

# TROPHY AA 4400 HVLP OR LVMP AIR-ASSIST AIRLESS SPRAY GUNS





The following instructions provide the necessary information for the proper operation and preventive maintenance of your new TROPHY AA Air-Assist Airless Spray Gun.

Please read and understand all information in this document in order to get the maximum performance from your new TROPHY AA spray gun.

With your new TROPHY AA spray gun, the paint or other material to be sprayed is primarily atomized as it passes through the carbide tip. The air cap will also add a secondary atomization, based on its configuration. This is done by utilizing a separate air supply, to the gun.

You may also control the pattern size using the spreader valve. This dual atomization and shaping produces an exceptionally fine and even spray pattern. The result of this spray pattern is an even finish that lends itself to products that need an exceptionally fine finish with reduced overspray and VOC emissions.

| SPECIFICATIONS              |                     |  |  |  |  |
|-----------------------------|---------------------|--|--|--|--|
| Maximum fluid pressure:     | 303 bar [4,400 psi] |  |  |  |  |
| Maximum air inlet pressure: | 7 bar [105 psi]     |  |  |  |  |
| Gun Body material:          | Forged Aluminum     |  |  |  |  |
| Fluid Path material:        | Stainless Steel     |  |  |  |  |
| Fluid Seat Material:        | Tungsten Carbide    |  |  |  |  |
| Fluid inlet connection:     | 1/4" NPS (m)        |  |  |  |  |
| Air inlet connection:       | 1/4" BSP / NPS (m)  |  |  |  |  |

Product Description/Object of Declaration: AIR-ASSIST

AIRLESS SPRAY GUN

**This Product is designed for use with:**Solvent and Water based Materials

**Suitable for use in hazardous area:** Zone 1

**Protection Level:** II 2 G X

Notified body details and role: Element Materials Technology. WN8 9PN UK

Lodging of Technical file

**This Declaration of Conformity**Carlisle Fluid Technologies Inc.,

/incorporation is issued under the sole 320 Phillips Ave., responsibility of the manufacturer: Toledo, OH 43612

# **EU Declaration of Conformity**





The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Machinery Directive 2006/42/EC ATEX Directive 2014/34/EU

by complying with the following statutory documents and harmonized standards:

EN ISO 12100:2010 Safety of Machinery - General Principles for Design

BS EN 1953:2013 Atomising and spraying equipment for coating materials - Safety requirements

EN 13463-1:2009 Non electrical equipment for use in potentially explosive atmospheres - Basic methods and requirements

Providing all conditions of safe use / installation stated within the product manuals have been complied with and also installed in accordance with any applicable local codes of practice.

Signed for and on behalf of Carlisle Fluid Technologies:

DJ Hasselschwert

(Vice President: Global Product Development)

11-Jul-17 Toledo, OH 43612

4-3193R-1

In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

# **A** WARNING

Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

# **A** CAUTION

Hazards or unsafe practices which could result in minor personal injury, product or property damage.

# **NOTE**

Important installation, operation or maintenance information.

### **A** WARNING

## Read the following warnings before using this equipment.



#### **READ THE MANUAL**

Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



#### **OPERATOR TRAINING**

All personnel must be trained before operating finishing equipment.



#### **EQUIPMENT MISUSE HAZARD**

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



#### LOCK OUT / TAG-OUT

Failure to de-energize, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



#### **AUTOMATIC EQUIPMENT**

Automatic equipment may start suddenly without warning.



### PRESSURE RELIEF PROCEDURE

Always follow the pressure relief procedure in the equipment instruction manual.



#### **KEEP EQUIPMENT GUARDS IN PLACE**

Do not operate the equipment if the safety devices have been removed.



# KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY



### WEAR SAFETY GLASSES

Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



### INSPECT THE EQUIPMENT DAILY

Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



### NEVER MODIFY THE EQUIPMENT

Do not modify the equipment unless the manufacturer provides written approval.



