

33109

MOUNT KIT

Mitsubishi FG

2005 - 11

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.

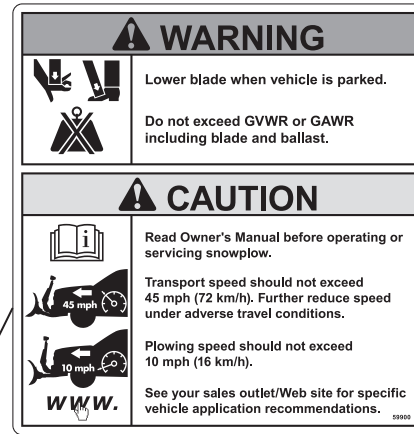
NOTE: Indicates a situation or action that can lead to damage to your snowplow and vehicle or other property. Other useful information can also be described.

WARNING/CAUTION & INSTRUCTION LABELS

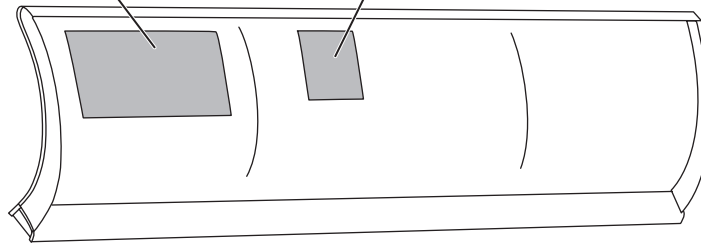
Become familiar with and inform users about the warning and instruction labels on the back of the blade.

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 the 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 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.

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					
Inch Fasteners Grade 5 and Grade 8					
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

Metric Fasteners Class 8.8 and 10.9					
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

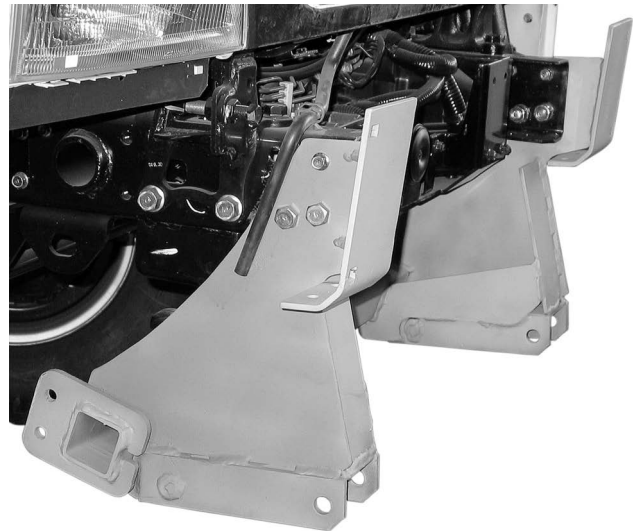
These torque values apply to fasteners except those noted in the instructions.

INSTALLATION INSTRUCTIONS

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

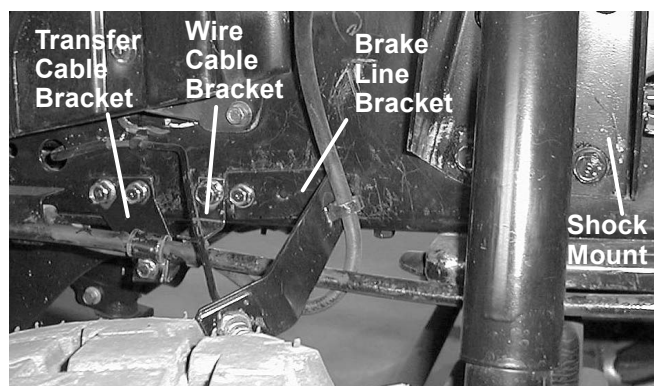
Main Mount

1. Remove the front bumper, then remove the bumper brackets from the frame rails. Retain fasteners.
2. Position the main mount on the frame rails, aligning the bumper bracket holes with the mount holes. Reuse the bumper bracket fasteners to attach the mount to the frame rails, and hand tighten.



Driver-Side Thrust Arm & Brackets

1. On the driver's side, carefully remove the fasteners attaching the brake line bracket, transfer cable bracket and wire cable bracket to the frame rail. Completely remove the bracket from the transfer cable. Retain all fasteners.

