

Aluminum Collision Tools

Aluminum Vehicle Repair Tools

SPR-12^{V2}



For Flattening	Solid Rivet	3mm Punch & Die	5mm Punch & Die	5mm Extractor Dies	3mm Extractor Dies	5mm Punch & Die
						
Forming & Flattening Set	Installation Set	Installation Set	Installation Set	Male Female	Male Female	Installation Set

ALUMINUM SELF-PIERCING RIVET GUN
MODEL SPR12 INSTRUCTION MANUAL

FEATURES OF THE RIVET GUN

Thank you for purchasing Aluminum Collision Tools' Self-Piercing Rivet Gun. Our safe and easy-to-handle tool uses a high-quality lithium-ion battery to power the high-pressure hydraulic system and the control system. The rivet gun is designed specifically for work on aluminum alloy vehicle bodies.

Aluminum Collision Tools' Self-Piercing Rivet Gun:

- Is efficient and highly portable.
- Uses a micro-computer control system that monitors pressure and automatically retracts the ram after the rivet is installed. The output pressure is adjustable.
- Features a manual reset button, which halts the forward movement of the piston and automatically retracts it to starting position.
 - Features arms that rotate 360 degrees, making it easy to use in different spots.
 - Comes with a "C" yoke.

BEFORE USING THE SELF-PIERCING RIVET GUN

Before using the Aluminum Collision Tools Self-Piercing Rivet Gun **for the first time**, read the "Be Safe" and "Limited Warranty" sections at the end of this manual.

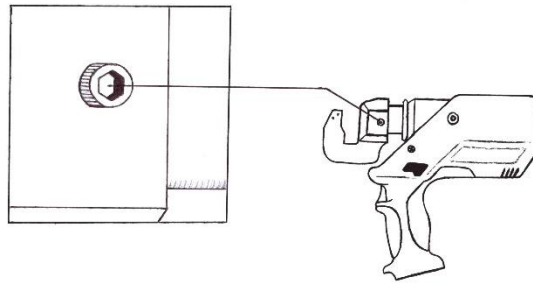
Each time you use the rivet gun, carefully examine the charger, batteries, and rivet gun itself to make sure all components are in working order. Also examine the punches, dies, and yoke and make sure that the battery connection is good.

Charging and using the battery

- Completely charge the battery before the first use of the rivet gun.
- Do not take apart the batteries, rivet gun, or battery charger. If problems occur with the rivet gun or components during use, contact Aluminum Collision Tools for authorized repairs. Taking apart the tool or its components voids the warranty and may be dangerous.

- When the battery reaches its low-voltage threshold, the rivet gun will beep three times and the LED will flash three times.
- The life cycle of each battery is about 600 cycles, after which the battery will need to be replaced. If the battery's useful charge has gotten shorter, it is a good indicator that replacement is required.
Never completely discharge the battery, as it damages the battery.
- Every couple of months, fully charge the batteries without interruption. If you do not plan to use the rivet gun for an extended period, remove the battery. Do not fully charge batteries that will be stored for extended periods.
 - Never put a battery in a fire, as explosion and personal injury may occur.
- Never expose the rivet gun and its components to rain or high humidity, as such exposure increases the possibility of electrical shock.
 - If the tool does get wet, take off the battery and re-install it only after the rivet gun dries.

Safely operating the rivet gun

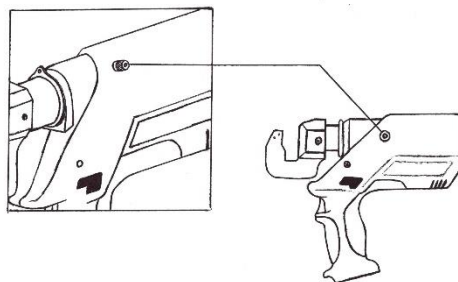


- Make sure the stop screws are tight before using the rivet gun, as they prevent the yoke from coming off during operation. Only remove the stop screws when changing to a different yoke.
- Remove the battery when changing dies to prevent pinching.
- Keep the rivet gun's handle and trigger clean, as grease and dirt can make the tool slip out of your hand.

