







# IW16 Hydraulic Impact Wrench

20224 Service Manual 2/2019 Ver. 31

<b>DECLARATION OF CONFORMITY</b> <b>ÜBEREINSTIMMUNGS-ERKLÄRUNG</b> <b>DECLARATION DE CONFORMITE CEE</b> <b>DECLARACION DE CONFORMIDAD</b> <b>DICHIARAZIONE DI CONFORMITA</b>		<b>STANLEY®</b> Infrastructure 																					
I, the undersigned: Ich, der Unterzeichnende: Je soussigné: El abajo firmante: Io sottoscritto:		<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <b>Nuerenberg, David</b> </div> <small>Surname and First names/Familiennamen und Vornamen/Nom et prénom/Nombre y apellido/Cognome e nome</small>																					
<b>hereby declare that the equipment specified hereunder:</b> <b>bestätige hiermit, daß erklaren Produkt genannten Werk oder Gerät:</b> <b>déclare que l'équipement visé ci-dessous:</b> <b>Por la presente declaro que el equipo se especifica a continuación:</b> <b>Dichiaro che le apparecchiature specificate di seguito:</b>																							
1. Category: Kategorie: Catégorie: Categoría: Categoria:	<b>Hydraulic Hand-Held Impact Wrench</b>																						
2. Make/Marke/Marque/Marca/Marca	<b>STANLEY</b>																						
3. Type/Typ/Type/Tipo/Tipo:	<b>IW16150, IW16150S, IW16350</b>																						
4. Serial number of equipment: Seriennummer des Geräts: Numéro de série de l'équipement: Numero de serie del equipo: Matricola dell'attrezzatura:	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>ALL MODELS NOTED ABOVE FROM            SERIAL NUMBER (042312097) and Above</b> </div>																						
<b>Has been manufactured in conformity with</b> <b>Wurde hergestellt in Übereinstimmung mit</b> <b>Est fabriqué conformément</b> <b>Ha sido fabricado de acuerdo con</b> <b>E' stata costruita in conformità con</b>																							
<table border="1"> <thead> <tr> <th>Directive/Standards Richtlinie/Standards Directives/Normes Directriz/Los Normas Direttiva/Norme</th> <th>No. Nr Numéro No n.</th> <th>Approved body Prüfung durch Organisme agréé Aprobado Collaudato</th> </tr> </thead> <tbody> <tr> <td>EN ISO</td> <td>28927-9</td> <td>Self</td> </tr> <tr> <td>EN ISO</td> <td>3744 (15744)</td> <td>Self</td> </tr> <tr> <td>EN ISO</td> <td>11148-69, Cl. 5.4</td> <td>Self</td> </tr> <tr> <td>EN ISO</td> <td>11148-6, Cl. 5.5</td> <td>Self</td> </tr> <tr> <td>EN ISO</td> <td>13732-1</td> <td>Self</td> </tr> <tr> <td>Machinery Directive</td> <td>2006/42/EC:2006</td> <td>Self</td> </tr> </tbody> </table>	Directive/Standards Richtlinie/Standards Directives/Normes Directriz/Los Normas Direttiva/Norme	No. Nr Numéro No n.	Approved body Prüfung durch Organisme agréé Aprobado Collaudato	EN ISO	28927-9	Self	EN ISO	3744 (15744)	Self	EN ISO	11148-69, Cl. 5.4	Self	EN ISO	11148-6, Cl. 5.5	Self	EN ISO	13732-1	Self	Machinery Directive	2006/42/EC:2006	Self		
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5. Special Provisions: Spezielle Bestimmungen: Dispositions particulières: Provisiones especiales: Disposizioni speciali:	<b>None</b>																						
6. Representative in the Union: Vertreter in der Union/Représentant dans l'union/Representante en la Union/Rappresentante presso l'Unione	<b>Patrick Vervier, Stanley Dubuis 17-19, rue Jules Berthonneau-BP 3406 41034 Blois Cedex, France.</b>																						
Done at/Ort/Fait à/Dado en/Fatto a <u>STANLEY Infrastructure, Milwaukie, Oregon USA</u> Date/Datum/le/Fecha/Data <u>4/25/2018</u>																							
Signature/Unterschrift/Signature/Firma/Firma  Position/Position/Fonction/Cargo/Posizione <u>North America Quality Manager</u>																							

## Safety Precautions

	The Safety Alert Symbol alerts you to potential personal injury hazards. Obey all safety messages that follow to avoid possible injury or death.
	Indicates an imminently hazardous situation which will result in death or serious injury.
	Indicates a potentially hazardous situation which could result in death or serious injury.
	Indicates a potentially hazardous situation which could result in property damage.

Always observe safety symbols. They are included for your safety and for the protection of the tool.



**WARNING:** Read all safety warnings and instructions. Failure to follow warnings and instructions may result in tool damage and/or serious injury.

**WARNING:** To reduce the risk of injury, read the instruction manual.

## General

- Do not discard safety instructions. Give to the operator.
- This tool will provide dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.
- Inspect the tool before each use and ensure all decals are legible. Contact STANLEY if replacements are needed.
- Establish a training program for all operators to ensure safe operation. Do not operate the tool unless thoroughly trained or under the supervision of an instructor. Keep out of the reach of children.
- Operators and maintenance personnel shall be able to physically handle the bulk, weight and power of the tool.
- Avoid unsuitable postures as these positions do not allow for counteracting of normal or unexpected movement of the tool, such as a sudden break of the tool bit. Change postures during extended tasks to help avoid discomfort or fatigue.
- Do not operate a damaged, improperly adjusted, modified or incompletely assembled tool.
- Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Provide adequate ventilation in closed areas when operating a gas or diesel hydraulic power source.
- Do not inspect, carry, clean, change accessories or perform maintenance on the tool while the power source is connected. Accidental engagement of the tool can cause serious injury.
- Ensure work piece is securely fixed. Be aware that failure of the work piece or accessories may generate high velocity projectiles.
- Stay alert, watch what you are doing and use common sense when operating a hydraulic tool. Do not operate this tool if you are tired or under the influence of drugs or alcohol. A moment of inattention while operating hydraulic tools may result in serious injury.
- Assess risks to others around you before operating the tool.
- During operation, do not contact mechanisms, accessories or hardware as they can become very hot; use your Personal Protection Equipment (PPE).
- Use and maintain the tool as stated in this manual. Misuse of the tool can cause serious injury. Do not modify the tool in any way.
- Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations.
- Never operate the tool if you cannot be sure that underground utilities are not present, such as electrical cables, gas pipes, etc. These can cause a hazard if damaged with the tool.
- The tool is not insulated against coming into contact with electric power. Use hose certified as non-conductive.
- Do not overreach. Maintain proper footing and balance at all times when using the tool.
- Slips, trips and falls are major causes of workplace injury. Be observant of hoses lying about the work area, as they can be a tripping hazard.

- Operator must start in a work area without bystanders and must assess the risk to bystanders, including the risk of serious injury or death caused by the tool or accessories dropped from an elevated height.
- Operators must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Only use clean hydraulic fluid and lubricants that have been recommended by STANLEY.
- Ensure tools are working properly and safely by performing preventative maintenance (PM) procedures.
- Repair and service of this tool must only be performed by an authorized and certified dealer.
- Use only replacement parts recommended by STANLEY.
- Do not force the tool to do the work of a larger tool. Use the correct tool for your application.
- Use only hoses and hose couplings that are rated for a minimum working pressure of 2500 PSI (172 BAR).
- Keep hands away from rotating chuck, drill bits or drives.
- Rotating drive sockets and drive extensions can easily entangle rubber-coated gloves or metal reinforced gloves. Never hold the drive, sockets, drive extensions or other accessories.
- Do not use in confined spaces. Beware of crushing hazards between the tool and the workpiece, especially when unscrewing or reversing the tool.
- In spite of the application of relevant safety regulations and the implementation of safety devices, certain residual risks cannot be avoided. These risks are: repetitive strain injury due to incorrect posture and risk of pinching fingers when changing tool bit or pressing trigger.