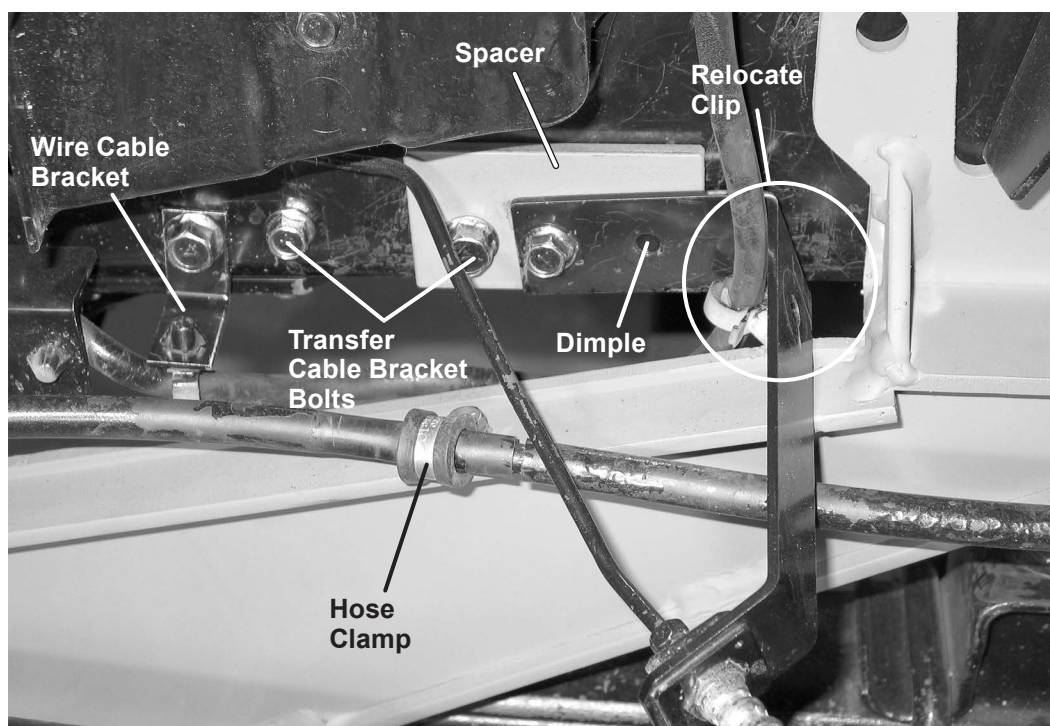


2. Remove and retain the two lower shock mount fasteners.
3. Position the thrust arm between the steering arm and leaf spring, and align the holes on the shock mount with the holes on the thrust arm. Use two M12 x 30 mm cap screws and lock washers to attach the thrust arm to the shock mount, and hand tighten.

4. Align the pair of holes in the main mount with the holes in the thrust arm, and fasten with 1/2" x 1-1/2" cap screws and locknuts. Hand tighten.

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

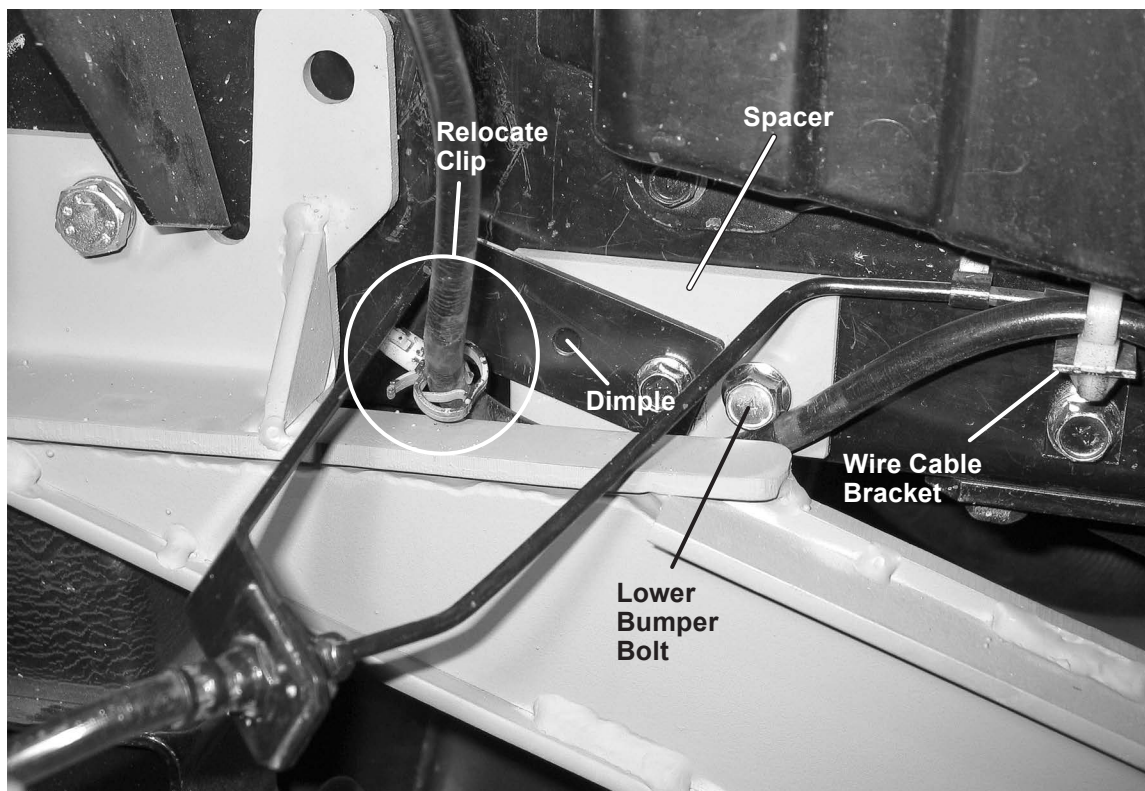
5. Place a spacer between the frame and the brake line bracket. Reattach the brake line bracket reusing the original fastener and inserting it through the middle hole in the spacer. Position the bracket so the dimple is locked into the small rear hole of the spacer, and hand tighten. Relocate hose clip as shown.
6. Insert the **larger transfer cable bracket bolt** through the front hole in the spacer and into the frame, and hand tighten.
7. Reattach the wire cable bracket to the frame using the forward-most transfer cable bracket bolt hole. Reinstall the smaller transfer cable bracket bolt into the remaining hole in the frame for storage.
8. Attach the supplied #10 hose clamp to the transfer cable, then fasten the clamp to the thrust arm using the provided 1/4" cap screw and locknut.



