

**2002 - 2003
DODGE RAM 1500
UNDER-FRAME MOUNT
INSTALLATION INSTRUCTIONS
FOR SINGLE-STAGE TAILGATE SPREADERS**

⚠ CAUTION

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

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SAFETY

SAFETY DEFINITIONS

WARNING

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

CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE: Indicates a situation or action that can lead to damage to your spreader and vehicle or other property. Other useful information can also be described.

BEFORE YOU BEGIN

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

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, then lock out power.
- Do not climb into or ride on spreader.

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.

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 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

⚠ WARNING

New untitled vehicle installation of a spreader requires National Highway Traffic Safety Administration altered vehicle certification labeling. Installer to verify that struck load of snow or ice control material does not exceed GVWR or GAWR rating label and complies with FMVSS.

⚠ 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.

TORQUE CHART

⚠ CAUTION

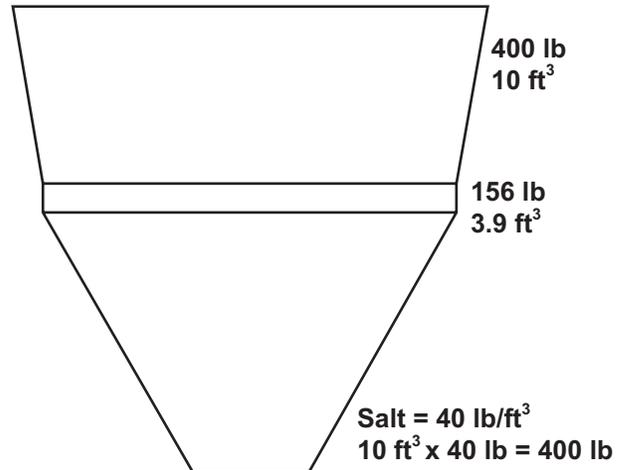
Read instructions before assembling. Fasteners should be finger tight until instructed to tighten according to the torque chart. Use standard methods and practices when attaching spreader including proper personal protective safety equipment.

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.			

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

Approximate Material Weights



Very Coarse = 35 lb/ft³
Coarse = 45 lb/ft³
Fine = 50 lb/ft³

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.

If truck *is* equipped with optional OEM receiver hitch:

1. Position cross brace in front of passenger-side subframe mount socket at its furthest position (narrow configuration) and align holes. (See Figure 1.)

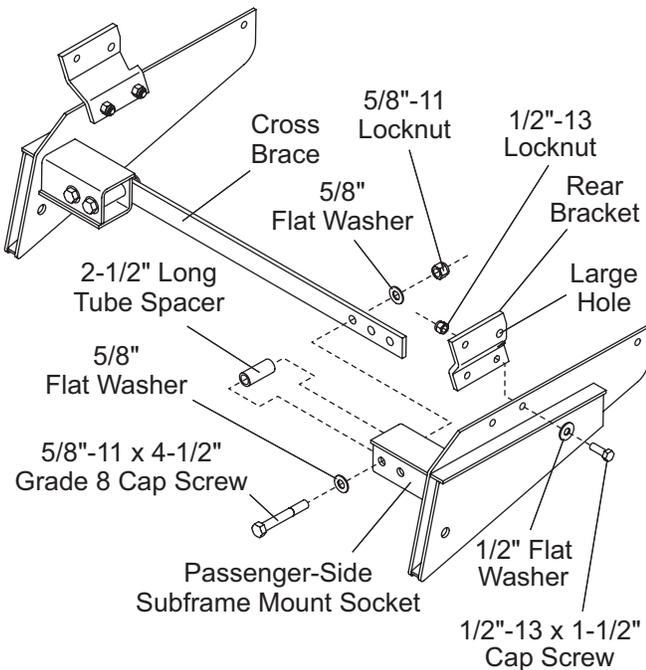


Figure 1

2. Install two 5/8"-11 x 4-1/2" grade 8 cap screws (with 5/8" flat washers under heads) through subframe mount socket, tube spacers, and cross brace as shown. Secure with 5/8" flat washers and 5/8"-11 locknuts. The 5/8"-11 x 4" grade 8 cap screws and receiver hitch will not be used in this application.
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.

