

# **2002 AND LATER DODGE RAM 1500 UNDER-FRAME MOUNT INSTALLATION INSTRUCTIONS FOR SINGLE STAGE TAILGATE SPREADERS**

The under-frame mounts are recommended for use on the following vehicles:  
2002 and Later Dodge Ram 1500

## **⚠ CAUTION**

- **Read Owner's Manual before operating or servicing spreader.**
- **Empty and clean spreader after every use.**



# TABLE OF CONTENTS

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## **SAFETY**

Safety Definitions .....	1
Before You Begin .....	1
Battery Safety .....	1

## **WEIGHT/LOADING RESTRICTIONS**

Certification .....	2
Torque Chart .....	2
Approximate Material Weights .....	2

## **UNDER-FRAME MOUNT INSTALLATION**

Subframe Assembly .....	3
Subframe Assembly Installation .....	3
Secondary Frame Assembly .....	6
Mounting the Secondary Frame .....	6
Spreader Installation .....	7

## **ASSEMBLY DIAGRAMS**

Subframe Assembly Diagram .....	8
Secondary Frame Assembly Diagram .....	8

# SAFETY

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## SAFETY DEFINITIONS

### WARNING

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

### CAUTION

Indicates a situation that, if not avoided, could result in damage to product or property.

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

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### WARNING

Overloading could result in an accident or damage. Do not exceed GVWR or GAWR ratings as found on the driver-side cornerpost of the vehicle. See Loading Section to determine maximum volumes of spreading material.

### CAUTION

If rear directional, CHMSL light, or brake stoplights are obstructed by the spreader, the lights shall be relocated, or auxiliary directional or brake stoplights shall be installed.

## 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.

### CAUTION

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

- Batteries contain sulfuric acid that burns skin, eyes and clothing.
- Disconnect the battery before removing or replacing any electrical components.

# WEIGHT/LOADING RESTRICTIONS

## CERTIFICATION

### ⚠ CAUTION

New untitled vehicle installation of spreader requires National Highway Traffic Safety Administration altered certification labeling. Installer to verify struck load of snow or ice control material does not exceed GVWR or GAWR ratings.

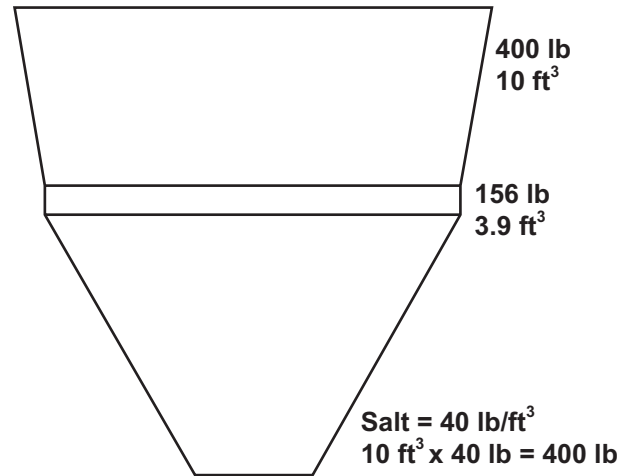
The following table contains information regarding the Class IV receiver hitch.

HITCH TYPE	MAX. GROSS TRAILER WT. (LB.)	MAX. TONGUE WT. (LB.)
Weight Distributing	10,000	1000
Weight Carrying Ball Mount	10,000	1000

### ⚠ WARNING

Overloading could result in an accident or damage. Do not exceed GVWR or GAWR ratings as found on the driver-side cornerpost of vehicle. See Loading Section to determine maximum volumes of spreading material.

## Approximate Material Weights



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

Recommended Fastener Torque Chart (Ft.-Lb.)			
Size	SAE Grade 2	SAE Grade 5	SAE Grade 8
1/4-20	6	9	13
5/16-18	11	18	28
3/8-16	19	31	46
3/8-24	24	46	68
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.)			
Size	Torque	Size	Torque
M 6	7	M 12	60
M 8	17	M 14	95
M 10	35	M 16	155
These torque values apply to fasteners except those noted in the instruction.			

