

AIR FENCING BATTEN STAPLER



TSABS

www.thetoolshed.co.nz



TABLE OF CONTENTS

Product Details	3
Specifications	
Product Identification	5
Safety Guidelines	
Assembly	
Operation	
Maintenance	
Recommended Hookup	
Troubleshooting	18
Exploded Parts List	

Thank You

For the purchase of this ToolShed product. We try our hardest to supply customers like you with the best quality products available, at the best price possible. We cant wait to continue working together in the future.

Please contact us for any servicing, replacement parts, or questions you might have about your ToolShed product by visiting our website, or calling: 0800 948 665.



PRODUCT DETAILS

Product Model ToolShed Air Fencing Batten Stapler

Product Code TSABS

DISTRIBUTED BY:



Note:

This manual is for your reference only. Due to the continuous improvement of the ToolShed products, changes may be made at any time without obligation or notice.

Warranty:

This product may be covered under The ToolShed warranty. For more information, see our Terms & Conditions at www.thetoolshed.co.nz



SPECIFICATIONS

Length 330mm

Height 310mm

Width 94mm

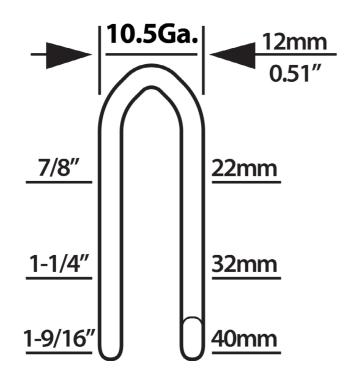
Weight 2.8 kg

Normal Operating Pressure 70–115 PSI

Magazine Capacity 50 pieces

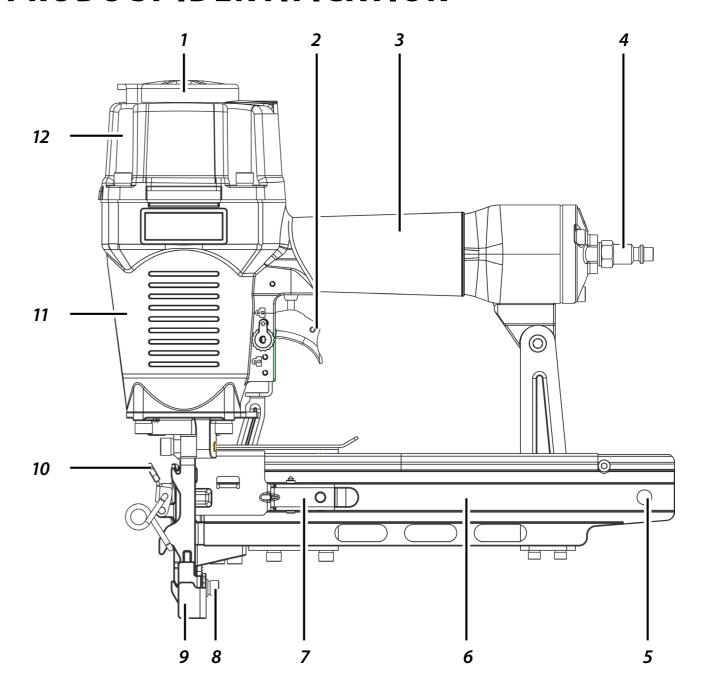
Firing Mode Sequential Fire

Fastener Size Range 10.5 Gauge Staples: 22–40mm (7/8" – 1-9/16")





PRODUCT IDENTIFICATION



1 Adjustable Exhaust Deflector

2 Trigger

3 Hand Grip

4 Air Connector

5 Stop Hole

6 Magazine

7 Pusher

8 Depth of Driver Adjustment

Safety

Quick Release Lever

11 Body

12 Air Cap





SAFETY GUIDELINES



READ ALL SAFETY WARNINGS & INSTRUCTIONS. Failure to follow instructions and warnings could lead to serious injury, electric shock, or fire.

Work Area Safety

- Ensure that your work area is kept clean and well lit. Lack of visibility and clutter greatly increase the risk of accident when using tools.
- Keep bystanders, pets, and children clear when operating this power tool or machine. They can cause distraction or risk injury to themselves.
- Ensure you are not operating the power tool or machinery in the presence of dust, liquids, flammable gases, or anything that can create an explosive atmosphere.
 Power tools and machinery can create sparks which can lead to ignition and fire hazards in working environments.

