

SPOT UNIT

Training Manual





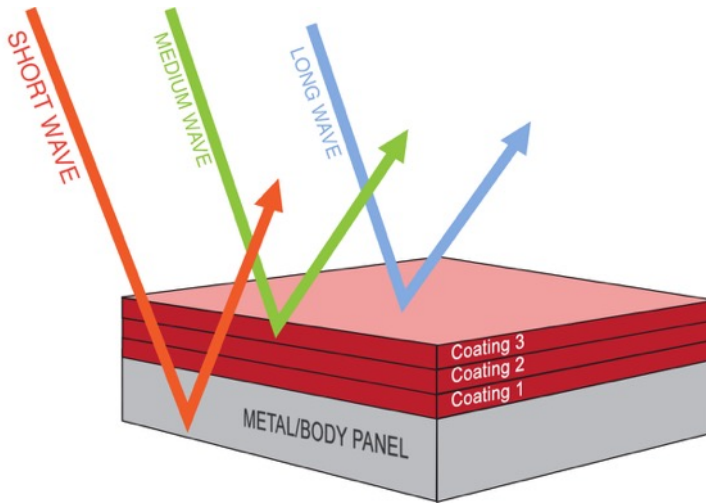
Faster Repairs. Better Results.

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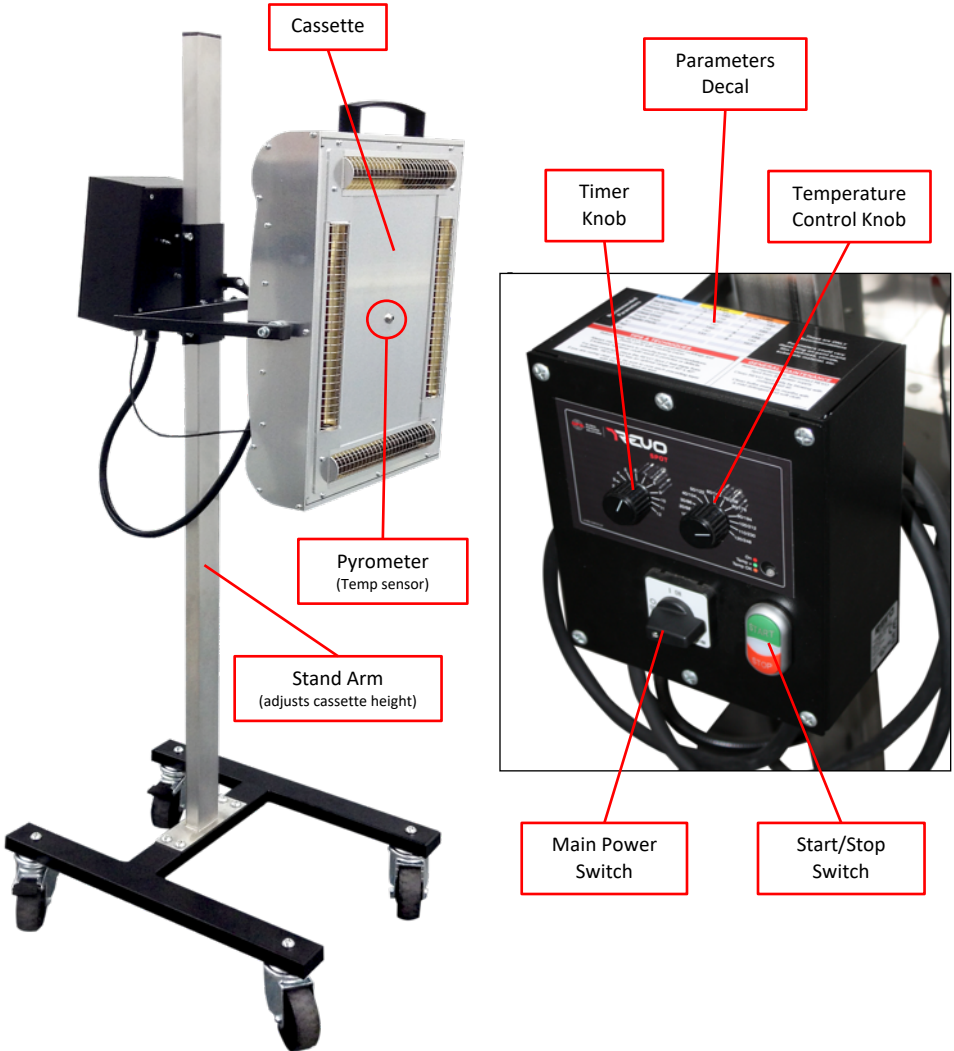
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HOW IT WORKS

REVO Systems use short wave infrared light to cure coatings from the inside out. Traditional methods of curing use medium or long wave infrared. Medium and long wave infrared light cures from the outside in — which can trap solvents or only cure the surface — leaving coatings wet on the inside. Short wave differs from these other methods by penetrating the applied coating and heating the substrate beneath, forcing all of the solvents out and resulting in a uniform and complete cure. Since it works from the inside out, REVO can cure up to three full coats of a product in one curing cycle with no need to cure between coats. Additionally, the infrared technology works on nearly all substrates including steel, aluminum, fiberglass, plastic, carbon fiber, etc.



