NITROSET®
SOLID PROPELLANT FASTENING SYSTEM

NTS805 Series
Operation & Safety Manual

US Patent: US8397969B2

Additional Patents Pending

VER 22.09

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WARNING

DO NOT OPERATE THE NITROSET TOOL

UNLESS YOU HAVE COMPLETELY READ

AND UNDERSTOOD THE OPERATION

AND SAFETY MANUAL

Training is required for use of this tool.*

*Please contact your local distributor or visit www.nitroset.com for more information.

Basic Instructions*

You are required to understand and follow all safety instructions for proper and safe use of NITROSET® tools. If you require any assistance, please contact your jobsite safety foreman or call Nitroset, LLC. at 1.800.524.4649.

Required Safety & Protective Equipment

Always wear proper safety equipment including safety glasses, hard hats, hearing protection, and gloves while operating the tool.

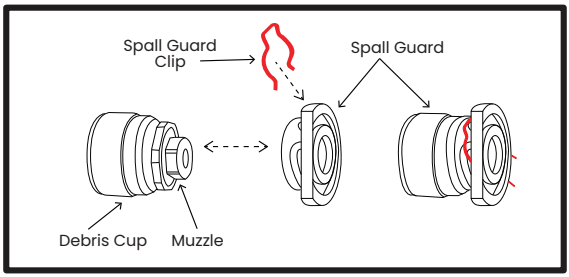
Misuse of the Tool

- Manipulation or modification of the tool is not permitted. Any alteration of the tool or use of non-genuine NITROSET® parts might impair function or cause damage to the tool. Use of non-genuine parts will void any warranties.
- Do not operate in an explosive or inflammable environment.
- Never put your hand over the nosepiece of the tool.
- Never point the tool at yourself or any bystanders.
- Never press the nosepiece against any part of your body or anyone else's body.
- Only fasten into appropriate substrates. Use of inappropriate substrates may cause injuries.
- Never attempt to disassemble, modify or alter the fastener assemblies. Use only the required length and type of pin (with correct adapter) for the application (Refer to the Adapter Usage Table on Page 6).
- Use only genuine NITROSET® Fasteners with the NITROSET® system. Use of incorrect fasteners may lead to injury or damage to the tool.

**According to ANSI A10.3 and DOT (ref: EX2009040168) NITROSET® tools are not classified as a powder actuated tool, thus no licensing is required.*

General Safety Precautions

- Inspect the tool to ensure that the tool is complete, undamaged, and all parts are secure prior to use. Damaged parts should be replaced using genuine NITROSET® parts.
- The trigger body and reset sleeve should be held in place when loading a fastener.
- Insert the fastener assembly completely into the muzzle to ensure the correct function of the tool. Fasteners that do not completely insert into the muzzle should not be used and should be disposed of appropriately.
- The NITROSET® tool should be reset after every actuation to clear any debris from the nosepiece (muzzle+debris cup) of the tool.
- Never leave a loaded tool unattended. Only load the tool prior to fastening.
- Always remove fasteners and any debris from the muzzle prior to cleaning, servicing, maintenance, or storage of the tool.
- Always hold the tool securely and perpendicular to the working surface when making a fastening.
- Use the NITROSET® spall guard with clip to protect against concrete spall.



Spall Guard Usage Instructions

- Spall Guard should ALWAYS be used while operating the tool. Install appropriate spall guard to nosepiece.

  Please refer to the included **Spall Guard Usage Guide**.
- Ensure spall guard is installed flush to nosepiece.
- Install the spall guard clip to the nosepiece to hold spall guard in place.

Acceptable Base Materials

The NITROSET® tool is for fastening into the following base materials only:

- Concrete
- Structural Steel

Never attempt to fasten into any material other than those listed above.

Inappropriate Base Materials

The NITROSET® tool is **NOT** for fastening into the following base materials:

- Wood
- Drywall
- Glass
- Tile
- Rock

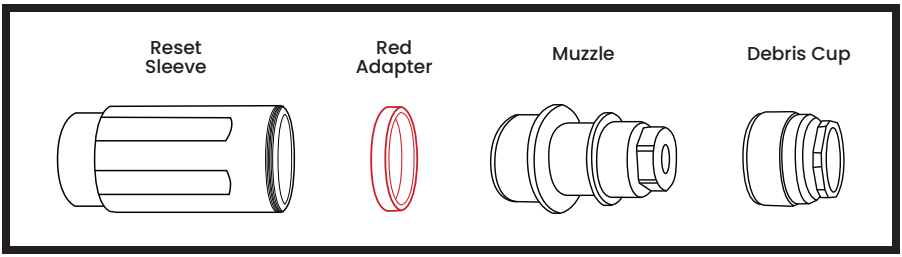
These materials may shatter causing the fastener or base substrate to fly free and may cause serious injury to the operator or bystanders.

