860-A10 Shipek® Sampler

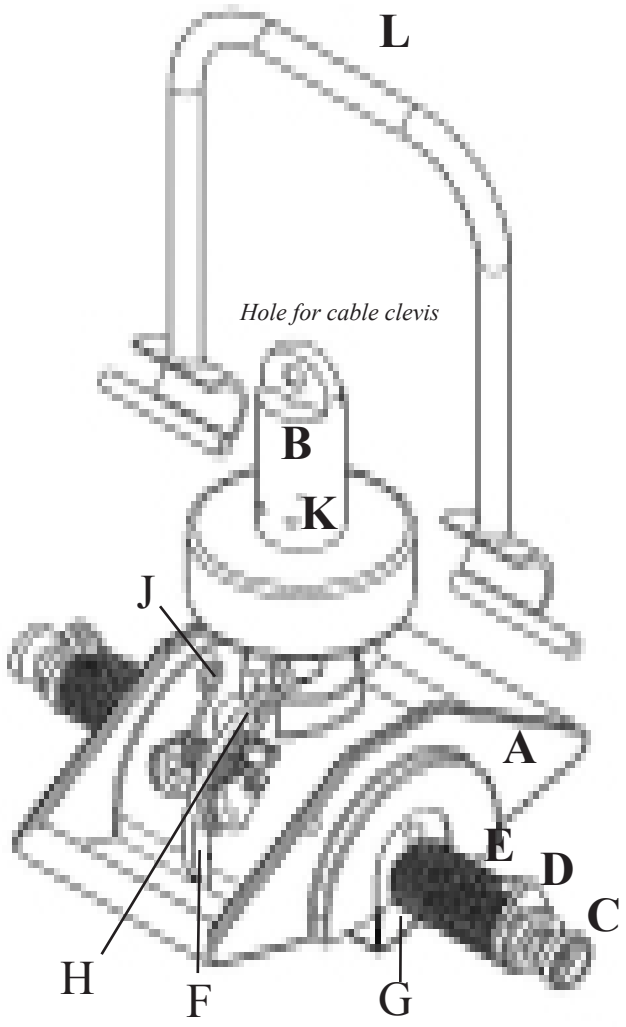
Warning:
Handle carefully! Spring loaded!

Because the Shipek® is a spring loaded and spring operated sampling device, it must be handled carefully to avoid premature activation. As with all spring operated devices, all persons near the device should use extreme caution. Behave as if the scoop could slam shut at any moment!

The Shipek® must be handled by **two strong people** at all times. Because the Shipek® is heavy and has an awkward shape, its movements must be kept under control at all times.

Parts of Shipek® Sampler:

A. **Body** of Shipek® sampler
B. **Trigger release weight** with hole (7/8"/22.2 mm) for cable clevis. Drops onto trigger arm to pivot it, releasing bucket to rotate to closed position
C. **Spring loaded knobs** pull out and one-quarter turn either way. Moves axial pins which lock or release bucket
D. **Torsion spring winding hooks**. Cocking jack pins nest here to wind torsion spring
E. **Torsion springs**
F. **Trigger arm (bucket latch)** holds J-hook safety pin. Recess for end of J-hook in non-safety position. When pivoting, latches or unlatches bucket. Must pivot easily and freely. Keep greased.
G. **Bucket (sample scoop).** Removable. Rotates 180°. Holds sediment sample.
J. **J-hook safety pin** prevents early unwinding of torsion spring when in safety position
K. **Retaining pins** for trigger release weight Holds trigger release weight on Shipek® body
L. **Cocking jack**, with cups and pins, for winding torsion springs



Warranty and Parts:

We replace all missing or defective parts free of charge. We accept Mastercard, Visa, American Express, checks, institutional P.O.'s. All products guaranteed free from defect for 90 days. This guarantee does not include accident, misuse, or normal wear and tear.

P/N 031089

Introduction:

The patented **Wildco**® Shipek® Sediment Sampler is designed for sampling unconsolidated sediments from soft ooze to hard packed sand.

The sole driving force is the Shipek's® weight, which totals over 130 pounds with the trip weight. The body itself weights about 40 kg (85 pounds) which is augmented by the trip weight 22 kg (48 lbs), which is securely fastened by two (2) side pins. The heavy duty removable scoop digs quickly and efficiently through the benthic sediment.

Operation Requires:

- 100-foot stainless steel cable (**61-B14** recommended)
- Winch and depth meter (**85-E10** recommended) *OR*
- **81-A10/11** Large Boat Crane

Accessories or Parts:

- **188-E50** Wash frame to sort sample
  860-A30 Extra sampling bucket

How To Operate:

1. **Inspect the dredge** before using to make sure it is in working order. Make sure it is securely attached to the cable on the winch/crane.

