



TADANO

TG-500E

HYDRAULIC TRUCK CRANE
55-ton capacity (50 metric tons)





LEADING IN ITS

The TG-500E truck-mounted crane incorporates advanced technology and Tadano's extensive on-the-job know-how to outperform any crane in its class. Both strong and flexible, the TG-500E is tough enough for big jobs, while versatile enough to handle jobs in constricted and irregularly shaped work areas. This power crane features a stronger hexagonal boom, designed for maximum flexural and torsional rigidity and a wider elevation range for close-in lifting. The unit also incorporates a unique feedback system, which provides the operator with information on lifting capacity, working radius and other operational data for markedly improved operating efficiency.

Superior Carrier

Mounted on a left-hand 8 X 4 drive Mitsubishi chassis, the TG-500E features a powerful water-cooled four-stroke direct injection diesel engine for superior performance over any terrain. In addition to increased on-road acceleration, the high torque output and flexible transmission — ten forward and two reverse speeds — also ensures enhanced maneuverability and powerful mobility off the road. The low-line type two passengers cab has been ergonomically designed for maximum visibility and comfort. The steering wheel, seats, pedals, and control levers provide optimum comfort and easy operation, even during prolonged operation and over long-distances.



LIFTING POWER

Powerful Hexagonal Boom

The advanced design of the TG-500E's hexagonal boom incorporates greatly improved flexural and torsional rigidity for increased strength. The five-section boom, which is operated by a single lever, is equipped with three telescope cylinders and has a range of from 10.95 to 40.4 meters.

Double-Acting Hydraulic Cylinders

With an elevation range of -3° to 80° , the double-acting hydraulic cylinders, fitted with holding valve, are highly maneuverable and have negative boom angles that permit ground-level reeving.

CLASS



Underslung Jib

A two-stage jib stored under the base boom section can be extended by 9.0 or 14.6 meters and when erected can be offset either 5° , 25° , or 45° from the main boom center line. This innovative feature makes lifting at close quarters safe and efficient.

Single Top (Auxiliary Boom Sheave)

The boom head can be fitted with a single top for high-speed lifting of light loads, when the extra lift height provided by the jib is not required.





BEDROCK SAFE

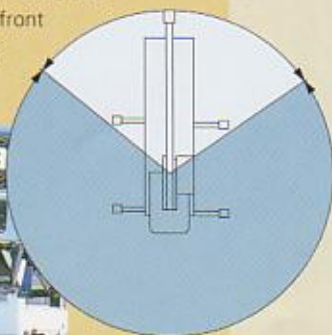
Adjustable Outriggers

Outriggers mounted on the TG-500E chassis can be extended midway at 4.6 meters or to a maximum of 6.6 meters, to meet the varying requirements of job sites. Equipped with controls and level gauges on either side, the outriggers can be extended simultaneously or independently from either side of the carrier. The beams can be pinned in retracted or extended positions, and because the floats are attached to the jacks, set up is made extremely easy.



Front Jack

A fifth hydraulically operated jack is mounted to the front frame of the carrier to permit full capacities through a 360° swing. However, when a front jack is not extended, the crane still has a rated over front capacity.



By attaching a front (fifth) jack, full lifting capacity is achieved through a 360° swing.

Fitting Every Situation

Outriggers can be set at various lengths on either side of the vehicle to accommodate irregularly shaped and constricted work areas.





* Fan optional



Automatic Moment Limiter (AML)

This highly advanced moment limiter enables automatic moment input electrically directly from the boom elevation support point. Boom angle and length can also be monitored. In conjunction with outrigger configuration, the AML controls and monitors stepless lifting capacity changes as the work proceeds.

Automatic Moment Limiter provides -

- Continual display of moment as percentage (color bar graph display), and audible and visible warnings of approaching overload situations, and cuts out the dangerous crane motion during hoist up, telescoping out and boom down before over loading occurs.
- Continual LCD readouts for boom angle, either boom length, or potential hook height, actual working radius, actual hook load, permissible load, jib offset angle or jib length, either moment as percentage or main hydraulic pressure and accumulate or pressure.



Working range limit function

The AML incorporates restriction keys for setting maximum boom height, plus angle, negative angle and working radius, thus ensuring increased safety for repeated operations in constricted work areas such as beneath highway overpasses or under live electric power lines.

FINGERTIP CONTROL



ENHANCED FEATURES

Automatic Fail-Safe Brake

Tadano's unique design incorporates an automatic fail-safe braking system with counterbalance valves for added safety and efficiency. The crane is powered by a powerful, high-torque two-drum winching system. The winch utilizes two-circuit, two-speed combination circuitry, and when combined with accelerator pedal control, provides multiple line speeds. And, the winch drums have been widened and grooved to increase rope service life.