Check Before Fastening

Check the thickness and type of base material before fastening. Follow your specific jobsite instructions and building code requirements.

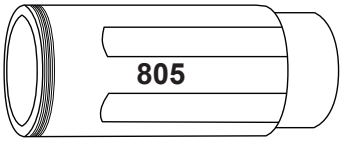
Minimum concrete thickness is three times the fastener penetration (ie. 3" of concrete base material is a minimum requirement for 1" penetration).

In fastening into steel substrate, the minimum thickness of substrate must be 3/16".

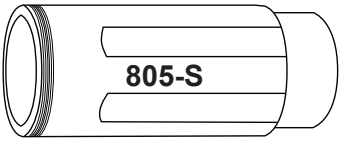


Note: As illustrated above, the Red Adapter is installed between the Muzzle and Reset Sleeve.

NTS805 vs NTS805-S



Reset Sleeve of NTS805 Tool
Best used with 7/8" to 1-1/4" pin & clip



Reset Sleeve of NTS805-S Tool
Best used with 1/2" to 1" pin & clip

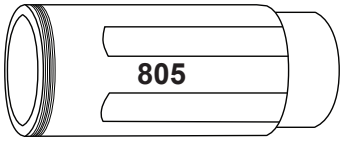
The NTS805 tool comes with the standard NTS805-10 Reset Sleeve. The NTS805-S tool comes with NTS805-10-S. Please refer to the engraved text on the reset sleeve to verify tool model (see illustration above).

REMEMBER

To make use of the full range of the tool, always use correct adapter for different types of pin and pin/clip assembly.

Please refer to the Adapter Usage Table on Page 7 & 8.

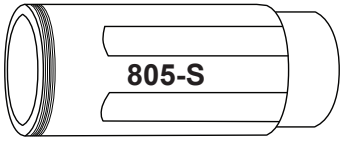
Adapter Usage Table (With NTS805-10 Reset Sleeve)



NTS805 Tool is assembled with the NTS805-10 Reset Sleeve. The new threadless Muzzle can use various pin and clip assemblies with the proper Red Adapter.

Fastener Type / Adapter Requirement	Pin	Pin & Clip Assembly
No Adapter	PIN219 PIN219T PIN222 PIN222W PIN222SW PIN525 PIN532NW	CLU222 CLC12-222 CLC34-222 CLC38-222 CLC1E-222 CLR14-222 CLR38-222 CLR14222-BRT114 CLR14222-BRT2 CLAS525 CLSUPL525 CLRHD14-525 CLRHD38-525 CLRHD14-525-BRT114 CLRHD38-525-BRT2 CLAS532 CLSUPL532 CLT219
With Red Adapter		STT14

Adapter Usage Table (With NTS805-10-S Reset Sleeve)



NTS805-S Tool is assembled with the NTS805-10-S Reset Sleeve. The new threadless Muzzle can use various pin and clip assemblies with the proper Red Adapter.

Fastener Type / Adapter Requirement	Pin	Pin & Clip Assembly
No Adapter	PIK313 PIK316	
With Red Adapter	PIN219 PIN219T PIN222 PIN222W PIN222SW PIN525 PIN532NW	CLU222 CLC12-222 CLC34-222 CLC38-222 CLC1E-222 CLR14-222 CLR38-222 CLR14222-BRT114 CLR14222-BRT2 CLAS525 CLSUPL525 CLRHD14-525 CLRHD38-525 CLRHD14-525-BRT114 CLRHD38-525-BRT2 CLAS532 CLSUPL532 CLT219

Loading and Actuating Instructions

1. Reset the tool before inserting the fastener to ensure the muzzle barrel is clear of any debris.

A) Pull back front of muzzle until reset spring fully collapses.

B) Ensure firing pin guide clears all debris from muzzle chamber prior to inserting new fastener assembly.