SPOT UNIT DIAGRAM



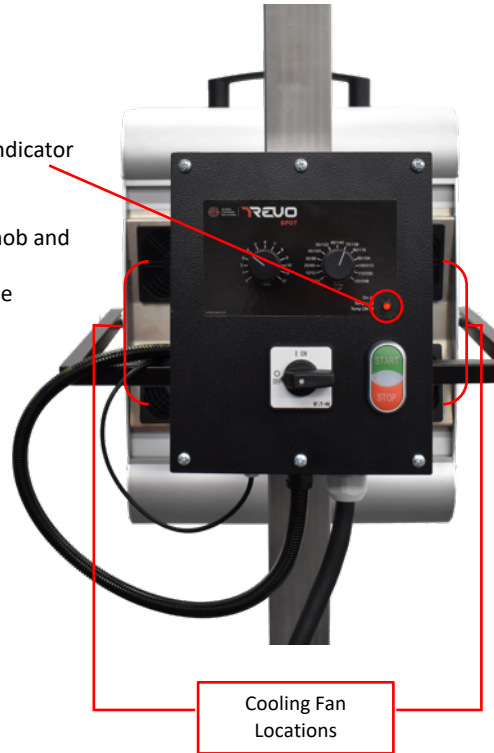
SPOT UNIT

SPECIFICATIONS	
Rated voltage	208-240 VAC 1ph
Rated frequency	50-60 Hz
Max Rated current	25 A
Max Rated power	6 kW
Lamp type	Ruby Infrared
Single Bulb power	1 or 2 kW
Drying temperature	Max 130°C
Dimension	H1650mm/L550mm/P500mm
Weight	24 Kg
Power plug	L6-30P

POWERING ON

First time Powering On the REVO Spot Unit:

1. Flip the power switch to the on position. The indicator light will light up red.
2. Turn up the temperature knob and the time knob and push the green **Start** button
 - Ensure that all four bulbs on the cassette turn on.
3. Listen to make sure both cooling fans on the cassette turn on.
4. Push the red stop button and ensure the cooling fans are still running.



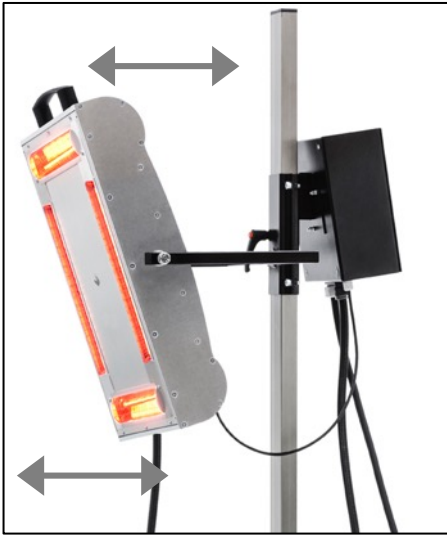
Note: If any of these things aren't working, contact GFS or your local distributor for support.

ADJUSTMENT

Loosen the height adjustment lever to slide the cassette up or down the stand.

Height Adjustment Lever

Tilt the cassette up or down manually.



OVERVIEW

Using the REVO Spot Unit:

- In order to use REVO on a top coating, all under coatings should also be cured with REVO before applying the topcoat. If you don't use REVO to cure your primer, you shouldn't use REVO to cure your basecoat. If you don't use REVO to cure your basecoat, you shouldn't use REVO to cure your clearcoat.
- **Coverage Area:** The Spot unit will cure a 40" by 40" area.
- **Incompatible Products:** 1K products are not intended to be heated and do not work well with REVO with the exception of basecoat. Basecoat works fine but avoid 1K putties and aerosol primers.
- **Mixing on a Scale:** All sprayable coatings should be mixed on a scale to ensure accurate ratios. Too much hardener will not speed up the curing process, it will only cause failure of the products.
- **No Accelerators:** Do not use any accelerators. REVO cures from the inside out and accelerators will skim the surface of the coating. When the REVO pushes out the solvents it can cause solvent popping.
- **Hardener and Reducer Selection:** Use only medium or slow hardeners and reducers. Fast hardeners will cause the same issues as accelerators.
- **Cure Times Are Adjustable:** The REVO comes with a decal that lists times and temperatures that are safe for a wide range of products. Contact GFS to get product specific recommendations. Some products can withstand greater temperatures and cure in shorter times.
- **Checking Temperature:** Infrared thermometers can give inaccurate readings due to the interference from the infrared light produced by the REVO. Check temperatures on the backside of the panel or in between flashes of infrared light.

