

CRANE DATA

	w/3-Section Boom	w/4-Section Boom
Max. Lifting Capacity	25,000kg at 3.2m	
Boom	Box-type, fully hydraulically telescoping	
Boom length	8.3 to 20.1m	8.3 to 26.0m
Extension speed	11.8m/66sec	17.7m/76sec
Elevation	1° to 75° in 52 sec by double-acting, twin hydraulic cylinders	
Hook height*	27.5m w/jib (max.)	33.5m w/jib (max.)
Working radius*	25.0m w/jib (max.)	31.0m w/jib (max.)
*Excluding boom deflection		
Jib length	7.0m	
Main Winch	Hydraulic motor driven, spur gear speed reduction, power up and down, free fall, winch neutral brake	
Single line pull	3,150kg	
Single line speed	96m/min (max.)	
Wire rope (dia. x length)	16mm x 130m	
Auxiliary Winch	Hydraulic motor driven, spur gear speed reduction, power up and down, free fall, winch neutral brake	
Single line pull	3,000kg	
Single line speed	78m/min (max.)	
Wire rope (dia. x length)	16mm x 75m	
Swing	Hydraulic motor driven, planetary gear speed reduction, 360° continuous rotation, disc foot brake with a locking device, free swing	
Swing speed	3.1 rpm	
Outriggers	Hydraulically operated; double-box construction; extended in "H" configuration; integral with carrier frame; power in, out, up and down; up and down individually operable; provided with check valves	
Extended width	5.4m	
Hydraulic System	Triple-tandem gear pump	
Hydraulic pump	Axial plunger type for winch, radial plunger type for swing	
Hydraulic motors	Multiple control valves	
Control valves		
Cab	All steel, fully enclosed with safety-glass windows, electric windshield wiper, one door; both crane and drive operations can be performed from one cab mounted on rotating superstructure	
No. of seats	1	
Safety Devices	<ul style="list-style-type: none"> • Load meter • Load indicator • Overwinding cut-out device • Winch neutral brake • Swing lock device • Axle leaf-spring lock device • Hook safety latch • Hydraulic safety valves, check valves and holding valves 	
Option	<ul style="list-style-type: none"> • Electronic automatic moment limiter 	

Notes: 1. All crane function speeds are based on no-load conditions.
2. When the electronic automatic moment limiter is installed, it replaces the load indicator.

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CARRIER DATA

Type	Manually selected, front drive (4 x 2) or front/rear drive (4 x 4)
Engine	Nissan Diesel PD603 diesel engine; 4-cycle, water-cooled, 6 cylinders; max. output of 180PS/2,300rpm (JIS); max. torque of 67 kgm/1,300rpm (JIS) with 3-section boom, 67kgm/1,200rpm (JIS) with 4-section boom
Torque Converter	3-element, 1-stage
Transmission	4-forward speeds and one reverse, power-shifted in all speeds
Axles (front/rear)	Full-floating type
Steering	3-way hydraulic power steering: 2-wheel conventional, 4-wheel coordinated, 4-wheel crabbing
Suspension (front/rear)	Leaf-spring type with a hydraulic lockout device
Service Brake	Dual-circuit, air brake, 4-wheel internal expanding
Parking Brake	Front and rear axles equipped with spring set, air-released emergency parking chambers
Tires (front/rear)	16.00-25-20PR x 2 (OR)
Frame	All-welded, box-section construction
Fuel Tank Capacity	200 liters
Safety Devices	<ul style="list-style-type: none"> • Emergency power-steering unit • Rear steering lock • Nosedive prevention device

GENERAL DATA

Gross Vehicle Weight	Approx. 23,150kg w/3-section boom Approx. 23,650kg w/4-section boom
Max. Travel Speed	45km/h
Gradeability	65% at 2km/h, 80% at stall (computed values)

All specifications herein are subject to change without notice.
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TADANO HYDRAULIC ROUGH-TERRAIN CRANE

TR-250

25-ton capacity (27.6 short tons)