## Dust and Fumes

- **WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
    - Lead from lead-based paints,
    - crystalline silica from bricks and cement and other masonry products, and
    - arsenic and chromium from chemically-treated lumber.
- Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.
- Protect yourself and those around you. Research and understand the materials you are drilling. Follow correct safety procedures and comply with all applicable national, state or provisional health and safety regulations relating to them, including, if appropriate arranging for the safe disposal of the materials by a qualified person.
- When dust or fumes are created, control them at the point of emission. Direct tool exhaust to minimize disturbance of dust.
  - Operate and maintain the tool as recommended in this manual to minimize dust.
  - Use respiratory protection in accordance with employers instruction or as required by occupational health and safety regulations.
  - Avoid prolonged contact with dust. Allowing dust to get into your mouth, eyes or lay on the skin may promote absorption of harmful chemicals.
  - Select and replace tool bits as recommended in order to prevent an unnecessary increase in dust or fumes.
  - Keep tool handles dry, clean and free from oil and grease. This will enable better control of the tool.

## PPE

- Always wear safety equipment such as impact resistant goggles, ear protection, head protection, breathing protection and safety shoes at all times when operating the tool.
- Hands may be exposed to hazards, impacts, cuts, abrasions and heat. Wear gloves.
- Wear a hardhat if performing overhead work.
- Use PPE that conforms to standards ANSI Z87.1 (Eye and Face Protection), ANSI Z89.1 (Head Protection), ANSI Z41.1 (Foot Protection) and ANSI S12.6 (S3.19) (Hearing Protection).
- Do not wear loose fitting clothing, jewelry or gloves with cut or frayed fingers when operating the tool. Entanglement, choking, scalping and

laceration can occur if loose clothing, personal jewelry, neck wear, hair or gloves are not kept away from the rotating tool and its accessories. Gloves can become entangled with the rotation drive, causing severed or broken fingers.



M003  
Wear Ear  
Protection



M004  
Wear Eye  
Protection



M016  
Wear a Mask

## Sound

- Exposure to high noise levels can cause permanent, disabling hearing loss and other problems, such as tinnitus (ringing, buzzing, whistling or humming in the ears). Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations. Appropriate controls to reduce the risk can include actions such as damping materials to prevent work pieces from "ringing".
- Use and maintain as recommended in the manual to prevent an unnecessary increase in noise levels.

## Vibration

- When using a rotary or percussive tool to perform work related activities, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
- If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the tool. Tell your employer and

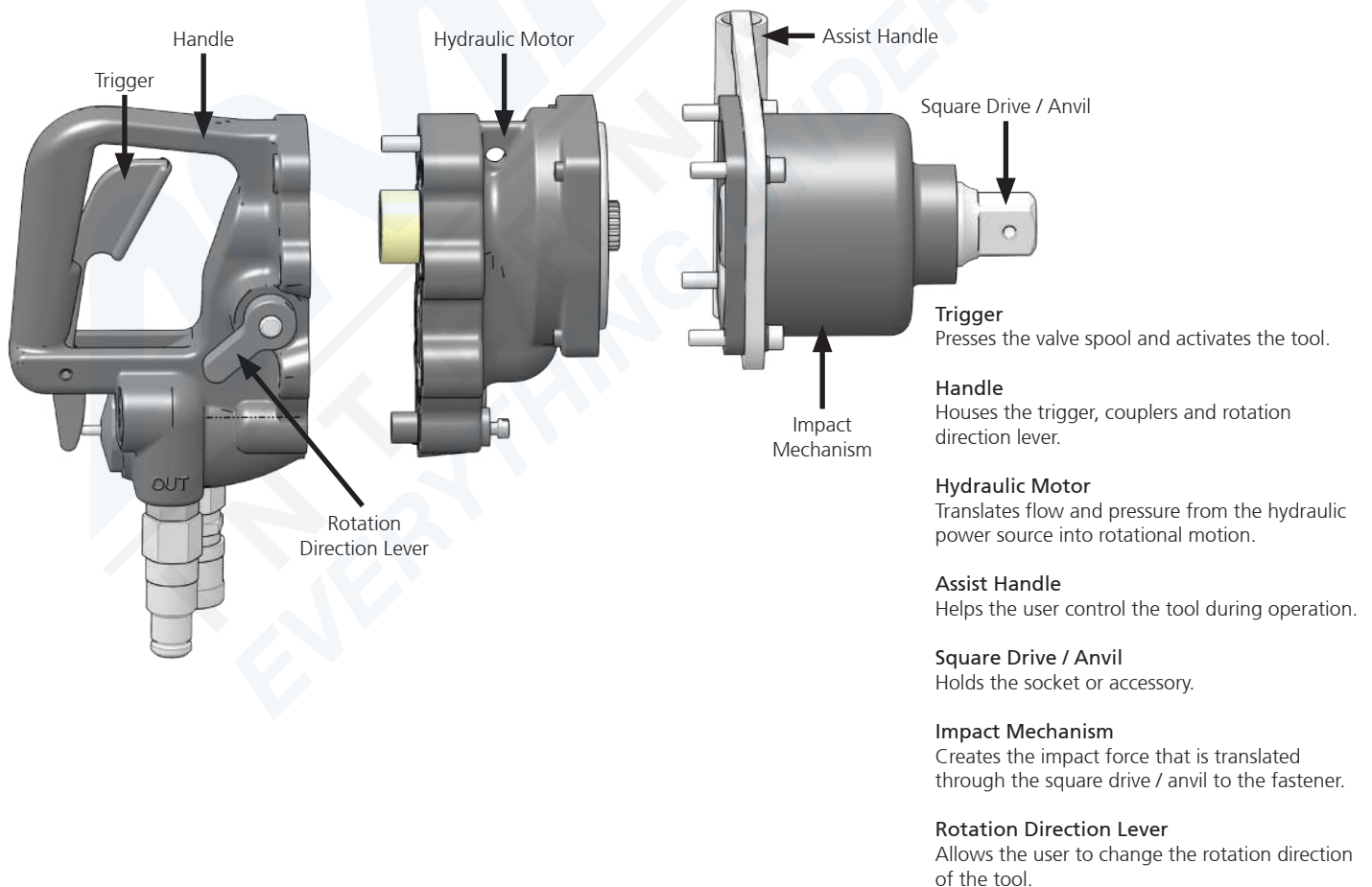
consult a physician.

