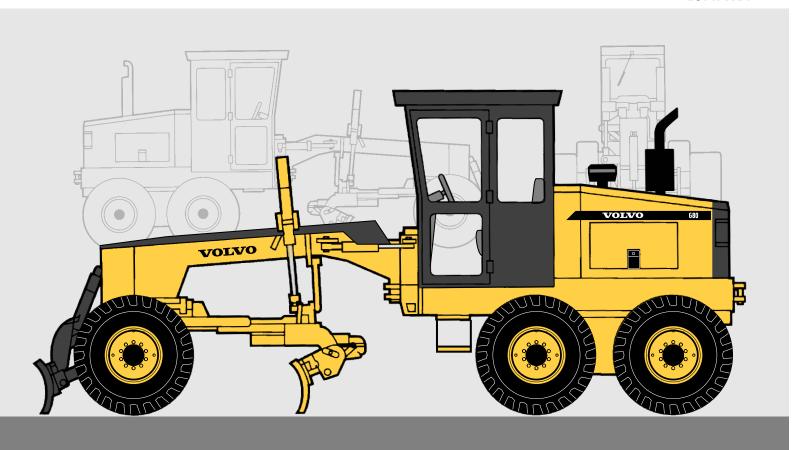
VOLVO MOTOR GRADER

G80 / G86

COMPACT



KEY FEATURES:

- Infinitely variable ground speeds 0-20 mph (0-32 km/h)
- ROPS canopy or fully enclosed cab ROPS
- Tight turning radius 16'6" (5 029 mm)
- Full range of front and rear attachments
- Fully adjustable, low effort, operator friendly controls
- Tandem drive or All Wheel Drive
- Dual lever speed and directional controls
- Hydraulically Boosted Dual Braking System with reserve power assist
- · Heavy duty positive traction differential
- 2 speed rear axle gearbox with neutral position
- 10' (3 048 mm) hydraulic sliding moldboard
- Hydraulic leaning front wheels

MODEL	G80	G86	
Configuration	Articulated Frame Tandem Drive	Articulated Frame All Wheel Drive	
Engine	Cummins 4B3.9	Cummins 4BT3.9	
Output (SAE J1349)	85 hp (63 kW)	110 hp (82 kW)	
Operating weight	15,000 lb (6 800 kg)	15,500 lb (7 030 kg)	
Turning Radius	16'6" (5 029 mm)		





G80

Total 1	5,000 lb	6 800 kg
Front wheels	5,010 lb	2 270 kg
Rear wheels	9,990 lb	4 530 kg

G86

Total	15	,500	lb	7	030	kg
Front wheels	5	,290	lb	2	400	kg
Rear wheels	10	,210	lb	4	630	kg

Weights shown include ROPS canopy with FOPS protection, all operating fluids and operator.



ENGINE DATA

Gan

Make/Model	Cummins 4B3.9
Type 4 cycle, natur	ally aspirated, diesel
No. of cylinders	4
Bore & stroke	4.02" x 4.72"
(102 mm x 120 mm)
Displacement	239 cu in (3.92 L)
Horsepower @ 2500 F	RPM
•	85 hp (63 kW)

G86

Make/Model	
Type 4 cycle	e, turbocharged, diesel
No. of cylinders	4
Bore & stroke	4.02" x 4.72"
	(102 mm x 120 mm)
Displacement	239 cu in (3.92 L)
Horsepower @ 2500	
,	110 hp (82 kW)

Engine equipped with a dual element, dry type air cleaner with evacuator. 12 volt starting and electrical system with 65 amp (780 watt) alternator.

Performance: Rated gross horsepower to SAE J1995 standard conditions with water pump, lubricating oil pump and fuel system.

Optionally available on G80: 110 hp (82 kW) Cummins 4BT3.9 turbocharged diesel engine.



