



B31251-1

UNDERCARRIAGE KIT

Ford Super Duty F-250/350/450/550

2008 - __

Installation Instructions

⚠ CAUTION

Read this document before installing the snowplow.

⚠ CAUTION

See your BLIZZARD® outlet/Web site for specific vehicle application recommendations before installation. The Undercarriage Selection Guide has specific vehicle and snowplow requirements.

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 snowplow and vehicle or other property. Other useful information can also be described.

WARNING/CAUTION & INSTRUCTION LABELS

Become familiar with and inform users about the warning and instruction labels on the back of the blade.

NOTE: If labels are missing or cannot be read, see your sales outlet.

Multiple Pinch Points Label



POWER PLOW™ & SPEEDWING™ Blades Only (both sides)

Instruction Label

ATTACH	⚠ WARNING	DETACH
<ol style="list-style-type: none"> Slowly drive vehicle forward to engage mount adapter into A-frame. Move power switch to center or "OFF" position. Plug in electrical harnesses. Push and hold power switch RIGHT and push UP and hold arm/blade operation switch. Arm will engage mount adapter and pull snowplow toward vehicle. Rotate and release hitch pin. Hitch pin is fully engaged when pin handle is against the pin guide plate. Repeat Step 5 on passenger's side. Rotate and release hitch pin. Hitch pin is fully engaged when pin handle is against the pin guide plate. While holding power switch RIGHT, push DOWN and hold arm/blade operation switch. Arm will disengage mount adapter to relieve tension on the stand. Pull stand handle up. Stand will lift off ground. Pull stand pin out. Rotate stand up until stand pin seats into upper hole. Pin must lock into upper A-frame hole. Repeat Step 8 on passenger's side. Pull stand handle up. Stand will lift off ground. Pull stand pin out. Rotate stand up until stand pin seats into upper hole. Pin must lock into upper A-frame hole. Move power switch to left or "Plowing" position. 	<p>Keep fingers away from snowplow and truck attachment points. POWER HITCH™ 2 arm raises behind undercarriage pushbeam.</p>	<ol style="list-style-type: none"> Lower snowplow onto ground with blade straight. Turn snowplow control in cab OFF. Move power switch to center or "OFF" position. While holding the power switch RIGHT, push DOWN and hold the arm/blade operation switch. Arm will disengage mount adapter to relieve tension on the stand. Pull stand pin out. Rotate stand down until stand pin seats into lower A-frame hole. Push down on top of shoe. Shoe will be on the ground. Repeat Step 4 on passenger's side. Pull stand pin out. Rotate stand down until stand pin seats into lower A-frame hole. Push down on top of shoe. Shoe will be on the ground. Push and hold power switch RIGHT and push UP the arm/blade operation switch. Arm will engage mount adapter and pull snowplow tightly to vehicle. Rotate and pull hitch pin. Rotate hitch pin into retracted position. Repeat Step 7 on passenger's side. Rotate and pull hitch pin. Rotate hitch pin into retracted position. While holding power switch RIGHT, push DOWN and hold arm/blade operation switch to fully lower arm. Unplug electrical harnesses.

Read Owner's Manual for complete instructions.

U.S. patents 5,638,618; 5,889,007; 6,179,669; 6,253,470; 6,278,076; 6,393,737; 6,408,549; 6,412,199; 6,442,877; 6,615,513; 7,134,227; 7,400,059; 7,430,821; 7,737,576; CAN patents 2,184,922; 2,229,783; 2,259,896; 2,366,145; 2,368,304; 2,460,195; 2,552,933; and other patents pending.

Crush Hazard Label



Warning/Caution Label

<p>⚠ WARNING</p> <p>Lower blade when vehicle is parked.</p> <p>Do not exceed GVWR or GAWR including blade and ballast.</p>
<p>⚠ CAUTION</p> <p>Read Owner's Manual before operating or servicing snowplow.</p> <p>Transport speed should not exceed 45 mph (72 km/h). Further reduce speed under adverse travel conditions.</p> <p>Plowing speed should not exceed 10 mph (16 km/h).</p> <p>See your sales outlet/Web site for specific vehicle application recommendations.</p>

SAFETY

SAFETY PRECAUTIONS

Improper installation and operation could cause personal injury and/or equipment and property damage. Read and understand labels and the Owner's Manual before installing, operating or making adjustments.

