



TADANO
HYDRAULIC TRUCK CRANES
TG-700E
TG-500E

TG-700E 77-ton capacity (70 metric tons)
TG-500E 55-ton capacity (50 metric tons)



Tough technology for a tough crane

Reliability is no small consideration when choosing a hydraulic crane. That's why you won't need to look any further than the Tadano TG-800E. Benefiting from the industry's most advanced technologies, this new breed of crane has withstood every sort of on-the-job endurance test imaginable to ensure consistent dependability.

The TG-800E's list of advanced features is quite impressive. Take the strengthened hexagonal boom for instance. Designed for maximum flexural and torsional rigidity, this full-length power hexagonal boom has a wide elevation range for close-in lifting on confined jobsites. Moreover, the winch's dual system, featuring the automatic fail-safe brake and free-fall operation, is capable of safely meeting the most trying demands. And the two-motor, two-drum system allows for both independent and simultaneous control of the auxiliary hoist units.

Still another vital feature, the Automatic Moment Limiter provides the operator with all the information necessary for safe operation, including lifting-capacity and working-radius data.

When it comes to tough and capable cranes that you can rely on, you need look no further than Tadano.



Ruggedly built carrier

The TG-800E is available mounted on an 8 X 4 wheel drive Nissan carrier that features a powerful watercooled, four-stroke direct-injection diesel engine which couples with efficient powertrain components to provide superior vehicle performance, including acceleration and gradeability, over a wide variety of terrains. The high torque output and flexible transmission — nine forward and one reverse speed — also ensure good lugging power off the road. The side-mounted, two-man cab is spacious and offers full visibility for two. All of the interior appointments, including the steering wheel, seats, pedals, and control levers, are ergonomically designed for optimum comfort and ease of operation, thus minimizing driver fatigue — particularly valuable for long-distance driving.

Full-length power hexagonal boom

Tadano's new hexagonal boom has been designed to maximize flexural and torsional rigidity while reducing unnecessary weight. This means a boom that is lighter and stronger than those of conventional cranes. The TG-800E comes with a five-section boom that features a full-power, partly synchronized telescoping boom for quicker, smoother extension and retraction from 11.0m to 42.0m. For greater convenience, you can perform boom extension and retraction by either lever or foot pedal engagement.



Single top (auxiliary boom sheave)

You can mount a single top to the boomhead to facilitate the high-speed lifting of light loads when the extra lift height provided by the jib (boom extension) is not required.



Wide elevation range

The double-acting hydraulic elevation cylinders, fitted with a counter-balance valve, boast an elevation range of -2° to 83° — versatile enough to answer the requirements of almost any jobsite. The negative boom angle permits ground-level reeving.



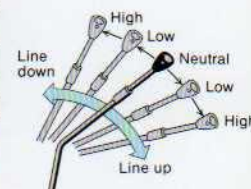
Swingaround jib (boom extension)

Extra reach is provided by a two-stage jib that extends from 9.0m - 16.0m. The swing-around mechanism enables quick and easy erection. When erected, the unit is offset either 5° or 30° from the main boom center line, thus widening the operating area.



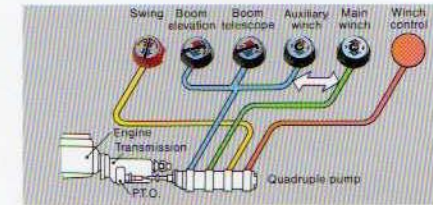
Dual system - automatic fail-safe brake and free-fall operation

An automatic fail-safe brake system and counterbalance valves ensure safe, smooth operation. And 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. This is convenient when operating over tall buildings. Tadano employs a powerful, high-torque two-motor, two-drum winching system. The hoists feature a two-circuit combination, two-speed-type circuitry that, combined with accelerator pedal control, provides varying line speeds. To increase rope service life, the hoist drums are grooved and wider in diameter.



Quadruple gear pump system

Four gear pumps are employed in the hydraulic system. The first three control the main hoist, auxiliary hoist, boom telescoping and elevation, and swing. The fourth pump provides hydraulic pressure for the winch clutch. The independent pumps allow each to perform to their maximum capability without diminishing the performance of the others.



