

PETOL[®] PULLDOWN VISETONGS

Operating Manual



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Form VTDA revision 01/23/2026

Table of Contents

PETOL® PULLDOWN VISETONGS Description	1
PETOL® Limited Warranty	2
Safe Practices and Procedures	3
Responsibility	3
Replacement Parts	3
Safety	4
Safe Practices	4
Safety Sources and Publications	4
Responsibility of Distributors	5
Overloading / Shock Loads / Side Loading	6
Environmental Conditions	6
Normal Life Expectancy	7
Lubrication	7
Periodic Inspection List for PETOL® Special Chain	8
Tong Inspection	10
Inspection Wear Limits	11
Operation	12
Tong Adjustment	13
Torque Capacity and Dimensions	14
Parts Lists	15
VTDA115H Parts List	16
VTDA116H Parts List	18
VTDA116H Chain Selection Table	19
VTDA118 Parts List	20
VTDA118 Chain Selection Table	21
VTDA120 Parts List	22
VTDA120 Chain Selection Table	23

PETOL® PULLDOWN VISETONGS Description

The PETOL® Pulldown Visetongs were designed for making up and breaking out tool joints, drill collars, reamers, and similar heavy jobs requiring substantial torque. A hydraulic cylinder can be attached to the end of the tong handle.

The tongs are easily adjusted to various pipe sizes by simply sliding the heat-treated PETOL Special Chain through the jaw of the tong and engaging the locking cam lever.

The PETOL Pulldown Visetongs offer the following features:

- A high strength, heat-treated alloy chain for rugged, dependable service.

- High strength alloy steels used throughout for long life with the toughest jobs.

- Regardless of the load on the handle, these tongs will not jam.

- The tongs have a minimum crushing effect and a great strength for their weight.

- These tongs are equipped with replaceable high-speed steel PETOL Diamond Point Inserts, which minimize marring of pipe surfaces.

PETOL® Limited Warranty

What Is Covered

PETOL® 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 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 sales representative in Clifton, Texas.

PETOL 4450 S. Highway 6 · P.O. Box 192 · Clifton, TX 76634

What Will We Do To Correct Problems

Warranted products will be repaired or replaced, at PETOL'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 disclaims all implied warranties, including implied warranties of merchantability and/or fitness for a particular purpose. PETOL 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 tool, PETOL 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 LIMITED WARRANTY is the sole and exclusive warranty, express or implied for PETOL 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.

Law Applicable

All matters related to the sale and/or use of the PETOL 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 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 in Clifton, Bosque County, Texas. No claim or suit may be brought against PETOL, 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 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.

Arbitration Clause

In the event of dispute or claim arises out of the sale and/or use of the PETOL 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 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 or any intermediate seller, shall be construed as modifying, in any way, the rights and liabilities contained in this limited warranty. PETOL 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 regarding the use of the tool and any aspect of the sale of the tool of this limited warranty should be addressed to PETOL.

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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 usage of tools, chains, etc., and to ensure that they are selected and used in that manner. In many instances, injury results because it is assumed that anybody knows how to use common hand tools. Observations and the record show that this is not the case. A part of every job instruction program should therefore be detailed training in the proper use of hand tools (and of all other special tools and equipment needed to accomplish the job)." - (Source: National Safety Council)

"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)

Replacement Parts

Use only PETOL[®] replacement parts - no other parts are of comparable strength, quality and interchangeability.

Safety

While we pride ourselves on the quality and dependability that we build into PETOL 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.

Safe Practices

(Source: The National Safety Council)

Failure to observe one or more of the following five safe practices accounts for most hand and powered tool accidents:

1. ALWAYS WEAR SAFETY GOGGLES TO PROTECT EYES
2. SELECT THE RIGHT TOOL FOR THE JOB
3. KEEP TOOLS IN GOOD CONDITION
4. USE TOOLS CORRECTLY
5. KEEP TOOLS IN A SAFE PLACE

Safety Goggles must always be worn by persons in any area where hand and powered tools are being used.

Never apply excess leverage to a wrench or tool by means of a "Cheater Bar". Never strike wrenches and tools with hammers or other objects.

All tools should be kept clean, inspected on a regular basis, and replaced when they show signs of wear.

Be especially careful not to place yourself in a position that could result in bodily injury in the event of a failure. Brace yourself firmly and pull rather than push when wrenching. (If necessary, to push, do so with the flat of the hand rather than gripping around the wrench.)

Never stand under or near loads being hoisted off the ground.

READ SAFE PRACTICES AND PROCEDURES MANUAL, CATALOG INFORMATION AND PRODUCT LABELING PRIOR TO OPERATION.

Safety Sources and Publications

In the interest of Safety the following sources of Safety information is furnished:

The Hand Tools Institute (HTI)

25 North Broadway
Tarrytown, New York 10591
(914) 332-0040
www.hti.org

The National Safety Council (NSC)
1121 Spring Lake Drive
Itasca, Illinois 60143-3201
(630) 285-1121
www.nsc.org

International Safety Council
1121 Spring Lake Drive
Itasca, Illinois 60143-3201
(630) 285-1121

Responsibility of Distributors

IT IS THE RESPONSIBILITY OF THE PURCHASERS OF PETOL[®] PRODUCTS TO CONVEY THE INFORMATION IN THIS PUBLICATION AND ANY OTHER 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.

The service life of leaf chains can be altered by a variety of adverse operating conditions. The following information discusses the most important of these conditions for consideration when operating or scheduling replacement of leaf chain systems.

Overloading / Shock Loads / Side Loading

Attempting to “inch loads which are beyond the rated capacity of the tool.

Striking the tool with a hammer or other object while force is being exerted in an attempt to loosen a “frozen” joint.

Side pull can be caused by pulling or pushing on the tong in a direction that is not along a perpendicular plane, unlevel mounting of the tong or vise, inadequate support of the part being broken out, and improper seating of the part being broken out in the tong or vise. Improper seating will occur when the diameter of the part is not consistent within the width of the tong or vise jaw.

Environmental Conditions

Wrench chains operate in widely varying environments, from wet outdoor conditions to mildly or highly corrosive industrial atmospheres. They can also be exposed to abrasives such as sand or grit.

The possible effects include:

Moisture - Corrosion and rust reduce chain strength by causing pitting and cracking.

Temperature - Very cold temperatures reduce chain strength by embrittlement.

Chemical Solutions or Vapors - Corrosive attack of the chain components’ grain structure and/or the mechanical connections between the chain components (crevice corrosion) may occur. Cracking often is microscopic. Propagation to complete failure can be eventual or sudden.

