



# TADANO HYDRAULIC ROUGH TERRAIN CRANES

# TR-300EX/250EX/200EX

TR-300EX 33-ton capacity (30 metric tons)  
TR-250EX 27.6-ton capacity (25 metric tons)  
TR-200EX 22-ton capacity (20 metric tons)



## TADANO

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# Tadano rough terrain cranes satisfy the toughest customers

The TR-300EX, TR-250EX and TR-200EX rough terrain cranes were built to stand the most demanding of job situations. Not to mention the most demanding operators.

A four-stroke high-output diesel engine has the power and speed to tackle most any job. In addition, a well constructed transmission system and large, high-quality tires make for optimum maneuverability.

A full-length power four-section (three-section for TR-200EX) boom construction gives Tadano rough terrain cranes tremendous reach while the dual system winches stand up to the most stress-inducing loads. And the Load Following Swing feature automatically brings the boomhead to the safest hoisting position above the load's center of gravity.

But Tadano cranes have as much brain as they do brawn. A microcomputer-controlled Automatic Moment Limiter provides the operator with necessary information for safe operation under any conditions.

Put this all together and you get productivity, with no compromises in safety or comfort. Tadano rough terrain cranes – built to satisfy the toughest customers.



## Superior maneuverability

Hydro  
H17.10.04  
Crane

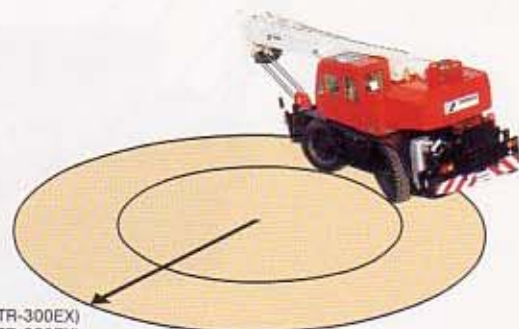
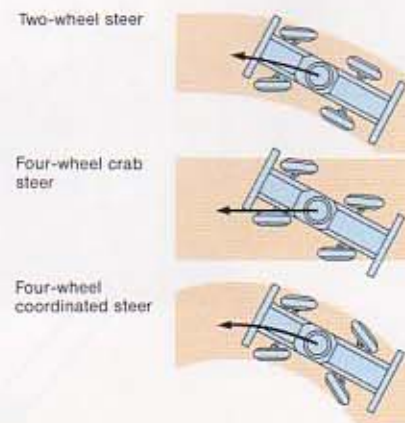
### Torque converter transmission puts power directly on the road

A fully automatic, heavy-duty torque converter transmission with an automatic lock-up device transfers power from the 220PS (TR-300EX) and 180PS (TR-250EX/200EX) four-stroke, watercooled direct-injection turbo-charged diesel engine to the road. This powershift unit enables easy gear changing and offers six forward (three for high range and three for low range) and two reverse speeds. The microcomputer-controlled powershift unit automatically selects an optimum range in relation to driving speed. Fully floating axles are employed front and rear.



### Three-way power steering

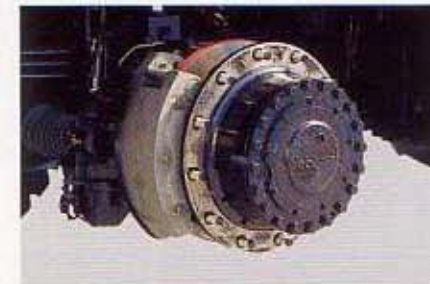
Whatever your working conditions, greater maneuverability is a crucial advantage. That's why the TR-300EX/250EX/200EX feature three-way power steering. A convenient switch provides the operator with a choice of steering modes: 1) conventional two-wheel front steer, 2) four-wheel crab steer, and 3) four-wheel coordinated steer. When using the four-wheel coordinated steer mode, the minimum turning radius is a slight 5.3m for the TR-300EX and 5.6m/5.7m for the TR-250EX/200EX, respectively (to outer tire center).



