

# TORQUE GUN

— A HYTORC COMPANY —



## DIGITAL JGUN™

### OPERATIONS MANUAL





This manual applies to all tool part numbers in the Digital jGun Single Speed Product Family. It is recommended the manual is kept up-to-date by checking the edition and date code at the bottom of this page by utilizing the Torque Gun Company website and downloading a copy of the most recent edition as needed.

#### **DIGITAL jGun PRODUCT FAMILY:**

DJ-.25, DJ-.5, DJ-1, DJ-2, DJ-3, DJ-5, DJ-8

#### **EN, EN-ISO, ISO Standards:**

EN ISO 12100-1:2011	EN ISO 4414:2010
EN ISO 12100-2:2011	EN 61310-2:2008
EN ISO 14121-1:2007	EN 61310-3:2008
EN ISO 11148-6:2012	ISO 3744:2011

*For a complete EC declaration of conformity or if you require any further assistance please contact your local Torque Gun representative or 1-888-GUN-2-GUN (1-888-486-2486) or on the web at [www.torquegun.com](http://www.torquegun.com).*

#### **TORQUE GUN LLC**

##### **A HYTORC COMPANY**

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**Product Modifications:** *Torque Gun **DOES NOT ALLOW** any of the products listed in this manual to be modified by any end user without exception. Should an application require a modification to the tool, or any of the standard accessories please consult with your local Torque Gun Company representative and they will be able to obtain the assistance for any modification that may be required.*

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## FREE SERVICES

- ♦ **FREE** User Safety Training upon Receipt of Merchandise.
  - ♦ **FREE** Semi-Annual User Safety Training on Request.
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  - ♦ **FREE** Loaner Tools in case of Product Failure within 24 Hours.
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  - ♦ **FREE** Half Day, First Use Supervision.
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  - ♦ **FREE** Product Demonstrations.
  - ♦ **FREE** 12 Month No-Questions-Asked Warranty.
  - ♦ **FREE** Upgrades during the Lifetime of the Tool to Enhance Safety, Durability, and Function.
- (Above services are **NOT** subject to travel expense charges)*

## REPAIRS

- All Repairs are Guaranteed for 6 Months.
- Repairs are Subject to Labor and Part Cost, as Outlined in the Official TORQUE GUN CO. Price List.
- All Warranty Repairs are FREE of All Charges Including Return-Freight.
- All Repairs Will be Tested and Calibrated to Ensure the Highest Quality Repairs.

## TOOL RENTALS

- 100% of all Paid Rentals Will be Applied as a Discount Towards any New Purchase in that Calendar Year.
- User Training for First Time Rentals is FREE of All Cost.
- Return Freight Charges are FREE.
- Rental Tools are Guaranteed to Perform and are Subject to the FREE Loaner Tool Policy of TORQUE GUN CO.

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**TORQUE GUN**  
A HYTORC COMPANY

**HELP:** If you require any further assistance, please call your local Torque Gun Co. Representative or 1-888-GUN-2-GUN (1-888-486-2486), on the web at [torcgun.com](http://torcgun.com) - 24/7! **It's live!**



# Digital jGUN™ Torque Gun

## OPERATIONAL MANUAL

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# WARRANTY

The Digital jGun has a one year limited warranty. Every TORQUE GUN tool is tested before leaving the factory and is warranted to be free from defects in workmanship and materials. TORQUE GUN will repair or replace, without charge, any tool which upon examination proves to be defective in workmanship or materials for one (1) year after the date of purchase. This warranty does not cover damage from repairs made or attempted by other than TORQUE GUN authorized repair facilities.

The repair and replacement remedies described herein are exclusive. In no event shall TORQUE GUN be liable for any incidental, special, or consequential damages, including loss of profits. This warranty is exclusive and in lieu of all other warranties or conditions, written or oral, expressed or implied for merchantability or fitness for particular use or purpose.

This warranty gives you specific legal rights. You may also have other rights that vary from state to state and province to province. In those states that do not allow the exclusion of implied warranties or limitation of incidental or consequential damages, the above limitations or exclusions may not apply to you.