Personal Safety

- Always wear personal protective equipment (PPE). Eye protection, ear protection, dust masks, and other protective equipment will help to reduce the risk of personal injury or long-term illnesses.
- Dress appropriately. DO NOT wear loose clothing that can get caught in moving parts. Keep hair, loose clothing, jewellery, and anything else that could be of risk, away

from moving parts in the machine, or they could become caught therein.

- Always remain alert and DO NOT operate power tools or machinery under the influence of any substances such as alcohol or drugs, including prescription medications. Lack of focus could lead to injury or accidents while operating these power tools and machinery.
- Always ensure proper footing and balance. Overreaching can lead to slipping and falling which can result in injury or accident.
- Ensure the power switch is in the OFF position before connecting any battery, or power source to the power tool or machinery. This can cause injury as tools and machinery can suddenly fire incidentally when live, causing accidents.
- Use all provided dust collection and extraction attachments, if included. This equipment, along with the use of PPE dust masks, can help keep you safe from dust, and keep your work site clear from hazards.
- Ensure loose parts such as wrenches or adjusting keys are removed before starting the power tool or machinery.

SAFETY GUIDELINES

Power Tool & Machinery Use & Care

- Use the correct tool for the job. Forcing a tool to do a job it was not designed for increases the risk of accident or injury.
- Disconnect tools and machinery from power, or remove batteries before doing any maintenance or adjustments, or before storing the tools and machinery. This reduces or removes the risk of a power connection that causes the tool or machinery to accidentally fire, which can help prevent injury or accident.
- Check the general condition of the power tool for damage or any problems that could affect the way the tool or machine works. An unrepaired tool or machine can lead to accident and injury. Only have your tool or machine repaired with genuine parts from The ToolShed.
- Only use the power tool and machinery with genuine parts or accessories that are designed to be used with this power tool and machinery. Failure to do so could result in accident or injury, or damage your tool or machinery.
- Store your tool or machinery out of reach
 of children, and away from untrained
 personnel when not in use. Use by some body untrained, or a child, could lead to
 accident or serious injury.

Pneumatic Safety

- Never attempt to ingest or expel the compressor air internally to yourself or other persons or animals.
- Never aim at yourself, others, or animals:
 Always keep the tool pointed away from any body parts while operating. Be mindful of the tool's direction and potential recoil or kickback. Never attempt to block the air outlet with your finger or any part of your body.
- Wear personal protective equipment (PPE): Always wear appropriate PPE, such as safety goggles or a face shield, hearing protection, gloves, and sturdy footwear. Pneumatic tools can generate high-speed projectiles or create loud noise.
- Check the tool condition: Inspect the tool before each use to ensure it is in good working condition. Look for any signs of damage, loose parts, or leaks.
- Use the correct air pressure: Adjust the air pressure according to the manufacturer's recommendations for the specific tool. Using excessive pressure can lead to tool failure or cause accidents.
- Securely connect hoses and fittings: Ensure that all hoses, fittings, and connections are properly secured and tightly fastened.
- Use proper technique and grip: Hold the tool firmly and use both hands when operating it.
- **Disconnect the tool when not in use:**Before performing any maintenance or adjustments, or when taking breaks, always disconnect the tool from the air supply.





SAFETY GUIDELINES

Service

 Have your tools and machinery serviced at The ToolShed with ToolShed replace**ment parts.** This will ensure that the safety of the power tool or machine is maintained.



WARNING

The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Always Use Common Sense

- It is not possible to cover every conceivable situation you can face. Always exercise care and use your common sense. If you get into a situation where you feel unsafe, stop and seek expert advise. Contact your dealer, service agent, or an experienced user. Do not attempt any task you feel unsure of!
- Do not let familiarity gained from the frequent use of tools allow you to become complacent and ignore tool safety prin**ciples.** A careless action can cause severe injury within a fraction of a second.

