HYTORC®

USER MANUAL

MXT/XLT

INDEX

FOR MORE INFORMATION

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1. WELKOM AT HYTORC

Thank you for buying HYTORC equipment.

This user manual and safety instructions is designed to provide you with the basic knowledge required to operate and maintain your new HYTORC equipment.

Please read this manual carefully and follow the instructions provided. If you still have any questions regarding HYTORC bolting equipment, please do not hesitate and call us at +31 (0) 24 3660 660 or contact us at info@hytorc.nl.
You also find more information on our website www.hytorc.nl

2. GENERAL INFORMATION

Your purchase of HYTORC equipment entitles you to the following HYTORC services:

- Instructions to your employees within your organization by a HYTORC specialist
- Free annual inspection of your HYTORC equipment
- 24-hour service
- When you need help abroad? No problem! We help you!
- HYTORC equipment according to the newest technology
- A full year complete warranty
- In case of failure under warranty of standard tools, substitutional rental equipment can be supplied at request
- Qualified work force employable for solutions at difficult challenges

3. SAFETY INSTRUCTIONS

Warning: Your HYTORC torque machine is a power tool, and as with any power tool, certain safety precautions should be observed to avoid accidents or personal injury. The following instructions will assist you.

- **Read all instructions.**

- **Keep work area clean and well lit.**

- **Consider work area environment.** Electrical Pumps should never be used in an atmosphere that can be considered potentially volatile. If there is any doubt, use an air pump. Note: Metal-to-metal contact can cause sparks, precautions should be taken.

- **Avoid premature tool starting.** The Pump Remote Control is for the TOOL OPERATOR only.

- **Stay clear during operation.** In most cases, the tool will allow “hands free” operation. If the tool must be held or steadied during operation, use alternative means of securing the tool to the application.

- **Guard against electric shock**. Ensure the pump is properly grounded and the proper voltage is being used.

- **Store equipment properly.** When not in use, tools and accessories should be properly stored to avoid deterioration.

- **Use right tool.** Do not force small tools or attachments to do the job of a larger tool. Do not use a tool for purposes not intended.

- **Proper safety attire**. When handling/operation hydraulic equipment use work gloves, hard hats, safety shoes and other applicable clothing.

- **Use safety glasses with side covers.**

- **Moving equipment**. Do not use hydraulic hoses, uni-swivels, pump power or remote cords as means of moving the equipment.

- **Maintain your HYTORC equipment with care.** For top performance, inspect tools, power pack and accessories for visual damage frequently and always prior to use. Always follow instruction for proper tool and pump maintenance. Refer to the Operations Maintenance Section in chapter 10 for further clarification.

- **Stay alert!** Watch what you are doing. Use Common sense. Do not use power equipment under the influence of any mood altering substances.

- **Prior to operation:**
  - Ensure that all hydraulic connections are securely connected and there is no leakage;
  - Verify that the hydraulic hoses are not kinked or otherwise damaged;
  - Ensure the square drive and its retainer are fully and securely engaged;
  - Be certain that all connectors, elbows, fitting and swivels are not bent, loose or damaged.

- **Prior to use:**
  - Check sockets for size, quality and flaws (do not use if questionable);
  - Cycle tool to ensure proper function;
  - Locate a solid, secure reaction point;
  - Be sure the reaction arm retaining clamp is fully engaged;
  - Be sure the hydraulic hoses are free of the reaction point;
  - Pressurize the system momentarily; if the tool tends to “ride up" or to “creep", stop and re-adjust the reaction arm to a more solid and secure position..

- **Stay away of the reaction points.** Remain clear of the reaction arm during operation and never punt body parts between reaction arm and reaction surfaces.

- **Always use quality accessories.** Always use top quality impact sockets in good condition that are the correct size and fully engage the nut. Hidden flaws, however, remain a possibility that could cause breakage, so stay clear of sockets during operation.

- **Do not use other equipment to enhance performance.** For example a hammer on the socket or tool.

Comment:
HYTORC pumps are designed to operate HYTORC tools only and otherwise. Damage may occur to the pump or the product that is being operated due to misuse.

You can find a version of the instructions on the reverse side of the torque charts.
STORE THESE SAFETY INSTRUCTIONS WITH YOUR HYTORC TOOL!

4. INTRODUCTION

The MXT/XLT-series is an advanced torque wrench, specially designed for applications with a limited free radius. This is possible because the reaction arm is adjustable in 60 different positions.

HYTORC has several low clearance wrenches to tighten or loosen nuts with limited height clearance, such as the Stealth, XLCT and Versa.

5. BEFORE USE

All HYTORC products have been tested and are ready for use at delivery. In some cases, you need to fill the supplied hydraulic oil in the pump unit before use.

The system accuracy of your HYTORC tool is within ± 3%. This accuracy maybe certified through calibration by our own calibration system. All new tools are delivered with a calibration certificate.

A HYTORC torque tool is only complete with a hydraulic pump and a high-pressure twin hose. To assure a safe and good operation of your equipment it is necessary to operate correctly and maintain regularly.

6. CONNECTING THE HYDRAULIC PUMP UNIT

Important

- Before use you have to fill the HYTORC pump units with, separate delivered, hydraulic oil (if it is not already done prior to delivery).
- If you operate your HYTORC torque tool with another pump brand, please note the restricted pressure of 700 BAR maximum.

6.1 Before use – Check pumps

Air driven pump units

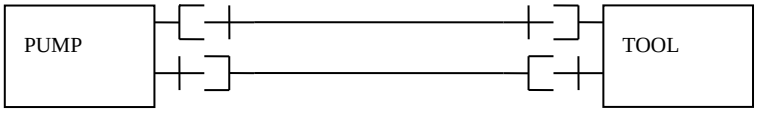
- Use as minimum ¾" air hose and ½" couplers. The working pressure is 6-10 BAR. During running the air pressure is not allowed to drop under 4,5 BAR.
- Check the water separator by opening the drain.
- Check if the oil level in the lubricator is sufficient. And check during running if the lubricator drops the subscribed drops of oil, approximately 4-6 drops per minute for most pumps.

