

PETOL™ Flange Shackle

FLS3

Data Book

WARNING

Improper use of flange shackles may result in injury or death. Do Not Exceed Rated Load of 2000 Pounds. Always follow safe practices listed in Data Book and OSHA guidelines for Process Safety Management.

PETOL™ GEARENCH

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Form FLS3 revision 03/28/19

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PETOL™ Flange Shackle Description

The FLS3 PETOL™ Flange Shackle hangs from a shackle or a hook, which is attached to a lifting mechanism such as a crane or a hoist. The lifting mechanism moves the Flange Shackle up and down to install and remove ANSI B16.5, ANSI B16.47 Series A, and ANSI B16.47 Series B blind and weld neck flanges. Load ratings for the lifting mechanism and shackle or hook components should be greater than or equal to the rated load of the Flange Lifter.

The Flange Shackle has a rated load of 2000 pounds.

The FLS3 offers the following features:

- Positively attaches to flange.

- No lifting eye required.

- For use on flanges up to 3” thickness. No spacers required.

- Automatically adjusts to hole spacing.

- Alloy steel materials to provide long life.

- Load tested and magnetic particle inspected to ensure safety and quality.

- Designed to comply with ASME specifications B30.20 and BTH-1.

Warranty

What Is Covered

PETOL™ GEARENCH tools are expressly warranted to you, the purchaser, to be free of defects in material and workmanship.

How Long Coverage Lasts

This express warranty lasts for the lifetime of the PETOL GEARENCH tool. Warranty coverage ends when the tool becomes unusable for reasons other than defects in workmanship or material.

How Can You Get Warranty Service

To obtain the benefit of this warranty, contact a PETOL GEARENCH sales representative in Clifton, Texas.

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What Will We Do To Correct Problems

Warranted products will be repaired or replaced, at PETOL GEARENCH's option, and returned at no charge to you, the original purchaser; or, if after three attempts at repair or replacement during the warranty period, the product defect in material or workmanship persists, you can elect to receive a full refund of your original purchase price for the product.

What Is Not Covered

Defects, failures or conditions that are due to normal wear and tear, abuse or misuse, are not covered by this limited warranty. In addition, this limited warranty is in lieu of all other warranties, express or implied, verbal or written. To the maximum extent allowed by law PETOL GEARENCH disclaims all implied warranties, including implied warranties of merchantability and/or fitness for a particular purpose. PETOL GEARENCH also specifically denies any liability for any incidental damages and/or consequential damages, including but not limited to property damage to property other than the product itself, loss of sales profits, down time, costs or any other damages measurable in money, whether or not included in the foregoing enumeration.

Please be advised that some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights, which vary from state to state, province to province, or country to country.

Are Personal Injuries Covered

In the event you, someone working for you, or any other person sustain a personal injury as a result of using the PETOL GEARENCH tool, PETOL GEARENCH limits its potential liability for such a claim or injury to the fullest extent allowed by law, and disclaims and denies any liability for such personal injury.

Please be advised that some states do not allow the exclusion or limitation of liability for personal injuries, so the above limitation or exclusion may not apply to you, or the individual claiming injury.

No Other Express Warranty Applies

This PETOL GEARENCH LIMITED WARRANTY is the sole and exclusive warranty, express or implied for PETOL GEARENCH products. No employee, agent, dealer or other person is authorized to alter, modify, expand or reduce the terms of this warranty or to make any other warranty on behalf of PETOL GEARENCH.

Law Applicable

All matters related to the sale and/or use of the PETOL GEARENCH tool that is the subject of this limited warranty, along with the construction and enforcement of the terms of this limited warranty itself, shall be subject to the substantive and procedural laws of the state of Texas, not the conflicts of laws provisions of Texas, but rather the laws of Texas themselves.

Forum Selection Clause

Any dispute arising out of the sale and/or use of the PETOL GEARENCH tool that is the subject of this limited warranty shall be presented in the form of a claim or lawsuit to the offices of PETOL GEARENCH in Clifton, Bosque County, Texas. No claim or suit may be brought against PETOL GEARENCH, arising out of the sale and/or use of the tool, or arising out of the terms of this warranty, except in such forum. Purchase and/or use of the PETOL GEARENCH tool makes you subject to the benefits and limitations of this limited warranty. Accordingly, any writ, judgment or other enforcement, obtained from a jurisdiction, county, parish, state or federal court or other country, other than from the forum identified above, shall be void and unenforceable against PETOL GEARENCH.