BODY FILLER

Using the REVO Spot Unit for Body Filler:

- Mix and apply the body filler.
 - Be sure to mix your body filler properly!** Many people put too much hardener in the filler. Follow the directions on the can. Too much hardener can cause pinholes or bubbling.
 - Automix filler systems are recommended to ensure mixing accuracy.
 - Always use two-part fillers and putties. One part glazing putties and fillers are not compatible with REVO.
- Place Spot unit about 2 feet away from the area to be cured.
- Position the cassette parallel to the curing area (Picture 1).
- Set the time and temperature controls in accordance with the decal on the machine (Picture 2).
- Press the green **Start** button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.
- When the panel has returned to ambient temperature you can begin sanding the body filler.
 - Cooling can be accelerated by using a blow gun to force air over the panel.



Recommended Parameters	MATERIAL	FLASH		CURE	
		Time (Min)	Temp. (°F)	Time (Min)	Temp. (°F)
	Body Filler	3	140	1	140
	Etch Primer	3	158	1	158
	Primer Surfacer	3	140	8	185
	Base Coat	3	140	1	140
	Clear Coat	3	140	8	194
	Single Stage	3	140	8	194
	Plastic Parts	3	131	8	167
	Sp1.				
	Sp2.				
	Sp3.				

These are ONLY Recommendations

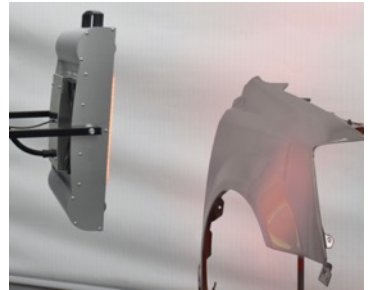
Parameters could vary depending on paint brand, film thickness, climate, substrate material, etc.

TIPS & TECHNIQUES	GENERAL MAINTENANCE
Before using REVO Spot, cover unpainted moldings and plastic parts with masking paper. Always mix hardeners to manufacturer recommendations. Excessive hardener could result in pinholes or defects. For best coverage, place the REVO Spot 2 feet away from substrate. REVO Spot has an optimal range of 40" x 40". If you are curing clear coat, be sure to cure each preceding layer with the REVO Spot as well.	Before maintenance, disconnect REVO Spot from the power supply. Clean REVO Spot daily by blowing with compressed air. Clean bulbs every six months with a mild detergent and soft cloth.

ETCH PRIMER

Using the REVO Spot Unit for Etch Primer:

- Mix and apply the etch primer.
 - Be sure to use a two part etch primer.** 1K aerosol products are not meant to handle heat and do not having good etching qualities.
- Place the Spot unit about 2 feet away from the area to be cured.
- Position the cassette parallel to the curing area (Picture 1).
- Set the time and temperature controls in accordance with the decal on the machine (Picture 2).
- Press the green **Start** button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.
- When the panel has returned to ambient temperature you can begin applying topcoats.
 - Cooling can be accelerated by using a blow gun to force air over the panel.



Recommended Parameters	MATERIAL		FLASH		CURE	
	Time (Min.)	Temp. (°F)	Time (Min.)	Temp. (°F)	Time (Min.)	Temp. (°F)
	Body Filler	3	140			1
Etch Primer	3	158			1	158
Primer Surfacer	3	140			8	185
Base Coat	3	140			1	140
Clear Coat	3	140			8	194
Single Stage	3	140			8	194
Plastic Parts	3	131			8	167
Sp1.						
Sp2.						
Sp3.						

These are ONLY Recommendations

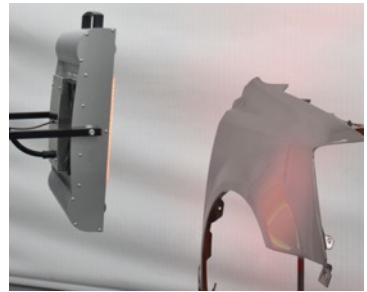
Parameters could vary depending on paint brand, film thickness, climate, substrate material, etc.

TIPS & TECHNIQUES	GENERAL MAINTENANCE
Before using REVO Spot, cover unpainted moldings and plastic parts with masking paper. Always mix hardeners to manufacturer recommendations. Excessive hardener could result in pinholes or defects. For best coverage, place the REVO Spot 2 feet away from substrate. REVO Spot has an optimal range of 40° x 40°. If you are curing clear coat, be sure to cure each preceding layer with the REVO Spot as well.	Before maintenance, disconnect REVO Spot from the power supply. Clean REVO Spot daily by blowing with compressed air. Clean bulbs every six months with a mild detergent and soft cloth.

