

# 31253

## MOUNT KIT PERSONAL PLOW

Ford F-150

2009 - \_\_\_\_

### 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 Kit Selection Guide/Selection List 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**

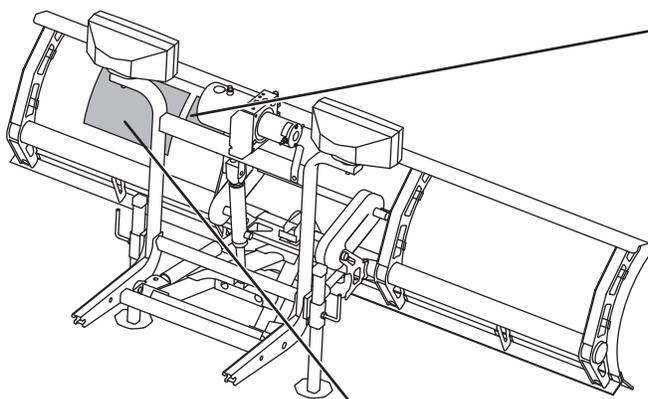
Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**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**

LOWER BLADE WHEN VEHICLE IS PARKED.

DO NOT EXCEED GVWR OR GAWR INCLUDING BLADE AND BALLAST.

REMOVE BLADE ASSEMBLY BEFORE PLACING VEHICLE ON HOIST.

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**⚠ CAUTION**

READ *OWNER'S MANUAL* BEFORE OPERATING OR SERVICING SNOWPLOW.

TRANSPORT SPEED SHOULD NOT EXCEED 45 MPH. FURTHER REDUCE SPEED UNDER ADVERSE TRAVEL CONDITIONS.

PLOWING SPEED SHOULD NOT EXCEED 10 MPH.

SEE YOUR SALES OUTLET/WEB SITE FOR SPECIFIC VEHICLE APPLICATION RECOMMENDATIONS.

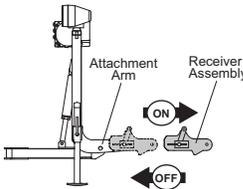
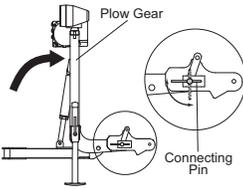
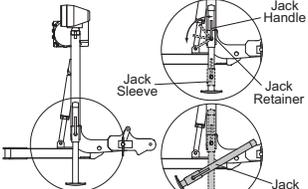
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***This snowplow is for personal/homeowner use only.***

ATTACH INSTRUCTIONS

1. Make certain both **connecting pins** are fully retracted.
2. Drive vehicle slowly to completely insert **attachment arms** into **receiver assembly** slots.
3. Twist both **connecting pins** to release spring tension, then push **plow gear** toward vehicle so **connecting pins** fully engage holes in **attachment arms**.
4. Loosen one **jack handle** and slide **jack sleeve** down below **jack retainer**. Remove **jack** and retighten **jack handle**. Repeat for other **jack** and store them.
5. Connect all electrical cables from vehicle to snowplow.

DETACH INSTRUCTIONS

U.S. Patents 4,999,935; 5,420,480; 6,253,470; 6,941,685; RE 35,700; CAN Patent 2,060,425; and other patents pending.

5. Back vehicle away from snowplow.
6. See Owner's Manual for proper snowplow storage.
3. While pushing **plow gear** toward vehicle to release **connecting pin** tension, pull **connecting pin** out on one side and twist pin handle to keep pin retracted. Repeat procedure for other **connecting pin**.
4. Disconnect all electrical cables.
1. Put blade on ground using LOWER/FLOAT on snowplow control. Leave control ON and in FLOAT.
2. Attach **jacks**. Loosen **jack handle**, put **jack** on ground, and raise **jack sleeve** until fully engaging **jack retainer**. Tighten **jack handle**. Repeat for other **jack**.

Read Owner's Manual for Complete Instructions

## 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 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 Kit Selection Guide/Selection List 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 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 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                                      |  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    |

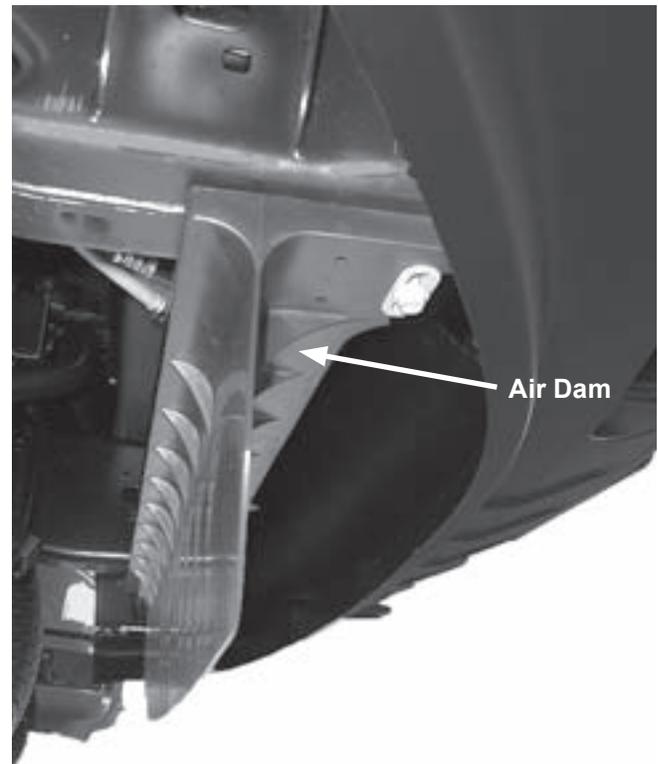
These torque values apply to fasteners except those noted in the instruction.

