

# Instruction Manual



Hydro-Pneumatic Blind  
Rivet Nut Tool

ProSert™ XTN20 Blind Rivet Nut Tool – 74202

# Hydro-Pneumatic Power Tool



Fig. 1

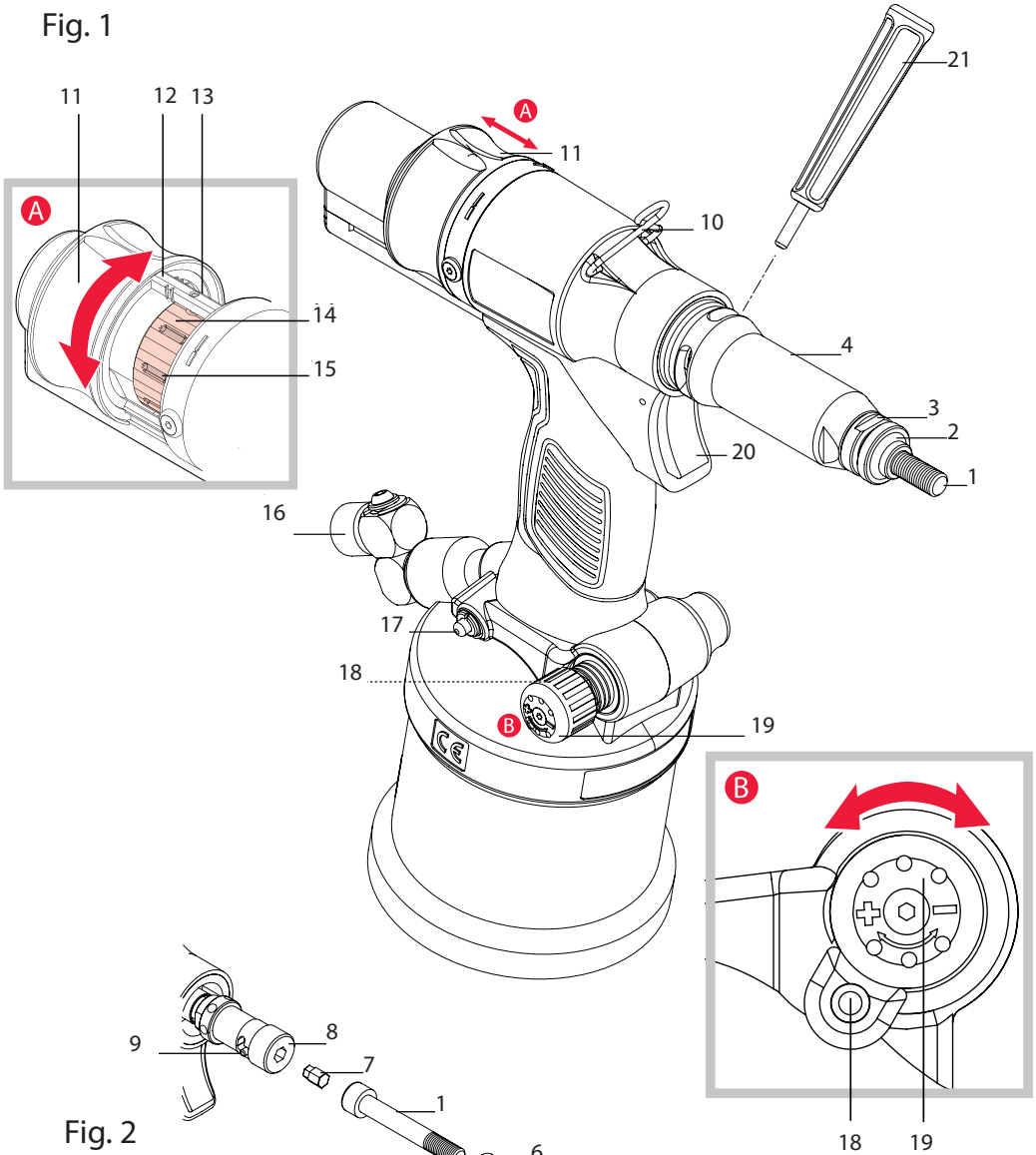


Fig. 2

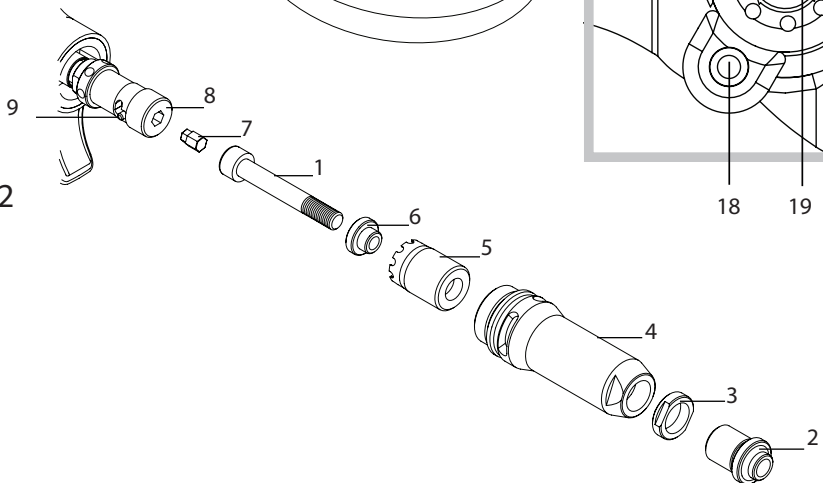
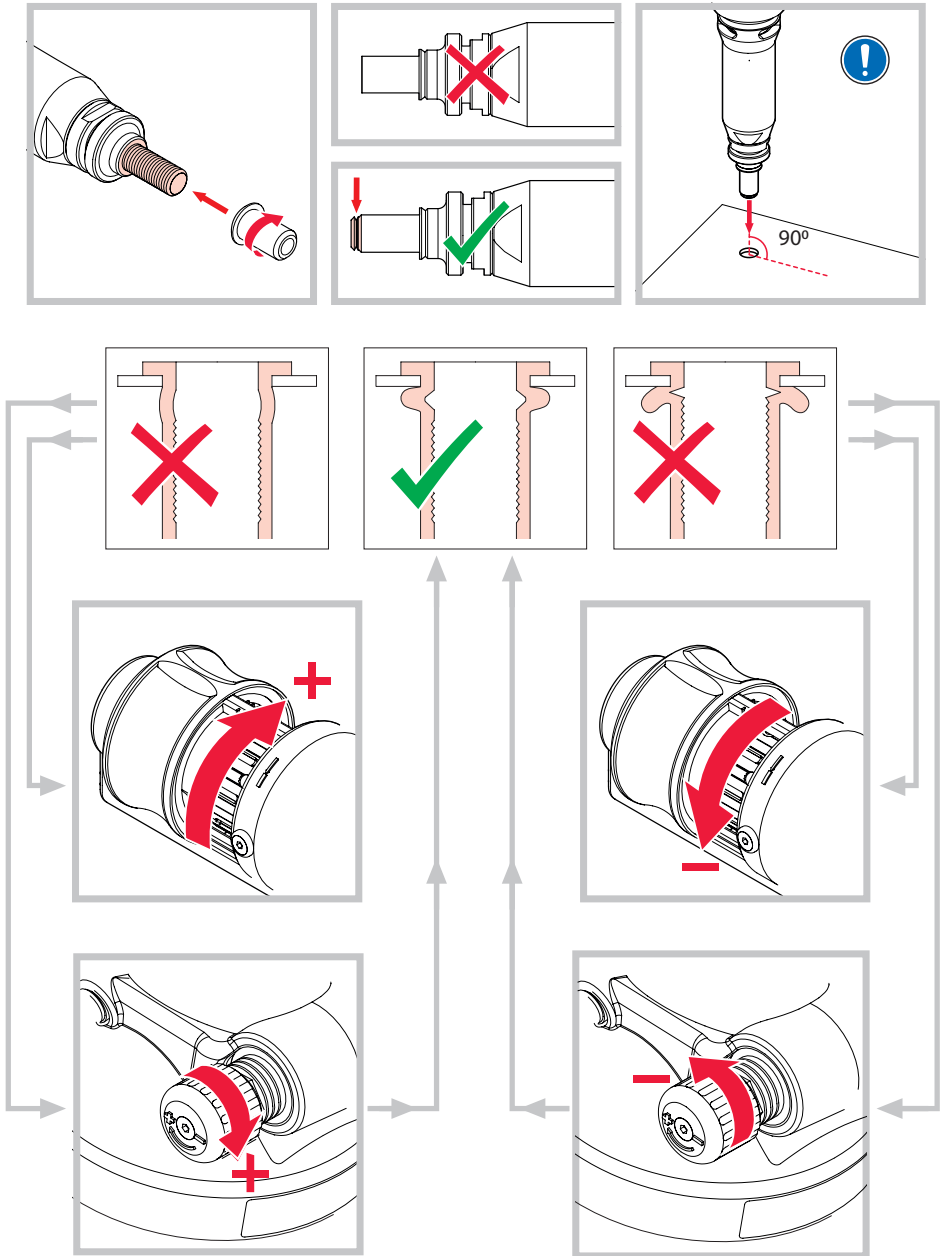