#### **NOISE HAZARD**

You may be injured by loud noise. Hearing protection may be required when using this equipment.



### PROJECTILE HAZARD

You may be injured by venting liquids or gases that are released under pressure, or flying debris.



#### PINCH POINT HAZARD

Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



#### STATIC CHARGE

Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



### WEAR RESPIRATOR

Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Safety Data Sheet.



### **TOXIC FLUID & FUMES**

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids



### FIRE AND EXPLOSION HAZARD

Improper equipment grounding, poor ventilation, open flame or sparks can cause a hazardous condition and result in fire or explosion and serious injury.



#### MEDICAL ALERT

Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Show the doctor this medical information or the medical alert card provided with your airless spray equipment.
- Tell the doctor what kind of fluid you were spraying or dispensing.



### GET IMMEDIATE MEDICAL ATTENTION

To prevent contact with the fluid, please note the following:

- · Never point the gun/valve at anyone or any part of the body.
- · Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- · Always have the tip guard on the spray gun before spraying.
- Always ensure that the gun trigger safety operates before spraying.



### **PROP 65 WARNING**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT. FOR FURTHER SAFETY INFORMATION REGARDING THIS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).

Binks reserves the right to modify equipment specification without prior notice.

### INSTALLATION

# **NOTE**

Before proceeding, make sure trigger lock is engaged.

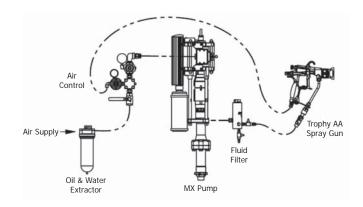
- Connect your high-pressure fluid hose to the gun fluid inlet and tighten securely.
- 2. Connect your air hose to the gun air connection and tighten securely.
- 3. Slowly increase air to the pump to obtain a fluid pressure at the gun's lower end of the pressure range. A typical starting fluid pressure is 70 bar [1000 psi]. Actual starting pressure points may be higher or lower and be dependent on the type of pump used, the type of material sprayed, and the spray gun itself.
- 4. Using the control knob of the gun air regulator at the air control, set the gun shaping air pressure at 0 bar [0 psi].
- To test the spraying pattern, spray a sample piece of wood or cardboard with a fast pass about 30cm [1 ft] away from the surface. The results of the test will allow you to determine the uniformity of the particle size and spraying pattern.
- 6. If the spraying pattern develops tails or is not uniform, gradually increase the air pressure as necessary to develop a uniform spraying pattern. 1 bar [14 psi] is the maximum inlet air pressure for HVLP air caps, or use 1.4-2.8 bar [20-40 psi] inlet air pressure for LVMP air caps.
- If the pattern is still unacceptable, you may gradually increase the fluid pump air pressure in 0.7 bar [10 psi] increments using the fluid pump air regulator control knob. Repeat step 6, as needed.
- 8. Once the quality of spray is acceptable, begin spraying. If the spraying rate is too slow to keep up with the production line speed, or if the quantity of material sprayed is inadequate for acceptable coverage, repeat step 7, until desired pattern and material quantity is achieved. If the maximum fluid pressure is reached before the required material coverage and spraying speed are achieved, you may need to switch to a different fluid tip.

### **FLUID TIP SELECTION**

Factors to consider in selecting a fluid tip for an air-assist airless spray gun include:

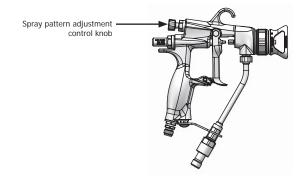
- The size of the parts being sprayed.
- · The production line speed
- The material flow rate and film thickness.
- The viscosity of the material applied
- The type of material applied.
- The quality of atomization of the coating required.

The selection of a fluid tip necessary to perform a specific spraying job is best determined through a combination of experimentation and expert advice from your material and equipment suppliers.