Adjusting the pressure

Typically, the failure of the rivet to become flush (crowned or concave) following installation will necessitate increasing the pressure. If the rivet is over installed (concave) on the installation, the tool may have the pressure decreased.

The tool was factory set at the typical appropriate pressure. In the event that the force pressure needs to be adjusted the tool is designed for this event. Before any adjustments are made, please confirm that the proper length rivet is being used.



Increase the pressure by turning the adjustment knob in a clockwise manner and for decreasing pressure, turn the adjustment knob in a counter clockwise manner.

Perform the adjustments in small increments and test prior to use.

SPECIFICATIONS AND COMPONENTS

Specifications

Capacity: 20-50KN (adjustable)

Riveting time: 3 to 5 seconds

Power: Electro-hydraulic actuator

Noise: 75 decibels

Charging time: about two hours

Weight: 9.9 pounds (4.5 kilograms)

Continuous use: about 350 rivets

Charging source: AC 100V 50-60 Hz (auto-switching)

Working temperatures: 14 to 140 degrees Fahrenheit (-10 to 40 degrees Celsius)

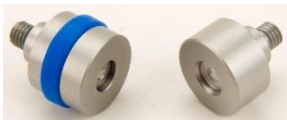
Rivet Gun Parts and Components



1. Closing Head Die holder
2. Rivet Holding Die
3. "C" yoke
4. Installation area for tool balancer attachment
5. Pressure adjustment knob
6. Warning light
7. Trigger
8. Vent
9. Manual retraction button
10. Lithium-ion battery
11. Battery Charger

Included Die Sets

For Self-Piercing Rivets:



36-PRR-16 & 36-PRR-17
(3mm rivet holding die and closing head die)



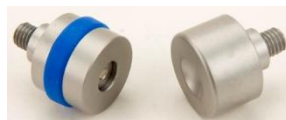
36-SA-0400 & 36-SA-0401
(5mm rivet holding die and closing head die)

OR



36-SA-0400 & 36-SA-0402
(5mm rivet holding die and closing head die)

For Solid Rivets:



36-PRR-16 & 36-PRR-15

For Removing Rivets:



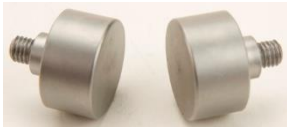
36-PRR-10 & 36-PRR-11
(5mm male/female)



36-PRR-12 & 36-PRR-13

(3mm male/female)

For Flattening:



36-PRR-14 & 36-PRR-14

Additional Accessories

Please contact Aluminum Collision Tools to find out about yokes and other options that are available. All update and upgrade see product updates at the end of this manual

HOW TO USE THE SELF-PIERCING RIVET GUN

CAUTION, VERY IMPORTANT!

*When installing a die in the piston ram and yoke for any kind of operation, the **USER MUST TIGHTEN THE THREADS FULLY** or **DAMAGE** to the die or tool will occur.*

Self piercing rivet die installation options

1. 3mm SPR installation requires the 36-PRR-16 rivet holding die & the 36-PRR-17 closing head
2. 5mm SPR installation with a stack height of 4.1mm to 7.1mm uses the 36-SA-400 rivet holding die
and the 36-SA-401 closing head.
3. 5mm SPR installation with a stack height of 7.5mm to 11.00mm uses the 36-SA-400 rivet holding die
and the 36-SA-402 closing head.

For Solid Rivet installation

1. 36-PRR-16 die and the 36-PRR-15 closing head.

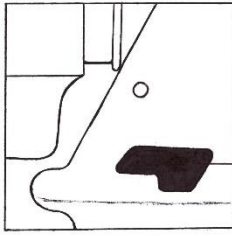
For Removing Rivets

1. 3mm rivet removal uses the 36-PRR-12 punch and the 36-PRR-13 female die.
2. 5mm rivet removal uses the 36-PRR-10 punch and the 36-PRR-11 female die.