PRIMER SURFACER

Using the REVO Spot Unit for Primer Surfacers:

- Mix and apply the Primer Surfacers.
 - Always use slow or medium hardener and reducers. Do not use fast products.**
 - Mix primer on the scale to ensure proper mixing.
- Place Spot unit about 2 feet away from the area to be cured.
- Position the cassette parallel to the curing area (Picture 1).
- Set the time and temperature controls in accordance with the decal on the machine (Picture 2).
- Press the green **Start** button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.
- When the panel has returned to ambient temperature you can begin sanding the primer.
 - Cooling can be accelerated by using a blow gun to force air over the panel.
- If re-priming is needed after sanding, primer can be reapplied immediately, and the same curing procedure should be followed.



Recommended Parameters	MATERIAL	FLASH		CURE	
		Time (Min)	Temp (°F)	Time (Min)	Temp (°F)
	Body Filler	3	140	1	140
Etch Primer	3	158	1	158	
Primer Surfacers	3	140	8	185	
Base Coat	3	140	1	140	
Clear Coat	3	140	8	194	
Single Stage	3	140	8	194	
Plastic Parts	3	131	8	167	
Sp1.					
Sp2.					
Sp3.					

TIPS & TECHNIQUES

Before using REVO Spot, cover unpainted moldings and plastic parts with masking paper.

Always mix hardeners to manufacturer recommendations. Excessive hardener could result in pinholes or defects.

For best coverage, place the REVO Spot 2 feet away from substrate. REVO Spot has an optimal range of 40" x 40".

If you are curing clear coat, be sure to cure each preceding layer with the REVO Spot as well.

GENERAL MAINTENANCE

Before maintenance, disconnect REVO Spot from the power supply.

Clean REVO Spot daily by blowing with compressed air.

Clean bulbs every six months with a mild detergent and soft cloth.

These are ONLY Recommendations

Parameters could vary depending on paint brand, film thickness, climate, substrate material, etc.

BASECOAT

Using the REVO Spot Unit for Basecoat:

- Apply all coats of basecoat per manufacturers recommendations.
 - There is no need to dry with REVO between coats.
 - For tri-coats: Dry with REVO after last coat of basecoat, and again after last coat of midcoat.
- Place Spot unit about 2 feet away from the area to be cured.
- Position the cassette parallel to the curing area (Picture 1).
- Set the time and temperature controls in accordance with the decal on the machine (Picture 2).
- Press the green **Start** button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.
- When the panel has returned to ambient temperature you can begin applying clearcoat.
 - Cooling can be accelerated by using a blow gun to force air over the panel.
 - If nibbing or any additional coats of base are needed, reapply basecoat and follow the same drying procedure.



Recommended Parameters	MATERIAL	FLASH		CURE	
		Time (Min)	Temp (°F)	Time (Min)	Temp (°F)
	Body Filler	3	140	1	140
	Etch Primer	3	158	1	158
	Primer Surfacer	3	140	8	185
	Base Coat	3	140	1	140
	Clear Coat	3	140	8	194
	Single Stage	3	140	8	194
	Plastic Parts	3	131	8	167
	Sp1.				
	Sp2.				
	Sp3.				

TIPS & TECHNIQUES

Before using REVO Spot, cover unpainted moldings and plastic parts with masking paper.

Always mix hardeners to manufacturer recommendations. Excessive hardener could result in pinholes or defects.

For best coverage, place the REVO Spot 2 feet away from substrate. REVO Spot has an optimal range of 40" x 40".

If you are curing clear coat, be sure to cure each preceding layer with the REVO Spot as well.

GENERAL MAINTENANCE

Before maintenance, disconnect REVO Spot from the power supply.

Clean REVO Spot daily by blowing with compressed air.

Clean bulbs every six months with a mild detergent and soft cloth.

These are **ONLY** Recommendations

Parameters could vary depending on paint brand, film thickness, climate, substrate material, etc.

CLEARCOAT

Using the REVO Spot Unit for Clearcoat:

- Mix and apply all coats of clearcoat per manufacturer's recommendations.
 - There is no need to cure with REVO between coats.
 - Only use slow or medium hardeners and reducers!**
 - Be sure to use a "Baking Clearcoat."** Air dry clears are not designed to handle heat and curing them with REVO could result in solvent popping or bubbling.
- Place Spot unit about 2 feet away from the area to be cured.
- Position the cassette parallel to the curing area (Picture 1).
- Set the time and temperature controls in accordance with the decal on the machine (Picture 2).
- Press the green start button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.
- When the panel has returned to ambient temperature you can begin assembling parts or start the buffing process.
 - Cooling should not be accelerated, let it cool naturally.



Recommended Parameters	MATERIAL	FLASH		CURE	
		Time (Min)	Temp (°F)	Time (Min)	Temp (°F)
	Body Filler	3	140	1	140
	Etch Primer	3	158	1	158
	Primer Surfacer	3	140	8	185
	Base Coat	3	140	1	140
	Clear Coat	3	140	8	194
	Single Stage	3	140	8	194
	Plastic Parts	3	131	8	167
	Sp1.				
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	Sp3.				