### **SPRAY PATTERN ADJUSTMENT**

 Turn the spreader valve knob indicated below counterclockwise to decrease the pattern size; clockwise to increase pattern size.



# **NOTE**

For HVLP spray, spray pattern adjustment feature requires 1 bar [14 psi] maximum of air inlet pressure.

For LVMP spray, spray pattern adjustment requires approximately 1.4-2.8 bar [20-40 psi] of air inlet pressure. Higher fluid pressures will require a higher air inlet pressure to accommodate pattern adjustment.

### **FLUID HOSES**

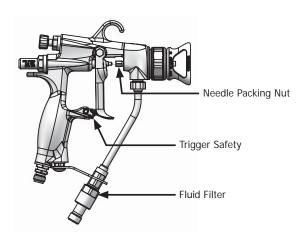
Air-assist airless spray guns operate at fluid pressures higher than operating pressures of air spray guns. As a result, when operating an air-assist airless spray gun, it is critical to select the appropriate fluid hose that is rated for the pressure range at which the airless gun is operated.

# **A WARNING**

The spray gun must be earthed to dissipate any electrostatic charges which may be created by fluid or air flows.

This can be achieved through the spray gun mounting, or conductive air/fluid hoses. Electrical bond from the spray gun to earth should be checked and a resistance of less than 106 Ohms is required.

# **GENERAL TROUBLESHOOTING**



| PROBLEM                                 | CAUSE                               | REMEDY  |
|---|-------------------------------------|---|
| Fluid leaking from needle packing       | Worn needle packing or needle shaft | Replace air valve & fluid needle assembly, item 5.  |
|   | Loose needle packing                | Tighten packing nut gradually until leak stops.   |
| Fluid leaking from the front of the gun | Worn or damaged needle ball         | Replace air valve & fluid needle assembly, item 5.  |
|   | Worn seat assembly                  | Replace fluid nozzle, item 9.   |
| Fluid in air passages                   | Spray tip seal leaking              | Tighten air cap & nozzle guard assembly, item 11 or 13.  Replace carbide tip seal. RS-5000-K5 or RS-5000-K10  |
|   | Leaking around fluid seat           | Tighten or replace fluid nozzle, item 9.  |
| Fluid slow to shut off                  | Fluid buildup on needle assembly    | Clean or replace air valve & fluid needle assembly, item 5.   |
| No fluid output when gun is triggered   | Tip orifice is plugged              | Flat tips - Turn off fluid supply. Relieve pressure into a closed earth-grounded container. Engage trigger safety. Remove air cap/nozzle guard assembly and spray tip. Clean or replace the spray tip, item 12.  Twist tips – Rotate twist tip 180° within the air cap, then spray into a closed earth-grounded container to try to clear tip of any debris. If that fails, turn off fluid supply. Engage   |
|   |                                     | trigger safety. Remove air cap/nozzle guard assembly and spray tip. Clean or replace the twist tip, item 10.  |
|   | Needle is damaged or broken         | Turn off fluid supply. Relieve pressure into a closed earth-<br>grounded container. Engage trigger safety. Replace air valve<br>& fluid needle assembly, item 5.  |
|   | Fluid filter is plugged             | Turn off fluid supply. Relieve pressure into a closed-grounded container. Engage trigger safety. Turn off air supply to pump and relieve fluid pressure from pump using bypass valve on pump. Very slowly loosen the fluid hose connection at the gun to relieve any pressure in the hose. Remove the fluid hose. Using two wrenches, one to hold the fluid tube in place, and the other to remove the nut. Open the fluid filter, and clean or replace the filter element, item 17e. |
|   | Fluid hose is plugged               | Turn off fluid supply. Relieve pressure into a closed-grounded container. Engage trigger safety. Turn off air supply to pump and relieve fluid pressure from pump using bypass valve on pump. Very slowly loosen the fluid hose connection at the gun to relieve any pressure in the hose. Remove the hose and clear obstruction, or replace hose.  |