Fencing Stapler Specific Safety

- Never point tool at yourself or others in work area. Assume the tool contains Fasteners. Never point the tool at yourself or others, whether it contains fasteners or not. If fasteners are mistakenly driven, it can lead to severe injuries. Never engage in horseplay with the tool. **Respect the tool.**
- Keep fingers away from trigger when not driving fasteners to avoid accidental firing. Never carry the tool with finger on trigger since you could drive a fastener unintentionally and injure yourself or someone else. Always carry the tool by the handle only.
- Never modify or alter a tool. Doing so may cause malfunction and personal injuries.
- Use only fasteners that are recommended for your model. Do not use the wrong fasteners or load the fasteners incorrectly.
- Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- Check safety before use. Make sure the safety operates properly. Never use the tool unless the safety is operating properly, otherwise the tool could drive a fastener unexpectedly. NEVER tamper with or remove
- Do not use tool if trigger does not actuate properly. Any tool that cannot be controlled with the trigger is dangerous and must be repaired.
- Never use tool which is defective or operating abnormally. If the tool appears to be

SAFETY GUIDELINES

operating unusually, making strange noises, or otherwise appears defective, stop using it immediately and arrange for repairs by your local ToolShed service centre.

- Maintain tools with care. Keep the tool clean and lubricated for better and safer performance.
- Never carry the tool by the air hose.
- Store tools out of the reach of children and other untrained people. Tools are dangerous in the hands of untrained users.
- Place tool properly on the workpiece. Do not drive fasteners on top of other fasteners Air Source or with the tool at too steep of an angle; the fasteners can ricochet and hurt someone.
- Do not use the tool as a hammer.
- Keep all screws and covers tightly in place.
- Keep face, hands and feet away from firing head at all times. Never place your • face, hands or feet near the firing head.
- Do not disconnect air hose from tool with **your finger on the trigger.** The tool can fire when reconnected to an air supply.
- Do not load fasteners with trigger pulled or safety depressed.
- Never place a hand or any part of body in fastener discharge area of tool.
- Do not drive fasteners into thin boards or **near corners and edges of workpiece.** The fasteners can be driven for a way from the workpiece and hit someone.

Disconnect the air hose from the tool when:

- 1. Doing maintenance and inspection;
- **2.** Turning the adjuster and top cover;
- **3.** Attaching or removing the no-mar tip;
- **4.** Clearing a jam;

- **5.** It is not in use;
- **6.** Leaving work area;
- **7.** Moving it to another location;
- **8.** Handing it to another person.
- Never attempt to clear a jam or repair the tool unless you have disconnected air hose from the tool and removed all remaining fasteners from the tool. The tool should never be left unattended since people who are not familiar with the tool might handle it and injure themselves.

- Never use oxygen or other bottled gases as a power source. Explosion may occur. Combustible gases and other bottled gases are dangerous and may cause the tool to explode.
- Do not exceed maximum recommended air pressure marked on the tool. Use only clean, dry, regulated, compressed air within the rated pressure range marked on the tool. Never connect the tool to pressure as which potentially exceeds 200 PSI the tool can burst.
- Do not abuse the air hose. Protect all hoses from kinks, restrictions, solvents or sharp objects. Keep air hose away from heat, oil, sharp edges, or moving parts. Replace damaged hoses immediately. Damaged hoses can burst or whip around.
- Check all fittings, hoses, pipes, connections and compressor before each use **of this tool.** Repair or replace damaged or leaking hoses and connections immediately. Damage to a hose or connection can cause a pressure hose to break and whip around the work area, and can lead to injury.

WWW.THETOOLSHED.CO.NZ WWW.THETOOLSHED.CO.NZ





ASSEMBLY

- All tool operators and their immediate supervisors must become familiar with the operator safety instructions before operating the tool.
- Included with the tool is one copy of these Operating/Safety Instructions. Keep this publications for future reference.
- Install a filter, regulator, lubricator unit and moisture trap on your air delivery system as per the manufacturer's instructions for these devices. Additionally, install a pressure gauge as close as practical to the tool, preferably within 3 metres.
- Select hoses with a minimum inner diameter of 1/4 inches and a maximum length of 30 metres.



WARNING

To reduce the risk of injury from a hose bursting, select hoses that are rated at least 200 PSI.

• Select fittings that are appropriate size for the selected hoses. The tool and air hose must have a hose coupling so that all pressure is removed from the tool when the coupling joint is disconnected.