⚠ WARNING

Lower the blade when the vehicle is parked. Temperature changes could change hydraulic pressure, causing the blade to drop unexpectedly or damaging hydraulic components. Failure to do this could result in serious personal injury.

⚠ WARNING

The driver shall keep bystanders clear of the blade when it is being raised, lowered or angled. Do not stand between vehicle and blade or within 8 feet of a moving blade. A moving or falling blade could cause personal injury.

⚠ WARNING

Keep hands and feet clear of the blade and A-frame when mounting or removing the snowplow. Moving or falling assemblies could cause personal injury.

⚠ WARNING

Do not exceed GVWR or GAWR including the blade and ballast. The rating label is found on the driver-side vehicle door cornerpost.

⚠ WARNING

To prevent accidental movement of the blade, always turn the control OFF whenever the snowplow is not in use. The power indicator light will turn OFF.

⚠ WARNING

Remove blade assembly before placing vehicle on hoist.

⚠ CAUTION

Refer to the Undercarriage Selection Guide for minimum vehicle recommendations and ballast requirements.

PERSONAL SAFETY

- Remove ignition key and put the vehicle in park or in gear to prevent others from starting the vehicle during installation or service.
- Wear only snug-fitting clothing while working on your vehicle or snowplow.
- Do not wear jewelry or a necktie, and secure long hair.
- Wear safety goggles to protect your eyes from battery acid, gasoline, dirt and dust.
- Avoid touching hot surfaces such as the engine, radiator, hoses and exhaust pipes.
- Always have a fire extinguisher rated BC handy, for flammable liquids and electrical fires.

FIRE AND EXPLOSION

⚠ WARNING

Gasoline is highly flammable and gasoline vapor is explosive. Never smoke while working on vehicle. Keep all open flames away from gasoline tank and lines. Wipe up any spilled gasoline immediately.

Be careful when using gasoline. Do not use gasoline to clean parts. Store only in approved containers away from sources of heat or flame.

CELL PHONES

A driver's first responsibility is the safe operation of the vehicle. The most important thing you can do to prevent a crash is to avoid distractions and pay attention to the road. Wait until it is safe to operate Mobile Communication Equipment such as cell phones, text messaging devices, pagers or two-way radios.

VENTILATION

⚠ WARNING

Vehicle exhaust contains lethal fumes. Breathing these fumes, even in low concentrations, can cause death. Never operate a vehicle in an enclosed area without venting exhaust to the outside.

TORQUE SPECIFICATIONS

NOISE

Airborne noise emission during use is below 70 dB(A) for the snowplow operator.




VIBRATION

Operating snowplow vibration does not exceed 2.5 m/s² to the hand-arm or 0.5 m/s² to the whole body.

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 snowplow including proper personal protective safety equipment.

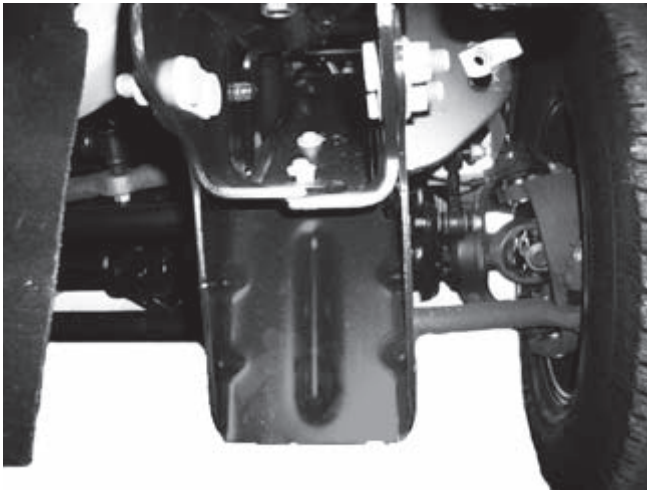
Recommended Fastener Torque Chart (ft-lb)			
Size	Torque		
	 SAE Grade 2	 SAE Grade 5	 SAE Grade 8
1/4-20	6	9	13
5/16-18	11	18	28
3/8-16	19	31	46
3/8-24	24	46	68
7/16-14	30	50	75
1/2-13	45	75	115
9/16-12	66	110	165
5/8-11	93	150	225
3/4-10	150	250	370
7/8-9	150	378	591
1-8	220	583	893
Metric Grade 8.8 (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.			