### TROUBLESHOOTING SPRAY PERFORMANCE

# **A** CAUTION

Always engage trigger lock and relieve fluid pressure.

| PROBLEM                           | CAUSE   | CORRECTION  |
|-----------------------------------|---|---|
| Heavy top or bottom pattern.      | Material build-up on air cap, plugged horn holes, center holes or jets. | Soak cap or tip in suitable solvent and thoroughly clean. |
|                                   | Material build-up on fluid tip exterior or partially plugged fluid tip. | Replace fluid tip or air cap if necessary.                |
|                                   | Fluid tip or cap dirty or damaged.                                      | Replace fluid tip or air cap if necessary.                |
| Heavy right or left side pattern. | Left or right side horn holes plugged.                                  | Soak cap or tip in suitable solvent and thoroughly clean. |
|                                   | Dirt or damage on left or right side of fluid tip exterior.             | Replace fluid tip or air cap if necessary.                |

Remedies for the top-heavy, bottom-heavy, right-heavy and left-heavy patterns.

Determine if the obstruction is on the air cap or the fluid tip. Do this by making a test spray pattern. Then, rotate the air cap and tip one-half turn and spray another pattern. If the defect is inverted, obstruction is on the air cap. Clean the air cap as previously instructed. Also check for dried paint just inside the cap center hole opening, remove by washing with solvent.

If the defect is not inverted, it is on the fluid tip. Clean tip. If problem persists, renew tip.

| Heavy center pattern.                   | Pattern adjustment valve set too low.       | Turn out counter clockwise to achieve correct pattern.   |
|---|---|--|
|   | Too much material.                          | Reduce fluid pressure.   |
|   | Material too thick.                         | Thin to correct consistency.   |
|   | Atomizing air pressure too low.             | Increase air pressure.   |
| Intermittent or 'fluttering' spray fan. | Fluid tip not seated correctly in gun head. | Remove fluid tip, clean components, check cone seating on tip and gun for damage or contamination. |
|   | Partially obstructed fluid passage or hose. | Clean or replace.  |