WARNING

Never use non relieving couplers and/ or female quick disconnect couplings on the tool. Non relieving couplings and female couplings will trap high pressure air in the tool when the air line is disconnected. This will leave the tool charged with enough air after it has been disconnected to drive a nail. Only MALE pneumatic type air connectors should be fitted to the tool, so that high pressure air in the tool is vented to atmosphere as soon as the air line is disconnected

• Set the regulator at the air delivery system to a PSI that falls within the tool's operating range of 70–115 PSI. The correct pressure is the lowest pressure that will do the job.

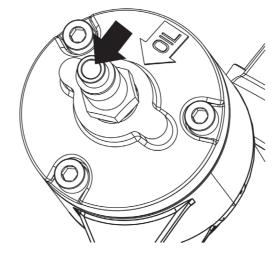
OPERATION

Lubrication

- If the tool is not used with an in-line lubrica- Adjust the air pressure at recommended tion system on the air supply it is necessary to periodically lubricate the tool with air tool lubrication.
- Under low use, lubricate once a day.
- Under heavy use, lubricate twice a day. To lubricate, insert 2-3 drops of lubricant into the air supply fitting attached to the tool handle (FIG.2). Using too much oil will cause it to collect in the tool and be noticeable in the exhaust.



2-3 Drops of **Air Tool Lubricant**



• Do not use detergent oil, WD-40, transmission fluid, motor oil, or other lubricants not specifically designated as air tool lubricants. These lubricants will cause accelerated wear to the seals, O-rings, and bumpers in the tool, resulting in poor tool performance and frequent maintenance.

Adjusting Air Pressure

- operating pressure of 70-115 PSI according to the length of nails and the hardness of the workpiece.
- The correct air pressure is the lowest pressure which will do the job. Using the tool at a higher than required air pressure unnecessarily over stresses the tool. Don't exceed 115 PSI.

FIG. 3



70 PSI Minimum

115 PSI Maximum

Connecting Air Supply



WARNING

Never use oxygen or other bottled gases as a power source. Explosion may occur. Combustible gases and other bottled gases are dangerous and may cause the tool to explode.



WARNING

Never connect the tool to an air source that is capable of producing air pressure exceeding 200 PSI. Excessive pressure can cause abnormal operation or cause the tool to burst, resulting in personal injury.

WWW.THETOOLSHED.CO.NZ WWW.THETOOLSHED.CO.NZ





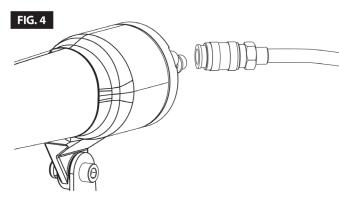
OPERATION

Connecting Air Supply (Cont.)



Do not exceed maximum recommended air pressure marked on the tool. Verify prior to using the tool that the air source has been adjusted within the rated air-pressure range. Be sure the air pressure gauge is operating properly and check it at least twice a day. Tools operated in excess of their maximum pressure rating may operate abnormally or burst resulting in personal injury.

- To connect the tool to the compressor only use pneumatic air hoses that meet the following criteria:
- **1.** Minimum hose pressure rating: 200 PSI.
- 2. Minimum hose inner diameter: 1/4 inch.
- **3.** Maximum hose length: 30 metres.



- Snap the air hose onto the quick connector.
- Check for air leakage. If leakage is noted, stop using the tool immediately and get it checked at your nearest ToolShed.
- Be sure the air pressure gauge is operating properly and check it at least twice a day.

Tool Testing



DANGER

Operators and others in work area must wear safety glasses with side shields.



WARNING

Never use the tool unless the safety is operating properly.

- Before actually beginning the nailing work, test the tool by using the check list below.
 Conduct the test in the following order.
- If abnormal operation occurs, stop using the tool and get it checked at your nearest ToolShed immediately.
- **1.** Disconnect the air hose from the tool. Remove all nails from the tool.
- **2. All screws must be tightened.** If any screws are loose, tighten them.
- **3.** The safety and trigger must move smoothly. Adjust the air pressure to 70 PSI, connect the air hose. Do not load any nails in the tool.
- **4. The tool must not leak air.** Remove your finger from the trigger and press the safety against the wood.
- **5. The tool must not operate.** Separate the safety from the wood. Next, point the tool downward, pull the trigger and then wait in that position for 5 seconds or longer.
- **6. The tool must not operate.** Without touching the trigger, depress the safety

OPERATION

against the workpiece. Pull the trigger.