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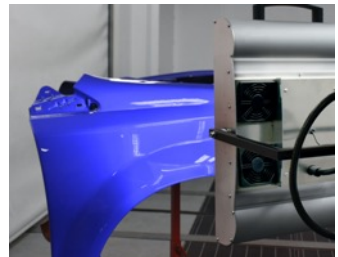
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TIPS & TECHNIQUES	GENERAL MAINTENANCE
Before using REVO Spot, cover unpainted moldings and plastic parts with masking paper. Always mix hardeners to manufacturer recommendations. Excessive hardener could result in pinholes or defects. For best coverage, place the REVO Spot 2 feet away from substrate. REVO Spot has an optimal range of 40° x 40°. If you are curing clear coat, be sure to cure each preceding layer with the REVO Spot as well.	Before maintenance, disconnect REVO Spot from the power supply. Clean REVO Spot daily by blowing with compressed air. Clean bulbs every six months with a mild detergent and soft cloth.

SINGLE STAGE PAINT

Using the REVO Spot Unit for Single Stage Paint:

- Mix and apply all coats of the single stage paint per manufacturers recommendations.
 - There is no need to cure with REVO between coats.
 - Only use slow or medium hardeners and reducers!**
- Place Spot unit about 2 feet away from the area to be cured.
- Position the cassette parallel to the curing area (**Picture 1**).
- Set the time and temperature controls in accordance with the decal on the machine (**Picture 2**).
- Press the green **Start** button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.
- When the panel has returned to ambient temperature you can begin assembling parts or start the buffing process.
 - Cooling should not be accelerated, let it cool naturally.



Recommended Parameters	MATERIAL	FLASH		CURE	
	Time (Min)	Temp (°F)	Time (Min)	Temp (°F)	Temp (°F)
	Body Filler	3	140	1	140
	Etch Primer	3	158	1	158
	Primer/Surfacers	3	140	8	185
	Base Coat	3	140	1	140
	Clear Coat	3	140	8	194
	Single Stage	3	140	8	194
	Plastic Parts	3	131	8	167
	SP1				
	SP2				
	SP3				

These are ONLY Recommendations

Parameters could vary depending on paint brand, film thickness, climate, substrate material, etc.

TIPS & TECHNIQUES	GENERAL MAINTENANCE
Before using REVO Spot, cover unpainted moldings and plastic parts with masking paper. Always mix hardeners to manufacturer recommendations. Excessive hardener could result in pinholes or defects. For best coverage, place the REVO Spot 2 feet away from substrate. REVO Spot has an optimal range of 40" x 40". If you are curing clear coat, be sure to cure each preceding layer with the REVO Spot as well.	Before maintenance, disconnect REVO Spot from the power supply. Clean REVO Spot daily by blowing with compressed air. Clean bulbs every six months with a mild detergent and soft cloth.

PLASTIC PARTS

Using the REVO Spot Unit for Plastic Parts:

- The plastic parts setting should be used on all coatings applied during a plastic repair process
 - This setting uses a lower temperature to cure as most plastic repair materials are more sensitive to higher temperatures.
 - Use this program after fillers, after primer, after basecoat, and after clearcoat.
- Place Spot unit about 2 feet away from the area to be cured.
- Position the cassette parallel to the curing area (**Picture 1**).
- Set the time and temperature controls in accordance with the decal on the machine (**Picture 2**).
- Press the green **Start** button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.
- Follow all the curing and cooling procedures listed for the other programs for each coating you are curing. Just substitute the “Plastic Parts” program for the other program listed in that procedure.



Recommended Parameters	MATERIAL	FLASH		CURE	
		Time (Min)	Temp (°F)	Time (Min)	Temp (°F)
	Body Filler	3	140	1	140
	Etch Primer	3	158	1	158
	Primer Surfacer	3	140	8	185
	Base Coat	3	140	1	140
	Clear Coat	3	140	8	194
	Single Stage	3	140	8	194
	Plastic Parts	3	131	8	167
	S ₀₁				
	S ₀₂				
	S ₀₃				

These are ONLY Recommendations

Parameters could vary depending on paint brand, film thickness, climate, substrate material, etc.

TIPS & TECHNIQUES	GENERAL MAINTENANCE
Before using REVO Spot, cover unpainted moldings and plastic parts with masking paper. Always mix hardeners to manufacturer recommendations. Excessive hardener could result in pinholes or defects. For best coverage, place the REVO Spot 2 feet away from substrate. REVO Spot has an optimal range of 40° x 40". If you are curing clear coat, be sure to cure each preceding layer with the REVO Spot as well.	Before maintenance, disconnect REVO Spot from the power supply. Clean REVO Spot daily by blowing with compressed air. Clean bulbs every six months with a mild detergent and soft cloth.

