

# **HOPPER SPREADER TECUMSEH ENGINE KIT**

## **Installation Instructions**

**⚠ CAUTION**

**Read this manual before installing or operating  
the spreader.**



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## SAFETY INFORMATION

### WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or personal injury.

### CAUTION

Indicates a situation that, if not avoided, could result in minor personal injury and/or damage to product or property.

**NOTE:** Identifies tips, helpful hints and maintenance information the owner/operator should know.

### Before You Begin

- Park the vehicle on a level surface, place shift lever in PARK or NEUTRAL and set the parking brake.

### WARNING

- Driver to keep bystanders minimum of 25 feet away from operating spreader.
- Before working with the spreader, secure all loose-fitting clothing and unrestrained hair.
- Before operating the spreader, verify all safety guards are in place.
- Before servicing the spreader, wait for conveyor or spinner to stop.
- Do not climb into or ride on spreader.

### Battery Safety

#### CAUTION




Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks or lit tobacco to come near the battery. When charging or working near a battery, always cover your face and protect your eyes, also provide ventilation.

Batteries contain sulfuric acid which burns skin, eyes and clothing.

Disconnect the battery before removing or replacing any electrical components.

When tightening fasteners, refer to Torque Chart for the recommended fastener values.

### Torque Chart

NC FASTENER TORQUE (FT-LB)			
DIAMETER- THREADS PER INCH	GRADE		
			
	G2	G5	G8
1/4 - 20	6	9	13
5/16 - 18	11	18	28
3/8 - 16	19	31	46
7/16 - 14	30	50	75
1/2 - 13	45	75	115
9/16 - 12	66	110	165
5/8 - 11	93	150	225
3/4 - 10	150	250	370
7/8 - 9	150	378	591
1 - 8	220	583	893
METRIC GRADE 8.8 (FT-LB)			
M 6	7	M 12	60
M 8	17	M 14	95
M 10	35	M 16	155

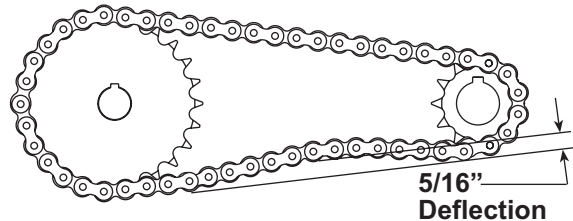
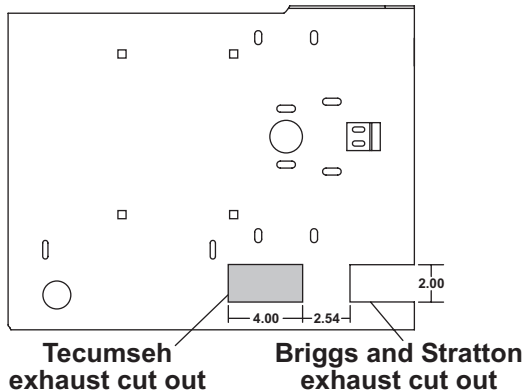
# ENGINE CONVERSION INSTRUCTIONS

## Briggs and Stratton Engine Removal

1. Ensure the engine is off.
2. Eliminate all sources of power to the engine and disconnect the battery.
3. Disconnect all the wiring from the Briggs and Stratton engine noting the location and termination of each wire.
4. Loosen and remove the four 3/8" carriage bolts from the engine mount. Slide the engine mount and engine toward the clutch sprocket. Do not discard this hardware.
5. Remove the master link (if necessary) from the roller chain and remove the chain from the clutch and engine sprockets. Do not discard the chain or master link.
6. Remove the engine and mount from the spreader.

## Tecumseh Engine Installation

1. If necessary, add or enlarge the exhaust tube cut out on the engine base. This is done by removing the shaded area shown below. Paint any bare metal surfaces to prevent corrosion.
6. Slide the engine assembly away from the clutch sprocket to tension the chain. Correct tension allows for 5/16" deflection in the roller chain.



2. Place the engine, engine mount, and engine mount brace on the engine base and align with the four holes in the base.
3. Install four (4) 3/8" carriage bolts through the bottom of the engine base to secure the engine and mount to the spreader. Do not tighten at this time.
4. Reinstall the roller chain between the clutch sprocket and engine sprocket. Install the master link to secure the chain.
5. Adjust the engine sprocket height to ensure the roller chain is parallel to the engine base and level with the clutch sprocket. Retighten the set screws so the sprocket does not come off during operation.
7. After correct tension is achieved, tighten the 3/8" carriage bolts. Refer to the Torque Chart for correct torque values.
8. Reconnect the wires from the spreader harness to the correct locations on the Tecumseh engine. (The Hopper Spreader Installation Manual is an excellent resource if more detail is desired.)
9. Remount the starter relay to the engine mount using the existing hardware. Reconnect the three green wires, the spreader harness, and the #6 clamp loop to the upper starter relay mounting bolt.
10. Connect the white wire from the spreader harness to the primary terminal of the starter relay.