2. Insert the fastener fully into the muzzle of the tool. Fasteners must be fully seated in muzzle to ensure proper actuation.

(Hold reset sleeve while inserting fasteners.)

⚠ WARNING ⚠

If the fastener assembly cannot be inserted into the muzzle, do not force the fastener into the muzzle. This can jam the fastener in the tool and damage the fastener. Fasteners that cannot be inserted should be removed and discarded appropriately.

In case of jammed fasteners – Refer to the Troubleshooting Guide (Page 11) for proper removal of all jammed fasteners.

3. Place the NITROSET® tool perpendicular against the fastening surface.

⚠ WARNING ⚠

Cracked concrete may actuate loudly when using the tool.

Fasteners should not be driven close to the edge of the base substrate.

Always maintain a distance of at least 3" from the concrete edge or 1" from the steel edge.

Too close to edge

4. Position the tool and push directly to feel the engagement of the firing spring. Follow with a smooth and forceful motion to compress the firing spring to trigger the firing mechanism. This is the correct fastening procedure to minimize spalling and noise.

IMPORTANT: DO NOT BOUNCE FIRE THE TOOL!

5. Reset the tool to ensure the muzzle barrel is clear of debris and repeat Steps 1 to 4 for further use.

If the tool fails to fasten, remove the spent fastener assembly while pointing the tool away from yourself and any bystanders.

⚠ WARNING ⚠

After the tool has been in use, the muzzle and other parts may be hot. Always wear gloves to handle these areas.

Using NITROSET® Tool with a NITROSET® Pole

The use of NITROSET® pole is recommended for maximum efficiency on ceiling fastening applications. The end of the wire assembly should be placed inside the pole for better control. Actuate by following the actuating instructions as detailed.

⚠ WARNING ⚠

When using an electrically conductive or metallic pole, be sure to maintain a minimum 10 ft clearance from all electrical lines to avoid electrical hazard.

DOs

DO read and understand the correct and safe usage instructions for the NITROSET® Fastening System.

DO recognize that operator and bystander safety is the most important factor when considering a NITROSET® tool application.

DO wear safety goggles and other suitable personal protective items while using the NITROSET® tool.

DO ensure all individuals working in the same area as those using the NITROSET® system also are wearing proper safety equipment.

DO always use a spall guard when using the NITROSET® Tool.

DO make sure when fastening into concrete, the base material thickness is at least 3 times the shank penetration.

DO make sure when fastening into steel substrate, the minimum thickness of the substrate must be 3/16".

DO use correct adapter for different types of pin and pin/clip assembly.

DO make sure that the tool is placed firmly perpendicular to the surface before fastening.

DO reset the tool pointed away from yourself and any bystanders and eject any debris from muzzle piece before inserting the fastener into the barrel.

DO remove defective tools, parts and/or accessories from service immediately.

DO only use the correct tools to disassemble the NITROSET® Tool. Use of pipe wrenches or vise grips can damage the tool.

DO only use genuine NITROSET® repair parts. Any parts from different manufacturers may impair function or cause damage to the tool and lead to injury.

DO clean the tool daily and empty the debris cup every 500 fastenings or as needed.

DO NOTs

DO NOT use NITROSET® tools to fasten into brittle materials such as brick, tile, rock or glazed material.

DO NOT attempt to drive fasteners into soft materials such as wood or drywall or light gauge metal.

DO NOT attempt to drive fasteners into hardened steel, cast iron, or natural rock such as marble.

DO NOT drive fasteners into base steel thinner than the shank diameter of the fastener.

DO NOT fasten into cracked or spalled areas of concrete.

DO NOT drive fasteners closer than 3" to the edge of the concrete materials and 1" to the edge of steel base materials.

DO NOT use NITROSET® tools in a hazardous environment.

DO NOT use the tool prior to ensuring that all parts are in good working order and securely attached to the tool. All parts should be fully threaded and hand tight.

DO NOT place hand over the muzzle end to reset the tool.

I. The fastener is jammed inside the nosepiece.

A) If cycling the tool does not clear the jammed fastener, remove the nosepiece completely. The jammed fastener can then be removed from the other end.

B) DO NOT strike the tool against the substrate to dislodge the fastener.

C) If the fastener remains permanently jammed, please contact the appropriate support personnel.