Fig. 3



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This instruction manual must be read by any person installing or operating this tool with particular attention to the following safety rules.

## 1. Safety Definitions

The definitions below describe the level of severity for each signal word. Please read the manual and pay attention to these symbols.

**DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**▲ WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**▲ CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**CAUTION:** Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

***Improper operation or maintenance of this product could result in serious injury and property damage. Read and understand all warnings and operating instructions before using this equipment. When using power tools, basic safety precautions must always be followed to reduce the risk of personal injury.***

### SAVE THESE INSTRUCTIONS.

#### WARNING:

1. Do not use outside the design intent of Placing STANLEY Engineered Fastening Blind Rivet Nuts.
2. Use only parts, fasteners, and accessories recommended by the manufacturer.
3. Do not modify the tool in any way. Any modification to the tool is undertaken by the customer and will be the customer's entire responsibility and void any applicable warranties.
4. Prior to use, check for misalignment or binding of moving parts, breakage of parts, and any other condition that affects the tool's operation. If damaged, have the tool serviced before using. Remove any adjusting key or wrench before use.
5. The tool must be maintained in a safe working condition at all times and examined at regular intervals for damage and function by trained personnel. Any dismantling procedure will be undertaken only by trained personnel. Do not dismantle this tool without prior reference to the maintenance instructions.
6. The supply air pressure must not exceed 7 bar (100 PSI).



7. Operators and others in work area must wear ANSI Z87.1 CAN/CSA Z94.3 approved safety glasses with side shields. Always wear safety glasses and ear protection during operation.
8. Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
9. Do not operate a tool that is directed towards any person(s).

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10. *DO NOT operate tool with the nose housing removed.*
  11. *Adopt a firm footing or a stable position before operating the tool.*
  12. *Prior to use, inspect airlines for damage, all connections must be secure. Do not drop heavy objects on hoses. A sharp impact may cause internal damage and lead to premature hose failure.*
  13. *Do not lift the placing tool by the hose. Always use the placing tool handle.*
  14. *Vent holes must not become blocked or covered.*
  15. *Disconnect the air hose from the tool before performing any maintenance, attempting to adjust, fit or remove a nose assembly.*
  16. *Keep tool handles dry, clean, and free from oil and grease.*
  17. *When carrying the tool from place to place keep hands away from the trigger to avoid inadvertent activation.*
  18. *Never leave operating tool unattended. Disconnect air hose when tool is not in use.*
  19. *Adequate clearance is required for the tool operators hands before proceeding.*
  20. *Do not abuse the tool by dropping or using it as a hammer.*
  21. *Keep dirt and foreign matter out of the hydraulic system of the tool as this will cause the tool to malfunction.*