Electrical driven pump units

- Assure yourself of using the right voltage according the pump specifications. You find these on the pump cover or electrical box.
- Beware of overvoltage and undervoltage! (too long or too thin extension cable will cause a voltage decrease).
- Use the hydraulic pomp only if the green/yellow grounding cables are connected.
- If needed, use an 2,5 mm² electrical extension cable, unreel the cable wince completely

6.2 Hose connection

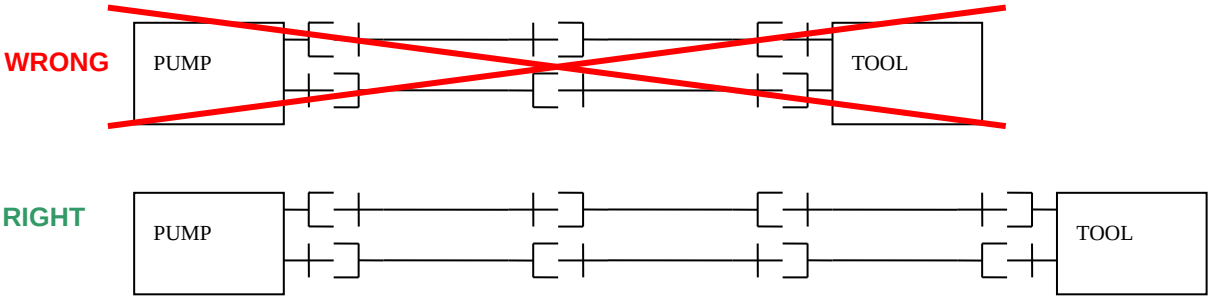
A twin hose connects the torque wrench and the hydraulic pump unit. Each hose has couplers at each end. One hose has female couplers at both ends and the other hose has male couplers at both ends. To avoid tool malfunction, do not reverse connectors!



We have three different types of couplers; rotating couplers, rotating couplers with locking devices and quick couplers. The different types cannot be connected between each other.

IMPORTANT

You cannot connect 2 or 4 hoses to each other. If necessary, you can connect 3 or 5 hoses. Use always an odd number of hoses.



- Push the hose parts and couplers to each other.
- Screw the couplers hand tight. Do not use locking pliers.
- If you want to detach, disconnect the return hose first. If impossible, press briefly once on the remote control push button.

Attention! During operation the couplers can become loose unnoticed, what makes oil flow impossible. The tool operates no longer.

ASSURE YOURSELF THAT ALL COUPLERS ON THE PUMP
AS WELL AS ON THE TOOL ARE TIGHTENED PROPERLY!
THIS IS THE MOST COMMON OPERATION FAILURE!

6.3 After use

- Reel the hoses.
- Protect the couplers against dirt and damage by connecting the end parts of the hose to each other.

7. SETTING OF TORQUE VALUE / BOLT LOAD

The HYTORC hydraulic pump unit has a working range of 20 BAR until maximum 700 BAR. Within this range the pressure is infinitely adjustable.

Follow the next steps to adjust the right torque:

1. Every tool type has his own pressure/torque chart, supplied with your HYTORC tool. Search for the right torque in the preferable column (Nm, kgm or ft.lbs.) in the chart and read the right pressure to adjust the pump in BAR (right) or PSI (left).

DRUK PRESSURE	AANHAALMOMENT IN			DRUK PRESSURE
PSI	Ft.lbs	Kgm	Nm	BAR
1.000	164	23	219	70
1.200	197	28	262	84
1.400	231	32	306	98

2. Turn the wing nut (on the tank cover of the pomp unit) completely leftwards = upwards. If a locking knob exists, please release this one first.

3. Put the torque tool somewhere on the ground or another safe place without placing on a nut.

4. Pick up the remote control and push the start/run button. The pump starts running and the tool makes one stroke. Repeat twice and check if the tool turns fine.

5. <u>NEXT: AS FROM NOW KEEP THE START BUTTON PRESSED!</u>

6. Turn the wing nut to the right until the pressure gauge presents the desirable pressure. After setting, you can release the start button.

7. Push the button after several seconds again and check the pressure. Fix the locking if adjustment is fine. <u>Finally, check the pressure again.</u>

<u>Important</u>
To change the pressure you first have to turn the wing nut back to lower pressure (0). Next you can set the desired pressure like explained in this chapter.

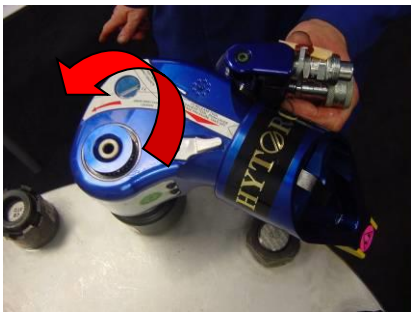
8. USE OF SOCKET WRENCH

- Secure the socket with the locking pin to the torque tool.
- Place tool and socket on the nut and beware that the socket covers the nut as far as possible. Even when the nut is painted or rusted!
- Never use a socket with extension piece!
- Never use a 12 points socket when not required!
- Never use any thin wall or turned off socket!

In above mentioned cases it is possible something brakes or causes injury!

8.1 Changing rotation direction

- Push the button of the drive retainer which fixes the square drive to the tool.
- Pull the square drive axle out of the tool and place it back on the other side of the tool.
- Place the fixation drive retainer.
- Some HYTORC types have the possibility to push the square drive through the tool to the other side.



Loosening

Tightening

8.2 Reaction arm

All HYTORC torque tools have a universal changeable reaction arm. This reaction arm bears the reaction forces that have been generated by the tool. The reaction arm needs to be retracted in the same direction as the square drive and, if necessary, changed of placement when the square drive is changed.

- Place the tool on the bolted connection and place the reaction arm to a reaction point by hand. Check if hoses and tool are free of obstacles.
- Ensure if the steel endpoint of the reaction arm abuts solidly to the chosen reaction point.
- Stay clear of the tool and reaction point with your fingers or other body parts!
- Push the start button for one second to find out if everything is working properly.