UNDERCARRIAGE INSTALLATION

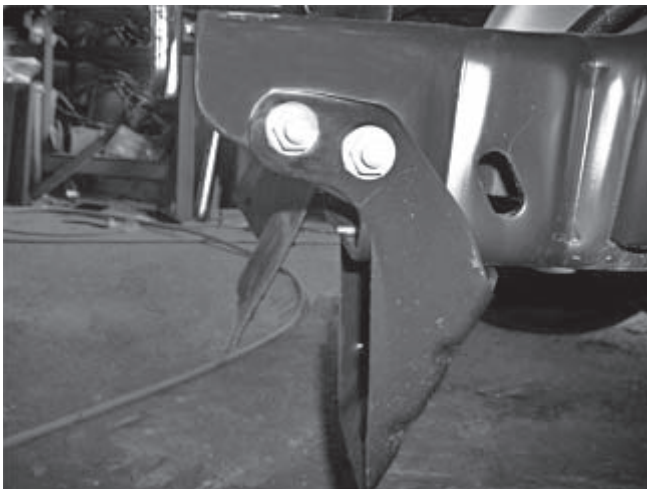
INSTALLATION INSTRUCTIONS

NOTE: For easier assembly and installation, vehicle and all snowplow components should be on a smooth, level, hard surface, such as concrete.

1. Remove the air dam and bumper. Retain the fasteners for later installation.
2. Remove compatibility structures, if vehicle is so equipped. Retain them for reinstallation if the snowplow mount is removed from the vehicle.



Remove compatibility structures.



3. Remove the metal sway bar brackets and retain for reinstallation later in this procedure.
4. Completely remove the sway bar fasteners and bolt clips from the keyholes in the truck frame. Retain the fasteners and clips for future reinstallation if the mount kit is removed from the vehicle.
5. Place a spacer inside the passenger's side of the truck frame with the slots closest to the center of the vehicle. Insert a 7/16" x 2-1/2" cap screw down through a 7/16" washer, the spacer and the truck frame.
6. Position the passenger-side rear bracket so the cap screw goes through the appropriate hole.

On 2011–__ model year F-250 and F-350 installations and all F-450 and F-550 installations, insert an additional washer between the truck frame and the rear bracket.

Place the sway bar in position and align the sway bar bracket so the fastener is in the correct hole. Attach a 7/16" locknut and hand tighten.

7. Insert a second 7/16" x 2-1/2" cap screw through a washer, the spacer, and the truck frame.

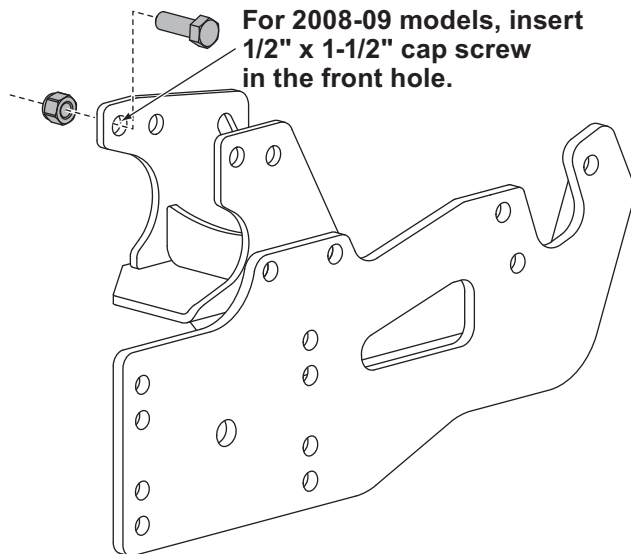
On 2011–__ model year F-250 and F-350 installations and all F-450 and F-550 installations, insert an additional washer between the truck frame and the rear bracket.

