



B33110

UNDERCARRIAGE KIT

Mitsubishi FG

1999 - 04

Parts List and 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.

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 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 dismounting 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 ON/OFF switch to OFF whenever the snowplow is not in use. The control 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.

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

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.



Grade Identification for J429–Grade 5 Bolt



Grade Identification for J429–Grade 8 Bolt

SAE J429 Grade 5 Torque Values				SAE J429 Grade 8 Torque Values			
Nominal Thread Size	Clamp Loads (lb)	Tightening Torque		Nominal Thread Size	Clamp Loads (lb)	Tightening Torque	
		"Lubricated"	"Dry"			"Lubricated"	"Dry"
1/4-20	2,000	6 ft-lb	8 ft-lb	1/4-20	2,850	9 ft-lb	12 ft-lb
5/16-18	3,350	13 ft-lb	18 ft-lb	5/16-18	4,700	18 ft-lb	25 ft-lb
3/8-16	4,950	23 ft-lb	31 ft-lb	3/8-16	6,950	32 ft-lb	44 ft-lb
7/16-14	6,800	37 ft-lb	50 ft-lb	7/16-14	9,600	53 ft-lb	70 ft-lb
1/2-13	9,050	57 ft-lb	75 ft-lb	1/2-13	12,800	80 ft-lb	107 ft-lb
9/16-12	11,600	82 ft-lb	109 ft-lb	9/16-12	16,400	115 ft-lb	154 ft-lb
5/8-11	14,500	113 ft-lb	151 ft-lb	5/8-11	20,300	159 ft-lb	211 ft-lb
3/4-10	21,300	200 ft-lb	266 ft-lb	3/4-10	30,100	282 ft-lb	376 ft-lb
7/8-9	29,435	321 ft-lb	430 ft-lb	7/8-9	41,550	454 ft-lb	606 ft-lb
1-8	38,600	482 ft-lb	640 ft-lb	1-8	54,540	680 ft-lb	900 ft-lb



Grade Identification for Metric–Grade 8.8 Bolt



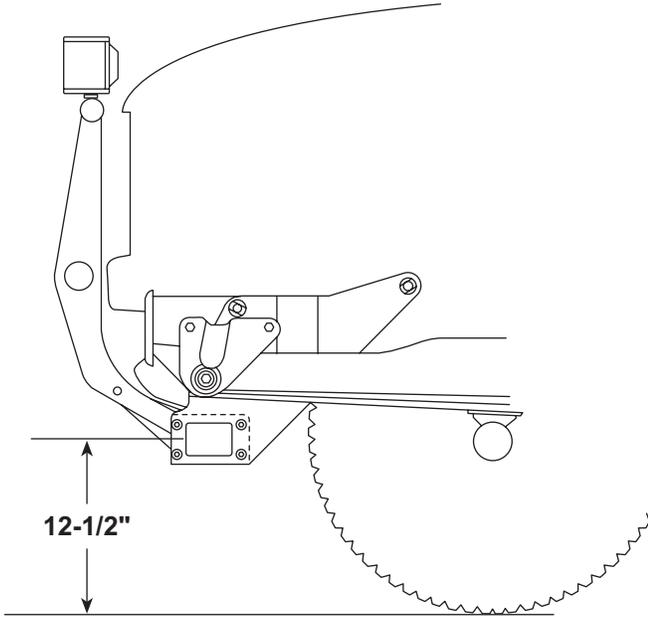
Grade Identification for Metric–Grade 10.9 Bolt

Metric Class 8.8 Torque Values				Metric Class 10.9 Torque Values			
Diameter (mm)	Clamp Loads (lb)	Tightening Torque		Diameter (mm)	Clamp Loads (lb)	Tightening Torque	
		"Lubricated"	"Dry"			"Lubricated"	"Dry"
5	1,389	3 ft-lb	5 ft-lb	5	1,987	5 ft-lb	7 ft-lb
6	1,965	6 ft-lb	8 ft-lb	6	2,812	8 ft-lb	11 ft-lb
7	2,826	10 ft-lb	13 ft-lb	7	4,044	14 ft-lb	19 ft-lb
8	3,579	14 ft-lb	19 ft-lb	8	5,121	20 ft-lb	27 ft-lb
10	5,672	28 ft-lb	37 ft-lb	10	8,116	40 ft-lb	53 ft-lb
12	8,243	49 ft-lb	65 ft-lb	12	11,796	70 ft-lb	92 ft-lb
14	11,246	77 ft-lb	103 ft-lb	14	16,092	111 ft-lb	148 ft-lb
16	15,882	125 ft-lb	167 ft-lb	16	21,970	173 ft-lb	231 ft-lb
18	19,423	172 ft-lb	229 ft-lb	18	26,868	238 ft-lb	317 ft-lb
20	24,784	244 ft-lb	325 ft-lb	20	34,284	338 ft-lb	450 ft-lb