ATTENTION!

The yellow reaction arm cover needs to support as low as possible against the reaction point or on the same height as the grip of the socket on the nut. If the reaction arm leans higher than this grip point, a bending force arises that causes a higher risqué of spoiling the thread.

Assure yourself that the reaction arm is pushed over the square drive as far as possible and that the fixation clip is secured in the groove of the tool.

Comment: if the reaction point cannot be reached due to a short reaction arm, we can lengthen the arm with an accessory.

8.3 To tighten a bolted connection

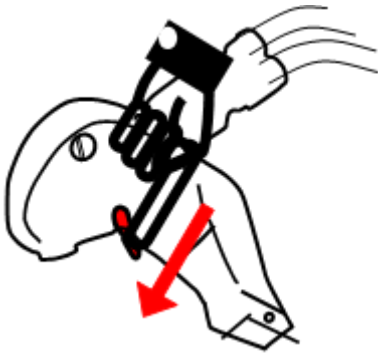
By pushing down on the remote control button in the advance position, the tool starts turning until the reaction arm will contact its reaction point. That is why you have to place the reaction arm to the reaction point first, ensuring reaction arm and reaction point are free of any obstacles. Continue to hold down the advance button as the nut turns until you hear a “click” which will signify the hydraulic cylinder inside the tool is fully extended and will not turn the nut further. Continuing to hold down the remote control button will result in a rapid build-up of pressure to the point of where the gauge reads what was pre-set prior to applying the wrench.

Attention: The rising of the oil pressure till the pre-set value does not mean that the desired torque value is reached. It only indicates that the cylinder is fully extended and cannot turn the nut further until the tool automatically resets itself. Release the remote control button and the cylinder will retract.

- The tool will automatically reset itself and the operator will hear a “click”.
- Push the button again for the next stroke.
- Repeat this step till the nut stops turning.
- Successive cycles are made until the tool “stalls” at the desired torque value with accuracy within ±3%.

8.4 The reaction pawl

The reaction pawl is a blocking system for the driving ratchet. It is possible that the reaction pawl is stuck in the sprocket wheel after reaching the desired torque value. You will notice that the tool is under pressure and cannot been taken from the nut.
The built-in reaction pawl is doing its job by intercepting the torsion and tolerance.



- Press again the start button of the remote control and keep it pressed till the oil pressure is build up to adjusted maximum.
- Slide the small reaction pawl button away from its covered position and keep it there.
- Let go off the start button on the remote control. You can remove the tool now.

8.5 To loosen a bolted connection

- Adjust the pressure of the pomp to its maximum of 700 BAR or 10.000 PSI.
- Check the rotating direction of the hexagon or square drive and change if necessary.
- Check the position of the reaction arm and change if necessary.
- Ensure that the reaction arm is secured.
- Place the tool on the bolted connection.
- Press the button of the remote control and keep it pressed till the socket or ratchet turns and stops again. As the cylinder extends fully, you will hear a “click”.
- Release the remote control button and wait till the cylinder automatically retracts, you again will hear a “click”.
- Press the button again till the “click” and repeat this as long as necessary till the connection is loose.

Comment: If the bolted connection does not loosen, it is an indication that you may require the next larger size tool to loosen the bolt. If you do not have this in your possession, please contact HYTORC to find a good solution.

9. MALFUNCTIONS AND SOLUTION

9.1 Torque wrench

- The tool does not operate anymore → check if all couplers (as well on tool as on the pump) are tightened properly. The coupling nut of the female coupler has to be tightened completely to the collar of the male coupler.

9.2 Pumps

- The pump pressure at a fixed adjustment repeats inaccurately → pump pressure adjusting valve is dirty or damaged → loose the valve and cover the hole with a towel, start the motor for 2 seconds, clean valve and assemble it again → renew the valve if the problem is not solved.
- Pump runs and produces pressure but the tool does not turn → check coupler connections.
- The tool turns in the wrong direction → probably two or an even number of hoses is connected to each other or the male and female couplers are interchanged.
- The tool is running slower than usually → adjust pump pressure to 700 BAR and shut off the pump when the start button is pressed → the pressure drops quickly to about 100 BAR but has to remain there. If the pressure drops to zero, it indicates an internal leakage. Please contact HYTORC Nederland B.V. +31 (0)24-3660660

9.2.1 Air pump units

- Pump motor does not start → kink in the air hose of the remote control → unreel the hose completely.
- Pump motor does not start → starter valve (position 21) is defect → press small knob of the starter valve while ON/OFF handle (position 9) stands at ON.
- Pump runs slowly or irregular → too low air pressure → minimum of 4 BAR with running motor → clean dirty filter → dirt in the air motor.
- The motor does not run or switch → this indicates a defect of the control valve in the pump unit.
  If necessary, contact HYTORC Nederland B.V. at +31 (0)24-3660660.

9.2.2 Electrical pump units

- Motor makes strange noise and produces no pressure → check rotating direction.
- Motor runs to slow or stops automatically after starting → voltage drop in the power. Usually too thin or too long extension cable is used. Check pump unit with the main plug directly in the electric point.
- Motor runs but does not switch from forward to reverse → rupture in the remote control cable → valve block defect.
- Motor does not run → no electrical power or rupture in supply cable.

10. MAINTENANCE

10.1 Inspection before each use

- Check if both oil levels of the pump unit are sufficient.
- Check power supply (air pressure minimum 5 BAR or the right E-voltage).
- Check if the cables and air hose supply of the remote control are not damaged.
- Unreel the hose of the remote control at air pumps completely. Bending of the small air hose can cause failures.
- Check if supply cables are not damaged.
- Check if the hydraulic hoses are not damaged. The working pressure is 700 BAR. Adjust pump pressure at 200 BAR. Check if the needle returns repeatable. Resume at 400 BAR and 700 BAR.
- Drain if there is water in the separator.
- Oil pressure gauges are filled with glycerine. If glycerine level drops, you have a leakage and repair is needed. When gauge is getting filled with hydraulic oil, this is also an indication of internal leakage.
- After each time the tool is used, clean it and check the grease inside the tool.

