

# 683

## HIGH SPEED ONE WAY PLOW

683 Series One Way  
Snowplow owner's manual.

Read before operating.

Important safety and operation  
instructions inside.

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## PREFACE

Congratulations on the purchase of your new Craig Manufacturing Ltd. Snowplow. This manual provides safety, operation and maintenance information. To keep your plow in good condition, please read this manual and follow all recommendations. Failure to do so may invalidate your warranty.

When parts or service are necessary contact Craig at 1-800-565-5007 for genuine Craig Parts. Before using your snowplow, make sure your machine is equipped with all the OEM recommended requirements for plowing.

### CRAIG FACTORY ORIGINAL PARTS



The best way to ensure equipment reliability is to use only genuine Craig Manufacturing Ltd. Factory Original Parts. Our parts department can help you not only find the right part for your application but also offer advice and support for the repair. Using aftermarket non-approved parts can alter your plow's performance characteristics and may affect your warranty.

To help ensure that correct parts are ordered, please record the serial number of your plow. Over time serial tags can become tarnished or difficult to read. Please supply this serial number to your dealership when ordering parts and it will ensure the correct part gets ordered.

**Serial:** \_\_\_\_\_

**Machine:** \_\_\_\_\_

**Model:** \_\_\_\_\_

**In-Service Date:** \_\_\_\_\_

**Purchased From:** \_\_\_\_\_

## **SAFETY**

### **SAFETY PRECAUTIONS**

Improper installation and/or operation of your Craig Manufacturing Ltd. attachments can cause bodily injury, property damage, and damage to your equipment. Read and understand labels and this booklet before operating or making adjustments. Failure to do so may affect your warranty.

### **HYDRAULIC SAFETY**

Always inspect hydraulic components before operating your Snowplow. Replace any damaged or worn parts immediately.

Lower the blade when the machine is not in use. Temperature changes can change hydraulic pressure, allowing the blade to drop unexpectedly causing injury or damaging hydraulic components.

Hydraulic fluid under pressure can cause bodily harm. If you suspect a hydraulic leak use a piece of wood or cardboard to investigate, **DO NOT** use your hand. If you are injured by hydraulic fluid, seek medical attention immediately.

### **WARNING LABELS**

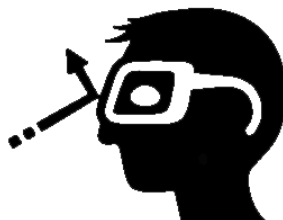
Become familiar with and inform users about all warning and instruction labels on the back of your attachment.

