

Gradall is pleased to present its collection of crawler excavators, Gradall crawler undercarriages provide a stable platform for our world-famous versatile boom, maneuvering and working on rocks, dirt and sand as well as in deep mud and on hillsides.



Overall Chassis View

1 Frame:

Gradall crawler undercarriages provide a stable platform for our versatile boom, while maneuvering and working on rocks in deep mud and on hill sides.

Chassis equipment includes:

- Triple Grouser excavator pads with widths of 800 mm or 600 mm enhance the excavator's ability to track through rough terrain. Travel speed in the high range can be up to 3.4 mph, while low range has a travel speed of 1.9 mph.
- Dual range, high-torque piston motors power each track. For sure travel and stopping capability, the excavator has a three-stage planetary drive and automatic spring set wet disc parking brake.
- Track adjustments are made using tension cylinders, a grease gun and special fitting in the tool kit.
- One or two top rollers are used, depending on the model, for better track chain support and longer track life.
- A state-of-the-art system applies powder coat paint for excellent protection and appearance. Various panels and components are painted before assembly, keeping paint off hoses and fittings.

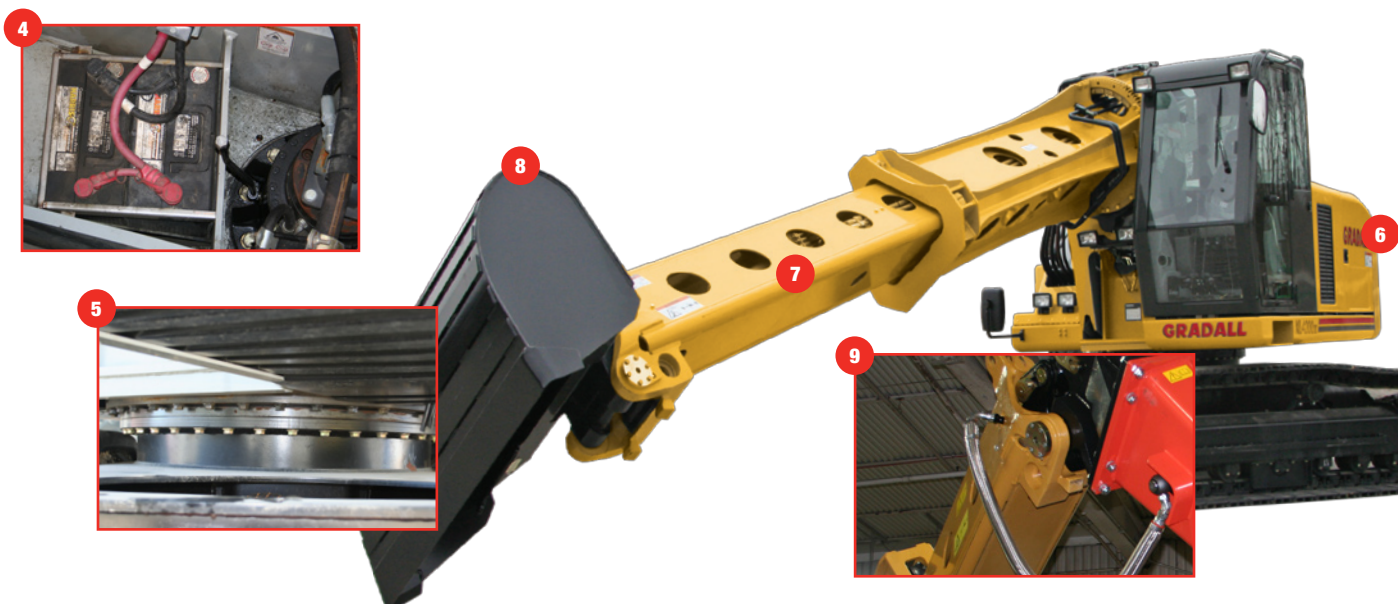
Engine Components

2 Engine:

- All Gradall crawler models use a fuel-efficient engine to power the undercarriage and to operate the upperstructure and boom. A Detroit Diesel Mercedes OM-904 Tier III engine with four in-line cylinders is standard. The engine is turbocharged with an air-to-air intercooler.
- The off-highway engine is certified in all 50 states with electronic controls, including a standard built-in safety de-rate and shutdown system.
- Intake air comes through a two-stage dry-type air filter with a safety element and service indicator.
- Variable-viscous fan-clutch system helps to reduce noise, dust and excessive fuel consumption.
- Engine powers load sensing, axial piston pump with oil flows of zero to 105 gpm.
- Engine mounted pilot gear pump supplies 6 gpm.

3 Fuel Tank:

The 99-gallon fuel tank is mounted on the right side of the upperstructure. Typically, it carries more than enough for a full day's work, eliminating nonproductive downtime to re-fuel.



4 Electrical System:

Gradall models have an electrical system that's 12-volt DC using a 100-amp alternator with an integral voltage regulator. Two batteries are mounted underneath the rear of the main boom for protection.

Upperstructure

5 Internal Tooth Swing Bearing:

- Crawler models have an upperstructure that's supported by an internal tooth swing bearing - a design that allows Gradall to use a larger bearing than ever before. As a result, the upperstructure has greater support and access is easier if repairs are needed.
- With a planetary transmission, upperstructure can swing 360 degrees continuously at speeds up to 8 rpm.
- Spring applied swing brake, released hydraulically, gives the operator the ability to precisely control the boom and attachments.