5.3m (TR-300EX)  
5.6m (TR-250EX)  
5.7m (TR-200EX)

### Responsive braking to match performance

The TR-300EX, 250EX and 200EX have separate service brake and parking brake systems. The dual-line service brakes on all four wheels are powerful hydro-pneumatic disc units, while the parking brake system is a spring-operated air released brake which acts on the front propeller shaft. Lightly touching the pedal causes all four wheels to brake simultaneously and ensures reliable braking power. In addition, an exhaust brake is provided – convenient when traveling down hills. To help prevent rust and freezing and increase service life, a circuit air dryer is provided.



### Non-spin differential

Especially useful on rough terrain construction sites, the non-spin differential works by transferring power from the slipping wheel to the wheel on the opposite side, thus maintaining traction wherever possible.

### On-rubber duties

These cranes can pick, carry or shuttle back and forth on the jobsite with a load on the hook. Hydraulic automatic lock-up cylinders ensure stable pick-and-carry operations.



### Tough undercarriage

The high-tensile steel undercarriage is an all welded box construction offering superior resistance to twisting and straining. Large-sized heavy-duty tires give long-life durability under the toughest conditions, and are capable of withstanding extremely high load bearing on the steering drive axle.



# Reaching out to challenges

## Full-length power boom

This boom features a sturdy but light-weight box construction for optimum rigidity and high resistance to bending. The four-section boom (TR-300EX/250EX) features two double-acting cylinders with holding valves and wire rope mechanism for sequential and synchronized telescoping. The three-section boom (TR-200EX) has one double-acting cylinder with holding valve and wire rope mechanism for synchronized telescoping. On each model, operation of a single lever ensures smooth full-length power boom extension and retraction from 9.1m to 28.6m (TR-300EX), 8.6m to 26.9m (TR-250EX) and 9.0m to 22.0m (TR-200EX). Thus, the outstanding lifting height and extensive working range ensure maximum lifting performance.



TR-300EX

TR-250EX

TR-200EX

Hydro  
H17.10.04  
Crane

## Wide elevation range for maximum convenience

The double-acting hydraulic elevation cylinder fitted with a counterbalance valve boasts an elevation range of 0° to 80° for the TR-300EX and 0° to 82° for the TR-250EX/200EX—versatile enough to answer the requirements of almost any jobsite.



## Swingaround jib (boom extension) for extra reach

Extra reach is provided by a single-stage or two-stage jib. The two-stage jib extends by 7.2m or by 12.8m (TR-300EX), while the single-stage jib extends by 7.5m (TR-250EX/200EX). The swingaround mechanism enables quick and easy erection. When erected, the jib is offset either 5°, 25° or 45° from the main boom center line, thus widening the operating area.



## Single top (auxiliary boom sheave)

You can mount a single top to the boomhead to facilitate high-speed lifting of light loads when the extra lift height provided by the jib is not required. The single top can also be used at the same time as the main hoist.



# A winch with pull

## Load following swing

The superstructure swings smoothly 360° continuously through a large-diameter, sealed ball-bearing swing ring driven internally by an axial piston motor through planetary reduction gearing. A load follower control button on the winch lever, when pressed, enables you to automatically position the boomhead over the load's center of gravity as the hoist takes up the load, eliminating potentially dangerous boomhead side-loading.



## Dual system – Automatic fail-safe brake and free-fall operation

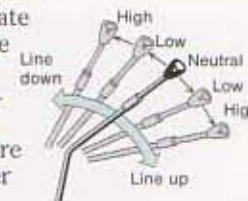
An automatic fail-safe brake system and counterbalance valve ensure safe, smooth operation. During normal operation, the brake is applied on the main or auxiliary hoist while the winch lever is in the neutral position. Also, the main and auxiliary hoists feature clutch-lever switching to free-fall operation with a foot brake, which allows the hook to be quickly lowered when the winch lever is in the neutral position. This is convenient when operating over tall buildings.