SPECIALTY PROGRAMS

Using the REVO Spot Unit for Specialty Programs:

1. There are slots to write three specialty programs on the parameters decal.
 - These can be added to cure a specialty product you are currently using in your shop. (Contact GFS for product specific recommendations)
 - A second type of Clearcoat or primer
 - Plastic Repair material
 - Seam Sealers
 - Panel Bond Adhesive
 - Rock or Chip guard
 - Decal Removal



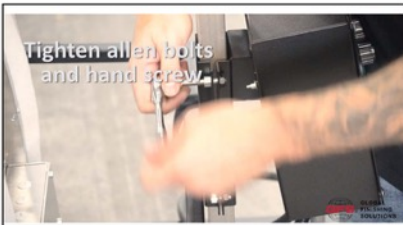
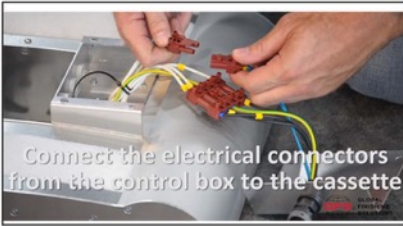
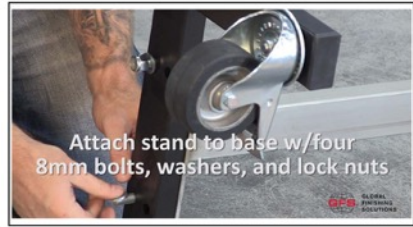
2. Place Spot unit about 2 feet away from the area to be cured.
3. Position the cassette parallel to the curing area
4. Set the time and temperature controls in accordance with the decal on the machine

5. Press the green **Start** button and the Spot unit will begin curing.
 - When the target temperature is achieved the lamp will flicker to maintain proper temperature.
 - When the curing cycle is complete the lamp will automatically shut off.



6. When the panel has returned to ambient temperature you can begin the next step of the repair process.
 - Cooling can be accelerated by using a blow gun to force air over the panel unless curing top coats.

ASSEMBLY INSTRUCTIONS



MAINTENANCE

1. Cleaning the bulbs and machine

- The machine can be cleaned with compressed air and mild detergents when dirty
- Blow off bulbs with compressed air daily
- Mild solvents and detergents can also be used to clean bulbs of overspray when needed

2. Changing bulbs

- If a bulb is broken contact GFS or your distributor for replacement parts. They will provide instructions for changing a bulb (it is very simple)

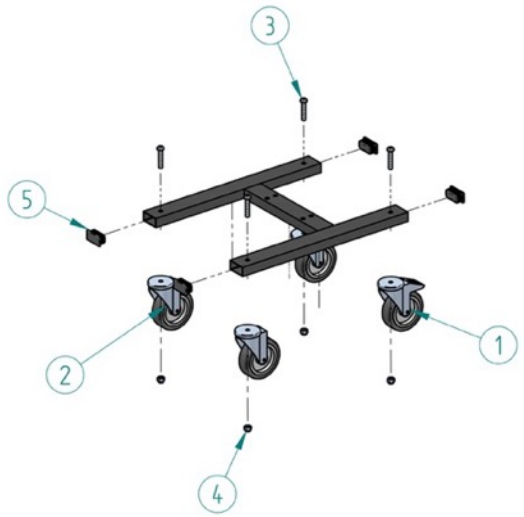
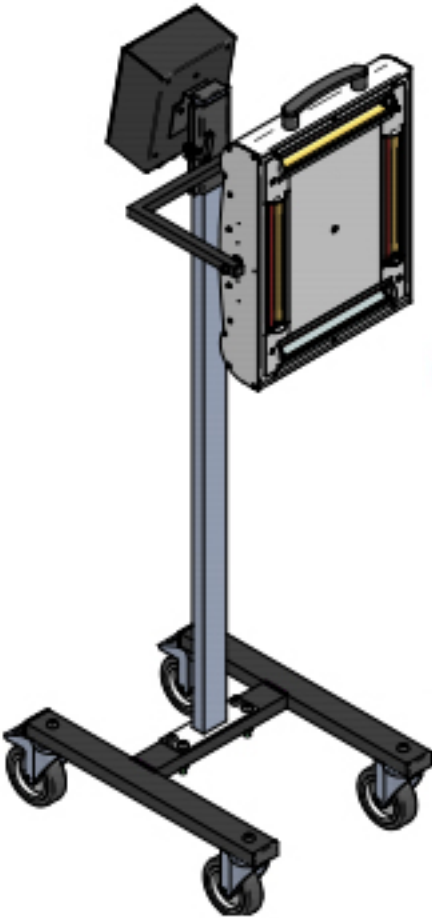
3. Cleaning filters

- Fan filters should be cleaned when dirty, they can be removed and blown off with compressed air or hand washed with soap and water (dry before re-installing)