**STANLEY Engineered Fastening policy  
is one of continuous product development and improvement  
and we reserve the right to change the specification  
of any product without prior notice.**

## 2. Specification

**UNDER NO CIRCUMSTANCES SHOULD ANY MAINTENANCE OR SERVICING BE CONDUCTED APART FROM NOSE EQUIPMENT CHANGE.**

The ProSert XTN20 hydro-pneumatic tool is designed for placing STANLEY Engineered Fastening Blind Rivet Nuts through adjustment of the force and/or the stroke.

The ProSert XTN20 Tool is used to place Blind Rivet Nuts from a range of M3 to M10 when coupled with the relevant nose equipment. Imperial nose equipment is also available to place UNC and UNF inch thread size Blind Rivet Nuts. The safety instructions must be followed at all times.

### 2.1. Placing Tool Specification

<b>Pull Force:</b>	Pull @ stated pull pressure 5.0 bar	17.65 kN	3968 lbf	
<b>Air Supply Pressure:</b>	Min/Max	5-7 bar	72.5-101.5 lbf/in <sup>2</sup>	
<b>Oil Pressure:</b>	Pull (max)	230 bar	3336 lbf/in <sup>2</sup>	
<b>Stroke:</b>	Piston stroke	3-7 mm	0.118-0.275 in	
<b>Weight:</b>	Including nose equipment	1.59 kg	3.50 lb	
<b>Noise Level:</b>	<b>Uncertainty noise: K=3dB(A)</b>	<75 dB(A)	<75 dB(A)	
<b>Vibration:</b>	<b>Uncertainty vibration: K=0.1 m/s<sup>2</sup></b>	<2.5 m/s <sup>2</sup>	<8 ft/s <sup>2</sup>	
<b>Motor Speed:</b>	Forward & Reverse	2000rpm	2000rpm	
<b>Material:</b>	-	<b>Aluminium</b>	<b>Steel</b>	<b>Stainless Steel</b>
<b>Avdel® Product Range:</b>	Eurosert®	-	M3-M10	M4-M5
	Thin Sheet Nutsert®	M3-M10	M3-M10	M3-M10
	DK/DL		M4-M10	-
	Euro Hexsert®/Hexsert®	-	M3-M8	M6
	High Strength Hexsert®	-	M6-M8	-
	Squaresert®	-	M5-M8	-
<b>POP Nut® Product Range:</b>	Standard Nut*	M3-M10	M3-M8	M4-M6
	Knurled Nut*	M4-M8	M4-M6	-
	Closed End Nut*	M3-M10	M3-M8	M4-M6
	Hexagonal Nut*	M4-M8	M4-M8	M4-M6
	Tetra Nut*	M4-M8	M4-M8	-
	HB Bolt*	M6-M8	M6-M8	-
	Pipe Nut*	M6	M6	-
<b>Additional Features:</b>	Pull-to-Force operating mode	Yes		
	Pull-to-Stroke operating mode	Yes		
	Auto Spin On/Spin Off	Yes		
	Tool Free Mandrel fittings	Yes		
	Manual Reverse override	Yes		
	Hydraulic Lip Seals & O-rings	Yes		

Items with a \* may require a mandrel adaptor kit (74202-02200 found in the Accessories Manual 07900-01073). A complete ProSert XTN20 (74202) tool is made up of the base tool (part number 74202-02000) and the appropriate nose assembly for the Blind Rivet Nut.

