YOUR GUIDE TO

BETTER BLADING

JOHN DEERE

MAKE THE MOST OF YOUR MOTOR GRADER

BETTER BLADING

The setup specs in this brochure cover what you'll encounter on a typical jobsite. With varied material conditions, operator preferences, and onsite equipment comes the need for different blade positioning.

Find the technique that's right for you and blade like a champ.

V-ditching

Position the moldboard with the toe just outside the right front tire and the moldboard heel just outside the left tandems.

Flat-bottom ditching

Place the entire length of the blade in the ditch, with the toe of the blade at the base of the banked slope and the heel at the base of the inside slope.

Cleaning wet ditches

Position the moldboard toe behind the right front wheel. Move the material onto the foreslope between the tandem wheels without cutting the foreslope.

Finishing steep slopes

For 3-to-1 or steeper slopes, make the first pass across the top with the frame straight and the blade shifted as far downslope as possible. Make subsequent passes on the slope with the frame articulated downhill and the wheels leaning upslope. On the next pass, keep the moldboard as before, but side-shift both the circle and the blade upslope. Angle the blade to place the windrow between the tandems.

BEGINS HERE

Finishing high, gentle slopes

For any slope work, use the first pass to smooth the base. To cut the slope from the top, articulate the frame and place the moldboard parallel with the front axle. On the next pass, side-shift the circle and angle the blade toward the slope. Position the heel of the blade outside the rear tires, and position the toe upslope from the front tire to cast material outside the tandems.

Bank cuts

As with slope work, bank cuts require a smooth platform for the grader. Make the first pass to level the base of the bank. To set up, side-shift the saddle, circle, and blade to the bank side. Place the blade toe forward and center the heel to cast the material inside the tandems. Pitch the blade forward to roll the material.

Crowning roads (two pass)

First, bring the material from the shoulder to the center. On the second pass, place the moldboard slightly angled beyond parallel to the front axle and operate down the center of the windrow, with the front wheels and back tandems slightly offset. Keep the moldboard high on the load to feather material to both sides.

Crowning roads (three pass)

On the first pass, bring the material from the shoulder to the center. On the second pass, move the material past the center. On the third pass, place the moldboard slightly angled beyond parallel to the front axle and operate down the center of the windrow, with the front wheels and back tandems slightly offset. Keep the moldboard high on the load to feather material to both sides.

Grading cul-de-sacs

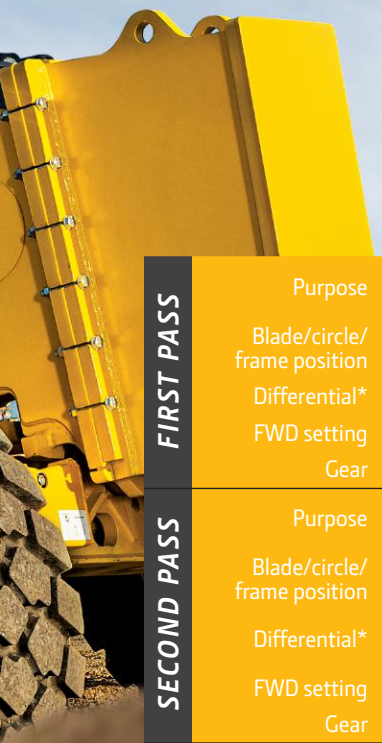
Articulate the frame and lean the front wheels to turn. Angle the blade to avoid spilling beyond the toe and cast the material outside the tandems. Pitch the blade slightly forward to get the material rolling.

Spreading materials

Articulate the grader with the circle centered and the front wheels leaned toward the heel of the blade. Side-shift the blade and angle it approximately 30 deg. so the material rolls off the heel outside the tandems. Pitch the blade forward for optimized material-rolling action.

BEGINS HERE

Familiar features. Leading-edge advantages. Several options. G-Series Motor Graders are loaded with customer-inspired improvements, empowering operators to perform at their best.