Very Coarse = 35 lb/ft<sup>3</sup>  
Coarse = 45 lb/ft<sup>3</sup>  
Fine = 50 lb/ft<sup>3</sup>

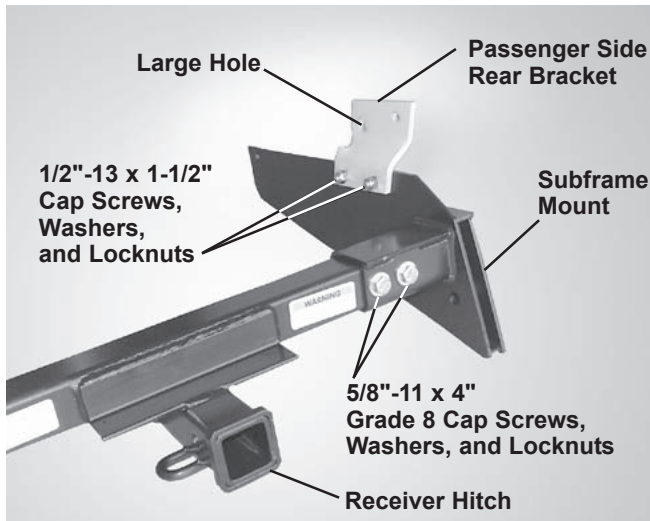
# UNDER-FRAME MOUNT INSTALLATION

## SUBFRAME ASSEMBLY

**NOTE:** Remove any existing after-market equipment that may interfere with the installation of this product according to these instructions.

**NOTE:** Install all fasteners finger tight until the assembly is complete. Then tighten according to the Torque Chart.

1. Insert receiver hitch into passenger side subframe mount to furthest position (narrow configuration) and align holes (four per side). (See Figure 1.)



**Figure 1**  
Passenger Side Shown

2. Install two 5/8"-11 x 4" grade 8 cap screws (with 5/8" flat washers under head). Secure with 5/8" flat washers and 5/8"-11 locknuts.
3. Position passenger side rear bracket to inside of subframe with the large hole in the top-front corner and secure with two 1/2"-13 x 1-1/2" cap screws, 1/2" flat washers, and 1/2"-13 locknuts.

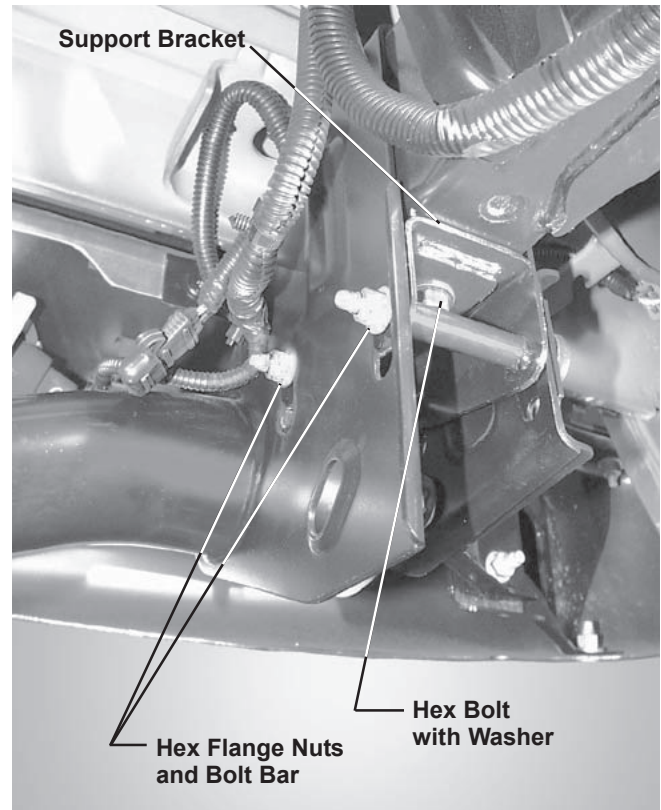
**Repeat on other side.**

## SUBFRAME ASSEMBLY INSTALLATION

**NOTE:** Install all fasteners finger tight until the assembly is complete. Then tighten according to the torque chart.

1. Remove OEM-supplied metric hex bolt with flat washer, two hex flange nuts, bolt bar, and support bracket from bumper assembly. (See Figure 2.) Hex flange nuts, bolt bar, and support bracket will not be reused.