Super-smooth Tadano "Twin-Swing"

The superstructure smoothly swings 360° through a large-diameter sealed ball-bearing swing ring driven internally by an axial piston motor through planetary reduction gearing. A switch on the control panel shifts between power-controlled and free-swing action. In addition, the hoist levers are fitted with Tadano's "Twin-Swing" load follower controls which permit instantaneous switch-over from power-controlled to free-swing action. During free swing, you can automatically position the boomhead over the load's center of gravity as the hoist takes up the load, eliminating potentially dangerous boomhead side loading.



Counterweight dismantling device*

The counterweight can be easily removed by operating a lever in the crane cab. This is convenient when traveling for long hours or when there is a need for reduced overall crane weight.



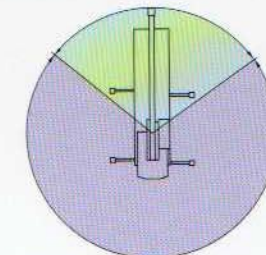
Duplicated outrigger controls

Two outrigger control centers — one on each side of the carrier — have their own level gauges and the control layout virtually eliminates the possibility of inadvertent operation. The outriggers can be extended independently or simultaneously and, for extra safety, the beams can be pinned in the fully extended or fully retracted position. In addition, the floats are permanently attached to the jacks, eliminating troublesome mounting chores and permitting rapid setup.

An asterisk (*) denotes optional equipment.

Front (5th) jack

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



With a front jack, full lift capacity is available through a 360° swing.

Oil reservoir

A large-capacity oil reservoir is fitted with a level gauge. In addition, the return line filter has a quick-change replaceable element that helps simplify maintenance.



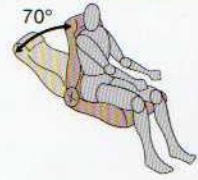
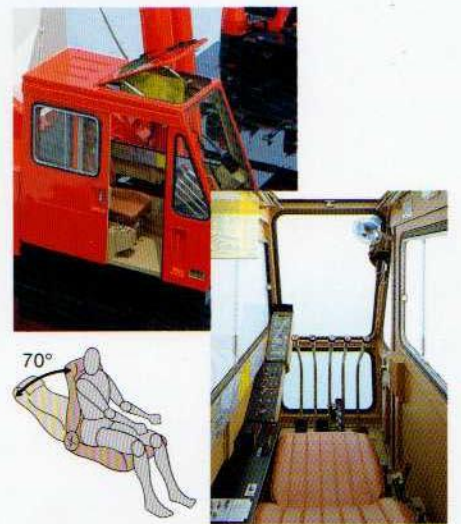
Oil cooler

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



Full-vision cab designed with total comfort

One look at the cab and you'll know it has been designed with the operator in mind. Get inside and you'll 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 horizontally adjustable reclining seat with headrest. Other comforts include through ventilation from the sliding door and opening side, rear and roof windows made of safety glass, a cigarette lighter, interior lighting, and an adjustable spotlight on the front of the cab.



Tadano's Automatic Moment Limiter (AML)

With Tadano's newest electronic Moment Limiter, moment input is electrically taken directly 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.

The Automatic Moment Limiter constantly displays:

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

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

- There are also LCD readouts on 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 cramped sites — e.g. beneath highway overpasses, under live power lines, etc.



Strength plus technology — a tough combination

Rugged, reliable and raring to go, these new Tadano cranes are the result of our renowned and advanced technological know-how. And they've been tested for strength and work-tough conditions, so that when one arrives on your construction site, you can stand back and enjoy the action.

You'll find things like a stronger hexagonal boom, which has been designed for maximum flexural and torsional rigidity. This full-length power hexagonal boom has a wide elevation range for close-in lifting on a restricted construction site. The winch's dual system — automatic fail-safe brake and free-fall operation — meets every demand no matter how stressful. The two-motor, two-drum system allows the main and auxiliary hoist units to be controlled independently and simultaneously.