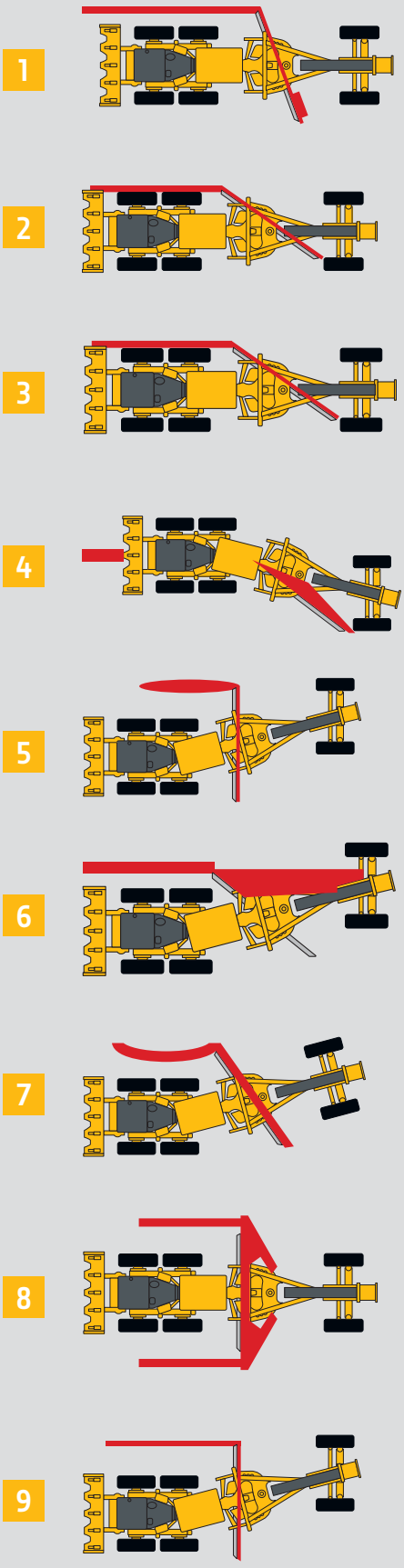


		V-ditching	*Flat-bottom ditching*	*Cleaning wet ditch*	*Finishing steep slopes*	*Finishing high, gentle slopes*	*Finishing low, gentle slopes*
FIRST PASS	Purpose	Mark ditch lines	Slice off back slope	Bring material to shoulder	Prepare smooth base	Prepare smooth base	Prepare smooth base
	Blade/circle/ frame position	1	3	4	2	2	2
	Differential*	Auto-diff Lock	Auto-diff Lock	Locked	Auto-diff Lock	Auto-diff Lock	Auto-diff Lock
	FWD setting	Ditching	Grading	Mud	Grading/Mud	Grading	Grading
	Gear	1st or 2nd	1st or 2nd	1st or 2nd	2nd or 3rd	2nd or 3rd	2nd or 3rd
SECOND PASS	Purpose	Cut V-ditch (3-to-1 inslope)	Cut ditch	Spread material	Cut on slope	Cut slope from top	Cut slope
	Blade/circle/ frame position	2	3	2	4	9	2
	Differential*	Auto-diff Lock	Auto-diff Lock	Auto-diff Lock	Unlocked/Locked	Locked	Auto-diff Lock
	FWD setting	Ditching	Grading	Mud	Grading/Mud	Grading	Grading
	Gear	1st or 2nd	1st or 2nd	2nd or 3rd	1st or 2nd	1st	1st
THIRD PASS	Purpose	Cleanup	Move material to shoulder		Cut slope near bottom	Cut on slope	Cleanup
	Blade/circle/ frame position	2	2		4	4	2
	Differential*	Auto-diff Lock	Auto-diff Lock		Unlocked/Locked	Unlocked/Locked	Auto-diff Lock
	FWD setting	Ditching	Grading		Grading/Mud	Grading	Grading
	Gear	2nd or 3rd	1st or 2nd		1st or 2nd	2nd or 3rd	2nd or 3rd
FOURTH PASS	Purpose	Cut-back slope (1-1/2 or 2 to 1)	Cleanup		Cut slope from bottom	Cut slope from bottom	Finish slope
	Blade/circle/ frame position	3	2		4	4	4
	Differential*	Auto-diff Lock	Auto-diff Lock		Unlocked/ Locked	Unlocked/ Locked	Locked
	FWD setting	Ditching	Grading		Grading/Mud	Grading	Grading
	Gear	1st or 2nd	2nd or 3rd		1st or 2nd	2nd or 3rd	1st or 2nd
FIFTH PASS	Purpose	Clean ditch bottom			Cleanup	Cleanup	
	Blade/circle/ frame position	3			2	2	
	Differential*	Auto-diff Lock			Auto-diff Lock	Auto-diff Lock	
	Front-wheel drive	Dial setting 1–7			Dial setting 1–7	Dial setting 1–7	
	Gear	2nd or 3rd			2nd–4th	2nd–4th	

