

Operation and Maintenance Manual



Cargo Crane

Model **TM-ZR500XL-4**

Applicable Serial No. EH9935 ~

⚠ CAUTION: Read this manual before operating the crane. Save this manual for future reference.

TADANO LTD.

▲ Avoid Overwork. Do Not Operate the Crane under the Influence of Alcohol or Drugs

If you are exhausted due to overwork or lack of sleep, or are under the influence of drugs or alcohol, your attention will be diverted. This may affect your judgement in an emergency, resulting in an accident.

Be in good physical condition before operating the equipment. Do not operate the crane when you are in poor physical condition or under the influence of drugs or alcohol.

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Warning Decals

Several warning decals are affixed to your crane and in the truck cab. These decals include important warnings and cautions to ensure safety. This section reviews these warnings and cautions, and shows the location of the decals. The instructions given on these decals are essential to prevent accidents. Be sure to understand them thoroughly.

Make sure that the warning decals are not damaged or covered with grime. If words or pictures are illegible or unclear, clean them.

If any decal is soiled or missing, replace it with a new one.

New decals are available from your nearest TADANO distributor or dealer.

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2. OPERATION

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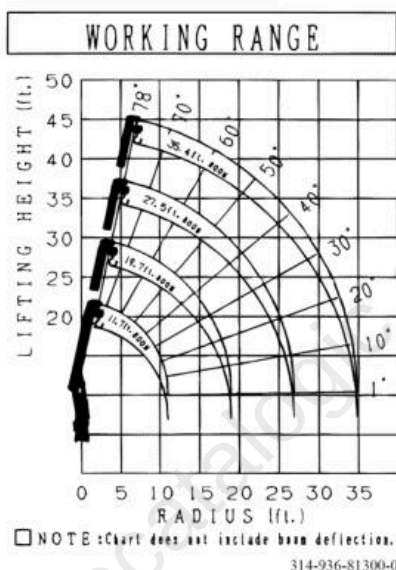


2-3 How to Read the Performance Data Table

(1) How to Read the Load Radius /Lifting Height Chart

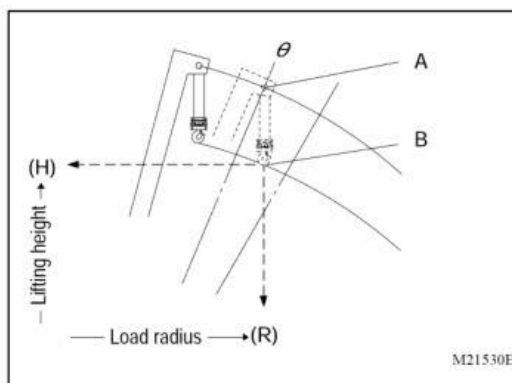
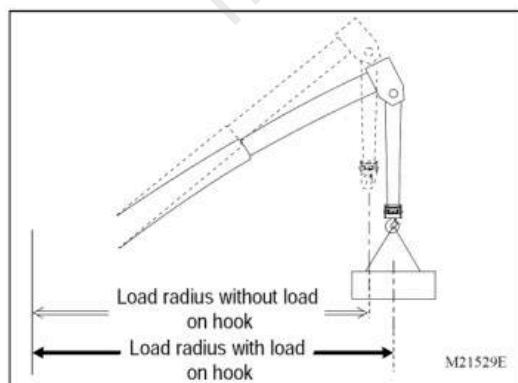
The "load radius /lifting height" chart shows the relation between the load radius and the lifting height for each boom length and boom angle.

◆ The chart below shows the working range chart of TM-ZR504XL.



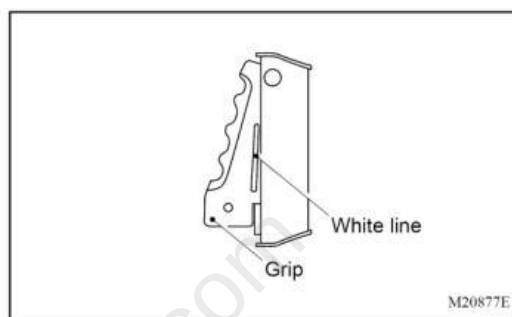
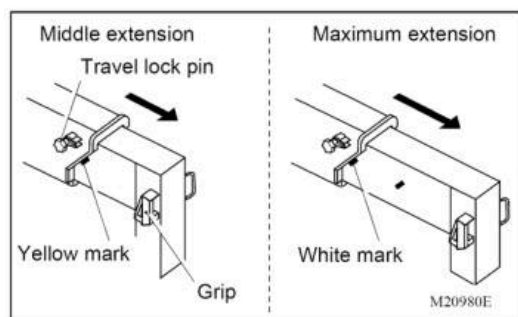
◆ While points A and B in the figure are in the same load radius, point A denotes the boom angle, and point B the lifting height.