Arbitration Clause

In the event of dispute or claim arises out of the sale and/or use of the PETOL GEARENCH tool that is the subject of this limited warranty, or arises out of the interpretation or enforcement of the terms and conditions of this limited warranty, such dispute shall be submitted to binding arbitration pursuant to the rules of the American Arbitration Association. If required to accomplish the purpose of this Arbitration clause, the purchaser hereby expressly waives any right to demand trial by jury.

Complete Agreement

This express limited warranty contains the entire agreement regarding express or implied warranties related to the PETOL GEARENCH tool that is the subject of it. No writing or language contained in the purchase order or any other document of the purchaser, or invoice of PETOL GEARENCH or any intermediate seller, shall be construed as modifying, in any way, the rights and liabilities contained in this limited warranty. PETOL GEARENCH expressly disclaims any obligations expressed in any customer purchase order or document that are contrary to the terms and limitations of this warranty.

Severability

If any term or limitation contained in this limited warranty is deemed unenforceable by law, then the term shall be severed from the remaining portions of the limited warranty which shall remain enforceable.

All communications to PETOL GEARENCH regarding the use of the tool and any aspect of the sale of the tool of this limited warranty should be addressed to PETOL GEARENCH.

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Safe Practices and Procedures

Responsibility

It is the responsibility of the employer to train the employee in the proper selection and use of flange shackles, and to ensure that they are selected and used in that manner. A part of the job instruction program should therefore be detailed training in the proper use of flange shackles.

"Employers are responsible for the safe condition of tools and equipment used by employees, including tools and equipment which may be furnished by employees." - (Source: OSHA 1910.242A)

Safety

While we pride ourselves on the quality and dependability we build into PETOL™ GEARENCH tools and products, we caution users that it is only prudent to know and follow the simple rules of safety when using our products, or anyone else's.

Always follow safe practices and procedures in accordance with the recommendations of OSHA, The National Safety Council (NSC), The Hand Tools Institute (HTI), The International Association of Drilling Contractors (IADC), Etc. All applicable Governmental rules, regulations or restrictions, now in effect or which may be promulgated, take precedence over the suggestions in this publication. The information in this publication is designed to supplement standard safe practices and procedures, not in lieu of, or replacement thereof.



Improper use of flange shackles may result in injury or death. Follow safe practices listed below.

Potential hazards when installing and removing flanges:

Hazard

Getting pinched fingers and hands from shackles, flanges, and connections

Possible Solution

Keep all hands and fingers away from pinch points

Being struck by swinging flanges and flange shackles

Instruct workers to be alert when on the work site

Hazard

Being struck by flanges or flange bolts should they slip

Possible Solution

Ensure that workers are instructed in proper flange lifting procedure

Being struck by flanges or flange bolts not securely connected

Inspect the tools before use
Inspect and maintain flange shackles

Periodic Maintenance and Inspection Schedule**Daily**

1. Visually inspect flange shackle for signs of corrosion or damaged components.
2. Inspect for any visual evidence of external cracks. Visible cracks indicate potential failure points, and if they are discovered, the flange shackle should be immediately removed from service.
3. Examine the bodies for deformation. If the surfaces are excessively worn, the flange shackle needs repair. (See 'Inspection Wear Limits' for maximum allowable wear)
4. **Do not grind or remove metal from any surface of the flange shackle. Contact PETOL™ GEARENCH for all suspected damage and repair.**
5. After use, clean flange shackle. Remove all external dirt and grease.

Semi-annually

1. Perform Daily Maintenance as required.
2. Grease spherical bearings.
3. Inspect the following areas for wear and/or damage (See 'Inspection Wear Limits' for maximum allowable wear):
 - a. Flange screw
 - b. Body screw hole
 - c. Spherical bearing
 - d. Flange link holes
 - e. Pin

Inspection Wear Limits**Flange screw (any location on screw body) (FLSS3)**

- Diameter – 0.702 inches

Body screw hole (unthreaded side) (FLSB3)

- Diameter – 0.730 inches

Spherical bearing (HXPB03)