**Repeat on other side.**



**Figure 2**  
Driver Side Shown

(Continued on next page.)

# UNDER-FRAME MOUNT INSTALLATION

## SUBFRAME ASSEMBLY INSTALLATION

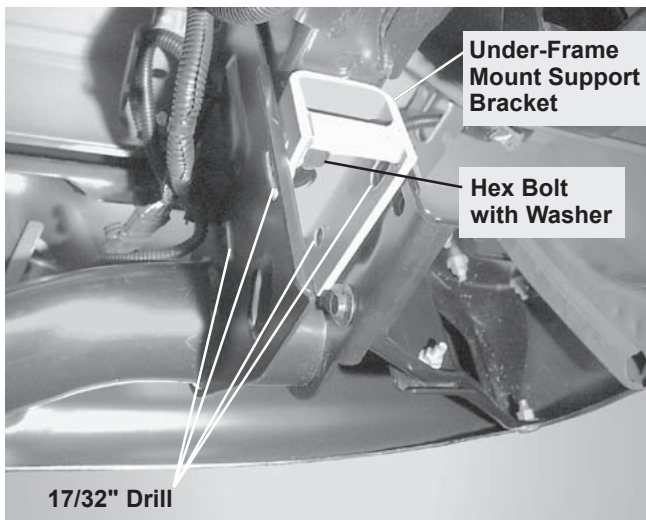
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### **⚠ CAUTION**

Before drilling any holes, check both sides of the material for any wires, fuel lines, fuel tanks, etc. that may be damaged by drilling.

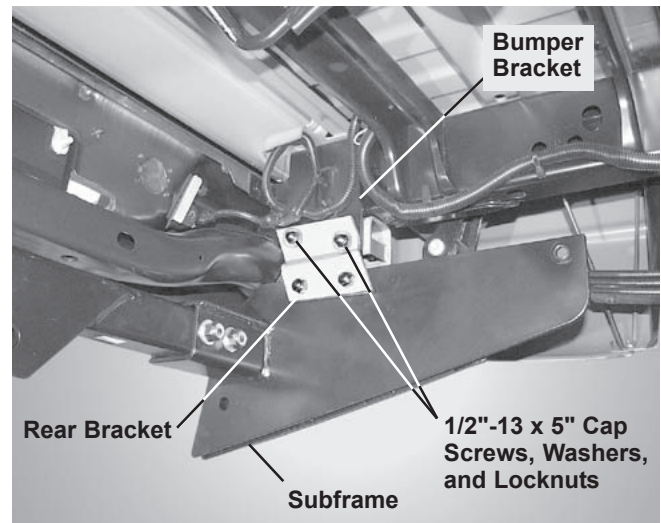
2. Position under-frame mount support bracket underneath frame rail with slots at front and align holes. Secure with OEM-supplied metric hex bolt with flat washer. Enlarge bumper bracket holes and slots to  $17/32$ ". (See Figure 3.)

*Repeat on other side.*



**Figure 3**  
Driver Side Shown

3. Position the assembled subframe under the truck with rear brackets against inside surface of bumper brackets. Install two  $1/2$ "-13 x 5" cap screws with  $1/2$ " flat washers per side (four total) through bumper bracket, support bracket, and rear bracket and secure with  $1/2$ " flat washers and  $1/2$ "-13 locknuts. (See Figure 4.)



**Figure 4**  
Driver Side Shown

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# UNDER-FRAME MOUNT INSTALLATION

## SUBFRAME ASSEMBLY INSTALLATION

(Continued)