**If you have questions about the TORQUE GUN warranty, contact our customer service center at 888-GUN-2-GUN..**

# ***DIGITAL jGUN OVERVIEW***

The Digital jGun pneumatic torque wrench is designed to safely and accurately deliver up to 8,000 ft-lbs of torque onto a fastener. This is accomplished using a patented planetary gearbox torque multiplier system and an appropriate reaction arm or HYTORC Reaction Washer™ and HYTORC Nut™. The torque multiplier produces torque ratios of up to 4180:1 while the Reaction Arm or Washer is used to absorb the high counter rotational force produced as the final torque value is reached. At final torque value, the Digital jGun safely stalls out, leaving the fastener tightened to specification.

Unlike impact wrenches, the Digital jGun never transmits working torque to the operator. The torque is applied between the fastener and the reaction surface. The Digital jGun has a built-in pressure sensor and signal conditioner. During calibration the tool's torque chart is established and stored in the display electronics. Desired torque is selected simply by adjusting the regulator until the torque value is displayed. The Digital jGun additionally has an integral Filter-Regulator and through the use of corrosion resistant internal components does not require continuous lubrication obviating the need for a stand alone FRL. This manual provides information for the standard Digital jGun.





# ***DIGITAL jGUN SAFETY***

Only qualified personnel who have thoroughly read this document may operate this tool. Failure to safely operate this tool may result in serious injury or death.

- Inspect all Digital jGun components as they are removed from the shipping container. If damage is found to any component, contact your shipper immediately. Do not use the tool.
- Failure to follow correct tool usage could result in personal injury, co-worker injury, and/or damaged tools and equipment.
- Ensure your working area is clean and unobstructed before beginning work.
- Digital jGun maintenance and repair must be performed by a qualified pneumatic technician.
- Modifying a Digital jGun or Digital jGun accessory is dangerous and invalidates the warranty.
- Inspect the tool before each use. Replace any obviously worn or damaged parts.
- When not in use, store the Digital jGun and Digital jGun accessories in the plastic storage case supplied with the tool. Do not expose the gun to high humidity or large temperature variations.
- Do not discard the safety instruction.
- Loose clothing, personal jewelry, neckwear, hair, hands and gloves should be kept away from rotating tool and accessories.
- Do not wear loose fitting gloves, or gloves with cut or frayed fingers.
- Operators and maintenance personnel should be physically able to handle the bulk, weight and power of tool.
- Hold the tool correctly; be ready to counteract normal or sudden movements and have both hands available.
- Maintain a balanced body position and secure footing.
- Release the trigger in case of an interruption of the air supply.
- Do not use in confined space.
- Always shut off air supply before changing accessories or making repairs.
- Never carry the tool by the hose.
- Do not exceed the maximum air pressure stated in the manual.
- Do not touch sockets or accessories during the torquing.
- Beware of slippery surfaces and trip hazards caused by the air line.
- Proceed with care in unfamiliar surroundings. Hidden hazards such as electric or other utility lines can exist.
- This tool is not intended for use in potentially explosive atmosphere. It is not insulated against coming into contact with electric power.
- Make sure there are no electrical cables, gas pipes, etc. that can cause a hazard if damaged by the use of the tool.
- Wear warm clothing when working in cold conditions and keep your hands warm and dry.
- Do not use worn or ill-fitting sockets or extensions as this is likely to cause substantial increase in vibration.

## Personal Protective Equipment

- Always wear the appropriate personal protective equipment when operating a Digital jGun including gloves, impact resistant eye protection, hearing protection, hard hat, and safety shoes. The grade of protection required should be assessed for each use.

## Air Supply Requirements

- The air supply line must be ½-inch minimum diameter to allow adequate air flow to the Digital jGun.
- The air supply must provide a minimum of 90 psi at 50 cfm.
- Ensure that air line fittings are tight and leak free. Do not over tighten air line fittings.
- Open the air supply connected to the Digital jGun unit and run the Digital jGun while setting the torque on the display.

## DIGITAL jGUN SAFETY BUTTON

The Directional Control Selector Button must first be pushed in the desired direction (clockwise or counter-clockwise) before the trigger can be depressed. This safety feature reduces the chance for operator error.



