

AL-5

Capacitor Discharge

Aluminum Dent Pulling System



Instruction Manual

Version 1.02

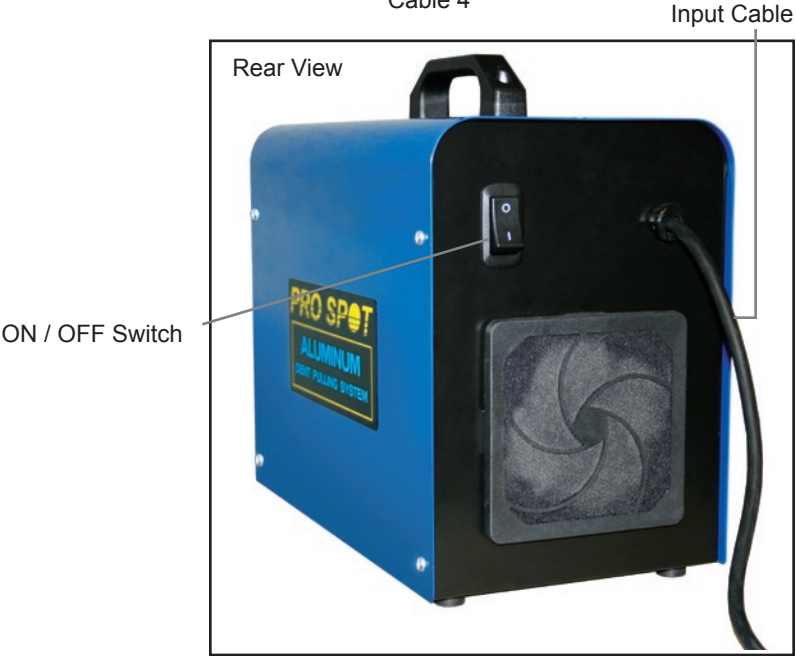


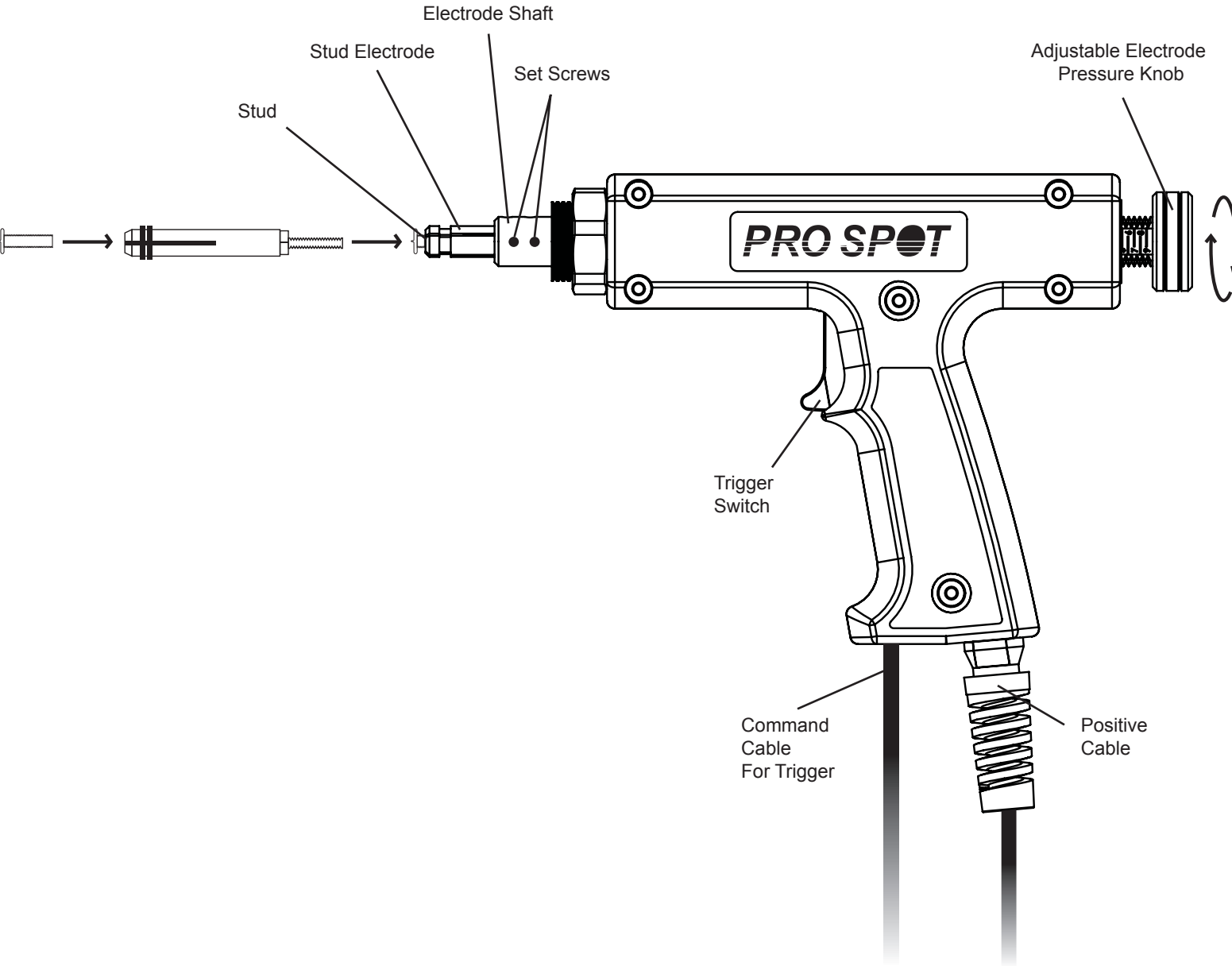
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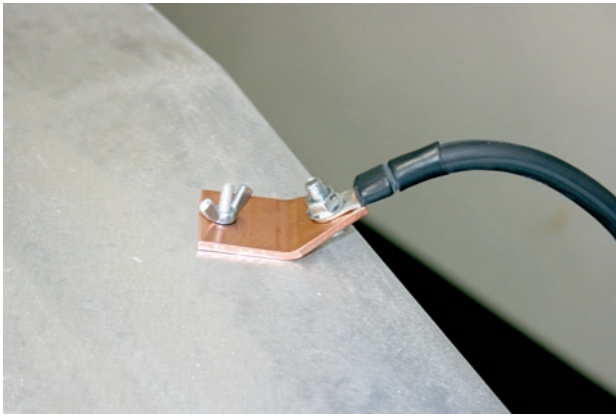
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Front Panel Zoom