Abrasives - Accelerated wearing and scoring of the articulating chain members (pins and plates) may occur, with a corresponding reduction in chain strength. Due to inaccessibility of the bearing surfaces (pin surfaces and plate apertures), wear and scoring are not readily noticeable.

These conditions, when coupled with normal chain wear and inherent residual stress (normally in the chain as constructed), can result in environmentally assisted failure. It is impossible to predict chain life under complex conditions, as the degree of hostility and its effects are dependent on many variables such as temperature, time of exposure, concentration of corrosive atmosphere or medium, degree of abrasive wear, etc. Establishing the degree and frequency of unpredictable dynamic loading is also difficult.

Normal Life Expectancy

A leaf chain's normal life expectancy can be expressed as a maximum percent of elongation. This is generally between 2% and 3% of pitch. As the chain flexes back and forth, the bearing joints (pins and inside link plates) gradually wear from articulation. As with all steel bearing surfaces, the precision hardened steel joints of leaf chain require a constant film of oil between mating parts to prevent wear and to resist corrosion.

Lubrication

One of the most important but often overlooked factors is adequate lubrication. In addition to reducing internal friction, maintaining a film of oil on all chain surfaces will inhibit rusting and corrosion, this is important as corrosion of highly stressed, hardened steel chain components can cause a major reduction in the load capacity of leaf chain and result in link plate cracking.

Protection from corrosion is important in storage as well as in service. The factory lubricant applied to PETOL® Chain is a "Fingerprint Neutralizing Water-Displacing Corrosion Preventative." This is an excellent rust and corrosion inhibitor for chains in storage.

Do not attempt to paint chains. Though painting may help inhibit corrosion, it will seal off critical clearances and restricts oil from reaching the pin surfaces where it is needed for good joint lubrication. Do not plate chains or chain components. Highly stressed alloy steel components are subject to hydrogen embrittlement caused by plating. Periodic relubrication of chains is the most important factor in extending the life of the chains. There is no lubricant that is ideal for all situations.

A heavy oil lubricant provides excellent protection during prolonged storage, but is messy to apply, will attract dirt and other contaminants and is messy to use. These contaminants could lead to premature abrasive wear of the moving components. When operating in dusty environments, lubricated chains will accumulate a paste like buildup of grime. At periodic intervals, this buildup should be removed by cleaning and the chain should be immediately relubricated. Do not use caustic or acid type cleaners; use a stiff brush and a certified safe petroleum base solvent.

Light oil-based lubricants penetrate into articulated joints easily but can also be washed off or rubbed off during use. A light oil-based lubricant must have periodic reapplication of the lubricant to maintain coverage.

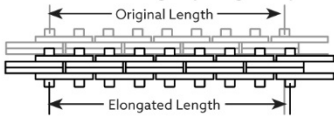
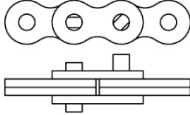
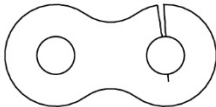
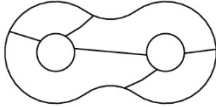
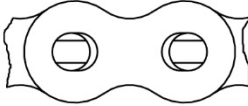
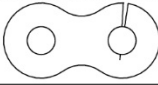
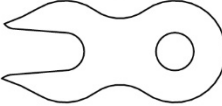
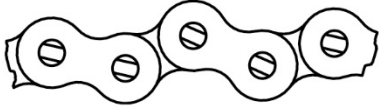
Specialty chain lubricants (wax-based) provide excellent lubrication. They have no oily residue. They are easy to apply. They can be more expensive than other lubricants and are subject to being washed off or worn off. Wax-based lubricants must have periodic reapplication of the lubricant to maintain coverage.

The frequency of relubrication is the most important factor. It will depend on frequency of use, length of storage between uses, exposure to dust and other contaminants, and exposure to salt water or other corrosion accelerants. The end user should establish a good preventative maintenance program for relubrication of all chains and articulated components.

Periodic Inspection List for PETOL® Special Chain

PERIODIC INSPECTION LIST FOR PETOL® SPECIAL CHAIN

1. Prior to each use, Leaf Chain and tools should be inspected for serviceability and lubrication.
2. Use Only PETOL® Replacement Parts - No other parts are of comparable strength, quality, and interchangeability.

APPEARANCE AND/OR SYMPTOM	PROBABLE CAUSE	CORRECTION
Excessive Length (Elongation) 	Normal Wear Permanent deformation (stretch) from overload	Replace chain Replace chain and correct cause of overload
Abnormal Protrusion of Pins 	Overloading Inadequate lubrication Side Loading	Replace chain and correct cause of overload Replace chain and improve lubrication Replace chain and correct cause of side load
Cracked Plates (Fatigue) 	Overloading Side Loading	Replace chain and correct cause of overload Replace chain and correct cause of side load
Arc-Like Cracked Plates (Stress Corrosion) 	Severe rusting or exposure to acidic or caustic medium, plus static stress at press fit between pin and plate.	Replace chain and protect from hostile environment
Enlarged Holes 	Overloading	Replace chain and correct cause of overload
Cracked Plates (Corrosion Fatigue) Perpendicular to Pitch Line, plus rust or other evidence of chemical corrosion 	Corrosive Environment	Replace chain and protect from hostile environment
Fractured Plates (Tension Mode) 	Overloading	Replace chain and correct cause of overload
Tight Joints 	Dirt or foreign substance packed in joints Corrosion and rust Bent Pins	Clean and relube Replace chain and protect from hostile environment Replace chain

Safety Precautions

1. Always wear safety goggles to protect eyes.
2. Select the right tool for the job.
3. Keep tools in good condition.
4. Use tools correctly.
5. Keep tools in a safe place.
6. Wear protective clothing, gloves and safety shoes as appropriate.
7. Use lengths of assembled chain. Do not build lengths from individual components.
8. Do not attempt to rework damaged chain by replacing only the components obviously faulty. The entire chain may be compromised and should be discarded.
9. Never electroplate assembled leaf chains or components. Plating will result in failure from hydrogen embrittlement.
10. Do not weld any chain or component. Welding spatter should never be allowed to come into contact with chain or components.
11. Leaf chains are manufactured exclusively from heat-treated steels and therefore must not be annealed. If heating a chain with a cutting torch is absolutely necessary for removal, the chain must not be reused.
12. Inspect chains frequently and regularly for link plate cracking, pin turning, pin protrusion and corrosion.
13. Use only PETOL replacement parts to ensure proper strength.

Tong Inspection

It is recommended that the tong be visually inspected on a daily basis for signs of damaged or worn components.