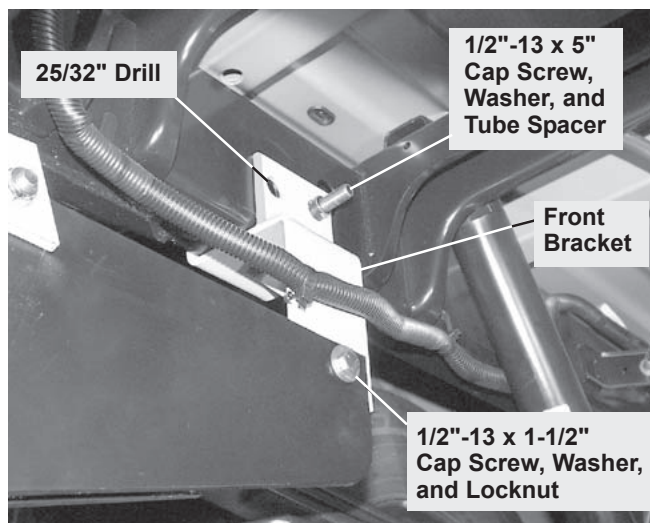
### ⚠ CAUTION

Before drilling any holes, check both sides of the material for any wires, fuel lines, fuel tanks, etc. that may be damaged by drilling.

- Position front bracket outside of subframe and under frame rail. Install a 1/2"-13 x 1-1/2" cap screw with 1/2" flat washer from the inside of the subframe and secure with a 1/2"-13 locknut. With front bracket against bottom surface of frame rail, center punch the holes, then remove bracket.

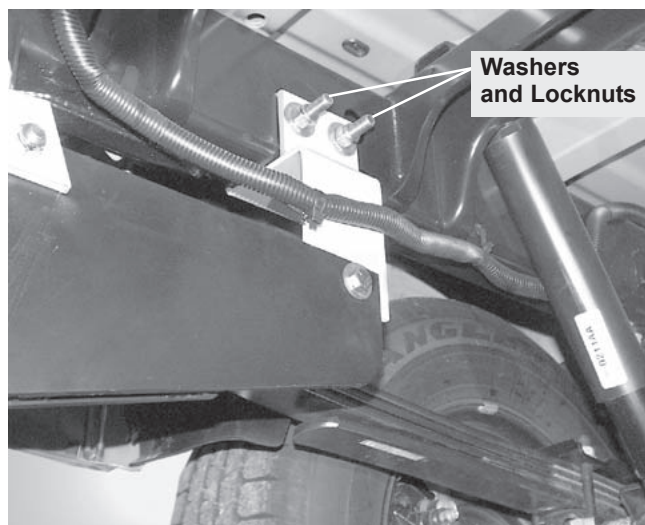
Drill two 25/32" holes on each side of frame rail (four total) and reinstall front bracket as previously described. Install two 1/2"-13 x 5" cap screws with 1/2" flat washers through tube spacers, front brackets, and frame rail. (See Figure 5.)

*Repeat on other side.*






**Figure 5**  
Driver Side Shown

- Secure with 1/2" flat washers and 1/2"-13 locknuts. (See Figure 6.)



**Figure 6**  
Driver Side Shown

- Tighten all fasteners according to recommended fastener values on Torque Chart.

Recommended Fastener Torque Chart (Ft.-Lb.)			
Size	 SAE Grade 2	 SAE Grade 5	 SAE Grade 8
1/4-20	6	9	13
5/16-18	11	18	28
3/8-16	19	31	46
3/8-24	24	46	68
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.)			
Size	Torque	Size	Torque
M 6	7	M 12	60
M 8	17	M 14	95
M 10	35	M 16	155
These torque values apply to fasteners except those noted in the instruction.			



# UNDER-FRAME MOUNT INSTALLATION

## SECONDARY FRAME ASSEMBLY

1. Position the center secondary frame section between passenger and driver-side frame sections. (See Assembly Diagram.)

**NOTE:** Secondary frame shall be assembled with mount bars to inside of vertical tubes (narrow configuration). Top of center section should be approximately six inches above top of vertical tubes. The notch in the top cross-member shall face rearward.

