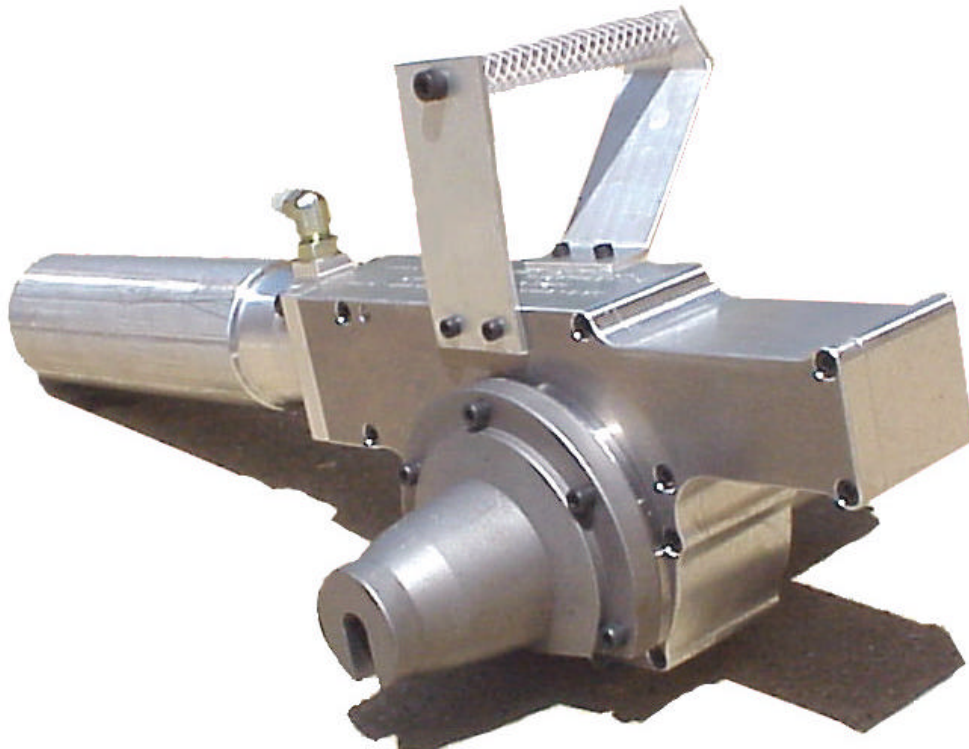


Introducing
the

P o c k e t S h e a rTM

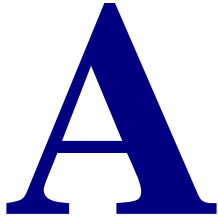
**Model 501HC Series & Model 601HC Series
for 1/2" & .6" PC strand**

Proudly Made In the USA



www.pocketshear.com





Introduction

The P o c k e t S h e a r[™] is easy to use in the field. The unit should leave a cut end that is even and free of burrs, at a specified dimension from the anchor face.

The P o c k e t S h e a r[™] does not pull, push or heat the strand, anchor or wedges. It simply rotates one cutting blade in relation to another. All of this is accomplished within the confines of the unit with no external moving parts except the rotation of the clamp assembly.

The P o c k e t S h e a r[™] cycle time varies according to the type of pump that is used to actuate it. With most pumps, good production rates should be obtained.

The P o c k e t S h e a r[™] operation requires standard safety precautions to be adhered to, as any trained operator of field hydraulic equipment should be aware. All applicable OSHA rules and standards should be applied when utilizing this device.

The 501 Series P o c k e t S h e a r[™] is manufactured in a configuration for most elevated structures. The unit is shipped in a configuration to allow 1" of strand from the anchor face. This also allows caps on encapsulated anchors to be placed effectively.

The 601 Series P o c k e t S h e a r[™] is manufactured in a configuration for most elevated structures. The unit is shipped in a configuration to allow 1 1/4" of strand from the anchor face. This also allows caps on encapsulated anchors to be placed effectively.

Special order units are shipped with special nosepieces for 45 degree pocketformers.



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1.

Unpacking and assembly:

Wear protective eyewear at all times.

Remove the *P o c k e t S h e a r*TM from the box in which it was shipped. If the handle is not fully attached, rotate the front handle, aligning the mounting holes in the handle with the corresponding holes in the housing. Insert mounting screws through the handle on each side and tighten firmly. Firmly tighten the other two mounting screws that were purposely left loose in the handle prior to shipment. The *P o c k e t S h e a r*TM is now ready to be attached to the actuating pump. (See Section 2)

The following are parts typically shipped with the *P o c k e t S h e a r*TM Model 501HC Series and the 601HC Series:

1	<u><i>P o c k e t S h e a r</i></u> TM Model 501HC Series Unit
2	Handle and Screws
1*	Allen Wrench for Handle Screws
1*	Extra Rotating Shear Blade
1*	Extra Stationary Shear Blade
1*	Set Allen Wrenches
1**	Instruction CDROM

* Recommended, not included in base price.

** Additional instruction CDROMS can be purchased. Call 214-654-0696 or fax 214-654-0697 for additional copies.



2.

Attaching the Pump:

Wear protective eyewear at all times.

The *P o c k e t S h e a r*[™] does not come with a hydraulic pump. The unit can be used with either a 10,000 psi "Stressing" pump or the 3,000 psi "*P o c k e t P u m p*[™]".

Hydraulic hoses of varying length can be used. Typically, a pair of 8' 0" ¼" are adequate for use with a "Stressing pump." A *P o c k e t P u m p*[™] can sometimes allow for longer (20' 0") hose lengths as preferred by the operator.

Contact The Adrian Division of Tigerb Industries Corporation to purchase:

- *P o c k e t P u m p*[™], Model PSP1100
- Stressing Pump, OTC Model PE554
- Stressing Pump, Enerpac
- GS5P Hydraulic Stressing Jack
- Stressing Accessories
- Fabrication Lines
- Extrusion Lines
- Anchorage Systems
- PocketCaps

-
1. Use the handy order form found at the end of this publication
 2. Fax: 214-654-0697, or call 214-654-0696
 3. Order Online at: <http://www.pocketshear.com>
 4. E-mail to: order@pocketshear.com
-



2.1 For use with a "Stressing Pump":

For all "pipe thread" connections, use teflon tape on threads prior to attaching, except where noted. Care should be taken to NOT LET TEFLON TAPE BECOME EXPOSED TO THE INTERNAL CIRCUIT as small pieces of teflon tape can cause damage to the pump and its valving as well as the internal valving in the hydraulic cylinder of the *P o c k e t S h e a r*TM.

FOR USE WITH "QUICK-COUPERS":

Prepare two 3/8" hydraulic stressing jack hoses with 3/8" male pipe fittings at one end and 3/8" female pipe swivel fittings at the other.

Attach a "Quick-Couple" fitting to the 3/8" female pipe swivel fitting that corresponds with the type and style that is in use on the pump. (Generally, a male "Quick-Coupler" should be used on one hose and a female on the other.)

