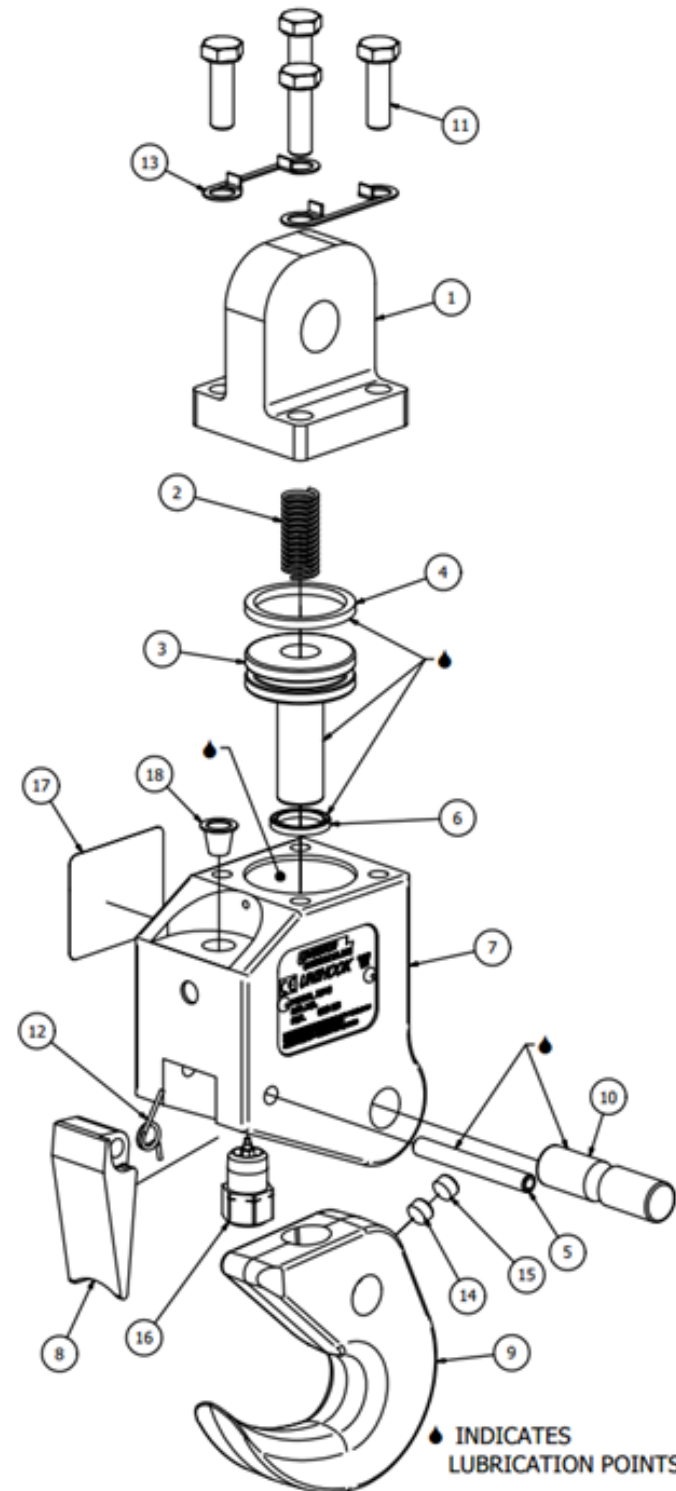


Item / Qty / Part No. / Description

01	1	CA4997002	Top cap
02	1	AA4465000	Spring
03	1	CA3139000	Piston
04	1	M57000002	• U-Cup seal
05	1	M69100002	• Latch pin
06	1	M57000001	• U-Cup seal
07	1	CB6509000	Body
08	1	BB6654000	Latch
09	1	CB4425000	Hook
10	1	AA7842000	Hook pin
11	4	M30600006	• Tie bolt
12	1	AA4197000	• Latch spring
13	2	BB8401000	• Bolt Locking Tab
14	1	M30100013	Set screw
15	1	M30100013	Jam set screw
16	1	M24250049	Relief valve
17	1	AB0121000	Caution sticker
18	1	M18500013	Tapered plug

• Recommended Spares



Warning- Only use #M30600006 Bolts. They are special high strength bolts. Do not substitute any other hex head bolts.