2. Carefully keeping clear of the jaws and other working edges of the dredge, **move the scoop to the open position.** To open the scoop, hold the corer by the lower bars and rotate the cocking arm until the trigger arm (bucket latch) clicks into place and is fully engaged (about 180°).

3. **Insert the J-hook safety pin at this time**. To do so, rotate the pin and slide it under the trigger arm.
4. When ready to sample, remove the J-hook safety pin.

5. Use the winch/crane to lift the dredge clear of the boat deck and then outboard.

6. **Lower slowly** into the water.

7. When the dredge reaches the bottom, allow a moment for it to sink into the sediments. **Keep tension on the cable** for penetration to occur.

8 Now **winch the cable** to exert a closing motion, transmitted mechanically through the bars and to the jaws of the dredge.

9 This mechanical action, plus the force exerted downward by the trip weights tends to force the scoop **deeper into the bottom** as it moves to close.

10. **Maintain tension on the cable** by operating the winch. Sample cannot fall out once the scoop is triggered.

11. When the dredge reaches the surface, **lift clear and swing inboard** over a tub placed to receive the sample, such as the **188-E50** washframe.

12. Taking care to stay clear of the edges of the jaws, **open the sampler and discharge the sample** into the tub. The liner allows easy removal of the sample. You can pull the liner out with the sample contained within. Samples should be screened, sieved, separated, bottled, labeled and otherwise processed for analysis and classification studies by the standard procedures outlined for the work in progress.

13. At the end of sampling, **replace the "Safety Pin"** to prevent accidental closing of the jaws in handling or shipping. Then wash and inspect the grab and make necessary repairs or adjustments in preparation for the next use. The unit should be decontaminated between each unique sampling location.

Maintenance:

Barring loss through accident or abuse, this dredge will give long years of service. The 316 stainless steel construction resists corrosion.

1. **Wash the dredge** after each sample drop; at the close of the day's work, give the entire apparatus a thorough washing with fresh water. This is particularly essential after sampling in **salt water**. Do the same with all equipment - cable, crane, winch, boats etc.
2. **Inspect the cutting edges** after each sample drop. Severe nicks or dents may require re-working of these edges to assure a good cutting action and tight closure.
3. **Keep greased!** Keep well greased but not overgreased. Wipe off excess grease. Use an automotive grade.
   One zerk is on the trigger arm (F) axis.
   One zerk is on the end of each knob (C)
   Remove rust and recoat with two-part epoxy or urethane paint.
4. **Lubricate** pivot points occasionally. When the bottom dredge is to be out of service for a long time, we recommend applying a coating of oil or other rust barrier to protect the unit's metal surfaces. Coat all surfaces, joints, bolts and stud-bolt holes if these are to be left open.

To attach and remove sample bucket:

1. Turn sampler on its back or hang it by a cable.
2. Pulls knobs (C) outward and give it a quarter turn.
3. Slide bucket (G) into the guide rails.
4. Slide bucket until bucket holds and axial pins line up.
5. Return knobs to closed position with pins reaching into the bucket sides. Bucket must be hanging outside the Shipek® body prior to winding.

Using the J-hook safety pin:

1. After winding and latching the sampler prior to sampling, engage the J-hook safety pin (J)

a. Push the plate end of the J-hook safety pin from the recess hole in the trigger arm.

B. Rotate the J-hook safety pin until the hook can go between the trigger arm and the main body of the sampler. Pull back the J-hook by the plate end until fully between trigger arm and main body.

2. Just before lowering the sampler overboard, remove the J-hook from between the trigger arm and the sampler, return the end of the J-hook into its recess in the side of the trigger arm.
3. Closing occurs when the J-hook safety pin is in the non-safety position and the trigger release weight drops on the trigger arm. The trigger arm pivots which unlatches the bucket. A sample is taken.

Winding the torsion spring:

Winding the torsion spring for operation requires great care. Attaching the cocking jack to the sampler and winding the large torsion spring by the rotation of the cocking jack can cause serious injury unless done with care and according to the instructions.

1. Hang sampler by its cable at a comfortable working height above the floor or deck.
2. Rock the trigger arm (F). It must pivot freely. This means that the sampler is hanging properly by the trigger release weight (B)
3. To wind the torsion springs:

a. Place the cocking jack (L) on torsion springs (E) so the curved plates cup over the torsion springs and the pins hook onto the torsion spring winding hooks (D)

b. Rotate the clocking jack about 180° or so until the trigger arm hooks over the edge of the bucket

Note: The torsion springs are wound one full turn before being locked in place by the two socket head cap screws on each torsion spring winding hook (D)