**Ground Plate**

Clean surface, weld a stud using the AL-5.

Place the ground plate on top of the stud, use a wing nut or similar to tighten the plate to the panel. The closer the ground to the weld location, the better.

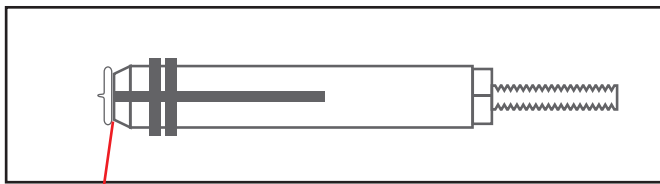
**Ground Clamp**

Alternative method to achieve ground.

Clean surface on work piece and use ground clamp in this location. The closer the ground to the weld location, the better.

To Weld:

Insert a threaded stud into the matching electrode holder.
Place the gun in a perpendicular 90° position to the weld area.



NO GAP Figure 1

In normal operation, the indicator light on the front panel should be as follows:

	○ GRD	READY and ON
OV ○	● READY	lights are illuminated
OH ○	● ON	when the welder is on.

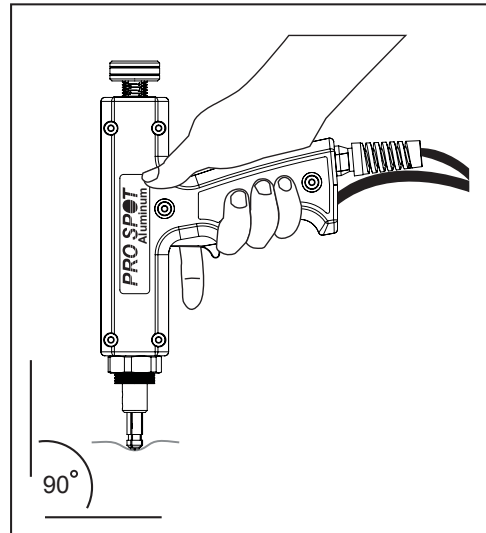
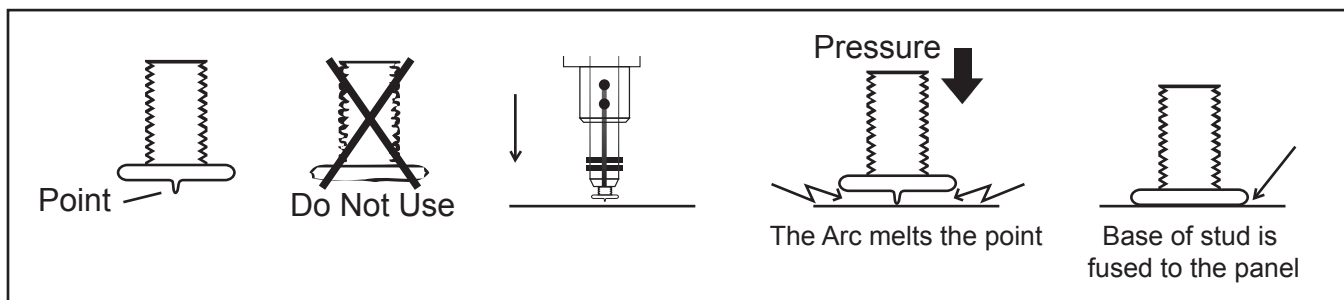


Figure 3

