



A Division of Northern Star Industries, Inc.
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**TAILGATE SPREADER
VIBRATOR KIT
INSTALLATION & OWNER'S MANUAL
TGS05960**

TGS05960 VIBRATOR KIT COMPONENTS

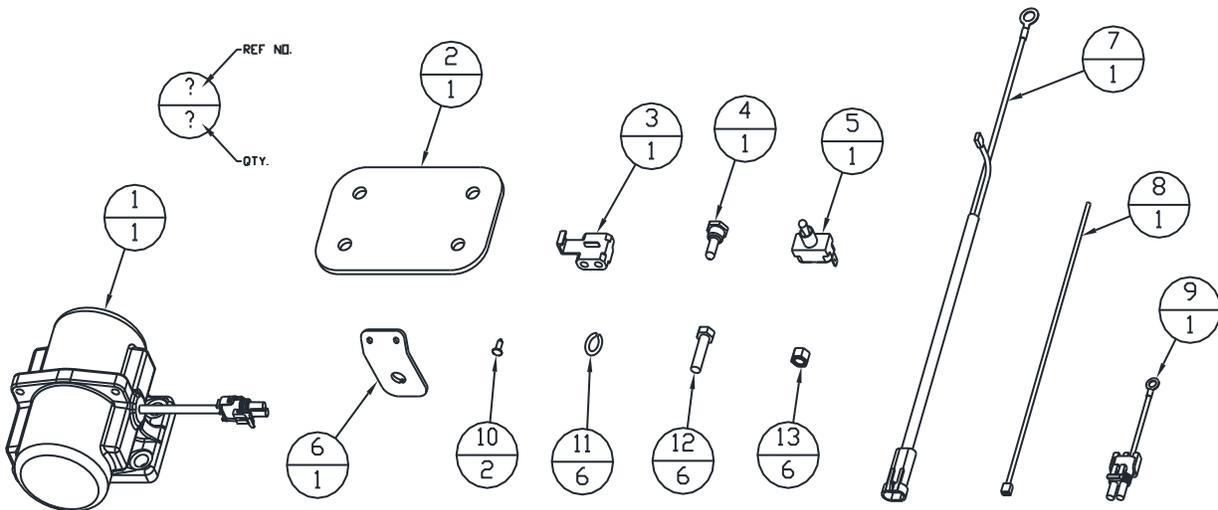


Figure 1. TGS05960 Vibrator Kit and TGS05968 Fastener Kit contents.

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REF. NO.	DESCRIPTION	PART NO.	QTY.
1	VIBRATOR	MSC14279	1
2	INNER BOLT PLATE	TGS05964	1
3	SCOTCH LOCK CONNECTOR, 12 GAGE	MSC05974	1
4	SWITCH BOOT	MSC04238	1
5	TOGGLE SWITCH	MSC04218	
6	SWITCH MOUNTING PLATE	MSC05973	1
7	HARNESS, VEHICLE REAR	TGS05970	1
8	HARNESS, VEHICLE FRONT	TGS05971	1
9	WEATHER CAP, VEH SIDE HARNESS	TGS05972	
	CABLE TIES, 15 COUNT	MSC04088	
	FASTENER KIT, VIBRATOR KIT	HDW05968	
Includes:			
10	SHEET METAL SCREW, #8 x 1/2"	HDW05953	2
11	SPLIT LOCK WASHER, 3/8", ST/ST	HDW14439	4
12	HEX HEAD BOLT, 3/8"-16 x 1-1/2" ST/ST	HDW05995	4
13	NYLON LOCK NUT, 3/8"-16, ST/ST	HDW05854	4