Insert the cap screw through the rear bracket and sway bar bracket. Attach a 7/16" locknut and hand tighten.

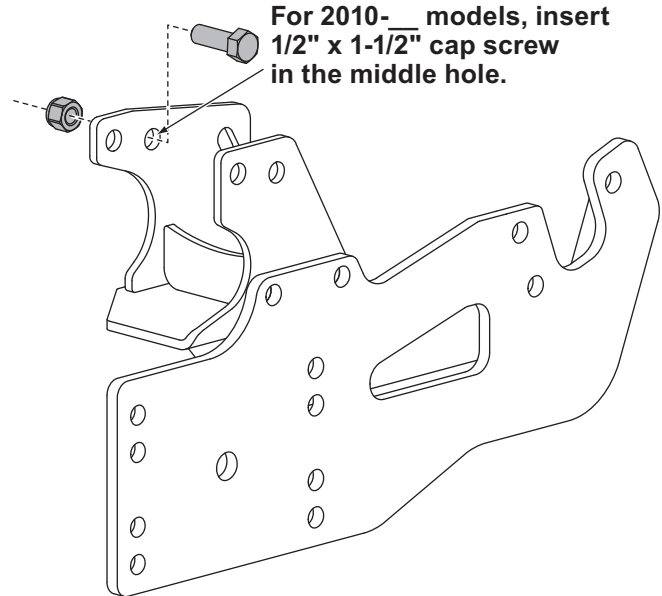
8. Insert a 1/2" x 1-1/2" cap screw and 1/2" washer into the truck frame and out through the front hole in the rear bracket. Attach a 1/2" locknut and hand tighten.

UNDERCARRIAGE INSTALLATION

9. Position the passenger-side hanger plate so that the rear hole is aligned with the rear hole in the bracket. Insert a 1/2" x 1-1/2" cap screw through the hole in the hanger plate and rear bracket, attach a 1/2" locknut and hand tighten.
10. Rotate the hanger plate up against the truck frame. Insert a 1/2" x 1-1/2" cap screw into the inner rear hole at the front of the hanger plate and through the truck frame. Attach a 1/2" washer and locknut on the inside of the truck frame and hand tighten.
11. Insert a 1/2" x 1-1/2" cap screw into the inner front hole in the hanger plate. Attach a 1/2" washer and 1/2" locknut on the inside of the truck frame and hand tighten.
12. Insert a 1/2" x 1-1/2" cap screw and 1/2" washer into the truck frame and out through the outer rear hole in the hanger plate. Attach a 1/2" washer and locknut and hand tighten.
13. **For 2008–09 model years:** Insert a 1/2" x 1-1/2" cap screw into the truck frame and out through the outer front hole in the hanger plate. Attach a 1/2" locknut and hand tighten.



For 2010–__ model years: Insert a 1/2" x 1-1/2" cap screw into the truck frame and out through the outer middle hole in the mount. Attach a 1/2" locknut and hand tighten.



14. Install two more cap screws through the holes in the hanger plate and rear bracket. Attach locknuts to fully secure the rear bracket to the hanger plate. Hand tighten fasteners.
15. Repeat Steps 5–9 on the driver's side.

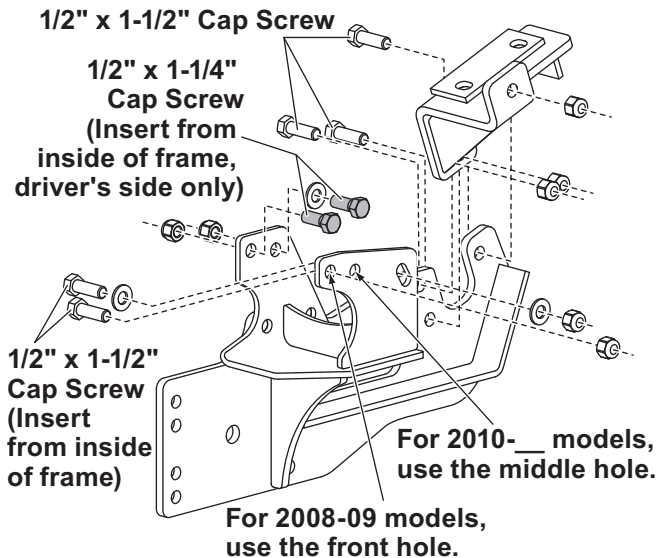
UNDERCARRIAGE INSTALLATION

16. Rotate the hanger plate up against the truck frame. Insert a 1/2" x 1-1/4" cap screw and 1/2" washer into the truck frame and out through the inner rear hole at the front of the hanger plate. Attach a 1/2" locknut and hand tighten.