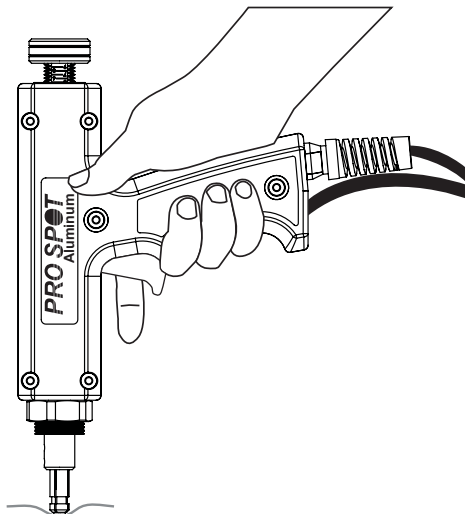
When the stud is placed on the panel, the GRD (ground) Light should turn on and indicate that the ground circuit is complete. If the voltage setting is changed, the ready light will go out until the correct capacitor voltage has been verified. Once the correct capacitor voltage has been verified, the light will turn on again.

The point on the stud creates an arc and the pressure on the stud collapses the point and melts the base of the stud to the panel. All of this occurs in milliseconds to create a proper weld, if the time were longer it could damage or blow a hole in the panel.

**Setting the Weld Voltage:**

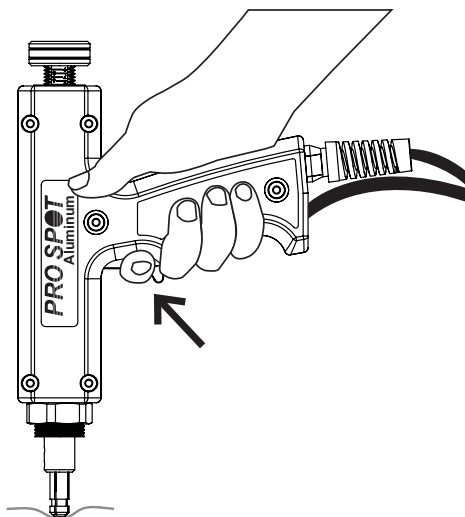
Thickness:	Set weld knob to:
4mm	60-90
5mm	70-110
6mm	80-130

1.



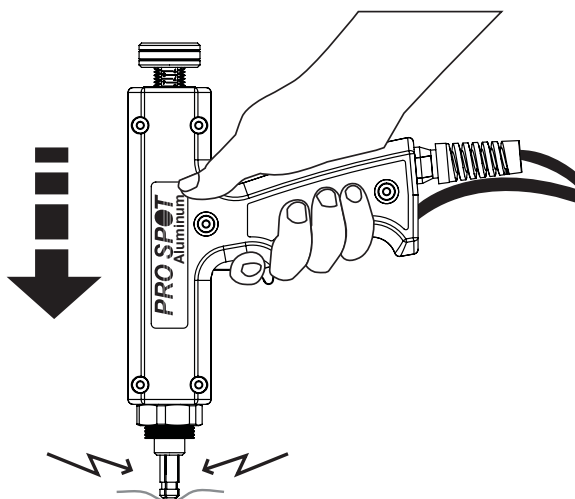
Place stud in desired location.
Do not apply pressure to gun yet.

