



Motor Grader

Operations & Safety Training

Target Audience: This course is designed specifically for any road maintenance team members that build or maintain gravel roads. In addition, any DOT, municipal public works, streets/roads, county, or any other government entity employees who may be called on from time to time to do gravel road maintenance using a motor grader are encouraged to attend.

Course Overview: This training course will help supervisors and operators gain a better understanding of the materials, techniques, and equipment needed for maintaining gravel roads. Participants will learn details about road design from construction to reshaping as well as recognizing the necessity of proper drainage. We will also describe many aspects of road maintenance from the grading process to material replacement. This highly interactive class combines lectures with group discussions, case studies, and hands-on activities. This class would provide an excellent orientation for new motor grader operators and a good refresher for seasoned operators.

After completing this class, students should be able to:

- Identify best practices for gravel road maintenance
- Select appropriate grading techniques needed to improve a gravel road
- Improve their skill level by actually performing the most common tasks for which a motor grader is used



For more information or to inquire about future training events:

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Classroom Part

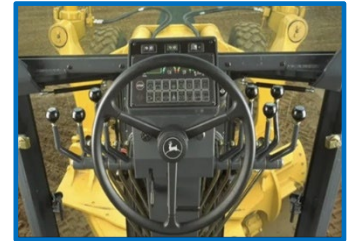
Best Practices for Gravel Road Maintenance: Includes discussion of the importance of proper drainage on gravel roads, reasons for grading gravel roads, identifying techniques and applications to stabilize the road.

Motor Grader Equipment Orientation: Includes the viewing of owner's operator video that introduces each machine component, identifies all controls and their function(s) and discusses basic safe operating principles.

External Work Zone Set-up (Temporary Traffic Control): Vehicular and pedestrian traffic strategies are summarized by referencing MUTCD Chapter 6 Temporary Traffic Control sections. This includes work in travel lanes, at the roadside and when impacting sidewalk use.

Operator Safety Rules: This section covers the rules that operators must obey to prevent serious accidents.

Equipment Inspection and Use of Pre-Job Briefing Checklists: This section reviews a sample pre-job briefing and checklist form that can be used as a tool to promote motor grader equipment safety.



Classroom:

- Machine Orientation
- Work Zone Hazard Analysis
- Job Set-Up—Pre-Job Checklists
- Imperative Operator / Pedestrian Worker Rules
- Special Operation Tasks
- ...and more!



Outside Exercises / Hands-On Operations:

- Machine Walk-Around Inspection
- Vehicle Entry, Start Up and Function Tests
- Basic Operational Controls
- Material Line Exercises - operators will practice and demonstrate their efficiency and accuracy of grading, building wind rows and distributing loose roadway materials evenly using the motor grader
- Blade Pitch / Angle Exercises – operators practice using the proper angle and pitch of the mold board and associated operations.
- Fore Slope & Back Slope Exercises – operators practice cutting a V-ditch adjacent to the road using the proper 4-to-1 or 3-to-1 ratios

Motor Grader Grade Hydroscience Test Grading Form		Clip Board Area
Student Name: _____		
Scores with a 1 or 0		
A - Machine Operation Prep / Inspection		
1	Pre-job inspection completed thoroughly/correctly? (2 points)	
2	Job Site Hazard Analysis? (3 points)	
3		
B - Equipment Entry/Startup/Basic Controls		
1	3 points of operator on entry	
2	Seat Belt	
3	Seat adjuster - Mirrors adjusted	
4	Checked all gauges, lights, signals, horn	
5	Check blade control	
6	Released park brake before trying to move?	
7	Released park brake before trying to move?	
8		
9		
C - Travel Forward at job site		
1	Blade at intermediate?	
2	Used horn (intermittent/continuous traffic/slowing)?	
3	Slowing to light speed/angled cones	
4	Yielded to pedestrian/cyclist/vehicle?	
5		
6		
7		
D - Vehicle Backing		
1	Returned to "idle" - or the same gear?	
2	Used horn (intermittent/continuous) before backing?	
3	Backing straight path only (no need for adjustment)	
4	Stopped at marked point?	
5	Stopped when not sight of operator?	
6	Responded to "stop" directions?	
E - Completed Field Exercises		
1	Pre-job hazard analysis	
2	3 points of correct work	
Note: Each item worth 2 points unless noted (100 points possible)		
Name: Inhibition: _____		
Grader Name: _____ Date: / / _____		