6 Counterweight and Frame:

- New counterweight and upperstructure frame design has reduced tail swing by as much as 1½', making it easier to work in traffic.
- Swing lights, recessed into counterweight, inform personnel on the job that upperstructure is rotating.

Boom

7 Design:

- Triangular boom design has become a traditional Gradall advantage, delivering extra strength and durability on the toughest jobs. It even works under bridges, wires and trees where comparable sized conventional booms can't operate.

- The boom has adjustable rollers on both boom sections. The rollers allow the two sections to telescope smoothly into the right position.

- Entire Gradall boom delivers full power as it tilts 110 degrees in both directions. That's far better than bucket-mounted tilt attachments that add extra weight and reduce breakout capacity.

- Adjustable boom tilt speed gives the operator more productivity advantages because attachment positioning is never a problem with 220 degrees of boom tilt.

8 Bucket Adapter:

- New bucket adapter on Gradall's Series III excavators is cast steel with new linkage geometry.
- Design produces up to 25% more bucket breakout force.
- Maintain optimum speed while keeping the 165 degree's bucket arc.
- The new bucket adapter also enables the operator to reverse the bucket position for more efficient cleanup work and material movement.
- Full floating pin design allows for easier maintenance and longer pin brushing life.
- Quick attach wedge bolt system, along with tilting boom, simplifies task of changing buckets and other attachments with no need to hammer out pins and find a level spot to work.

9 Auxiliary Hydraulics:

Auxiliary hydraulic valve is standard on every crawler model. With the addition of auxiliary hydraulics, a variety of hydraulically driven attachments can be easily fitted to the end of the boom. Plumbing is safely secured inside the boom, well protected from contact damage.



Hydraulic System

10 Reservoir:

The hydraulic system is centered around a reservoir with a 10-micron return filter and the load-sensing piston pump, driven directly off the engine.



11 Center Pin and Valve Bank:

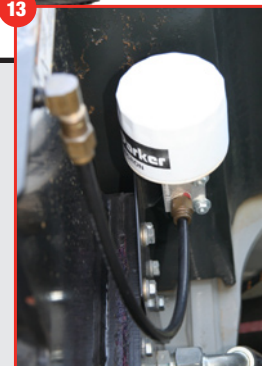
- Gradall's center pin assembly links the operator controls with actual machine functions and carrier positioning advantages.
- The main control valve delivers perfectly metered oil to all machine functions.
- System uses microprocessors to control the speed and force of all machine functions by the way of electronic joysticks controlled by the operator.

12 Oil Cooler:

The large oil cooler is equipped with dual thermal bypass valves, keeping hydraulic system running at optimal temperatures

13 Pilot Pump and Filter:

- Hydraulic system uses an engine-mounted pilot pump
- Remote mounted pilot filter system also helps deliver pilot oil to control valve for the electrically controlled end caps.
- End caps provide smooth control of all machine functions.
- Load sense relief circuits are set at a maximum 4900 psi.
- Electronic control maximizes engine horsepower while minimizing fuel consumption.



Upperstructure Cab

14 Standard Features Include:

- All-weather upperstructure cab is roomy and comfortable.
- Rubber mounts limit the shock and vibration while the machine is digging.
- Radio, acoustic lining and air conditioning.
- Work lights help illuminate work area.
- For fresh air, front window slides to an overhead storage position. The front foot glass is removable and stows inside the cab.
- High visibility mirrors provide view of job site.



15 Travel Features Include:

- After selecting either high or low range mode, the operator uses electronic foot pedals with handles to control actual crawler travel speed, direction and individual tracks, providing efficient steering capability. For difficult travel conditions, the system automatically shifts the crawler drive into low speed. The foot pedals sound travel alarm, alerting people in the vicinity that the machine is about to move.

16 Seating Module:

- Operator's seat can be adjusted eight different ways.
- Left and right arm pods conveniently contain electronic joysticks that control all boom functions.
- Auto idle control reduces engine rpm to idle when controls are returned to neutral for 7 seconds. This reduces noise and fuel consumption while waiting for the next truck or traffic.
- Joysticks control the tilt, tilt speed override and horn, plus the design makes it easy to access the auxiliary hydraulic control and the bucket shake feature.
- Right arm pod contains controls for work lights and boom light switches. Left arm pod has controls for tilt speed and radio.

17 Other Controls:

- Dig mode switch for fine grading control or maximum performance digging.
- Climate controls to adjust heater and air conditioning.
- High/Low travel switch.
- The Easy-to-read monitor lets operator know, at a glance, the condition of many systems on the machine. Systems include engine RPM, oil pressure, battery voltage, hydraulic oil, and coolant temperatures.
- Monitor also helps the operator check warning system, hydraulic pressures, fuel level and hydraulic temperature and reservoir level.

18 Joystick Pattern Switch:

Training a new operator? That task is now easier with the new joystick control pattern switch. Change from the Gradall pattern to SAE or John Deere control pattern with a simple flip of a switch inside the operator's cab. Nothing could be easier. Change the control pattern decal overlays, located in the manual storage drawer under the seat, every time the control pattern is changed.

For more information, please visit:

www.Gradall.com/walkaround/index.html

Explore the online virtual tour of all Gradall Crawler Models, Rough Terrain Models, and Highway Wheeled Models.