Attach one 3/8" hydraulic hose, utilizing the male pipe fitting end, to the rear of the cylinder on the *P o c k e t S h e a r*TM. Attach the other end of the hose to the pump valve port that is normally used for the stressing cycle. **DO NOT CONNECT THIS END TO THE "POWER SEATING" PORT. IGNORE THE "POWER SEATING" PORT.**

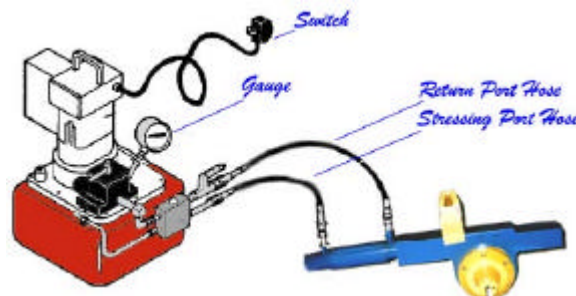
Attach the other 3/8" hydraulic hose, utilizing the male pipe fitting end, to the front of the cylinder on the *P o c k e t S h e a r*TM. Attach the other end of the hose to the pump valve port that is normally used for the return side of the stressing pump.

FOR USE WITHOUT "QUICK-COUPERS":

Prepare two 3/8" hydraulic stressing jack hoses with 3/8" male pipe fittings at one end and 3/8" male pipe fittings at the other.

Attach one 3/8" hydraulic hose to the rear of the cylinder on the *P o c k e t S h e a r*TM. Attach the other end of the hose to the pump valve port that is normally used for the stressing cycle. This might be easier if a "swivel adapter" is used at this connection. **DO NOT CONNECT THIS END TO THE "POWER SEATING" PORT. IGNORE THE "POWER SEATING" PORT.**

Attach the other 3/8" hydraulic hose to the front of the cylinder on the *P o c k e t S h e a r*TM. Attach the other end of the hose to the pump valve port that is normally used for the return side of the stressing pump. This will be easier if a "swivel adapter" is used at this connection.



2.2 For use with a PocketPump™

The PocketPump™ comes in one mounting style, the “Wheeled Skid Mount”, Model PSP1100 Series. See the Installation and Instruction Booklet that came with your pump for additional details.

Prepare two (2) ½” hydraulic hoses (one @ 20’-0”, one @ 20’ 9”) with 90 degree female flare swivel fittings at one end and straight female flare swivel fittings at the other end.



Remove the PocketShear™ and the PocketPump from their respective shipping container(s). Place the units in a clean, clear, area.

Fill the PocketPump™ with hydraulic fluid. The same fluid that is used for stressing pumps in your climate and jobsite conditions will be fine for the PocketPump™



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Each set of hydraulic hoses shipped with a PocketShearTM and PocketPumpTM is designed to connect easily.

On one end of each hose is a 90 degree swivel fitting. This is the end of the hose that should be connected at the PocketPumpTM

At the other end of each hose is a straight swivel fitting. These ends shall be connected to the PocketShearTM



One hose is 20'-0" and should be connected to port "A" of the PocketPumpTM

The other end of this hose should be connected to the rear of the cylinder of the PocketShearTM

The other hose is longer, 20'-9" and should be connected to port "B" of the PocketPumpTM

The other end of this hose should connect to the fitting in the middle of the PocketShearTM

Tie the hoses off to the side frame of the PocketPumpTM. This will help keep the fittings from working loose during field operations.

Electrical "zip ties" or tape can be used to accomplish this task.



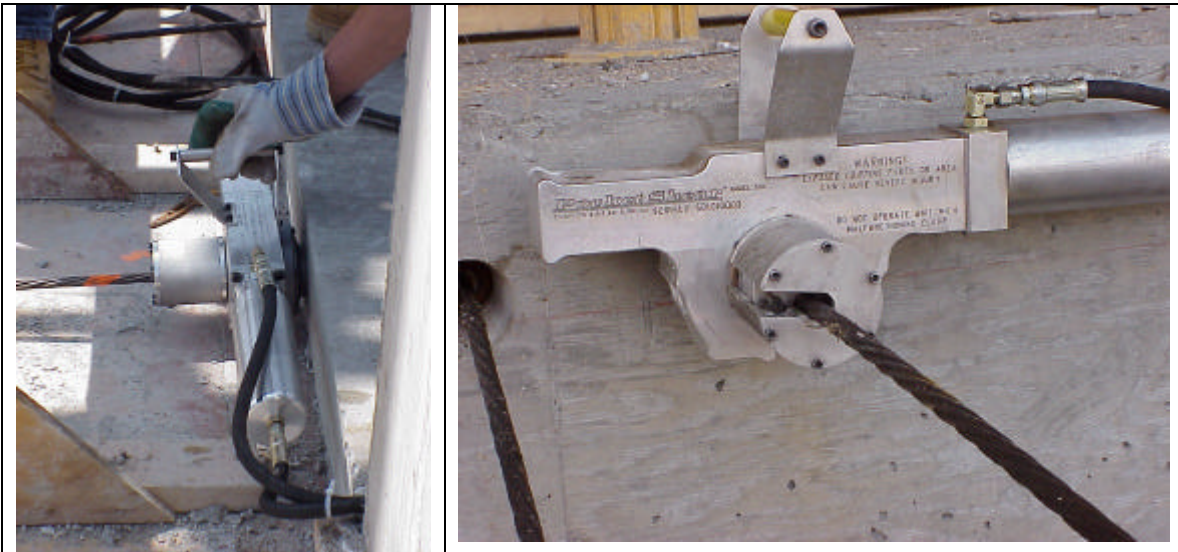
Along the hoses, approximately every foot, use electrical "zip ties" or tape to secure the two hoses together. This will make it much easier to handle the hoses.





Figure 1, Model PSP1100 Series

The PocketPump[™] is designed to automate the cutting process. **DO NOT BEGIN THE CUTTING PROCESS UNTIL THE UNIT IS PROPERLY PLACED IN THE POCKET AND THE CLAMP IS FULLY ENGAGED.** Once one button on the two (2) button pendant is actuated the unit goes through the cut cycle (the button must remain depressed through the cut cycle.) Once the strand is cut, the opposite button must be pressed (and held in position) while the unit returns to the home position. Read Safety instructions carefully prior to use.



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3.

Testing the P o c k e t S h e a r™:

Do not put 1/2" strand in the P o c k e t S h e a r™ yet.
(NOTE: The Model 501HC Series PocketShear is not designed for cutting .6 strand. Contact The Adrian Division of Tiger Industries Corporation or the nearest dealer for information on the Model 601HC Series PocketShear.)

Wear protective eyewear at all times.

The P o c k e t S h e a r™ has been lubricated at the factory and cutting blades have been installed. The following testing procedure has also been followed at the factory prior to shipment.