2.



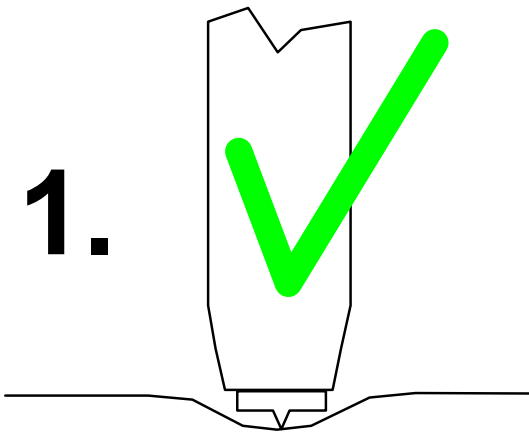
Squeeze and hold trigger.
Again, do not apply pressure to gun yet.

3.

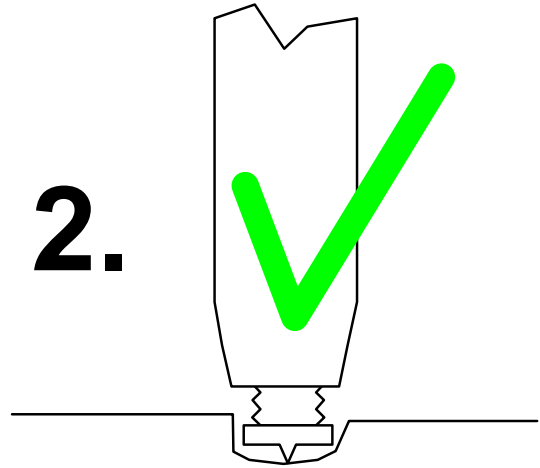


With trigger still squeezed, apply downward pressure until the gun fires and the weld has been made.

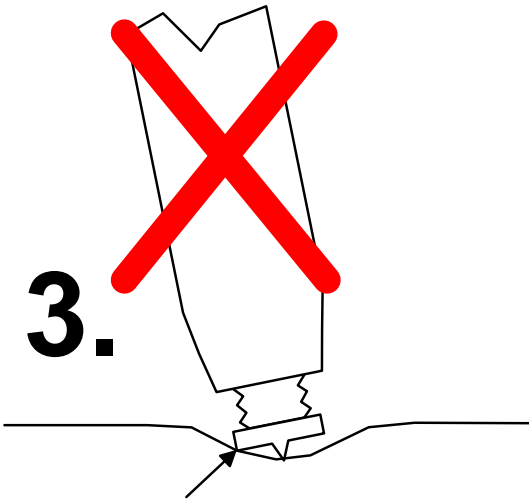
1.



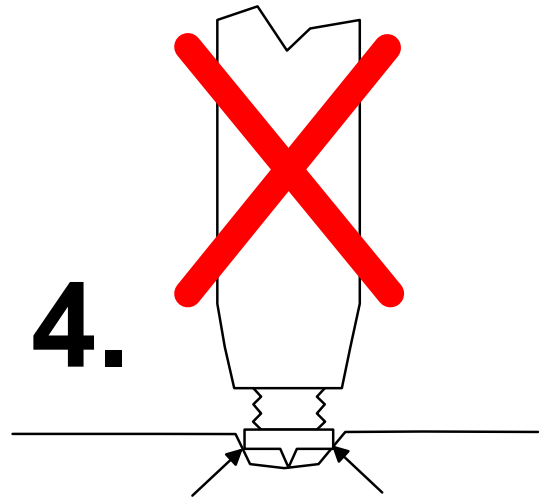
2.