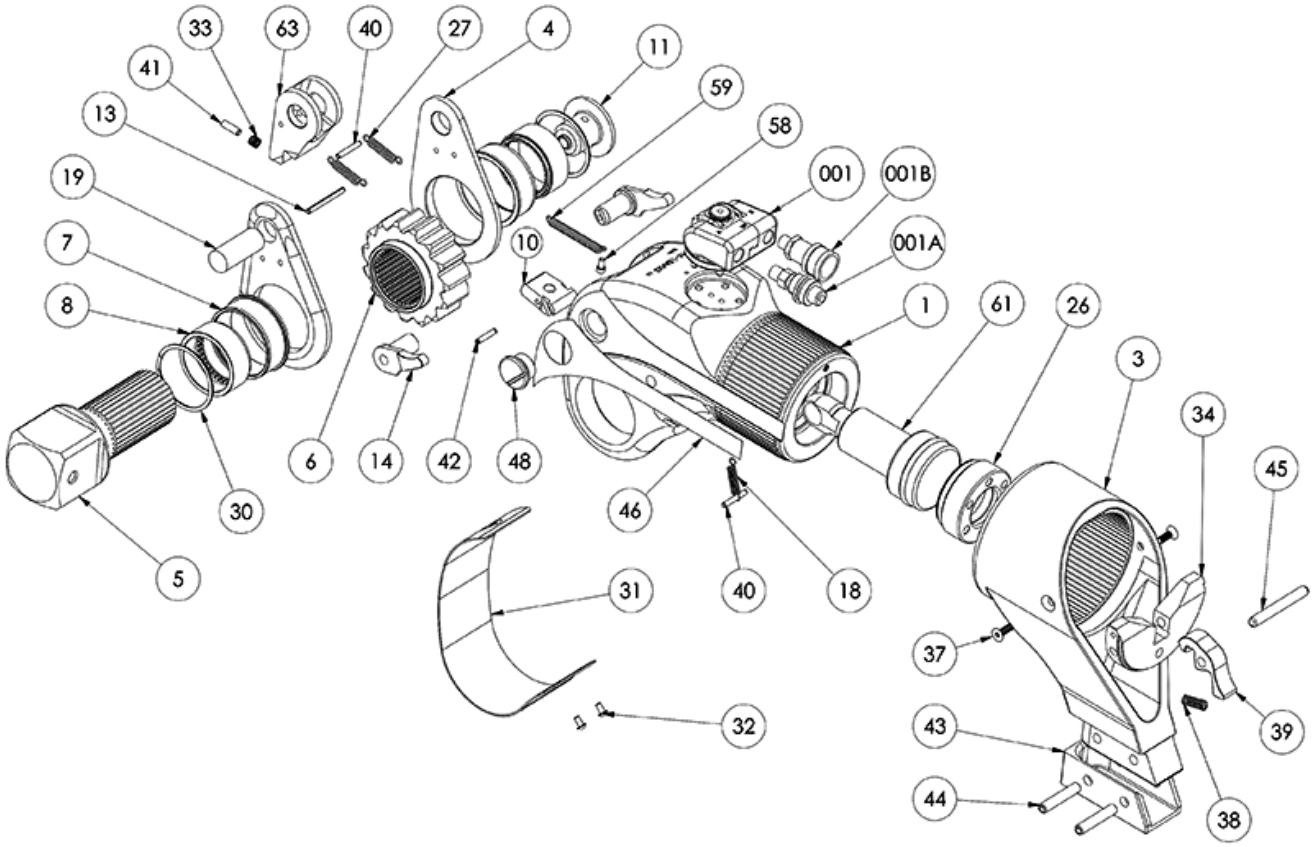
10.2 Small maintenance

- Hydraulic oil:
  Change the oil after 40 operation hours completely or at least 2 times a year. Use only High-grade oil, ISO VG 46 or 32.
- Filter at the pump:
  This filter must be changed 3 times a year at normal use and more often if the unit is used each day.
- Quick couplers hoses:
  Clean dirty or rigid couplers or replace them.
- Coal brush assembly (electrical unit):
  Check and if necessary renew

10.3 Maintenance at HYTORC

- Torque wrench:
  Depending of the usage, but at least once a year, disassemble the complete tool, clean, inspect, change small springs and lubricate again. Inspection on capacity at 100, 200, 300 and 700 BAR.
- Pump unit:
  Calibrate pump pressure gauge 1 time a year and fill glycerine level.
- Motor (electrical and air driven):
  The rotor axle and bearings; 1 time a year cleaning and lubrication.
- Remote control (air driven unit):
  Check the air hoses at flow obstructions and if necessary repair. The operation buttons are supplied with a small spring and have to open and close easily.
- Clean the control valves.