## ENGINE CONVERSION INSTRUCTIONS

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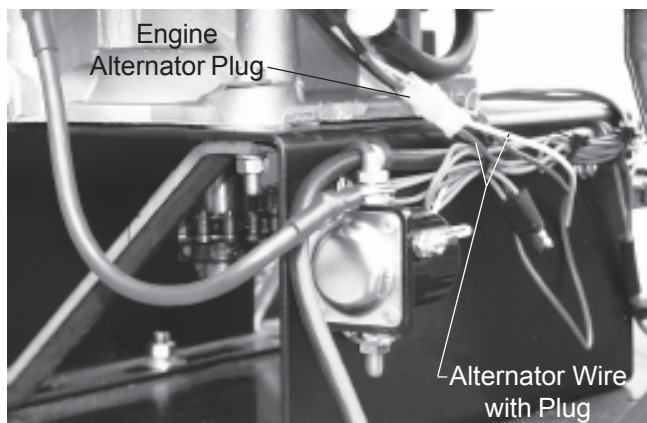
11. Connect the black wire from the spreader harness to the Tecumseh engine ground terminal located under the fuel tank next to the starter.

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**NOTE: The black wire requires a female receptacle. Clip the ring terminal and replace with the red female receptacle provided with the Tecumseh Engine Kit.**

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12. Connect the starter cable to the starter and one of the large secondary terminals on the starter relay.
13. Connect the alternator wire with plug to the engine alternator plug.

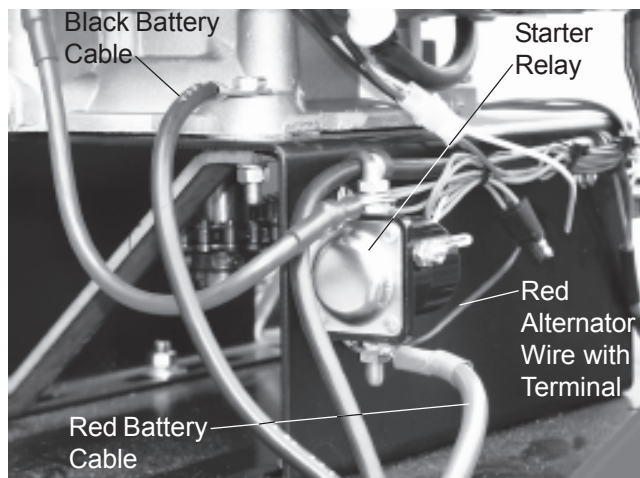


14. Connect the alternator wire with plug and the red battery cable to the unused secondary terminal of the starter relay.

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**NOTE: The white alternator wire is not used.**

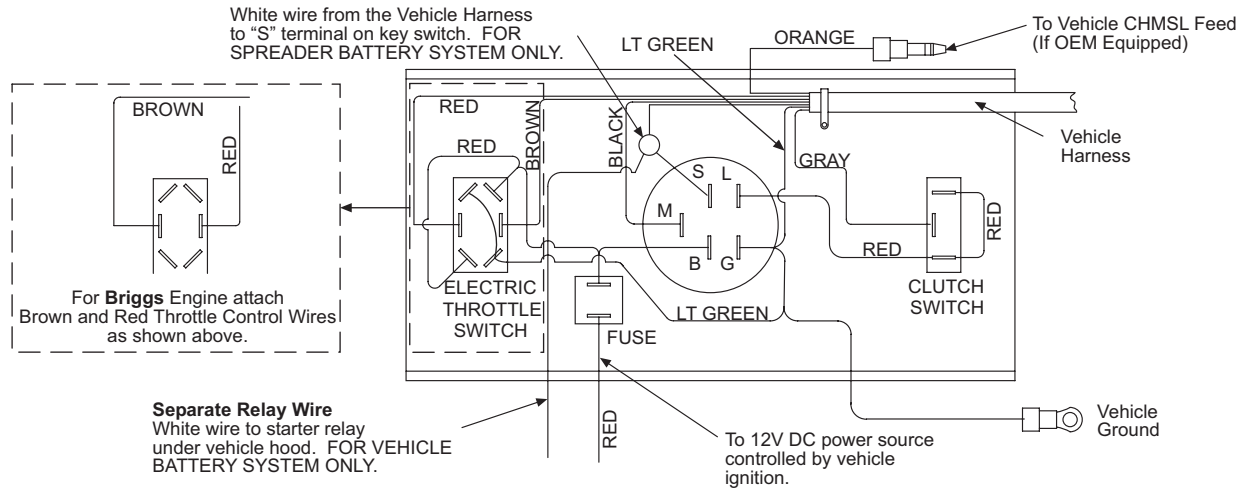
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15. Reattach the black battery cable to the engine mounting flange using the existing hardware.
16. Install the Tecumseh muffler with the supplied mounting hardware. Route the muffler through the new exhaust cut out in the engine base.

# SPREADER CONTROL REWIRING INSTRUCTIONS

## Standard Cab Control



1. Remove the Standard Cab Control from its mounting location to gain access to the wiring.
2. When viewing the control from behind, ensure the control is properly wired for the engine you are using. This may require you to reverse the middle positions of the brown and red wires on the throttle switch as shown above, to allow proper operation of the throttle.
3. Check for proper operation of the throttle and reinstall the control making sure to avoid all airbag deployment areas.

### **⚠ WARNING**

**Do not install this product in deployment path of an air bag. Refer to vehicle manufacturer's manual for air deployment area(s).**



The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications used herein.

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