Tadano's Automatic Moment Limiter provides the operator with necessary information regarding lifting capacity, working radius and others for safe operation.

Tadano. The company that cranks up its efforts to bring you the best and the toughest.



Ruggedly built carriers

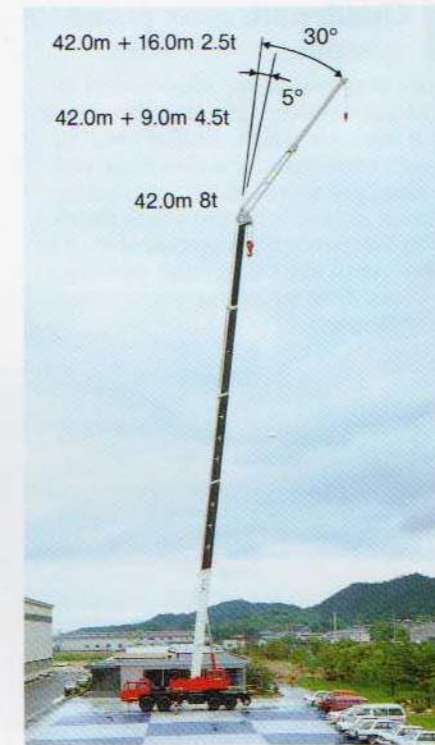
The TG-700E and TG-500E are available mounted on an 8 × 4 wheel drive left-hand or right-hand steering Nissan carrier. The carrier features a powerful watercooled four-stroke direct-injection diesel engine which couples with efficient powertrain components to provide superior vehicle performance, including acceleration and gradeability, over a wide variety of terrain. The high torque output and flexible transmis-

sion — nine forward speeds and one reverse speed — also ensure good lugging power off the road. The side-mounted, two-man cab is spacious and offers visibility for two. All of the interior appointments, including steering wheel, seats, pedals, and control levers, are ergonomically designed for optimum comfort and ease of operation, thus minimizing driver fatigue — particularly valuable for long-distance driving.

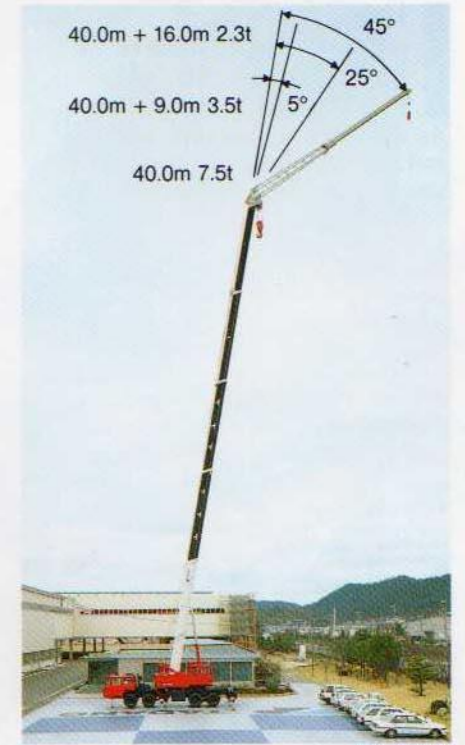
High-capacity lifting

Full-length power hexagonal boom

Tadano's new hexagonal boom has been designed to maximize flexural and torsional rigidity while reducing unnecessary weight. The result is a revolutionary boom that is lighter and stronger than those found on conventional cranes. Both the TG-700E and TG-500E feature a five-section boom that is equipped with three telescope cylinders for full-length power extension/retraction from 11.0m to 42.0m and 10.65m to 40.0m, respectively. The single lever control makes telescoping quick and simple.



TG-700E



TG-500E

Single top (auxiliary boom sheave)

You can mount a single top to the boomhead to facilitate the high-speed lifting of light loads when the extra lift height provided by the jib (boom extension) is not required.



Wide elevation range

The double-acting hydraulic elevation cylinders, fitted with a counterbalance valve, have an elevation range of -2° to 83° for the TG-700E, and -3° to 80° for the TG-500E — versatile enough to answer the requirements of almost any jobsite. The negative boom angle permits ground level reeving.