If truck *is not* equipped with optional OEM receiver hitch:

1. Insert receiver hitch into passenger-side subframe mount socket to furthest position (narrow configuration) and align holes. (See Figure 2.)

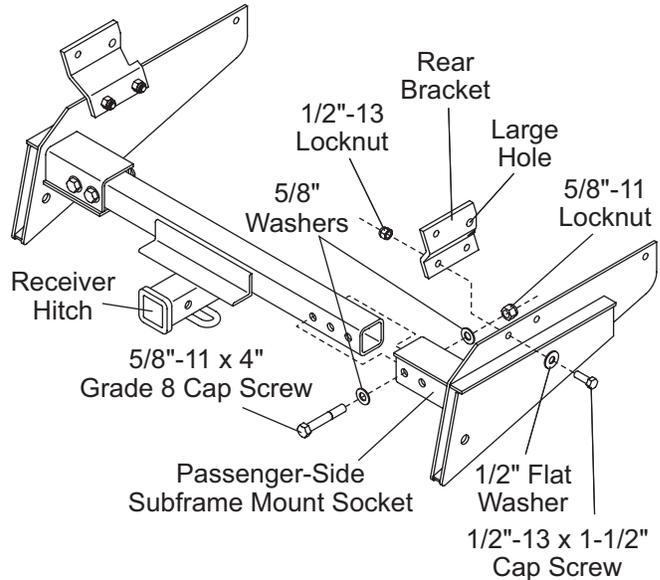


Figure 2

2. Install two 5/8"-11 x 4" grade 8 cap screws (with 5/8" flat washers under heads). Secure with 5/8" flat washers and 5/8"-11 locknuts. The 5/8"-11 x 4-1/2" grade 8 cap screws, 2-1/2" long tube spacers, and flat cross brace will not be used in this application.
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.

UNDER-FRAME MOUNT INSTALLATION

SUBFRAME ASSEMBLY INSTALLATION

1. Remove OEM-supplied metric hex bolt with flat washer, two hex flange nuts, bolt bar, and support bracket from bumper assembly. (See Figure 3.)

Hex flange nuts, bolt bar, and support bracket will not be reused.

Repeat on other side.

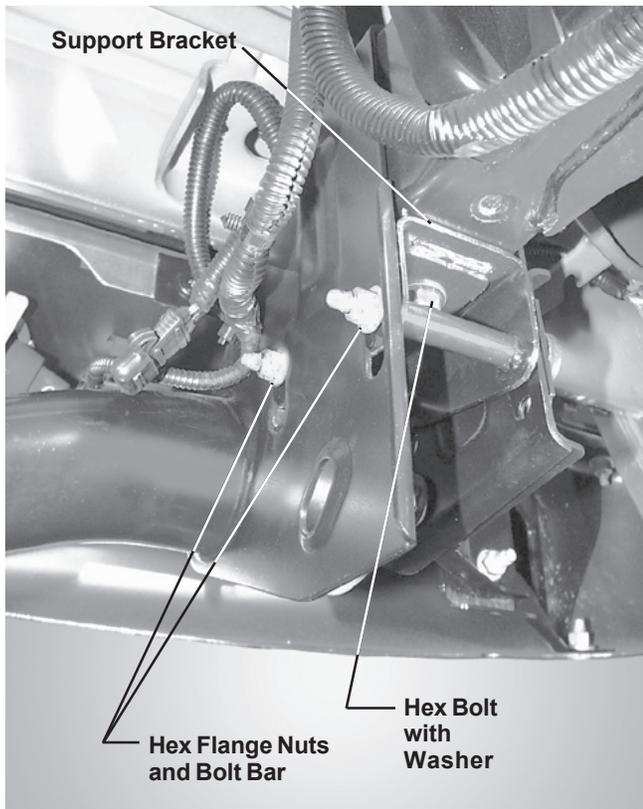


Figure 3
Driver Side Shown

⚠ 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 4.)

Repeat on other side.