Semi-annually, inspect the following areas for wear and/or damage (See “Inspection Wear Limits” for maximum allowable wear):

- Jaw Pin
- Jaw Pin Hole in the Jaw, Handle, and Pawl
- Handle Pin
- Handle Pin Hole

Contact PETOL[®] for all suspected damage and repair.

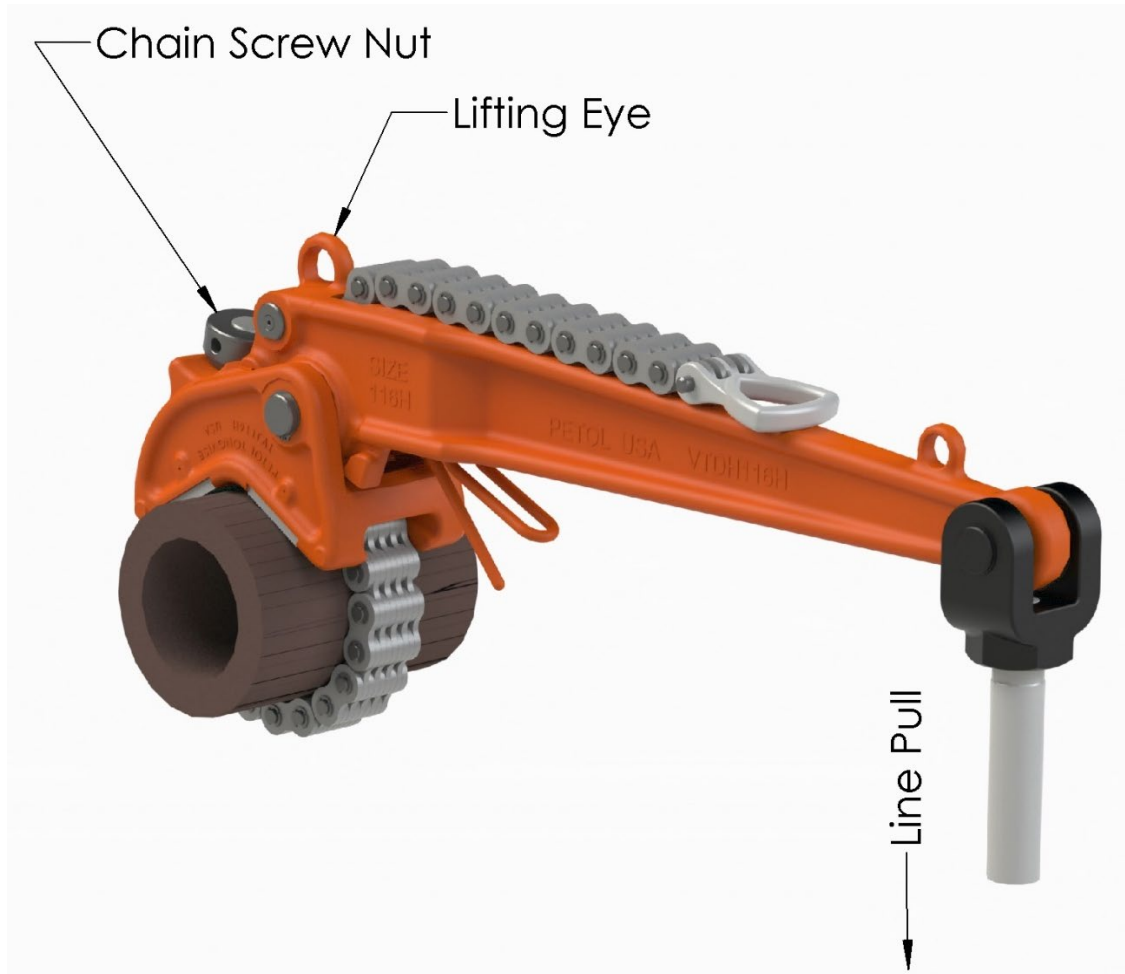
Inspection Wear Limits

The following table indicates limiting diameters on the components of the PETOL® Pulldown Visetongs. When localized wear is beyond any one of the limits indicated, the component should be replaced.

Tong	Part Number	Description	Location	Limit Diameter (inches)
VTDA115H	HP292	Jaw Pin	Pin Body	1.230 (min)
	HP356	Handle Pin	Pin Body	1.230 (min)
	TVJ115H	Jaw	Jaw Pin Hole	1.270 (max)
	HU62	Handle Bushing	Jaw Pin Hole	1.270 (max)
	VTDH115H	Handle	Handle Pin Hole	1.270 (max)
	TVP115	Pawl	Jaw Pin Hole	1.270 (max)
VTDA116H	HP277	Jaw Pin	Pin Body	1.725 (min)
	HP336	Handle Pin	Pin Body	1.355 (min)
	TVJ116H	Jaw	Jaw Pin Hole	1.775 (max)
	VTDH116H	Handle	Jaw Pin Hole	1.775 (max)
	VTDH116H	Handle	Handle Pin Hole	1.395 (max)
	TVP116HV	Pawl	Jaw Pin Hole	1.775 (max)
VTDA118	HP294	Jaw Pin	Pin Body	2.215 (min)
	HP276	Handle Pin	Pin Body	1.725 (min)
	TVJ118	Jaw	Jaw Pin Hole	2.285 (max)
	VTDH118	Handle	Jaw Pin Hole	2.285 (max)
	VTDH118	Handle	Handle Pin Hole	1.775 (max)
	TVP118	Pawl	Jaw Pin Hole	2.285 (max)
VTDA120	HP345	Jaw Pin	Pin Body	2.965 (min)
	HP222	Handle Pin	Pin Body	2.215 (min)
	TVJ120	Jaw	Jaw Pin Hole	3.040 (max)
	VTDH120	Handle	Jaw Pin Hole	3.040 (max)
	VTDH120	Handle	Handle Pin Hole	2.285 (max)
	TVP120	Pawl	Jaw Pin Hole	3.040 (max)