11. PART LIST MXT-SERIES



ITEM	QTY.	DESCRIPTION	MXT-.7	MXT-1	MXT-3	MXT-5	MXT-10
1	1	Housing (with end cap, shroud, access plug and seal kit)	MXT-.7-01	MXT-01 -01	MXT-03-01	MXT-05-01	MXT-10-01
3	1	Rear Reaction Arm Assembly	MXT-.7-03	MXT-01-03	MXT-03-03	MXT-05-03	MXT-10-03
4	2	Drive Plate Universal	MXT-.7-04	XLT-01-04	XLT-03-04	XLT-05-04	XLT-10-04
5	1	Sq Drive Assembly	MXT-.7-05	XLT-01-05-1	XLT-03-05-1	XLT-05-05-1	XLT-10-05-1
6	1	Ratchet	MXT-.7-06	XLT-01-06-1	XLT-03-06-1	XLT-05-06-1	XLT-10-06-1
7	2	Sq Drive Bushing	MXT-.7-07	XLT-01-07-1	XLT-03-07-1	XLT-05-07-1	XLT-10-07-I
8	2	Drive Sleeve Spline	MXT-.7-08	XLT-01-08-1	XLT-03-08-1	XLT-05-08-1	XLT-10-08-1
10	1	Reaction Pawl Assembly	MXT-.7-10	MXT-01-10	MXT-03-10	MXT-05-10	MXT-10-10
11	1	Drive Retainer Assembly	MXT-.7-11	XLT-01-11	XLT-03-11	XLT-05-11	MXT-10-11
13	1	Drive Plate Roll Pin	MXT-.7-13	XLT-01-13	XLT-03-13	XLT-05-13	XLT-10-13
14	1	Left and Right Lever Assembly	MXT-.7-14	MXT-01-14	MXT-03-14	MXT-05-14	MXT-10-14
18	1	Reaction Pawl Spring	MXT-.7-18	MXT-01-18	MXT-03-18	MXT-05-18	MXT-10-18
19	1	Rod End Pin	MXT-.7-19	XLT-01-19	XLT-03-19	XLT-05-19	XLT-10-19
26	1	End Cap	MXT-.7-26	MXT-01-26	MXT-03-26	MXT-05-26	MXT-10-26
27	2	Drive Pawl Spring	MXT-.7-27	XLT-01-27	XLT-03-27	XLT-05-27	XLT-10-27
28	1	Reaction Arm Lever Assembly	MXT-.7-28	MXT-01-28	MXT-03-28	MXT-05-28	MXT-10-28
30	2	Drive Sleeve Retaining Ring	MXT-.7-30	XLT-01-30	XLT-03-30	XLT-05-30	XLT-10-30
31	1	Shroud	MXT-.7-31	MXT-01-31	MXT-03-31	MXT-05-31	MXT-10-31
32	2	Shroud Screw	MXT-.7-32	XLT-01-32	MXT-03-32	MXT-03-32	XLT-10-32
33	1	Drive Pawl Spring Secondary	n/a	n/a	n/a	n/a	n/a
34	1	Reaction Arm Thrust Plate	MXT-.7-367	MXT-01-367	MXT-03-367	MXT-05-367	MXT-10-367
37	2	Thrust Plate Screw	MXT-.7-503	MXT-01-503	MXT-03-503	MXT-05-503	MXT-10-503
39	1	Catch Lever, Reaction Arm	MXT-.7-328	MXT-01-328	MXT-03-328	MXT-05-328	MXT-10-328
38	1	Reaction Arm Lever Spring	MXT-.7-508	MXT-01-508	MXT-03-508	MXT-05-508	MXT-10-508
40	1	Roll Pin Drive Pawl Primary	MXT-.7-40	XLT-01-40	XLT-03-40	XLT-05-40	XLT-10-40
41	1	Roll Pin Drive Pawl Secondary	MXT-.7-41	XLT-01-41	XLT-03-41	XLT-05-41	XLT-10-41
42	1	Roll Pin Reaction Pawl	MXT-.7-42	XLT-01-42	XLT-03-42	XLT-05-42	XLT-10-42
43	1	Reactin Arm Boot	MXT-.7-43	XLT-01-43	XLT-03-43	XLT-05-43	XLT-10-43
44	2	Reaction Arm Boot Pin	MXT-.7-44	MXT-01-44	MXT-03-44	MXT-05-44	MXT-10-44
45	1	Reaction Arm Lever Pin	MXT-.7-509	MXT-01-509	MXT-03-509	MXT-05-509	MXT-10-509
46	1	Serial Plate Right/Left Set	MXT-.7-46	MXT-01-46	MXT-03-46	MXT-05-46	MXT-10-46
48	2	Access Plug (with 0 ring)	MXT-.7-02	MXT-01-02	MXT-03-02	MXT-05-02	MXT-10-02
58	1	Shroud Spring Screw	MXT-.7-58	XLT-01-58	XLT-03-58	XLT-05-58	XLT-10-58
59	1	Shroud Spring	MXT-.7-59	XLT-01-59	XLT-03-59	XLT-05-59	XLT-10-59
61	1	Piston Assembly	MXT-.7-61	XLT-01-61	XLT-03-61	XLT-05-61	XLT-10-61
63	1	Drive Pawl Assembly	MXT-.7-63	XLT-01-63	XLT-03-63	XLT-05-63	XLT-10-63
1	1	Uniswivel Assembly	MXT-001ACL	MXT-001ACL	MXT-003ACL	MXT-003ACL	MXT-010ACL
		Model 1 & 3 refer to the 1st letter of serial # to determine A or D style	MXT-001CL	MXT-001CL	MXT-003CL	MXT-003CL	MXT-010ACL
001A	1	Male Coupler (comes with nipple)	090155-1/8	090155-1/8	090155-1/4	090155-1/4	090155-1/4
001B	1	Female Coupler	090156-1	090156-1	90156	90156	90156
001C	1	Uniswivel Seal Kit	MXT-001-00	MXT-001-00	MXT-003-00	MXT-003-00	MXT-010-00
	1	Housing Seal Kit	MXT-.7-62	MXT-01-62	MXT-03-62	MXT-05-62	MXT-10-62
	1	Maintenance Kit	MK-HY-.7MXT	MK-HY-1MXT	MK-HY-3MXT	MK -HY-5MXT	MK-HY-10MXT