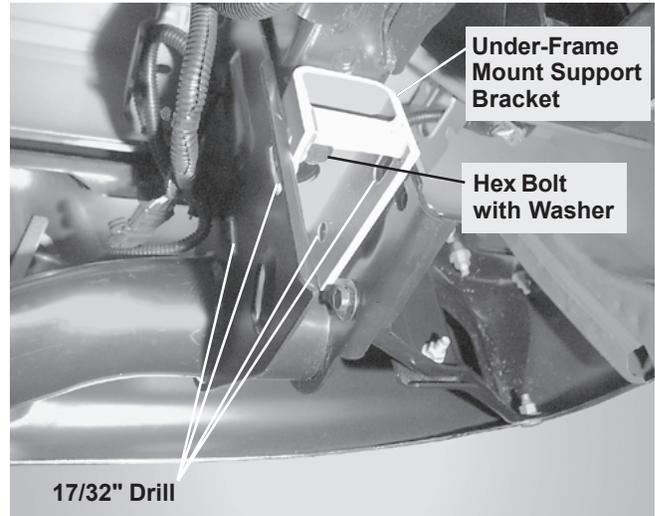


Figure 4
Driver Side Shown

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 5.)

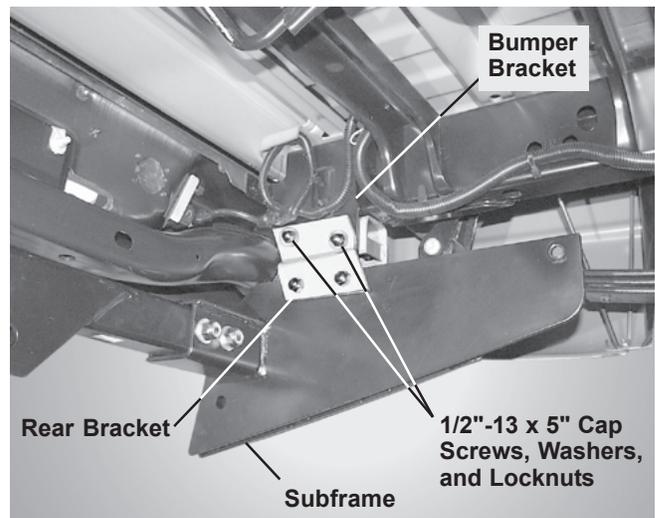


Figure 5
Driver Side Shown

(Continued on next page.)

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.

4. 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 6.)

Repeat on other side.