- **7. The tool must operate.** Hold the trigger back while separating the safety from the wood.
- **8.** The tool will remain in operated status (the driver blade will remain at the bottom).
- **9.** Remove your finger from the trigger. Tool operation will end (the driver blade will return to the top).
- **10.**If no abnormal operation is observed, you may load nails in the tool. Drive nails into the workpiece that is the same type to be used in the actual application.
- The tool must operate properly.

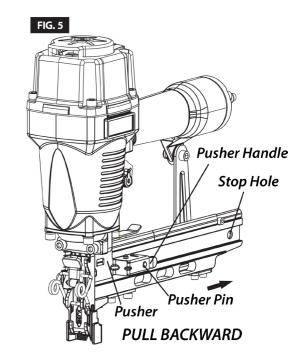
Nail Loading



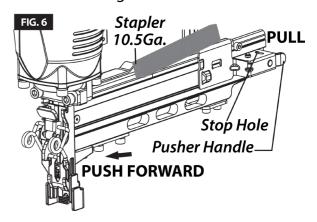
WARNING

When loading the tools magazine, check that the nail tips contact the wear rail and slide smoothly against the surface of the magazine. If the nails are not loaded properly, the tool will misfire and nails can be deflected, causing the tool to react in an unexpected manner, and damage the tool.

- Connect the tool to the air supply.
- Pull the Pusher backward until the Pusher Pin set into the Stop Hole (FIG.5).



 Insert appropriate nail strips from the top of magazine. Pull the Pusher Handle to get the Pusher Pin released from the Stop Hole to let the Pusher go back to move fasteners up to the driving mechanism. The Pusher will stop when it rests against the end of the fastener.





Keep the tool pointed away from

yourself and others when loading fasteners. Failure to do could result in possible serious personal injury.

2 — WWW.THETOOLSHED.CO.NZ — WW



OPERATION

Removing the Nails



Never load fasteners with the workpiece contact or trigger activated. Doing so could result in possible serious personal injury.

- Disconnect air supply.
- Press magazine latch and pull magazine to open position (FIG.5).
- Grasp the head of the nail strip and remove it from magazine.

Methods of Operation

- This tool is equipped with the safety and does not operate unless the safety is depressed.
- The methods of operation to drive nails with this tool is **sequential actuation** mechanism.
- 1. Position the nail outlet on the workpiece with finger off The trigger.
- 2. Depress the safety firmly until it is completely depressed.
- **3.** Pull the trigger to drive a nail.
- **4.** Remove finger from the trigger.
- To continue nailing a separate location, move **3.** Adjust tool driving depth: the tool along the wood, repeating steps (2-4) as required.

NOTE: Always handle nails and package carefully. If nails are dropped, collating bent may be broken, which will cause mis-feeding and jamming.

After nailing:

- 1. Disconnect air hose from the tool.
- 2. Remove all nails from the tool.
- 3. Supply 5-10 drops of pneumatic tool lubricant into the air plug on the tool.
- **4.** Open the pet cock on the air compressor tank to drain any moisture.

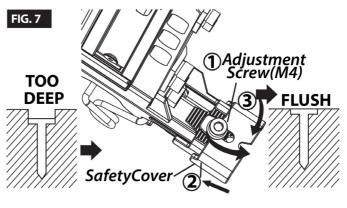
Cold Weather Operation

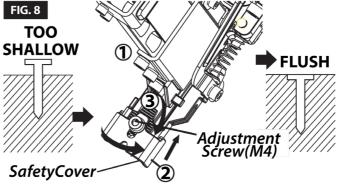
- Do not use a frozen tool. Allow tool to thaw before using. Moisture frozen in the tool may impede internal components resulting in the risk of injury and/or tool damage.
- When using the tool in cold conditions the tool will cycle slower than usual while driving the first nails. The cycle rate will increase as the tool warms up. Keep tool warm to avoid reduced cycle rate.

