

# 33209

## MOUNT KIT

**Mitsubishi FG**

**2012 - \_\_**

**Installation Instructions**

**⚠ CAUTION**

Read this document before installing the snowplow.

**⚠ CAUTION**

See your sales outlet/Web site for specific vehicle application recommendations before installation. The online selection tool has specific vehicle and snowplow requirements.

### 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.

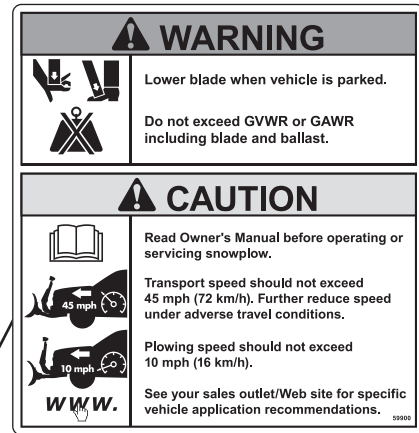
**NOTE:** Indicates a situation or action that can lead to damage to your snowplow and vehicle or other property. Other useful information can also be described.

### WARNING/CAUTION & INSTRUCTION LABELS

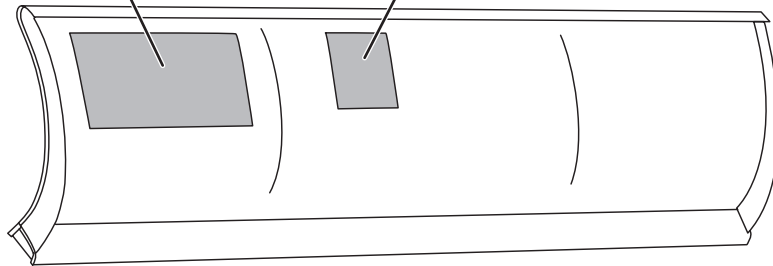
Become familiar with and inform users about the warning/caution labels on the back of the blade and the instruction label on the headgear.

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

Warning/Caution Label



Instruction Label



## 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 blade when 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 the vehicle and the 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 online selection tool for minimum vehicle recommendations and ballast requirements.**

## PERSONAL SAFETY

- Remove the 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 tanks 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.**

**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/s<sup>2</sup> to the hand-arm or 0.5 m/s<sup>2</sup> 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.

<b>Recommended Fastener Torque Chart</b>					
<b>Inch Fasteners Grade 5 and Grade 8</b>					
Size	Torque (ft-lb)		Size	Torque (ft-lb)	
	 Grade 5	 Grade 8		 Grade 5	 Grade 8
1/4-20	8.4	11.9	9/16-12	109	154
1/4-28	9.7	13.7	9/16-18	121	171
5/16-18	17.4	24.6	5/8-11	150	212
5/16-24	19.2	27.3	5/8-18	170	240
3/8-16	30.8	43.6	3/4-10	269	376
3/8-24	35.0	49.4	3/4-16	297	420
7/16-14	49.4	69.8	7/8-9	429	606
7/16-20	55.2	77.9	7/8-14	474	669
1/2-13	75.3	106.4	1-8	644	909
1/2-20	85.0	120.0	1-12	704	995
<b>Metric Fasteners Class 8.8 and 10.9</b>					
Size	Torque (ft-lb)		Size	Torque (ft-lb)	
	 Class 8.8	 Class 10.9		 Class 8.8	 Class 10.9
M6 x 1.00	7.7	11.1	M20 x 2.50	325	450
M8 x 1.25	19.5	26.9	M22 x 2.50	428	613
M10 x 1.50	38.5	53.3	M24 x 3.00	562	778
M12 x 1.75	67	93	M27 x 3.00	796	1139
M14 x 2.00	107	148	M30 x 3.50	1117	1545
M16 x 2.00	167	231	M33 x 3.50	1468	2101
M18 x 2.50	222	318	M36 x 4.00	1952	2701
These torque values apply to fasteners except those noted in the instructions.					

**INSTALLATION INSTRUCTIONS**

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

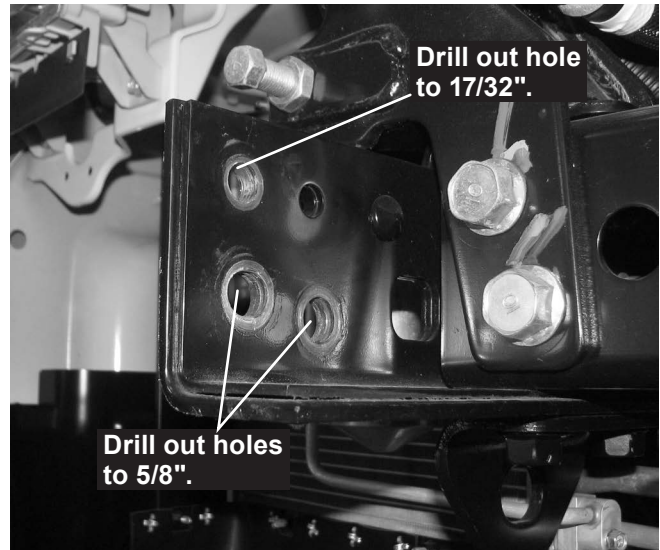
**Main Mount**

1. Remove the front bumper, then remove the tow hook and bumper bracket from the frame rails. Retain the bumper bolts, bumper bracket fasteners, bumper bracket and tow hook in case the snowplow mount is later removed from the vehicle.