Swingaround jib (boom extension)

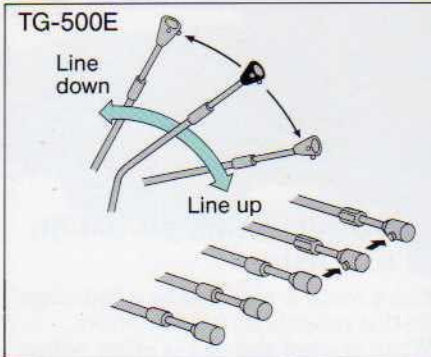
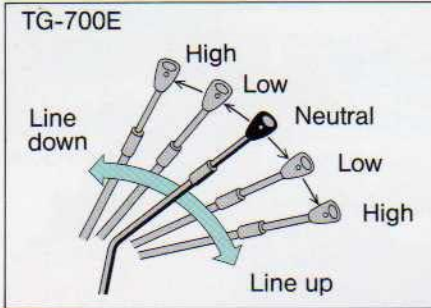
Extra reach is provided by a two-stage jib that extends by 9.0m or 16.0m. When erected, the unit is offset either 5° or 30° for the TG-700E and 5°, 25° or 45° for the TG-500E from the main boom center line. The stowage position alongside the base boom section is slightly offset to ensure disconnection from the boomhead.



Efficient load management

Dual system – automatic fail-safe brake and free-fall operation

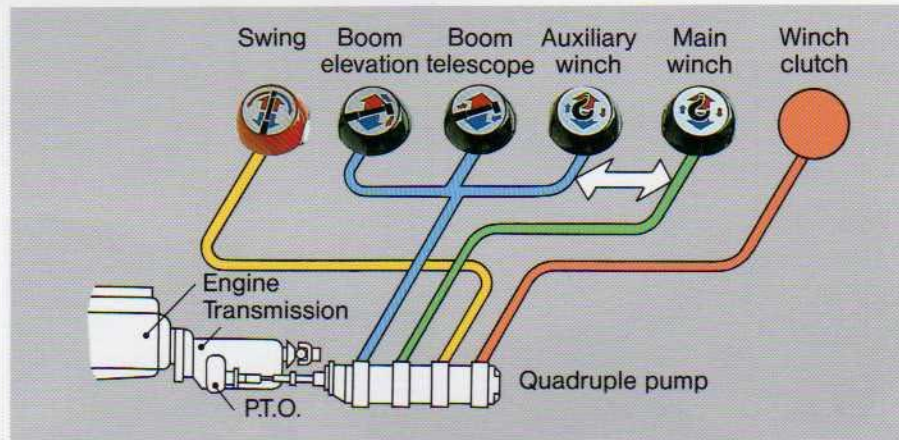
An automatic fail-safe brake system and counterbalance valves ensure safe, smooth operation. And the main and auxiliary winches feature clutch-lever switching to free-fall operation with a foot brake, which allows the hook to be quickly lowered. This is convenient when operating over tall buildings. Tadano employs a powerful, high-torque two-motor, two-drum winching system. The main winch features a two-circuit combination, two-speed-type circuitry that, combined with accelerator pedal control, provides varying line speeds. To increase rope service life, the winch drums are grooved and wider in diameter.



With the TG-500E, a switch located on the lever provides high-speed winching when continually depressed.

Quadruple gear pump system

Four gear pumps are employed in the hydraulic system. The first three control the main winch, auxiliary winch, boom telescoping and elevation, and swing. The fourth pump provides hydraulic pressure for the winch clutch. The independent pumps allow each to perform to their maximum capability without diminishing the performance of the others.



This illustration shows the pump system incorporated in the TG-700E. With the TG-500E, the first gear pump controls boom telescoping and elevation, while the second pump, the main and auxiliary winches.