⚠ CAUTION

Diesel equipped vehicles must use supplied 1/2" x 1-1/4" cap screws between frame and intercooler to prevent intercooler damage during assembly and use.

17. Insert a 1/2" x 1-1/4" cap screw into the truck frame and out through the inner front hole in the driver-side hanger plate. Attach a 1/2" locknut and hand tighten.



18. Insert a 1/2" x 1-1/2" cap screw and 1/2" washer into the truck frame and out through the outer rear hole in the hanger plate. Attach a 1/2" washer and locknut and hand tighten.

19. **For 2008–09 model years:** Insert a 1/2" x 1-1/2" cap screw into the truck frame and out through the outer front hole in the hanger plate. Attach a 1/2" locknut and hand tighten.

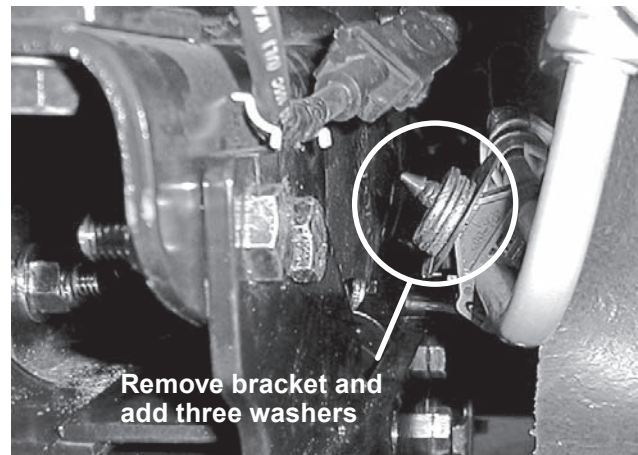
For 2010–__ model years: Insert a 1/2" x 1-1/2" cap screw into the truck frame and out through the outer middle hole in the hanger plate. Attach a 1/2" locknut and hand tighten.

20. Install two more 1/2" x 1-1/2" cap screws through the outer middle holes in the hanger plate and rear bracket. Attach locknuts to fully secure the rear bracket to the hanger plate. Hand tighten the fasteners.

21. Fully tighten the rear bracket fasteners according to the torque chart.

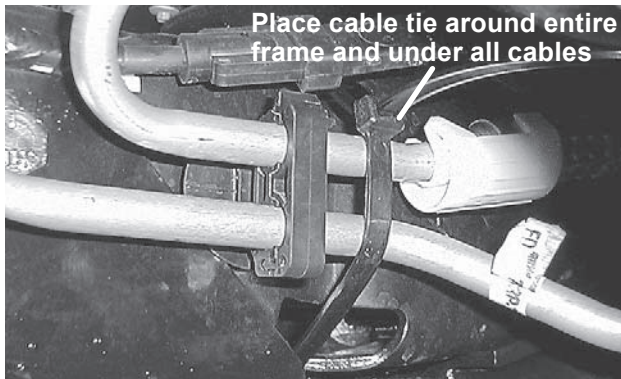
22. Make sure the hanger plates are tight up against the truck frame. Fully tighten the fasteners securing the hanger plate to the truck frame and rear bracket according to the torque chart.

23. Remove the plastic bracket holding the metallic cooling lines from the passenger's side of the truck frame. Stack three 1/2" washers over the fastener.