For Flattening

1. Flattening requires the use two of the 36-PRR-14 flattening dies.

How to Install a Self-Piercing Rivet



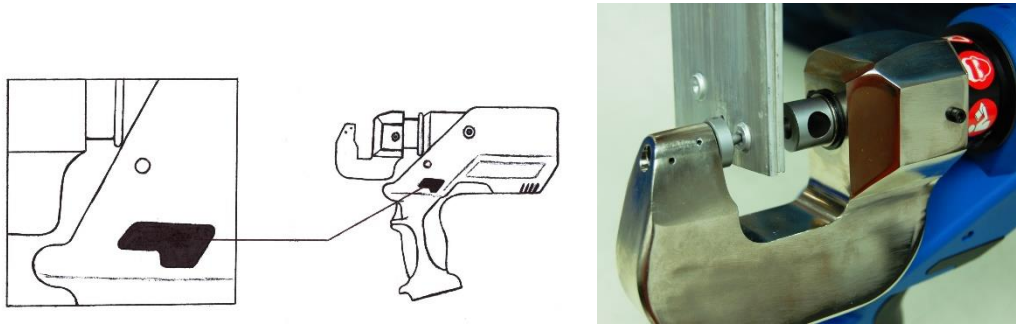
Installation of self piercing rivets

Before each rivet installation make sure the piston ram is fully retracted. If piston ram is not fully retracted press the manual retraction button until full retraction is completed.

Install dies into the SPR12. The rivet holding die must be installed on the piston side of the SPR12 rivet gun with the closing head die installed on the stationary side of the C-yoke. (See chart above for rivet die combinations).

Place rivet to be installed into the rivet holding die taking extra caution that the rivet is seated securely in place with the help of the magnet located in the center of the die. Once the SPR12 with rivet is in the desired position squeeze the trigger and hold until the install process is completed and the piston has started automatic retraction.

How to Take Out a Rivet

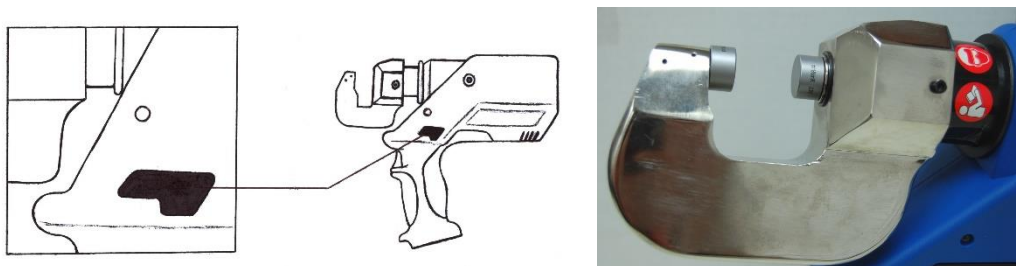


Removal of rivet

Before each rivet removal make sure the piston ram is fully retracted. If piston ram is not fully retracted press the manual retraction button until full retraction is completed.

Install rivet removal dies into the SPR12. The male die must be installed on the stationary side of the C-yoke and the female die installed into the piston side of the SPR12. Place tip of male die in the center of the formed side of the rivet to be removed. Then press the trigger extending the piston which holds the female die and continue holding the trigger until rivet is punched out and automatic retraction has started. The punched out rivet must be removed from female die before any other rivet removal is attempted.

How to Flatten Sheet Metal



Flatten sheet metal

Before use make sure the piston ram is fully retracted. If piston ram is not fully retracted press the manual retraction button until full retraction is completed.

Install one flatting die into the stationary side of the C-yoke as well as one flatting die into the piston side of the SPR12.

Once placed into desired position squeeze trigger until the flattening process is completed and the automatic retraction has started.

BE SAFE

Common sense is required to use this tool. If the Self-Piercing Rivet Gun does not seem to functioning properly, has parts missing, or is being used in a manner dangerous to the operator or anyone else, stop using the tool immediately.

Electrical

The rivet gun is an electric tool, so electric shock is possible. Only a qualified technician should make electrical connections. Do not:

- Modify the battery charger plug or use an adapter with it.
- Expose the rivet gun or components to wet or very humid conditions.
 - Burn or short-circuit the battery.