**⚠ CAUTION**

Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

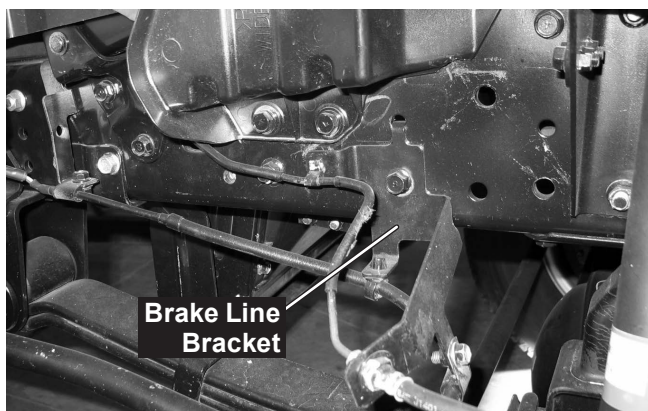
2. Drill out the upper frame hole to 17/32". Drill out the two lower frame holes to 5/8". Repeat on the other side.



3. Position the main mount on the frame rails, aligning the bumper bracket holes with the mount holes. Attach each end of the main mount with a supplied 1/2" x 1-1/2" cap screw in the upper drilled-out hole and supplied 5/8 x 2" cap screws in the two lower drilled-out holes. Hand tighten the fasteners.

## Driver-Side Thrust Arm & Brackets

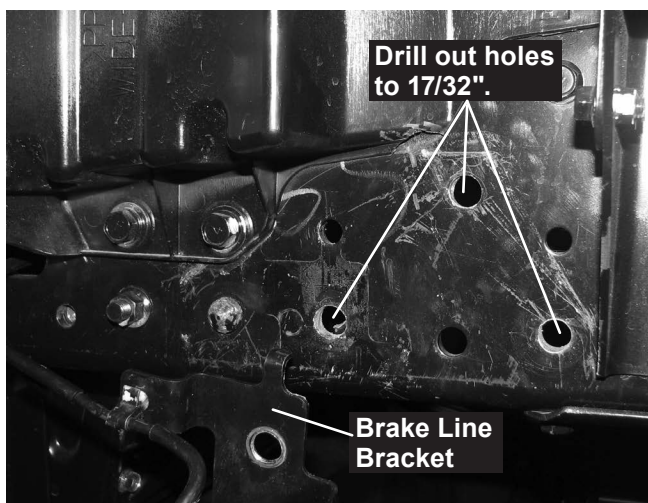
1. On the driver's side, remove the fastener attaching the brake line bracket. Move the brake line bracket down and out of the way, taking care not to crimp any lines or cables.



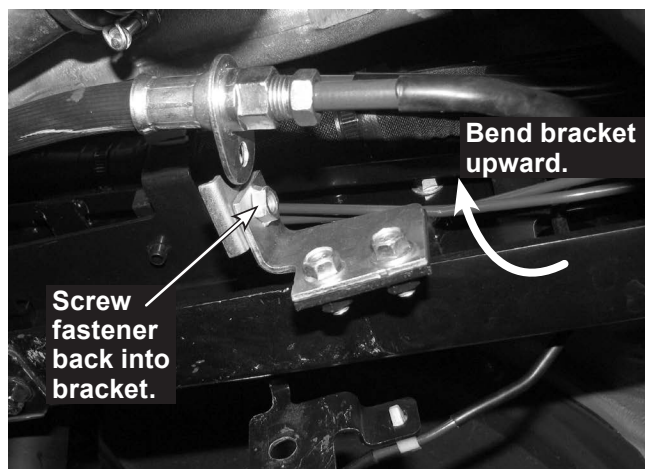
### ⚠ CAUTION

Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

2. Drill out the brake line bracket fastener hole and the two other existing holes to  $17/32$ ".



3. On the inside of the frame, remove the fastener connecting the hydraulic line to the hydraulic line bracket. Bend the bracket upward past the lower edge of the frame. Screw the fastener back into the repositioned bracket.