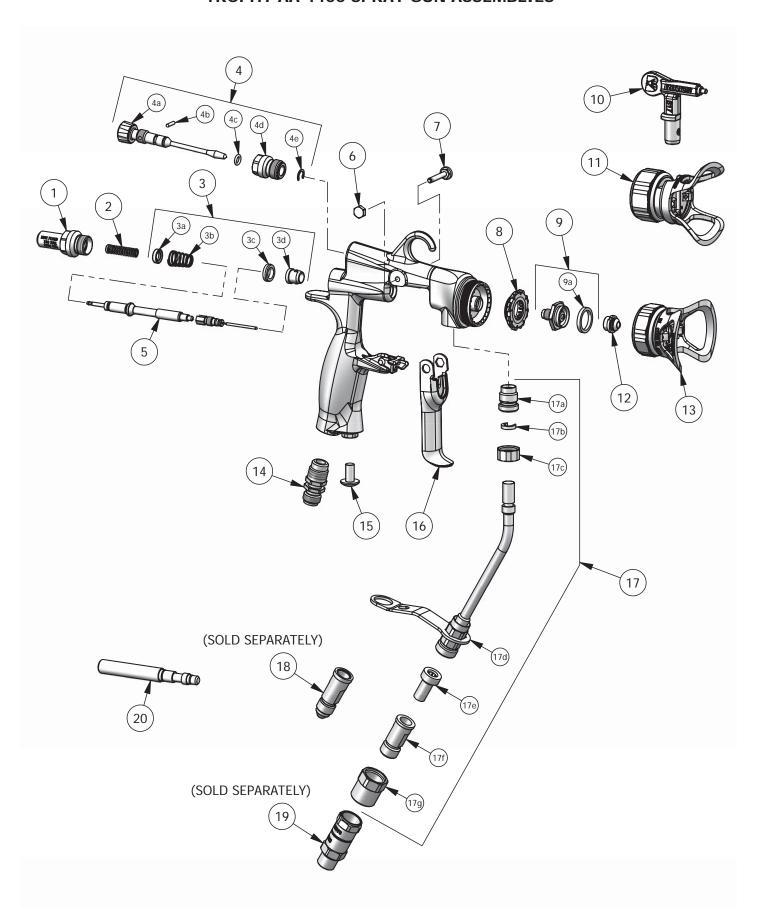
### TROUBLESHOOTING SPRAY PERFORMANCE

# **A** CAUTION

Always engage trigger lock and relieve fluid pressure.

| PROBLEM   | CAUSE                              | CORRECTION  |
|---|------------------------------------|---|
| Split spray pattern.                                  | Not enough material flow.          | Increase fluid flow by changing fluid tip size, or increase fluid pressure. |
| Excessive bounce-back.                                | Too much atomization air pressure. | Reduce air pressure.  |
|   | Gun too far from surface.          | Check distance.   |
| Runs and sags.  | Too much fluid flow.               | Adjust gun or reduce fluid pressure.  |
|   | Material too thin.                 | Mix properly or apply light coats/reduce fluid flow.                        |
|   | Gun tilted at an angle.            | Mount gun at right angle to work.   |
| Thin, sandy coarse finish drying before it flows out. | Gun too far from surface.          | Check distance.   |
|   | Too much air pressure.             | Reduce air pressure and check spray pattern.                                |
|   | Fluid flow too low.                | Increase fluid flow by changing fluid tip size, supply pressure.            |