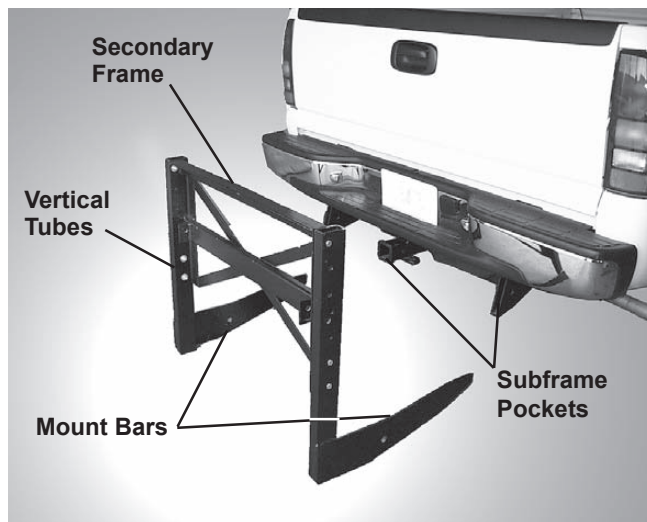
**NOTE:** Center secondary frame may be assembled three or six inches lower for use with higher trucks.

2. Align holes and install six 3/8" x 2-1/2" grade 8 cap screws through vertical tubes and center section sideplates. Retain with flat washers and locknuts, three on each side.
3. Tighten all fasteners according to recommended fastener values on Torque Chart.

Recommended Fastener Torque Chart (Ft.-Lb.)			
Size	SAE Grade 2	SAE Grade 5	SAE Grade 8
1/4-20	6	9	13
5/16-18	11	18	28
3/8-16	19	31	46
3/8-24	24	46	68
7/16-14	30	50	75
1/2-13	45	75	115
9/16-12	66	110	165
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7/8-9	150	378	591
1-8	220	583	893
Metric Grade 8.8 (Ft.-Lb.)			
Size	Torque	Size	Torque
M 6	7	M 12	60
M 8	17	M 14	95
M 10	35	M 16	155
These torque values apply to fasteners except those noted in the instruction.			

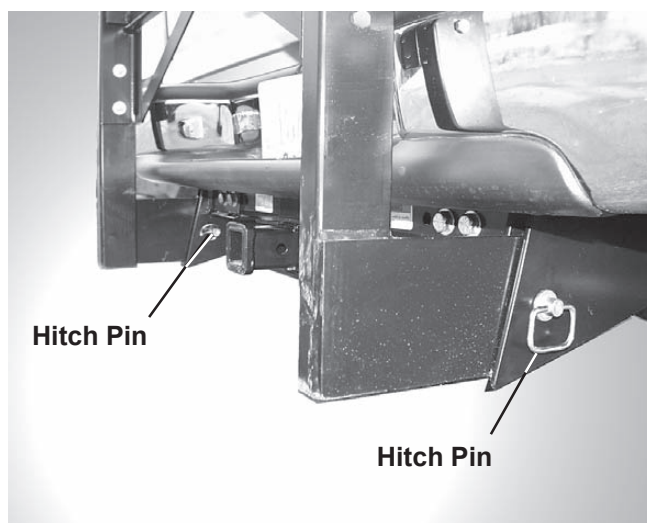
## MOUNTING THE SECONDARY FRAME

1. Position the secondary frame behind the truck and insert the mount bars of the secondary frame into the subframe pockets. (See Figure 7.)



**Figure 7**  
Wide Configuration  
with Lowest Center Section Position Shown

2. Slide the secondary frame into the subframe until the holes align.
3. Install two 3/4" hitch pins through the subframe and the secondary frame.
4. Install a 3/16" linchpin into the hole in each 3/4" hitch pin. (See Figure 8.)



**Figure 8**

# UNDER-FRAME MOUNT INSTALLATION

## SPREADER INSTALLATION

**NOTE:** If the spreader obstructs the view of the license plate, check for any local regulations that may apply.

1. Lift the spreader assembly and tip slightly forward. Position tabs on the spreader assembly over the top of the installed secondary frame assembly and lower the spreader assembly. (See Figure 9.)