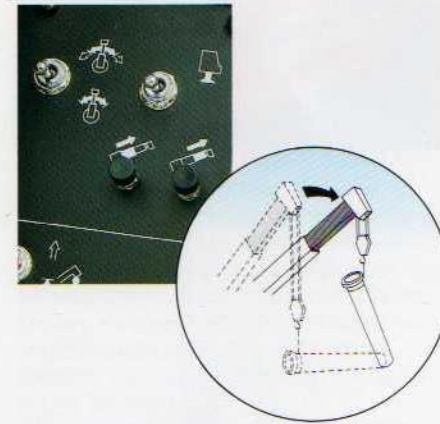
Minimum tail swing radius

Reduced superstructure size minimizes the tail swing radius to 3.80m for the TG-700E and 3.52m for the TG-500E. This allows the cranes to operate at space-limited jobsites.



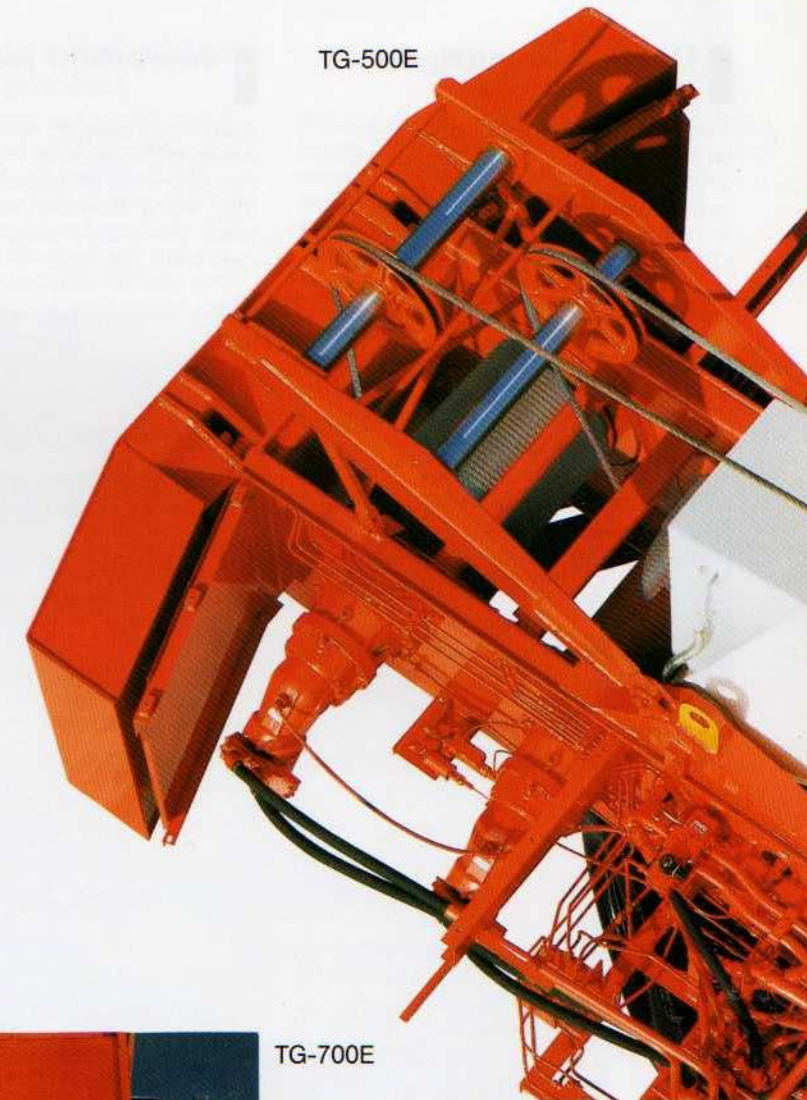
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With the TG-700E, in addition to the above switch, a switch fitted to the control lever also provides twin swing control.

TG-500E



TG-700E



Stable from the ground up

Duplicated outrigger controls

Two outrigger control centers — one on each side of the carrier — have their own level gauges and the control layout virtually eliminates the possibility of inadvertent operation. The outriggers can be extended independently or simultaneously and, for extra safety, the beams can be pinned in the fully extended or fully retracted position. In addition, the floats are permanently attached to the jacks, eliminating troublesome mounting chores and permitting rapid setup.