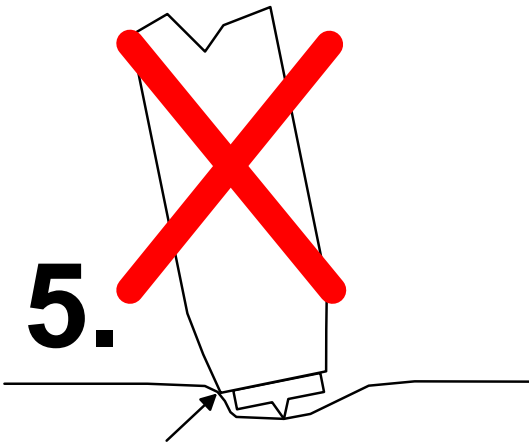
3.



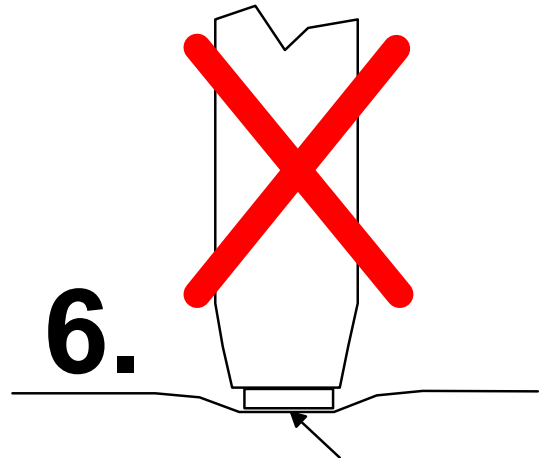
4.



5.



6.



1. Make sure the point ONLY touches the surface.
GOOD! Stud flush to electrode. GOOD.

2. Make sure the point ONLY touches the surface
GOOD! Stud can extend 1/8"(2mm) from electrode. OK.

3. Point and head of stud touches the surface. BAD!

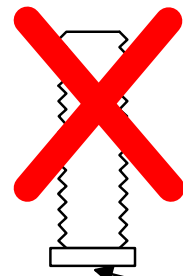
4. Head of stud touches the surface. BAD!