**READ THE FOLLOWING CAREFULLY
BEFORE ATTEMPTING TO ACTUATE THE
P o c k e t S h e a r™ !**

Only qualified personnel should attempt to use the
P o c k e t S h e a r™

The P o c k e t S h e a r™ **IS NOT FOR GENERAL CUTTING !**
It is solely intended for cutting stressed 1/2" and .6" PC strand tails
in the pocket formed for 1/2" and .6" monostrand post tensioned
members.

DO NOT cut rebar, wire, 1/2", .6" PC strand or any other material
outside of the intended area.

DO NOT operate the unit if the clamp is malfunctioning.

The clamp is a safety device that restrains short pieces of steel
from becoming flying debris.

Failure to fully engage the clamp EACH TIME a cut is made
can cause severe damage to the unit (that is not covered under any
warranty)

and severe injury to the operator may result.

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3.1

CYCLE THE UNIT

Check tightness on all hydraulic fittings. Plug in the pump and actuate the pump valve as if stressing.

For use with a “Stressing Pump”:

Step #1 (Cut Cycle): Manually move the valve on the pump to the “Stressing” position. The PocketShear[™] will begin its rotation internally, noticeable only by the rotation of the Clamp at the rear of the unit. The rotation will stop when the cutting cycle has been completed and the pump will immediately go to the relief setting of the pump. This can be as high as 10,000 psi. Release the switch as soon as the cutting cycle is complete to avoid repeatedly reaching high pressure as this will cause premature seal wear and failure.

Step #2 (Return Cycle): Manually move the valve on the pump to the “Return” position and actuate the pump switch. The PocketShear[™] will rotate back to its home position. Upon returning to its home position, the pump will increase pressure to the relief setting of the pump. This can be as high as 10,000 psi. Release the switch as soon as the return cycle is complete to avoid repeatedly reaching high pressure as this will cause premature seal wear and failure.

For use with a PocketPump[™]:

If using a PocketPump[™] Step #1 and Step #2 above will actuate when the appropriate button on the pendant is pressed and an automatic electric solenoid valve on the pump is then automatically actuated. There is no need to manually actuate a valve.



Using the two button pendant operator, cycle the unit several times to flush all of the air out of the system. When first actuated, it seems that nothing is happening. Hold the button until pressure builds on the gauge.

The only other indicator that is visible is the turning action of the clamp.

Turn the PocketShear[™] upside down.

Taking care to not put anything into the slot of the PocketShear[™], actuate the unit. In this way the operator can see the mechanism that causes the cutting.

It becomes obvious that any object that obstructs the rotation of the internal elements can cause severe damage.



3.2

NOTE: THIS SECTION CAN BE SKIPPED. THIS TECHNIQUE IS ONLY HELPFUL WHEN ATTEMPTING TO DIAGNOSE A PROBLEM.

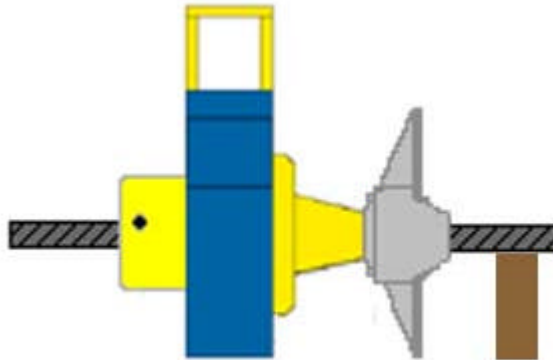
Prepare a piece of ½" PC strand approximately 3' 0" long and attach a Dead End anchor. Be sure to leave at least two (2) feet of strand extended from the wedge cavity.

It is not necessary to remove any grease from the sample, but it is necessary to remove the plastic sheathing. The P o c k e t S h e a r[™] is NOT designed to cut plastic coated ½" PC Strand.

Wear protective eyewear at all times.

3.3

Turn the P o c k e t S h e a r[™] handles up (The slot open to the bottom.) Place the previously prepared piece of 1/2" PC strand in the slot of the P o c k e t S h e a r[™] with the Dead End snugly to the front of the P o c k e t S h e a r[™] nose. It will be necessary to prop the cable at the anchor end so that the cable stays straight in the P o c k e t S h e a r[™] nose. Allowing the strand to lay crooked in the slot will cause SEVERE DAMAGE TO THE UNIT. Make sure that the strand is straight, THE CLAMP ACTUATED, and the strand fully engaged with the top of the slot in the unit.



Confirm that the 1/2" PC strand is securely in the slot as far as it can go. Rotate the clamp clockwise (approximately ¼ turn of the clamp rotator) to securely engage the 1/2" PC strand at the rear of the unit.

DO NOT STAND OVER, IN FRONT OF, OR BEHIND THE P o c k e t S h e a r[™]
AT ANY TIME DURING THIS TEST.

Actuate the P o c k e t S h e a r[™] as described in section **3.1**. The P o c k e t S h e a r[™] will rotate in the same fashion as described in that section. During the rotation the 1/2" or .6" PC strand will be cut. At no time should the pump pressure exceed 2,900 psi during actual cutting. If additional pressure is noted, contact the factory for advice prior to continuing.

Rotate the clamp counter-clockwise (approximately ¼ turn of the clamp rotator) to release the cut 1/2" or .6" PC strand.

4.

Safety Considerations:

The P o c k e t S h e a r™ is a special purpose device designed to cut the remaining tail of a stressed 1/2" or .6" PC strand, in the pocket, at a specific dimension from the face of the ductile iron anchor. Any other use is considered a misuse and it is the responsibility of the purchaser to ensure that this does not occur. The following are important Safety Rules:

- Only trained, qualified operators should use this device
- Cutting 1/2" or .6" strand shorter than 16" can cause flying debris
- Cutting 1/2" or .6" strand without the clamp fully engaged can cause severe damage to the unit and injury to the operator
- Wear eye protection at all times
- Do not hang off of edge of building to use this device
- NEVER PLACE HANDS OR FINGERS IN THE SLOT INTENDED FOR 1/2" or .6" PC STRAND
- Confirm tightness of all hydraulic fittings before, during and after use
- Perform cutting test (Section 3) periodically to assure proper functioning of unit
- Register and Periodically check for new information at:

<http://www.pocketshear.com>

- Do not operate unit if in conflict with other 1/2" or .6" PC strands



5.

Safe Use of the P o c k e t S h e a r™

The ½" P o c k e t S h e a r™ Model 501HC Series is intended for use ONLY on ½" PC Strand that has been stressed. The .6" P o c k e t S h e a r™ Model 601HC Series is intended for use ONLY on .6" PC Strand that has been stressed. BOTH THE 501HC AND THE 601HC ARE NOT GENERAL PURPOSE CUTTING DEVICES.

Wear protective eyewear at all times.

Check all hydraulic fittings and hoses for proper, tight connections and general condition. Repair or replace, if necessary, prior to use.