# IMPORTANT LI-ION BATTERY INSTRUCTIONS

The Digital jGun contains a non-removable rechargeable Li-Ion Battery that powers the Display Electronics. The following instructions, concerning the Li-Ion Battery shall be followed:

- **DO NOT** splash or immerse in water or other liquids.
- **Do not incinerate the battery even if it is severely damaged or is completely worn out.** The battery can explode in a fire. Toxic fumes and materials are created when lithium ion batteries are burned.
- **Do not charge or use the battery in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Inserting or removing the charger may ignite dust or fumes.
- **If battery contents come into contact with the skin, immediately wash area with mild soap and water.**
- **If battery liquid gets into the eyes, rinse over the open eye for 15 minutes or until irritation ceases. If medical attention is needed, the battery electrolyte is composed of a mixture of liquid organic carbonates and lithium salts.**
- **Contents of opened battery cells may cause respiratory irritation.** Provide fresh air. If symptoms persist, seek medical attention.



**WARNING:** Burn hazard. Battery liquid may be flammable if exposed to spark or flame.

- Charge the battery only with charger supplied for charging this product.
- DO NOT pack with conductive items.



The US Department of Transportation Hazardous Materials Regulations (HMR) actually prohibit transporting batteries in commerce or on airplanes, (i.e. packed in suitcases and carry-on luggage). When transporting individual batteries, make sure that the battery terminals are protected and well insulated from materials that could contact them and cause a short circuit. For any other concerns in regarding the transportation of LI-ION batteries, consult your Transportation Carrier.

## THE RBRC™ SEAL

The RBRC™ (Rechargeable Battery Recycling Corporation) Seal on the lithium ion battery (or battery pack) indicates that the costs to recycle the battery at the end of its useful life have already been paid by HYTORC.

The RBRC™ in cooperation with HYTORC and other battery users, has established programs in the United States to facilitate the collection of spent lithium ion batteries. Help protect our environment and conserve natural resources by returning the spent lithium ion battery to an authorized HYTORC service center for recycling. You may also contact your local recycling center for information on where to drop off the spent battery. RBRC™ is a registered trademark of the Rechargeable Battery Recycling Corporation.

## IMPORTANT BATTERY CHARGER SAFETY INSTRUCTIONS

**SAVE THESE INSTRUCTIONS:** This manual contains important safety instructions for battery chargers:

- Before using charger, read all instructions and cautionary markings on charger and product using the battery.



**WARNING:** Shock hazard. Do not allow any liquid to get inside charger.



**CAUTION:** Burn Hazard. To reduce the risk of injury, charge only Torque Gun batteries. Other types of batteries may burst causing personal injury and damage.





**CAUTION:** Under certain conditions, with the charger plugged into the power source, the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminium foil, or any buildup of metallic particles should be kept away from charger USB connectors. Always unplug the charger from the power source when not connected to the jGun. Unplug charger before attempting to clean.

- **DO NOT attempt to charge the battery with any chargers other than the one in this manual.** The charger and battery are specifically designed to work together.
- **These chargers are not intended for any uses other than batteries supplied with Digital jGun series guns as described in this manual.** Any other uses may result in risk of fire, electric shock or electrocution.
- **Do not expose charger to rain or snow.**
- **To disconnect charger, firmly grasp plug and remove. Do not disconnect the charger by pulling on the cord.**
- **Make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.**
- **Do not use an extension cord unless it is absolutely necessary.**
- **An extension cord must have adequate wire size (AWG) for safety. In general the larger the wire size the greater the capacity of the cable.**
- **Do not block any ventilation slots on charger power supply.**
- **Do not operate charger with damaged cord or plug.** Have any damaged plug or cord replaced immediately.
- **Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way.**
- **Do not disassemble charger; take it to an authorized Torque Gun service center when service or repair is required.**
- **This charger is designed to operate on standard household electrical power (120V/220V 60hz/50hz).**

## Reaction Arm or HYTORC Washer

Choose the correct reaction arm for the job. The Digital jGun is shipped with a standard length reaction arm, but your gun may have been ordered with a custom reaction arm for a specific purpose.

Reaction Arm



The HYTORC Washer system can be used for all applications instead of the reaction arm.

HYTORC Washer and Drive



**WARNING!**

Never modify a reaction arm! Changes in the reaction arm may lead to personal injury or damage to the tool.

**NOTE:**

Reaction arm modifications result in loss of warranty for the reaction arm and the Digital jGun. If you need a custom reaction arm, please consult with your local Torque Gun dealer.