Personal Safety

The Self-Piercing Rivet Gun should only be used by operators who know about proper riveting practices. No one under 18 years old or without training should utilize this tool. The rivet gun should be kept away from children or people not trained to use it.

You should:

- Always wear safety goggles, hearing protection, and appropriate non-slipping gloves.
 - Only use the rivet gun indoors.
- Not put your fingers or any other body part between the rivet gun's jaws, as you could be seriously hurt.
 - Never use the tool when tired or under the influence of alcohol or medication.
- Not put the rivet gun on an uneven or unstable surface, as it may fall and harm you or the tool.
 - Not use the tool where gas, dust, or flammable or explosive liquids are present.
 - Not store the tool near gases and corrosive liquids or in high temperatures.
- Not use or store the rivet gun in extremely cold or extremely hot temperatures, as either can deform the plastic body, damage the battery, and shorten the life of electronic parts.

Service Recommendation:

- Battery should be used and cycled regularly to maintain battery life.
 - Always inspect rivet gun Prior to use.
- Unit should be returned for service and inspection every 3 years or 200,000 Rivet cycles.
 - Service Should and repairs should be done by an Aluminum Collision Tools Certified Service Center only.
 - Do not open or work on inside of rivet gun. This will void your warranty
- Modifications or non-factory upgrades and alterations of equipment will void warranty.

LIMITED WARRANTY

Aluminum Collision Tools* warrants Self-Piercing Rivet Guns for twelve (12) months after purchase against defects in materials or workmanship that arise under normal use if used in accordance with the manufacturer's instructions and warnings. This warranty is limited to repair, replacement, or refund of the purchase price of the defective tool at the option of Aluminum Collision Tools. The purchaser must have a copy of the original purchase receipt and contact Aluminum Collision Tools for return authorization and instructions. Return and replacement shipping charges must be paid by the purchaser. This warranty extends only to the original purchaser, and the warranty does not cover normal wear and tear nor tools that have been: modified, disassembled, altered, or repaired by anyone other than Aluminum Collision Tools, or misused, abused, or used contrary to the manufacturer's instructions or warnings.

Note: Yoke and Piston thread damage is not covered under warranty

Battery has A 180 day warranty from date of purchase:

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER EXPRESSLY WAIVES ANY RIGHT IT MIGHT HAVE TO CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM A DEFECT OR OTHERWISE. ANY ACTION OR ARBITRATION CONCERNING THE PRODUCT MUST BE BROUGHT IN SEDGWICK COUNTY, KANSAS. THIS LIMITED WARRANTY IS PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Any limitation in this warranty that conflicts with the law of an applicable jurisdiction shall be deemed modified to comport to the minimum warranty permitted under that law.

***Aluminum Collision Tools, LLC**

2101 S Water Street

Burnet, TX 78611

Self-Piercing Rivet (SPR)

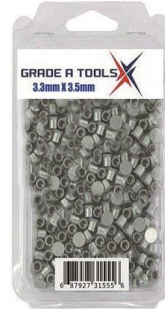
Available From Grade A Tools

Self-Piercing Rivet Re-Order

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☐ GAT-33x40
☐ GAT-33x45
☐ GAT-33x50
☐ GAT-33x55
☐ GAT-33x60
☐ GAT-33x65
☐ GAT-33x70



3mm



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☐ GAT-53X75
☐ GAT-53X80
☐ GAT-53X85
☐ GAT-53X90
☐ GAT-53X95
☐ GAT-53X10
☐ GAT-53X105
☐ GAT-53X110
☐ GAT-53X115
☐ GAT-53X120



5mm



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Product Update: 04-01-2021

1.) Battery life Meter and Rivet Cycle Count display



Battery display provided for batteries w/o Power Meters, Rivet Cycle displays counts the number of riveting cycles that rivet Gun has processed. Display turns on when rivet gun trigger switch is engaged. This update is for all SPR-12 V2 = (Version 2 Models)