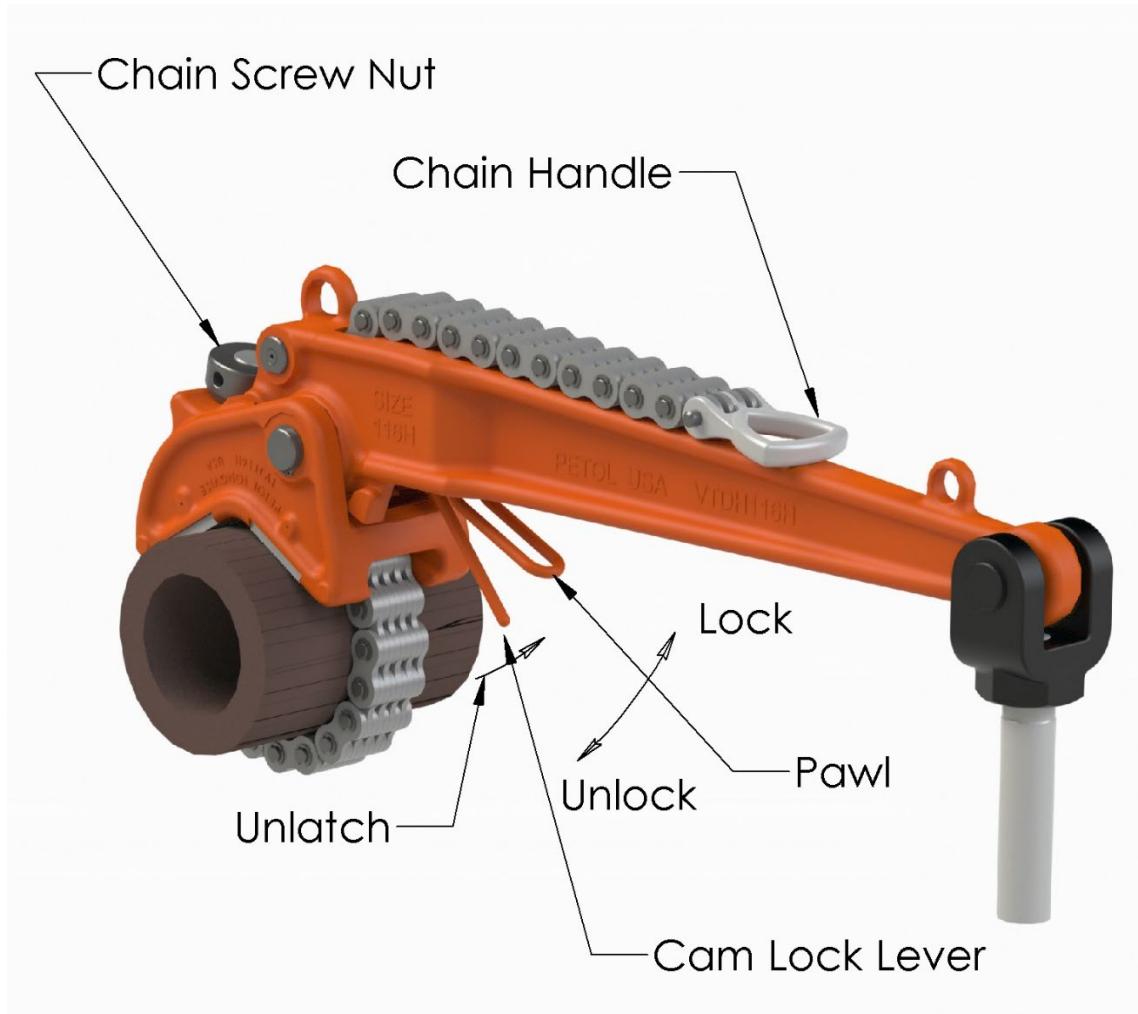
Operation

The typical application of one PETOL® Pulldown Visetong is shown in the figure below. Normally a vise is used as a backup. The vise is not shown for clarity. The tong will exert torque in the direction shown. The tong will ratchet when moved in a direction opposite to the line pull. Ratcheting is used when the tong must be pulled more than once to completely makeup or breakout the connection.



Tong Adjustment

Release the cam lock on the tong and vise by depressing the cam lever and moving the pawl to the unlocked position. Slide the chain through the tong or vise as needed to latch the chain screw nut into the jaw. Move the pawl lever to the locked position and release the cam lever. Check that the cam lever is latched. Tighten the chain screw nut on the vise until hand tight. Tighten the chain screw nut on the tong until it is hand tight and then loosen the chain screw nut on the tong 1/2 turn to provide proper ratcheting.

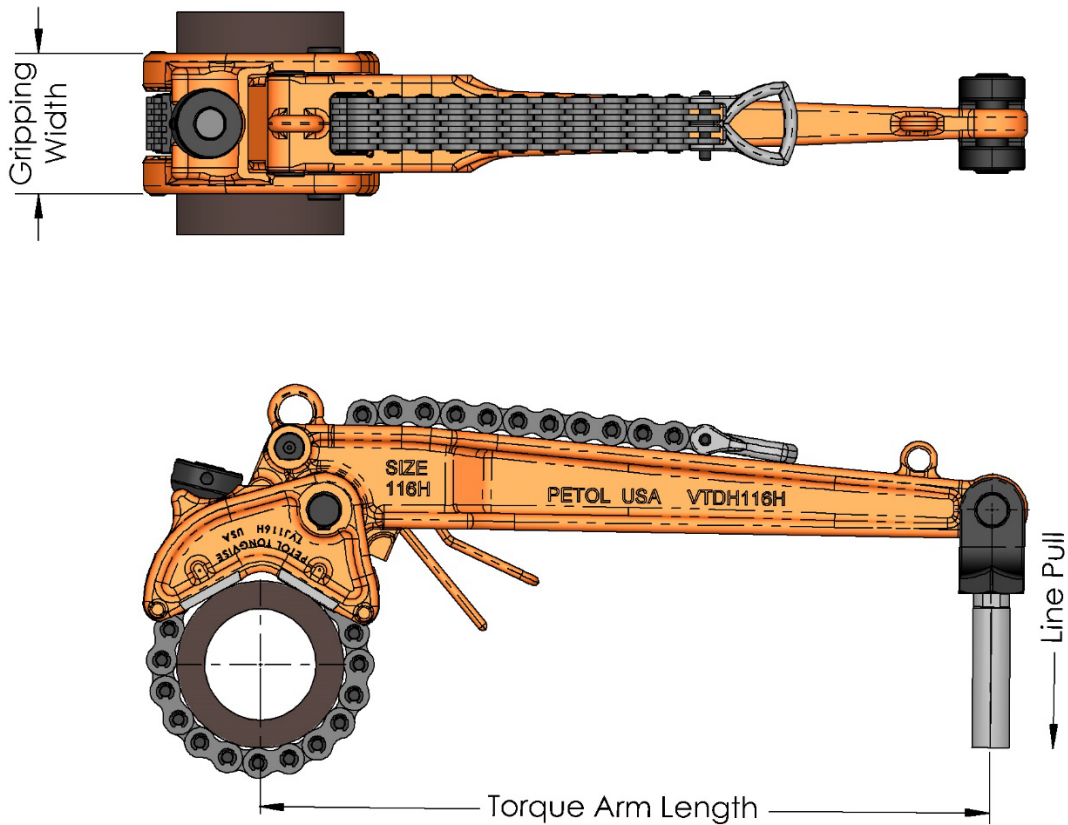


Torque Capacity and Dimensions

The maximum working torques and their corresponding handle loads, the outer diameter ranges, the gripping widths, and the torque arm lengths for the PETOL® Pulldown Visetongs are shown in the table below.