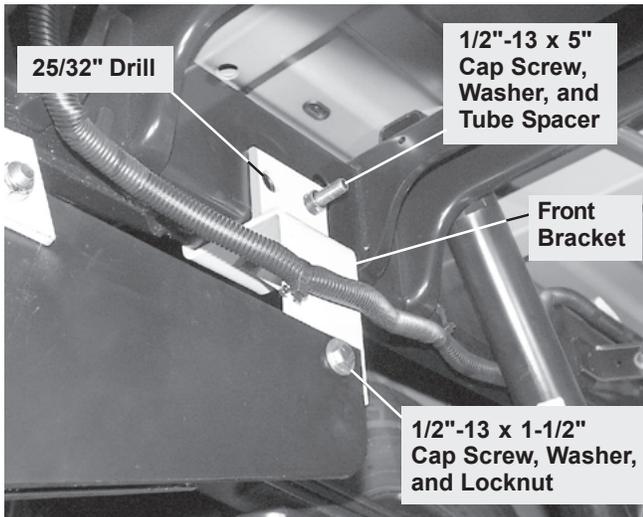


Figure 6
Driver Side Shown

5. Secure with 1/2" flat washers and 1/2"-13 locknuts. (See Figure 7.)

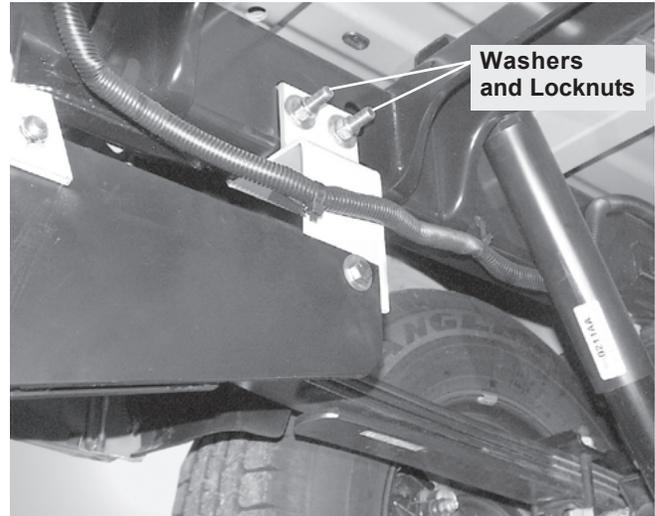


Figure 7
Driver Side Shown

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

UNDER-FRAME MOUNT INSTALLATION

SECONDARY FRAME ASSEMBLY

1. Place the center section on the ground with the notch in the top cross member facing downward. Position the L-shaped side sections on either side of the center section so that their 3/8" thick mount bars are pointing upward and are inboard of their tubes (narrow configuration). Locate the two L-shaped side sections so that the tops of their tubes are approximately 6" below the top cross member of the center section. (See Figure 8.)

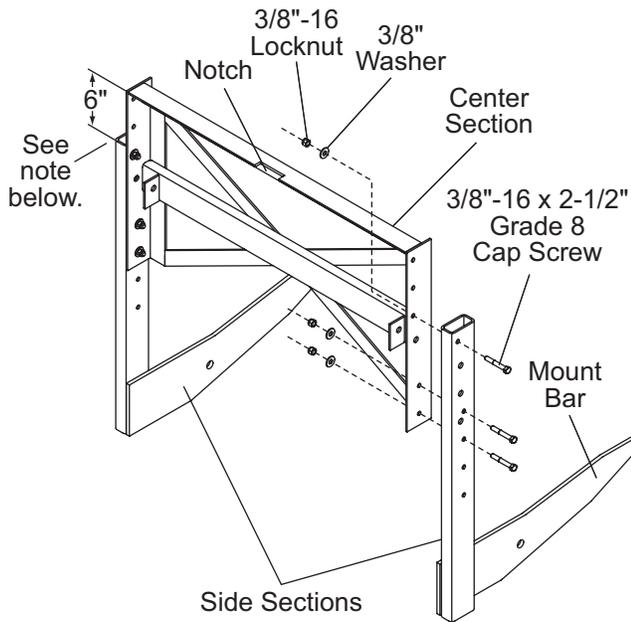


Figure 8

Highest Center Section Position Shown

2. Align the holes and install six 3/8"-16 x 2-1/2" grade 8 cap screws through the tubes of the L-shaped side sections and the center section side plates. Retain with washers and locknuts, using three on each side.

NOTE: The center section may be assembled to the L-shaped side sections three or six inches lower for use with higher trucks.

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

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 9.)

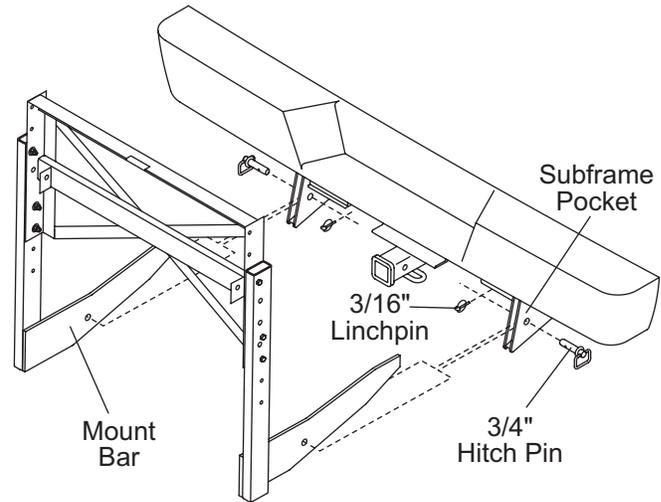


Figure 9

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

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 10.)