PUSHBEAM

PUSHBEAM HEIGHT

The recommended pushbeam height for this undercarriage assembly is 12-1/2" from the center of the pushbeam to level ground. DO NOT exceed 14-1/2" in height for this undercarriage.



UNDERCARRIAGE INSTALLATION

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

1. Align the driver-side hanger plate (**Item 8**) to the holes on the outside of the truck frame rail. Secure the top two holes with cap screws (**Item 14**), flat washers (**Item 15**) and locknuts (**Item 16**).

Secure the three middle holes with cap screws (**Item 13**), flat washers (**Item 11**) and locknuts (**Item 12**).

Position two cap screws (**Item 13**), flat washers (**Item 11**) and locknuts (**Item 12**) through the horizontal support into the bottom of the frame rail. Hand tighten.

2. Remove the front AC condenser mount bracket, if applicable, to access the hole on the passenger side of the truck frame rail.

CAUTION

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

NOTE: It may be necessary to slot both holes on the AC bracket approximately 1/2" toward the truck frame.

3. Align the holes in the passenger-side hanger plate (**Item 6**) with the holes in the front of the truck frame rail.

NOTE: The hanger plate will be positioned between the AC bracket and the truck frame rail. The plate will also be positioned around the welded tow hook.

Reposition the AC bracket over the two front holes in the hanger plate and secure with cap screws (**Item 13**), flat washers (**Item 11**) and locknuts (**Item 12**). Secure the two rear holes in the plate with cap screws (**Item 14**), flat washers (**Item 15**) and locknuts (**Item 16**).

Insert one cap screw (**Item 13**), flat washers (**Item 11**) and a locknut (**Item 12**) through the horizontal support into the bottom of the frame rail. Use the original hardware to reinstall the bracket to the AC condenser.

4. Mount the pushbeam (**Item 1**) square with the bottom of each hanger plate using cap screws (**Item 18**), flat washers (**Item 17**) and locknuts (**Item 19**). Fully tighten pushbeam fasteners according to the torque chart.
5. Position the support arms (**Items 7 and 9**) on the outside of the mounting brackets on the rear of the pushbeam. Secure each arm with cap screws (**Item 20**), flat washers (**Item 17**) and locknuts (**Item 19**).

Remove the brake line support bracket and the cap screw located in front of the bracket and discard hardware. Drill out both holes to accept 7/16" diameter cap screws. The arms will be positioned against the truck frame rail and the front brake line support bracket.