ATTENTION- Cranston assembles each hook using a NLGI #2, marine grade, calcium sulfonate base grease (Example: Lucas Marine Grease) which seals out water and inhibits corrosion. Any substitution must be NLGI #2, have a washout rating of less than 3% (typically Calcium Sulfonate or polymerized PTFE), and a viscosity of 120-220 cSt. Ensure grease not applied to threaded areas.

Product description and specification is subject to change without notice. All products and services are covered by Cranston standard terms and conditions, including limits of liability and warrantee effective at the time of sale. Available upon request. © Cranston Machinery Co., Inc.

Bulletin No:	L053
UNIHOOK™ Model:	26A106
Issued:	220509
Patent No:	11434110

Introduction:

The Cranston UNIHOOK™ is a very robust, marine grade, lifting device, designed to provide remote release of a pre-slung load.

The user must assemble the UNIHOOK™ to a properly rated chain assembly and plumb to a pressurized, regulated air or nitrogen supply.

During attachment to a lifting sling (multiple wire strands, wire ropes, slings, rings, etc.), the pivoting hook is manually cocked in the locked position.

To unlatch the pivoting hook from the locked position, the load must be removed from the hook before the pneumatic supply is applied. For relocating slings, or other similar light load applications (up to 45Kg/100#), the pivoting hook can be released.

Limitation of Liability. Rigging, conditions of use, and maintenance of cargo handling gear is outside of Cranston Machinery Control. The user, therefore, must evaluate each application under the condition of use and the safety factor pertinent to the appropriate industry, to determine the safe application of the Cranston Machinery UNIHOOK™

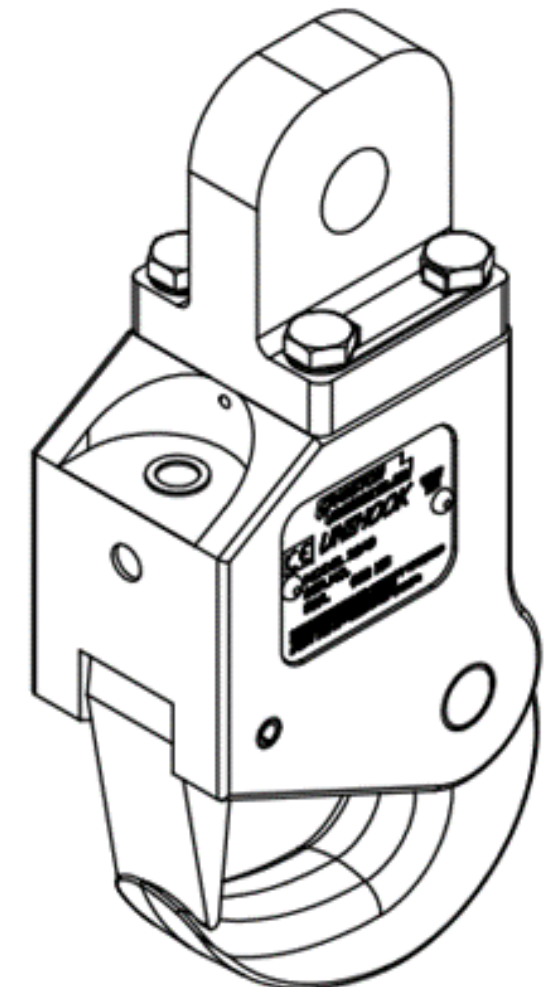
ATTENTION- All owners, users and technicians should review Cranston Specification CS005 prior to operation or servicing of this UNIHOOK™. CS005 is available thru Cranston's website. CS005 includes detail on use, maintenance, and warranty

