



**READ THESE INSTRUCTIONS FULLY BEFORE USING
YOUR ORIGINAL ENGLISH HYDRAULIC DENT RAISER**

Your Original English Hydraulic Dent Raiser is a very precise and powerful, miniature hydraulic jack. When used properly it will remove even large dents from shotgun barrels. It consists of handle, shaft with stop collar, bore cylinder, anvil, and the adjusting Allen screw located in the handle. Both the anvil and adjusting screw are hydraulic pistons; each has O-ring seals. The English Dent Raiser is factory filled with hydraulic fluid and ready to use.



WARNING



Never attempt to disassemble or reassemble a firearm unless you are absolutely certain that it is empty and unloaded. Visually inspect the chamber, the magazine and firing mechanism to be absolutely certain that no ammunition remains in the firearm. Disassembly and reassembly should follow the manufacturer's instructions. If such instructions are not immediately available, contact the manufacturer to see if they are available. If they are not available at all, then you should consult other reference sources such as reference books or persons with sufficient knowledge. If such alternative sources are not available and you have a need to disassemble or reassemble the firearm, you should proceed basing your procedures on common sense and experience with similarly constructed firearms.

With regard to the use of these tools, the advice of Brownells Incorporated is general. If there is any question as to a specific application it would be best to seek out specific advice from other sources and not solely rely on the general advice and warnings given.

HOW TO USE

- 1) To raise anvil: turn adjusting screw *clockwise*. **Caution:** Do not overextend anvil or bleeding will be necessary.
- 2) To lower anvil: turn adjusting screw *counter-clockwise*. **Caution:** Do not continue to turn screw when anvil is seated.

Hold the tool on the outside of the barrel so the anvil is even with the dent in the barrel. Slide the collar on the shaft until it is even with the breech or muzzle of the barrel and lock it tightly to the shaft with the medium sized Allen wrench. **Caution:** Do not use excessive pressure when tightening the collar as this will damage the shaft.

Insert the Hydraulic Dent Raiser into the barrel until the anvil is at the center of the dent. Gently turn the large, removable Allen wrench *clockwise*. This creates hydraulic pressure within the instrument and forces the anvil upward. As soon as the anvil makes contact with the dent you will note a slight increase in resistance while turning the Allen wrench. Keep turning carefully as you observe the dent. As soon as the dent is pushed up, stop turning the Allen wrench. Take your time. Be very careful. Do not continue turning the Allen wrench after the dent is raised as it is possible to bulge the barrel.

Unscrew the Allen wrench until you can turn the tool inside the barrel without meeting resistance. Locate the anvil beneath where the dent was located and turn in the wrench until you are making contact between the anvil and the barrel interior. At this point you start ironing out whatever dent remains in the barrel. This is accomplished as follows:

Rotate the Hydraulic Dent Raiser *clock-and-counter-clockwise* by grasping the wooden handle in your hand. If it rotates freely without contacting the barrel, gradually apply more pressure to the anvil by turning in the Allen wrench until you can feel the anvil burnishing the remainder of the dent. Continue this burnishing action by hand or by applying leverage with an adjustable-jawed wrench placed on the hex end of the handle and slightly increasing the hydraulic pressure until all traces of the dent are burnished out. You can tell this has been accomplished when the resistance is constant as you turn the anvil across the area where the dent was located.

Warning: This is a very, very powerful hydraulic tool. Do not apply excessive hydraulic pressure on the anvil while burnishing. Due to the twisting pressure of burnishing and the powerful upward thrust of the anvil, it is possible to break off the anvil or the whole shaft. The Hydraulic Dent Raiser is **Not** guaranteed against breakage from shear stress.

When the job is complete, release the pressure on the anvil by turning the Allen wrench *counter-clockwise* and remove the tool from the barrel. Continue turning the Allen wrench out until the anvil can be pressed back into its socket. Note: **Do Not** unscrew the Allen wrench farther than necessary. Doing so will suck in air and damage the seals. After use, the anvil may have to be resealed in the body by applying a slight amount of pressure with your finger.

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ENGLISH HYDRAULIC DENT RAISER

READ & FOLLOW THESE
INSTRUCTIONS

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MAINTENANCE PROCEDURES

Never remove the anvil except to perform necessary maintenance. When that is required, elevate the anvil and very carefully remove it from the tool body. (This can be done with your fingers.) You can now replace the large O-ring oil seal. Note that old seals will normally have to be cut to be removed. Any cut, nick, etc., will cause the new O-rings to leak - Be Careful! Place the tool body in protected vise jaws and remove the outer tube by unscrewing *counter-clockwise* from the handle end. Using a wrench to loosen the hex end of the handle, replace the oil seal in the body, followed by the plastic anti-extrusion washer. Refit the outer tube in the body securely.

FILING & BLEEDING

Remove the anvil and turn the inner operating rod in to its full limit. Fill the anvil recess with hydraulic fluid and slowly unscrew the inner operating rod. Keep the anvil recess fully topped off with fluid. This will ensure that no air is allowed to enter. When the inner rod is unscrewed to its limit, remove the bleed screw situated on the flat of the body and press the anvil inward to allow excess hydraulic oil to weep from the bleed hole. Replace the bleed screw. Be sure that the anvil is refitted with its radiused edge adjacent to the flat on the body.

Your Original English Hydraulic Dent Raiser will give excellent service if properly cared for. Should special service be required, return the unit to Brownells, Inc., 200 South Front St., Montezuma, IA 50171. It is guaranteed one year under normal use. However, after one year a small service charge will be made for refurbishing.

Three Allen wrenches are furnished for the inner rod, the locating collar, and the bleed screw. Replacement O-rings, plastic anti-extrusion washers, and bleed hole screws are available at an additional charge.