**NOTE:** If labels are missing or cannot be read, call 1-800-565-5007 to get replacements.

### **PERSONAL SAFETY**

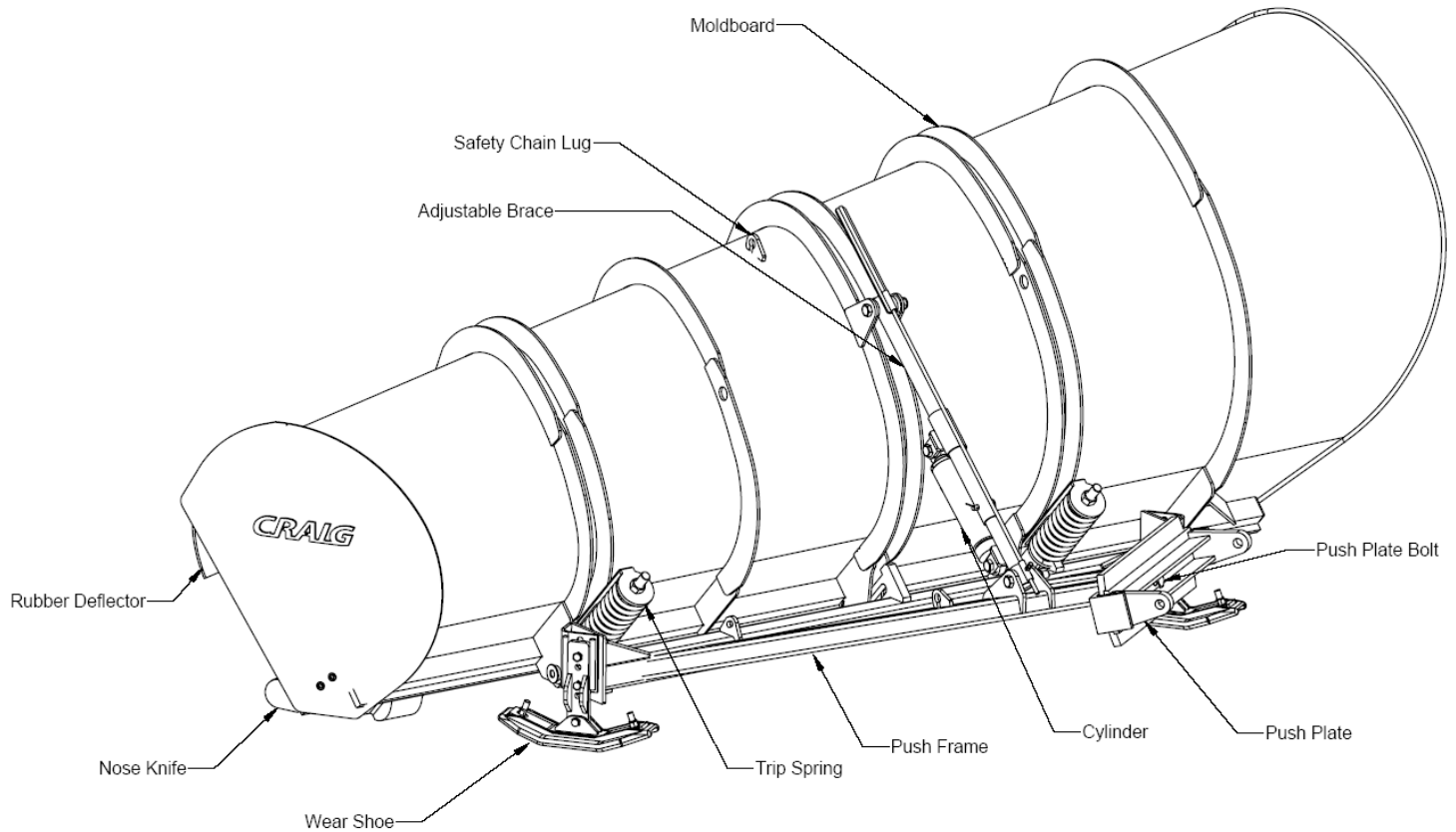
Remove ignition key and immobilize the machine during installation, inspection or service. Always follow safe work practices when installing servicing or inspecting your snowplow by wearing only snug-fitting clothing, removing jewelry, and securing long hair. Wear safety goggles to protect your eyes from hydraulic fluid, sparks, dirt and dust. Always have a fire extinguisher rated BC on hand for flammable liquid and electrical fires.

Lift with your legs. Get help and use lifting equipment when applicable. Never trust that the hydraulic system will not fail. Do not work under or around heavy items not supported by stands, blocks or safety chains.