Once the P o c k e t S h e a r™ has been properly connected (Section 2) and tested (Section 3), familiarize yourself with the safety precautions in Section 4. The P o c k e t S h e a r™ should now be ready for use.

Confirm that elongations have been approved by the engineer of record prior to cutting any tendons!

- With the P o c k e t S h e a r™ in its "Home" position (All slots lined up with a clear path for the strand) gently drop the unit over the tendon tail left after the stressing operation.
- Push the nose of the P o c k e t S h e a r™ into the pocket, pressing the nosepiece of the P o c k e t S h e a r™ firmly on the anchor face.
- Turn the clamp on the rear of the P o c k e t S h e a r™ clockwise (Approximately ¼ turn) and fully engage the clamp mechanism on the strand end.
- **(Failure to properly engage the clamp EACH TIME a cable is cut is both dangerous to the operator and can cause SEVERE DAMAGE to the unit!)**
- The clamp should now hold the P o c k e t S h e a r™ unit in place.
- Actuate the pump:
 - When using a "Stressing" pump:
 1. Manually move the valve handle to the stressing position
 2. Actuate the electric switch on the pump
 3. Allow the unit to fully cut the PC Strand before releasing the switch
 4. Manually move the valve on the pump to the return position
 5. Actuate the electric switch on the pump
 6. Allow the unit to fully return to its HOME position
 - When using a P o c k e t P u m p™:
 1. Press the buttons on the pendant control to actuate the pump.
- Rotate the clamp on the rear of the unit counter-clockwise (Approximately ¼ turn) and fully disengage the clamp mechanism on the strand end. The strand end should now fall freely from the P o c k e t S h e a r™ and the P o c k e t S h e a r™ is now ready to cut the next PC Strand end.
- Repeat as necessary



6.

Care and maintenance:

The P o c k e t S h e a r[™] is easy to use and intuitive to maintain once a qualified operator is properly trained on the unit.

The P o c k e t S h e a r[™] does not require extensive maintenance. However, a few issues must be dealt with regularly in order to extend the life of the unit. Review all subsections of this heading for pertinent information.

6.1

Storage:

stored on a jobsite.

Always store the P o c k e t S h e a r[™] in a toolbox. The toolbox should be kept in a safe, dry area that is out of traffic lanes and not near the edge of any area that could allow it to be knocked off of a ledge when

The P o c k e t S h e a r[™] should always be cleaned prior to placement in its toolbox. Note: If you did not order a toolbox for the P o c k e t S h e a r[™] you should furnish a suitable box for this purpose.



Cleaning and Lubrication:

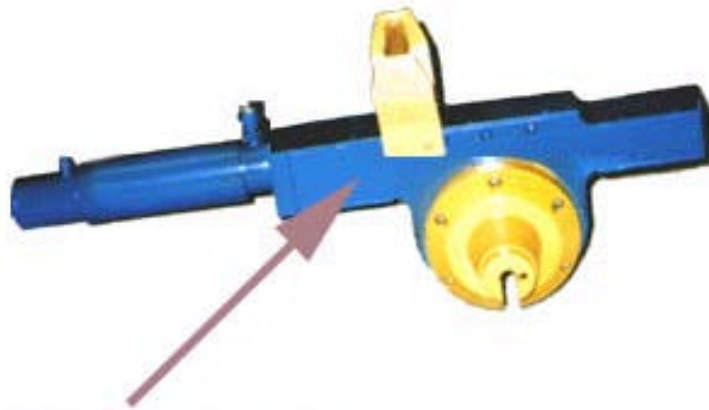
6.2

The PocketShear™ should be kept clean at all times. The outer surfaces are aluminum and should need only water and a clean rag to maintain.

All units produced since mid 2000 are uncoated aluminum. Clean with a damp rag and water.

Drive System:

Approximately every 10,000 cuts the front plate should be removed and the Rack should be coated heavily with an approved grease. At this printing Texaco Starplex 50 Moly Grease, or equal, is recommended.



Remove to apply grease to Rack



6.3

The Clamp:

The clamp can attract considerable dirt, especially in SOG (Slab on Grade) conditions. The clamp should be cleaned regularly, based on jobsite conditions.

This can be accomplished by removing the rear cover plate of the clamp and cleaning the clamp arm cavity, including all areas. An air hose or stiff brush can be used. If water is used, be sure to lubricate the spring to retard rusting. The rest of the components are aluminum and should not be affected.



View of clamp assembly with rear cover removed.
Note that the spring is green in most applications
(Bolts not shown)

The clamp is a special purpose tool that is both a **safety device** and **utility device**.

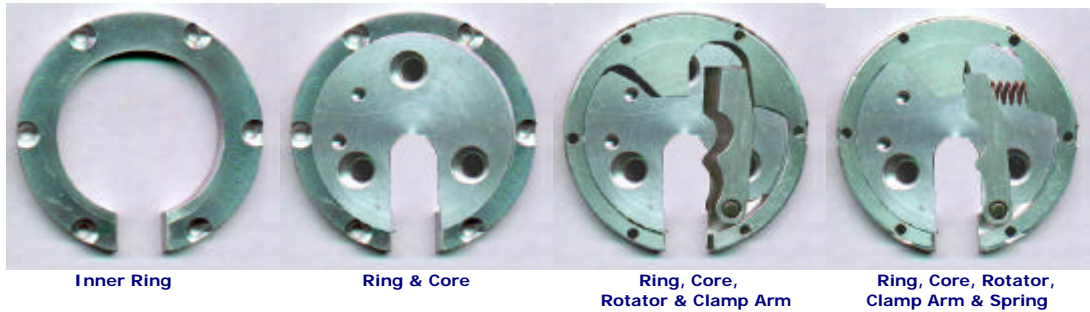
A SAFETY DEVICE: When cutting $\frac{1}{2}$ " or .6" PC Strand shorter than 16", small pieces of wire become flying debris and are a safety hazard. The clamp prevents that, if properly adjusted with the adjusting nut accessible from the outside surface of the clamp rotator. Screw the adjusting screw in as tight as possible for the greatest clamping action.

A UTILITY DEVICE: By utilizing the clamp mechanism after the PocketShear[™] is in place for cutting, the actuated clamp will hold the unit on the strand through the cutting cycle. The clamp also retains the cut tendon tail and keeps the cut tendon tail from dropping off the edge of the building.



The Clamp Assembly

The Clamp assembly is made up of several parts.



Assembly with rear cover

Note: Bolts not shown

The assembly process:

1. Attach the clamp arm within the rotator.
2. Insert spring through rotator and apply adjusting (set) screw
3. Slide the rotator over the core
4. Attach the inner ring to the rotator
5. Bolt (3 bolts) the core to the hub of the PocketShear™
6. Insert the two (2) shoulder bolt stops into the core
7. Bolt the rear cover to the rotator to complete the assembly
- 8.