### 2.2. The package contains:

- 1 XTN20 Blind Rivet Nut Tool
- 1 set M4, M5, M6, M8 Nose Equipment & Mandrels
- 1 Printed Instruction Manual
- 1 Maintenance Kit



### 2.3. Main components list

ref fig. 1 &amp; 2

		Re-order		
		Spare part numbers		Qty
1	Mandrel	M4	07555-09004	1
		M5	07555-09005	1
		M6	07555-09006	1
		M8	07555-09008	1
2	Nose Tip	M4	07555-00904	1
		M5	07555-00905	1
		M6	07555-00906	1
		M8	07555-00908	1
3	Lock Nut	-	07555-00901	1
4	Nose Casing	-	74202-02021	1
5	Chuck Nut	-	74202-02022	1
6	Reducing Sleeve	M4	07555-09104	1
		M5	07555-09105	1
		M6	07555-09106	1
		M8	07555-09108	1
7	Drive Shaft	M4	07555-01004	1
		M5	07555-01005	1
		M6	07555-01006	1
		M8	07555-01008	1
8	Mandrel Adaptor	-	74202-02023	1
9	Nose Rod	-	74202-02039	-
10	Suspension Ring	-	74202-02012	1
11	Stroke Slider	-	74202-02092	1
12	Stroke Indication Markings	-	-	-
13	Stroke Locking Pin	-	74202-02095	1
14	Stroke Setter	-	74202-02010	1
15	Stroke Setter Recess	-	-	-
16	Air Inlet Assembly	-	74202-02103	1
17	Manual Reverse Trigger	-	74202-02030	1
18	Regulator Lock	-	74202-02038	1
19	Pressure Regulator	-	74202-02037	1
20	Trigger	-	74202-02020	1
21	Pin Push	-	07908-00624	1

<b>Complete nose assembly</b>	M4	07555-09884
	M5	07555-09885
	M6	07555-09886
	M8	07555-09888

\*All sizes are supplied with Lock Nut (3) 07555-00901.

For additional sizes please visit [www.StanleyEngineeredFastening.com](http://www.StanleyEngineeredFastening.com)

### 3. Tool Setup

**▲ IMPORTANT - READ THE SAFETY RULES ON PAGE 6 & 7 CAREFULLY BEFORE PUTTING INTO SERVICE.**

#### Before Use

- Select relevant size nose equipment and install.
- Connect the placing tool to the air supply. Test pull and return cycles by depressing and releasing the trigger **20**.
- Set the tool for desired stroke/pressure.

**▲ CAUTION** - correct supply pressure is important for proper function of the installation tool. Personal injury or damage to equipment may occur without correct pressures. The supply pressure must not exceed that listed in the placing tool specification.

### 4. Operating Instructions

**▲ IMPORTANT - READ THE SAFETY RULES ON PAGE 6 & 7 CAREFULLY BEFORE PUTTING INTO SERVICE.**

**▲ IMPORTANT - THE AIR SUPPLY MUST BE TURNED OFF OR DISCONNECTED BEFORE FITTING OR REMOVING THE NOSE ASSEMBLY.**

#### 4.1 Nose Equipment (see Fig.2).

##### Fitting Instructions

Item numbers in bold refer to nose assembly components in fig 1.

- Air supply must be disconnected.
- If still fitted, remove the Nose Casing **4** and the Chuck Nut **5**, while pulling back the spring loaded Nose Rod **9**.
- Insert Drive Shaft **7** into Mandrel Adaptor **8**.
- Fit Mandrel **1** onto Drive Shaft **7**.
- Insert Reducing Sleeve **6** (if specified) into the Chuck Nut **5**.
- Screw the Chuck Nut **5** onto the Mandrel Adaptor **8** while pulling back the spring loaded Nose Rod **9**. Tighten the Chuck Nut **5** clockwise.
- While holding the Tool, screw on the Nose Casing **4** and Nose Tip **2** with the nose tip Lock Nut **3**.
- The reverse operation is carried out for equipment removal.

