

**HYTORC**<sup>®</sup>  
*Since 1968*



# MANUAL BACKUP WRENCH

*OPERATIONAL AND SPARE PARTS MANUAL*

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## OPERATIONAL AND SPARE PARTS MANUAL

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INTRODUCING HYTORC

# THANK YOU FOR BUYING HYTORC!

**YOU ARE NOW HOLDING ONE OF THE WORLD'S LARGEST SELLING AND MOST ADVANCED HYDRAULIC TORQUE/TENSION TOOLS.**

HYTORC is used more often, by more industries on more applications than all others combined. If you maintain your new tool properly, it will last for years to come.

This manual is designed to provide you with the basic knowledge required to operate and maintain your HYTORC tool. Please read this manual carefully and follow the instructions provided. If you have any questions regarding your HYTORC tool, please call us directly at 201-512-9500 or fax 201-512-0530.

Finally, your purchase of this HYTORC tool entitles you to the following FREE services:

- Free on-site training in the application and operation of your HYTORC equipment
- Free semi-annual training
- Free annual tool inspection
- Free loaner tools in case of failure
- Free engineering assistance by calling 1 800 FOR-HYTORC, or our continental office

Your local HYTORC office was informed of the delivery of this equipment. Should you require immediate training, please feel free to call us directly to arrange an appointment with you at your convenience.

An instructional CD is also available for basic training and occasional brush up on operating procedures.

For additional information please visit our website at [www.hytorc.com](http://www.hytorc.com)

Again, thank you and welcome to HYTORC!

## **Worldwide Warranty**

HYTORC equipment is engineered to the latest technological standards and is backed by our exclusive 12-word, 12-month warranty.

**"YOU BREAK IT UNDER NORMAL USE, WE FIX IT FREE OF CHARGE!"**

If a HYTORC Tool cannot be repaired on-site, FREE loaner HYTORC equipment will be made available to you upon request.

UNEX CORPORATION OR ITS DEALERS SHALL NOT BE LIABLE FOR LOSS OF PRODUCT OR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS INCURRED BY THE BUYER OR THE USER.

## **HYTORC Offices Worldwide**

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United Kingdom	HYTORC UK	Tel. 44-16-7036-3800
Brazil	HYTORC South America	Tel. 55-21-2223-2944
All Others	HYTORC USA	Tel. 201-512-9500 /800-FOR-HYTORC

SECTION I

# OPERATING INSTRUCTIONS

The HYTORC backup wrench you have chosen is a self-contained hydraulic system, requiring no external power source. It offers convenient through bolt or stud nut retension in an ultra light weight housing that can be easily removed by hand.

## 1-1

### Backup Wrench Link Selection

1. Select the back-up link insert required to retain the 6 or 12 point fastener.
2. Attach the link insert into the housing. Rotate the hook portion of the insert around the link pin then press and hold the latch to place the insert fully into the housing. Release the latch to secure the link insert in place.



## 1-2

### Loosening and Tighten Backup Wrench

1. Prepare the backup wrench for tightening or loosening. During use, the handle of backup wrench will always be directed towards the user (see pictures below). The direction of rotation is determined from the position of the reaction foot.



When loosening, the reaction foot will be located on the left side of the handle.



When tightening, the reaction foot will be located on the right hand side of the handle.

2. Choose an appropriate point for reaction. The wrench is intended to react firmly against an adjacent nut or solid reaction area. A good reaction surface is usually located in the same plane as the nut.
3. Squeeze the lever and the backup housing tab together to extend the position of the reaction foot. To lock the reaction foot in place, turn the adjustment knob approx. 1 ¼ turns clockwise. Verify that the reaction foot is locked by pushing it against a firm surface. When locked, the reaction foot will not move.



4. Position the insert link on the nut with the reaction foot as close to the contact area as possible.
5. Hold the handle of the backup wrench (when applying the tightening or loosening torque) until the reaction foot makes contact with the reaction point. Once a firm connection has been achieved, remove your hands from the backup wrench completely.



### **1-3 Removing the Backup Wrench**

1. To remove the wrench after tightening, turn the adjustment knob approx. 1 ¼ turns counter clockwise. Hold the handle and rotate the reaction foot until it makes contact with the reaction point. The position of the reaction foot will retract and loosen the backup wrench from the nut.

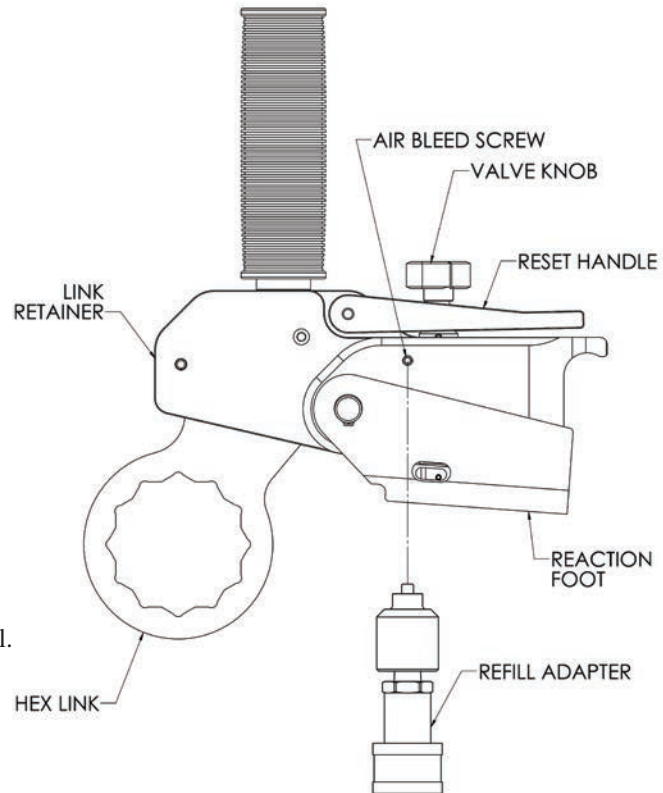


When loose, the wrench can be removed from the nut.