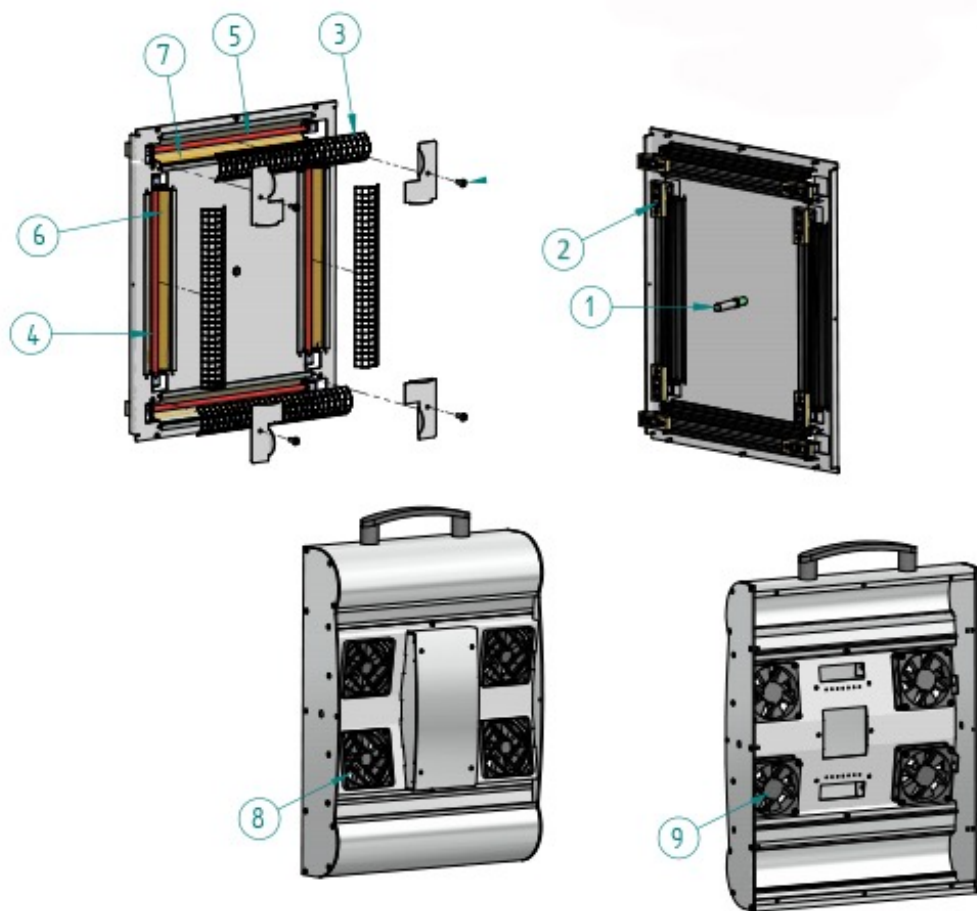
4. Replacement parts are available from GFS or your local distributor, see parts breakout on the following pages.

NOTICE

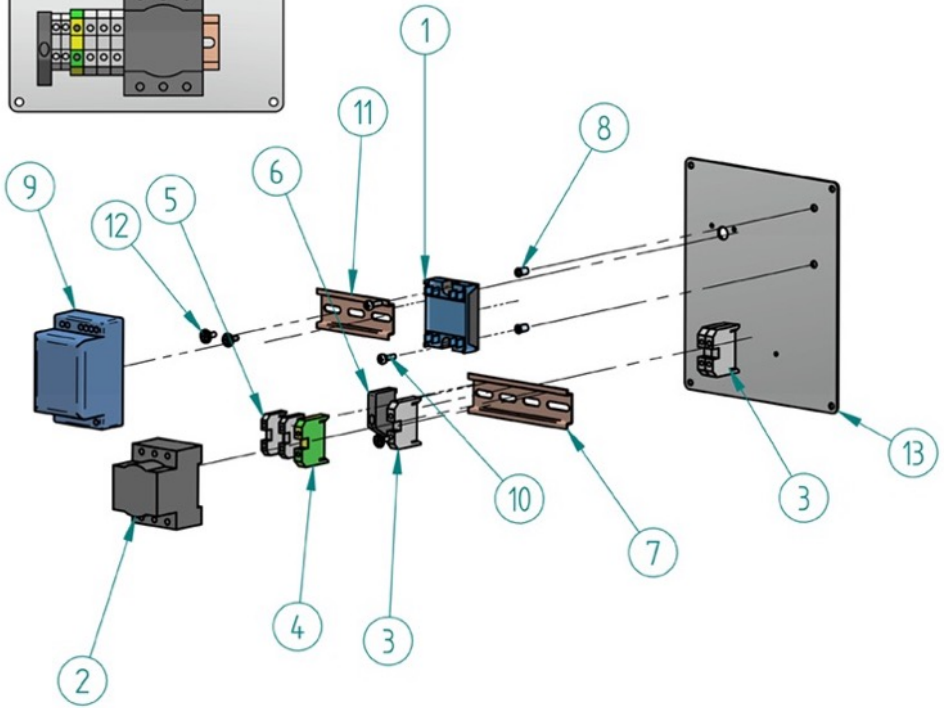
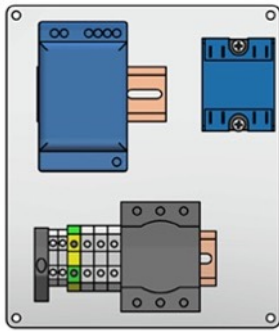
Proper use and maintenance is critical to the function of REVO Systems. Ensure that all filters, parts, and components are clean and in good repair. Replace worn or damaged components immediately.