## “Intelligent” winch speed control

The main and auxiliary winch systems feature Tadano's new “intelligent” winch speed control. Employing a variable output pump, a regulator, and a built-in flow control valve, it automatically adjusts hydraulic pressure to match load conditions. The lighter the load, the faster the winching speed – the heavier the load, the slower the winching speed. In this way, “intelligent” winch speed control allows the crane to select the optimal hoisting speed for each load via single lever action, from “inching” to high-speed operations.

## Powerful two-speed winching

Tadano employs a powerful, high-torque two-motor, two-drum winching system. Both the main and auxiliary hoists feature a two-speed boost circuitry that nearly doubles line speed while maintaining high line pull characteristics. The auxiliary hoist has its own separate motor. To increase rope service life and eliminate off-position winding, the hoist drums are grooved and wider in diameter.



## Winch drum locks

Both winch drums can be locked for operational safety using a lever in the cabin.



## Wide span outriggers

The TR-300EX/250EX/200EX feature wide-span, hydraulically operated double-box construction outriggers. For extra safety, the beams can be pinned in the fully retracted or fully extended position. The outriggers can be controlled either independently or simultaneously. The outrigger housing design, of rigid box construction, permits the floats to remain permanently attached to the jacks, eliminating troublesome mounting chores and permitting rapid setup.



## Optimum cab comfort

### Full-vision cab designed for total comfort

One look at the cab and you'll know it's been designed with the operator in mind. Get inside, and feel unprecedented cab comfort. Tadano's full-vision cabs are wide and spacious. The cab is fully instrumented and laid out to provide a comfortable working environment at the jobsite and on the road. Adjustable, full-length crane control levers for enhanced feel are complemented by a vertically and horizontally adjustable, tilting and reclining seat with headrest. In particular, swing and elevation levers fall flat for easier boarding and de-cabing. Other comforts include through ventilation from the sliding door and safety glass windows opening from the side, rear, and roof, large-sized three-speed windshield wiper, tilt/telescope steering wheel, roof window wipers, roof window lock warning, cigarette lighter, interior lighting and an adjustable spotlamp on the front of the cab.

As optional comforts, cab heater/cooler and defroster, electric fan and winch drum indicator are also provided.



## High safety, low maintenance

### Oil cooler

An oil cooler prevents oil temperature from becoming excessively high and causing subsequent power loss after long hours of operation, thus enhancing operational efficiency.



### Overhoist cut-out

A pendant-type overhoist cut-out is also fitted to prevent inadvertent operation.



### Oil reservoir

A large-capacity oil reservoir is fitted with a level gauge. In addition, the return line filters have quick-change replaceable elements that help simplify maintenance.

## Keep on top of the situation

### Tadano's Automatic Moment Limiter (AML)

With Tadano's Moment Limiter, moment input is taken electronically at the boom elevation support point. The boom angle and boom length are also detected. These factors combine with the outrigger configuration to enable the unit to monitor and control stepless lifting capacity changes. For extra safety, an indicator is also provided outside the cab: a yellow lamp blinks when moment is in the 90% - 99% range, while a red lamp lights up when it becomes 100% or more.

The Automatic Moment Limiter constantly displays:

- moment as a percentage (color bar-graph display)

Furthermore, it provides both audible and visible warnings of approaching overload situations and automatically cuts out dangerous crane motions including hoist up, telescope out and boom down when the 100% level is reached.

There are also LCD readouts of the following:

- boom angle
- either boom length or potential hook height
- actual working radius
- actual hook load
- permissible load
- jib offset angle, etc.

When preset by means of the preset switch, the boom never exceeds the preset boom height, maximum boom plus angle, maximum boom negative angle or working radius. This ensures safety for repeated operations at space-limited sites e.g. beneath highway overpasses, under live power lines, etc.



### Monitor lamps

Bright monitor lamps indicating steering configuration and other important data are located on the control panel. This easy-to-read display improves safety by providing the operator with a quick index of system status.