5. Electrode touches surface. BAD!

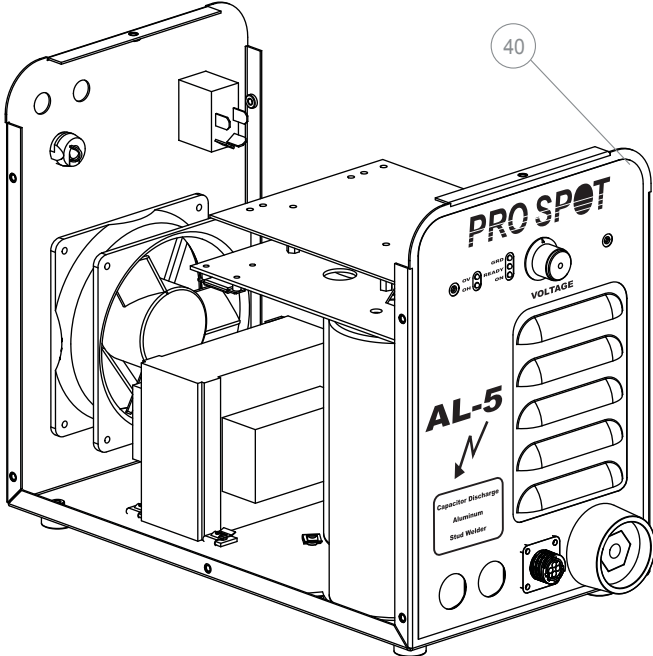
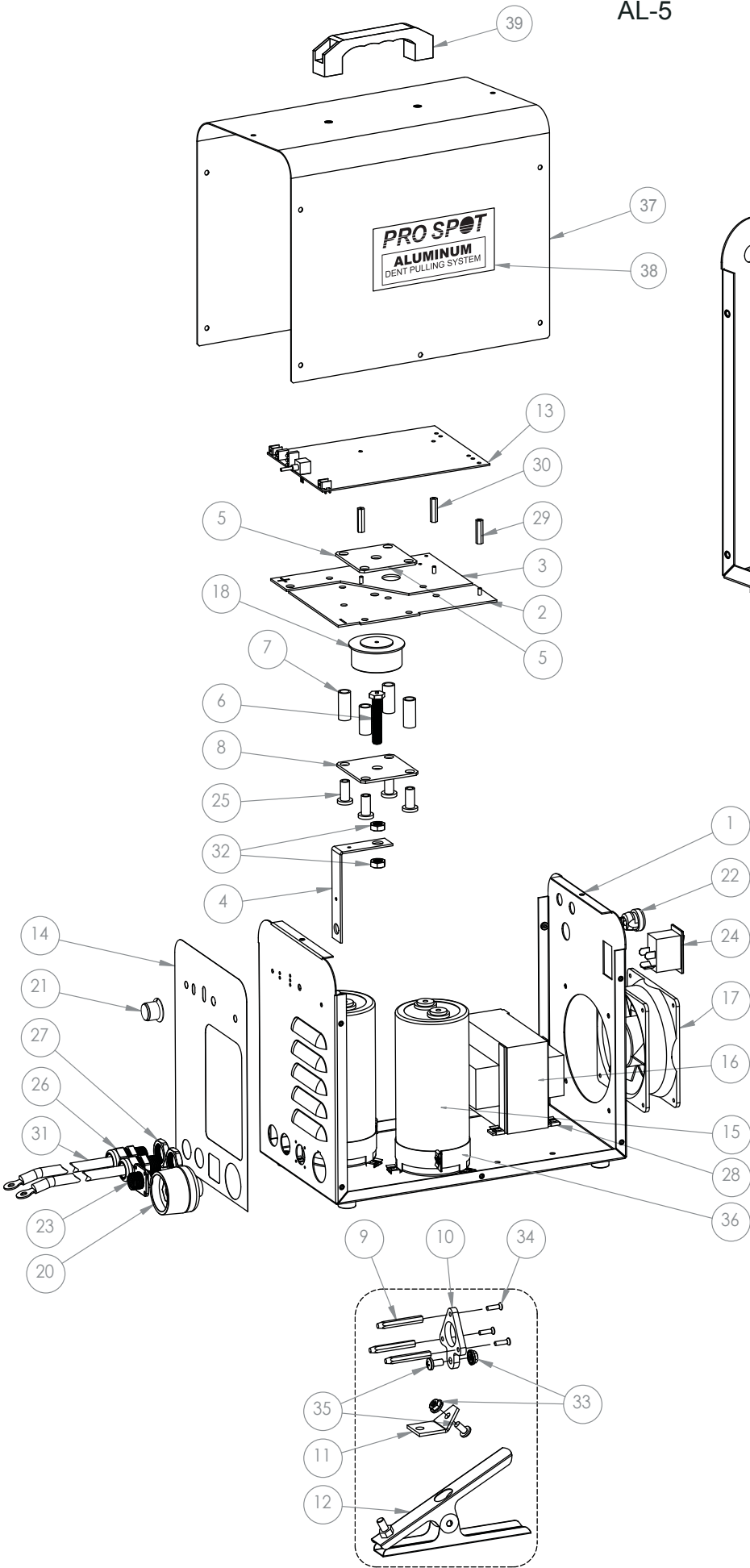
6. No point on stud. BAD! Will not work.