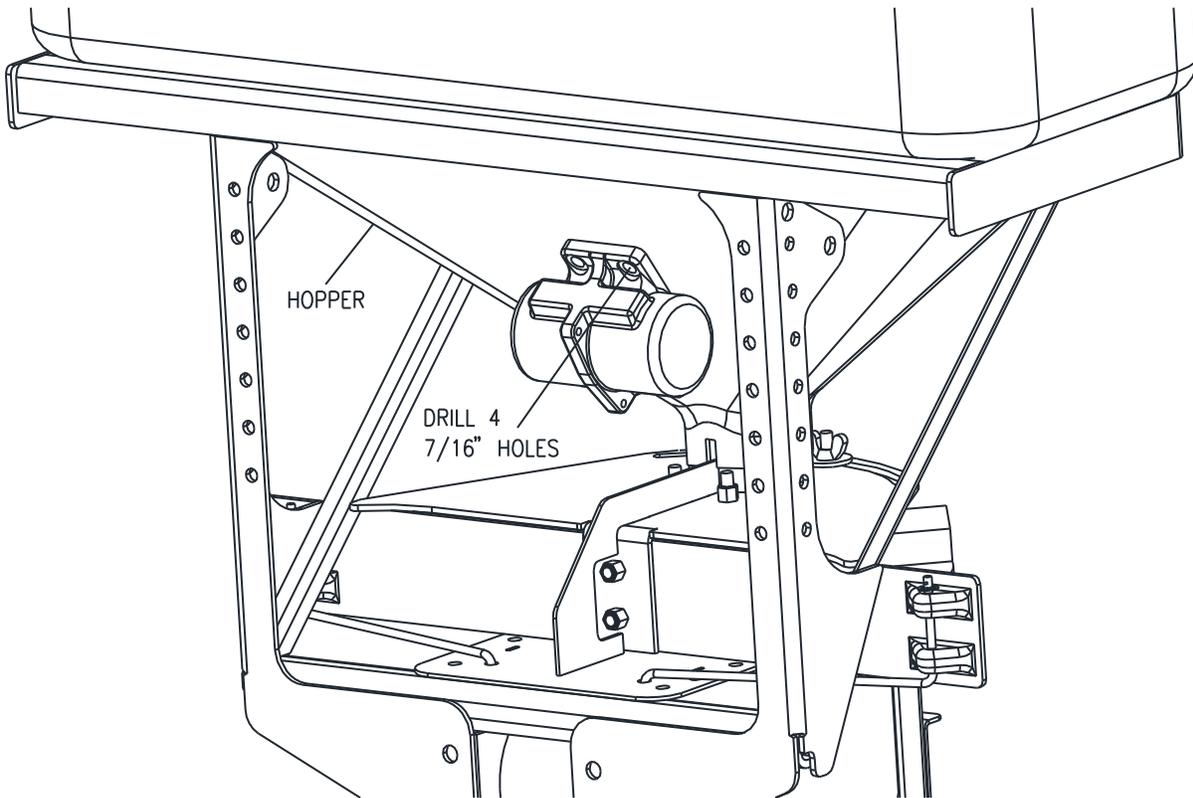


Figure 2. Align Vibrator Motor Assembly

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1. Align Vibrator (1) as low as possible on back side of Hopper. Vibrator (1) should be facing away from hopper with mounting bracket on Vibrator (1) facing hopper as shown in Figure 2. Be sure there is adequate clearance between the vibrator unit and any of the existing spreader components.

Note: Be sure all four bolt holes of the Vibrator (1) are located on the flat portion of the Hopper.

2. Drill four 7/16" holes through Hopper using existing holes in Vibrator (1) as a guide. Refer to Figure 2.
3. Align Inner Bolt Plate (2) inside Hopper and align Vibrator (1) outside the Hopper with the drilled holes.
4. Attach Vibrator (1) and Inner Bolt Plate (2) to Hopper using four 7/16"-16 x 1-1/2" Stainless Steel Hex Head Cap Screws, four 3/8" Stainless Steel Split Lock Washers, and four 7/16"-16 Stainless Steel Nylon Lock Nuts.

Note: Be sure bolts are properly torqued. Refer to Table 1.

GUIDE TO RECOMMENDED ASSEMBLY TORQUE

All Torque Values Are In Foot-Pounds (Ft.-Lb.)

DIA./PITCH	CLASS	GRADE 5	GRADE 8
¼ - 20		6	9
5/16 – 18		14	19
3/8 – 16		23	33
7/16 – 14		38	53
½ - 13		56	80
9/16 – 12		82	116
5/8 – 11		113	159
¾ - 10		201	283
M10-1.5	49		
M12-1.75	86		

Table 1: Recommended Torque Values

* The torque values listed above are based on dry, coated bolts, variables such as oil, or other lubrications may appreciably alter these values and must be taken into consideration.

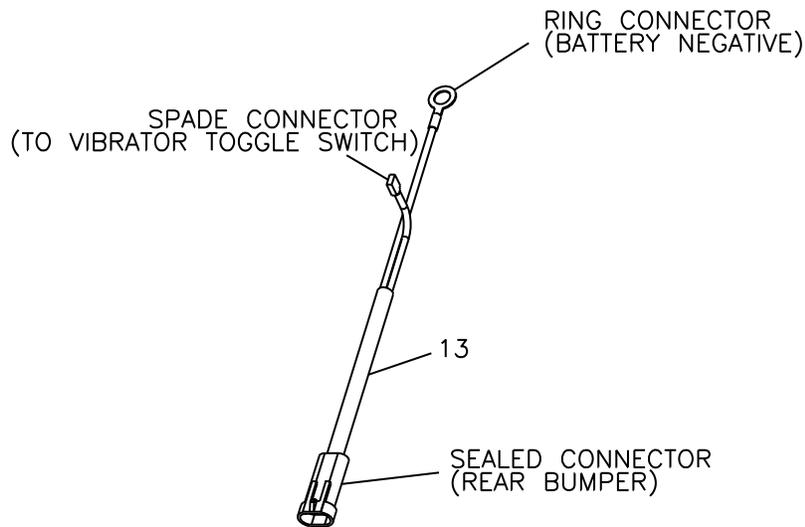


Figure 3. Mounting of Rear Vehicle Harness

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1. Route Rear Vehicle Harness (7) along the Driver Side frame rail of the vehicle. The sealed connector should be located near the center of the rear bumper. The spade connector should be routed into the vehicle's cab near the dash and the ring connector should be routed into the engine compartment.
2. Attach the ring connector on Rear Vehicle Harness (7) to the negative battery terminal.

