

ROYAL

MOTOR GRADER

MODEL
80

Summary of features

- **Caterpillar 910 Power Package 3204, 65 Flywheel H.P. Diesel Engine.**
- **Articulated Frame, Sharp Turning Front Wheels** provide excellent maneuverability and short turn radius. Steering control is all hydraulic.
- **Caterpillar Powershift Transmission.** Three speeds forward, three reverse. Caterpillar torque converter and drive axle.
- **Full Hydraulic Controls** for wheel lean, blade lift, circle drive, centershift and articulation control. Lock valves are provided on each implement circuit.
- **Low Profile R.O.P.S. Cab** combines convenient control placement with the comfort of sit-down operation.
- **Calliper disc brakes** for excellent braking and easy servicing.



Caterpillar Engine

Horsepower @ 2400 RPM 65
Kilowatts 48

(Kilowatts (kW) is the International System of Units equivalent of horsepower.)

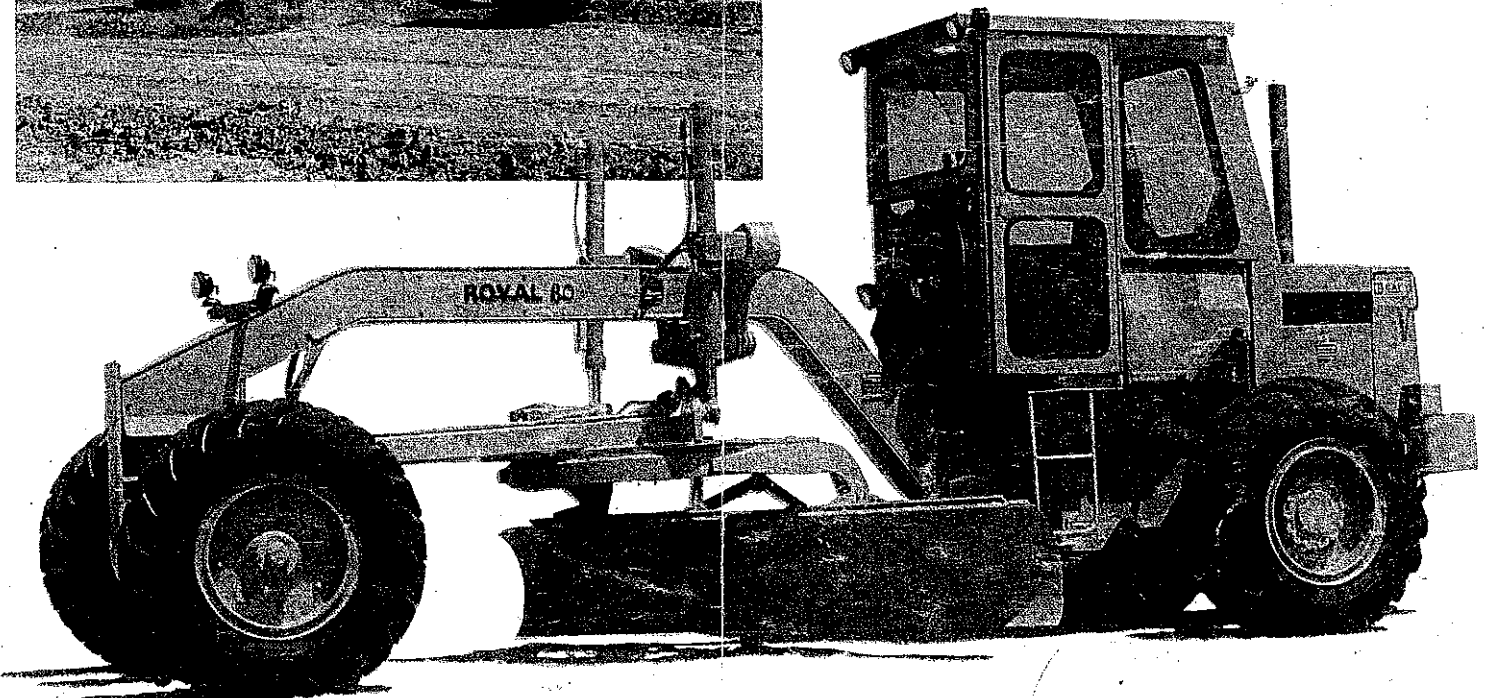
The net power at the flywheel of the vehicle engine operating under SAE standard ambient temperature and barometric conditions, 85°F (29°C) and 29.38" Hg (995 mbar), using 35 API gravity fuel oil at 60°F (15.6°C). Vehicle engine equipment includes fan, air cleaner, water pump, lubricating oil pump, fuel pump and alternator. Engine will maintain specified flywheel power up to 7500 feet (2300 m) altitude.