6.4 Shear Blade Replacement & Lubrication

The cutting blades should only need lubrication every 1,000 to 1,250 cuts. This coincides with the need to rotate the fixed blade in order to use the other cutting edge and complete the expected 2,500 cuts per set of blades.

In order to lubricate the rotating blade it is necessary to remove the nose of the unit. This is accomplished by removing the five (5) mounting bolts in the nose.

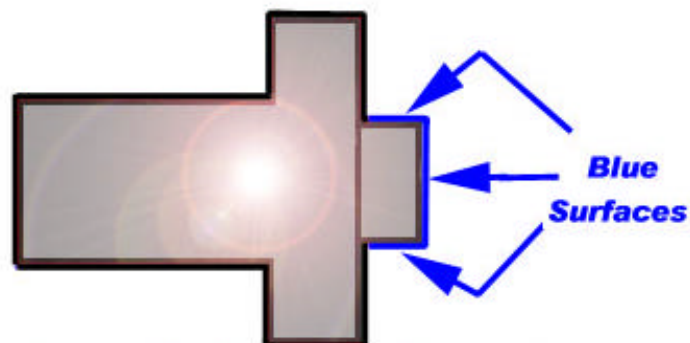
Upon removal of the nose, the wear plate is loose and exposed. Check for wear on the wear plate and flip over prior to re-assembly, if necessary. The wear plate should be cleaned and lubricated, with an approved lubricant **(Texaco Starplex 50 Moly, or equal)**, at the area of contact with the rotating blade only, prior to re-assembly.

Hold the nose vertical with the base at the bottom. Gently shake the nose, up and down, to help the rotating blade fall free. The newer the unit, the tighter the fit. It may be necessary to turn the blade and pull on the square drive hub with a large pair of channel lock pliers to remove the blade.

Inspect the blade for cracks and chips at the cutting surface. It is common to see slight "ding marks" at the cutting surface. This is not necessarily a cause for replacement of the rotating blade. Replace if necessary with a new blade.

Clean and lubricate the blade, with an approved lubricant, **Texaco Starplex 50, or equal**, on the surfaces shown in figure 6.3 below prior to re-assembly.

FIG 6.3



Lubricate only the Black surfaces
DO NOT LUBRICATE THE BLUE SURFACES

Gently tap the base of the nose flatly on a clean, dry surface to cause the small "fixed" blade to drop out of its pocket. As with the rotating blade, the fit is tight. The newer the unit, the tighter the fit.

Clean and inspect the fixed blade for cracks. If none are found, replace the blade, reversed, into the nose pocket after cleaning the nose. This activity doubles the life of the fixed blade.

(NOTE: DO NOT FORCE THE BLADE INTO THE POCKET. PROPERLY ORIENTED, THE BLADE WILL "FALL" INTO PLACE.)

Lubricate the center hole in the nose and insert the lubricated rotating blade. Orient the blade slot to match the slot in the nose.

Re-attach the nose and wear plate to the body of the PocketShear™ with the five bolts previously removed during the disassembly process.

6.5 Hydraulic Seal Replacement:

Hydraulic seal replacement should only be attempted by a qualified hydraulic repair facility. The cylinder is not intended for field repair.

Contact the factory for reference in this matter.

Improper service on the cylinder can create a potentially dangerous hazard to the operator and those around him.

6.6

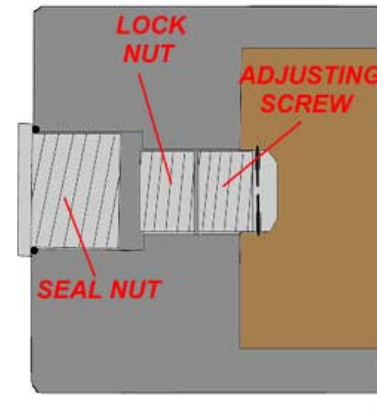
Hydraulic Stroke Adjustment:

The hydraulic cylinder on the PocketShear[™] should be adjusted only by a properly trained hydraulic mechanic. The PocketShear[™] is shipped with both steel and aluminum cylinders.

At the rear of the cylinder is a “seal nut” or hydraulic fitting that can be removed for the purpose of adjusting the stroke of the cylinder in order to better orient the “Home” position of the PocketShear[™]

MODEL 5HC ONLY

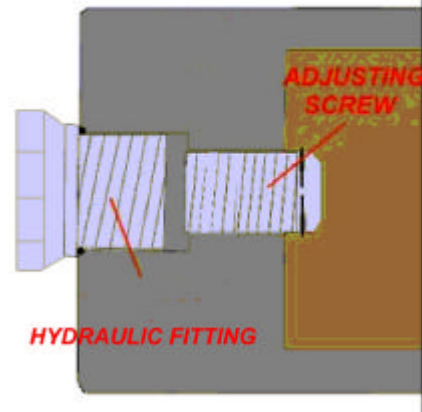
For steel cylinders, within the orifice created by the removal of the “seal nut” there can be found a “lock nut” that can also be removed. Further, under the “lock nut”, is the adjusting screw. All of these can be actuated with the same allen wrench.



STEEL CYLINDER

MODELS 501HC & 601HC

For aluminum cylinders, within the orifice created by removal of the hydraulic fitting there can be found a hollow “nylok” adjusting screw



ALUMINUM CYLINDER

Actuate the PocketShear[™] in order to move the cylinder forward, adequately away from the adjusting screw. Turn the adjusting screw sparingly in or out to adjust the home position. Each time a small adjustment is made on the adjustment screw return the cylinder to check for proper orientation. **NO MORE THAN** three (3) revolutions should be necessary to properly adjust the stroke. If this is not adequate, contact the factory for more information.

Once the proper orientation is achieved, replace the “lock nut” and the “seal nut”, or the hydraulic fitting, snugly.



7.

Troubleshooting:

This section corresponds to the FAQ on the [P o c k e t S h e a r](http://www.pocketshear.com)[™] Website, located at:

<http://www.pocketshear.com>

The latest and most complete list of troubleshooting items are listed in the FAQ on the website.

NOTE: THE MOST COMMON CAUSE FOR PROBLEMS WITH A P o c k e t S h e a r IS AN OPERATOR THAT DOES NOT PROPERLY UTILIZE THE CLAMP. FAILURE TO PROPERLY ENGAGE THE CLAMP CAN CAUSE SEVERE DAMAGE TO THE UNIT AS WELL AS THE OPERATOR

Q. The unit doesn't do anything when I press the switch.

A. The [P o c k e t S h e a r](http://www.pocketshear.com)[™] requires the activity of the hydraulic pump attached. This is not an indication that there is anything wrong with the [P o c k e t S h e a r](http://www.pocketshear.com)[™]. Troubleshoot the pump.