27.1-meter outreach w/3-sec. boom + jib

33.0-meter outreach w/4-sec. boom + jib

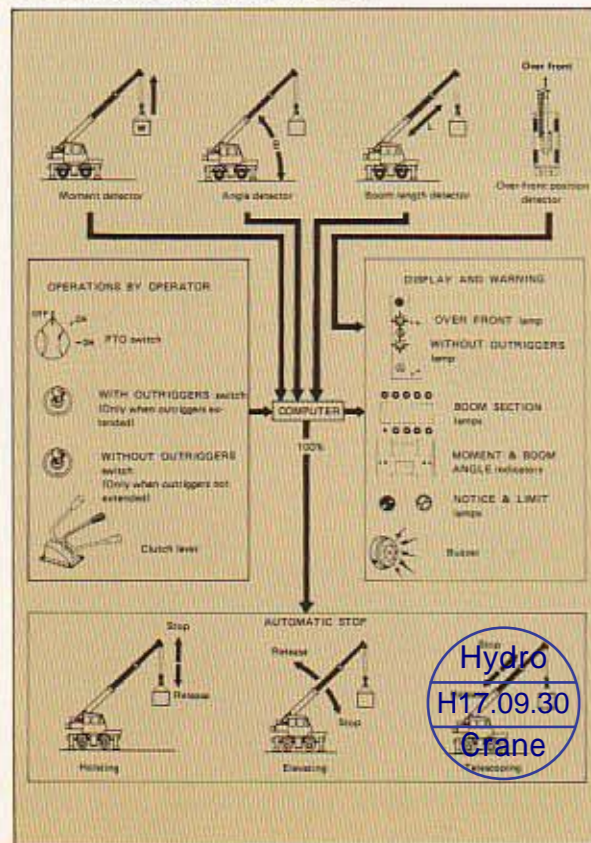


In-cab safety and comfort make for efficiency

Electronic automatic moment limiter with high control accuracy (optional)

Tadano's electronic automatic moment limiter (A.M.L.) electronically controls crane operations with a high accuracy of $\pm 5\%$. It detects the combined moment of lifting load and boom tare weight, and tells the operator the percentage of the actual moment to the rated moment. When the actual moment reaches 90% capacity, the NOTICE lamp flickers and a buzzer sounds intermittently. At 100% capacity, the LIMIT lamp flickers with a continuous buzzer sound, and simultaneously, all critical crane functions — boom lowering, boom extension and load hoisting — are automatically cut off. In combination with the fully hydraulic telescoping boom, this enables continuous control of lifting capacities for any boom length. In addition, because of its big memorizing capacity, the A.M.L. functions also in such working conditions as on-tire operation or with-jib operation.

How Tadano's A.M.L. works



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Load meter for load weight

This easy-to-read instrument displays the weight of the load on hook by measurement of wire rope tension for higher accuracy. Along with the load indicator which indicates boom angle and total rated loads for each boom length, the load meter increases operating safety.



Overwinding cut-out device

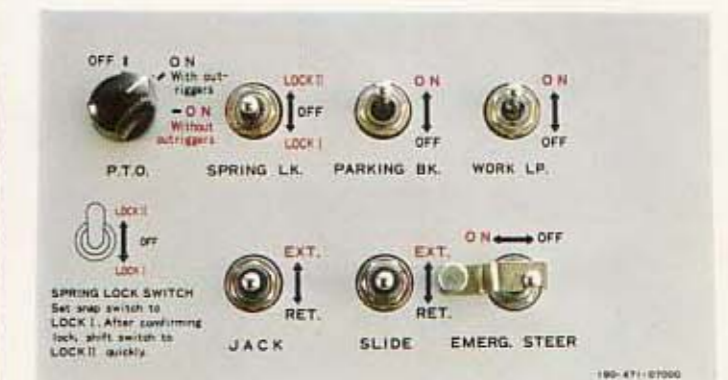
Equipped with both main and auxiliary hoist lines, this device warns the operator of overwinding by lighting up the mis-operation indicator lamp in the cab when the main or auxiliary hook approaches the boom nose or jib top, and simultaneously cuts off overwinding. This prevents such accidents as load fall-down due to rope breakage.