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ITEM	QTY.	DESCRIPTION	MXT-15	MXT-20	MXT-35
1	1	Housing (with end cap, shroud, access plug and seal kit)	MXT-15-01	MXT-20-01	MXT-35-01
3	1	Rear Reaction Arm Assembly	MXT-15-03	MXT-20-03	MXT-35-03
4	2	Drive Plate Universal	MXT-15-04	XLT-20-04	MXT-35-04
5	1	Sq Drive Assembly	MXT-15-05	XLT-20-05	MXT-35-05
6	1	Ratchet	MXT-15-06	XLT-20-06	MXT-35-06
7	2	Sq Drive Bushing	MXT-15-07	XLT-20-07	MXT-35-07
8	2	Drive Sleeve Spline	MXT-15-08	XLT-20-08	MXT-35-08
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11	1	Drive Retainer Assembly	MXT-15-11	XLT-20-11	MXT-35-11
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30	2	Drive Sleeve Retaining Ring	MXT-15-30	XLT-20-30	MXT-35-30
31	1	Shroud	MXT-15-31	MXT-20-31	MXT-35-31
32	2	Shroud Screw	MXT-15-32	XLT-20-32	MXT-35-32
33	1	Drive Pawl Spring Secondary	n/a	XLT-20-33	MXT-35-33
34	1	Reaction Arm Thrust Plate	MXT-15-367	MXT-20-367	MXT-35-367
37	2	Thrust Plate Screw	MXT-15-503	MXT-20-503	MXT-35-503
39	1	Catch Lever, Reaction Arm	MXT-10-328	MXT-20-328	MXT-35-328
38	1	Reaction Arm Lever Spring	MXT-10-508	MXT-20-508	MXT-35-508
40	1	Roll Pin Drive Pawl Primary	MXT-15-40	XLT-20-40	MXT-35-40
41	1	Roll Pin Drive Pawl Secondary	MXT-15-41	XLT-20-41	MXT-35-41
42	1	Roll Pin Reaction Pawl	MXT-15-42	XLT-20-42	MXT-35-42
43	1	Reactin Arm Boot	MXT-10-43	XLT-20-43	MXT-35-43
44	2	Reaction Arm Boot Pin	MXT-15-44	MXT-20-44	MXT-35-44
45	1	Reaction Arm Lever Pin	MXT-15-509	MXT-20-509	MXT-35-509
46	1	Serial Plate Right/Left Set	MXT-15-46	MXT-20-46	MXT-35-46
48	2	Access Plug (with 0 ring)	MXT-15-02	MXT-20-02	MXT-35-02
58	1	Shroud Spring Screw	MXT-15-58	XLT-20-58	MXT-35-58
59	1	Shroud Spring	MXT-15-59	XLT-20-59	MXT-35-59
61	1	Piston Assembly	MXT-15-61	XLT-20-61	MXT-35-61
63	1	Drive Pawl Assembly	MXT-15-63	XLT-20-63	MXT-35-63
1	1	Uniswivel Assembly	MXT-010ACL	MXT-010ACL	MXT-010ACL
		Model 1 & 3 refer to the 1st letter of serial # to determine A or D style	MXT-010ACL	MXT-010ACL	MXT-010ACL
001A	1	Male Coupler (comes with nipple)	090155-1/4	090155-1/4	090155-1/4
001B	1	Female Coupler	90156	90156	90156
001C	1	Uniswivel Seal Kit	MXT-010-00	MXT-010-00	MXT-010-00
	1	Housing Seal Kit	MXT-15-62	MXT-20-62	MXT-35-62
	1	Maintenance Kit	MK-HY-15MXT	MK-HY-20MXT	MK-HY-35MXT

FOR MORE INFORMATION

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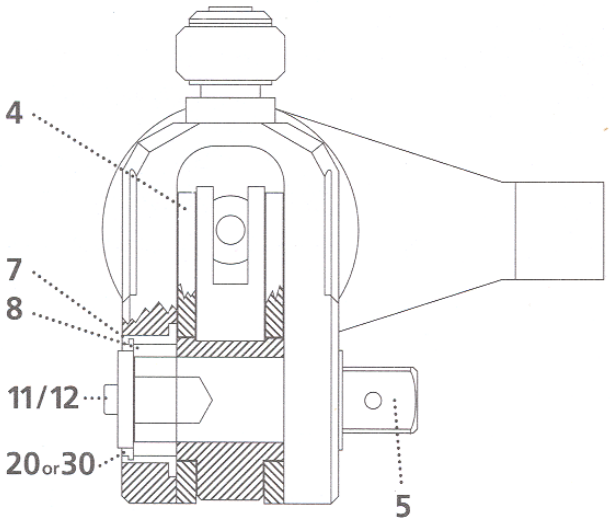
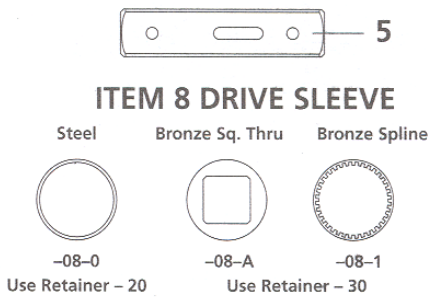
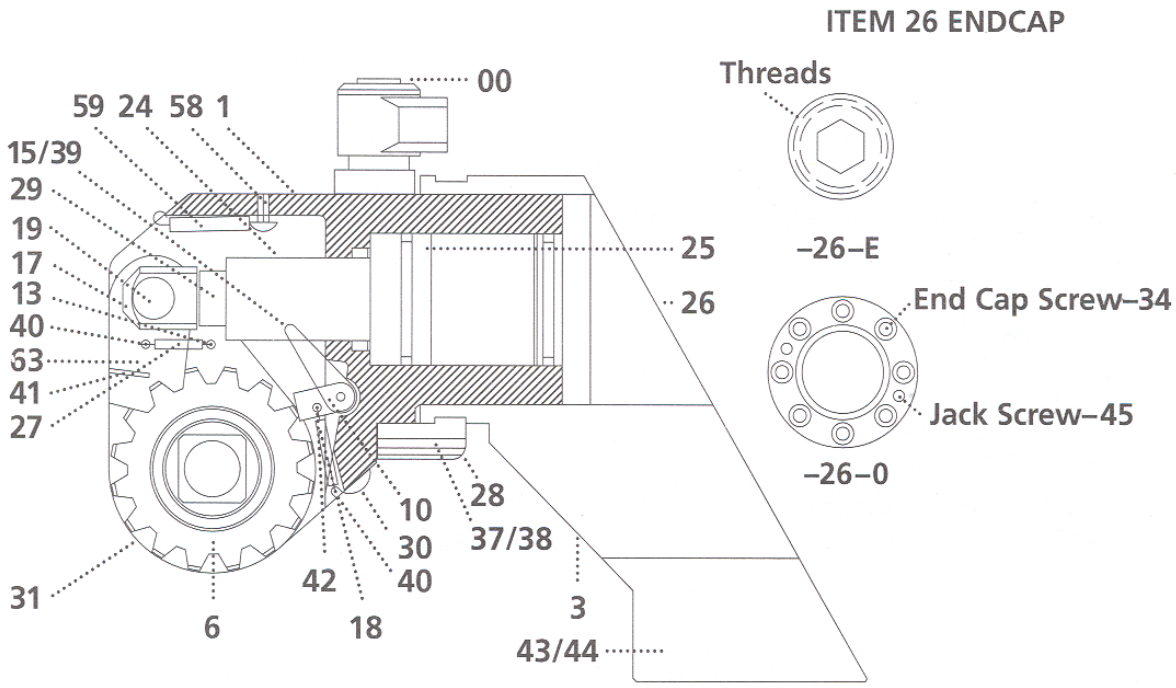
12. PART LIST XLT SERIES