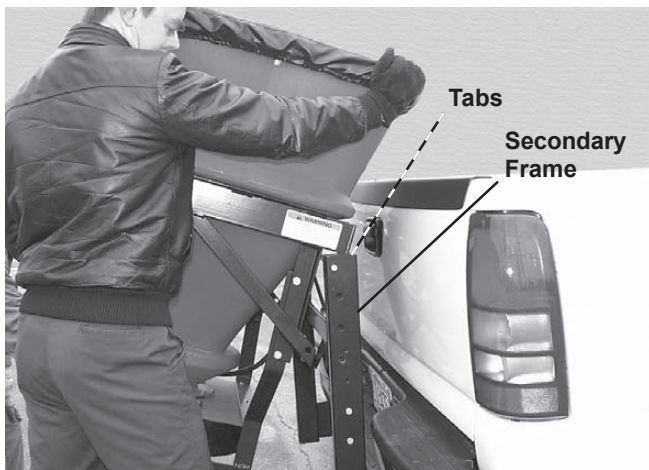


Figure 9

2. Allow spreader assembly to rotate until the bottom contacts secondary frame assembly.
3. Insert hold-down pins on each side and secure with hairpin cotter pins. (See Figure 10.)

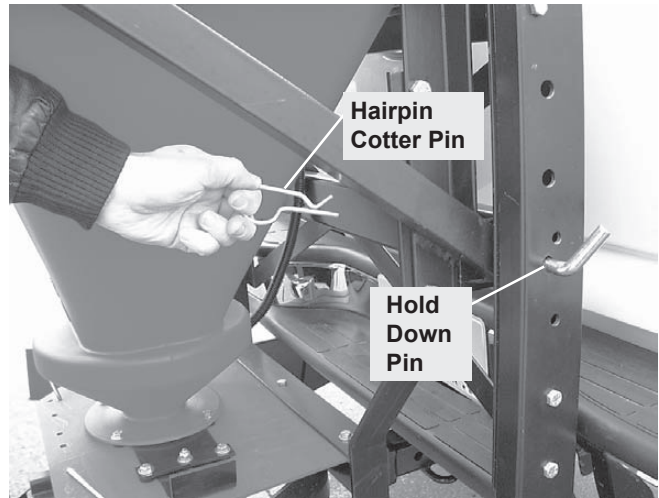


Figure 10

### ⚠ CAUTION

Both hold-down pins must be in place and secured with hairpin cotter pins. The hopper assembly may become unstable if the pins are not properly secured while the vehicle is in motion.