◆ The working range chart does not include the influence of boom deflection. When a load is lifted, the boom deflects, increasing the load radius.



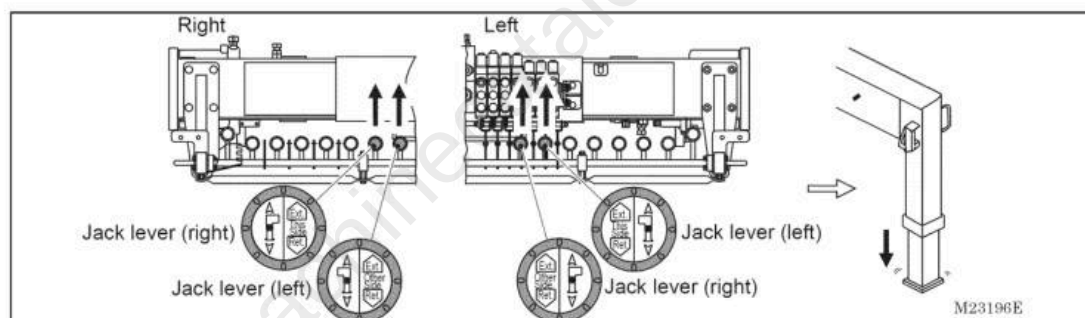
2. Hold the grip and pull out the outrigger. When the yellow mark appears, the outrigger is extended to the middle extension width. To extend the outrigger to the maximum extension width, hold the grip, and pull it until the white mark appears.

◆ Slide the outrigger to make sure that the outrigger is fixed with the lock pin. When the grip has returned to the original position and the white line is exposed, the outrigger is fixed with the lock pin.



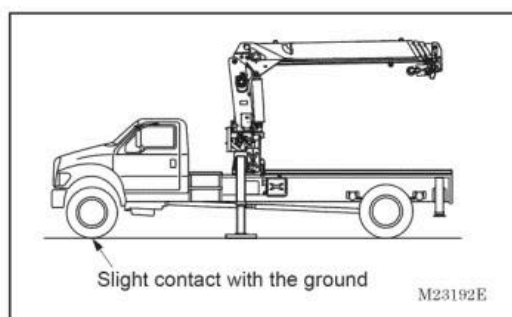
3. Extend the outrigger beam at the opposite side, according to the same procedure.

4. Shift the two jack levers to "Ext." simultaneously to extend the front jack cylinders.



◆ When extending the jack cylinders, watch your feet.

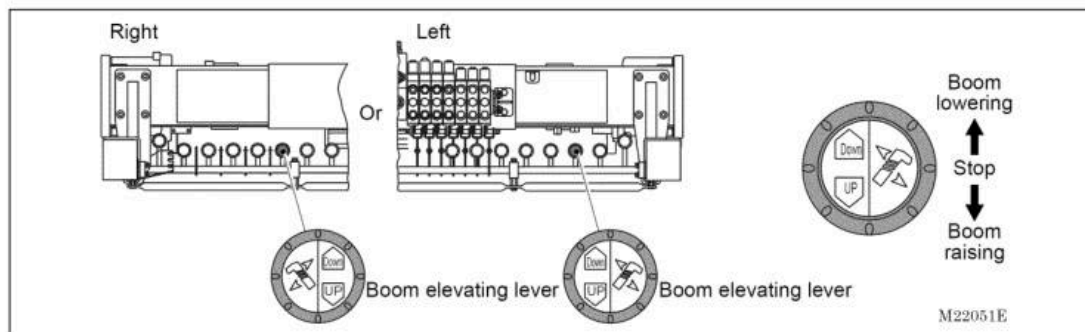
◆ Extend the jack cylinders so that the front tires are kept in slight contact with the ground.



5. After completing front outrigger extension operation, return all the control levers to the neutral position.

2-11 Elevating the Boom

(1) Controls



(2) Raising/Lowering the Boom

⚠ WARNING

- ⚠ Operate the control lever slowly. Pay attention, particularly when the boom is substantially extended, since abruptly operating the control lever causes the load to sway at the start and stop of operation.
- ⚠ Lifting a load from the ground by raising the boom may cause the crane to be overturned or damaged. To lift a load from the ground, hoist it up by operating the winch lever.
- ⚠ As the boom is lowered, the load radius increases. When lowering the boom with a load lifted, make sure that the crane is not overloaded.
- ⚠ Before lowering the boom, make sure that the operating condition is safe, referring to the rated lifting capacity table.

[NOTICE]

◆ If the boom is excessively raised when the boom is short, the hook block or load may hit against the boom, guide sheave or boom elevating cylinder. Pay attention when raising the boom.