ID	Spare parts description	HY-.5XLT	HY-1XLT	HY-3XLT	HY-5XLT	HY-8XLT	HY-10XLT	HY-20XLT	HY-25XLT
1*	Housing Complete	XLT-.5-01-	XLT-01-01-E	XLT-03-01-E	XLT-05-01-E	XLT-08-01-	XLT-10-01-E	XLT-20-01-E	XLT-25-01-E
3	Reaction Arm	XLT-.5-03	XLT-01-03	XLT-03-03	XLT-05-03	XLT-08-03	XLT-10-03	XLT-20-03	XLT-25-03
4	Drive Plate Universal	XLT-.5-04	XLT-01-04	XLT-03-04	XLT-05-04	XLT-08-04	XLT-10-04	XLT-20-04	XLT-25-04
5	Square Drive Square Through	XLT-.5-05-A	XLT-01-05-A	XLT-03-05-A	XLT-05-05A	XLT-08-05-A	XLT-10-05-A	XLT-20-05-A	XLT-25-05A
5	Square Drive Spline	XLT-.5-05-1	XLT-01-05-1	XLT-03-05-1	XLT-05-05-1	XLT-08-05-1	XLT-10-05-1	XLT-20-05-1	XLT-25-05-1
6	Ratchet Square	XLT-.5-06-A	XLT-01-06-A	XLT-03-06-A	XLT-05-06-A	XLT-08-06-A	XLT-10-06-A	XLT-20-06-A	XLT-25-06-A
6	Ratchet Spline	XLT-.5-06-1	XLT-01-06-1	XLT-03-06-1	XLT-05-06-1	XLT-08-06-1	XLT-10-06-1	XLT-20-06-1	XLT-25-06-1
7	Drive Bushing for Steel Sleeve	XLT-.5-07-0	XLT-01-07-0	XLT-03-07-0	XLT-05-07-0	XLT-08-07-0	XLT-10-07-0	XLT-20-07-0	XLT-25-07-0
7	Drive Bushing for A/B Sleeve	XLT-.5-07-1	XLT-01-07-1	XLT-03-07-1	XLT-05-07-1	XLT-08-07-1	XLT-10-07-1	XLT-20-07-1	XLT-25-07-1
8	Drive Sleeve Round steel	XLT-.5-08-0	XLT-01-08-0	XLT-03-08-0	XLT-05-08-0	XLT-08-08-0	XLT-10-08-0	XLT-20-08-0	XLT-25-08-0
8	Drive Sleeve Square BR/ALU	XLT-.5-08-A	XLT-01-08-A	XLT-03-08-A	XLT-05-08-A	XLT-08-08-A	XLT-10-08-A	XLT-20-08-A	XLT-25-08-A
8	Drive Sleeve Spline BR/ALU	XLT-.5-08-1	XLT-01-08-1	XLT-03-08-1	XLT-05-08-1	XLT-08-08-1	XLT-10-08-1	XLT-20-08-1	XLT-25-08-1
10	Reaction Pawl	XLT-.5-10	XLT-01-10	XLT-03-10	XLT-05-10	XLT-08-10	XLT-10-10	XLT-20-10	XLT-25-10
11	Drive Retainer	XLT-.5-11	XLT-01-11	XLT-03-11	XLT-05-11	XLT-08-11	XLT-10-11	XLT-20-11	XLT-25-11
13	Drive Plate Roll Pin	XLT-.5-13	XLT-01-13	XLT-03-13	XLT-05-13	XLT-08-13	XLT-10-13	XLT-20-13	XLT-25-13
15	Lever	XLT-.5-15	XLT-01-15	XLT-03-15	XLT-05-15	XLT-08-15	XLT-10-15	XLT-20-15	XLT-25-15
17	Piston Connector Rod	XLT-.5-17	XLT-01-17	XLT-03-17	XLT-05-17	XLT-08-17	XLT-10-17	XLT-20-17	XLT-25-17
18	Reaction Pawl Spring	XLT-.5-18	XLT-01-18	XLT-03-18	XLT-05-18	XLT-08-18	XLT-10-18	XLT-20-18	XLT-25-18
19	Rod Spring	XLT-.5-19	XLT-01-19	XLT-03-19	XLT-05-19	XLT-08-19	XLT-10-19	XLT-20-19	XLT-25-19
20	Drive Sleeve O-Ring	XLT-.5-20	XLT-01-20	XLT-03-20	XLT-05-20	XLT-08-20	XLT-10-20	XLT-20-20	XLT-25-20
24	Piston Sleeve	XLT-.5-24	XLT-01-24	XLT-03-24	XLT-05-24	XLT-08-24	XLT-10-24	XLT-20-24	XLT-25-24
25	Piston with Seals	XLT-.5-25	XLT-01-25	XLT-03-25	XLT-05-25	XLT-08-25	XLT-10-25	XLT-20-25	XLT-25-25
26	End Cap with Screws	XLT-.5-26-1	XLT-01-26-1	XLT-03-26-1	XLT-05-26-1	XLT-08-26-1	XLT-10-26-1	XLT-20-26-1	XLT-25-26-1
26	End Cap used with E style housing only	XLT-.5-26-E	XLT-01-26-E	XLT-03-26-E	XLT-05-26-E	XLT-08-26-E	XLT-10-26-E	XLT-20-26-E	XLT-25-26-E
27	Drive Pawl Spring (2)	XLT-.5-27	XLT-01-27	XLT-03-27	XLT-05-27	XLT-08-27	XLT-10-27	XLT-20-27	XLT-25-27
