Electronic engine control system	•
ᄝ	Heavy duty High Pressure Common Rail system	•
Engine-related	New combustion system	•
4	Air to air charge air cooling system	•
Ĕ	Overheat prevention function	•
ב ב	Auto engine warm-up function	•
	Auto air pre-heat function	•
	Large capacity radiator	•
	Dual floating structure	•
8	New operator's seat with suspension	•
ä	Tiltable steering column	•
֡֟֟֟֟֟֟֟֟֟֓֟	Electric forward/reverse lever	•
Ĕ	Combination switch (turn signal light & light switch)	•
Iraveling-related	Indicator auto-return mechanism	•
≝	Wide slip-resistant step	•
	Paper binder at engine hood	•
	Meter panel	•
2	Hourmeter (6-digit)	•
Meters	Engine cooling water temperature gauge	•
Ē	Torque converter oil temperature gauge	•
	Fuel gauge	•
	Lifting interlock lamp	•
	Charge warning lamp	•
2	Neutral indicator	•
aig	Failure indicator	•
ndicators	Engine failure indicator	•
	Air cleaner element warning lamp	•
	Cooling water level warning lamp	•
	Glow indicator	•
	Large capacity alternator	•
Electric components	Quick auto glow system	•
5	Neutral start function	•
<u> </u>	Auto fuse	•
5	Low maintenance battery	•
2	Engine key stop function	•
ទី	Halogen headlight	•
<u> </u>	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  Stooring knob synchronizer function	
меспап	Steering knob synchronizer function  Non-asbestos parking brake linings	0
<u>ရ</u>	Key-off lift lock	
2	Floor mat	
	Assist grip	
	Overhead guard with front/rear conduits	•
	Rearview mirrors (pair)	
	Full shield solid-state engine hood	
	Easy-removable floor panel	•
Exterior	Easy-removable radiator cover	
	Engine hood lock	
ŭ	Radiator reservoir tank	•
	Jacking points	

## Options

#### Engine & power train related

- Extra fuel filters Pre-cleaner
- Upward exhaust muffler Automatic transmission
- Steering knob synchronizer

#### Exterior

- Canvas cabin
- Steel cabin
- Heater
- Air-conditioner
- Tilt cylinder boots Power steering cylinder boots
- Fuel cap with key
- Front glass with wiper Fire extinguisher
- Rear under mirror

#### Electrical equipment

- Headlights, 2-stage (High-Low)
- Mast mount type head lights
- Rear working light
- Yellow strobe light

#### Meters & gauges

- Speedmeter with alarm
- Mast tilt angle gauge

#### Tyre-related

• Elastic cushion tyre (6.0 & 7.0 ton)

## 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

• 3-stage full free view mast The mast extends in three stages and high level loading is easily

## 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.

#### • Fork positioner with side shifter

The combination of fork positioner and side shifter.

#### • Fork positioner with side shift function

This attachment is a fork positioner which has a simultaneous fork movement function to act as a side