**NOTE:** Grease the electrical connections using dielectric grease.

4. Connect spreader-side wiring harness to vehicle-side wiring harness. (See Figure 11.)

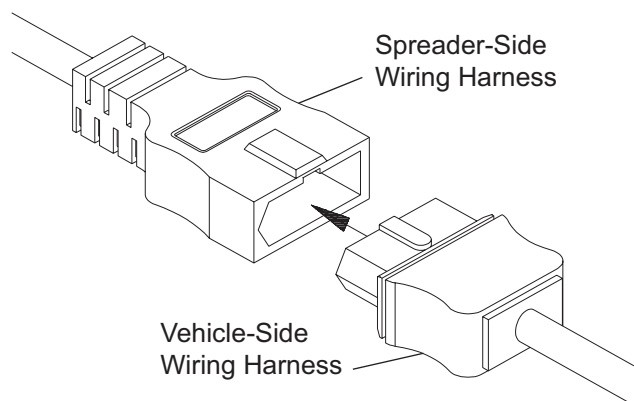
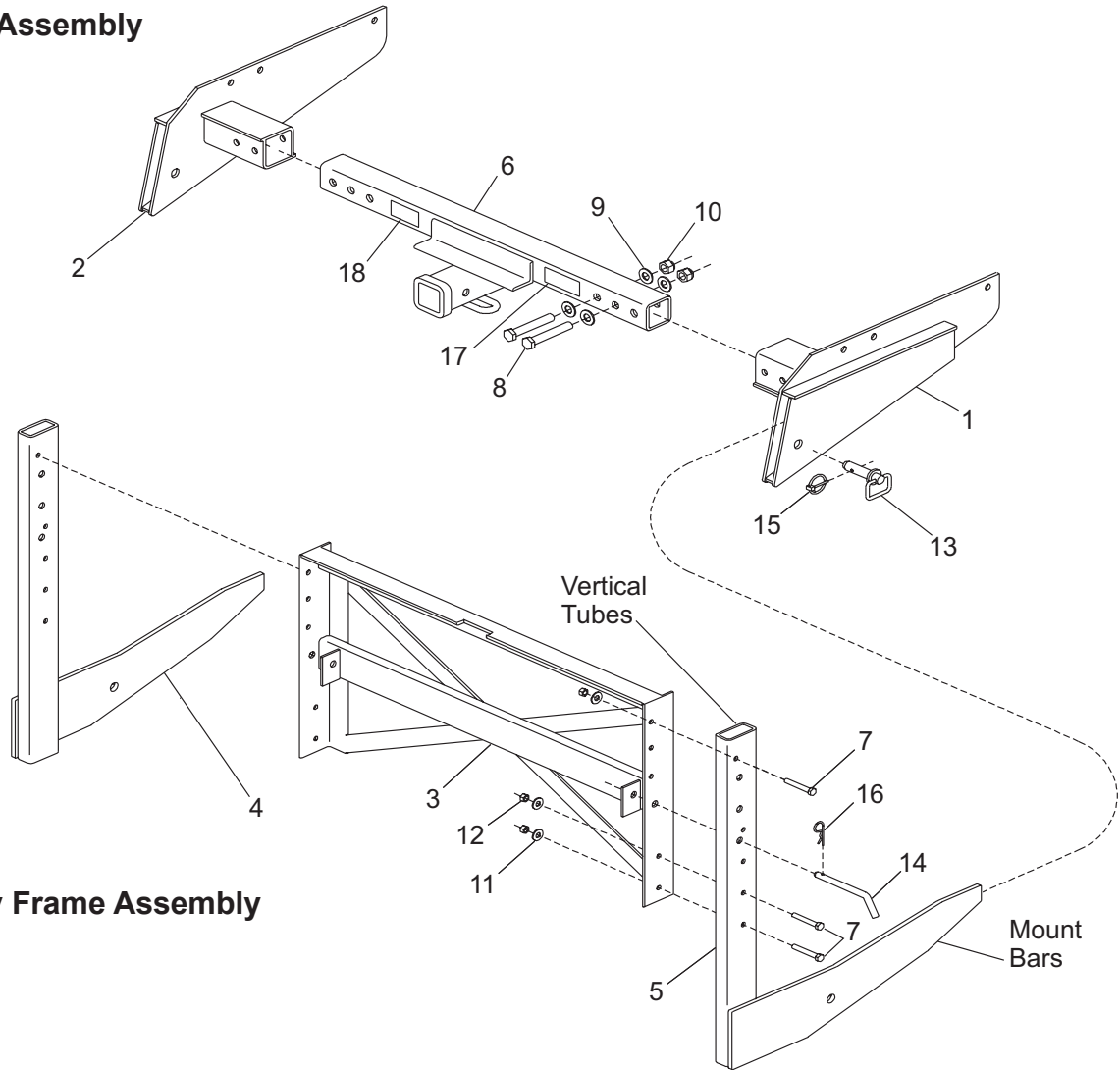


Figure 11

# ASSEMBLY DIAGRAMS

## Subframe Assembly



## Secondary Frame Assembly

**NOTE: See Owner's Manual or Parts List for service parts part numbers.**

ITEM	QTY.	DESCRIPTION	ITEM	QTY.	DESCRIPTION
1	1	MOUNT SUBFRAME - Passenger Side	11	6	3/8 PLAIN WASHER
2	1	MOUNT SUBFRAME - Driver Side	12	6	3/8-16 LOCKNUT
3	1	SECONDARY FRAME - Center	13	2	3/4X2-3/4 HITCH PIN
4	1	SECONDARY FRAME	14	2	PIN 1/2"X5.5"
5	1	SECONDARY FRAME	15	2	3/16" LINCHPIN
6	1	RECEIVER HITCH W/LABELS (includes items 17 and 18)	16	2	HAIRPIN COTTER 1/8"
7	6	3/8-16X2-1/2 GRADE 8 CAP SCREW	17	1	LABEL-INFORMATION (WARNING)
8	4	5/8-11X4 GRADE 8 CAP SCREW	18	1	LABEL-INFORMATION (RATING)
9	8	5/8 PLAIN WASHER	<b>Items 7-16 are found in the following assembly:</b>		
10	4	5/8-11 LOCKNUT	1	1	BOLT BAG ASSEMBLY

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