## Reaction Arm and Socket Installation

- Choose the correct reaction arm for the job. The Digital jGun is shipped with a standard length reaction arm, but your gun may have been ordered with custom-length reaction arm for a specific purpose.
  - If using the HYTORC Washer™, follow installation instructions in HYTORC Washer™ Overview.
  - Clean the reaction arm and Digital jGun barrel mating surfaces before installing the reaction arm.
  - Slide the reaction arm onto the Digital jGun barrel with the reaction arm extension facing out.

Installing a Reaction Arm



### **!! CAUTION !!**

ALWAYS INSTALL THE REACTION ARM WITH THE EXTENSION FACING AWAY FROM THE GUN.

FAILURE TO INSTALL THE REACTION ARM CORRECTLY COULD RESULT IN THE REACTION ARM COMING IN CONTACT WITH YOUR HAND OR OTHER ANOTHER PART OF YOUR BODY, CAUSING PERSONAL INJURY.





Reaction Arm Installed



- Lock the reaction arm to the Digital jGun by aligning the set-screw with the hole in the splined section and then tightening the set screw firmly.

Tightening Reaction Arm Set Screw



- Place the appropriately sized socket onto the Digital jGun barrel.

### Installing Digital Digital jGUN Socket



- Install the socket locking pin and retaining ring.

### Installing Socket Locking Pin and Retaining Ring



## Key Operating Safety Points

- Ensure that the reaction arm is in direct contact with an appropriate immovable object before beginning to tighten the fastener.

Placement of Reaction Arm



- Using the HYTORC Washer™ eliminates external moving parts and increases worker safety. Refer to HYTORC Reaction Washer Overview.



### !! CAUTION !!

FAILURE TO HAVE THE REACTION ARM IN DIRECT CONTACT WITH AN APPROPRIATE IMMOVABLE OBJECT BEFORE BEGINNING TO TIGHTEN THE FASTENER COULD RESULT IN LOSS OF CONTROL OF THE TOOL AND PERSONAL INJURY.

- Keep all body parts clear of the reaction arm and reaction arm contact point (immovable object).



### !! CAUTION !!

DO NOT PLACE ANY PART OF YOUR BODY BETWEEN THE REACTION ARM AND AN APPROPRIATE IMMOVABLE OBJECT AT ANY TIME WHILE A FASTENER IS BEING TORQUED.

PERSONAL INJURY MAY OCCUR IF ANY PORTION OF YOUR BODY IS LOCATED BETWEEN THE REACTION ARM AND THE IMMOVABLE OBJECT WHEN THE FASTENER IS BEING TORQUED.

- Ensure the Digital jGun barrel is in a straight line with relation to the stud and that the socket is fully engaged onto the fastener.
- As the tool takes up the bolt load, the Digital jGun may shift.

# ***DIGITAL jGUN SETUP AND USE***

Proper setup and use of the Digital jGun before and during installation ensures accurate results and safe operation.

## **Setting a Torque Value**

Digital jGun Display



1. Connect an adequate air supply to the input of the tool's regulator.
2. Select desired Torque units via the right most push button.
3. Adjust the regulator until desired torque is displayed.

### **NOTE**

While setting torque the trigger should be pulsed until the displayed torque value is stable.

## **Changing the Drive Direction**

1. To change the square drive direction from clockwise to counter clockwise.
2. Move the direction selector behind the trigger as indicated on the back of the unit.
3. Left button – Toggle between TORQUE and PRESSURE mode on the display.
4. Center button – Toggle on-off.
5. Right button – When in TORQUE mode, toggle between units of PSI, bar and KPa. When in PRESSURE mode, toggle between units of ft-lbs and Nm.

Digital jGun Drive Direction Selector



## NOTE

The trigger cannot be depressed unless the directional button is displaced. Once depressed the trigger will hold the directional button in position and both hands can be used to hold the tool.

## Charging the Digital jGUN

1. There is a three-segment battery charge indicator on the lower right side of the screen. When the level drops plug it in until it is fully charged as indicated by three bars.
2. A charger with USB cable is provided in the case with the tool.
3. Connect the charger to the USB connector on the right side of the display housing on the rear of the gun.

