



GENERAL INSTRUCTION GUIDELINES

READ THIS FIRST:

- Read these instructions fully prior to beginning work. Verify all parts listed below are in the kit packaging, and all tools, equipment, skills and methods are on hand to safely complete the installation.
- Read the attached GENERAL INSTALLATION NOTES prior to beginning any work.
- Installation of these components should be performed by experienced and qualified mechanics, using safe and correct tools and equipment. Northwoods recommends this installation be performed by a qualified, certified automotive shop.
- Use safe methods in all work operations. Support the vehicle safely as required on a lift or hoist, or certified jack stands.

GENERAL INSTALLATION NOTES

- Installation shall be performed by qualified, experienced mechanics capable of performing this type of work. Northwoods recommends the work be performed in qualified ASE certified shops.
- Use only quality, certified tools and equipment appropriate for the job.
- Vehicle should only be supported by certified hoists, lifts, or jackstands of adequate capacity.
- Use only certified, dedicated spring compressors to compress and assemble springs. Northwoods recommends springs only be assembled and installed by qualified auto repair shops, using dedicated spring compression tools.
- Actual lift heights will vary by vehicle due to vehicle accessories, weights, loading, wear, initial ride height, and other factors.
- Upon completion of installation of springs or other suspensions and steering components, vehicles should be immediately aligned at a qualified shop.
- Modification to vehicle ride height requires re-alignment of headlights.
- Full inspection of all components installed should be checked after 300 miles of driving, including torque of all fasteners.
- Modified vehicles will handle and perform differently from stock vehicles, and the modified vehicle characteristics should be considered for driving safety. Modified vehicles may have affects to vehicle steering and response, and increased braking distances due to increased vehicle weight or larger tires.
- Modified vehicles may exhibit increased wear to suspension and other components, as well as an increase in vibration due to changes in component alignment and operating angles.
- Northwoods Performance Warranty, Return, and Replacement policies can be found on-line at northwoodsperformance.com, RESOURCES tab.



SKID PLATE INSTALLATION INSTRUCTIONS

HIGHLANDER G2, 2008-2013

Installation time: 2-3 hours

SKID PLATE KIT MATERIAL LIST

SKID PLATE		1
PKG 1, Front Mount	12M-1.25 110mm bolt	2
	12M Flat washer, small diameter	2
	12M Flange Nut	2
	12M Hex Nut	2
	12M Flat Washer, large diameter	6
	(4 extra flat washers provided for additional shimming if needed)	
	Spacer bushing, 1"ODX7/8", 1/2" bore	2
PKG 2, Rear Mount	12M-1.25 120 mm bolt	2
	12M Flat washer, small diameter	2
	12M Hex Nut	2
	12M Flat Washer, large diameter	2
	Spacer bushing, 1"ODX1-1/2", 1/2" bore	2
PKG 3, Damper Mount	8M-1.25X25mm bolt	2
	8M flat washer	2
	8M lock washer	2
	Spacer bushing, 1"ODX5/16", 3/8" bore	2

SKID PLATE INSTALLATION

1. Remove the factory splash guards, both mid-engine and front.



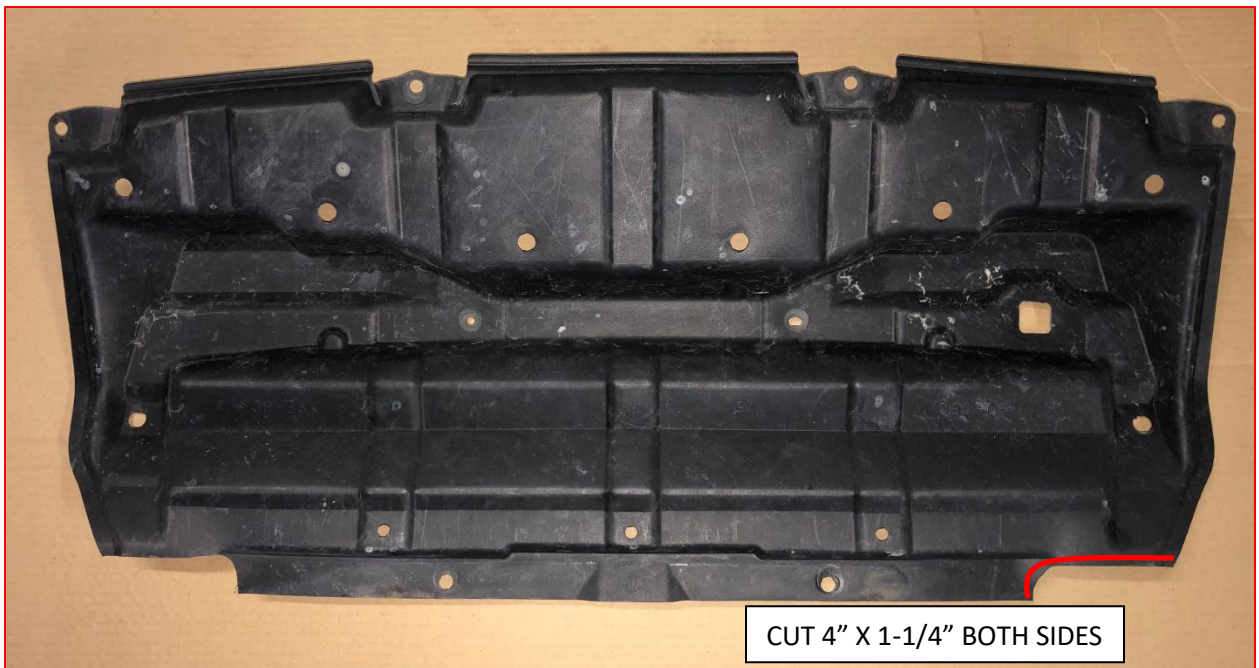
2. Remove the harmonic damper mounted on the left side of the core support cross member.



3. Locate the two indents on the front sub frame cross member. The bottom and/or top of the holes may have rubber caps on them. Remove the caps. Distance between the two hole centers will be 27-1/2".
4. Install the front mounting bolts from the top down on both sides. Installation stack up from the top down will be bolt, small washer, frame member, bushing, flange nut installed with flange facing down. Tighten securely.
5. Reinstall the harmonic damper. Install spacer bushings between subframe cross member and damper mounting plate with supplied bolts and washers.



6. Cut the front splash guard at the rearward corners. Cut out should be 4" in width, and 1-1/4" from front to back on each of the rearward corners.



7. Reinstall the front splash guard.

8. Raise skid plate into position. Secure front with large washers and nuts. Secure rear with bolts mounted from bottom up. Installation stack up from the bottom up will be bolt, large washer, skid plate, spacer bushing, frame, small washer, nut.
9. If desired, cut or grind the front bolts flush with the nuts for additional clearance.