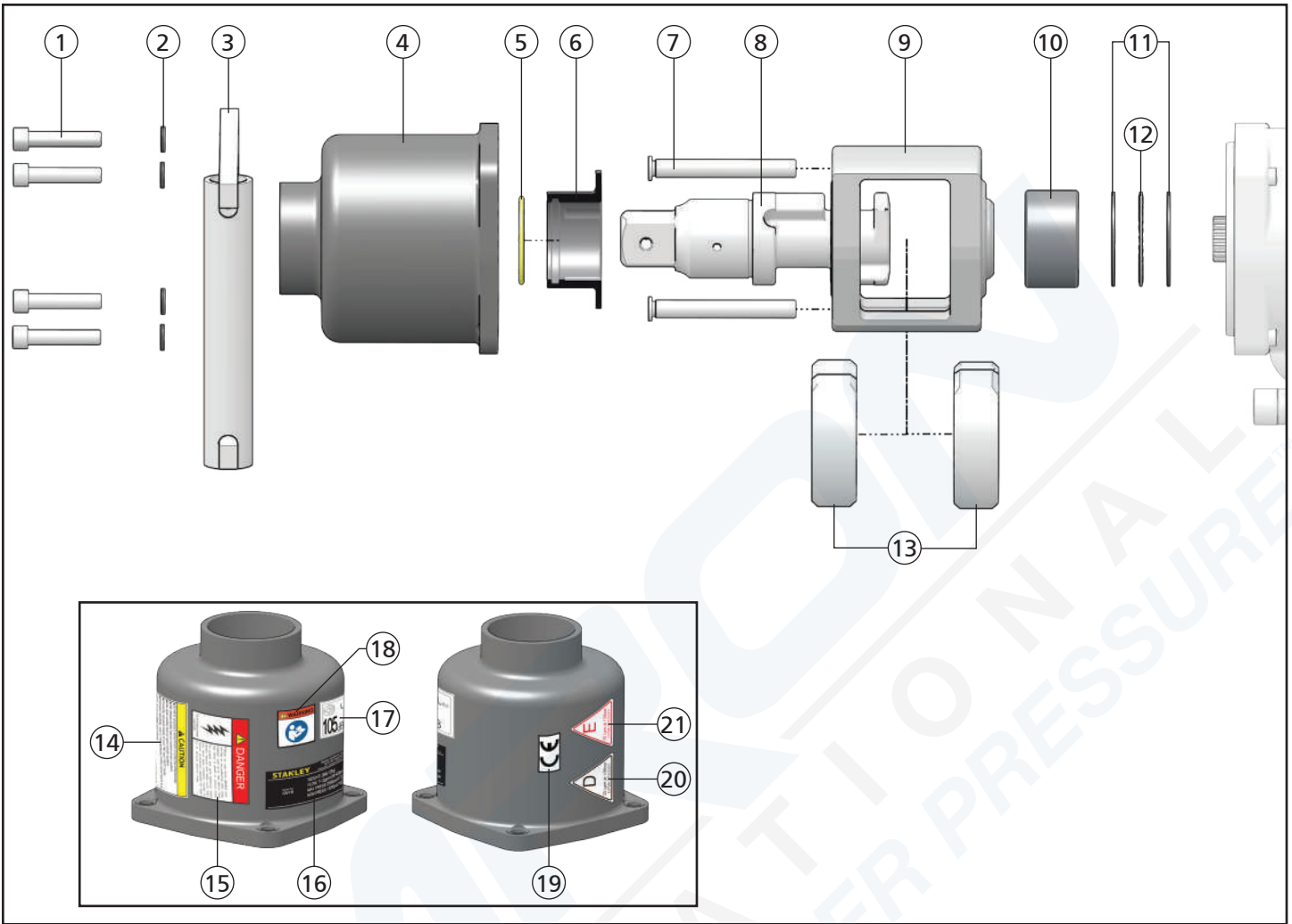
- Wear warm clothing when working in cold conditions and keep your hands warm and dry.
- Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.
- Do not use worn or ill-fitting sockets or extensions, as this is likely to cause a substantial increase in vibration.
- Do not touch sockets or accessories during impacting. This increases the risk of cuts, burns or vibration injuries.
- Use and maintain as recommended in the manual to prevent an unnecessary increase in vibration.
- Check the vibration level after each service. If higher than normal, contact your STANLEY dealer.

## Hydraulic

- Warning:** Hydraulic fluid under pressure could cause skin injection injury. If you are injured by hydraulic fluid, get medical attention immediately.
- Do not let hydraulic oil get on the skin. Hydraulic oil is hot. Wear Personal Protection Equipment (PPE) at all times.
- Do not exceed the maximum relief valve setting stated on the tool.
- Inspect and clean couplers before use, daily. Replace damaged couplers immediately.
- Hydraulic circuit control valve must be OFF before coupling or uncoupling tools. Failure to do so may damage the couplers and cause overheating of the hydraulic system.
- Ensure the couplers are properly connected and are tight.
- Do not operate the tool at fluid temperatures above 140°F (60°C). Higher temperatures can cause operator discomfort and damage to the tool.
- Do not exceed the rated flow and pressure as stated on the tool. Rapid failure of the internal seals may result.