Adjusting The Nailing Depth

- The driving depth of the fasteners are adjustable. To adjust the depth, use the drive depth Adjustment Screw on the back side of the
- **1.** Disconnect tool from air supply.
- 2. Remove nails from the tool.
- Use the attached M4 wrench to loose the screw.
- · Move the Safety Cover up or down to change the driving depth.
- After reach the desired depth, tighten the screw back.
- **4.** Reconnect to the air supply.
- 5. Drive a test nail after each adjustment until the desired depth is set.

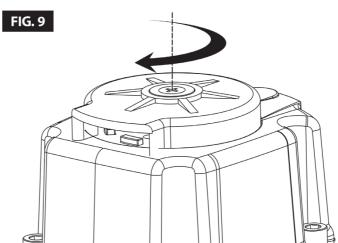
OPERATION





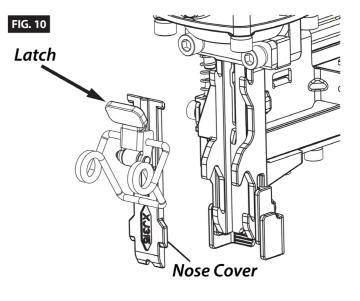
Adjusting the Exhaust

• The direction of the exhaust vent can be changed by turning the top cover (FIG.9).



Jam Clearing

- If a nail becomes jammed in the tool, disconnect the air hose and keep the tool pointed away from you while clearing the jam.
- 1. Disconnect the tool from air source.
- 2. Remove fasteners from the tool. Failure to do so will cause the fasteners to eject from the front of the tool.
- **3.** Pull up on the Latch and open the Nose Cover.
- **4.** Using caution not to bend or damage the driver blade, using pliers or a screwdriver if required to clear the jammed fastener.
- **5.** Close the jam release and latch.
- **6.** Reconnect the tool to the air source.
- **7.** Reload the tool with fasteners.



WWW.THETOOLSHED.CO.NZ WWW.THETOOLSHED.CO.NZ





MAINTENANCE



Always be sure that the tool is switched off and unplugged before attempting to perform any inspection or maintenance.

- When cleaning a tool be careful not to disassemble any portion of the tool since internal components may be misplaced or safety components may be improperly mounted. Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts and o-rings.
- Do not attempt to clean by inserting pointed objects through openings. Sharp edges may damage internal components and cause a serious hazard.
- Ventilation openings, the work contact element, and the trigger must be kept clean and free of foreign matter Periodically clean the tool with compressed air.
- Clean the magazine. Remove metal or wooden chips which may have accumulated in the magazine. Periodically clean magazine with compressed air.

Environment & Disposal

- Packaging materials are raw materials and can be re-used. Separate the different packaging materials and take them to the appropriate waste disposal facility. More information can be obtained from your local authorities.
- Old machines do not belong in your household garbage! Dispose of old machines appropriately, we are all responsible for the environment.

Storage



Keep out of reach of children and personnel unfamiliar with tool operation.

- When not in use, the tool should be disconnected and stored in the storage case in a warm and dry place. When tool will not be in use for an extended period, apply a thin coat of the lubricant to the steel parts to avoid rust.
- Do not store the tool in a cold weather environment.

RECOMMENDED HOOKUP

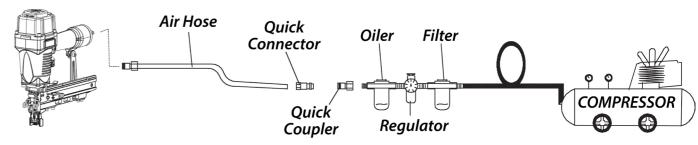
Hookup Instructions from Tool to Air Supply

NOTE: For better performance, install a 3/8 inch quick plug (1/4 inch NPT threads) with an inside diameter of 8mm (0.315in) on the nailer and a 3/8 inch quick coupler on the air hose.

- With the ON/OFF switch in the OFF position, plug the compressor into the electrical outlet.
- Close the pressure regulator by turning it all the way to the left. Turn the compressor ON and let it pump all the way up to automatic shut-off pressure.
- Attach the air hose to the regulator outlet. Adjust the pressure regulator by turning it to the right so that outlet pressure is between 70 PSI to 115 PSI.
- Load fasteners into the nailer.
- Point the nailer in a safe direction while attaching to the air hose.
- Nailer is ready for use. You may need to adjust the outlet pressure to achieve proper fastener depth.