#### Hinged fork

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

#### 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.

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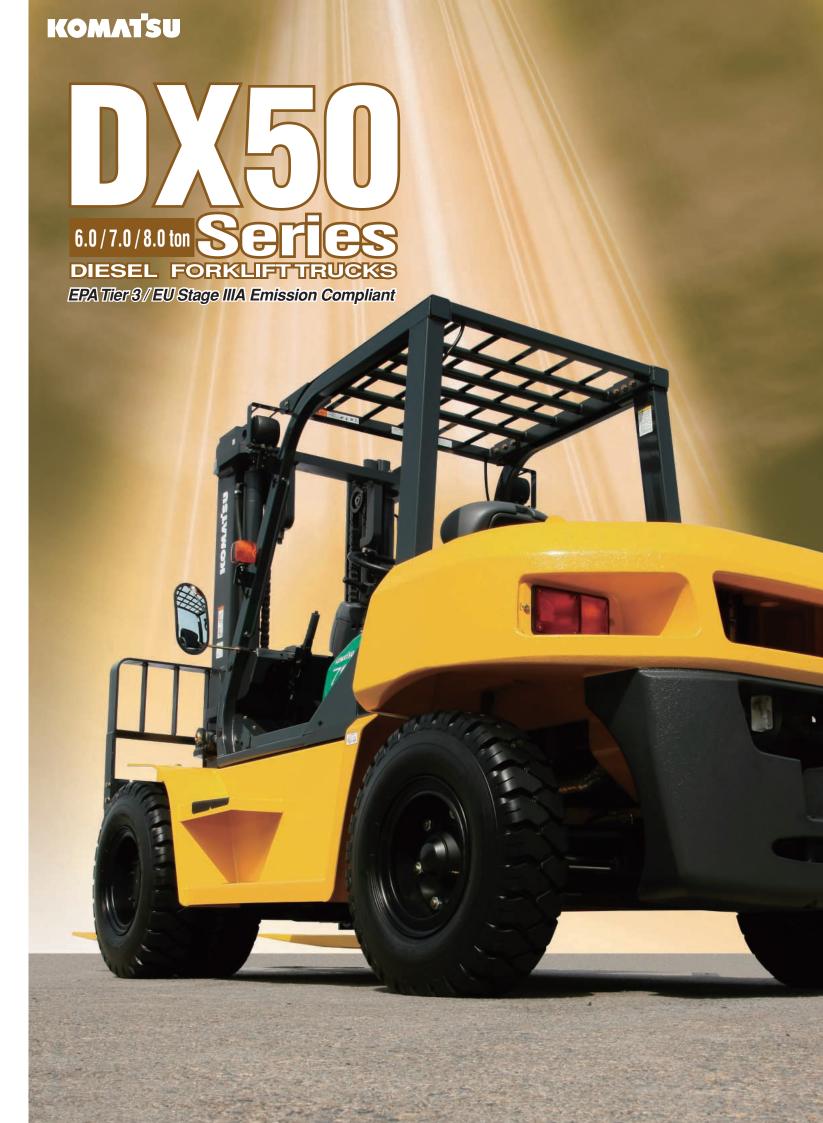
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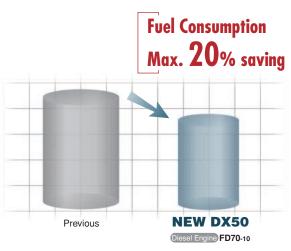


The fusion of advanced engines and Komatsu's unique hydraulic system enables the new DX50 Series to achieve a significant reduction in the total operation costs and facilitates superior work performance. Our innovative machines challenge the conventional concept of the forklift.

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



In order to minimize the engine load, the new DX50 Series adopts the Komatsu's latest hydraulic system. The compact 3.3-liter engine features superior performance and achieves up to 20% less fuel consumption.

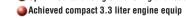


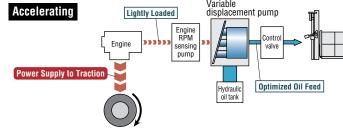
Komatsu tested data, comparison with FD70-8 model. The results may vary depending on conditions.

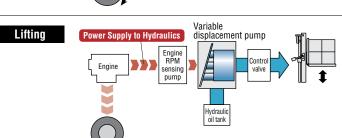
## ■ Komatsu's Latest Hydraulic System Contributes Low Fuel Consumption

As the engine speed changes, the engine RPMs control pump detects the engine revs. and controls the oil feed to reduce the load on the engine. This hydraulic system offers optimized balancing of traveling and loading work, making it ideal for forklift operations that often put complex demands on the engine such as starting/acceleration while performing lift operations.

Optimally controlled hydraulic oil results in;
Optimized balancing of traveling and loading work







## **Greatly Reduced Total Operating Costs**

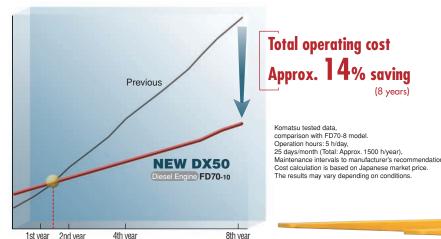
The sealed wet disc brakes can withstand about 10,000\* hours operation without maintenance and eliminating frequent brake shoes replacements. The engine oil replacement interval has been extended for 300 hours, which reduces oil costs. The reduced maintenance costs and significant fuel saving provide a total operating cost reduction of about 14% over eight years of usage.

\*A periodical check and oil replacement are necessary.

■ Running cost (Accumulated costs for 8 years)
Assuming FD70-8 as 100%;



■ Total operating cost (\*Image)



## The Advanced Technology Offers Reduced CO<sub>2</sub> Emissions



The new DX50 Series feature the SAA4D95LE-5-A engine in combination with Komatsu's efficient hydraulic system. This arrangement enables a reduction in annual CO<sub>2</sub> emissions by about 7.1 tons.