- If the electric motor is turning, remove the breather cap and check the tank for fluid. The tank should be filled to the top.
- If you are using "quick couples", check for dirt or any other obstruction. Remove "quick couples" if necessary.
- Read gauge pressure and see if any pressure (2,000 psi +) is building.
 - If there is no pressure:
 - Using a small screwdriver, push on the end button of the solenoid valve to manually move the internal spool of the valve. If this does not create pressure, either the valve or the internal pump unit has failed. Contact the factory.
 - If the unit actuates with the manual movement of the spool:
 - An electrical issue is probable. Check all wires, electrical connections and two button pendant.
 - If there is pressure:
 - Check to see that you are not using any more than 100' of proper size electrical extension cord. The pump may not be able to draw adequate amperage for cutting.
 - It is possible that the seals in the cylinder have worn and failed.
 - It is possible that the piston rod or piston may have become loose inside the cylinder.
 - Remove cylinder and check for needed repairs.
- Call the factory for more information.



Troubleshooting, Cont'd:

- Q. Can I use "quick-couple" fittings?
- A. Yes. However, if the fittings are not properly attached the pump cannot get fluid to the unit and it will seem to not function.
- Q. What size strand can I cut with a P o c k e t S h e a rTM.
- A. The Model 501HC will cut ½" PCstrand. The Model 601HC is used for cutting .6" PC strand.
- Q. I hear a "clicking" sound when the unit reaches the end of the cut cycle or the return cycle. Is this OK?
- A. Yes. However, this only happens with the older, Model 5HC. You are hearing the internal pressure relief valve chatter. Prolonged chatter reduces the life of the valve.
- Q. The clamp seems too loose to hold the unit in the pocket.
- A. Adjust the set screw on the clamp Rotator (Part # 23) for a tight fit.
- Q. One wire was left after I cut the PC Strand. What went wrong?
- A. PC Strand is 7 wire strand. This means that six wires are wrapped around one. The P o c k e t S h e a rTM actually cuts one wire at a time. Incomplete cutting cycles will leave wires uncut.
- Put the P o c k e t S h e a rTM back in the pocket and actuate fully to cut the remaining wire.
 - Check for excessive wear on the blades. Worn blades will also cause this condition.
- Q. Why do I hear a different sound from time to time during the actual cutting cycle?
- A. PC Strand is manufactured under the ASTM A416 specification in the U. S. and abroad. Within this specification, there is no reference to allowable surface hardness ranges on the wires that make up the strand. Hard and soft spots occur randomly along the length of the strand.



Troubleshooting, Cont'd:

Q. Why does blade life seem better in some batches as opposed to other batches?

A. All shear blades are manufactured to strict manufacturing standards. Each blade is individually checked through a detailed QA procedure. The variance you experience is generally due to the actual strand hardness variance. See answer above.

Q. Why won't the P o c k e t S h e a rTM fit over the strand?

A. There can be several factors:

- Check to see that the strand has not been "flattened", or otherwise deformed, during the stressing operation. Generally, a pair of channel lock pliers can fix the problem.
- Check to see that the P o c k e t S h e a rTM is fully returned to its "HOME" position. If not, actuate the pump to adjust. If necessary, adjust the stroke of the hydraulic cylinder as described in Section 6.5 of this manual.

Q. Why did the nose fall off during cutting?

A. There are two causes for this occurrence. Both are considered operator error.

- Due to the repeated shock of cutting, the nose bolts on a brand new unit can tend to work themselves loose during the first several hundred cuts. Check periodically for tightness of the bolts.
- Use "Locktight" to secure bolts.
- Cutting with loose nose bolts allows the cutting surfaces of the blades to separate. This separation causes the blades to push away from each other (with a great deal of force) in a fashion that actually pulls the bolts out of the side frame housing. Loose bolts also leave fewer engaged threads to accomplish the designed load transfer to the housing.

Troubleshooting, Cont'd:

- Allowing the PC Strand to become "off center" with the uppermost part of the slot through the PocketShear[™] causes a conflict within the gear mechanism. Generally, the nose piece was not fully engaged in the anchor at the time of cutting and was therefore out of alignment. This conflict "locks" the unit mechanically. When this occurs, the rotating blade cannot rotate freely as it is smashing the strand into the side of the slot in the nosepiece. In this case, the nosepiece bolts relieve in "shear" fashion. It is important to note that the hydraulic force required to cut PC Strand is in excess of the shear strength of the bolts. Therefore, the force cannot be reduced and the bolts become the "point of relief."

If you have found issues that should be listed in this manual, please don't hesitate to call or write to us in order to have your suggestions included.



FOR MORE INFORMATION:

See the FAQ (Frequently Asked Questions) section of the [P o c k e t S h e a r](http://www.pocketshear.com)TM Website at:

<http://www.pocketshear.com>

Order the latest version of the Manual For [P o c k e t S h e a r](#)TM Model 501HC and 601HC

FOR MORE INFORMATION REGARDING:

Stressing Jacks & Accessories	Hydraulic Stressing Pumps
Fabrication Lines	Extrusion Lines
Anchorage Systems	Encapsulated Anchorages
Complete Monostrand Accessory products	

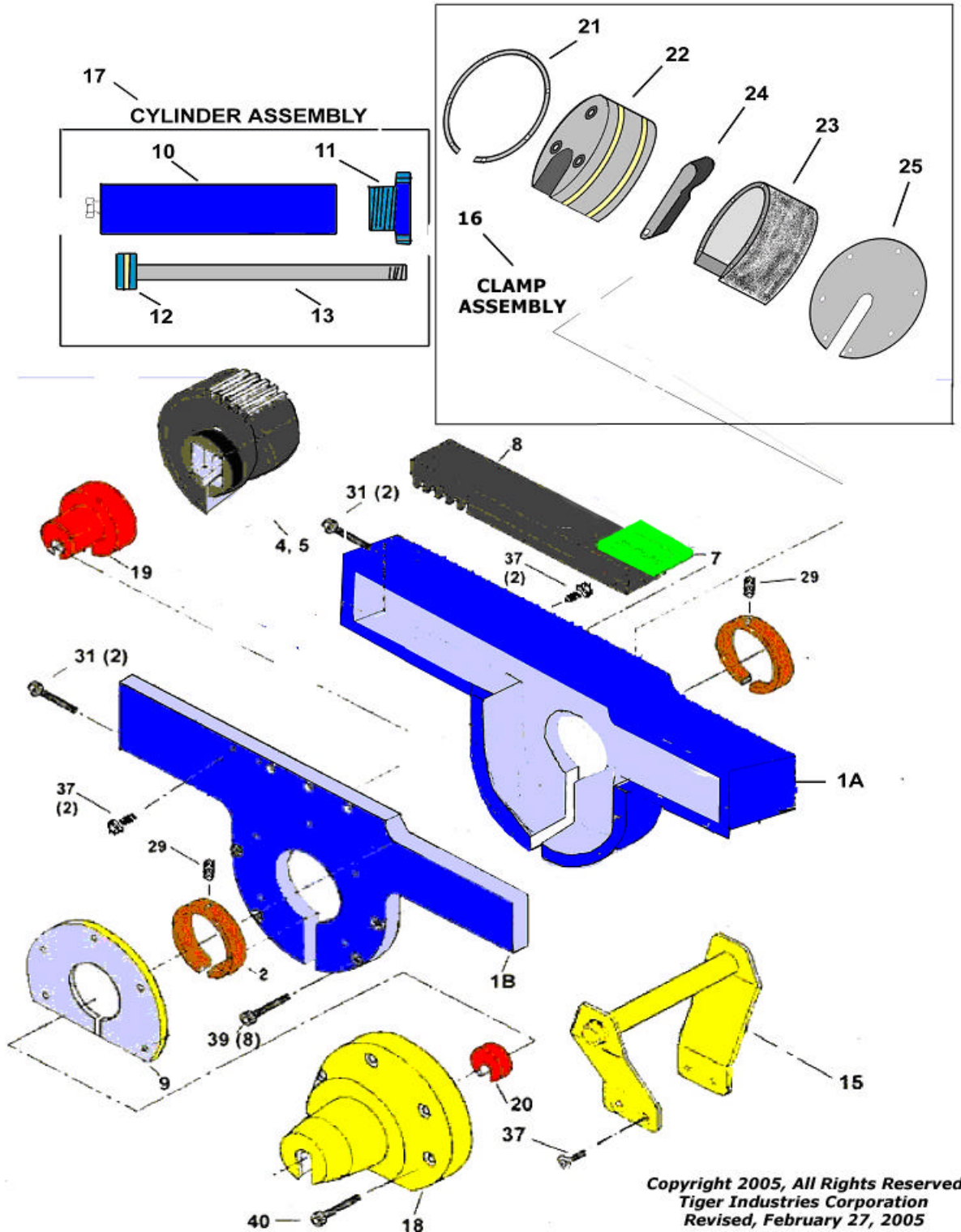
You may call or fax The Adrian Division
of Tiger Industries Corporation at:
Phone: 214-654-0696
Fax: 214-654-0697