## **TROPHY AA 4400 SPRAY GUN ASSEMBLIES**



### **PARTS LIST**

| ITEM<br>NO. | PART NO.                | DESCRIPTION                                      |   | 4400-<br>H10000<br>FLAT TIP<br>QTY. | 4400-<br>H20000<br>FLAT TIP<br>QTY. | 4400-<br>LF0000<br>FLAT TIP<br>QTY. | 4400-<br>HT0000<br>TWIST TIP<br>QTY. | 4400-<br>LT0000<br>TWIST TIP<br>QTY. |
|-------------|-------------------------|--|---|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|
| 1           | 54-6008                 | AIR VALVE HOUSING                                | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 2           | 54-5935-K5              | NEEDLE RETURN SPRING KIT (MULTI-PACK)            | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 3           | 54-6131-K               | SPINDLE SEAL & SPRING KIT                        | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 3a          |                         | REAR SEAL  | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 3b          |                         | AIR VALVE SPRING                                 | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 3c          |                         | VALVE SEAL                                       | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 3d          |                         | FRONT SEAL                                       | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 4           | 54-5815                 | SPREADER VALVE ASSEMBLY                          | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 4a          |                         | VALVE STEM                                       | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 4d          |                         | VALVE BODY                                       | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 4c          | SN-71X-K2 •             | O-RING (MULTI-PACK)                              | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 4b          | •                       | PIN  | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 4e          | •                       | SNAP RING  | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 5           | 54-5937                 | AIR VALVE & FLUID NEEDLE ASSEMBLY                | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 6           | 54-6114                 | TRIGGER NUT                                      | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 7           | 54-6115                 | TRIGGER SCREW                                    | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 8           | SPA-71-K5<br>SPA-71-K10 | BAFFLE PLATE (MULTI-PACK)                        | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 9           | 54-5799-K               | FLUID NOZZLE & GASKET (FLAT TIP)                 | 1 | 1                                   | 1                                   | 1                                   | -                                    | _                                    |
| 9           | 54-5832-K               | FLUID NOZZLE & GASKET (TWIST TIP)                | _ | _                                   | _                                   | _                                   | 1                                    | 1                                    |
| 00          | SPA-98-K5               | GASKET (MULTI-PACK)                              | _ | _                                   | _                                   | _                                   | _                                    | _                                    |
| 9a          | SPA-98-K10              | GASKET (MULTI-PACK)                              | _ | _                                   | _                                   | _                                   | _                                    | _                                    |
| 10          | SEE PAGE 10             | REVERSABILE TWIST TIP                            | _ | _                                   | _                                   | _                                   | _                                    | _                                    |
| 11          | 54-5924-K               | HVLP TWIST TIP AIR CAP ASSEMBLY                  | _ | _                                   | _                                   | _                                   | 1                                    | _                                    |
| 11          | 54-5925-K               | LVMP TWIST TIP AIR CAP ASSEMBLY                  | _ | _                                   | _                                   | _                                   | _                                    | 1                                    |
| 12          | SEE PAGE 10             | FLAT TIP ASSEMBLY                                | _ | -                                   | -                                   | _                                   | _                                    | _                                    |
| 12          | SEE PAGE 10             | FINE FINISH FLAT TIP ASSEMBLY                    | _ | -                                   | _                                   | _                                   | _                                    | _                                    |
|             | 54-5878-K               | 9X-H+ AIR CAP ASSEMBLY (4400-HF0000)             | 1 | -                                   | -                                   | _                                   | _                                    | _                                    |
| 13          | 54-5890-K               | AA10 AIR CAP ASSEMBLY (4400-H10000)              | _ | 1                                   | _                                   | _                                   | _                                    | _                                    |
| 13          | 54-6030-K               | AA10+ AIR CAP ASSEMBLY (4400-H20000)             | _ | -                                   | 1                                   | _                                   | _                                    | _                                    |
|             | 54-5797-K               | 9X-L AIR CAP ASSEMBLY (4400-LF0000)              | _ | -                                   | _                                   | 1                                   | _                                    | _                                    |
| 14          | SN-9-K3                 | AIR INLET (MULTI-PACK)                           | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 15          |                         | SLOTTED ROUND HEAD SCREW, 1/4" - 20 x 1/2", S.S. | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 16          | 54-6019                 | TRIGGER  | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17          | 54-6015                 | FLUID TUBE ASSEMBLY                              | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17a         |                         | FLUID TUBE ADAPTER                               | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17b         | 54-5896-K5              | FLUID TUBE RETAINER (MULTI-PACK)                 |   | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17c         | 54-5899                 | FERRULE NUT                                      |   | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17d         | 54-6017                 | FILTER BRACKET                                   |   | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17e         | 54-1835                 | FLUID FILTER, 100 MESH                           | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17f         | 54-4726-K               | DISC FILTER BODY, 1/4" NPS (M)                   | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 17g         | 54-4726-K               | DISC FILTER RETAINER                             | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |
| 18          | 54-5897                 | JIC #5 FLUID INLET FITTING (SOLD SEPARATELY)     | _ | _                                   | _                                   | _                                   | _                                    | _                                    |
| 19          | 72-2360                 | SWIVEL ADAPTER, 1/4" NPS M X F (SOLD SEPARATELY) | _ | _                                   | _                                   | _                                   | _                                    | _                                    |
| 20          | SPN-7                   | TOOL   | 1 | 1                                   | 1                                   | 1                                   | 1                                    | 1                                    |

Parts are included within the following packing kits:

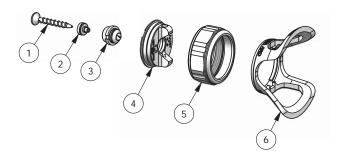
• Parts are included in kit: GTI-428-K5

ALTERNATE ITEMS (SOLD SEPERATELY):