Extra safety features

Other considerations for safety include: the swing lock device for added safe travel, winch brake lining wear indicating device, hook safety latches for main and auxiliary hooks, and hydraulic safety valves in each circuit.

Comfortable, convenient control layout

The cab of the TR-250 is operator-oriented for efficient, easy operation and comfort. Mounted on the rotating superstructure, the cab enables the operator to perform both drive and crane operations. All instruments and controls are systematically laid out within operator's reach for quick, smooth action. Control levers for main crane functions are adjustable in length. And the transmission shift pattern is the same as those of normal passenger cars — eliminating trouble due to unfamiliarity. For the operator's further comfort, there's a fully-reclining upholstered seat with back-and-forward adjustment, floor and roof ventilation, and extra-wide safety-glass windows throughout for operator protection and unobstructed vision.



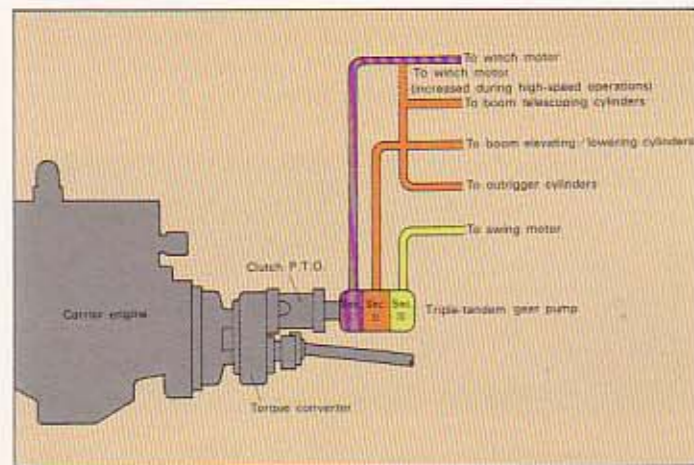
Lifts up to 25t, reaches up to 27.1m(3-sec. boom), 33.0m(4-sec. boom) (with jib)

Independent three-pump system

The TR-250 has a triple-tandem gear pump, which is directly powered by the carrier engine. Each section delivers hydraulic energy separately to the individual crane functions, keeping each circuit independent of the others — Section I to the winch function; Section II to the boom telescoping, boom elevating/lowering and outrigger functions; and Section III to the swing function. Thus, there's no fluctuation due to deviation in pressure or flow of the hydraulic fluid — allowing smooth composite crane operations, from inching to high speeds.

Reliable boom elevating/lowering

Two powerful double-acting hydraulic cylinders provide the power for elevating or lowering the boom. An integrated counterbalance valve keeps the cylinders raised in the event of hose failure.

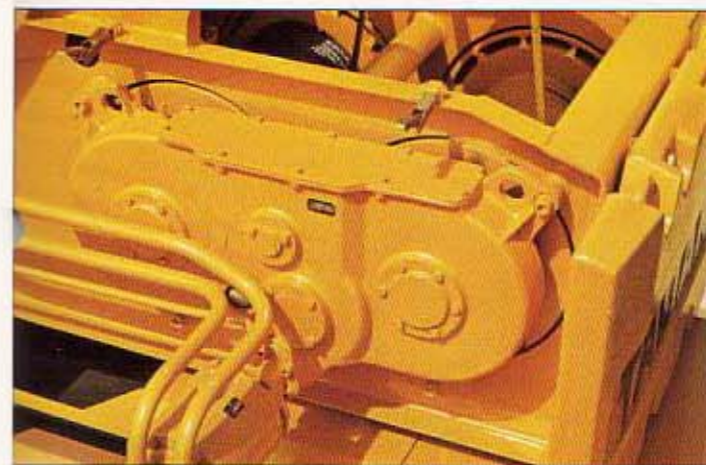


Fully hydraulic boom telescoping

The boom is fully hydraulic in all sections — three-section boom, from 8.3 to 20.1 meters; four-section boom, from 8.3 to 26.0 meters. Smooth telescoping is provided by two powerful double-acting hydraulic cylinders which actuate in response to single-lever control. The boom boxes are constructed of super high-tensile steel plates to increase durability and strength as well as to reduce the total boom weight.