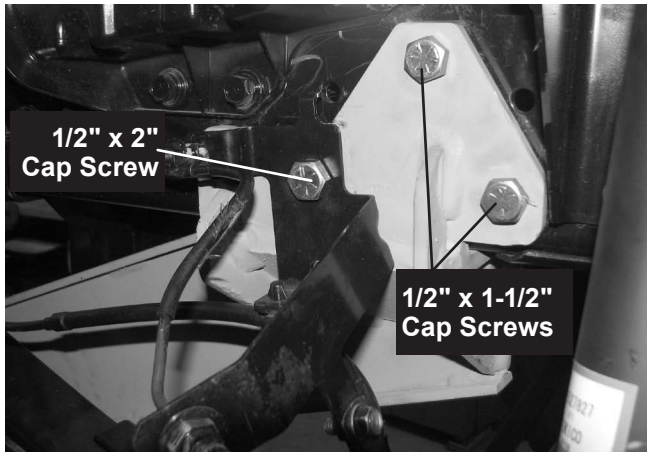


4. Position the thrust arm inside the leaf spring, between the leaf spring and the radiator bracket, aligning the forward hole over the frame rivet.





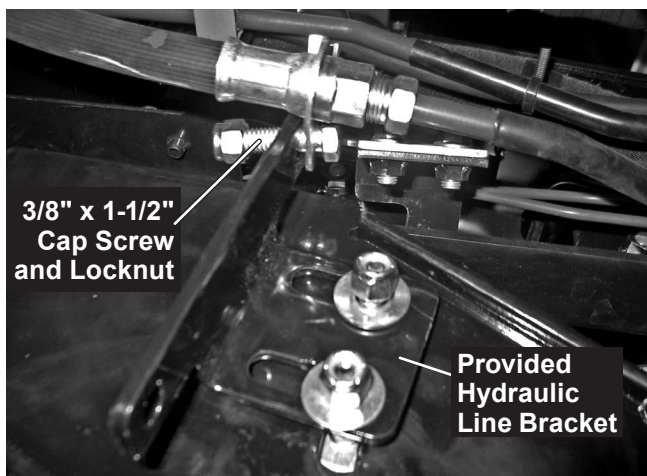
Attach the thrust arm to the frame using two 1/2" x 1-1/2" cap screws and locknuts in the rearmost holes. Reinstall the brake line bracket using a 1/2" x 2" cap screw and locknut in the forward hole. Hand tighten the fasteners.



- Align the pair of holes in the main mount with the holes in the thrust arm, and fasten with 5/8" x 2" cap screws and locknuts. Hand tighten.

**NOTE: The thrust arms should be installed on the outside of the main mount.**

- Install the provided hydraulics line bracket to the inside of the driver-side thrust arm using two 3/8" x 1-1/2" cap screws, four flat washers, and locknuts. Drill out the hydraulic line tab hole to 3/8". Attach the hydraulic line tab to the bracket using a 3/8" x 1-1/2" cap screw and locknut.



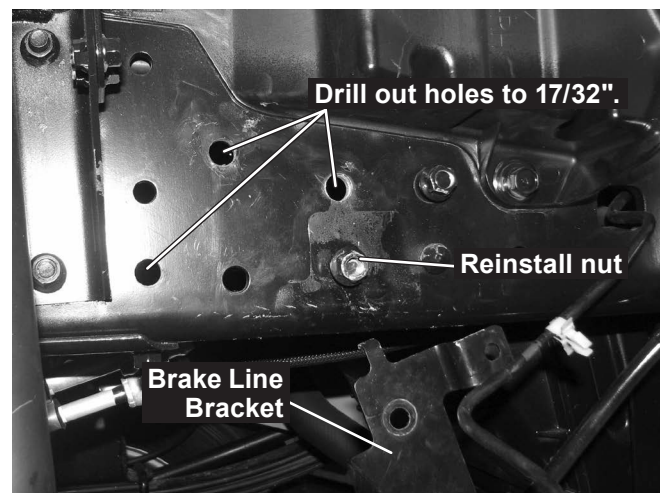
## Passenger-Side Thrust Arm & Brackets

- On the passenger's side, remove the brake line bracket and retain the nut. Carefully shift the brake line bracket aside and reinstall the nut.

### ⚠ CAUTION

Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

- Drill out three frame holes to 17/32" as shown.



- Position the thrust arm inside the leaf spring, between the leaf spring and the radiator bracket, aligning the forward hole over the frame rivet.

Attach the thrust arm to the frame using three 1/2" x 1-1/2" cap screws and locknuts. Hand tighten the fasteners.



- Align the pair of holes in the main mount with the holes in the thrust arm, and fasten with 5/8" x 2" cap screws and locknuts. Hand tighten.

**NOTE: The thrust arms should be installed on the outside of the main mount.**

**⚠ CAUTION**

**Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.**

- Using the small hole in the thrust arm as a guide, drill a 13/32" hole through the vehicle frame.



- Reinstall the brake line bracket using a 3/8" x 2" cap screw, washer and locknut in the drilled hole.



## Final Assembly

- Push the main mount tight up against frame and fully tighten all fasteners according to the torque chart.
- Drill out the bumper plate holes to 17/32", if necessary.
- Reattach the bumper using the four provided 1/2" x 1-1/2" cap screws, washers and locknuts. Fully tighten all fasteners according to the torque chart.

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

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 snow removal. Do not exceed vehicle ratings with a snowplow. The company offers a limited warranty for all snowplows and accessories. See separately printed page for this important information.

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