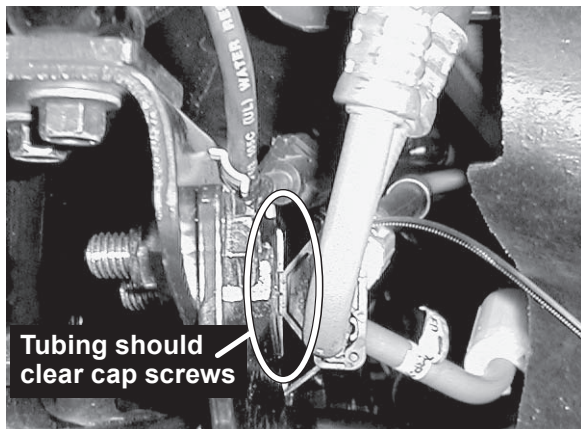


UNDERCARRIAGE INSTALLATION

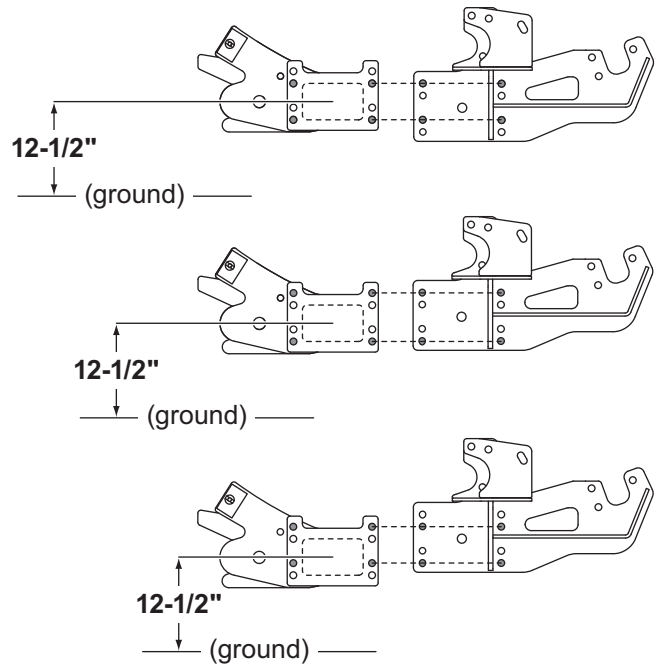
24. Reinsert the fastener into the original hole to hold its position. Wrap the cable tie around the entire frame and tubing behind the bracket. Do not wrap cable tie over any other wires or tubes or go inside the truck frame.