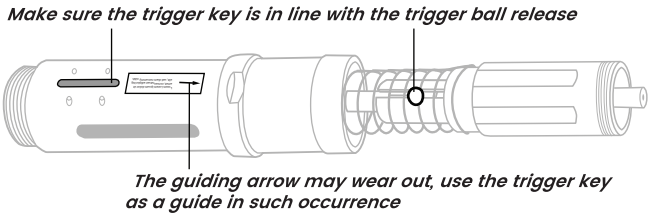
II. The tool does not fire.

A) Check if you are fastening to the appropriate substrate material.

B) Check the nosepiece is free of debris and reset the tool.

C) Check if the correct adapter is being used (Refer to Adapter Usage Table on Page 6).

D) Ensure the tool is assembled properly according to the manual and instructions.



E) Before firing, make sure the nosepiece is perpendicular (right angle) to the material surface. The tool is not designed to fasten at other angles.

F) **Check if the firing pin is piercing the NITROSET pill.** If it's piercing the pill and not firing, then check for damage to the firing pin. Replace firing pin if damaged.

G) If the tool still does not actuate after checking all the above, follow the instructions (Page 14) and disassemble to check for broken parts.

III. The tool fires loudly.

A) Check if you are fastening to the appropriate substrate material.

B) Check if the correct adapter is being used.

C) Before firing, ensure the nosepiece is perpendicular to the material surface. The tool is not designed to fasten properly at other angles.

D) Check and clean the debris cup. Ensure the vents in the debris cup are clear of debris.

E) Ensure the debris cup and muzzle are securely fastened to the tool.

IV. The tool is difficult to depress and fire.

A) Ensure the tool is assembled properly according to the manual and instructions.

B) Clean and lubricate according to the operator's manual.

C) Check that the springs are clean, straight and undamaged.

V. Firing Pin Holder and Guide are damaged.

A) Disassemble the tool and check to see if the buffer is in place. This part acts as a shock absorber. Damage to the tool is possible if used without the buffer properly inserted.

B) Clean to the tool to ensure no debris has gotten into the main body of the tool.

REMEMBER

If all of the above fails, please contact your local supplier's technical support personnel to address the issues or visit our website at:

WWW.NITROSET.COM

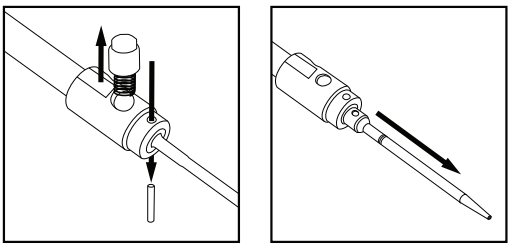
REMEMBER

When removing the firing pin, depress the trigger ball release, and guide the pin out.

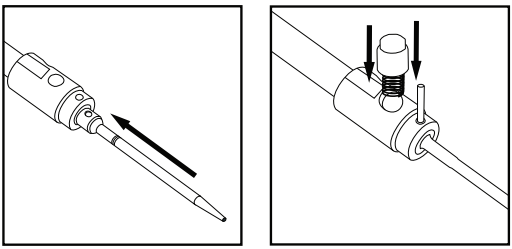
Keep the trigger ball release depressed until the pin exits the guide, otherwise the spring will propel the trigger ball away.

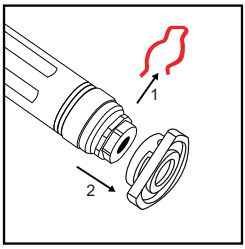
1. Use the provided roll pin punch to knock out the 1/8" roll pin.
2. Remove the worn firing pin from the firing pin holder
3. Seat a new 1/8" roll pin into the holder. Do not insert the roll pin completely.
4. Insert a new firing pin into the slot in the firing pin holder. Ensure that the holes on the back of the firing pin line with the holes in front of the holder.
5. Using a hammer, fully insert the 1/8" roll pin.
6. Reinstall the trigger spring and trigger ball release into the appropriate slot on the firing pin holder.
7. While depressing the trigger ball spring, insert the firing assembly into the firing pin guide.