E-mail to faq@pocketshear.com



8.

Schematic Parts Drawing



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Revised, February 27, 2005

**RETURN
TO
CONTENTS**

9.

501 Series PocketS hear™

Parts Order Form effective March 1, 2005 *PocketS hear™*

Serial Number: _____

All prices are subject to change at any time. Call for current prices.

Key	Part #	Description	Units	Quan.	Order Quan.
<input type="checkbox"/>	1a	PSH200101	SIDE FRAME – MAIN HOUSING	EA	1
<input type="checkbox"/>	1b	PSH200102	SIDE FRAME – NOSE PIECE MOUNT	EA	1
<input type="checkbox"/>	2	PSH201110	SIDE FRAME BUSHING	EA	2
<input type="checkbox"/>	3	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	4	PSH200120	SHEAR DRIVE GEAR AND HUB ASSY	EA	1
<input type="checkbox"/>	5	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	6	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	7	PSH200130	RACK BEARING	EA	1
<input type="checkbox"/>	8	PSH200135	GEAR RACK	EA	1
<input type="checkbox"/>	9	PSH200520	BACK-UP PLATE	EA	1
<input type="checkbox"/>	10	PSH200300	CYLINDER BODY	EA	1
<input type="checkbox"/>	11	PSH200304	CYLINDER MOUNT	EA	1
<input type="checkbox"/>	12	PSH200302	PISTON	EA	1
<input type="checkbox"/>	13	PSH200303	PISTON ROD	EA	1
<input type="checkbox"/>	14	PSH200150SealKit	SEAL KIT	EA	1
<input type="checkbox"/>	15	PSH200220	HANDLE - SIDE FRAME	EA	1
<input type="checkbox"/>	16	PSHclamp	CLAMP ASSEMBLY	EA	1
<input type="checkbox"/>	17	PSH200151	HYDRAULIC CYLINDER ASSEMBLY	EA	1
<input type="checkbox"/>	18	PSH200500	.5 NOSE PIECE	EA	1
<input type="checkbox"/>	19	PSH200505	.5 SHEAR BLADE (ROTATING)	EA	1
<input type="checkbox"/>	20	PSH200510	.5 SHEAR BLADE (STATIONARY)	EA	1
<input type="checkbox"/>	21	PSHclamp01	CLAMP, WASHER PLATE	EA	1
<input type="checkbox"/>	22	PSHclamp02	CLAMP, CORE W/ TEFLON BEARING	EA	1
<input type="checkbox"/>	23	PSHclamp03	CLAMP, ROTATOR	EA	1
<input type="checkbox"/>	24	PSHclamp04	CLAMP, ARM	EA	1
<input type="checkbox"/>	25	PSHclamp05	CLAMP, REAR COVER PLATE	EA	1
<input type="checkbox"/>	26	PSHclamp06	CLAMP, SPRING, GREEN	EA	1
<input type="checkbox"/>	27	FIT0832X1/2FHSCS	8 - 32 X 1/2 FHSCS	EA	6
<input type="checkbox"/>	28	FIT0832X1/2SHCS	8 - 32 X 1/2 SHCS	EA	6
<input type="checkbox"/>	29	FIT1/4-20X3/4SSS	1/4 - 20 x 3/4 SSS	EA	2
<input type="checkbox"/>	30	FIT5/16-18X2-1/2SHCS	5/16 - 18 x 2 1/2 SHCS	EA	3
<input type="checkbox"/>	31	FIT5/16-18X1SHCS	5/16 - 18 x 1 SHCS	EA	4
<input type="checkbox"/>	32	FIT#6X3/8NPTS	#6 SAE X 3/8 NPT SWIVEL	EA	1
<input type="checkbox"/>	33	FIT#6X3/8NPT90S	#6 SAE X 3/8 NPT 90 DEGREE SWIVEL	EA	1
<input type="checkbox"/>	34	PSH200245	BOLT KIT, COMPLETE	EA	1
<input type="checkbox"/>	35	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	36	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	37	FIT1032X1/2SHCS	10 - 32 X 1/2 SHCS	EA	4
<input type="checkbox"/>	38	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	39	FIT1/4-20X5/8SHCS	1/4 - 20 X 5/8 SHCS	EA	14
<input type="checkbox"/>	40	FIT1/4-20X1-1/4SHCS	1/4 - 20 X 1 1/4 SHCS	EA	5
<input type="checkbox"/>	41	FIT1/4-20X5/8SHCSSB	1/4 X 5/8 SHCS SHOULDER BOLT	EA	2

Company: _____ Authorized By: _____ P.O. # _____

Address: _____ Date: _____

City, State, Zip _____ Phone: _____



601 Series P o c k e t S h e a r™

Parts Order Form effective March 1, 2005 P o c k e t S h e a r™

Serial Number: _____

All prices are subject to change at any time. Call for current prices.