Tong	Diameter Range (inches)	Gripping Width (inches)	Torque Arm Length (inches)	Maximum Torque (foot-pounds)	Maximum Line Pull (pounds)
VTDA115H	2 – 8	5.25	27.00	14,000	6,220
VTDA116H	4 – 14	7.25	39.38	50,000	15,230
VTDA118	4 – 24	9.00	50.00	90,000	21,600
VTDA120	6 – 24	12.63	41.00	200,000	58,530

WARNING: Under no circumstances should the maximum working load be exceeded. Always monitor the line pull on the tong to avoid an overload.

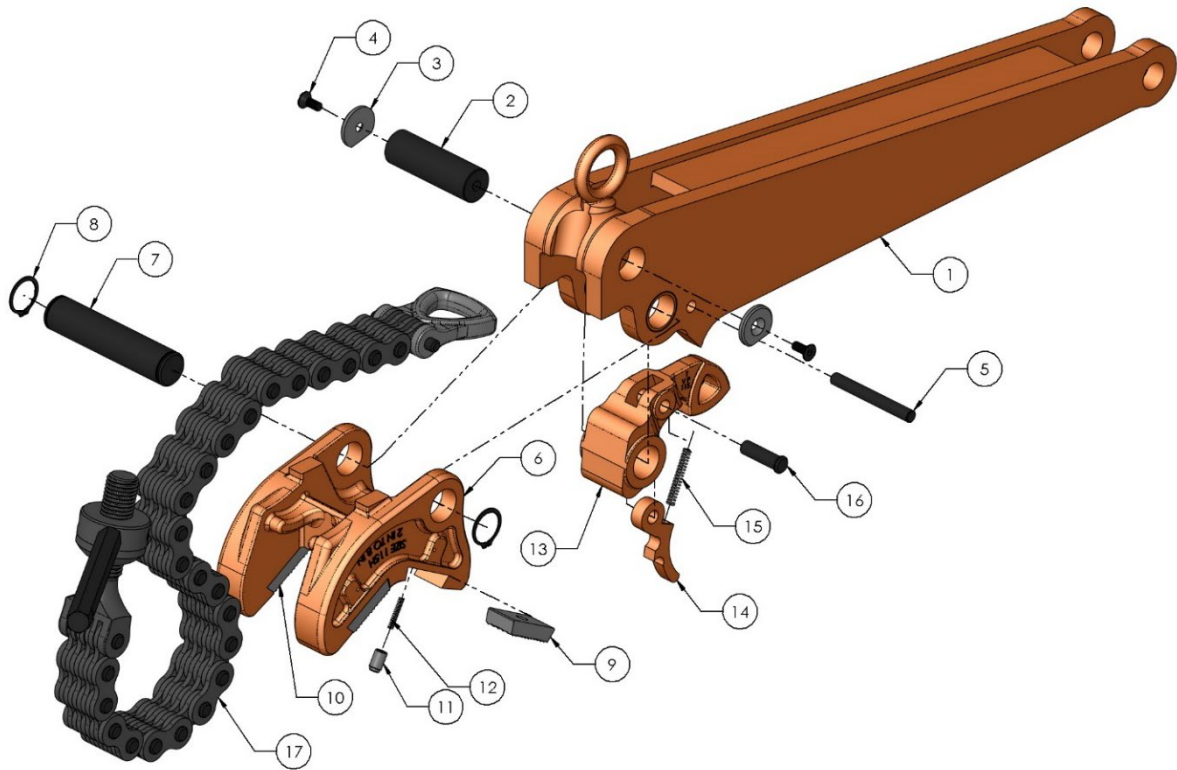


Parts Lists

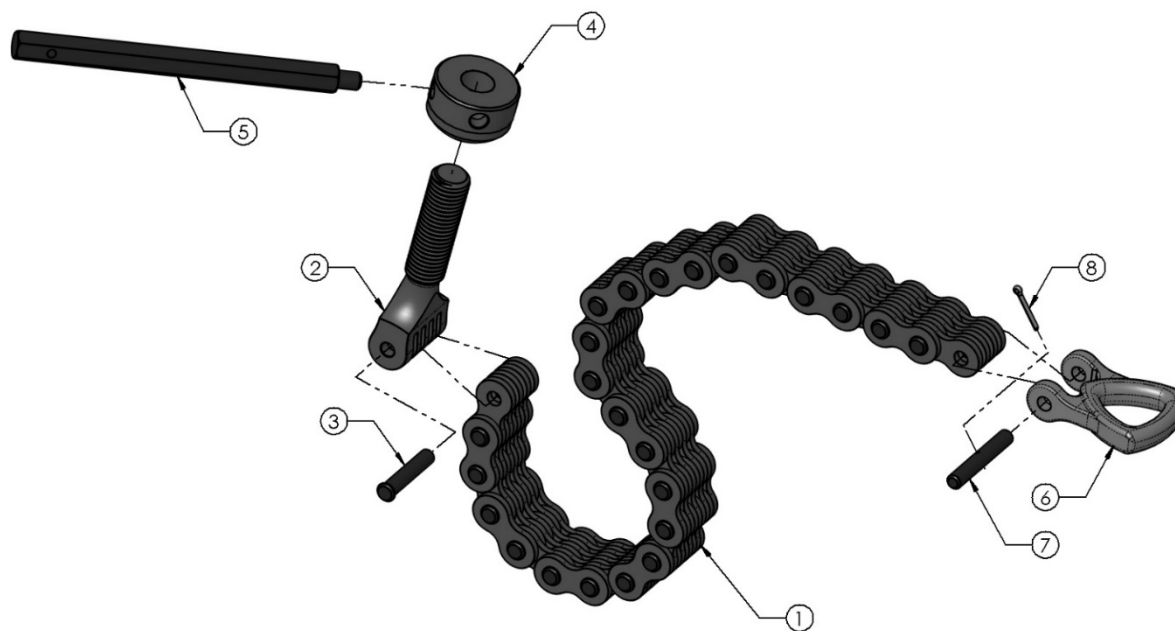
The following drawings, diagrams, and parts lists describe all parts, which may be needed as replacement items.