Annual CO<sub>2</sub> emissions
About **7.1** tons reduction



Komatsu tested data, comparison with FD70-8 model. The CO<sub>2</sub> emission coefficient is given in the Common Guidelines of the Japanese METI and MLIT (April 2006)

The CO₂ emission coefficient is given in the Common Guidelines of the Japanese METI and MLIT (April 2008). The results may vary depending on conditions.

## ■ An Advanced Diesel Engine Conforms to the Latest Emission Regulations

Low fuel consumption and low environmental impact are enabled by elimination of excess combustion and the use of the combined technologies of the high pressure common rail system, electronic control system, new combustion system and air to air charge air cooling system.

EPA Tier 3 / EU Stage IIIA Emission Compliar





 $\underline{2}$ 



# Superior "Productivity" and "Reliability" **Satisfy Demanding Operations**

## **Durable Wet Disc Brakes to Withstand Severe Conditions**

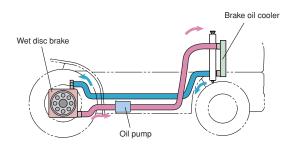


The wet disc brake is sealed with oil to block dust penetration. providing durable, water resistant and fade resistant characteristics. Smooth, stable braking provides "Productivity" and "Reliability" in demanding operation.



## 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



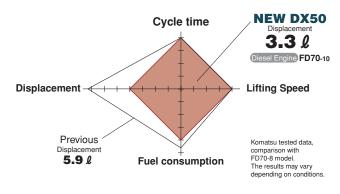
- Steady breaking is always achieved.
- Overheating of the brakes is prevented.
- Downtime and maintenance costs are reduced.

## **First-class Productivity is Achieved**

#### **First-class Cycle Time**

The new DX50 Series adopts a compact 3.3-liter engine in conjunction with Komatsu's advanced hydraulic system. This arrangement features high productivity and achieves a first class cycle time.

The NEW DX50 Series achieves high productivity equivalent to the previous DX20 Series.



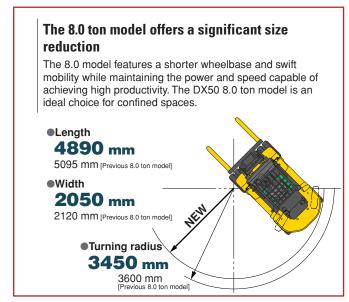
●Lifting Speed (Loaded) Diesel Engine FD70-10 450 mm/s

●Traveling Speed (Unloaded) Diesel Engine FD70-10

31.0 km/h

## **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. In addition, steering knob synchronizer function is available as an option.



## **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.

A heavy mast rail profile for excellent rigidity.

#### [Frame]

The successful high rigidity structure of previous models is adopted.

The proven reliable design of previous models is adopted.

#### [Rear axle]

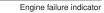
The durability of the power steering cylinders is improved.

## Improved Reliabilities for the Hydraulic and **Electrical Systems**

## **Engine Protection for Maintaining** the Engine in Top Condition

The electronic engine controls upgrade the performance of the engine protection (fail-safe functions).

- Trouble diagnosis: Engine malfunctions are automatically detected and an alarm lamp blinks.
- Overheating prevention (Diesel) The engine output and RPMs are reduced when
- the coolant temperature is high. Automatic engine warm-up (Diesel): The RPMs are accelerated to warm up the engine at



• Automatic air pre-heating (Diesel): The engine is automatically pre-heated when starting it at low temperatures

# 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.

## **Careful Design Facilitates Inspection and Servicing**

## Filter Layout Optimization for Improved Serviceability

A fully-opening floor plate.



Relay and fuse boxes are

## **Easy Radiator Cleaning**

## Wide Opening Engine Hood with a Lock for Easy Servicing



5

locking provid

4



## **Effective Safety Mechanisms**

### "Operator Presence Sensing system"

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.



Lifting interlock lamp



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

#### **A Neutral Start Function for Preventing** a Sudden Start

The engine cannot be started unless the F-R switch



for at-a-glance

#### **Parking Brake Alarm**



A double action type brake lever

**ISO-Compliant Enhanced Overhead Guard for Operator's Protection** 



#### **Suspension Seat and Cab Floating Structure Comfortable Braking with the Organ-type Pedal**

**Absorb Vibrations** The deluxe suspension seat features improved vibration resistance and reduces the burden on the body. The cab floating structure enables the entire cab to be isolated from the frame and the rubber cushioning of the engine mounts reduces

the vibrations transmitted from the engine and road surface. The overall design concept is operator and load friendly.