TRANSMISSION

Туре	Hydrostatic
Control	Dual lever speed
	and directional control
	lutched" by brake pedal.
Mechanical neutral lo	ockout with neutral start
switch.	
Operating pressure.	3,000 PSI
	(20 700 kPa)
Maximum pressure.	5,000 PSI
	(34 500 kPa)

Hydrostatic Drive provides infinitely variable control to the operator through the entire range of ground speeds. This permits very smooth increases or decreases in operating speeds, essential when fine grading. Rapid forward or reverse selection makes repetitive operations simpler.

SPEEDS @ 2500 RPM

	Forward and Reverse
Working range	0-10 mph
	(0-16 km/h)
Roading range	0-20 mph
	(0-32 km/h)

Foot controlled forward and reverse pedals available optionally.



DIFFERENTIAL / FINAL DRIVE

Positive traction differential consists of 4 bevel gears and automatic lock/unlock. Heavy duty flanged sleeve construction is supported by tapered roller bearings, allowing fully floating, non load carrying drive axles. A heavy duty two speed gearbox provides work and travel modes as well as a neutral position for towing.

Ground clearance 10" (254 mm)



TANDEMS

Tandems are fabricated steel box construction.

Wall thicknesses

- inner & outer	0.625"	(16 mm)
Drive chain pitch	. 1.5"	(38 mm)
Oscillation		+/-25°



WHEELS & TIRES

Tire size	15 x 19.5, TL, G-2
Ply rating (PR)	8
Rim size	12.25" (311 mm)
Bolt-on type	



BRAKES

Service BrakesFoot operated Fade resistant, hydraulically actuated disc brakes effective on all four rear wheels.

Braking system operates from a separate hydraulic pump and features dual circuits for even braking on both sides of the grader. Includes reserve power assist and operator warning system (visual and audible). Hydrostatic drive provides dynamic braking.

All braking systems meet SAE Standard J1473 OCT 90, SAE Recommended Practice J1152 APR 80 and ISO 3450: 1985.



FRONT AXLE

Front axle type: fully welded steel truss, gusseted for torsional strength and rigidity. Single oscillation pin with replaceable pin supports.



STEERING

Steering system operates from separate hydraulic pump.

(8 275 kPa)



FRAME

Full front and rear frame sections



ARTICULATION

4" (102 mm) diameter pivot pins, turning on 4 tapered roller bearings. 2 hydraulic cylinders mounted with replaceable ball joints and dust shields.

Articulation angle37°



CIRCLE



CIRCLE DRIVE



DRAWBAR

Main drawbar (solid) 4" (102 mm) square Cross bar (solid)1" x 4"

(25 mm x 102 mm)

"T" bar designed for maximum visibility and support. Connected to frame by shim adjustable ball stud.



MOLDBOARD

Optional circle sideshift cylinder available for increased blade mobility.

right or left87" (2 210 mm)

- articulated & extended



CAPACITIES

Fuel tank	39 gallon (148 L)
Hydraulic	
Coolant	4.5 gallon (17 L)
Tandems (each)	18 gallon (68 L)
Final drive	4.5 gallon (17 L)



CAB & CONTROLS



All hydraulic controls are located on the fully adjustable steering pedestal. Ten low effort, direct acting hydraulic control levers are arranged in accordance with the industry standard for optimum operator convenience, visibility and comfort. Full hydraulic controls provide operation of circle turn, left and right blade lift and float control, articulation, moldboard slide, moldboard tilt, leaning wheel, front blade/scarifier, and optional circle side shift and front/rear attachments.

Pedestal instrument cluster: engine temperature gauge; engine oil pressure gauge; fuel level gauge; volt meter; tachometer.

A right hand console houses the transmission controller, throttle, hour meter, all electrical switches, heater controls and ignition switch.



HYDRAULICS

Standard "Single Flow" hydraulic system with feathering blade lift controls provides smooth, uniform response.

Hydraulic tank contains a temperature gauge and sight glass for fluid level checks.