Key	Part #	Description	Units	Quan.	Order Quan.
<input type="checkbox"/>	1a	PSH206101	SIDE FRAME - LEFT	EA	1
<input type="checkbox"/>	1b	PSH206105	SIDE FRAME - RIGHT	EA	1
<input type="checkbox"/>	2	PSH206110	SIDE FRAME BUSHING	EA	2
<input type="checkbox"/>	3	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	4	PSH206123	SHEAR DRIVE GEAR AND HUB ASSY	EA	1
<input type="checkbox"/>	5	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	6	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	7	PSH206130	RACK BEARING	EA	1
<input type="checkbox"/>	8	PSH206135	GEAR RACK	EA	1
<input type="checkbox"/>	9	PSH206520	BACK-UP PLATE	EA	1
<input type="checkbox"/>	10	PSH206300	CYLINDER BODY	EA	1
<input type="checkbox"/>	11	PSH206301	CYLINDER MOUNT	EA	1
<input type="checkbox"/>	12	PSH206302	PISTON	EA	1
<input type="checkbox"/>	13	PSH206303	PISTON ROD	EA	1
<input type="checkbox"/>	14	PSH206304	SEAL KIT	EA	1
<input type="checkbox"/>	15	PSH206220	HANDLE - SIDE FRAME	EA	1
<input type="checkbox"/>	16	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	17	PSH206305	HYDRAULIC CYLINDER ASSY	EA	1
<input type="checkbox"/>	18	PSH206500	.5 NOSE PIECE	EA	1
<input type="checkbox"/>	19	PSH206505	.5 SHEAR BLADE (ROTATING)	EA	1
<input type="checkbox"/>	20	PSH206510	.5 SHEAR BLADE (STATIONARY)	EA	1
<input type="checkbox"/>	21	PSHclamp01	CLAMP, WASHER PLATE	EA	1
<input type="checkbox"/>	22	PSHclamp02	CLAMP, CORE W/ TEFLON BEARING	EA	1
<input type="checkbox"/>	23	PSHclamp03	CLAMP, ROTATOR	EA	1
<input type="checkbox"/>	24	PSHclamp04	CLAMP, ARM	EA	1
<input type="checkbox"/>	25	PSHclamp05	CLAMP, REAR COVER PLATE	EA	1
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<input type="checkbox"/>	32	FIT#6X3/8NPTS	#6 SAE X 3/8 NPT SWIVEL	EA	1
<input type="checkbox"/>	33	FIT#6X3/8NPT90S	#6 SAE X 3/8 NPT 90 DEGREE SWIVEL	EA	1
<input type="checkbox"/>	34	PSH206245	BOLT KIT, COMPLETE	EA	1
<input type="checkbox"/>	35	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	36	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	37	FIT1032X1/2SHCS	10 - 32 X 1/2 SHCS	EA	4
<input type="checkbox"/>	38	UNUSED	UNUSED	UNUSED	UNUSED
<input type="checkbox"/>	39	FIT1/4-20X5/8SHCS	1/4 - 20 X 5/8 SHCS	EA	14
<input type="checkbox"/>	40	FIT1/4-20X1-1/4SHCS	1/4 - 20 X 1 1/4 SHCS	EA	5
<input type="checkbox"/>	41	FIT1/4-20X5/8SHCSSB	1/4 X 5/8 SHCS SHOULDER BOLT	EA	2

Company Name: _____ Authorized By: _____
 Address: _____ Date: _____ P. O. # _____
 City, State, Zip _____ Phone: _____



Other Products:



Heavy duty Jobsite toolbox.



PocketCaps™

PocketCaps™ were designed for use on all anchorages. The cap snaps onto the strand end and seals the strand end and wedge cavity. NO SPECIAL ANCHOR is required. Just apply the PocketCap™ with one sharp blow of a hammer.



Parking garage barrier cable applications utilize the PocketCap™. As a cosmetic cap as well as a safety cap.

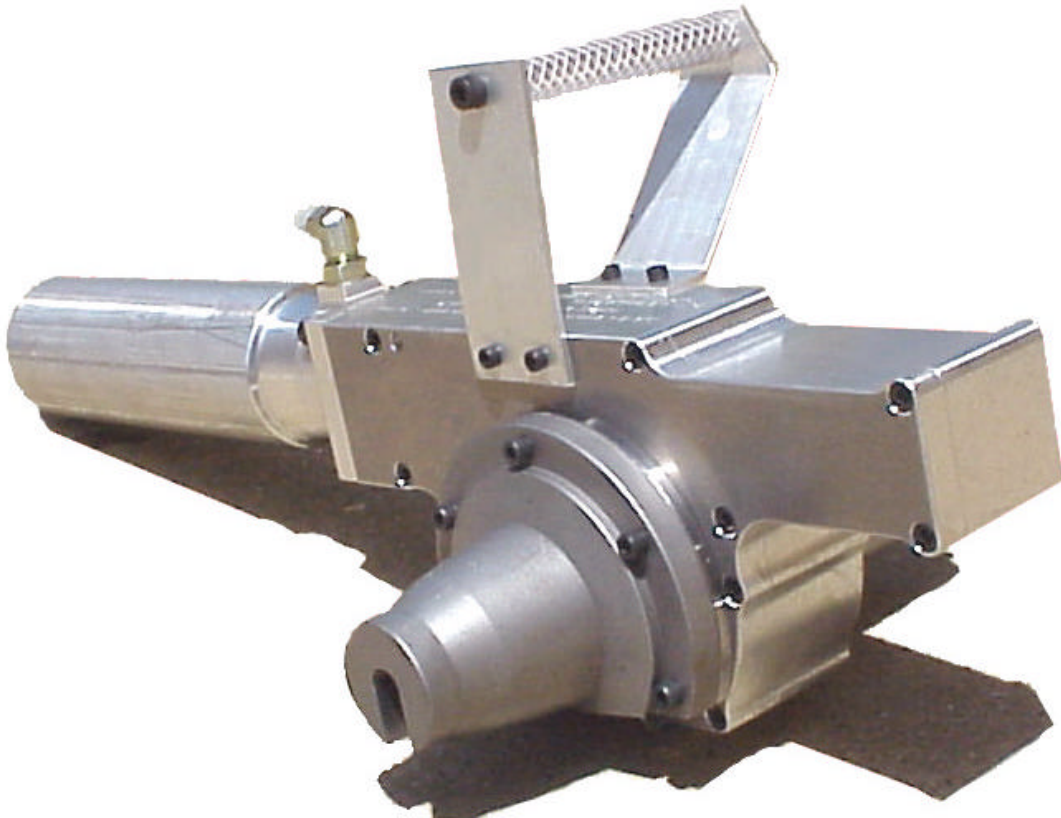


Fast and economical, PocketCaps™ are the answer when full encapsulation is not necessary, but, some corrosion protection of the strand ends is preferred.



The Adrian Division of Tiger Industries Corporation

Dallas, Texas
USA



PocketShear™

Phone: 214-654-0696
Fax: 214-654-0697
e-mail: info@pocketshear.com

**The PocketShear Model 501HC Series is manufactured and marketed
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