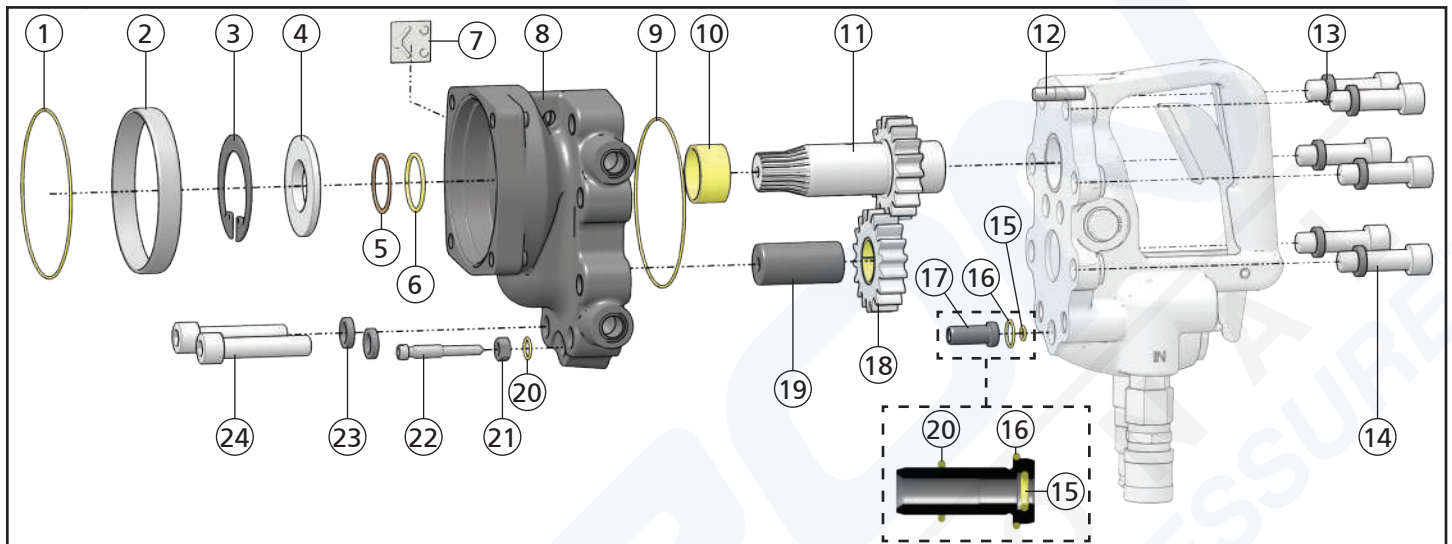
## Tool Anatomy





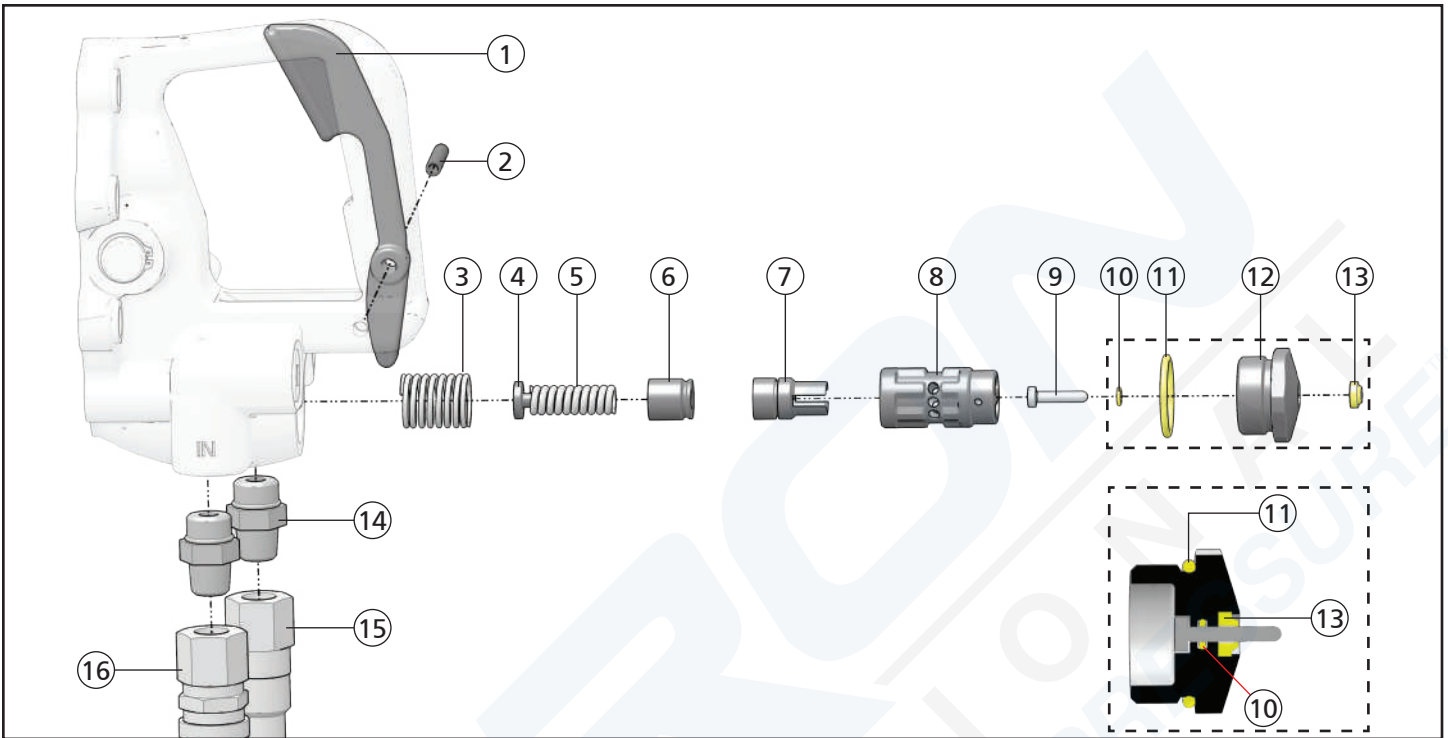
IW16 Impact Mechanism Illustration		
ITEM	P/N	DESCRIPTION
1	09625	Cap Screw
2	73687	Lock Washer
3	32087	Assist Handle
4	24682	Hammer Case Assembly (Includes 21010)
	72770	Hammer Case - Model IW16350
5	01276	O-ring* - Model IW16350
6	21010	Bushing
	21011	Bushing - Model IW16350
7	24680	Hammer Pin
8	24678	Anvil
9	24679	Hammer Frame (Includes 24680)
10	23817	Thrust Spacer
11	08147	Thrust Washer
12	08148	Thrust Bearing
13	24677	Hammer
14	09612	General Caution Decal

IW16 Impact Mechanism Illustration		
ITEM	P/N	DESCRIPTION
15	12412	Electrical Danger Decal
16	74692	Tool Name Tag
	73680	Railroad Help Desk Decal - Models IW16150BN & IW16150S
17	81433	Sound Power Decal - Models IW16150 & IW16150S
18	28788	"Read the Manual" Decal - Models IW16150, IW16150S & IW16350
19	28323	CE Decal - Models IW16150, IW16150S & IW16350
20	11207	Circuit Type "D" Decal - Models IW16150, IW16150S & IW16350
21	12535	Circuit Type "E" Decal - Models IW16150, IW16150S & IW16350
22	23134	Impact Mechanism Assembly (Not Shown) - Includes 24682, 21010, 24678, 24680, 24679 & 24677
23	24757	Impact Mechanism Assembly (Not Shown) Model IW16350 - Includes 72770, 21011, 24678, 24680, 24679, 24677 & 01276*
24	09602	Seal Kit (Not shown) - * in seal kit



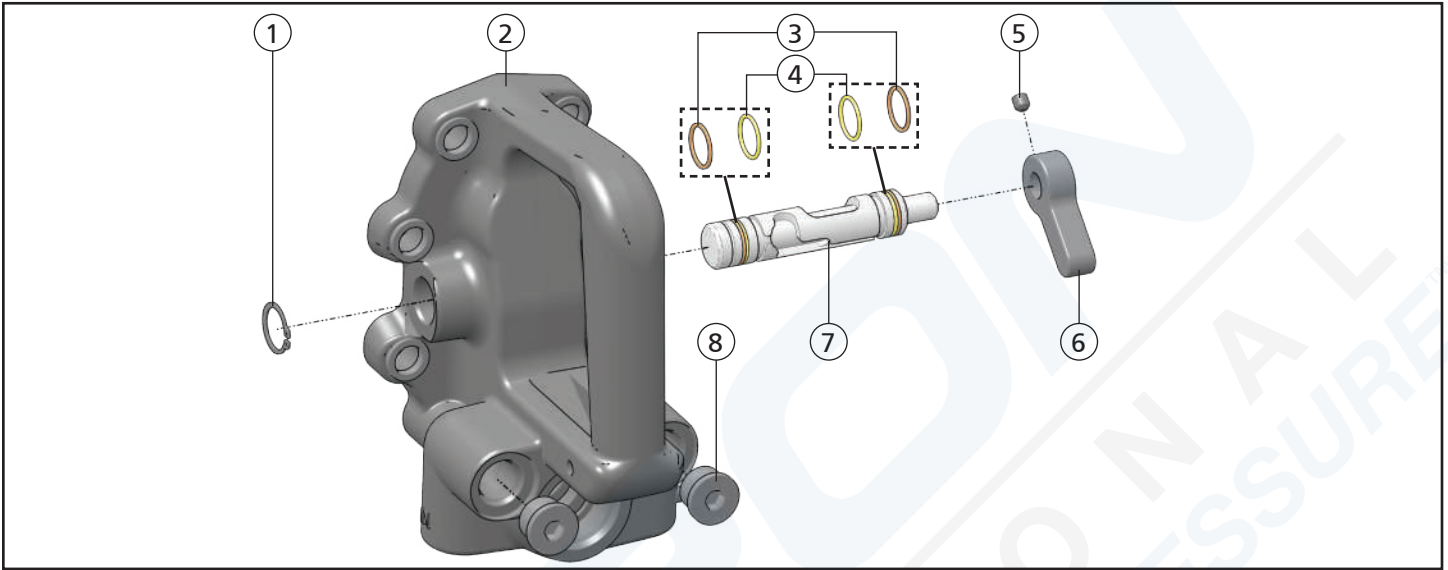
IW16 Hydraulic Motor Illustration		
ITEM	P/N	DESCRIPTION
1	00255	O-ring*
2	08126	Pilot Ring
3	00663	Retaining Ring
4	08125	Seal Backup Washer*
5	08180	Backup Ring*
6	04888	O-ring*
7	30136	Rotation Direction Decal
8	08137	Motor Housing Assembly (Includes 03252, 07995, 08123, 08126 & 08146)
9	00255	O-ring*
10	08146	Bushing
11	08136	Main Shaft
12	07337	Dowel Pin
13	00697	Lock Washer
14	09284	Cap Screw
15	00717	O-ring*

IW16 Hydraulic Motor Illustration		
ITEM	P/N	DESCRIPTION
16	00016	O-ring*
17	07995	Insert
18	08128	Idler Gear Assembly
19	08123	Idler Shaft
20	03252	O-ring
21	09277	Hex Nut
22	07984	Relief Adjustment
23	00697	Lock Washer
24	21986	Cap Screw
25	09602	Seal Kit (Not shown) - * in seal kit



IW16 Valve Spool & Trigger Illustration		
ITEM	P/N	DESCRIPTION
1	08133	Trigger
2	05965	Roll Pin
3	08131	Compression Coil
4	07982	Spring Rest
5	08122	Compression Coil
6	08135	Relief Poppet
7	07986	Relief Seat
8	73046	On/Off Spool
9	23678	Headed Push Pin
10	00026	O-ring*
11	06533	O-ring*
12	22063	Spool Cap
13	22064	Rod Wiper*
14	00936	Adapter - Models IW16150, IW16150D & IW16350
15	03973	Male Coupler
16	03972	Female Coupler