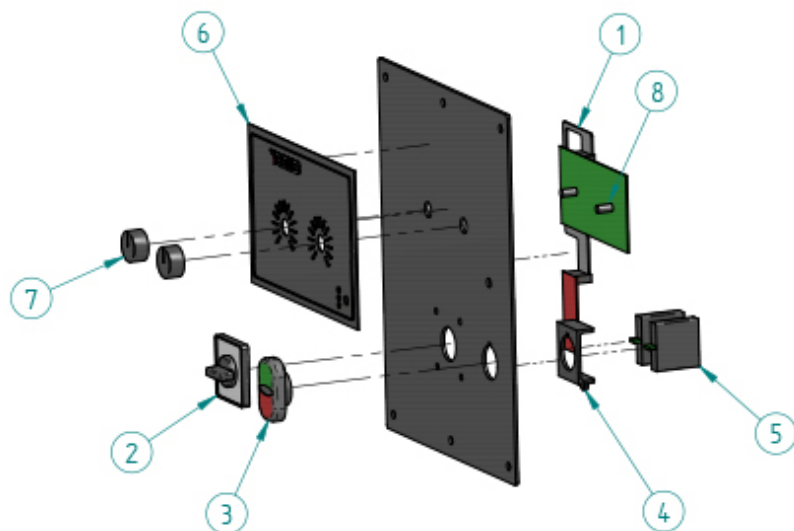
Position	Code	Description
1	8141343	WHEEL WITH BRAKE
2	8141426	WHEEL WITHOUT BRAKE
3	8140279	ISO7380 TBEI 109 M12X60 STANDARD
4	8038143	DIN 982 NUT 6S M12
5	8146391	RECTANGULAR COVER 60x30



Position	Code	Description
1	352172	PYROMETER IR/FSU 242T BURST OUTPUT
2	296350	REVO CERAMIC HOLDER FOR MET. FIXTURE
3	354987	SAFETY NET
4	295824	LAMP IR 1KW RUBY ATT J
5	328641	LAMP IR 2KW RUBY ATT J
6	8136152	REFLECTIVE FOIL 1K
7	8136236	REFLECTIVE FOIL 2K
8	332981	FILTER FOR FAN SPOT/RAPID UNITS
9	292813	REVO FAN 24VDC 92X92MM

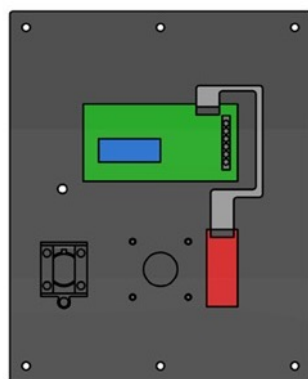
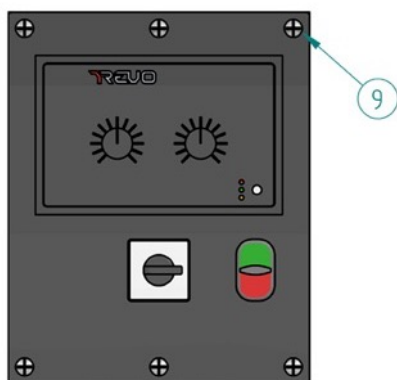


Position	Code	Description
1	8184996	THYRISTOR BIFASE 3,5-32VDC 24-600VAC 25A
2	8021131	SUPPLY SWITCH
3	8122863	TERMINAL BLOCK WIELAND 6 mm GRAY
4	8124018	TERMINAL BLOCK WIELAND 6 mm GRENN/YELLOW
5	8122780	TERMINAL BLOCK WIELAND 2,5mm GRAY
6	8035826	CLAMP STOP
7	8006124	DIN BAR
8	334821	BUSHING M4
9	351742	SWITCHING UL DRL60-24-1 240VAC/24VDC
10	8100745	CROSSED SLOT SCREW 4x14
11	8006124	DIN BAR
12	8113532	CROSSED SLOT SCREW 4, 2x13



FRONT SIDE

BACK SIDE



Position	Code	Description
1	352175	REVO MAINBOARD FOR UNIT SERIAL (FROM S/N: 41.100.856)
2	8021131	SELECTOR SWITCH ON-OFF
3	8024515	START STOP BUTTON
4	8024283	SUPPORT CONTACT
5	8024366	REVO CONTACTOR FOR SPOT UNIT
6	8175903	STICKER FRONT
7	352268	POTENTIOMETER KNOB
8	352267	POTENTIOMETER
9	8127813	DIN967 SCREW TBL 4.8 5X20 STANDARD



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