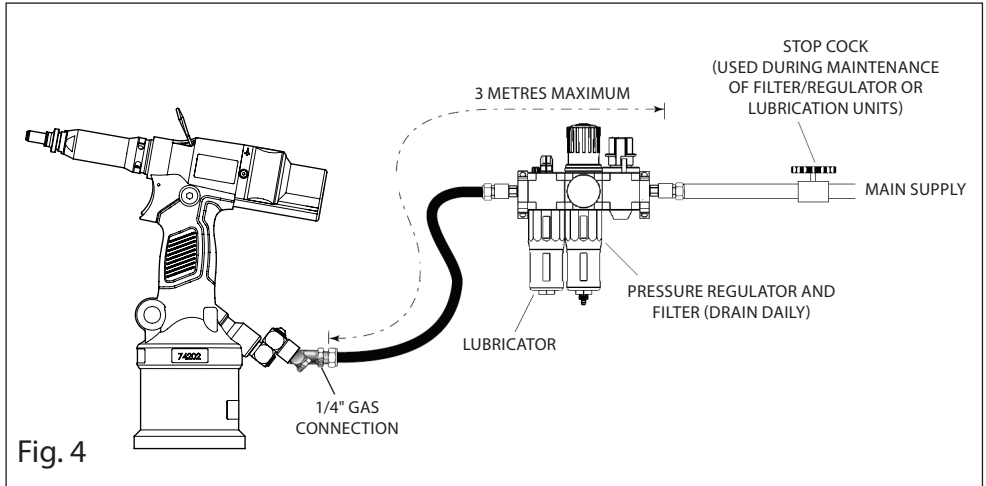
With the tool still disconnected from the air supply, screw a Blind Rivet Nut onto the Mandrel manually.

- Position Nose Tip **2** on the Nose Casing **4** and lock it with Lock Nut **3** so that the Mandrel **1** protrudes slightly beyond the Blind Rivet Nut.
- Lock the Lock Nut **3** by turning clockwise with a spanner\*. Remove the Blind Rivet Nut from Mandrel.

\*Refer to items included in the Maintenance Kit 07900-09301 page 13.

## 4.2 Air Supply

- All tools are operated with compressed air at a minimum pressure of 5.0 bar.
- Pressure regulators and automatic oiling/filtering systems to be used on the main air supply within 3 metres of the tool (see fig. 4).
- Air supply hoses will have a minimum working effective pressure rating of 150% of the maximum pressure produced in the system or 10 bar, whichever is the highest.
- Air hoses must be oil resistant, have an abrasion resistant exterior and be armoured where operating conditions may result in hoses being damaged.
- All air hoses **MUST** have a minimum bore diameter of 6.4 millimetres.



If above system is not available you can use the following alternative:

- Before use or when first putting the tool into service, pour a few drops of clean, light lubricating oil into the air inlet of the tool if no lubricator is fitted on air supply. If the tool is in continuous use, the air hose should be disconnected from the main air supply and the tool lubricated every two to three hours.
- Check for air leaks. If damaged, hoses and couplings must be replaced by new items.
- If there is no filter on the pressure regulator, bleed the air line to clear it of accumulated dirt or water before connecting air hose to the tool.

## 4.3 Setting Instructions

- The stroke adjustment feature is mainly used for smaller Blind Rivet Nut sizes M3-M4.
- If you are setting the tool for optimum stroke the Stroke Setter should be wound in to minimum stroke (3mm) and the Pressure Regulator **19** be wound in to maximum setting.
- If you are setting the tool for optimum pressure the Stroke Setter should be wound out to maximum stroke (7mm) and the Pressure Regulator **19** be wound out to minimum setting.

When dealing with different grip thicknesses, it is always recommended that the tool is set for optimum pressure rather than optimum stroke. Use the maximum grip condition to set optimum pressure.