# OVERVIEW

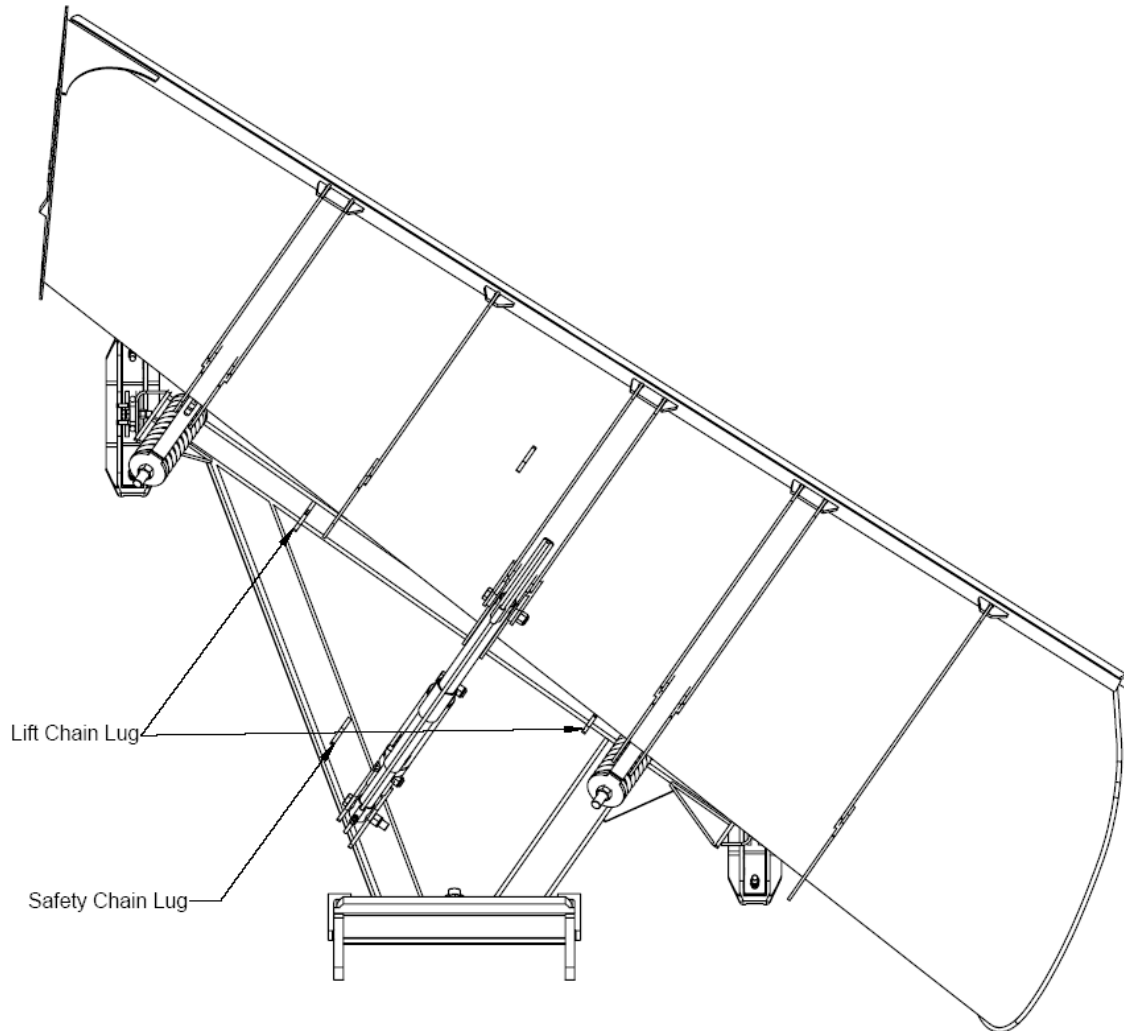
## GETTING TO KNOW YOUR SNOWPLOW



NOTE: YOUR PLOW MAY NOT APPEAR EXACTLY AS SHOWN

## OVERVIEW

### GETTING TO KNOW YOUR SNOWPLOW



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## OVERVIEW

### TERMINOLOGY

<b>Moldboard:</b>	The working face of the snowplow.
<b>Cutting Edge:</b>	The consumable wear component located at the bottom of the moldboard. Cutting edges must be replaced periodically to protect your moldboard.
<b>Trip:</b>	The ability of a snowplow to temporarily give way under the pressure of an obstacle. This can be accomplished by a variety of designs, often with the use of springs.
<b>Push Frame:</b>	The portion of the moldboard support frame that remains rigidly secured to the machine hook-up.
<b>Push Plate:</b>	The attachment point at the rear of the Push Frame that attaches to the plow harness. This plate oscillates to follow the crown of the road.
<b>Wear Shoes:</b>	The replaceable runners located under the cutting edge. Properly adjusted wear shoes protect the Push Frame from abrasion and extend cutting edge life.

### ACCESSORIES AND OPTIONS

<b>Rubber Deflector Kit:</b>	Includes a twelve inch wide, half inch thick heavy duty rubber deflector and all necessary mounting hardware. Attaches to the top of the Moldboard.
<b>Carbide Edge:</b>	Superior wear resistance intended for short passes such as ramp clearing. Prolonged passes can generate heat and premature wear.
<b>High Visibility Kit:</b>	Includes two high visibility flag sticks, two square feet of conspicuity tape and all necessary mounting hardware.
<b>Cast Curb Shoe:</b>	Replaceable item that protects the plow from curbs. Install at one or both ends of the cutting edge.
<b>Hydraulic Adjustable Moldboard:</b>	Allows for in-cab adjustment of moldboard angle.

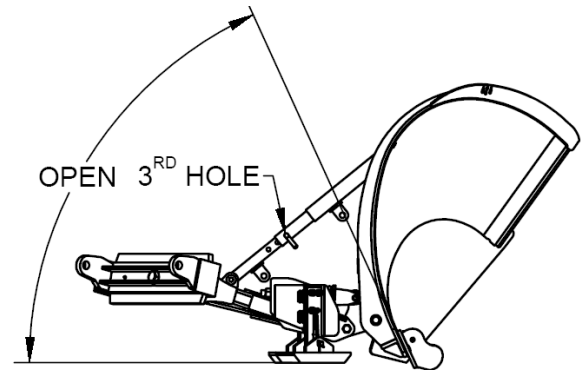
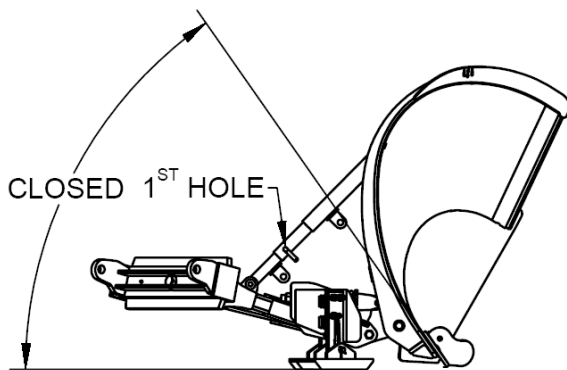
## OPERATION

### SETTING WEAR SHOES

The wear shoes on your one way plow are meant to take most of the weight of the plow. Craig recommends setting shoe height with the plow and machine on a flat shop floor. This way shoes can be set so the cutting edge is slightly off the ground. This will ensure that the shoes take most of the load and wear when compared to the moldboard cutting edge.