Digital jGun Battery Indicator and USB Connector





## Operating the Digital jGUN

To operate the Digital jGun:

1. Make sure the jGun has been calibrated.
2. Set desired direction (clockwise or counter clockwise).
3. Place the correct size impact socket on the square drive and secure it with the locking pin and ring.
4. Ensure that the square drive is fully engaged into the socket.
5. Engage the socket onto the nut.
6. Make sure the socket is fully engaged onto the nut.
7. Ensure that the reaction arm is placed firmly against a stationary surface such as an adjacent nut, a flange, or equipment housing. (If using the HYTORC™ Reaction Washer in place of a standard reaction arm ensure that it is setup according to the steps in the HYTORC Reaction Washer Overview section).
8. Apply momentary pressure to the torque gun trigger to ensure proper socket engagement and reaction arm placement.

Digital jGun Operation



9. Verify the desired torque is indicated in the jGun screen.
10. Torque the fastener by depressing the trigger until socket stops turning and air bypasses the motor.



## !! CAUTION !!

BE SURE THE REACTION ARM IS FULLY ENGAGED AND LOCATED ON A SOLID, SECURE REACTION POINT. FOR ADDED SAFETY, REMAIN CLEAR OF THE REAR OF THE REACTION ARM DURING OPERATION. ALSO, WHEN INITIALLY APPLYING THE TOOL, PRESSURIZE THE SYSTEM MOMENTARILY; IF THE TOOL TENDS TO RIDE UP OR CREEP, STOP AND READJUST THE REACTION ARM TO A MORE SOLID AND SECURE POSITION.

### Loosening a Fastener

To operate the Digital jGun:

1. Make sure the jGun has been calibrated.
2. Adjust the regulator until the display indicates maximum torque setting.
3. Set desired direction (clockwise or counter clockwise).
4. Place the correct size impact socket on the square drive and secure it with the locking pin and ring.
5. Ensure that the square drive is fully engaged into the socket.
6. Engage the socket onto the nut.
7. Make sure the socket is fully engaged onto the nut.
8. Ensure that the reaction arm is placed firmly against a stationary surface such as an adjacent nut, a flange, or equipment housing. (If using the HYTORC™ Reaction Washer in place of a standard reaction arm ensure that it is setup according to the steps in the HYTORC Reaction Washer Overview section).
9. Apply momentary pressure to the torque gun trigger to ensure proper socket engagement and reaction arm placement.
10. Loosen the fastener by depressing the trigger until socket turns freely.

Digital jGun Operation



# ***DIGITAL jGUN REPAIR AND MAINTENANCE***

## **Maintaining Hoses and Fittings**

- Visually inspect air lines and air line fittings before tool use.
- Replace worn or leaking air lines.
- Tighten leaky fittings.



### **!! CAUTION !!**

LOOSE FITTINGS CAN BE POTENTIALLY DANGEROUS WHEN PRESSURIZED. OVER TIGHTENING FITTINGS CAN CAUSE PERMANENT THREAD FAILURE.

LOOSE FITTINGS OR OVER TIGHTENED FITTINGS CAN CAUSE PERSONAL INJURY AND TOOL DAMAGE.

ENSURE THAT AIR LINE FITTINGS ARE TIGHT, BUT NOT OVERLY TIGHT.

## **Lubricating the Air Motor**

To lubricate the air motor:

1. Turn the Digital jGun upside down and disconnect the air hose at the regulator coupling connection.
2. Pour approximately one ounce (29.6 ml) of air tool oil, or spray a lubricant, into the hose coupling on the gun.
3. Reconnect the hose and operate the gun, while standing clear of the exhaust opening at the base of the handle. Excess lubricant will release from this opening upon initial operation.

\*For additional maintenance instruction, refer to the HYTORC Tool Maintenance Guidelines

### **NOTE**

The air motor does not require continuous lubrication, however it is recommended that air tool oil be occasionally applied to the tool.