Improved Safety Features

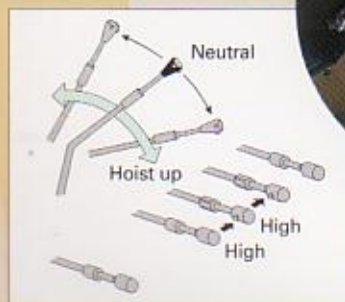
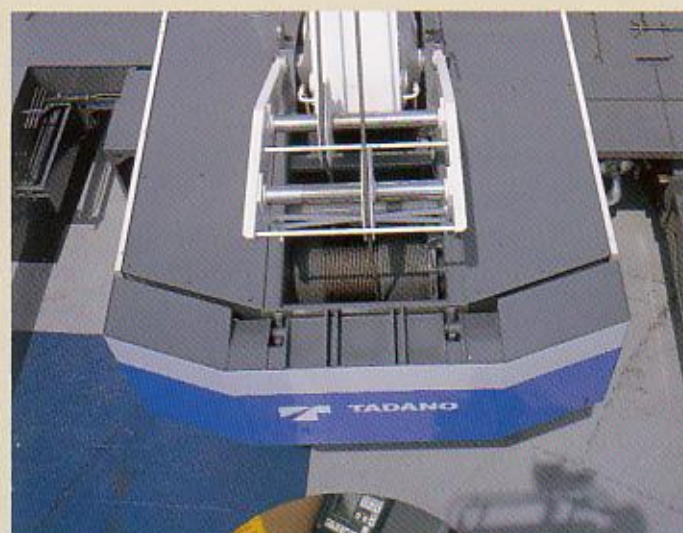
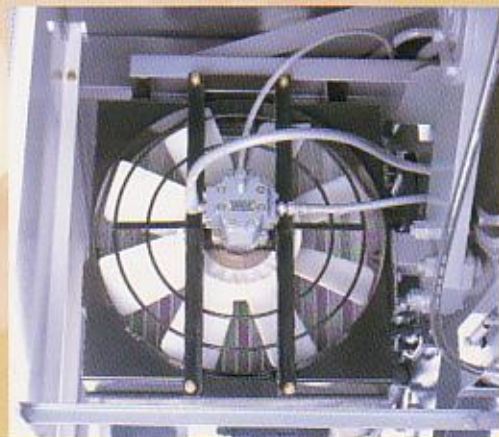
The outstanding safety features of the TG-500E include level gauges, wire rope over-payoff cut out, winch drum lock, hook safety latch, hydraulic safety valves, boom angle indicator, and an winch drum rotation indicator.

Oil cooler

The unit's oil cooler prevents power loss due to overheating from prolonged use.

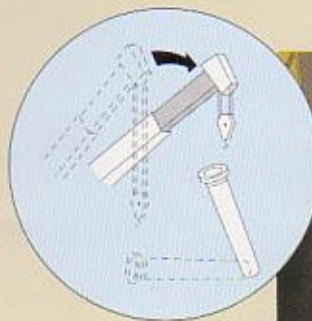
Oil reservoir

The large-capacity oil reservoir features a level gauge, and the return line filter is equipped with a quick-change replaceable element that simplifies maintenance.

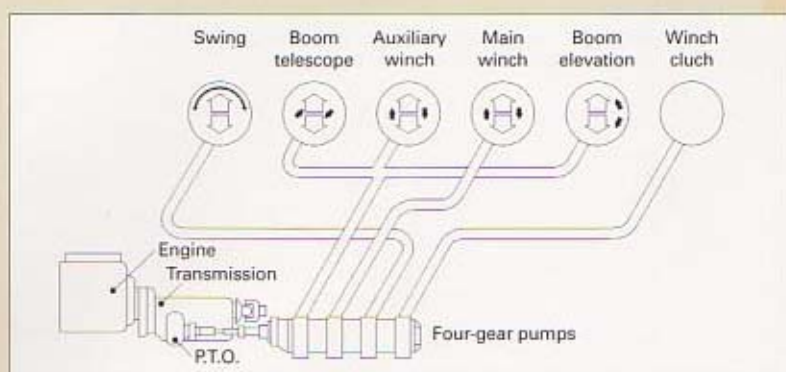


Twin-Swing for 360° Maneuverability

The chassis of the TG-500E swings a full 360°, owing to its special sealed ball-bearing swing ring, which is driven internally by an axial piston motor and planetary reduction gearing. With the flip of a switch, the operator can shift between power-control and free swing action, automatically positioning the boom head over a load's center of gravity as the hoist raises the load. This function makes it possible to avoid potentially dangerous boom head side-loading.



A special switch on the control lever makes it possible to control twin swing easily.



Four-Gear Pumping System

The crane's hydraulic system incorporates four gear pumps — the first three control the main winch, auxiliary winch, boom telescoping, elevation and swing, while the fourth pump provides hydraulic pressure for the winch clutch. The pumps have been designed to operate independently to enable each to perform at maximum capacity for increased efficiency.

Expanded Field of Vision

This model has been completely redesigned to afford the maximum field of vision during both crane operation and movement of the vehicle. The interior is more spacious than previous models and designed for maximum comfort and maneuverability. Full instrumentation in the cab makes operations easy and provides a pleasant working environment, whether on the work site or the road. Fully reclining seat and headrest, and full-length crane control levers increase control and improve efficiency. Other features include improved ventilation, interior lighting and safety glass.



MAXIMIZING OPERATING CONVENIENCE AND COMFORT

Increased Crane Control Levers

All crane controls conform to international ISO standards and employ a special spring center system that automatically returns lever positions to neutral when released, thus preventing accidental lever changes during operation. An easy-to-use foot pedal improves telescoping and winching operations, when executed simultaneously with parallel-type operation valves. The new system improves overall control and is extremely operator friendly.





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