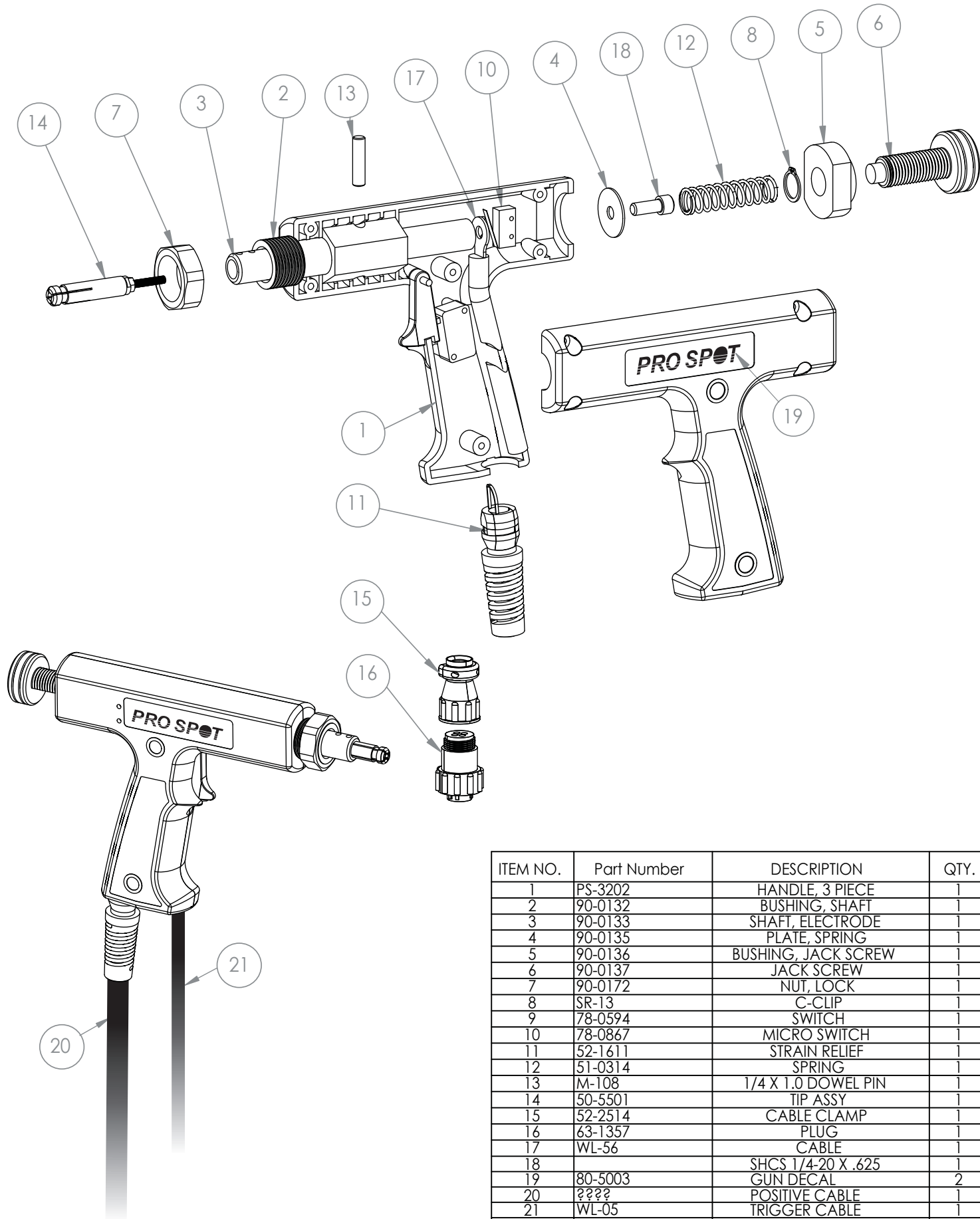
Point. GOOD!



No Point. BAD!



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	90-0154	CHASSIS	1
2	90-0157	PLATE, NEUTRAL	1
3	90-0156	PLATE, POSITIVE	1
4	90-0158	BUSS BAR	1
5	90-0159	PLATE, BACKER	1
6	90-0160	CONTACT SCREW	1
7	90-0161	SPACER, BOX CLAMP	4
8	90-0159	BACKER PLATE	1
9	90-0139	LEG, SUPPORT	3
10	90-0138	SUPPORT, TRIANGLE	1
11	90-0195	GROUND PLATE	1
12	85-0127	GROUND CLAMP	1
13	CB-500	PROCESSOR BOARD	1
14	80-5154	LABEL, FRONT PANEL	1
15	72-0333	CAPACITOR	2
16	77-2275	TRANSFORMER	1
17	82-0101	COOLING FAN 110V	1
18	74-8004	DIODE	1
19	52-9540	RUBBER FOOT	4
20	63-0031	SOCKET	1
21	52-0119	KNOB	1
22	52-1244	STRAIN RELIEF	1
23	63-1360	4 PIN CONNECTOR	1
24	78-1686	SWITCH	1
25	52-3503	NYLON SHOULDER WASHER	4
26	52-1903	CORD GRIP	2
27	52-2003	NUT	2
28	51-0133	PANEL NUT, #8	12
29	51-18	STANDOFF, BRASS	2
30	51-04	STANDOFF, PLASTIC	1
31	WL-56	CABLE	2
32	N-90	NUT, BRASS	2
33	N-96	FLANGE NUT 1/4-20	2
34	S-176	FHMS 8-32 X .75	3
35	S-38	PHMS 1/4-20 X .5	2
36		CLAMP, 76mm CAPACITOR	2
37	90-0155	COVER	1
38	80-5155	AL-5 COVER SIDE DECAL	2
39	51-0055	HANDLE	2
40	80-5154	FRONT PANEL DECAL	1