Efficient power winching

Two powerful winches are equipped for the main and auxiliary hoist lines, giving a maximum single line pull of 3,150kg and 3,000kg respectively. Line up/down operations are triggered by single-lever control. Shifting from one winch to the other is performed with the clutch lever. Both winches are equipped with a neutral brake to automatically stop hook motion when the control lever is returned to "NEUTRAL."



Smooth, 360° continuous rotation

The TR-250's superstructure continuously rotates a full 360° on precision-built ball bearings. Utilizing a free-swing mechanism, the swing operation is very smooth when stopping. This mechanism also prevents the boom from being dragged aside which could adversely affect the crane. A foot-operated swing brake is provided.

Rigid outriggers with a wide span

The rigid, double-box construction hydraulic outriggers provide a maximum extension of 5.4 meters for higher operating stability to make big lifts. Simultaneous operation of all outriggers is made by switch control in the cab or by lever control outside the cab. The latter also allows individual control of jack cylinders which have a big stroke, providing efficient and easy crane leveling on uneven jobsites.



Side-folded extension jib

Pinned to the boom head and stored beside the base boom section, the TR-250's extension jib can easily be set up with the use of a handle by only one person on the ground. An extra 7.0-meter outreach is provided by the jib.

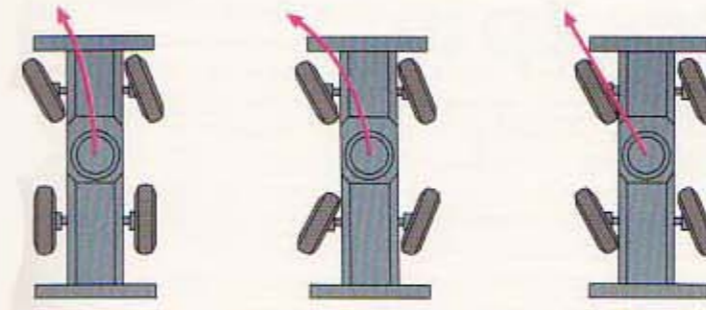
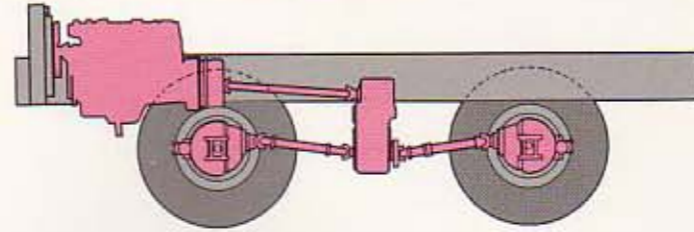
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Moves in anywhere, runs with a load

Front- or four-wheel drive via lever control

A simple shift of the control lever allows the operator to select four-wheel drive for real off-the-road mobility, providing sure traction and high gradeability over rough terrain, through muddy or sandy ground, or sloping worksites. This degree of mobility is further assured by such features as a low center of gravity, excellent vehicle weight distribution, torque converter, powershift transmission, planetary reduction gear with both front and rear axles, and no-spin differential in the rear axle.



• Two-wheel steering • Four-wheel steering • Four-wheel crab steering

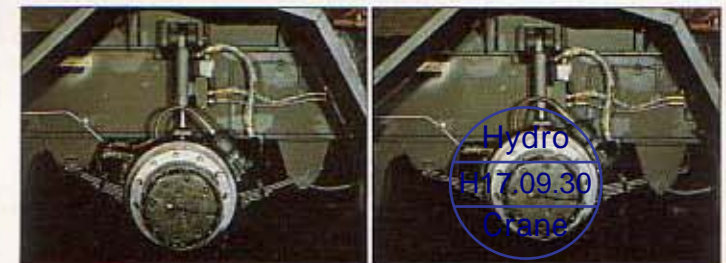
Three-way, fully hydraulic power steering

Hydraulic power steering is standard on all wheels. A simple switch control in the cab provides a choice of three steering modes: two-wheel front steering for normal maneuvering, four-wheel coordinated steering with a minimum turning radius of 6.4 meters for sharp turns, and four-wheel crab steering for diagonal advances and reverses. Along with the compact machine design, this enables the TR-250 to maneuver easily even in confined worksites such as storage yards and plants.