SECTION II

# FILLING & REFILLING PROCEDURE

**Periodically, the HYTORC backup wrench should be topped off with oil. Invert the wrench so that the air bleed screw faces upward and fill the cup of the refill adapter with oil. Depress the handle several times while pressing the ball on the fitting down. This allows air to escape and oil to enter the tool.**

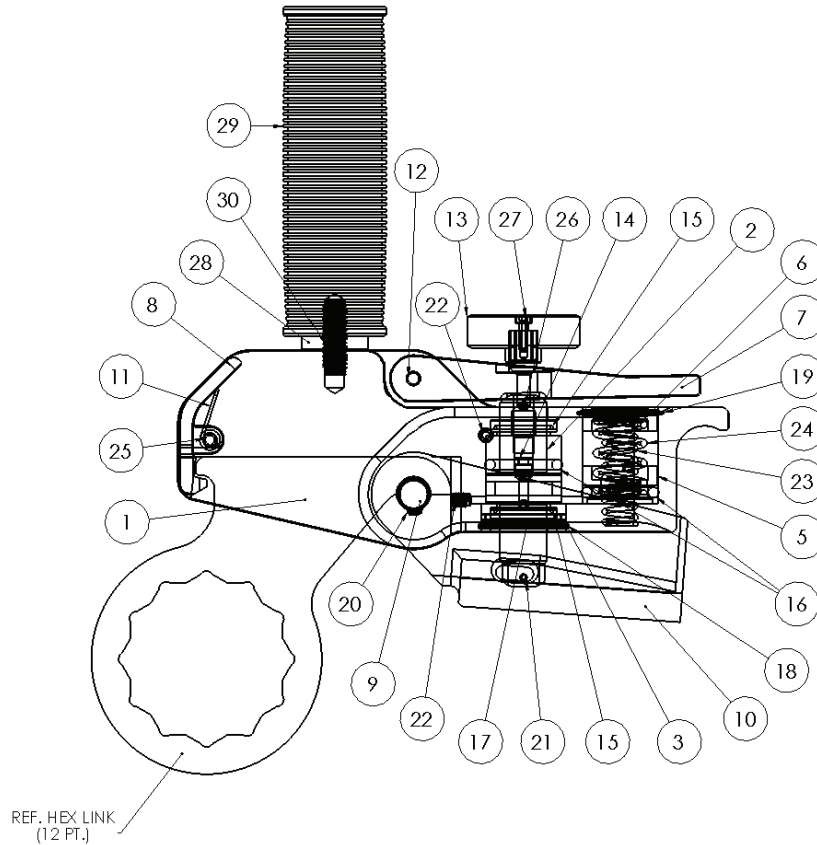


1. Retract reaction foot (valve open).
2. Remove air bleed screw & chrome steel ball.
3. Screw in refill adapter.
4. Connect hand pump to refill adapter.
5. Close valve.
6. Pressurize to 200-300 psi in retract (on pump) until reaction foot fully advances.
7. Open valve.
8. Place in retract position.
9. Bleed air from coupler by inserting male coupler to refill adapter.
10. Remove refill adapter.
11. Wipe tool down of any oil.
12. Replace chrome steel ball & air bleed screw.
13. Manually advance boot.
14. Close valve.
15. Check for firmness of reaction foot and check for any leaks.
16. Repeat procedure if tool feels spongy (not firm).
17. If any leaks or seepage is found, send tool to authorized hyltorc repair facility.

NOTE: Use the same hydraulic oil as for torque wrenches (46 grade oil or equiv.)

APPENDIX A

# BACKUP WRENCH PARTS LIST



REF#	DESCRIPTION	PART NUMBER	REF#	DESCRIPTION	PART NUMBER
1	HOUSING	BWCY-4-01	15	ROD SEAL	BWJ-17
2	PISTON	BWJ-02	16	O RING	BWJ-18
3	END CAP	BWJ-03	17	O RING	BWJ-19
4	VALVE STEM	BWCY-4-04	18	RETAINING RING	BWJ-20
5	CAP RESERVOIR	BWJ-05	19	RETAINING RING	BWJ-21
6	CAP RESERVOIR	BWJ-06	20	RETAINING RING	BWJ-22
7	LEVER	BWJ-08	21	ROLL PIN	BWJ-23
8	LATCH, LINK	BWCY-4-09	22	PLUG SCREW	BWJ-24
9	LINK PIN	BWJ-10	23	SPRING	BWJ-26
10	REACTION FOOT	BWJ-11	24	SPRING	BWJ-27
11	DRIVE PIN SPRING	BWJ-12	25	ROLL PIN	BWCY-4-28
12	DOWEL PIN	BWJ-13	26	SET SCREW	BWJ-29
13	KNOB	BWCY-4-15	27	SOCKET HEAD CAP SCREW	BWCY-4-30
14	O RING	BWJ-16	28	HANDLE ASSEMBLY	BWJ3-15

Technical data and specifications are subject to change without notice.

# ***Being #1 is no coincidence!***

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We are always within 1 hour from you!

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Division UNEX Corporation

333 State Route 17N, Mahwah, New Jersey 07430 U.S.A.

800-FOR-HYTORC • Tel: 201-512-9500 • E-Mail: [info@hytorc.com](mailto:info@hytorc.com) • Web: [www.hytorc.com](http://www.hytorc.com)