- 2.) New to this model upgraded rivet removal dies; the new design increases life of the die (mandrel) and reduces the Sticking, and hole run out. All will interchange with V1 Rivet gun

A.) 36-PRR-10 5mm Punch Die

B.) 36-PRR-12 3mm Punch Die



Note: All Rivet Dies (Mandrels) will interchange with both the V1 & V2 Rivet gun models

3.) Unit Includes Rivet Die (mandrel) Storage Cylinders quantity of 12. This accessory is subject to change without notice and carries no monetary value. But is a great addition to your kit. **See Part # GAT-SPR-2012**

4.) Update Rivet Dies kit From 12 To 16 Total dies (Updated 04-01-22)



5.) Upgraded Large "C" Yoke add 9 Total attachments (Updated 04-01-22)



Rivet Die Chart

SPR-12 Rivet Die & Mandrel - Re-Order Guide

Forming Dies



TYD-36-PRR-15
Solid Rivets - Forming



TYD-36-SA-0401
5mm Forming



TYD-36-SA-0402
5mm Forming



TYD-36-PRR-17
3mm Forming

Removal Dies



TYD-36-PRR-13
3mm - Female Removal



TYD-36-PRR-12
3mm - Male Removal



TYD-36-PRR-11
5mm - Female Removal



TYD-36-PRR-12
3mm - Male Removal

Punch & Flattening Dies



TYD-36-PRR-16
3mm Punch



TYD-36-SA-0400
5mm Punch



TYD-36-PRR-14
Flattening Dies

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Other Rivet Dies



GAT-PR5-10HD
5mm Male Removal
PR5 Compatibility



GAT-ES-5mm
Elastomer Spring
PR5 Compatibility



GAT-PR5-12HD
3mm Male Removal
PR5 Compatibility



GAT-ES-3mm
Elastomer Spring
PR5 Compatibility



GAT-PR5-11HD
5mm Female Removal
PR5 Compatibility



GAT-PR5-13HD
3mm Female Removal
PR5 Compatibility



GAT-36-CPD-C10
Flow Form Calibration Punch
PR5 Compatibility



GAT-SPR-399-5MM
5mm Punch Die
Works with: SPR-12,
SPR-12-V2, ESR800



GAT-36-C11-3MM
3mm Female
Punch Removal/Flow Form
SPR-12, SPR-V2 Pr-5, and ESR800



GAT-36-C11-5MM
5mm Female
Punch Removal/Flow Form
SPR-12, SPR-V2 Pr-5, and ESR800



GAT-FFD-FF10
Flow Form Die - Rivet Head Side
SPR-12 & PR5 Compatibility



GAT-FFD-FF11
Flow Form Die - Forming Side
SPR-12 & PR5 Compatibility



GAT-PRR-25-EXT
25mm Die Extension
SPR-12, SPR-V2 Pr-5, and
ESR800



GAT-PRR-35-EXT
35mm Die Extension
SPR-12, PR-5, & ESR800 SPR



GAT-GYS-DF-E1
E1 Extractor Die
Compatible with # SPR67 & SPR68
GYS Gun # 053861, 056893

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Aluminum Vehicle Repair Tools

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SoTex Tools LLC

201 Deborah Drive, New Braunfels Texas 78130.

South Texas Hydraulics and Pneumatics Service Center.

All warranty repairs must be authorized and noted with a WRA# (warranty return authorization).

Contact your place of purchase for the Warranty Return Authorization number (WRA#).

Service Recommendations

- 1.) Service and Clean your equipment as needed always inspect the equipment prior to use
- 2.) Inspect all rivet dies (mandrels) checking for any damage or wear and replace as needed
- 3.) Rivet Gun should be calibrated and inspected every 200,000 Rivet cycles or 3 Years
whichever occurs first.
- 4.) Inspections should be done by Certified Service Center of Aluminum Collision Tools
- 5.) Service Center will inspect and recalibrate pressure settings and check equipment and advise customer to any repairs as need. Equipment owner will be responsible for any damages and or parts needed that are outside of the 1 Year warranty Period.