***Auto differential lock can be overridden with manual differential lock any time as needed.**

MACHINE SETUP

Cutting banks	*Crowning roads*	*Cul-de-sac*	*Mixing materials*	*Spreading piles*
Prepare smooth base	Center material in road	Subgrade outside to center	Mix materials	Spread material ahead
2	2	7	6	5
Auto-diff Lock Grading 2nd or 3rd	Auto-diff Lock Grading 2nd–4th	Unlocked Grading 1st or 2nd	Locked Ditching/Mud 2nd or 3rd	Locked Ditching/Mud 2nd or 3rd
Cut bank	Build crown	Finish grade outside to center		
3	2	7		
Auto-diff Lock Grading 1st or 2nd	Auto-diff Lock Grading 2nd–4th	Unlocked Grading 1st or 2nd		
Cleanup	Spread excess to shoulder	Remove excess from center		
2	2	8		
Auto-diff Lock Grading 2nd–4th	Auto-diff Lock Grading 3rd or 4th	Auto-diff Lock Grading 2nd or 3rd		



Pro tip — Eliminating washboards

Before placing new material on any washboarded surface, always cut and rework the area. The washboard pattern in the original surface will quickly return if the area is not properly reworked first.

CHOOSE THE RIGHT GRADER AND CONTROLS FOR YOU

Inspired by input from customers like you, our latest G-Series Motor Graders have been redesigned to include innovative new options plus the proven standards you've come to expect. And, because you asked, we've added the smaller, more economical 620G/GP and 622G/GP models to the lineup — to help you do more, whatever your application.

The competitively priced new 620G/GP and 622G/GP deliver a winning combination of power and fuel savings of up to 10 percent over their larger siblings. Horsepower, torque, and blade pull have been increased on all existing models for more generous power and lugging ability.

On GP models, opt for new dual-joystick controls, or choose state-of-the-art fingertip armrest controls; a field kit allows you to easily swap between the two. Our G models offer conventional lever-operated controls. An industry-standard steering wheel is still included on all G-Series machines.

Adding a grade-control system is quick and easy. GP models are factory equipped to accommodate your favorite system, with Topcon, Trimble, and now Leica as available choices.

Precision mode — standard on all six-wheel-drive motor graders — reduces speed without having to use the inching pedal. Working in tight spaces, around obstacles, or in a cul-de-sac has never been easier.

Introduced over a decade ago, Event-Based Shifting (EBS) has set the standard in the industry. This customer-inspired feature delivers smooth gear and direction changes, for exceptional control and grading precision without extra effort.

All-new gate-less shifter, included on all G and GP models equipped with fingertip controls, builds upon EBS technology to allow operators to directly move from forward to reverse, in any gear, at any time. AutoShift option automatically shifts gears 4–8, for even easier operation.

Standard automated cross-slope — on GP models — simplifies holding a consistent slope via a single lever, reducing the number of passes and rework.

Automatic differential lock reads the steering angle to determine turns. The toggle-switch-activated auto-diff override allows aggressive steering with heavy loads in low-traction conditions.

Visibility is expansive, with virtually unobstructed views of the heel, toe, and back side of the blade. There are also clear sightlines to the inside of the front tires and the area beneath the front axle, making it easier to navigate around obstacles.

When engaged, new Eco mode reduces engine rpm in gears 1–5, optimizing fuel usage and decreasing operating costs by up to 10 percent.

		620G/GP	670G/GP	770G/GP	870G/GP
Tandem Drive	**Maximum net power:**	160 kW (215 hp)	175 kW (235 hp)	190 kW (255 hp)	209 kW (280 hp)
	Net torque rise:	49%	63%	64%	62%
	Turning radius:	7.21 m (23 ft. 8 in.)	7.21 m (23 ft. 8 in.)	7.21 m (23 ft. 8 in.)	7.21 m (23 ft. 8 in.)
	Blade reach:	2083 mm (6 ft. 10 in.)	2083 mm (6 ft. 10 in.)	2083 mm (6 ft. 10 in.)	2329 mm (7 ft. 8 in.)
	Typical operating weight:	18 302 kg (40,350 lb.)	19 205 kg (42,340 lb.)	19 396 kg (42,760 lb.)	20 303 kg (44,760 lb.)

		622G/GP	672G/GP	772G/GP	872G/GP
Six-Wheel Drive	**Maximum net power:**	168 kW (225 hp)	190 kW (255 hp)	205 kW (275 hp)	224 kW (300 hp)
	Net torque rise:	43%	54%	55%	51%
	Turning radius:	7.21 m (23 ft. 8 in.)	7.21 m (23 ft. 8 in.)	7.21 m (23 ft. 8 in.)	7.21 m (23 ft. 8 in.)
	Blade reach:	2083 mm (6 ft. 10 in.)	2083 mm (6 ft. 10 in.)	2083 mm (6 ft. 10 in.)	2329 mm (7 ft. 8 in.)
	Typical operating weight:	19 078 kg (42,060 lb.)	19 976 kg (44,040 lb.)	20 217 kg (44,570 lb.)	21 187 kg (46,710 lb.)

DKA760 Litho in U.S.A. (17-06)