- Radial displacement – 0.010 inches

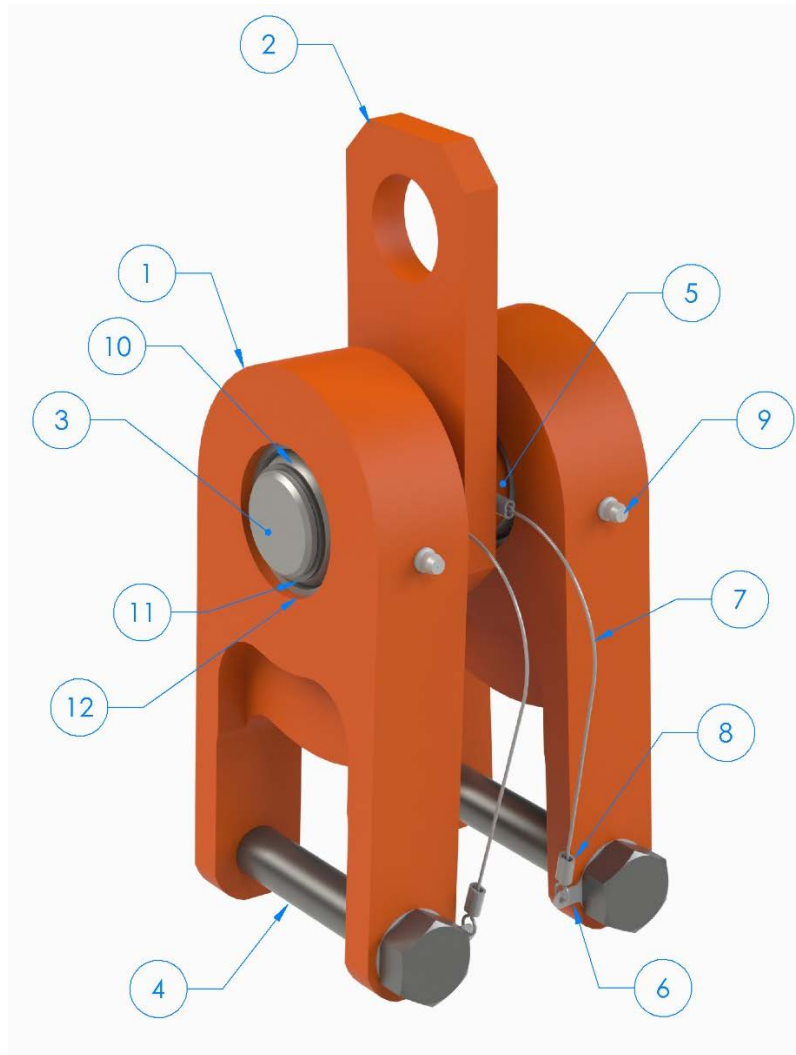
Flange link (both holes) (FLSL3)

- Diameter – 1.401 inches

Pin (any location on pin) (FLSP3)

- Diameter – 1.359 inches

Assembly Drawing



ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	FLSB3	Body
2	1	FLSL3	Flange link
3	1	FLSP3	Pin
4	2	FLSS3	Flange screw
5	2	FLSU3	Bushing
6	2	FLSW3	Lanyard washer
7	2	TSGSC	Lanyard cable (18.00 long)
8	4	TSGCS	Lanyard cable crimp sleeve
9	2	HXG006	Grease insert
10	2	HXPB03	Spherical plain bearing
11	2	HXSR137	Spiral retaining ring (external)
12	2	HXSR218I	Spiral retaining ring (internal)

Operation

As shown in the figure on the next page, spread the Flange Shackle until the flange screw holes line up with the holes in the flange. Insert the flange screws through the body and flange holes. Tighten the flange screws to prevent loosening during the lift.

The Flange Shackle may be used to tip up a flange that's lying on the floor or on a pallet to its working position.

For bolted connections, guide the working flange onto its connecting flange. Secure the working flange to the connecting flange at four separate bolt locations. Then remove the flange screws and the Flange Shackle, so it is no longer lifting between the flanges. Insert the top two flange bolts and complete the connection.

For welded connections, guide the leveled working flange into position for welding.



A falling load may cause SERIOUS INJURY or DEATH.

Under no circumstances should the rated load of 2000 Pounds be exceeded.

Read Operating Instructions prior to operation.

Before using, inspect the lifter daily to ensure it is in proper operating condition. Always follow safe practices listed in Data Book and OSHA guidelines for Process Safety Management.



Replacement Parts

Repairs should only be made by PETOL™ GEARENCH or a repair facility authorized by PETOL GEARENCH.

Responsibility of Distributors

PETOL GEARENCH DISTRIBUTORS ARE RESPONSIBLE FOR FORWARDING THIS DATA BOOK AND OTHER PETOL GEARENCH PRODUCT INFORMATION RELATING TO THE INDIVIDUAL PRODUCT, THROUGH THE CHANNELS OF DISTRIBUTION, DOWN TO AND INCLUDING THE INDIVIDUAL USING THE PRODUCT.

NOTE:

In view of the fact that the actual use determines whether safety requirements have been met, the ultimate responsibility to comply rests with the end user.

Certificates