# CALIBRATION

1. Remove the pressure regulator by unscrewing from the bottom plate using an appropriate size wrench on the wrenching flats on the top of the regulator (The tool's in-line air regulator which must not be used during calibration).
2. Install 38-18 NPTF female to 9/16-18 UN-2A male adapter (Parker 6-3/8 F50G or equivalent) with air hose QD in the bottom plate to attach the air hose.
3. Mount the tool to the calibration equipment.
4. Attach the tool to a calibrated 2 Stage air regulator that can supply a 20-90 PSI and 50 CFM output. The output of air regulator should be directly connected to the tool via a 1/2" air hose (a maximum of 10ft long). **NOTE:** The 2-stage air regulator must be supplied with a minimum of 100 PSI and 50 CFM by an air supply that can sustain this pressure and flow throughout calibration.
5. **NOTE:** During calibration the tool will "time out" and exit the calibration routine if too much time elapses without action from the operator.
6. To start the calibration routine: Press and hold the two outer buttons then momentarily press the inner button.
7. "CAL" should be displayed on screen momentarily, then "20 PSI" will blink.
8. Now adjust the calibrated air regulator until exactly 20 psi is applied to the tool.
9. Press the center button to lock in this air pressure calibration value. **NOTE:** If the air pressure applied to the tool varies much more than what the tool expects, the tool will display "ERR".
10. Now the tool will display a blinking torque value.
11. Run the tool to a stall condition on the calibration equipment. Record the stall torque.
12. Using the outer buttons of the tool, enter the found stall torque value (press and hold these buttons for fast auto-increment).
13. Press the center button when done.
14. Now "40 PSI" will be displayed, blinking, on the tool. Repeat the above steps to calibrate all 4 pressure and stall torque values.
15. When you have completed entering the data for all 5 calibration points. The tool will ask you if you want to "SAVE".
16. Press the center button to save the calibration data.

# ***HYTORC REACTION WASHER OVERVIEW***

The HYTORC Reaction Washer is the first reaction arm replacement device for torque wrenches and is exclusive to TORCGUN Corporation. The HYTORC Washer is a hex shaped washer that fits under a standard nut and is used in conjunction with a double-layered (concentric) socket. The double-layered socket turns the nut using the inner socket, and the gun reacts on the washer with the outer socket.

HYTORC Washer and Socket



In addition to the added safety of having no external moving parts, the HYTORC Washer system provides a universal reaction point for all applications, eliminating the need for custom-designed reaction arms. Concurrently, the threaded segment inside of the washer stops the bolt from turning, eliminating the need for back-up wrenches. By reacting and tightening on the same axis, side-load is eliminated and surface friction from nut-to-nut is equalized, giving you increased bolting accuracy.



## HYTORC Washer™ Socket Mounted on the Digital jGun



### Safety

Only qualified personnel who have thoroughly read this document may operate this system. Failure to safely install the HYTORC Washer may result in serious injury or death

- Inspect all HYTORC Washers as they are removed from the shipping container. If damage is found to any component, contact your shipper immediately. Do not use the washer.
- Failure to follow correct tool usage could result in personal injury, co-worker injury, and/or damaged tools and equipment.
- Ensure that your working area is clean and unobstructed before beginning work.
- Modifying a HYTORC Washer or accessory is dangerous and not recommended.
- Inspect the HYTORC Washer and HYTORC Washer driver before each use.
- Replace any obviously worn or damaged parts.
- When not in use, properly store the HYTORC Washer Drivers and any unused HYTORC Washers.

### Personal Protective Equipment

- Always wear the appropriate personal protective equipment when operating the Digital jGun including gloves, safety goggles, hearing protection, hard hat, and safety shoes.

## **HYTORC Washer Requirements**

- Always use the appropriately sized HYTORC Washer for the nuts and bolts you use.
- All specifications of the connection (screw size, material, seal type, etc.) must be coordinated.
- When installing the HYTORC Washer, use only original HYTORC accessories. Never use a wrench or other torque drive.

## **HYTORC Washer Assembly, Use and Service (SETUP)**

- Correct preparation and use of HYTORC Washers are a prerequisite for good rundown and for safe handling.

