

## Northman Control Troubleshooting

We get a good amount of service calls about our aftermarket Northman control with adapters. Because Northman is out of business, finding an OEM control is almost impossible. So there is demand for this aftermarket controller.

We sell a universal handheld controller that comes with two Northman adapters. You will only need to use one of the adapters depending on which Northman plow you have. Basically the Northman plow had two systems, we call them the OLDER & NEWER systems.

The first thing you should do:

Figure out which Northman plow you have (NEWER or OLDER) - The easiest way to do this is by the number of coils your plow has.

If your Northman plow has 3 coils, you have an OLDER Northman plow.

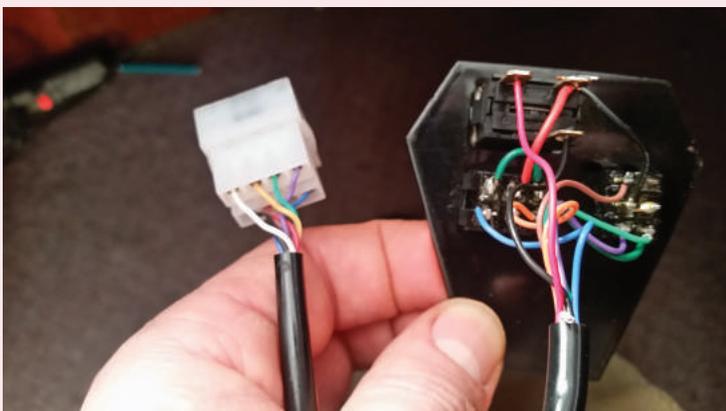
If your plow has 4 coils, you have a NEWER Northman plow.

Once you know this, install the corresponding adapter and in most cases our control will work perfectly. The adapters are marked with an "O" (for OLDER) and an "N" (for NEWER) on the 8-Pin connector.

But, we have found that at times, neither of these two adapters work perfectly. Some functions may work, others may not. Some reasons for this:

- Northman has been out of business for years, if you bought your plow second hand, there is no telling what the previous owner did to the wiring.
- If you bought our control because your current control was not functioning correctly, there is a chance your problem was some other problem besides your control (check all your grounds).
- Our control is designed to replace the "Grey" hand unit controller that was most common with Northman plows. But we recently have run into what appeared to be an OEM switch plate from Northman. The problem is, Northman had different plow systems, but continued to use the same 8-Pin connector. Meaning, old controls do plug into new systems, but they don't work & new controls plug into old systems, but they don't work either. It makes things confusing.

Below are photos of a Northman switch plate setup we recently came across (thanks for the photos Jason). As you can see the same 8-Pin connector is used, but when tracing the wires, some of the functions are plugged differently then the Northman Grey controller.



The good news is, the Northman electrical system is very basic. See below for some troubleshooting tips.

In almost all cases where our controller does not seem to be working properly, it is an issue with how the plow's harness is installed.

Maybe, UP & DOWN functions are not working properly, or LEFT & RIGHT work backwards.

There are several ways to fix this, but the easiest (normally) is to switch the plugging of the coils. On a newer 4 coils system (if the UP & DOWN don't work) flip the plugging of the UP & DOWN coil.

If the LEFT & RIGHT works backwards, flip the plugging of the LEFT & RIGHT coil. This will normally fix your issue.

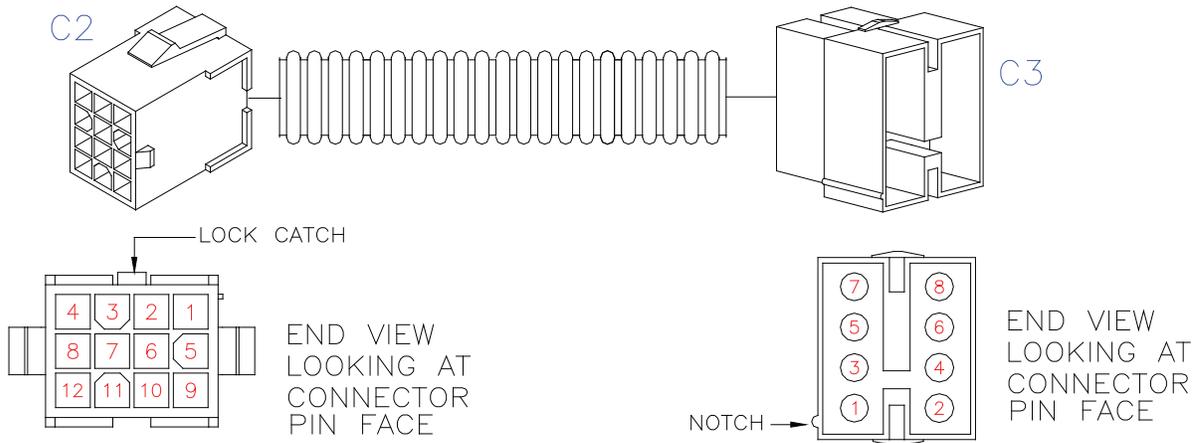
If you cannot easily flip the coil plugging, you may have to try to remove the pins (of the functions that need to be flipped) from the 8-Pin connector and replug them in the proper location. Or, you can cut the backwards wires within the adapter and splice them back together in order to create proper functionality.