Leaf-spring suspension for all axles

Employing leaf-spring suspension on both front and rear axles, the TR-250 provides the operator with a smooth, comfortable ride to minimize fatigue even after traveling long distances. An automatic spring lock device, which is interconnected and actuated with the brake pedal, is provided for the front-axle leaf springs, assuring the operator of safety and comfort by limiting nosedive motion. Furthermore, all springs on front and rear axles are locked by a spring lock device, reducing rolling/pitching phenomena inherent in rough-terrain travel.

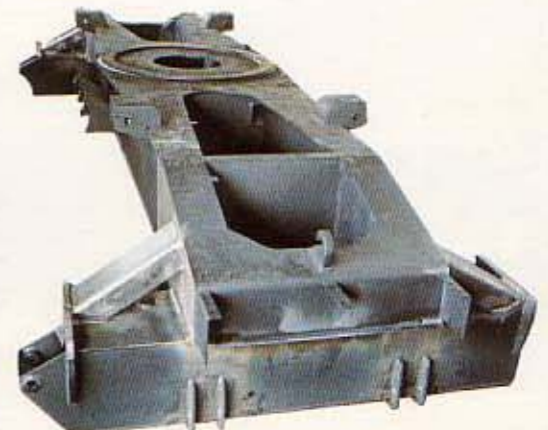


Reliable power train components

The power source is a dynamic 180PS diesel engine, an extremely high output for this class of rough-terrain crane. The torque converter smoothly transfers power into transmission according to load variations, eliminating engine stall due to overloads at low speed. The powershift transmission provides four-forward and one-reverse speeds. High efficiency air brake on all four wheels increases safety as well as assuring easy, fatigue-free braking. In addition, the emergency brake also operates as a parking brake.

All-around sturdy undercarriage

The TR-250's undercarriage components are also carefully selected to meet severe working conditions. Made of high-tensile steel, the frame has an all-welded box-construction to resist shocks, twists and any other loading impacts. Both the front and rear drive/steering axles are full-floating for maximum flexibility on bumpy roads. Large-sized, traction OR tires provide high durability under the heaviest load as well as superior traction and floatation.



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Tadano TR-250: more than just a rough-terrain crane



Available with 3-section boom



Available with 4-section boom



• Electronic automatic moment limiter, A.M.L., to prevent crane overloading (optional)

• Side-folded extension jib for quick set-up

• Tough, lightweight fully hydraulic telescoping boom

• Sure boom elevating by two double-acting hydraulic cylinders

• Two powerful winches for main and auxiliary hoisting

• Convenient one-cab control for both crane and drive operations

• Full 360° rotating superstructure

• Dynamic, 180PS diesel engine

• Rigid outriggers with a wide span

• Large-sized, durable tires

That's because the TR-250 has the raw power to go to work virtually anywhere. Maneuver all kinds of loads in the tightest spots. And stay rock-steady even on the roughest terrain. Plus, you get the versatility to pick-and-carry, travel with loads up to 14 tons on hook, and, of course, operate as a powerful hydraulic crane. On outriggers, it lifts a maximum 25 tons. This high degree of maneuverability and versatility makes the TR-250 the ideal workhorse for almost any outdoor/indoor crane operations such as in shipbuilding, iron- and steel-making, cargo handling, and dam construction. With the Tadano TR-250, you get increased working efficiency, more productivity.

Tadano Ltd. designs and manufactures its hydraulic cranes for maximum efficiency, productivity and safety. For this reason, the TR-250 is equipped with all the following equipment/functions as standard:

- Fully hydraulic boom (both three- and four-section boom models)
- Auxiliary winch
- Free fall for both main and auxiliary winches
- Free swing
- Extension jib
- Suspension for both front and rear axles
- Reclining seat
- Load meter
- Winch brake lining wear-indicating device
- Overwinding cut-out device
- No-spin differential for rear axle

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