IW16 Valve Spool & Trigger Illustration		
ITEM	P/N	DESCRIPTION
17	03971	Coupler Set (Not shown) - Includes 03973 & 03972
	81160	Coupler Set (Not shown) - Model IW16150BN
18	56725	Hose Assembly (Not shown) - Model IW16150S
19	66727	Hose Assembly (Not shown) - Model IW16150BN
20	09602	Seal Kit (Not shown) - * in seal kit



IW16 Reversing Spool Illustration		
ITEM	P/N	DESCRIPTION
1	09275	Retaining Ring
2	73167	Valve Handle Assembly (Includes 350237, 07337 & 08146)
3	08015	Backup Ring*
4	01211	O-ring*
5	00580	Set Screw
6	04939	Lever
7	08139	Reversing Spool
8	350237	Hollow Hex Plug
9	09602	Seal Kit (Not shown) - * in seal kit

Specifications		
Pressure	1500-2500 PSI (103-172 BAR)	
Flow	7-12 GPM (26-45 LPM)	
Hydraulic Circuit Type	Open Center	
Max. Relief Pressure	2100 PSI (145 BAR)	
Recommended Back Pressure	250 PSI (17 BAR) - Can be used with higher back pressures with reduced seal life.	
Couplers	3/4 Inch Male Pipe Adapter	
Port Size	-8 SAE O-ring	
Min. Hose Pressure Rating	2500 PSI (172 BAR)	
Max. Hydraulic Oil Temperature	140°F (60°C)	
HTMA/EHTMA Category	Type II & RR, Category C & E	
Drive	1 Inch Square Drive	
RPM	2000 @ 5 GPM (19 LPM)	
Torque	500-2500 Ft. Lbs. (680-3400 Nm)	
Tool Weight	26 Lbs. (12 Kg)	
Tool Size	14.5 Inches x 8 Inches x 10.4 Inches	
Underwater Tool Max. Depth	1000 Feet (305 M)	
Recommended Hose Diameters for Underwater Applications		
Depth	8 GPM (30 LPM)	12 GPM (45 LPM)
100 Feet (31 Meters)	5/8 Inches (16 mm)	5/8 Inches (16 mm)
300 Feet (91 Meters)	3/4 Inches (19 mm)	1 Inch (25.4 mm)
600 Feet (183 Meters)	1 Inch (25.4 mm)	1 Inch (25.4 mm)
1000 Feet (305 Meters)	1 Inch (25.4 mm)	1 1/4 Inches (32 mm)

Sound & Vibration Declaration	
Measured A-Weighted sound power level	105.01 dBA
Uncertainty	3.39 dBA
Measured A-Weighted Sound Pressure	97.03 dBA
Uncertainty	3.39
Values determined according to noise test code given in ISO 15744, 11203 and 3744.	
Declared vibration emission value in accordance with EN ISO 28927-2.	
Declared Vibration Emission Value (Main Handle):	62.2 m/sec <sup>2</sup>
Declared Vibration Emission Value (Assist Handle):	40 m/sec <sup>2</sup>
Uncertainty	13.4 m/sec <sup>2</sup>

IW16 Accessories	
Description	Part Number
1 Inch to 3/4 Inch Drive Adapter	31201
10 Inch long extension	31203
Socket Retainer Pin	33276
Socket Retainer Ring	33277
Upright Handle Kit	72768

1 Inch Square Drive Sockets	
Description	Part Number
Set of 6 Sockets (Includes 25211, 25216, 25217, 25218, 26456 & 27710)	33230
7/8 Inch x 1 1/8 Inch, 4 Point Rectangular Head Lag Screw Socket	66318
8 Point Deep, 1 5/16 Inch	25203
8 Point Deep, 1 3/8 Inch	25204
8 Point Deep, 1 1/2 Inch	25205
8 Point Deep, 1 9/16 Inch	25206
8 Point Deep, 1 7/8 Inch	25208
8 Point Deep, 2 Inch	25209
8 Point Deep, 2 1/8 Inch	25210
8 Point Deep, 2 3/16 Inch	25211
8 Point Deep, 2 1/4 Inch	25212
8 Point Deep, 1 5/8 Inch	25216
8 Point Deep, 1 13/16	25217
8 Point Deep, 1 11/16	25218
8 Point Deep, 1 1/4 Inch	26529
4 Point Deep, 1 Inch	27710
#70 Torx	26456

## Service Guidelines

- Always wear Personal Protection Equipment (PPE) when performing maintenance on the tool.
- Disassemble the tool in a clean area, away from dirt and grit.
- Replace all seals that are exposed during disassembly.
- Inspect all exposed seals for signs of damage or wear. This is a sign of contaminated hydraulic oil or oil that is too hot during operation. Check the hydraulic system for contamination, if signs exist.
- Use degreasing solvent to clean all removed parts.
- Inspect all removed parts for damage.
- Apply clean grease or O-ring lubricant to all parts prior to reassembly.
- Always determine and correct the cause of a problem before reassembly. Further wear and tool failure can result if the root cause has not been corrected.
- O-rings and seals should be removed with proper O-ring tools. This will prevent damage to seal groove surfaces.

Service Tools	
IW16 Seal Kit	09602

## Troubleshooting

Before servicing the tool:

- Check the hydraulic power source and ensure it is providing the correct pressure and flow to the tool. See "Specifications" on page 8
- Check hydraulic hoses and couplers for restrictions or blockages. Also ensure the hoses are connected to the proper ports on the tool.
- Check the hydraulic fluid temperature and ensure it is not too hot (140°F / 60°C) or too cold (50°F / 10°C).
- Ensure the hydraulic power source relief valve is set to open at the maximum relief pressure. See "Specifications" on page 8

Problem	Possible Cause	Solution
Tool has low impact performance.	Hydraulic power source is not running properly.	Ensure the power source is delivering proper flow and pressure. See "Specifications" on page 8. Proper flow and pressure maintain proper tool speed. Check regularly.
	Incorrect sockets or accessories.	Stop using the tool immediately. Only use impact rated sockets or accessories.
	Impact mechanism needs to be lubricated.	See "Grease the Impact Mechanism" on page 14.
	Impact mechanism is worn or damaged.	Contact your STANLEY dealer for service.
Tool runs too fast.	Hydraulic power source is not running properly.	Ensure the power source is delivering proper flow and pressure. See "Specifications" on page 8. Proper flow and pressure maintain proper tool speed. Check regularly.
	Pressure and return hoses are reversed.	Properly connect the hydraulic connections. See IW16 User Manual.
	Tool Failure.	Contact your STANLEY dealer for service.
Grease is leaking from the impact mechanism.	Hard use and heat forcing out grease.	This is normal. Follow proper maintenance. See "Grease the Impact Mechanism" on page 14.
Tool is leaking hydraulic oil.	Hydraulic fluid is too hot.	Ensure hydraulic fluid temperature does not exceed the value in "Specifications" on page 8.
	Tool damage or failure.	Contact your STANLEY dealer for service.

## Tool Disassembly

### Prior to Disassembly

1. Disconnect the tool from the hydraulic power supply.

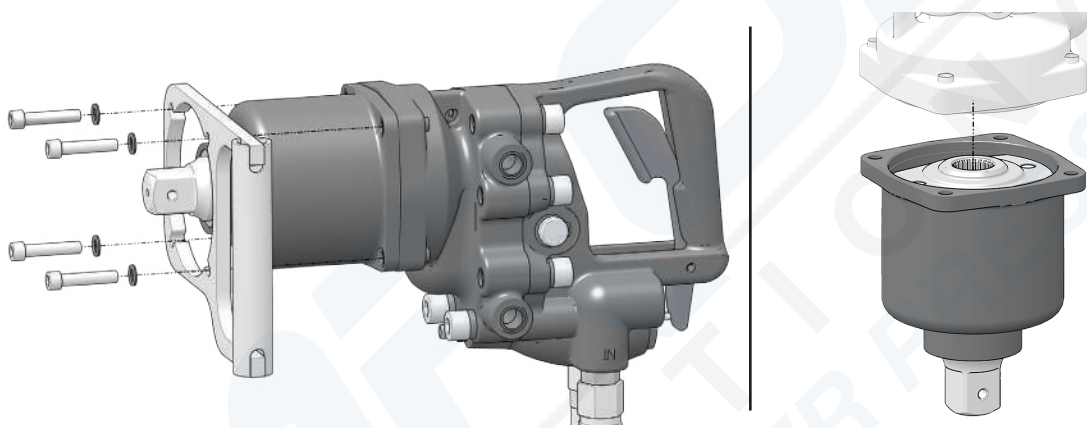
#### **⚠ WARNING**

Do not perform maintenance on the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury. Disconnect the hydraulic power source before servicing.