If our control has no power, first check that the control has proper grounding (the control will not work without a ground). Also, check that it is getting a good (+) power signal. If both the power & the ground are good and the control still does not turn on, you may have a defective control.

See the adapter diagrams (X2) below to help you in diagnosing an issue with our control.

If your Northman plow has 3 Coils

**FOR OLDER NORTHMAN**



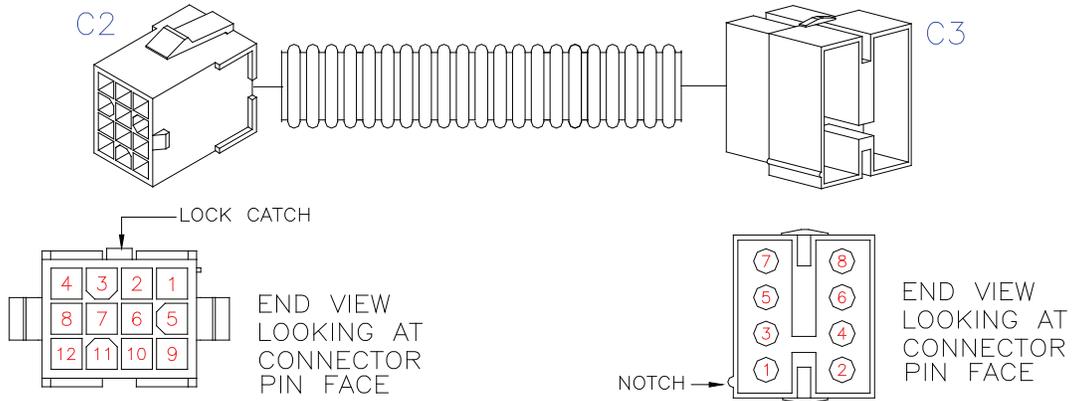
C2		
PIN #	COLOR	FUNCTION
1	RED	POS (+)
2	N/A	N/A
3	ORANGE	FLOAT
4	BROWN	PUMP SOLENOID
5	GREEN	RIGHT
6	BLUE	LEFT
7	N/A	N/A
8	N/A	N/A
9	N/A	N/A
10	N/A	N/A
11	N/A	N/A
12	BLACK	GROUND

C3		
PIN #	COLOR	FUNCTION
1	BLACK	GROUND
2	N/A	N/A
3	RED	POS (+)
4	GREEN	RIGHT
5	ORANGE	FLOAT
6	BROWN	PUMP
7	BLUE	LEFT
8	N/A	N/A

Note: Colors of the wires in this adapter may NOT match the wire colors of your Northman harness.

If your Northman plow has 4 Coils

**FOR NEWER NORTHMAN**



C2

PIN #	COLOR	FUNCTION
1	RED	POS (+)
2	WHITE	RAISE
3	ORANGE	FLOAT
4	BROWN	PUMP SOLENOID
5	GREEN	RIGHT
6	BLUE	LEFT
7	N/A	N/A
8	N/A	N/A
9	N/A	N/A
10	N/A	N/A
11	N/A	N/A
12	BLACK	GROUND

C3

PIN #	COLOR	FUNCTION
1	BLACK	GROUND
2	N/A	N/A
3	RED	POS (+)
4	BLUE	LEFT
5	WHITE	RAISE
6	BROWN	PUMP
7	GREEN	RIGHT
8	ORANGE	FLOAT

Note: Colors of the wires in this adapter may NOT match the wire colors of your Northman harness.



Keep all snowplow wire connections well greased with Dielectric Grease. Grease at least once a season.

Check all plow & vehicle grounds every season. Make sure they are clean & have no corrosion. Use sandpaper on metal when cleaning or attaching a ground to remove dirt or paint. Note: If your plow system loses a ground it will try to steal one from a different location which could cause power issues with the plow itself or your vehicle. Did we say, check your grounds.

Turn your plow control OFF when not in use, especially when driving on roads. If your control falls or is accidentally bumped, it will activate, which could cause injury.