Caterpillar 4-stroke-cycle, 3204 diesel Engine with four cylinders, 4.5" (114 mm) bore, 5" (127 mm) stroke and 318 cu. in. (5.2 liters) displacement.

Direct injection fuel system with individual adjustment-free injection pumps and valves.

Cam-ground and tapered aluminum alloy pistons with 2-ring design. Steel-backed aluminum bearings. Hardened crankshaft journals. Pressure lubrication with full-flow filtered and cooled oil. Dry-type air cleaner with primary and safety elements.

12-volt direct electric starting system with 40-amp alternator.



Shown with some optional equipment.

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Transmission

Planetary power shift with three forward and three reverse speeds.

		1	2	3
Forward	MPH	4.4	8.4	16.5
	km/h	7.1	13.5	26.5
Reverse	MPH	4.6	8.7	16.5
	km/h	7.4	14.0	26.5



Circle

Seamless high strength steel 59" diameter. Uniform flame cut teeth. Raised wear surfaces top and bottom prevent circle teeth from contacting support shoes. Hydraulically driven worm gear provides full 360° circle rotation.



Moldboard

Wear resistant, high carbon steel.
Length x Width x Thickness 10' x 22" x .75"

Cutting edge - through hardened wear resistant steel.
Width x Thickness 6" x .62"



Drive Axle

Drive axle fixed, axle shafts may be removed without removing wheels and planetaries. No spin differential is standard.



Planetaries

Planetary reduction in each drive wheel. Planetary units may be removed independently of wheels and brakes.



Front Axle

Solid steel arched bar provides 22" ground clearance. Oscillates total of 32°. Front wheel lean angle 18° left or right.



Steering

Front Wheels - full hydraulic power.
Steering Range - 50° left or right.
Frame - hydraulically actuated steering - 20° left or right.
Minimum Turn Radius - 19'-6" (outside front tires)
*Using frame articulation, wheel steering and wheel lean.



Brakes

Service - Two Wheel, Caliper Disc Brakes standard, hydraulically actuated. Right pedal actuates brakes without neutralizing transmission. Left pedal applies brakes and neutralizes transmission for faster easier operation, excellent for inching.

Parking - Mechanical Shoe Brake.
Emergency - Manual Control through booster.



Tires

Front - 13.00 x 24 (8 PR) Traction Type
Rear - 15.5 x 25 (8 PR) Traction Type



Basic Operating Weight

with cab 17,250 lbs.
with canopy 16,900 lbs.

Standard Equipment:

- 12V Electric Starting
- 40-Amp Alternator
- Fuel Priming Pump
- Dry Type Air Cleaner
- Muffler
- Engine Side Shields
- Rear Tow Hitch
- Back-up Alarm
- Stop & Tail Lights
- Back-up Lights
- Cab Interior Light
- Instrument Panel Lights
- Tool Box
- Door Locks
- Enclosed R.O.P.S. Cab
- Tinted Safety Glass
- Cab Sound Insulation
- Adjustable Seat & Seat Belt
- Cab Heater & Defroster Fan
- Throttle Accelerator/Decelerator
- Warning Horn
- Windshield Wiper
- Air Cleaner Indicator
- Engine Service Meter
- Engine Oil Pressure Gauge
- Engine Coolant Temperature Gauge
- Transmission Oil Temperature Gauge
- Ammeter Gauge

Optional Equipment

- Full Height R.O.P.S. Cab
- Full Height R.O.P.S. Canopy
- Low Profile R.O.P.S. Canopy
- Cab Air Conditioning
- Cab Pressurizer
- Windshield Washer
- Rearview Mirrors
- Tool Kit
- Vandalism Protection Kit
- Directional Lights
- Headlights
- Work Lights
- Warning Lights
- Push Block
- Counterweight
- 15.5 x 25 8 PR Front Tires
- 15.5 x 25 12 PR Tires
- 17.5 x 25 12 PR Rear Tires

Optional Earthmoving Attachments:

- 12-Foot Moldboard
- Hydraulic Blade Side Shift
- Hydraulic Blade Tip Control
- Hydraulic Blade Float Control
- Blade Extensions
- Rear Mounted Scarifier
- Front Mounted Dozer Blades
- Front Mounted Snow Blades
- Rear Mounted Window Eliminator

NOTE: Other options may be available upon request.