#### 4.3.1. Stroke Adjustment (see Fig. 1A & 3).

To use this tool in stroke set operation, screw the Pressure Regulator **19** fully in to achieve full pressure then adjust Stroke Setter to the desired stroke length:

- Open Stroke Slider **11**.
- The Stroke Locking Pin **13** will be released.
- Directional arrows indicate stroke direction.
- Increase the stroke from the minimum until optimum deformation is obtained.
- The scale gives an indication of the current stroke length.
- Increments **12** shown are 3, 5 and 7mm on one side and 4 and 6mm on the opposite.
- Line the rear of the Stroke Setter **14** up with these marks to achieve desired stroke length.
- Each Recess **15** on the Stroke Setter **14** is equal to  $\pm 0.1$ mm of stroke.
- Close the Stroke Slider **11** before using in the application environment.
- The Stroke Lock will activate when the Stroke Slider **11** is closed when the tool is in the upright position
- The tool is now ready to operate.

#### 4.3.2. Pressure Adjustment (see Fig. 1B & 3).

To use this tool in pressure set operation, wind the Stroke Setter **14** to 7mm, then screw the Pressure Regulator **19** fully out to achieve minimum pressure then adjust to the desired pressure:

- Initially the Blind Rivet Nut will not deform and the tool will spin off.
- Screw in the Pressure Regulator **19** by 1 groove on the regulator body and test.
- Repeat the operation with the Pressure Regulator **19** until optimum deformation is obtained.
- 1 notch on the Pressure Regulator **19** is equivalent to approximately 20N of pulling force.
- After a successful Blind Rivet Nut deformation, check the Blind Rivet Nut and increase the force if necessary.
- Increase by 1-2 notches extra to allow for variation in the Blind Rivet Nuts.
- The tool is now ready to operate.

## 5. Operating Procedure

### Installing a Blind Rivet Nut (see Fig. 3).

To install a Blind Rivet Nut.

- Check that the correct Blind Rivet Nut has been selected.
- Push Blind Rivet Nut into the application.
- Check Nose Assembly is at right angle (90°) to the work.
- Push onto the Blind Rivet Nut with the tool to spin on.
- Once fully and correctly inserted, depress tool Trigger **20** switch to start installation cycle.
- Hold the Trigger **20** until the Blind Rivet Nut is completely set and the tool has disengaged completely.

In the event a Blind Rivet Nut becomes jammed in an application press the Manual Reverse Trigger **17** to reverse the Mandrel **1** and spin off the Blind Rivet Nut. Alternately disconnect from the air supply and use the 4mm Pin Punch **21** supplied in the Maintenance Kit to wind off the Mandrel through the Nose Casing **4** shown in figure 1.

**▲ CAUTION** - do not attempt to force the installation of an Blind Rivet Nut as this will cause damage to the tool and/or application.

## 6. Servicing the Tool

Regular servicing must be carried out by trained personnel and a comprehensive inspection performed annually or every 500,000 cycles, whichever is sooner.

Cleaning and Maintenance

### ▲ DISCONNECT AIR SUPPLY

Nose assemblies should be serviced at weekly intervals or every 5,000 cycles

**▲ CAUTION** - Blow dirt and dust out of the main housing with dry air as often as dirt is seen collecting in and around the air vents where the Pneumatic Cylinder connects to the plastic Handle Assembly. Wear approved eye protection and approved dust mask when performing this procedure.

**▲ CAUTION** - Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the materials used in these parts.

- Disconnect the air supply
- Remove the complete nose assembly using the reverse procedure to the Fitting Instructions page 10(4.1).
- Any worn or damaged part must be replaced by a new part.
- Particularly check wear on Mandrel.
- Assemble according to fitting instructions.

### 6.1 Daily Servicing

- Check for air leaks. If damaged, hoses and couplings must be replaced by new items.
- Check that the Nose Assembly is correct and fitted properly.
- Check if the stroke of the tool is adequate to place selected Blind Rivet Nut. See Stroke Adjustment page 12 (4.3.1.).
- Inspect the Mandrel **1** in the nose assembly for wear or damage. If any, replace.