All tong components are manufactured only by PETOL®. DO NOT ATTEMPT TO SUBSTITUTE THESE COMPONENTS. The tong will not work properly unless these components are matched to the specific application. Consult our factory as your requirements change. Any non-PETOL substitutions of these components void all warranties and subject the user to assumption of liabilities resulting from subsequent use.

VTDA115H Parts List

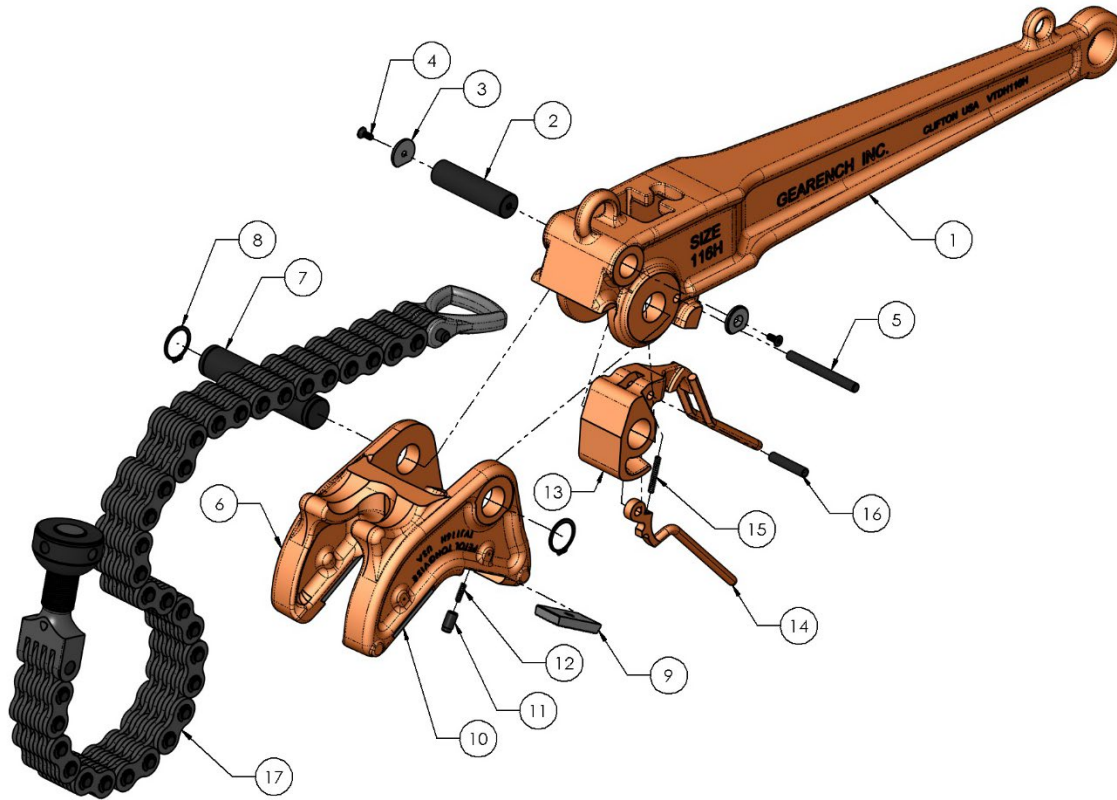


Item	Qty.	Part Number	Description
1	1	VTDH115H	Handle
2	1	HP356	Handle lock pin
3	2	HP274-RP	Lock pin retaining plate
4	2	HXS090	Retaining plate screw
5	1	HP297	Pawl latch pin
6	1	TVJ115H	Jaw
7	1	HP292	Handle – jaw pin with retaining rings
8	2	HXRR125	Jaw pin retaining ring only
9, 10	4	HI04D	Diamond point insert (standard)
9, 10		HI04K	Knurled insert (optional)
10		HI04B	Blank insert (optional)
11	4	HP903	Insert key
12	4	HS20S	Insert key spring
13	1	TVP115	Pawl
14	1	TVL116	Pawl latch
15	1	HS25	Pawl latch spring
16	1	HP026	Pawl latch rivet
17	1	151-45-25T	Chain assembly (see next page for parts)



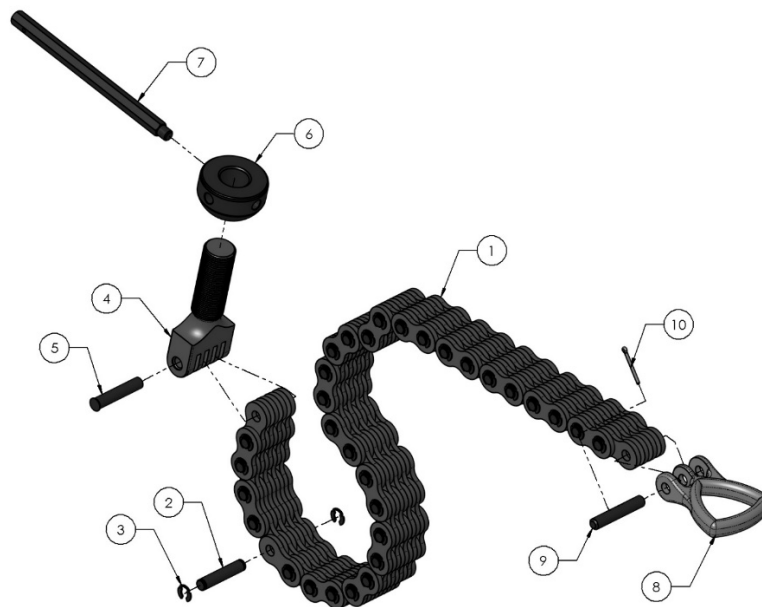
Item	Part No.	Description
1	151-45-25	Special chain only
2	HV07-45	Chain screw
3	HP236	Chain screw rivet
4	HN05	Chain screw nut
5	HP951	Chain nut lever
6	HD2-45	Chain handle
7	HP280	Chain handle pin with cotter
8	HXC002	Chain handle pin cotter only

VTDA116H Parts List



Item	Qty.	Part Number	Description
1	1	VTDH116H	Handle
2	1	HP336	Handle lock pin
3	2	HP275-RP	Lock pin retaining plate
4	2	HXS090	Retaining plate screw
5	1	HP298	Pawl latch pin
6	1	TVJ116H	Jaw
7	1	HP277	Handle – jaw pin with retaining rings
8	2	HXRR175	Jaw pin retaining ring only
9, 10	4	HI09D	Diamond point insert (standard)
9, 10		HI09T-7	Tooth insert (optional)
10		HI09B	Blank insert (optional)
11	4	HP904	Insert key
12	4	HS21	Insert key spring
13	1	TVP116HV	Pawl
14	1	TVL116HV	Pawl latch
15	1	HS25	Pawl latch spring
16	1	HP050	Pawl latch rivet
17	1	*	Chain assembly (see next page for parts)