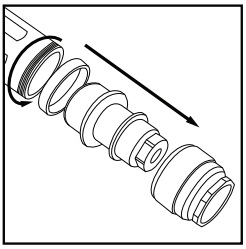
Disassembly



Assembly





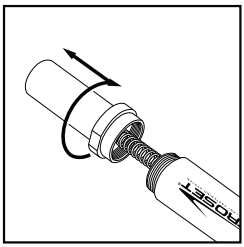


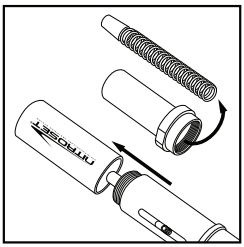
Remove Spall Guard.

Remove Debris Cup from the Reset Sleeve. Use the included wrenches for assistance as necessary.

Remove Muzzle and the Adapter from the Reset Sleeve.

Slide the Adapter off the Muzzle as necessary.

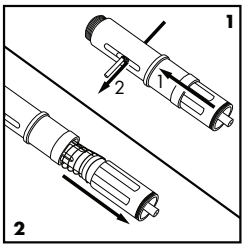


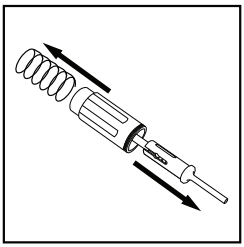


Remove the End Cap from the tool.

Slide the Firing Spring off the tool. Note the Buffer is attached to the end of the Firing Spring. Check condition of Firing Spring and Buffer.

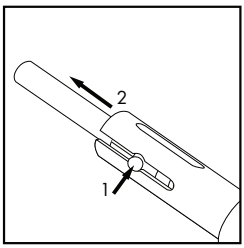
Slide off the Outer Cover Sleeve.





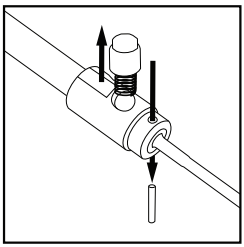
Depress the Reset Spring to collapse the Reset Sleeve. This will loosen the Main Assembly Pin and allow it to be removed from the tool.

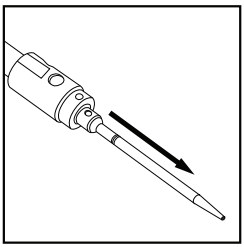
Slide the Main Firing Assembly from the main body of the tool.



Depress the Trigger Ball Release to compress the Trigger Ball Spring and slide the Firing Pin Assembly from the Firing Pin Guide.

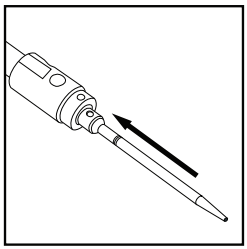
Keep pressure over the Trigger Ball to hold it in place while removing the assembly. Releasing the Trigger Ball may cause it to spring up.

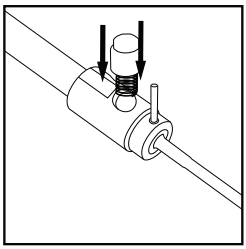




Once the Firing Pin Assembly has been removed from the Guide, slowly release the Trigger Ball and remove it from the Firing Pin Holder.

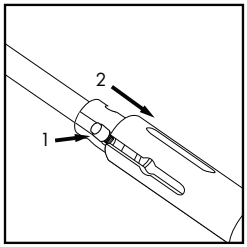
To remove the Firing Pin, use the provided firing pin punch and knock out the 1/8" Roll Pin.

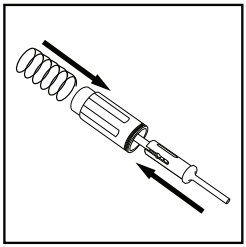




Assemble Firing Pin into Firing Pin Holder using the 1/8" Roll Pin.

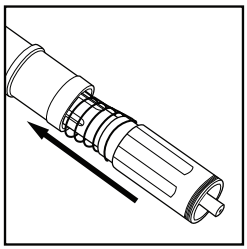
Insert Trigger Ball Spring into Trigger Ball Release and place into the Firing Pin Holder.

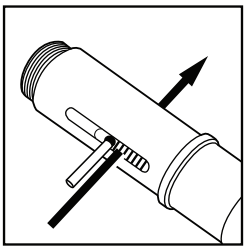




Slide complete Firing Assembly into the Guide while depressing the Trigger Ball Release until it clicks into the Guide.

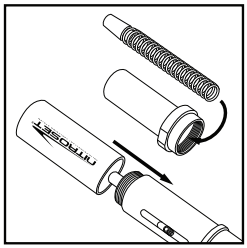
Insert Guide and Holder through the Reset Sleeve. Attach Reset Spring to Reset Sleeve.