2. Drain the hydraulic oil from the tool, making sure to collect the oil for recycling (See "Tool Disposal" on page 15).
3. Clean the outside of the tool.

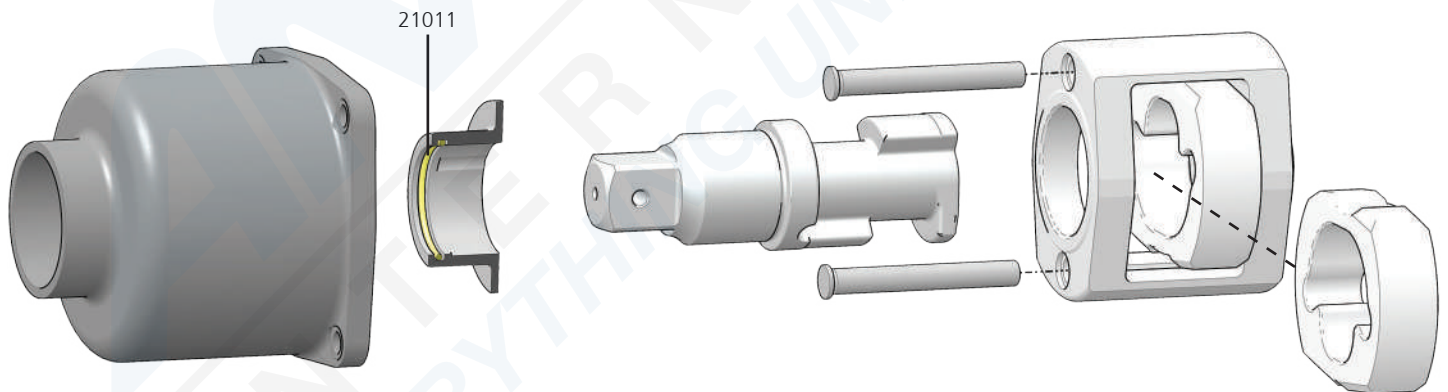
### Remove the Impact Mechanism

1. Remove four cap screws from the hammer case.
2. Remove the assist handle.
3. Hold the hammer case in place, then point the tool downward and remove the impact mechanism assembly.



4. Remove the impact mechanism from the hammer case.
5. Replace exposed seals during reassembly.

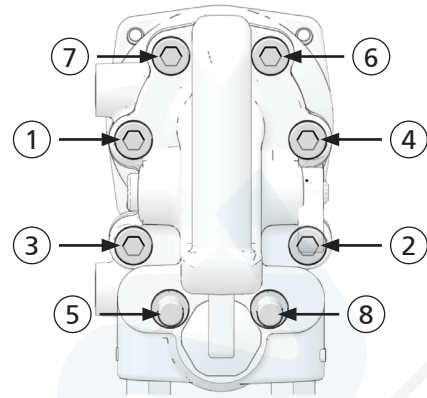
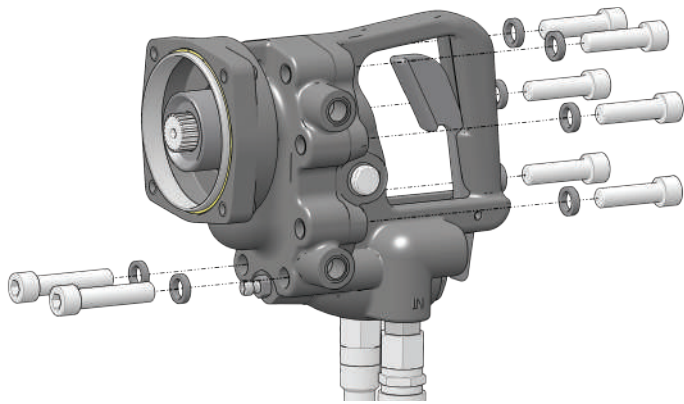
Note: The impact mechanism must be properly greased during reassembly. See "Grease the Impact Mechanism" on page 14.



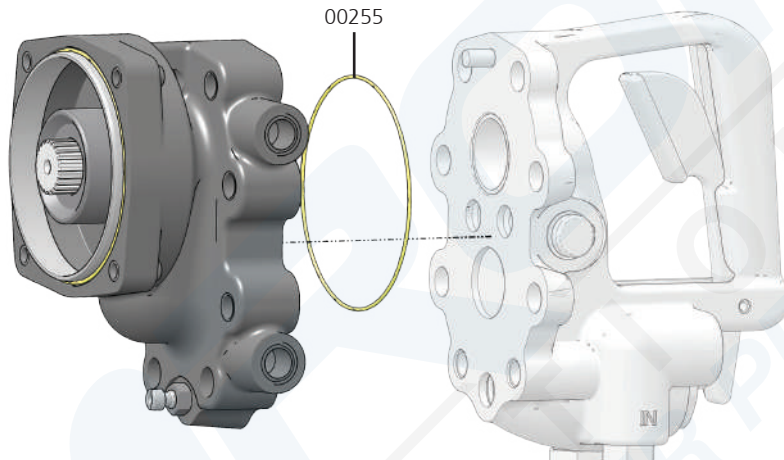
### Remove the Hydraulic Motor

1. Remove the eight cap screws holding the hydraulic motor to the handle assembly.

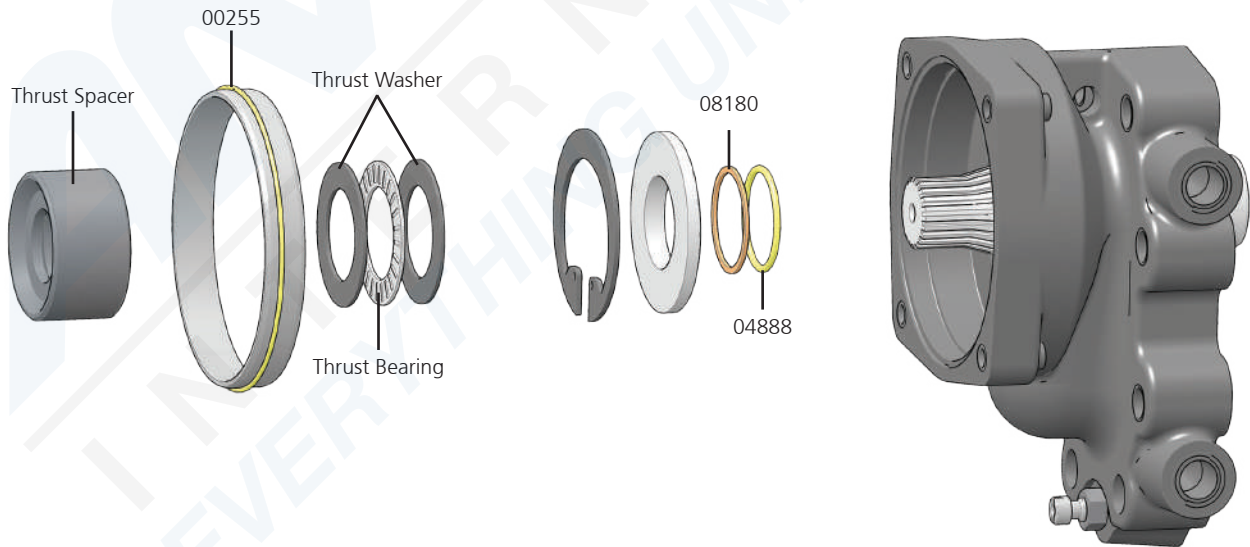
Note: During reassembly, apply Loctite 242 to each screw thread. Install each cap screw finger tight. Torque each screw to 55 Ft. Lbs., in the pattern shown.