- □ 54-1836 FLUID FILTER, 60 MESH
- 54-6018 TRIGGER, SHORT PULL

### TROPHY AA 4400 AIR CAP ASSEMBLIES

### **FLAT TIP AIRCAPS**





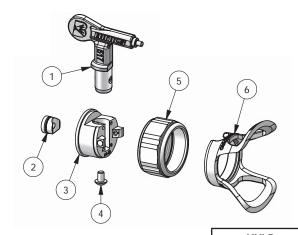
|             |                 | HVLP                |           |           |           | LVMP      |           |
|-------------|-----------------|---------------------|-----------|-----------|-----------|-----------|-----------|
|             |                 |                     | 54-6030-K | 54-5890-K | 54-5878-K | 54-5795-K | 54-5797-K |
| ITEM<br>NO. | PART NO.        | DESCRIPTION         | AA10+     | AA10      | 9X-H+     | 9Х-Н      | 9X-L      |
| 1           |                 | SEAL REMOVAL TOOL   |           |           |           | _         | _         |
| 2           | see pages 14-15 | REPLACABLE TIP SEAL |           |           |           | _         | _         |
| 3           | see pages 14-15 | RS SPRAY TIP        | -         | -         |           | _         | _         |
| 4           |                 | AIR CAP COLOR       | BLUE      | BROWN     | BLACK     | SILVER    | SILVER    |
| 5           |                 | RETAINING RING      | 1         | 1         | 1         | 1         | 1         |
| 6           | 54-5794         | FLAT TIP GUARD      | 1         | 1         | 1         | 1         | 1         |

TEST AIR CAP KITS:

54-6036

54-5836-K

### **REVERSIBLE TWIST TIP AIRCAPS**



|             |                 | HVLP                     | LVMP      |        |
|-------------|-----------------|--------------------------|-----------|--------|
|             |                 | 54-5924-K                | 54-5925-K |        |
| ITEM<br>NO. | PART NO.        | DESCRIPTION              | AA10      | 9X-L   |
| 1           | see pages 14-15 | TWIST TIP                | -         | _      |
| 2           | 54-7539-K2      | TWIST TIP BRACE          | 1         | 1      |
| 3           |                 | TWIST TIP AIR CAP COLOR  | BLACK     | SILVER |
| 4           | 54-5930         | RETAINING SCREW          | 1         | 1      |
| 5           |                 | TWIST TIP RETAINING RING | 1         | 1      |
| 6           |                 | TWIST TIP GUARD          | 1         | 1      |

TEST AIR CAP KITS:

54-5932-K

### MAINTENANCE AND CLEANING

Maintenance of air-assist airless spray guns includes three areas:

- fluid tip wear and replacement
- lubrication
- cleaning of the gun

### **FLUID TIPS**

Operating an air-assist airless spray gun with a worn fluid tip will result in increased usage of spraying material and therefore, hazardous air pollutants. For example, an increase in the diameter of a tip from .4 to .5mm [0.015 to 0.021 in] due to wear can result in up to a 100 percent increase in material consumption and cost. To prevent waste in spraying material and non-value-added costs, a maintenance schedule that includes fluid tip inspection and replacement, should be established.

### LUBRICATION

Proper lubrication is essential for optimum spray gun performance. Lubrication allows the equipment to operate easily and correctly. The spray gun should be lubricated after each cleaning. The points that need lubrication during the maintenance of air-assist airless spray guns include the fluid needle packing and trigger pivot point.

# **A** CAUTION

Never immerse the entire gun in solvent or thinners. Some gun parts will lose their lubricative film and wear more quickly. Additionally, solvents may carry impurities throughout the gun body and allow them to clog small air and fluid passages.

### **CLEANING**

The following steps summarize the procedure for cleaning air- assist airless spray guns:

- 1. Turn off the air supply to the gun.
- 2. Turn off air supply to the pump and relieve fluid pressure. This may be accomplished by opening the bypass valve, if so equipped.
- 3. Place the material suction tube into a solvent container. If the pump is directly immersed in material, remove the pump and immerse it in a container containing solvent.

- 4. Engage the gun trigger safety switch into the locked position (move down).
- Remove the fluid or twist tip and place it in a closed solvent container.

# **NOTE**

Use only compatible solvents that are identified as approved for cleaning and wash-off use.