### 6.2 Weekly Servicing

Maintenance Kit 07900-09301		
Part Number	Description	Qty
07900-00624	4mm Pin Punch	1
07900-00632	17mm/19mm Spanner	1
07900-00225	5mm Hexagonal Wrench	1

- Check for oil leaks and air leaks on air supply hose and fittings and tool.
- With the tool laid horizontally, open "Oil Plug" and check oil level, if low re-prime, refer to "Service manual, Section 6.

**,troubleshooting**

For full servicing and maintenance instructions please refer to Service Manual **07900-09302**.

## 7. Declaration of Conformity

We, **Avdel UK Limited, Stanley House, Works Road, Letchworth Garden City, Hertfordshire, SG6 1JY UNITED KINGDOM**, declare under our sole responsibility that the product:

**Description** ProSert™ XTN20 Hydro-Pneumatic Blind Rivet Nut Tool  
**Brand/Model** POP-Avdel 74202  
**Serial No.**

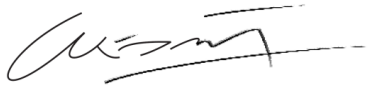
to which this declaration relates is in conformity with the following standards:

ISO 12100:2010	EN ISO 28927-5:2009
EN ISO 11202:2010	EN ISO 3744:2010
EN ISO 4413:2010	<del>EN 792-13:2000+A1:2008</del>
EN ISO 4414:2010	EN 28662-1: 1993 <del>EN ISO 11148-1:2011</del>

Technical documentation is compiled in accordance with Annex 1, section 1.7.4.1,  
 in accordance with the following Directive:

**2006/42/EC The Machinery Directive**

UK Statutory Instruments 2008 No 1597 - The Supply of Machinery (Safety) Regulations refers.



**A. K. Seewraj**

**Technology Manager – EU Blind Fastening**

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 Hertfordshire, SG6 1JY UNITED KINGDOM

Place of issue: Letchworth Garden City

Date of issue: 01-04-2015



This machinery is in conformity with  
 Machinery Directive 2006/42/EC

**STANLEY®**  
 Engineered Fastening

## 8. Protect your Investment!

### POP®Avdel® BLIND RIVET NUT TOOL WARRANTY

STANLEY Engineered Fastening warrants that all power tools have been carefully manufactured and that they will be free from defect in material and workmanship under normal use and service for a period of one (1) year.

This warranty applies to the first time purchaser of the tool for original use only.

#### **Exclusions:**

##### **Normal wear and tear.**

Periodic maintenance, repair and replacement parts due to normal wear and tear are excluded from coverage.

##### **Abuse & Misuse.**

Defect or damage that results from improper operation, storage, misuse or abuse, accident or neglect, such as physical damage are excluded from coverage.

##### **Unauthorized Service or Modification.**

Defects or damages resulting from service, testing adjustment, installation, maintenance, alteration or modification in any way by anyone other than STANLEY Engineered Fastening, or its authorized service centres, are excluded from coverage.

All other warranties, whether expressed or implied, including any warranties of merchantability or fitness for purpose are hereby excluded.

Should this tool fail to meet the warranty, promptly return the tool to our factory authorized service centre location nearest you. For a list of POP®Avdel®Authorized Service Centres in the US or Canada, contact us at our toll free number (877)364 2781.

Outside the US and Canada, visit our website

**[www.StanleyEngineeredFastening.com](http://www.StanleyEngineeredFastening.com)** to find your nearest STANLEY Engineered Fastening location.

STANLEY Engineered Fastening will then replace, free of charge, any part or parts found by us to be defective due to faulty material or workmanship, and return the tool prepaid. This represents our sole obligation under this warranty. In no event shall STANLEY Engineered Fastening be liable for any consequential or special damages arising out of the purchase or use of this tool.

### **Register Your Blind Rivet Nut Tool online.**

To register your warranty online, visit us

<http://www.stanleyengineeredfastening.com/popavdel-powertools/warranty-card>

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For an authorized distributor nearby please check [www.StanleyEngineeredFastening.com/contact/distributors](http://www.StanleyEngineeredFastening.com/contact/distributors)

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