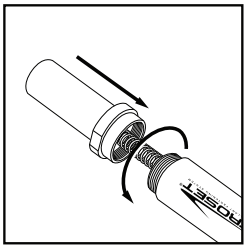




Insert Reset Sleeve into the Trigger Body. Make sure the trigger key on the body aligns properly with the Trigger Ball Release.

Insert Main Assembly Pin. Ensure coils of the Reset Sleeve are all above the pin.

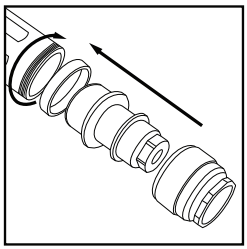


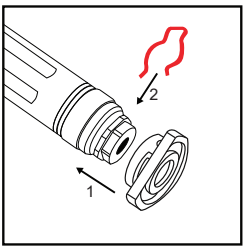


Slide Outer Cover Sleeve over the Trigger Body.

Insert the Firing Spring with the Buffer attached over the Holder.

Attach the End Cap of the tool.





Slide appropriate Adapter onto the Muzzle.

Insert Muzzle into the Reset Sleeve.

Screw the Debris Cup onto the Reset Sleeve.

Install the Spall Guard onto the Debris Cup, secure with the Retention Clip.

NITROSET® Tool Full Cleaning Procedure

It is recommended that the NITROSET® tool be cleaned every day after use. Proper maintenance and cleaning of the tool enables the tool to operate at peak performance.

1. First, be sure all fastener assemblies and debris are ejected from the tool by resetting it pointed away from yourself or any bystanders.
2. Remove the debris cup by unscrewing it from the reset sleeve. Then, remove the end cap and disassemble the entire tool following the tool disassembly instructions (Page 14).
3. Empty the debris cup.
4. To clean, use a diluted industrial degreaser or cleaner similar to Strike-Hold (provided in tool kit) or other similar non-oil base degreaser to spray or wipe the tool surface and threads. Allow contact time of 3 to 5 minutes before scrubbing. Wipe off excess cleaning agent and allow tool to fully dry before reassembly.
5. Re-assemble the tool (Page 15). For long term storage, thread the nosepiece halfway to prevent debris build up from forming rust on the fine thread.

Interim Cleaning Procedure

1. Empty the debris cup after every 500 fastenings, or as needed to optimize performance.
2. A liquid shot of degreaser lubricant at approximately every 500 to 1000 fastenings is recommended to maintain a smooth operation.
3. This will help tool performance and actuating consistency, making your end-of-day cleaning easier.