Passenger-Side Thrust Arm & Brackets

1. On the passenger's side, carefully remove the fasteners attaching the brake line bracket and wire cable bracket to the frame rail, as well as the two lower shock mount fasteners. Retain all fasteners.
2. Place a spacer between the frame rail and the brake line bracket. Reattach the brake line bracket reusing the original fastener and inserting it through the middle hole in the spacer. Position the bracket so that the dimple is locked into the small rear hole of the spacer, and hand tighten. Relocate hose clip as shown.
3. Insert one of the **lower bumper bolts** through the front hole in the spacer and into the frame, then hand tighten.
4. Reattach the wire cable bracket to the frame as shown below.
5. Align the holes in the thrust arm with the holes on the shock mount, and use two M12 x 30 mm cap screws and lock washers to attach the thrust arm to the shock mount. Hand tighten.
6. Align the pair of holes in the main mount with the holes in the thrust arm, and fasten with 1/2" x 1-1/2" cap screws and locknuts. Hand tighten.

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



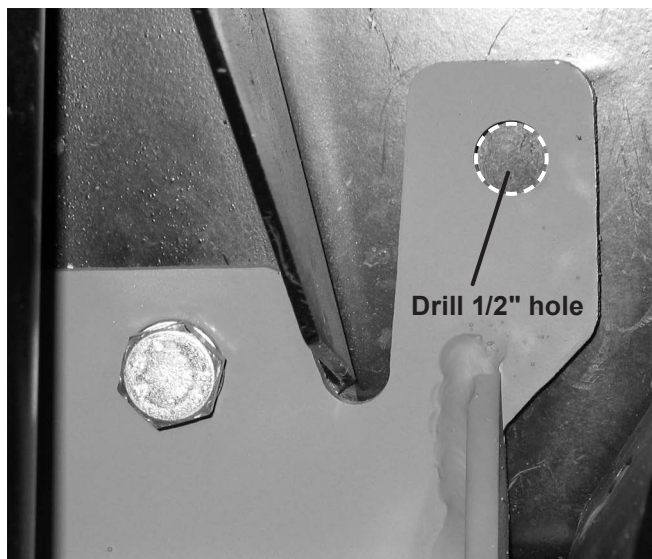
Final Assembly

1. Push the main mount tight up against frame, and according to the torque chart, fully tighten the six fasteners securing the main mount to the frame rails.
2. Fully tighten the driver-side shock mount fasteners, followed by the two fasteners securing the thrust arm to the main mount, according to the torque chart. Repeat on the passenger's side.
3. On both sides of the vehicle, fully tighten the brake line bracket, wire cable bracket and transfer cable bracket fasteners.

⚠ CAUTION

Use caution not to pinch, cut, or drill through any wires or hoses running along the frame rails.

4. Use the holes on the thrust arms as guides, and drill a 1/2" hole through each side of the frame. Place a 1/2" flat washer between the frame and the thrust arm, then insert a 1/2" x 1-1/2" cap screw through the hole, washer and frame. Attach a 1/2" locknut, and fully tighten. Repeat on the opposite side.



5. Reattach the bumper using the original carriage bolts on the front and the provided 1/2" x 1" cap screws, washers and locknuts on the lower portion of the bumper. Fully tighten.

NOTE: After five to ten hours of snowplow usage, retorque all mount 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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