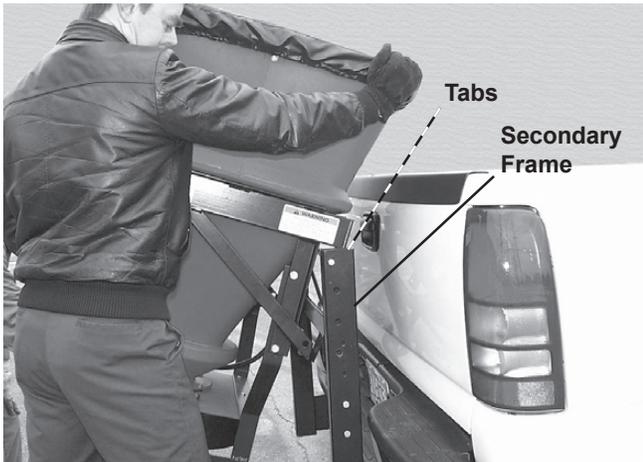


Figure 10

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 11.)

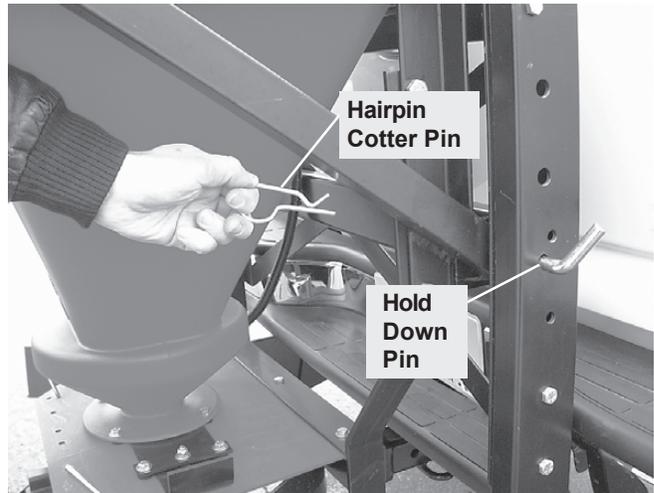


Figure 11

⚠ 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 12.)