### ADJUSTABLE BRACES

The adjustable braces on a 683 one way plow can be between 45° and 59° and is intended for different plowing conditions. Closing the moldboard angle to 45° is recommended for light snow conditions. The 45° position is also easier on asphalt in fall and spring conditions, when there is no frost in the ground.



When in heavy snow conditions or when peeling hardpack, opening the moldboard to the 59° position is recommended. This position will make the plow scrape better, but consequently will make the moldboard jump or trip easier when hitting obstructions and the moldboard may chatter.

The hydraulic cylinder on the 683 one way plow is intended to make adjusting the moldboard angle easier for the operator. When hydraulically adjusting the moldboard, be certain to remove the pin in the adjustable brace. Craig recommends that the pin in the adjustable brace be replaced before using the plow, since they are intended to take the brunt of plowing forces. Failing to do this will put all the plowing loads directly on the cylinder and can cause failure in the cylinder.

**Do not drill additional holes in the adjustable braces to allow for more adjustable positions. The plow is not designed for this and damage or premature wear can occur.**

### TRIP SPRINGS

The 683 one way plow has compression type trip springs. These springs have 7" of travel and enable the plow to hop over obstacles during plowing. The trip springs are preloaded with tension during assembly and are not intended to be adjustable. In the event that a spring breaks, when replacing the spring simply retighten the nut back to its original position.





## **OPERATION**

### **SAFETY CHAINS**

The 683 one way plow has a safety chain attaching the moldboard to the push frame. This chain will appear sloppy when the moldboard is closed, however it is cut to the correct length and is not to be trimmed. Shortening the safety chain can result in the chain tightening and kinking the main sheet of the moldboard when the moldboard is fully open and the springs are compressed.

### **GREASE POINTS**

One way plows have several grease points. The Push Plate, where the plow attaches to your machine contains two grease fittings. If your plow has crank style wear shoes, there are also grease fittings on each of these.



## MAINTENANCE

### INSPECTION BEFORE USE

- Check all bolts and nuts. Tighten any loose bolts or replace if they are worn or missing. When replacing worn or missing bolts, do not replace with bolts that are smaller or of a different grade.
- Check the cutting edge for wear. When replacing the cutting edges, the bolts, nuts and lock washers should be replaced with new ones.
- Check trip springs and linkage to ensure that all bolts are tight and that they are not worn or missing. Adjust the spring if it is loose by screwing the locknuts back tight against the spring. This complete assembly should be greased daily, especially the shaft that is inside the spring. Replace the spring if it is broken or if it cannot be tightened anymore by the locknuts.
- Check the adjustable brace and pin for wear or bend. Replace as necessary.
- Adjust the moldboard angle as desired. It is possible to set the moldboard at 45° to 59°.

DO NOT WELD THE TRIP LINKAGE SOLID OR INHIBIT THE MOVEMENT OF THE TRIP LINKAGE. DO NOT REMOVE THE WEAR SHOES. SEVERE DAMAGE OR INJURY MAY OCCUR.

### STORING THE SNOW PLOW

When storing your snowplow for extended periods of time the following precautions should be taken to avoid unnecessary damage.

- Thoroughly clean your snowplow to remove all salt and grime.
- Store your plow off the ground. Laying the plow on a simple set of 4"x 4" blocks can keep your plow from sitting in water or damp ground.
- Paint exposed steel surfaces.
- Apply fresh grease to all grease points.
- Apply penetrating oil/rust inhibitor to trip assembly.

### PAINT

The finish on your Craig attachment has been applied with a special primer and adhesion enhancer to promote a durable finish. Because of the nature of heavy equipment attachments scraping and wear are normal. **The finish on your Craig attachment is not covered under warranty.** For best results your Craig Snowplow should be cleaned, inspected and re-painted at the end of each season. Matching paint and primer can be purchased from your local original equipment dealer.



## **MAINTENANCE**

### **TECHNICAL SUPPORT**

If you have followed the maintenance instructions contained in this manual you should have years of trouble-free operation from your Craig attachment.

Should you encounter any issue or have any questions about your plow please contact us at 1-800-565-5007 and ask for technical support.

### **READING YOUR PRODUCT ID TAG**

Craig Manufacturing Ltd. stamps a blue serial tag onto every attachment. The tag is often located on the rear of the attachment in the upper left corner. The information contained on this tag will be required for parts and support. Craig serial numbers begin with a "T" followed by the year then month of construction. For example T1203 would denote the year 2012 and 03 the month of March.







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