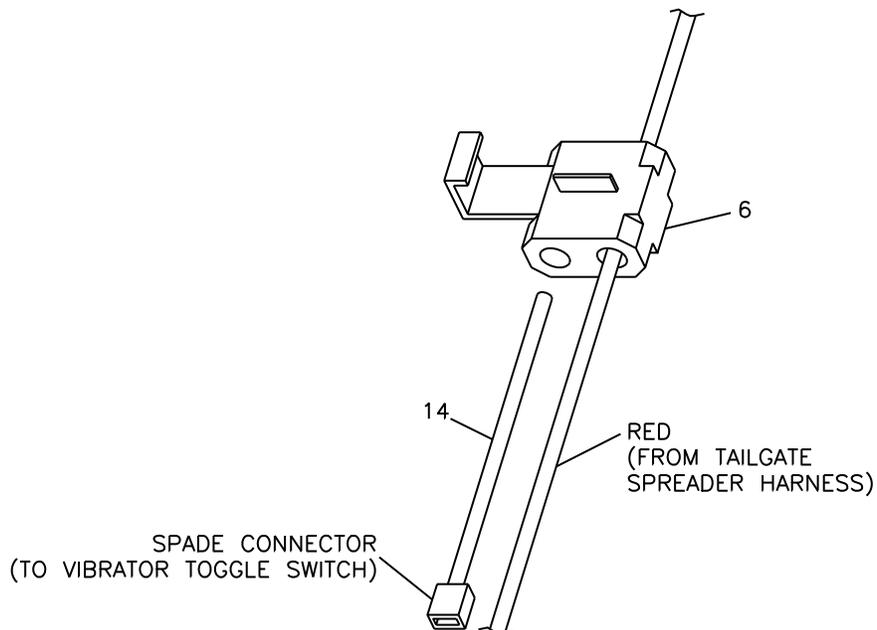


Figure 4. Connect Wires Using Scotch Lock

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3. Route the spade connector on Front Vehicle Harness (8) into the vehicle's cab near the dash. The other end should be routed into the engine compartment. Attach this end to the RED wire on the existing Tailgate Spreader Harness using Scotch Lock Connector (3).

4. Attach both spade connectors in the cab to Toggle Switch (5). Wire orientation is not critical.

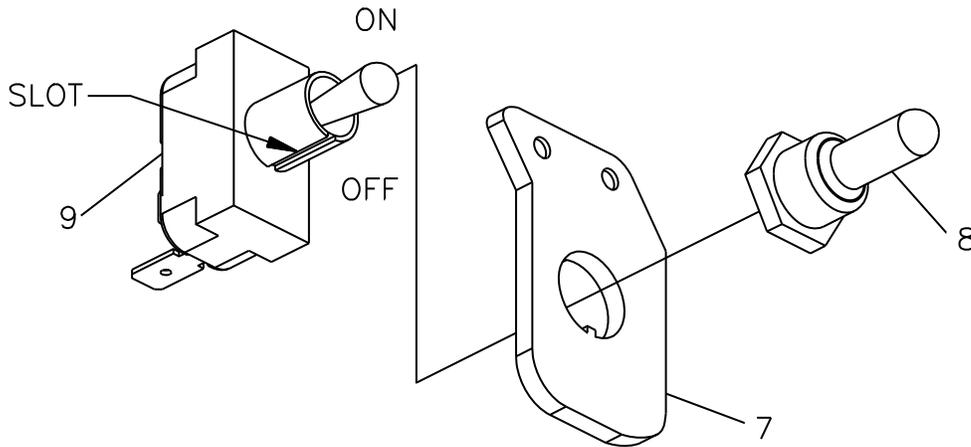


Figure 5. Assembly and Mounting Orientation of Toggle Switch

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5. Locate a spot on the dash to install Switch Mounting Plate (6). Install using two Sheet Metal Screws (10).

Note: The slot in Toggle Switch (5) indicates the OFF position. Refer to Figure 5.

6. Assemble Toggle Switch (5) into Switch Mounting Plate (6). Secure using Switch Boot (4).
7. Secure all wiring using fifteen Cable Ties included in the kit. Be sure wiring does not come into contact with hot surfaces or interfere with moving parts.
8. Attach Weather Cap (9) to the large plastic plug (at the rear bumper) on Rear Vehicle Harness (7). Weather Cap (9) should be left installed when the Vibrator is not being used.

VIBRATOR OPERATION

The Vibrator should only be activated when the Tailgate Spreader is attached to the Vehicle.

The Vibrator should only be activated when the spreader is on. Activating the vibrator on a full hopper without running the spreader can compact the material.

The Vibrator should not be activated when the Tailgate Spreader's hopper is empty. This can cause wear to the Vibrator Motor and can damage the Hopper.

The toggle switch will only activate the Vibrator when the truck key is in the ON position.

Check all hardware on the Vibrator and on the Tailgate Spreader after using the Vibrator. Excessive use may loosen hardware.