28	Reaction Arm Clamp	XLT-.5-28	XLT-01-28	XLT-03-28	XLT-05-28	XLT-08-28	XLT-10-28	XLT-20-28	XLT-25-28
29	Piston Rod	XLT-.5-29	XLT-01-29	XLT-03-29	XLT-05-29	XLT-08-29	XLT-10-29	XLT-20-29	XLT-25-29
30	Retainer Ring	XLT-.5-30	XLT-01-30	XLT-03-30	XLT-05-30	XLT-08-30	XLT-10-30	XLT-20-30	XLT-25-30
31-0	Shroud, 4-Screw Type	XLT-.5-31-0	XLT-01-31-0	XLT-03-31-0	XLT-05-31-0	XLT-08-31-0	XLT-10-31-0	XLT-20-31-0	XLT-25-31-0
40574	Shroud, Spring Type	XLT-.5-31-1	XLT-01-31-1	XLT-03-31-1	XLT-05-31-	XLT-08-31-1	XLT-10-31-1	XLT-20-31-1	XLT-25-31-
32	Screw, Shroud	XLT-.5-32	XLT-01-32	XLT-03-32	XLT-05-32	XLT-08-32	XLT-10-32	XLT-20-32	XLT-25-32
33	Spring, Secondary Drive Pawl	XLT-.5-33	XLT-01-33	XLT-03-33	XLT-05-33	XLT-08-33	XLT-10-33	XLT-20-33	XLT-25-33
34	Screws, End Cap	XLT-.5-34	XLT-01-34	XLT-03-34	XLT-05-34	XLT-08-34	XLT-10-34	XLT-20-34	XLT-25-34
37	Screw, RA Clamp	XLT-.5-37	XLT-01-37	XLT-03-37	XLT-05-37	XLT-08-37	XLT-10-37	XLT-20-37	XLT-25-37
38	Spring, RA Clamp	XLT-.5-38	XLT-01-38	XLT-03-38	XLT-05-38	XLT-08-38	XLT-10-38	XLT-20-38	XLT-25-38
39	Lever screw	XLT-.5-39	XLT-01-39	XLT-03-39	XLT-05-39	XLT-08-39	XLT-10-39	XLT-20-39	XLT-25-39
40	Roll Pin, Primary DP/ reaction Pawl	XLT-.5-40	XLT-01-40	XLT-03-40	XLT-05-40	XLT-08-40	XLT-10-40	XLT-20-40	XLT-25-40
41	Roll Pin, Secondary Drive Pawl	XLT-.5-41	XLT-01-41	XLT-03-41	XLT-05-41	XLT-08-41	XLT-10-41	XLT-20-41	XLT-25-41
42	Roll Pin, Reaction Pawl	XLT-.5-42	XLT-01-42	XLT-03-42	XLT-05-42	XLT-08-42	XLT-10-42	XLT-20-42	XLT-25-42
43	Reaction Arm Boot with Screws	XLT-.5-43	XLT-01-43	XLT-03-43	XLT-05-43	XLT-08-43	XLT-10-43	XLT-20-43	XLT-25-43
44	Boot Screw	XLT-.5-44	XLT-01-44	XLT-03-44	XLT-05-44	XLT-08-44	XLT-10-44	XLT-20-44	XLT-25-44
45	Screw, End Cap Jacking	XLT-.5-45	XLT-01-45	XLT-03-45	XLT-05-45	XLT-08-45	XLT-10-45	XLT-20-45	XLT-25-45
58	Screw, Shroud Spring	XLT-.5-58	XLT-01-58	XLT-03-58	XLT-05-58	XLT-08-58	XLT-10-58	XLT-20-58	XLT-25-58
59	Shroud Sping	XLT-.5-59	XLT-01-59	XLT-01-59	XLT-01-59	XLT-08-59	XLT-10-59	XLT-20-59	XLT-25-59
61**	Piston Rod Assembly	XLT-.5-61	XLT-01-61	XLT-03-61	XLT-05-61	XLT-08-61	XLT-10-61	XLT-20-61	XLT-25-61
62**	Seal Kit Universal	XLT-.5-62	XLT-01-62	XLT-03-62	XLT-05-62	XLT-08-62	XLT-10-62	XLT-20-62	XLT-25-62
#,++63	Drive Pawl Assembly Kit	XLT-.5-63	XLT-01-63	XLT-03-63	XLT-05-63	XLT-08-63	XLT-10-63	XLT-20-63	XLT-25-63
#64	Roll Pin Kit (All roll pins)	XLT-.5-64	XLT-01-64	XLT-03-64	XLT-05-64	XLT-08-64	XLT-10-64	XLT-20-64	XLT-25-64
#00	Uniswivel Assembly	XLT-001	XLT-001	XLT-003	XLT-003	XLT-001	XLT-001	XLT-003	XLT-003
#00	Uniswivel Seal Kit	XLT-01-00	XLT-01-00	XLT -001-00	XLT -001-00	XLT-01-00	XLT-01-00	XLT -001-00	XLT -001-00

* E Serie Housing Includes 01-E, 07-1, 26-E and 31-1
** Piston Rod Assembly Includes 24, 25, and 29
++ Drive Pawl Assembly Kit includes 17 and 19
# Available only as an assembly

FOR MORE INFORMATION

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