2" Full-Cut Spall Guard
NTS101-0-C

3.5" Spall Guard
NTS101-0-CLAS

Spall Guard Clip
NTS101-0-U

Muzzle
NTS805-1

Debris Cup
NTS805-2

Firing Pin Guide
NTS805-3

Firing Pin
NTS101-4

Trigger Ball Spring
NTS101-5

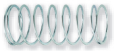
Firing Pin Holder
NTS101-6

Trigger Ball Release
NTS101-7

1/8" Roll Pin
NTS101-8

Firing Spring
NTS101-9

Reset Sleeve
NTS805-10
NTS805-10-S



Reset Spring
NTS101-11

1/4" Main Assembly Pin
NTS101-12

Trigger Body
Not sold Separately

Outer Cover Sleeve
NTS8X-14

End Cap
NTS101-15

Buffer
NTS101-16

Red Adapter
NTS805-17-A

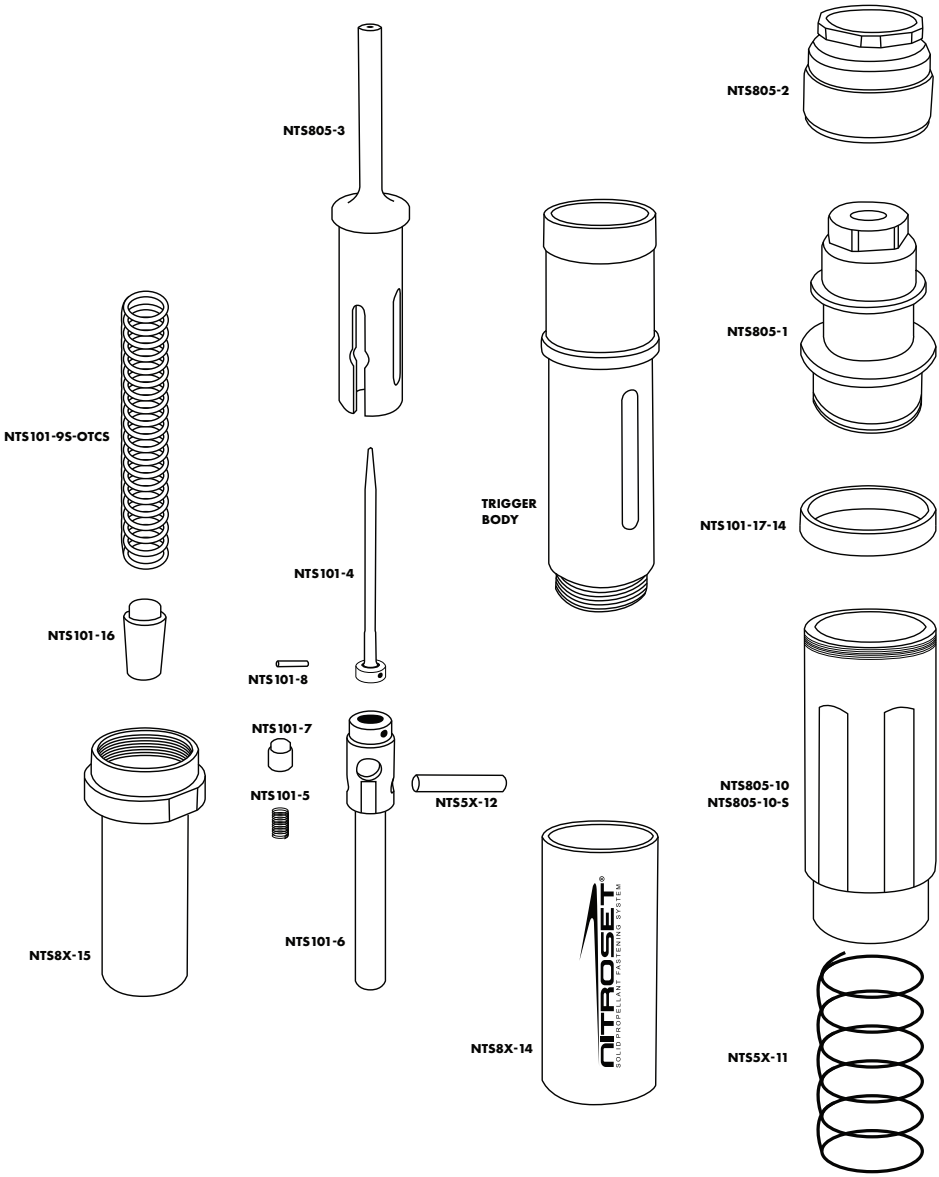
Triple Play Extension*
TOPF-MF14

Hand Grip*
NTS101-19

Trigger Body Insert**
NTS101-32

*These parts are included in the NTS805 Triple Play Tool Kits.

**Some tools may have this part permanently fixed in the Trigger Body.



* Parts in this diagram are to scale

NITROSET®

SOLID PROPELLANT FASTENING SYSTEM

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Houston, TX 77036

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Nitroset® One-Year Limited Warranty

- Nitroset, LLC. offers a one-year limited manufacturer's warranty on Nitroset® Fastening Tools against defects from the date of purchase.
- The manufacturer's warranty covers performance issues of covered parts.
- Excluded are normal wear and tear parts, improper maintenance, handling, alteration, abuse, neglect, accidental damage, vandalism, theft, fire, water, or damage due to natural disasters.
- Damage resulting from the installation or use of any part, accessory, or attachment not approved by Nitroset, LLC. for use with the product(s) will void the warranty.
- The determination if the tool is covered under warranty is at the sole discretion of Nitroset, LLC. We reserve the right to repair or replace the item.
- The product owner is responsible for inbound shipping costs.
- The warranty is non-transferable and limited exclusively to the original purchaser.

All warranty returns for repair must include a Return Merchandise Authorization (RMA) number obtained from a Nitroset representative. The claim product must be sent at the customer's expense to Nitroset, LLC. for evaluation. Unauthorized returns without an RMA number will not be accepted.