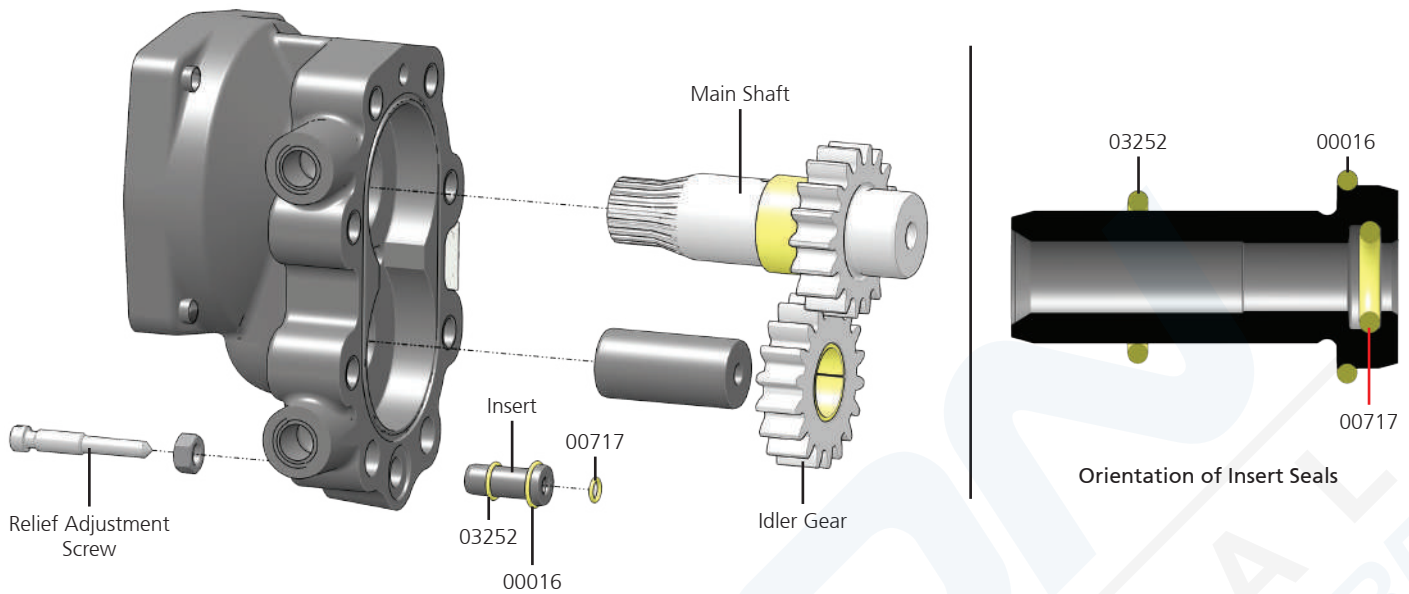
2. Remove the handle assembly from the hydraulic motor.
3. Remove the seal between the hydraulic motor and the handle assembly. Replace during reassembly.



4. From the front of the hydraulic motor, remove the thrust spacer, O-ring, pilot ring, thrust washers and thrust bearing.
  5. Remove the retaining ring holding the seal backup washer in place.
  6. Using O-ring tools, remove the backup ring and o-ring.
- Note: Replace exposed seals during reassembly.



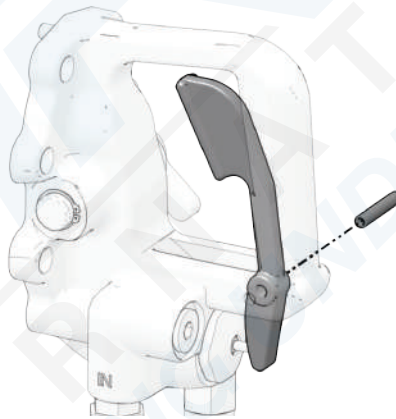
7. From the rear of the hydraulic motor, remove the idler gear, idler shaft and main shaft.
  8. If necessary, remove the relief adjustment screw, insert and related seals.
- Note: Count how many turns you made when taking out the relief adjustment screw. Reassemble with the same amount of turns to maintain proper impact force. To adjust the impact force, see "Adjusting Impact Intensity" on page 14.
9. Replace exposed seals during reassembly.



10. Inspect the bushings. The insides of the bushings should be gray in color. If yellow-bronze shows, replace the bushing.
11. Inspect the idler and main shafts for wear. Replace if necessary.
12. Inspect the gear chamber. The chamber should be polished and not rough or grooved.
13. Check each gear and insure they have flat, straight tips. Each tooth should have a smooth polish. Replace the gears if damage or cracking is present.

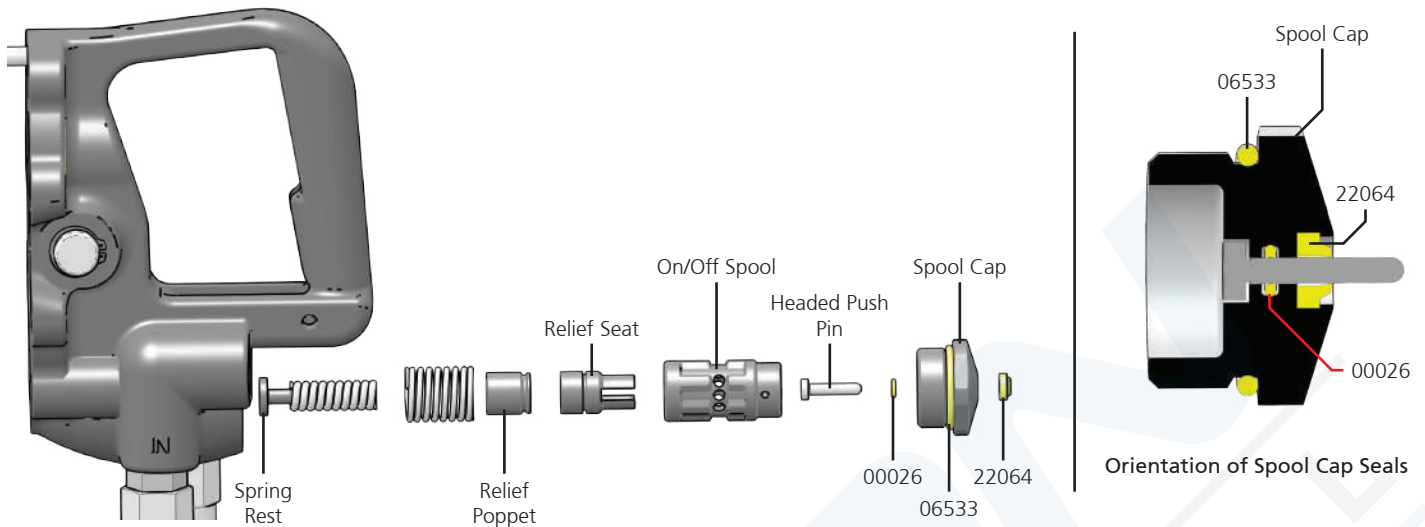
## Remove the Valve Spool

1. Remove the roll pin that holds the trigger to the handle.
2. Pull the trigger out of the bottom of the handle.



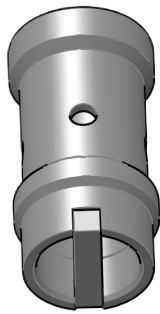
3. Remove the spring cap, headed push pin, valve spool, relief seat, poppet, springs and spring rest from the handle.
4. Replace exposed seals during reassembly.