**INSTALLATION INSTRUCTIONS**

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

**MOUNT INSTALLATION**

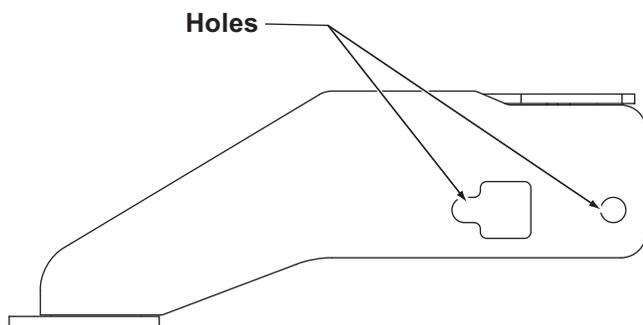
1. Remove the bumper.
2. Remove the air dam (pictured), if equipped. Retain for the owner.



3. Remove the tow hooks. Retain the fasteners. Save tow hooks for reinstallation if mounts are removed in the future.

4. Place passenger-side mount plate up against the frame. Insert tow hook bolt bar (a clip with 2 cap screws attached to it) into frame. Insert tow hook fasteners down through the truck frame and down through the mount frame hole. Attach locknuts and hand tighten.

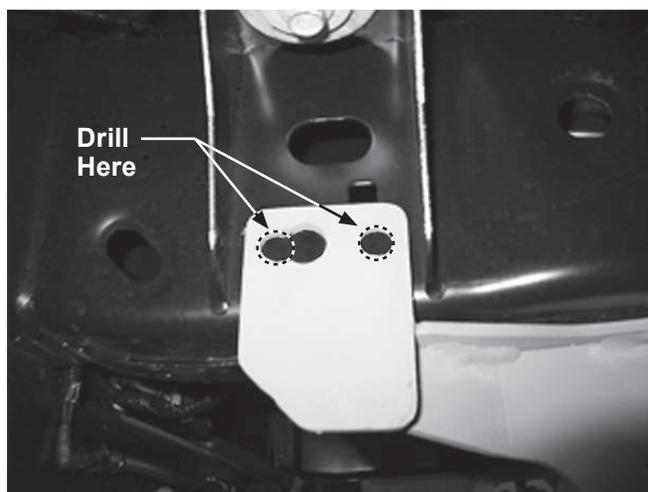
Top View



**⚠ CAUTION**

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

5. Push mount plate tight up against frame and rearward. Using rearmost portion of rear hole on the outside of the mount plate, drill a 17/32" hole through the frame. Using other mount plate hole as a guide, drill a hole through the outside of the frame.

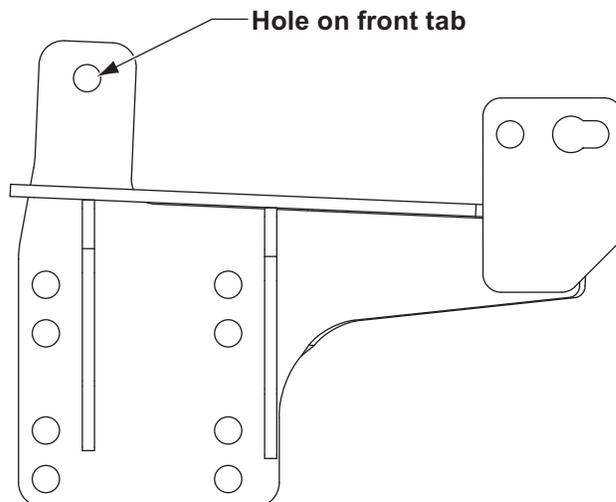


6. Attach a washer to the cap screw with handle and insert it through the frame and through the forwardmost rear hole. Attach locknut and hand tighten.
7. Attach a washer to the cap screw with handle and insert it through the frame and through the rearmost hole in mount plate. Attach a washer and locknut to the fastener and hand tighten.

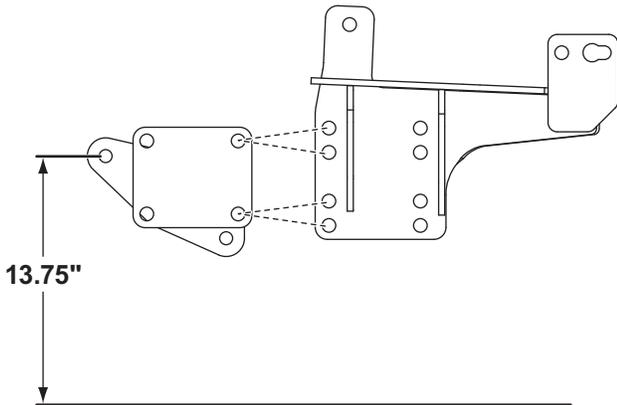
**⚠ CAUTION**

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

8. Using the front tab on the mount plate as a guide, drill a 17/32" hole through the inside of the frame. Attach washer to a 1/2" cap screw. Insert it through the frame and through the front tab on the mount plate. Attach a locknut and hand tighten.



- Repeat steps 4–8 for the driver's side.
- Align the four holes in each side of the pushbeam with the holes in the mount plates. Choose the set of holes that will bring the pushbeam closest to the dimension shown below.



- Attach the pushbeam to the mount plates using eight 1/2" x 1-1/2" cap screws. Place a locknut on each cap screw and fully tighten according to the torque chart.
- Fully tighten all fasteners according to the torque chart.
- Reattach the bumper and modify the air dam as necessary.

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

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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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