ITEM NO.	Part Number	DESCRIPTION	QTY.
1	PS-3202	HANDLE, 3 PIECE	1
2	90-0132	BUSHING, SHAFT	1
3	90-0133	SHAFT, ELECTRODE	1
4	90-0135	PLATE, SPRING	1
5	90-0136	BUSHING, JACK SCREW	1
6	90-0137	JACK SCREW	1
7	90-0172	NUT, LOCK	1
8	SR-13	C-CLIP	1
9	78-0594	SWITCH	1
10	78-0867	MICRO SWITCH	1
11	52-1611	STRAIN RELIEF	1
12	51-0314	SPRING	1
13	M-108	1/4 X 1.0 DOWEL PIN	1
14	50-5501	TIP ASSY	1
15	52-2514	CABLE CLAMP	1
16	63-1357	PLUG	1
17	WL-56	CABLE	1
18		SHCS 1/4-20 X .625	1
19	80-5003	GUN DECAL	2
20	???	POSITIVE CABLE	1
21	WL-05	TRIGGER CABLE	1

AL-5 WARRANTY CARD

PRO SPOT

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**Register Online:
www.prospot.com**

FILL OUT AND MAIL OR FAX TO ENSURE WARRANTY REGISTRATION

Company Name:

Address:

City:

State:

Zip:

Owner/President:

Phone:

Fax:

E-Mail:

Web Site:

Date of Purchase:

Serial No:

Model purchased:

Purchased from:

Address:

Comments:



**PRO SPOT INTERNATIONAL INC.
~ AL-5 PRODUCT WARRANTY ~**

Pro Spot International Inc., a California corporation, (hereinafter 'Pro Spot') warrants to the original purchaser (hereinafter 'Purchaser') of Pro Spot product(s) referred to in this Purchase Order (hereinafter 'Pro Spot Product') in lieu of all other warrants that Pro Spot International Inc. of Oceanside, CA shall be free from defects in material and workmanship under intended use and service for a period of one (1) year after delivery of the Pro Spot Product to Purchaser.

Pro Spot's obligation under this warranty shall be limited to the repair or exchange, at Pro Spot's option of any part or parts, which may prove defective under intended use and service as determined by Pro Spot after said part or parts have been returned to and examined by Pro Spot whose address is 2625 Temple Hts. Drive 'A' ~ Oceanside, CA. 92056. Pro Spot will pay for standard transportation on outgoing warranty related parts, the distributor pays for incoming warranty items. Charges for expedited shipping will be the responsibility of the customer.

This warranty is in lieu of all other warranties, express or implied, including the warranties of merchant ability and fitness for a particular purpose. Pro Spot shall not be liable under expressed or implied warranty for incidental or consequential damages or other obligations or liabilities on the part of the purchaser.

Pro Spot neither assumes nor authorizes any other person to act on behalf of Pro Spot's liability in connection with Pro Spot product.

The above limited warranty does not apply to damage of Pro Spot product caused by accidents, alterations, negligence, tampering or improper or unreasonable use or failure to provide reasonable maintenance.

Pro Spot makes no warranty whatsoever in respect to accessories or parts not supplied by Pro Spot.

Pro Spot reserves the right to make changes in the design of any product at any time without obligation for retroactive action to the Pro Spot Product. Failure to employ, attach, and or use any and all recommended safety devices (including electrical grounding) and failure to follow and or comply with any recommended safety procedure shall constitute a waiver of this limited warranty. Pro Spot shall not be responsible for any incidental or consequential damages as a result of the aforementioned.

Purchaser is not considered to be a 'consumer' under Magnuson-Moss Warranty Act, but shall be considered a merchant engaged in commerce.

This warranty shall apply within the boundaries of the UNITED STATES and CANADA.

1/17/2009

Notes

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