Note: During reassembly, ensure that seals 22064, 06533 and 00026 are in their proper position inside the spool cap, as shown in the seal orientation graphic below.

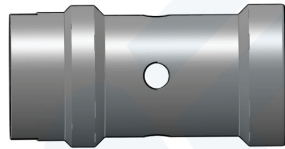


### A Note About Older Model Valve Spools

IW16's with a serial number of 031513001 or earlier use an older version valve spool and handle. New model valve spools are not backwards compatible. You must order a new handle assembly (Part Number 73167) and a new valve spool, if replacement is necessary.



Older Model Valve Spool  
(Part Number 07998)



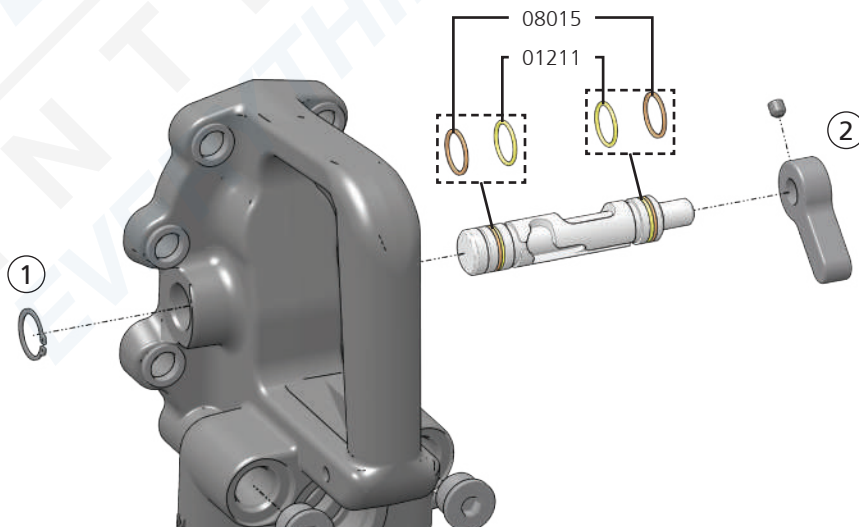
New Model Valve Spool  
(Part Number 73046)



### Remove the Reversing Spool

1. Remove the retaining ring from the valve spool.
2. Remove the set screw from the reversing lever. Remove the lever from the valve spool.
3. Push the valve spool out of the handle.

Note: Replace exposed seals during reassembly.



## Grease the Impact Mechanism

Before you fully reassemble the tool, you must grease the impact mechanism.

1. Remove hydraulic power from the tool.
2. Thoroughly clean the impact mechanism.
3. Inspect all parts of the impact mechanism for damage. Replace damaged parts before using the tool.
4. Lubricate the inside of the hammer frame, the thrust bearing and thrust races with a STANLEY recommended grease. See the table below.
5. Reassemble the impact mechanism and reattach it to the tool.
6. Apply Loctite 242 on the four cap screws that hold the impact mechanism to the hydraulic motor and torque to 12 Ft. Lbs. (16.2 Nm).

STANLEY Recommended Grease
Energy Release G-200
Kendall Super-Blu L-427
Texaco Starplex 2
Lubrication Engineers Almagard 3752
Mobil Delvac Xreme Service

## Adjusting Impact Intensity

The impacting intensity can be changed by adjusting the relief adjustment screw.

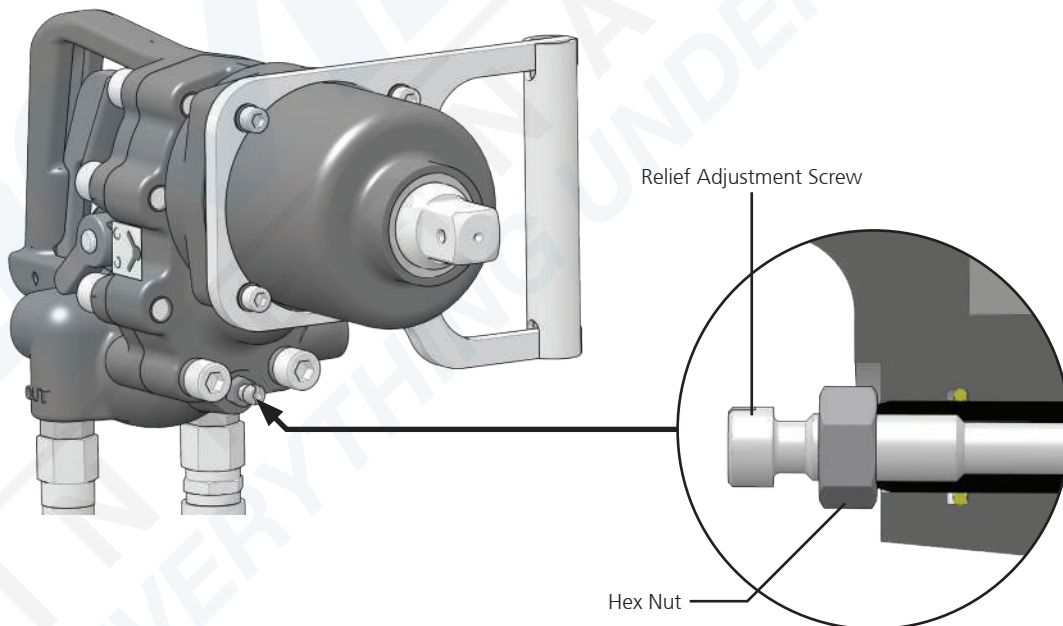
### Adjusting the Relief Adjustment Screw

1. Remove hydraulic power from the tool.
2. Loosen the hex nut on the relief adjustment screw.
3. Turn the relief adjustment screw clockwise to increase the impact torque -OR- counter clockwise to decrease the impact torque.

#### **⚠ CAUTION**

Do not operate the tool with the relief adjustment screw more than one turn from the bottom of its travel or less than three turns from the top of its travel. Damage to the impact mechanism may result.

4. Tighten the hex nut to prevent the relief adjustment screw from moving.



## Testing the Tool

1. Attach a calibrated flow and pressure gauge to the tool port marked "In".
2. Connect the tool to the hydraulic power supply.
3. Power up the hydraulic power supply.
4. Use IW16 to tighten a fastener. Watch the flow and pressure gauge and ensure maximum flow and pressure are not exceeded. See "Specifications" on page 8.

# Tool Maintenance

## Daily Maintenance

1. Remove hydraulic power from the tool.
2. Check all hydraulic connections and hoses for damage. Replace damaged parts before operating the tool.
3. Remove the hammer case and inspect the impact mechanism. If the mechanism is not well lubricated, or if the grease is burned, see "Grease the Impact Mechanism" on page 14.
4. Inspect tool to ensure all decals are legible. Contact STANLEY if replacements are needed.
5. Using a calibrated flow and pressure gauge, check the output of the hydraulic power source. Ensure it matches the flow and pressure in "Specifications" on page 8. Proper flow and pressure maintain proper tool speed.

## Underwater Tool Maintenance

Perform maintenance on underwater models after each use.

1. Remove hydraulic power from the tool.
2. Clean and grease the impact mechanism with a waterproof grease. See "Grease the Impact Mechanism" on page 14.
3. Using a water displacing oil, spray into the trigger.
4. Spray or dip the entire tool.

## Tool Disposal

### Hydraulic Oil

Hydraulic oil can contaminate the air, ground and water if not properly recycled. Recycle hydraulic oil in accordance with all State, Federal and local laws, at your local oil recycling facility.

### Hydraulic Hoses

Hang hydraulic hoses to drain. Collect the oil for recycling. Contact your local municipal recycling authorities for an approved hydraulic hose recycling site.

### Tool Body

Drain hydraulic oil from the tool, making sure to collect the oil for recycling. Disassemble the tool and dispose of all non-metal parts. Recycle the metal components. Contact your local municipal recycling authorities for recycling instructions.

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