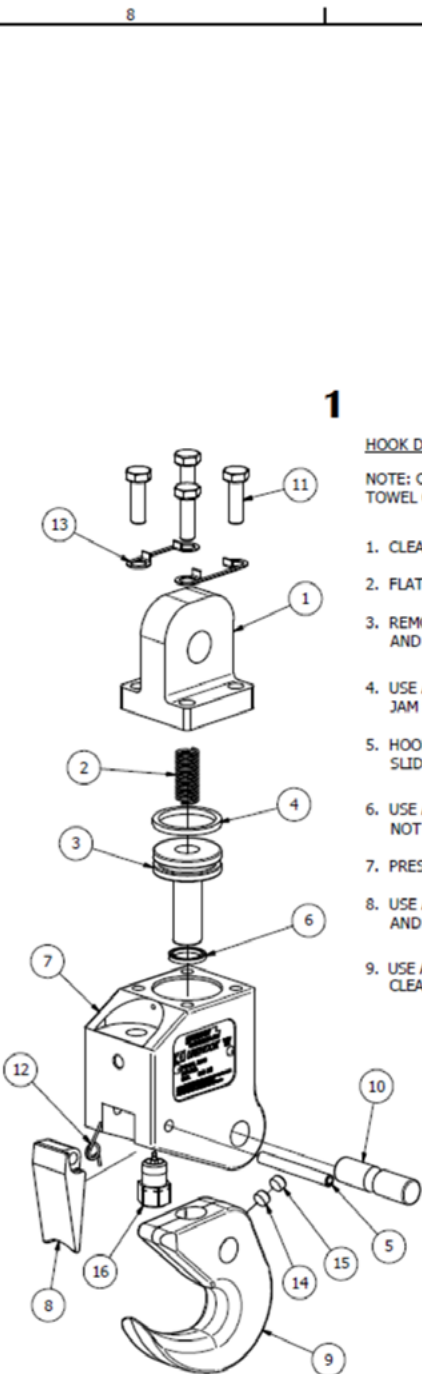
WARNING- It is imperative that the pressurized pneumatic supply does not exceed .14MPa / 20PSI. An internal pressure relief valve is incorporated into this model UNIHOOK™ to audibly alert the user of an over pressure condition, indicating use should be discontinued, until the condition is corrected.

NOTE- Cranston Machinery would be pleased to consider any special requirements you may have. Cranston Machinery designs and manufactures custom tools, lift beams and automated equipment.

Specifications:

- Safe Working Load: 3 Metric Tonnes
- Design Safety factor: 4 x SWL
- Certified Testing for each UNIHOOK™: 2 x SWL
- Operating Temperature: -35°C - +175°C
- Typical Weight: 5kg / 11#
- Guidelines for Maintenance, Use and Care: **CS005**
- Top Cap Features: **Fixed Cap**
- Pivoting hook Material choice: **Corrosion Resistant**
- CE Compliance: Yes
- Tested for Underwater release: Yes





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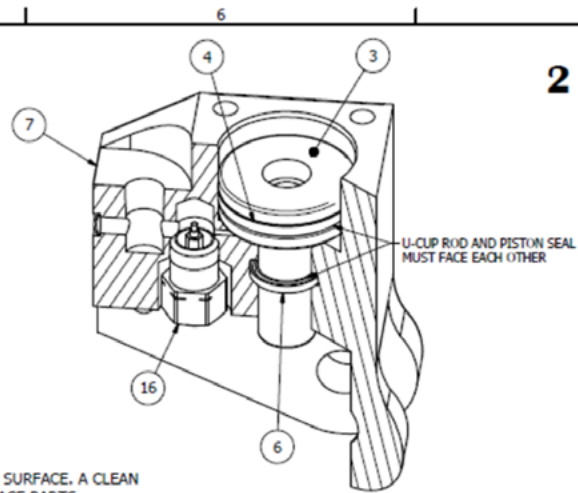
HOOK DISASSEMBLY:

NOTE: CLEAR A CLEAN SPACE WITH A CLEAN SURFACE. A CLEAN TOWEL OR CARDBOARD WORKS WELL TO PLACE PARTS.

- CLEAN HOOK EXTERIOR BEFORE DISASSEMBLY.
- FLATTEN LOCK TABS #13, LOOSEN AND REMOVE TIE BOLTS #11.
- REMOVE TOP CAP FROM BODY AND PLACE SPRING #2, TOP CAP, AND TIE BOLTS ASIDE.
- USE A $\frac{5}{16}$ ALLEN WRENCH TO REMOVE BOTH SET SCREW #14 AND JAM SET SCREW #15.
- HOOK PIN #10 SHOULD SLIDE OUT RELEASING HOOK. IF PIN DOESN'T SLIDE OUT BY HAND, DETERMINE IF REPLACING PIN IS APPLICABLE.
- USE A $\frac{3}{4}$ PUNCH TO TAP LATCH PIN #5 OUT OF BODY #7. CAREFUL NOT TO LOSE LATCH SPRING #12.
- PRESS ON ROD END OF PISTON #3 AND REMOVE FROM BODY #7.
- USE A PLASTIC PIC TO DELICATELY REMOVE BOTH PISTON SEAL #4 AND ROD SEAL #6. CAREFUL NOT TO SCRATCH LANDS.
- USE A THIN WALL $\frac{3}{8}$ SOCKET TO REMOVE PRESSURE RELIEF VALVE. CLEAN SEPARATELY IN MINERAL OIL.