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



The organ-type pedal allows an operator to control braking comfortably without lifting the heel from the floor.

## The Low Noise Design

The low-noise design of the compact engine reduces unpleasant noise levels during operation.

## DX50 Series Specifications

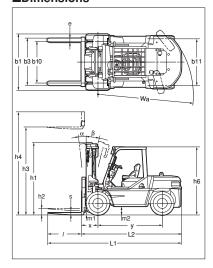
cs	1.3	Power Type	Elect	ric, Diese	el, Gasoline, LPG, Cable		Diesel	Diesel	Diesel
Characteristics	1.4	Operation Type					Sitting	Sitting	Sitting
	1.5	Rated Capacity	Q	Rated (	Capacity	kg	6000	7000	8000
arac	1.6	Load Center	С	Rated I	_oad Center	mm	600	600	600
Š	1.8	Load Distance	х	Front A	xle Center to Fork Face	mm	580	585	635
	1.9	Wheelbase	у			mm	2300	2300	2300
Weight	2.1	Service Weight				kg	8555	9245	10910
	2.2				Front	kg	12950	14330	16565
	2.2.1		Loaded		Rear	kg	1605	1915	2345
	2.3	Axle Loading			Front	kg	3890	3725	4270
	2.3.1		Unloa	aded	Rear	kg	4665	5520	6640
Se	3.1	Tyre Type	·			Pneumatic	Pneumatic	Pneumatic	
	3.2	T 0:	Front				8.25-15-12PR(I)	8.25-15-14PR(I)	8.25-15-18PR(I)
	3.3	Tyre Size	Rear				8.25-15-12PR(I)	8.25-15-14PR(I)	8.25-15-18PR(I)
Tyres	3.5	Number of Wheel	Front	/Rear (x:	=driven)		4x/2	4x/2	4x/2
	3.6	Tread, Front	b10			mm	1470	1470	1540
	3.7	Tread, Rear	b11			mm	1640	1640	1640
	4.1	Tilting Angle	α/β				6/12	6/12	6/12
	4.2	Mast Height, Lowered	h1				2500	2585	2710
	4.3	Std. Free Lift	h2	2-stage	Std. Mast, from Ground	mm	215	220	220
Dimensions	4.4	Std. Lift Height	h3	2-stage	Std. Mast, from Ground	mm	3000	3000	3000
	4.5	Mast Height, Extended	h4	2-stage	Std. Mast	mm	4350	4350	4350
	4.7	Height, Overhead Guard	h6	<u> </u>			2440	2440	2440
	4.19	Length, with Std. Forks	L1			mm	4700	4785	4890
	4.20	Length, to Fork Face	L2	L2			3480	3565	3670
	4.21	Width, at Tyre	b1	1 Double		mm	1980	1980	2050
	4.22	Forks	s/e/l	s/e/l Thickness x Width x Length		mm	65 x 150 x 1220	65 x 150 x 1220	65 x 170 x 1220
Ω	4.23	Fork Carriage Class	ISO 2328, Type A/B/no			Class4, A	Class4, A	Class4, A	
	4.24	Width, Fork Carriage	b3			mm	1690	1690	1800
	4.31	0	m1 Under Mast		mm	220	220	235	
	4.32	Ground Clearance	m2	at Cent	er of Wheelbase	mm	295	295	295
	4.33	Right Angle Stacking Aisle	Ast	Plus loa	ad length	mm	3830	3935	4085
	4.35	Turning Radius	Wa	Wa			3250	3350	3450
	5.1	Travel Speed (FWD)	Loaded, 1st/2nd			km/h	11.0/29.0	11.0/29.0	11.0/26.0
	5.1		Unloaded, 1st/2nd			km/h	12.0/31.0	12.0/31.0	12.0/31.0
	5.2	Lifting Speed	Loaded			mm/s	500	450	400
ė		Litting Opecu	Unloaded			mm/s	560	500	450
anc	5.3	Lowering Speed	Loaded			mm/s	550	480	460
Ē		Lowering Opecu	Unloaded			mm/s	580	500	500
Performance	5.6	Max. Drawbar Pull			m/h, 3 min rating	kN	44	44	44
	5.8	Max. Gradeability	Loaded 1.5 km/h, 3 min rating			%	29	29	24
	5.10	Service Brake		ation/Typ			Foot/Hydraulic	Foot/Hydraulic	Foot/Hydraulic
	5.11	Parking Brake		ation/Co	ntrol		Hand/Mechanical	Hand/Mechanical	Hand/Mechanical
	5.12	Steering	Туре				FHPS	FHPS	FHPS
	6.4	Battery	Volta	ge/Capa	city at 5-hour rating	V/Ah	24/52	24/52	24/52
	7.1	Make					Komatsu	Komatsu	Komatsu
Φ		Model					SAA4D95LE-5-A	SAA4D95LE-5-A	SAA4D95LE-5-A
gin	7.2	Rated Output, SAE net				kW	69	69	69
Engine	7.3	Rated RPM				min-1	2250	2250	2250
<u>0</u>	7.3.1	Max. Torque, SAE net				Nm@min <sup>-1</sup>	343@1600	343@1600	343@1600
	7.4	No. of Cylinder/Displacement				cm <sup>3</sup>	4-3260	4-3260	4-3260
	7.6	Fuel Tank Capacity				L MPa	140	140	140
ers	8.2	Relief Pressure for Attachment					18.1	18.1	18.1
Others	8.2.1	Hydraulic tank Capacity					115	115	115
ō	8.7	Transmission					TORQFLOW	TORQFLOW	TORQFLOW