To raise or lower the boom, operate the boom elevating lever.

(1) Raising the boom:

Move the boom elevating lever to "Up".

(2) Lowering the boom:

Move the boom elevating lever to "Down".

(3) Stop:

Return the boom elevating lever to the neutral position.

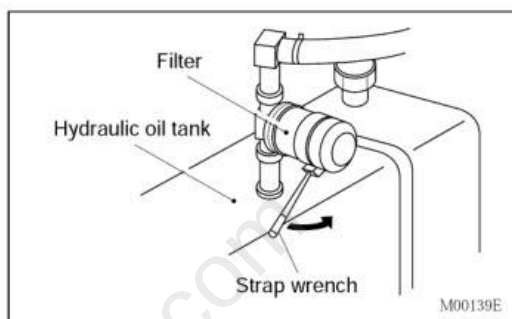
(4) Return Filter Replacement

• • • Every 600 Hours or Every 6 Months

◆ Replace return filter after 300 hours or 3 months after the machine is delivered (whichever comes earlier); replace it every 600 hours or every 6 months after that.

1. Remove the filter with a strap wrench.

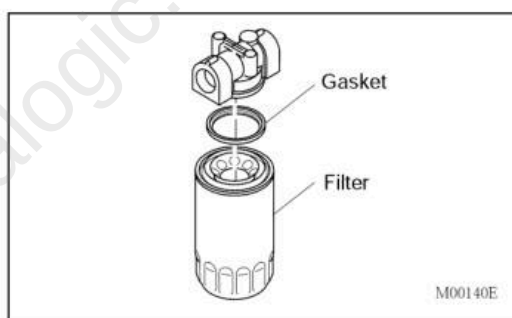
◆ Use lug for hydraulic oil spillage.



2. Place the new filter.

Tightening torque	14.5 ft-lb {20 N · m}
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◆ Thinly apply hydraulic oil to the gasket.



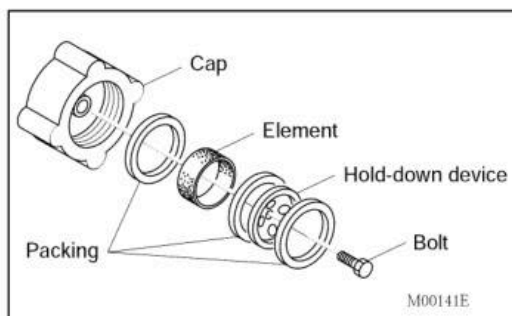
(5) Air Breather Replacement (Hydraulic Oil Tank)

• • • Every 600 Hours or Every 6 Months

[NOTICE]

◆ When the air breather element is clogged, the hydraulic oil tank will be damaged. Be sure to replace the element periodically.

1. Take off the bolt to replace the hold-down device. Replace the element with a new one.



(2) Recommended Oils and Greases

◆ When replacing oils and greases, use the oils and greases used at shipment.

If a different brand must be used, refer to the following tables.

Hydraulic Oils

Component	Hydraulic oil tank		
Type	ISO VG46	ISO VG32	ISO VG22, VG15
Ambient temperature	23°F to 77°F (-5°C to 25°C)	14°F to 59°F (-10°C to 15°C)	
Operating temperature range	32°F to 158°F (0°C to 70°C)	23°F to 140°F (-5°C to 60°C)	
Allowable temperature range	23°F to 176°F (-5°C to 80°C)	14°F to 158°F (-10°C to 70°C)	
TADANO Genuine	TADANO Hydraulic Oil LL		
Idemitsu	Daphne Super Hydro 46A	Daphne Super Hydro 32A	Daphne Super Hydro 22WR
Shell	Shell Tellus Oil 46	Shell Tellus Oil 32	—————
Esso		Nuto H32	Nuto H15
Mobil	Mobil DTE25	Mobil DTE24	Mobil DTE11

Gear Oils

Component	Greases used in new cranes at shipment			Other	
	Manufacturer	Brand	Type	Manufacturer	Brand
Winch speed reducer, swing speed reducer	Mobil	Mobil Gear 632	ISO VG 320	Idemitsu	Daphne Super Gear Oil 320
				Japan Energy	JOMO Reductus 320
				Nippon Oil	Bonnoc M 320
				Shell	Omala Oil 320
				Esso	Spartan EP 320

Full Version Available

Tadano TM-ZR500XL-4 Cargo Crane Operator Manual

Tadano TM-ZR500XL-4 cargo crane operator manual covering safe operation, setup, travel and daily checks. 4 manuals in PDF. Instant PDF download.

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<https://machinecatalogic.com/tadano-tm-zr500xl-4-cargo-crane-operator-manual/>

Book No: TM-ZR500XL-4-O(2)(U)-3E · File Pages: 611 · File Count: 10 · File Language: English