*See Chain Selection Table on page 19

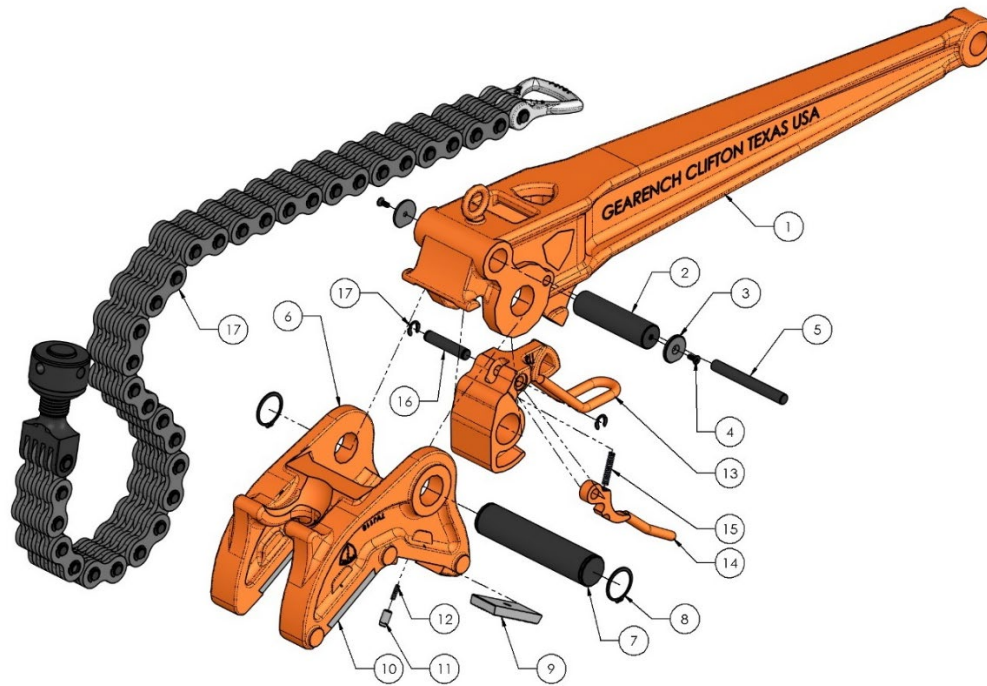


Item	Part No.	Description
1	161-45-02K	Special chain only
1	161-45-03K	Special chain only
1	161-45-04K	Special chain only
1	161-45-05K	Special chain only
1	161-45-07K	Special chain only
2	HP326	Chain pin with klipring
3	HXKR062	Chain pin klipring only
4	HV04-45	Chain screw
5	HP290	Chain screw rivet
6	HN02	Chain screw nut
7	HP952	Chain nut lever
8	HD3-45	Chain handle
9	HP282	Chain handle pin with cotter
10	HXC003	Chain handle pin cotter only

VTDA116H Chain Selection Table

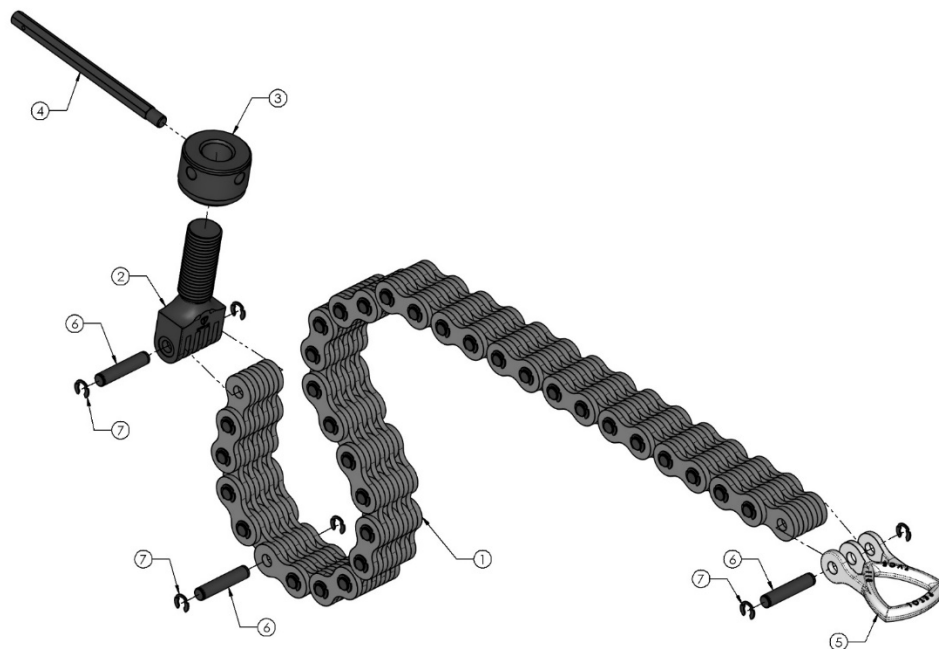
Diameter Range (in.)	Chain Assembly No.
4 - 10	161-45-25T
4 - 14	161-45-33T

VTDA118 Parts List



Item	Qty.	Part Number	Description
1	1	VTDH118	Handle
2	1	HP276	Handle lock pin
3	2	HP276-RP	Lock pin retaining plate
4	2	HXS090	Retaining plate screw
5	1	HP300	Pawl latch pin
6	1	TVJ118	Jaw
7	1	HP294	Handle – jaw pin with retaining rings
8	2	HXRR225	Jaw pin retaining ring only
9, 10	4	HI10D	Diamond point insert (standard)
10		HI10B	Blank insert (optional)
11	4	HP904	Insert key
12	4	HS21	Insert key spring
13	1	TVP118V	Pawl
14	1	TVL118V	Pawl latch
15	1	HS01	Pawl latch spring
16	1	HP327	Pawl latch pin with kliplings
17	2	HXKR075	Pawl latch pin klipling only
18	1	*	Chain assembly (see next page for parts)