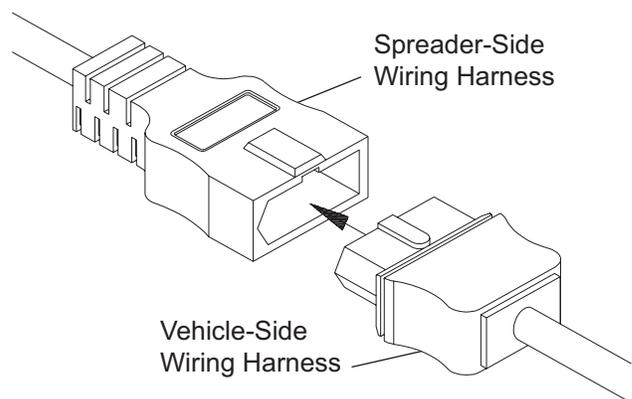
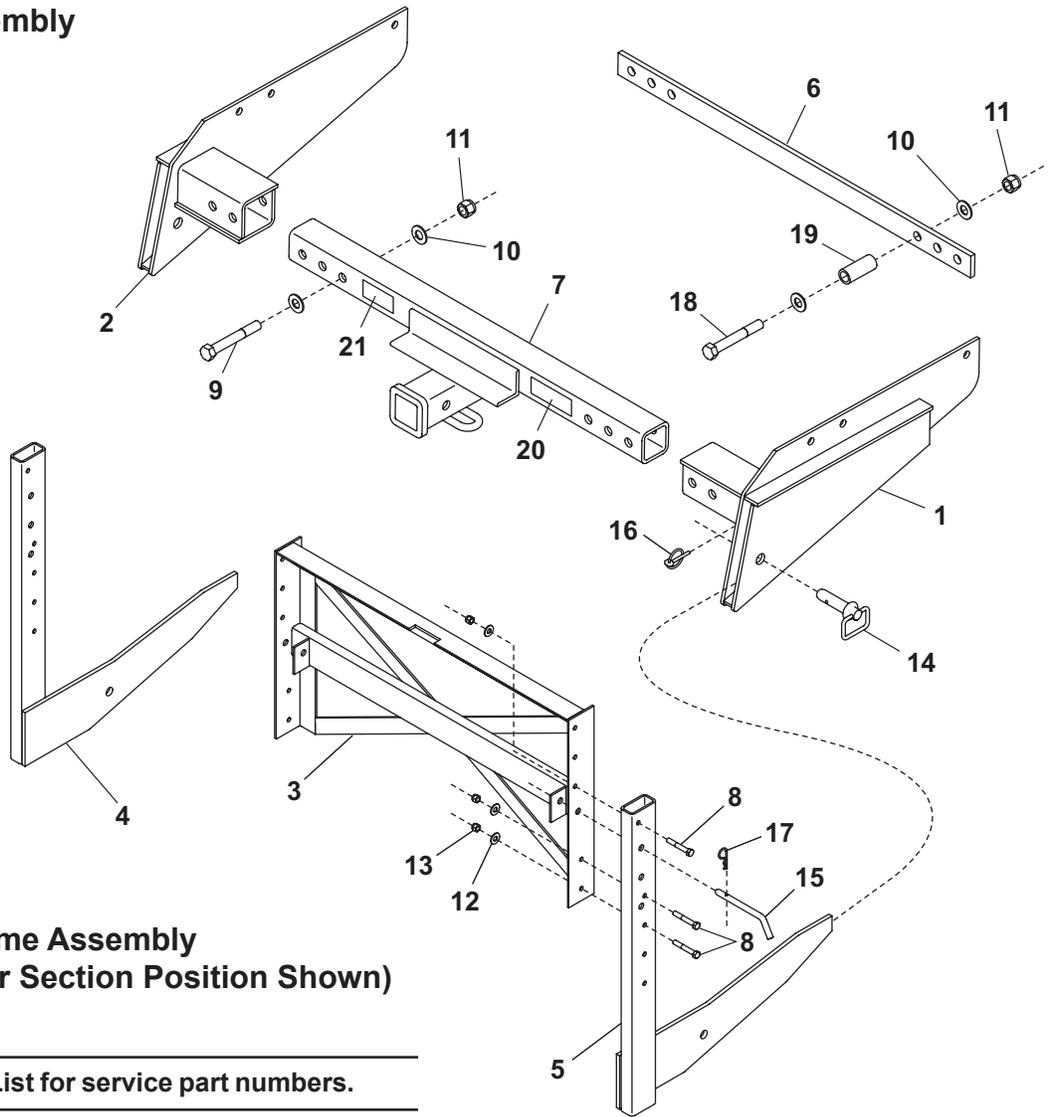


Figure 12

ASSEMBLY DIAGRAMS

Subframe Assembly



Secondary Frame Assembly (Highest Center Section Position Shown)

NOTE: See Parts List for service part numbers.

ITEM	QTY	DESCRIPTION
1	1	MOUNT SUBFRAME - Passenger Side
2	1	MOUNT SUBFRAME - Driver Side
3	1	SECONDARY FRAME - Center
4	1	SECONDARY FRAME
5	1	SECONDARY FRAME
6	1	CROSS BRACE
7	1	RECEIVER HITCH W/LABELS
8	6	3/8-16X2-1/2 GRADE 8 CAP SCREW
9	4	5/8-11X4 GRADE 8 CAP SCREW
10	8	5/8 PLAIN WASHER
11	4	5/8-11 LOCKNUT
12	6	3/8 PLAIN WASHER

ITEM	QTY	DESCRIPTION
13	6	3/8-16 LOCKNUT
14	2	3/4X2-3/4 HITCH PIN
15	2	PIN 1/2"X5.5"
16	2	3/16" LINCHPIN
17	2	HAIRPIN COTTER 1/8"
18	4	5/8-11X4-1/2 GRADE 8 CAP SCREW
19	4	TUBE SPACER
20	1	LABEL INFORMATION (WARNING)
21	1	LABEL INFORMATION (RATING)

Items 8–17 are found in the support frame bolt bag assembly.

Items 18 and 19 are found in the under-frame mount bolt bag assembly.

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. This equipment manufacturer or the vehicle manufacturer may require or recommend optional equipment for spreaders. Do not exceed vehicle ratings with a spreader. The company offers a limited warranty for all spreaders and accessories. See separately printed page for this important information.

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