25. Tighten the cable tie until it is snug, taking care not to crimp tubing. Trim excess length.



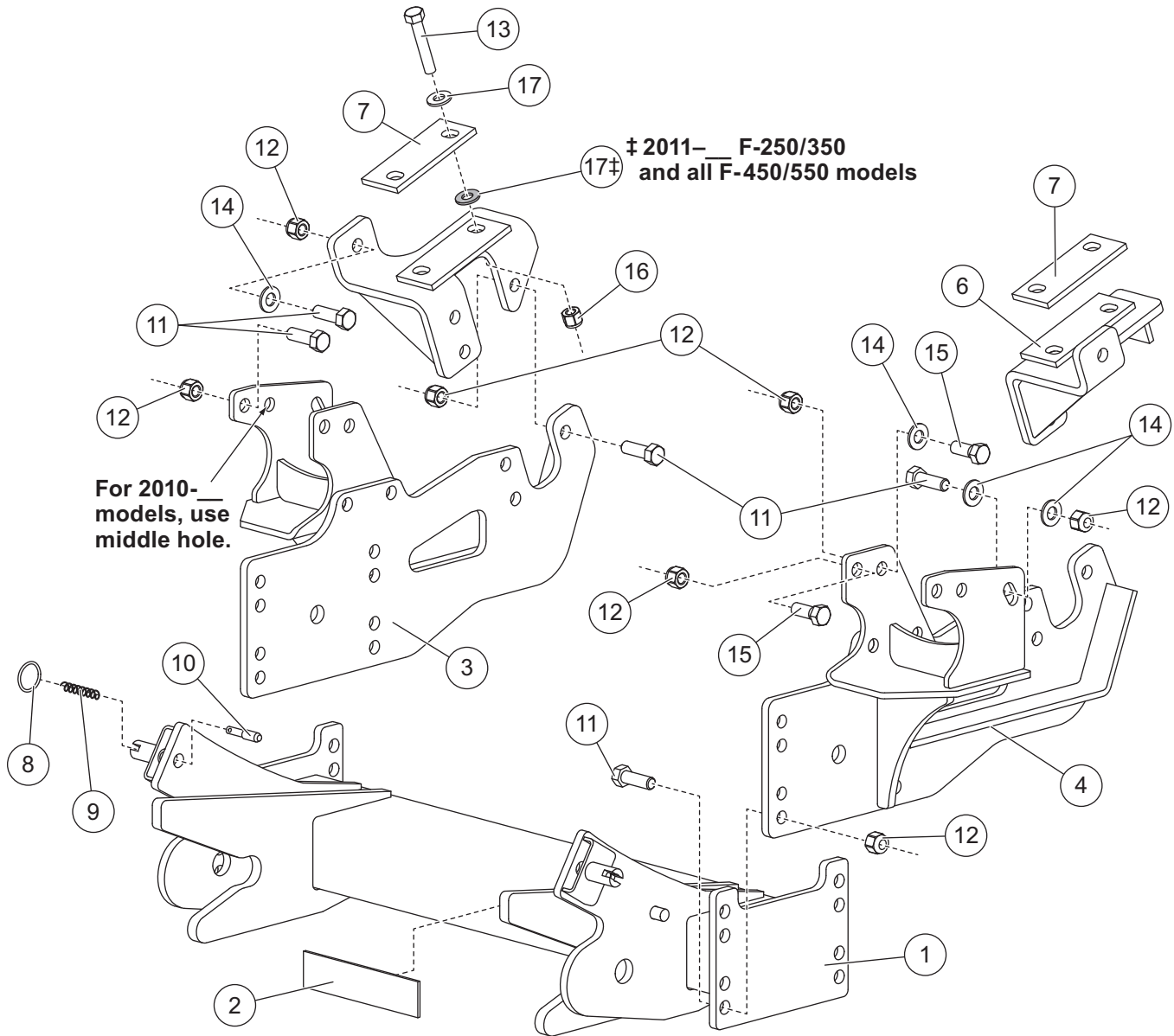
26. Align the four holes on each side of the pushbeam with the holes in the hanger plates. Choose the set of holes that will bring the pushbeam closest to the position shown in the following illustration.



27. Insert four 1/2" x 1-1/2" fasteners through the chosen set of holes in the pushbeam and hanger plates. Attach 1/2" locknuts and hand tighten. Level the pushbeam with the floor and fully tighten the fasteners according to the torque chart.
28. Reattach the air dam and bumper using the original fasteners. If the air dam does not clear the hanger plates, notch it as needed.

NOTE: After five to ten hours of snowplow usage, retorque all undercarriage assembly fasteners.

UNDERCARRIAGE PARTS LIST



B31251-1 Undercarriage Kit							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	44964	1	Pushbeam	7	68206	2	Spacer
2	B63162	1	Label, Pushbeam	8	B61309	2	Split Ring, 1.25 OD
3	44960	1	Hanger Plate – PS	9	B61000	2	Compression Spring SS
4	44962	1	Hanger Plate – DS	10	B40079	2	A-Frame Latch Pin
5	68192	1	Rear Bracket – PS	ns	44966	1	Hardware Kit – B31251-1
6	68194	1	Rear Bracket – DS				
44966 Hardware Kit – B31251-1							
11	22		1/2-13 x 1-1/2 Hex Cap Screw G5	15	2		1/2-13 x 1-1/4 Hex Cap Screw G5
12	24		1/2-13 Hex Locknut GB	16	4		7/16-20 Hex Locknut G8
13	4		7/16-20 x 2-1/2 Hex Cap Screw G8	17‡	8		7/16 Hardened Flat Washer
14	11		1/2 Hardened Flat Washer	ns	1		Cable Tie, Extra Heavy Duty
			G = Grade				SS = Stainless Steel
							ns = not shown

‡ 2008–10 model year F-250/350 installations require only four washers; 2011— model year F-250/350 installations and all F-450/550 installations require eight washers.



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