Oil reservoir

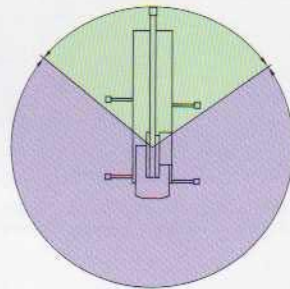
A large-capacity oil reservoir is fitted with a level gauge. In addition, the return line filter has a quick-change replaceable element that helps simplify maintenance.

Oil cooler

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With a front jack, full lift capacity is available through a 360° swing.

Counterweight dismounting device*

The counterweight can be easily removed by operating a lever in the crane cab (available as option for the TG-700E only). This is convenient when traveling for long hours or when there is a need for reduced overall crane weight.



*Optional equipment

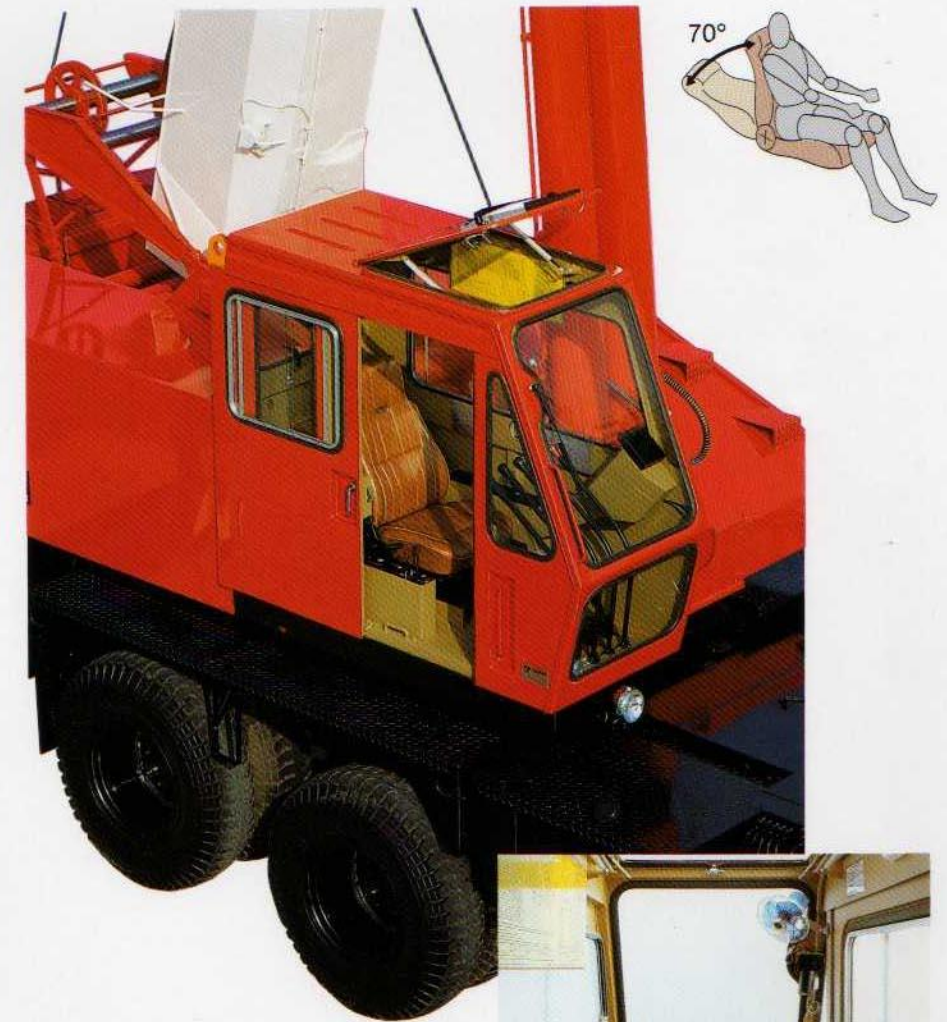


In tune with the operator

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The TG-700E's crane cab. Instrument and control layouts are slightly different from those of the TG-500E.