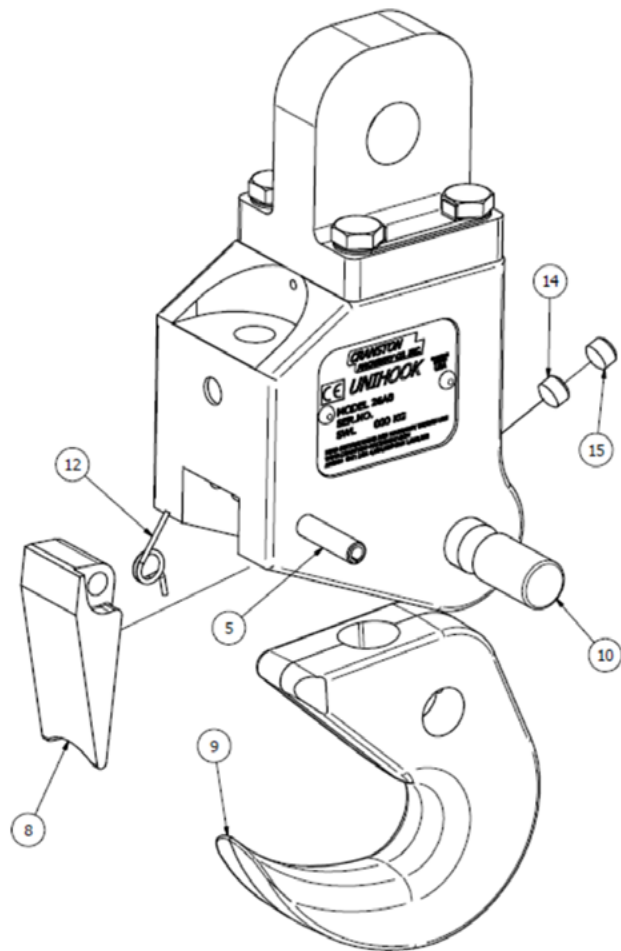
CLEAN AND INSPECT:

- PLACE ALL HOOK COMPONENTS IN A CONTAINER OF CLEAN MINERAL SPIRITS OVERNIGHT.
- WITH A NYLON PARTS BRUSH, CLEAN ALL SURFACES AND PLACE ON A CLEAN TOWEL.
- USE SHOP AIR TO DRY ALL INTERIOR SURFACES.
- INSPECT ALL FOLLOWING AREAS FOR SCRATCHES, ELONGATION OR DAMAGE.
 - A) CYLINDER BORE AND ROD SEAL LAND.
 - B) PISTON ROD AND SEAL LAND.
 - C) TOP CAP PIN BORE.
 - D) HOOK BORE AND PIN IN BOTH HOOK AND BODY.
 - E) LATCH BORE AND BODY LATCH BORE.



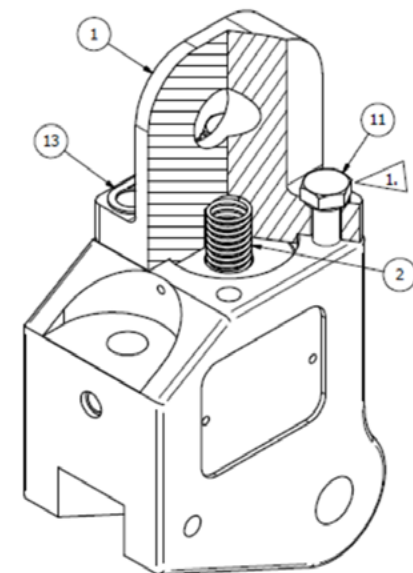
2 PISTON / BODY ASSEMBLY:

- INSPECT INTERNALS OF BODY #7, SEAL GROVE AND AIR PATH FOR CONTAMINATES. CONFIRM BORE IS CLEAN AND FREE OF IMPERFECTIONS.
- APPLY THREAD SEALANT TO PRESSURE RELIEF VALVE #16. CAREFUL TO AVOID SEALANT AROUND VALVE INTERNALS. HAND THREAD VALVE INTO BODY #7, TIGHTEN WITH SOCKET WRENCH ONE TO TWO TURNS MORE. CONFIRM VALVE IS RECESSED BELOW BODY SURFACE.
- INSTALL "U" SEAL #6 IN ROD BORE OF BODY #3, WITH "U" UP TOWARDS PISTON BORE.
- INSTALL "U" SEAL #4 ON PISTON #3 WITH "U" TOWARDS ROD END.
- APPLY A THIN LAYER OF LUCAS MARINE GREASE TO OUTER LIP OF "U" SEAL #4 AND INNER LIP OF "U" SEAL #6 IN BODY.
- SMEAR A THIN LAYER OF LUCAS MARINE GRADE GREASE ON THE ENTIRE BORE SURFACE AND THE FIRST THIRD OF PISTON #3 ROD.
- INSTALL PISTON #3 INTO BODY #7 USING SEAL COMPRESSION FIXTURE BB9695. NOTE: PISTON SHOULD MOVE FREELY AND WITH PISTON DOWN IN THE BORE, THERE SHOULD BE 7/16 MIN. FROM TOP OF PISTON TO TOP OF CYLINDER BODY.



4 HOOK & LATCH ASSEMBLY:

- TAP PIN #5 INTO BODY #7 (THRU SER. PLATE SIDE) $\frac{3}{16}$ (APPX. 3/16" INTO CAVITY).
- DAB LUCAS MARINE GREASE IN HOLE OF LATCH #8 (NOTCHED SIDE).
- PLACE SPRING #12 ON THE $\frac{3}{16}$ " OF PIN #5, LONG TANG ON TOP OF PIN AND HORIZONTAL TO HOOK.
- POSITION LATCH #8 IN PLACE AGAINST SPRING #12, AND FINISH TAPPING PIN #5 TILL FLUSH.
- SMEAR LUCAS MARINE GREASE IN THE TWO $\frac{9}{16}$ " HOLES OF BODY #7.
- PLACE HOOK #9 IN POSITION AND SLIDE IN PIN #10 TILL FLUSH.
- INSTALL SET SCREW #14 INTO HOOK #9, TIGHTEN UNTIL IT BOTTOMS ON #10 - USE LOCTITE 242.
- INSTALL JAM SET SCREW #15 INTO HOOK #9 AND TORQUE 7.5 TO 8.3 FT-LBS (1.04-1.14 KG-M). USE LOCTITE 242, LET DRY PRIOR TO USE.



3 TOP CAP TO BODY ASSEMBLY:

- PLACE SPRING #2 ON PISTON AND INSTALL TOP CAP #1 ON PISTON BODY ASSEMBLY.
- INSERT TWO BOLTS #11 WITH EACH OF TWO LOCK TABS #13 THRU EACH SIDE OF TOP CAP. THREAD BOLTS LOOSELY INTO BODY.
- TIGHTEN #11 BOLTS IN A CROSS PATTERN TILL SNUG.
- PRELIMINARY TEST WITH 20 PSI AIR, PISTON SHOULD MOVE FREELY, SUBMERGE BODY INTO WATER AND CHECK FOR AIR LEAKS. NOTE: IF AIR LEAKS, DISASSEMBLE, CHECK U-CUP SEALS #4 AND #6 FOR DAMAGE, CHECK BODY #7 FOR SCRATCHES IN SEAL LANDS. THEN REASSEMBLE AND RETEST.
- INCREASE PRESURE, AT 25 PSI AND ABOVE AIR ESCAPE OUT PRESSURE RELIEF VALVE. IF NOT VALVE SHOULD BE REPLACED WITH NEW.
- TORQUE #11 BOLTS IN A CROSS PATTERN TO 24-29 FT-LBS (3.32-4.01 KG-M). MAKE SURE A FLAT ON EACH BOLT IS ALIGNED WITH A LOCK TAB AND THEN BEND UP LOCK TAB AGAINST BOLT HEAD.

1 WARNING! ONLY USE THE M30600006 BOLTS. THEY ARE SPECIAL HIGH STRENGTH BOLTS. DO NOT SUBSTITUTE ANY OTHER HEX HEAD BOLTS.