FD60-10

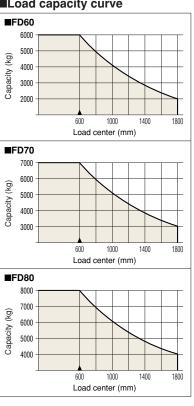
FD70-10

FD80-10

#### **■**Dimensions



#### **■**Load capacity curve



#### ■Right angle stacking aisle width

Inight angle stacking alsie width										
	Length of pallet	Width of pallet (mm)								
model	(mm)	800	900	1000	1100	1200	1300	1400		
	800	5050	5050	5050	5050	5050	5050	5050		
	900	5050	5050	5050	5050	5050	5050	5050		
	1000	5050	5050	5050	5050	5050	5050	5050		
6.0t	1100	5050	5050	5050	5050	5050	5050	5050		
	1200	5050	5050	5050	5050	5050	5050	5050		
	1300	5125	5125	5125	5125	5125	5125	5125		
	1400	5225	5225	5225	5225	5225	5225	5225		
	800	5155	5155	5155	5155	5155	5155	5155		
	900	5155	5155	5155	5155	5155	5155	5155		
	1000	5155	5155	5155	5155	5155	5155	5155		
7.0t	1100	5155	5155	5155	5155	5155	5155	5155		
	1200	5155	5155	5155	5155	5155	5155	5155		
	1300	5235	5235	5235	5235	5235	5235	5235		
	1400	5335	5335	5335	5335	5335	5335	5335		
	800	5305	5305	5305	5305	5305	5305	5305		
	900	5305	5305	5305	5305	5305	5305	5305		
	1000	5305	5305	5305	5305	5305	5305	5305		
8.0t	1100	5305	5305	5305	5305	5305	5305	5305		
	1200	5305	5305	5305	5305	5305	5305	5305		
	1300	5385	5385	5385	5385	5385	5385	5385		
	1400	5485	5485	5485	5485	5485	5485	5485		

#### ■Maximum load and overall height of mast by lifting height

maximum		Le	oad capacity (k	(g)	Overall height [Lowered / Extended*] (mm)			
fork height (mm)	model	FD60	FD70	FD80	FD60	FD70	FD80	
3000		6000	7000	8000	2500/4350	2585/4350	2710/4350	
3300		6000	7000	8000	2650/4650	2735/4650	2860/4650	
3500		6000	7000	8000	2750/4850	2835/4850	2960/4850	
3700		6000	7000	8000	2850/5050	2935/5050	3060/5050	
4000		6000	7000	8000	3000/5350	3085/5350	3210/5350	
4300		6000	7000	8000	3150/5650	3235/5650	3360/5650	
4500		6000	7000	8000	3350/5850	3435/5850	3560/5850	
5000		6000	7000	8000	3700/6350	3785/6350	3910/6350	
5500		6000	6700	7700	4050/6850	4135/6850	4260/6850	
6000		5700	6500	7500	4300/7350	4385/7350	4510/7350	

\* With standard load backrest

6