*See Chain Selection Table on page 21

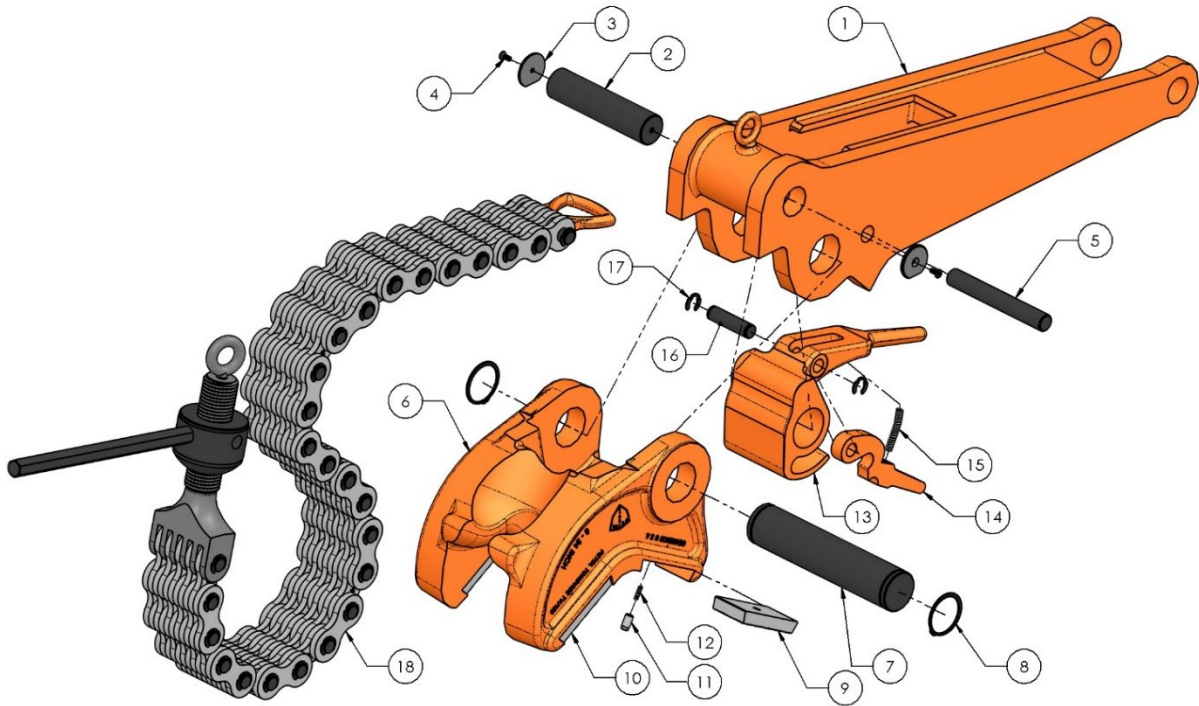


Item	Part No.	Description
1	181-45-02	Special chain only
1	181-45-03	Special chain only
1	181-45-04	Special chain only
1	181-45-05	Special chain only
1	181-45-07	Special chain only
2	HV05-45	Chain screw
3	HN03	Chain screw nut
4	HP954	Chain nut lever
5	HD4-45	Chain handle
6	HP327	Chain pin with kliprings
7	HXKR075	Chain pin klipring only

VTDA118 Chain Selection Table

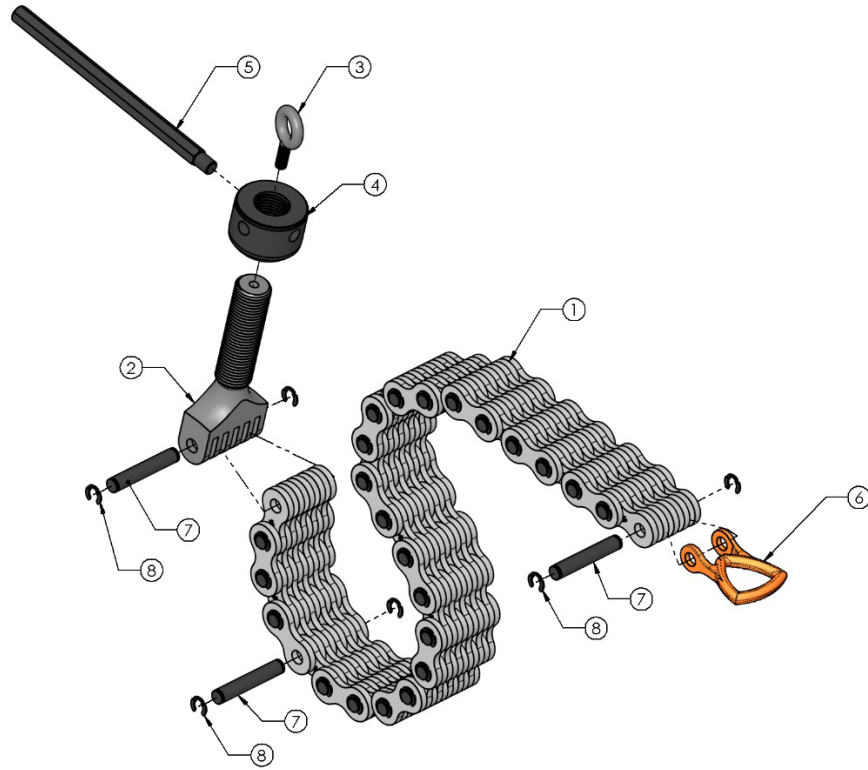
Diameter Range (in.)	Chain Assembly No.
4 - 12	181-45-25T
4 - 18	181-45-33T
4 - 24	181-45-41T

VTDA120 Parts List



Item	Qty.	Part Number	Description
1	1	VTDH120	Handle
2	1	HP222	Handle lock pin
3	2	HP279-RP	Lock pin retaining plate
4	2	HXS090	Retaining plate screw
5	1	HP344	Pawl latch pin
6	1	TVJ120	Jaw
7	1	HP345	Handle – jaw pin with retaining rings
8	2	HXRR300	Jaw pin retaining ring only
9, 10	4	HI11D	Diamond point insert (standard)
10		HI11B	Blank insert (optional)
11	4	HP904	Insert key
12	4	HS21	Insert key spring
13	1	TVP120	Pawl
14	1	TVL120	Pawl latch
15	1	HS03	Pawl latch spring
16	1	HP029	Pawl latch pin with kliprings
17	2	HXKR100	Pawl latch pin klipring only
18	1	*	Chain assembly (see next page for parts)

*See Chain Selection Table on page 24



Item	Part No.	Description
1	201-56-02	Special chain only
1	201-56-03	Special chain only
1	201-56-05	Special chain only
1	201-56-07	Special chain only
2	HV06-56	Chain screw
3	HB66	Eye bolt
4	HN07	Chain screw nut
5	HP955	Chain nut lever
6	HD5-56	Chain handle
7	HP328	Chain pin with kliprings
8	HXKR100	Chain pin klipring only

VTDA120 Chain Selection Table

Diameter Range (in.)	Chain Assembly No.
6 - 14	201-56-19T
6 - 18	201-56-25T
6 - 24	201-56-31T