Minimum Components Required for Hookup

- **Air compressor:** The air compressor must be able to maintain a minimum of 70 PSI when the nailer is being used. An inadequate air supply can cause a loss of power and inconsistent driving.
- **Pressure regulator:** A pressure regulator is required to control the operating pressure of the nailer between 70 PSI and 115 PSI.
- Air supply hose: Always use air supply hoses with a minimum working pressure rating equal to or greater than the pressure from the power source, or 150 PSI, whichever is greater. Use 1/4 inch air hose for runs up to 5 metres. Use 3/8 inch air hose for 15 metres, run or longer.



16 — — — WWW.THETOOLSHED.CO.NZ — — 17



TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SUGGESTED SOLUTION
Air leaking near the top of	Loose screws	Tighten screws.
the tool or in the trigger area.	Worn or damaged O-rings or seals	Install overhaul kit.
Air leaking near the	Loose screws	Tighten screws.
bottom of the tool.	Worn or damaged O-rings or seals	Install overhaul kit.
	Inadequate air supply	Make sure the air compressor is set between 70PSI and 115PSI.
Tool does nothing or operates sluggishly.	Tool is too dry	Add about 2–3 drops of lubrication into the air connector.
operates staggistily.	Exhaust blocked	Clean exhaust channel.
	Worn or damaged O-rings or seals	Install overhaul kit.
	Driver channel is worn	Fix the drive channel.
	Piston is broken or worn	Replace the piston.
Fasteners are jammed in	Bent fasteners	Remove the bent fasteners, replaced with the right fasteners.
the tool frequently.	Dirty magazine	Clean magazine.
	Loose magazine	Tighten screws.
	Wrong fasteners	Verify that fasteners are the correct size.

	10	Set Screw	40.5	O-Ring
	05	Washer	40.6	Valve
	03	Exhaust Cover	40.7	O-Ring
	04	Gasket	40.8	O-Ring
	05	Hex. Bolt A X4	40.9	Compression Spring
	90	Air Cap	40.10	
	07	O-Ring	40.11	Trigger Valve Stem X2
	08	Bumper	40.12	Valve Bush
	60	Compression Spring	41	Pin
	10	O-Ring	42	Button
	11	Head Valve Piston	43	Spring
	12	O-Ring X2	44	Hex. Bolt X2
	13	Seal Gasket	45	Cover Plate
	14	Bumper	46	Clip Unit
	15	O-Ring	47	
	16	O-Ring	48	Bolt Unit A X2
	17	Lining Ring	49	Spacer
	18	O-Ring	20	Drive Guide
	19	Cylinder	51	Bolt Unit A X4
	20	Collar	52	Pin
	21	Drive Blade	53	Hex. Bolt
	21.1	O-Ring	54	Flat Washer
	21.2	Drive Blade Unit	22	Core
	22	O-Ring	95	Coil Spring
	23	Pin	57	Pusher
	24	Body	28	Magazine
	25	O-Ring	29	Bolt Unit A X2
	26	Cylinder Seat	09	Pin
	27	Bolt Unit	19	Spring
	28	Nozzle X4	62	Bolt Unit A
	29	Bolt Unit A	93	Pin Spindle X2
	30	Safety Cover	64	Tail Hanger
	31	No-mar Tip	92	Plastic Nut
_	32	Bolt Unit D	99	Baffle
	33	Spring	29	Baffle
19	34	Safety	99	Bolt Unit A X2
\$	35	Safety Guide	69	Bolt Unit A
	36	Pin X2	20	Hand Grip
	37	Pin	11	Gasket
	38	Trigger Unit	72	Air Cap Unit X2
	38.1	Trigger	72A.1	Air Cap
	38.2	Pin X2	72A.2	Spring X2
	38.3	Trigger Lever B	72A.3	Steel Ball X2
	39	Spring	72A.4	Hooks
	40	Switch	72A.5	Ring
	40.1	O-Ring	72A.6	Hex. Bolt X3
	40.2	Valve Bush	73	Bolt Unit A
	40.3	Pin X4	74	Air Plug
	40.4	O-Ring	75	Dustproof

TSABS EXPLODED VIEW & PARTS LIS