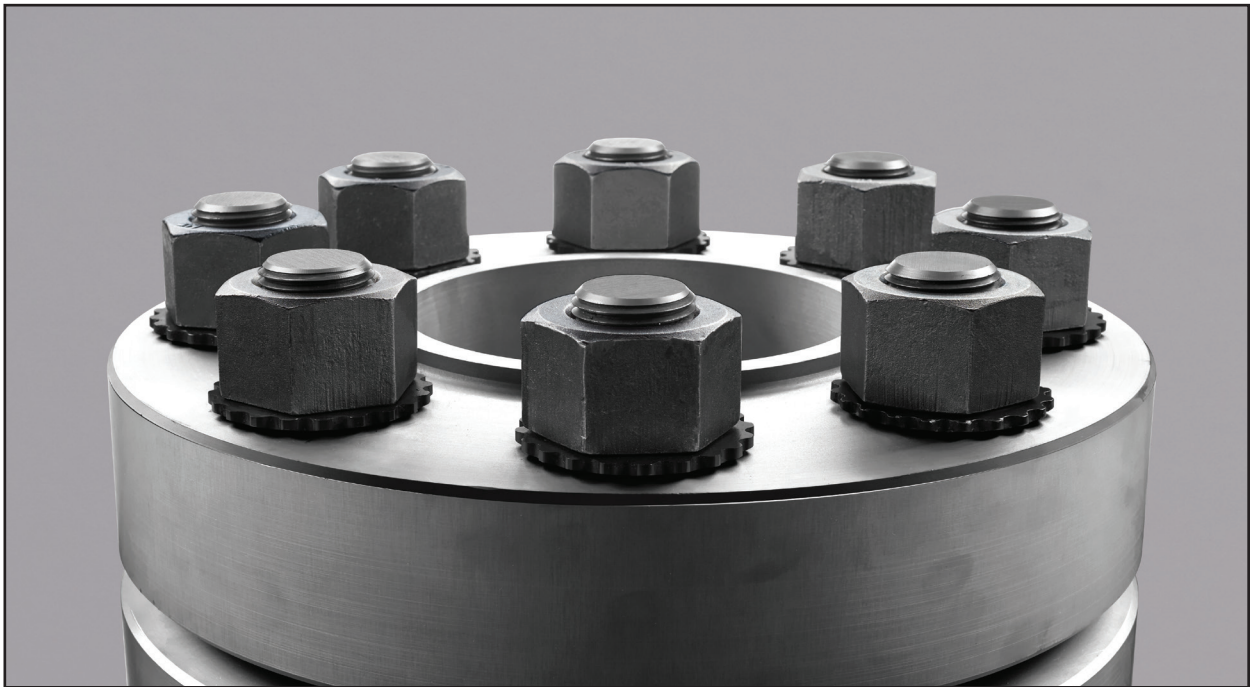
## **Important Preparation Steps for the HYTORC Washer**

- Before using the HYTORC Washer the connection elements must be carefully checked and cleaned.
- The HYTORC Washer must be completely dry and free from oil and grease.
- The nut to be mounted above the HYTORC Washer must be lubricated according to the specifications and application requirements.

## Important Installation Steps for the HYTORC Washer

- Slide bolts through the bolt hole.
- Determine which side of the connection is more suitable for fastening and tightening the bolts. (Working space for bolting, lighting, accessibility).
- Install the clean, dry nut on the opposite side from which you want to tighten.
- Install the HYTORC Washer on the side which you want to tighten by rotating the bolt clockwise until it is hand tight.
- Now install the lubricated nut (on the same side as the HYTORC Washer) by turning it clockwise until it is hand tightened against the HYTORC Washer.

HYTORC Washer Installed



**CAUTION**

For a correct installation only 3 to 4 threads should be seen beyond the nut to be tightened.

Once all the bolts are prepared following the previous instructions for assembly, tighten the nuts using the HYTORC Washer Driver.

Aligning HYTORC Washer™ Socket Set Screw with Machined Recess in Digital jGun Splines



## Installing HYTORC Washer Driver

- The set screw for fastening the HYTORC Washer Driver is aligned with the milled recess in the ring gear of the tool.
- Tighten the set screw and then loosen it again by ¼ turn.

Tightening HYTORC Washer™ Set Screw



## **Tightening with HYTORC Washer**

- Put the tool in tightening mode.
- Put the tool in HYTORC Washer mode.
- Place the HYTORC Washer Driver on the Digital jGun and tighten the set screw.
- Engage the HYTORC Washer Driver and tool with the nut by placing it over the top of the bolt to be tightened.
- Repeat the steps for tightening a bolt as shown for standard torque in this manual.

# ***DIGITAL jGUN MAINTENANCE AND TROUBLESHOOTING TIPS***

1. Never exceed the maximum air pressure specified.
2. Check the female coupler on your unit's hose and the male coupler on your Digital jGun for dirt. Dirt entering your Digital jGun will result in air motor damage.
3. Check your Digital jGun's gear box for loose or missing screws. DO NOT operate if any screws are loose or missing, or serious damage may occur. Use LOCTITE 262 on screws.
4. Check your Digital jGun's back cover gasket for air leaks. An air leak will result in inaccurate torque.









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