

Materials List for

# Continuous In-woods Production of Biochar Using a Trailer-mounted Air Curtain Burner

Deborah S. Page-Dumroese<sup>1</sup>, Joanne M. Tirocke<sup>1</sup>, Nathaniel M. Anderson<sup>2</sup>, James G. Archuleta<sup>3</sup>, Daniel W. McCollum<sup>4</sup>, Jeffrey Morisette<sup>4</sup>, Derek N. Pierson<sup>5</sup>, Carlos Rodriguez-Franco<sup>6</sup>

<sup>1</sup>USDA Forest Service, Rocky Mountain Research Station <sup>2</sup>USDA Forest Service, Rocky Mountain Research Station <sup>3</sup>USDA Forest Service, Pacific Northwest Regional Office <sup>4</sup>USDA Forest Service, Rocky Mountain Research Station <sup>5</sup>USDA Forest Service, Rocky Mountain Research Station <sup>6</sup>USDA Forest Service, Washington Office

## Corresponding Author

Deborah S. Page-Dumroese  
debbie.dumroese@usda.gov

## Citation

Page-Dumroese, D.S., Tirocke, J.M., Anderson, N.M., Archuleta, J.G., McCollum, D.W., Morisette, J., Pierson, D.N., Rodriguez-Franco, C. Continuous In-woods Production of Biochar Using a Trailer-mounted Air Curtain Burner. *J. Vis. Exp.* (206), e66716, doi:10.3791/66716 (2024).

## Date Published

April 5, 2024

## DOI

10.3791/66716

## URL

jove.com/video/66716

## Materials

Name	Company	Catalog Number	Comments
CharBoss air curtain burner	Air Burners, Inc.	T26	Comes with 36" landscape rake, sifting shovel, 1/2" drive standard ratchet with 1 1/8" socket, grease gun, and quench pan
Diesel fuel (Ultra-low sulfur)			Purchased locally
Diesel fuel tanks	Uline	H-1849Y	or similar
Engine oil (diesel grade)			Any diesel grade oil 15W40 or 10W40.
Excavator			Local rental company. Smaller sizes require less fuel.
High temperature anti-seize lubricant (16 oz cartridge)	McMaster-Carr	1288K97	lubricating hydraulic fittings
Hydraulic Oil	Amsoil	HVH05-EA (ISO32) /HVG05-EA (ISO22)	Any ISO32 synthetic hydraulic oil, ISO22 option for cold weather. Amsoil ISO32 is factory installed.
Large buckets	Uline	5495	or similar
Lighting torch (propane)	Grainger	9RCF3	or similar
1-ton pickup (or larger)	Rent locally		for transporting CharBoss to site
Viewing step	Gorilla	GLP=WP	Stable step to allow viewing into firebox or other bench-style step
Water truck			Any available water truck with minimum 300 gallon capacity; gravity feed of water to the quench pan can be used.
Wheel chocks			Blocks of 4"x 4" lumber or commercially available chocks while hitching/unhitching unit
<b>Personal protective equipment</b>			
Ear protection	Uline	S-22141	or similar

Eye protection	Amazon		or similar
Fire shirt	Grainger	12R487	or similar
Fire pants	Grainger	39EM96	or similar
Hard hat	Discount Safety Gear	SFTSCHH1000038126	or similar
Leather gloves	Uline	S-6777M	or similar
Sturdy boots			any thick soled, leather boot.
<b>Emergency gear</b>			
Garmin InReach	Cabelas	100195666	or similar
Pulaski axe	Forestry suppliers	85274	or similar
Fire rake	Forestry suppliers	85210	or similar