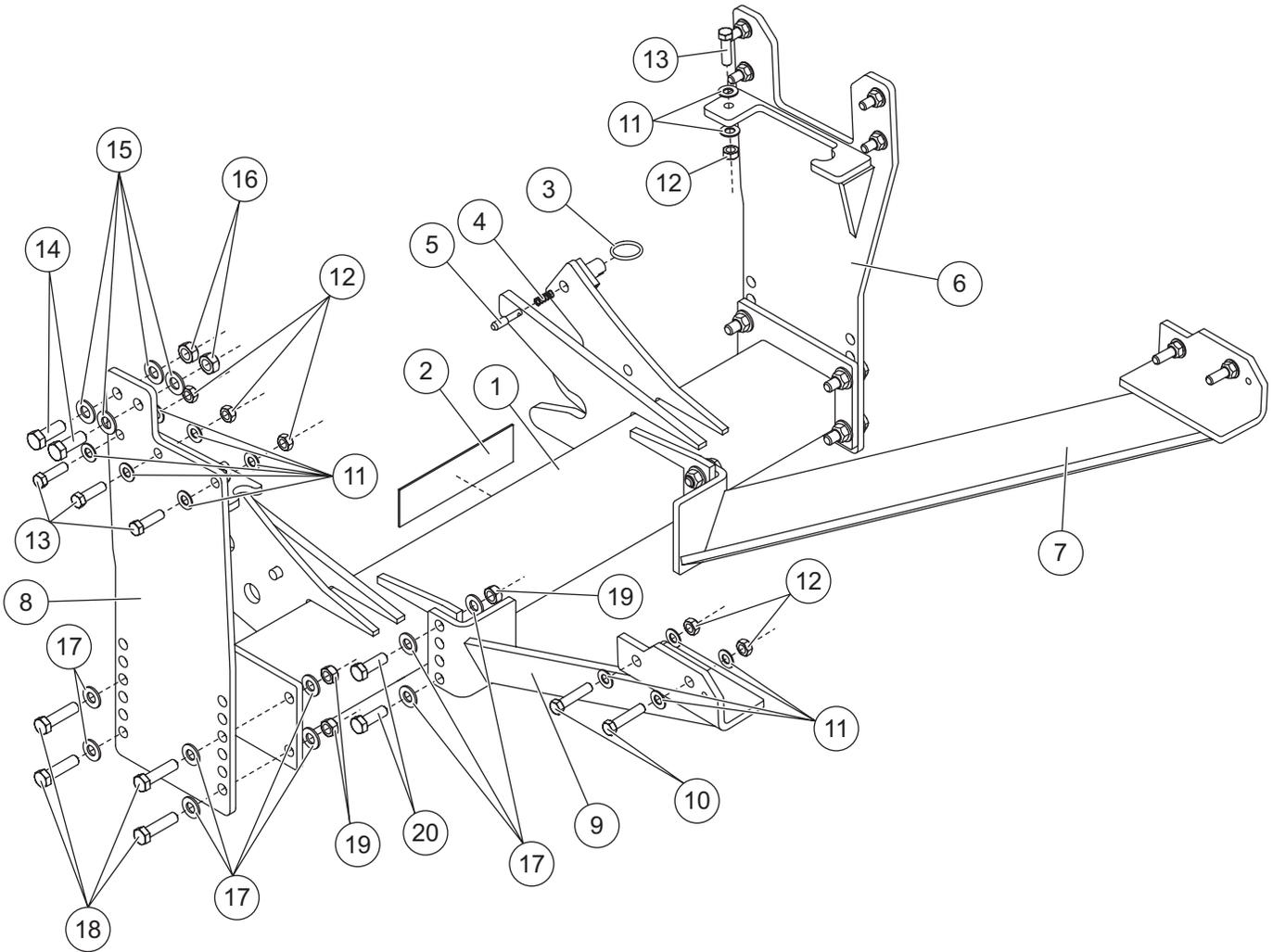
NOTE: It may be necessary to mount support arms under the plastic guard mounts.

Secure arm, brake line support brackets and plastic guards with cap screws (**Item 10**), flat washers (**Item 11**) and locknuts (**Item 12**).

6. Level the pushbeam with the floor and fully tighten all fasteners according to the torque chart.

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

UNDERCARRIAGE PARTS LIST



B33110 Undercarriage Kit							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	B33011	1	Pushbeam	6	B33012	1	Hanger Plate – PS
2	B63161	1	Decal, Pushbeam	7	B33026	1	Support Arm, Pushbeam – PS
3	B61309	2	Split Ring, 1.25 OD	8	B33013	1	Hanger Plate – DS
4	B61000	2	Compression Spring SS	9	B33027	1	Support Arm, Pushbeam – DS
5	B40079	2	A-Frame Latch Pin	ns	B61484	1	Hardware Kit
B61484 Hardware Kit							
10	B61483	4	7/16-14 x 2 Hex Cap Screw G8	16	29241	2	9/16-12 Hex Locknut
11	29232	28	7/16 Hardened Flat Washer	17	90572	24	1/2 Hardened Flat Washer
12	90353	14	7/16-14 Hex Locknut GB	18	90217	8	12-13 x 2 Hex Cap Screw G5
13	B61459	10	7/16-14 x 1-1/2 Hex Cap Screw G8	19	90593	12	1/2-13 Hex Locknut GC
14	29240	2	9/16-12 x 1-1/2 Hex Cap Screw G8	20	90210	4	1/2-13 x 1-1/2 Hex Cap Screw G5
15	63924	4	9/16 Hardened Flat Washer				
			G = Grade			SS = Stainless Steel	
						ns = not shown	



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