Operating pressure 1,800 PSI (12 411 kPa)

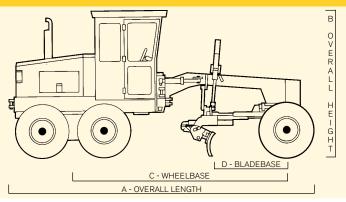
Two section gear pump......24 gpm (91 lpm)

"Twin Flow" hydraulic system available as an option.



FILTERS

DIMENSIONS



- A Overall length 20'10" (6 350 mm)
- B Overall height.......9'6" (2 896 mm)
- C Wheelbase 15'4" (4 674 mm)
- D Bladebase6'2" (1 880 mm)

Overall width



G86 AWD operates in low range, forward and reverse speeds from 0-10 mph (0-16 km/h).

Automatically disengages when the operator presses the brake pedal or shifts the transmission to neutral. All wheel drive provides optimum traction in all working conditions. System maintains equalized traction to both front wheels in turns and in all traction situations. Grader retains full front axle mobilities of oscillation and wheel lean.

ATTACHMENTS

Automatic Blade Control Counter Weight Front Mounted 7' (2 134 mm) Blade/Scarifier Front Mounted 8' (2 438 mm) Blade/Scarifier Front Mounted "V" Scarifier Rear Mounted Rippifier Rotary Broom Side Dozer Utility Front End Loader Windrow Eliminator

STANDARD EQUIPMENT

Hydrostatic drive

Heavy duty positive traction differential 2 speed rear axle gearbox with neutral position

ROPS canopy, with FOPS protection, c/w fully adjustable control pedestal, low effort, industry standard controls, feathering type blade lift controls 11' (3 353 mm) hydraulic sliding

moldboard c/w hydraulic tilt

Hydraulically Boosted Dual Braking System with reserve power assist

Power steering

Suspension seat

Hydraulic leaning front wheels

15 x 19.5 grader tires

Ratchet type park brake with operator warning alarm and indicator

Gauges: engine temperature and oil pressure, volt meter, fuel level, tachometer, hour meter

Moldboard float control valves

Muffler

12 volt electrical system

Backup alarm

Seatbelt

Steps and grab handles

Lockable engine side panels

Backup lights

Front and rear directional, brake and tail

lights and hazard lights

2 dual beam headlights

Inside convex rear view mirror

External lockable battery box

8 bank hydraulic manifold

Moldboard - 10' (3 048 mm)

FRONT MOUNTED BLADE (optional)

With scarifier teeth Size7' x 17" x 5/8" (2 134 mm x 422 mm x 16 mm) 8' x 17" x 5/8" (2 438 mm x 422 mm x 16 mm) Blade ground clearance 16" (406 mm) Replaceable, standard grader cutting edge Number of teeth4 Mounted on front blade. Replaceable tips below blade Cutting width43" (1 092 mm)

OPTIONAL EQUIPMENT

All Wheel Drive (available as G86) Enclosed ROPS cab with FOPS protection Cummins 4BT3.9 turbo diesel 110 hp (82 kW) (G80)

Moldboards

- 11' x 19" x 5/8"
 - (3 353 mm x 483 mm x 16 mm)
- 12' x 19" x 5/8"

(3 658 mm x 483 mm x 16 mm)

Hydraulic circle sideshift

Electronic blade controls

Forward-Neutral-Reverse foot control pedal Foot pedal accelerator

7' (2 134 mm) Front Mounted Blade with scarifiers

8' (2 438 mm) Front Mounted Blade with scarifiers

Cab heater

Windshield defroster

Beacon light

Working lights

Windshield wipers

Windshield washers

Air cleaner service indicator

Outside rear view mirrors

Rear glass in canopy

AM/FM radio cassette

Air conditioning

"Twin Flow" hydraulic system

Your safety and the safety of those around you depends on using care and judgement when operating and servicing your grader. Do not operate the grader until you read and understand the warnings and instructions in the operator's manual, www.volvo.com

Under our policy of continuous product development and improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