- 6. Adjust the pump air supply regulator to its lowest level (turning knob counter-clockwise).
- 7. Release the gun trigger safety switch into the unlocked position (move up).
- 8. Turn on the air supply to the pump and close the bypass valve, if so equipped.
- 9. Slowly adjust the pump air supply regulator until the pump begins to cycle (turning knob clockwise).

# **A** WARNING

Failure to reduce pump air supply pressure or to use a closed container can result in material "bounce-back".

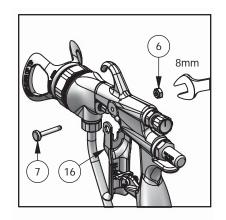
Material "bounce back" can cause injury and damage.

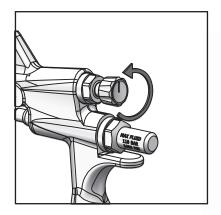
# **NOTE**

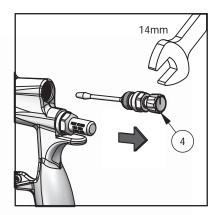
During cleaning, the gun may only be sprayed into a closed earth-grounded container, never flush the gun into the air or spray booth.

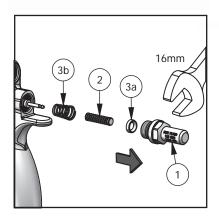
- 10. Trigger the gun into a closed earth-grounded container until the fluid runs clear.
- 11. Using a rag dampened with solvent, wipe the exterior surface of the gun. Additionally, some solvents are prohibited from being used for cleaning. The operator must take care to use only approved cleaning solvents for equipment cleaning. These materials are clearly labeled as approved for cleaning and wash off operations. If the operator has any question on selecting appropriate cleaning solvents, the operator should consult a supervisor or plant environmental staff.

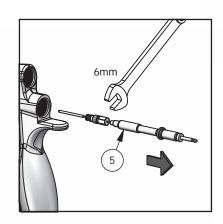
## MAINTENANCE — DISASSEMBLY

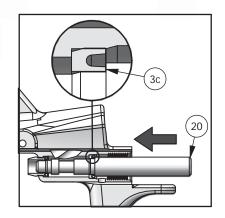


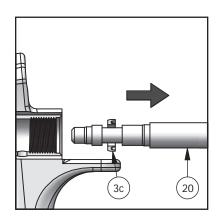


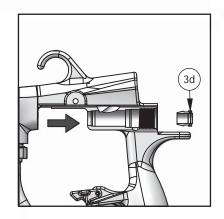


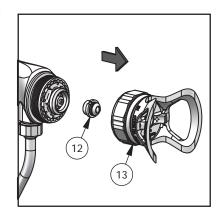


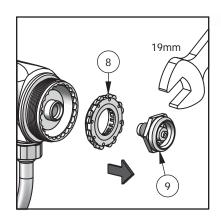


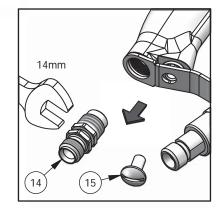


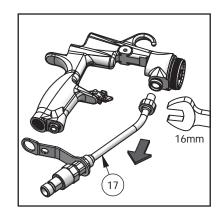




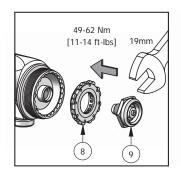


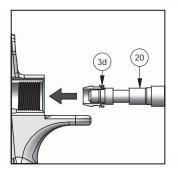


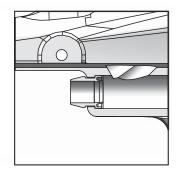


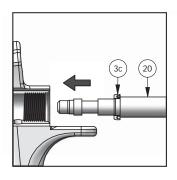


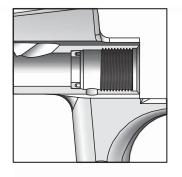
## **MAINTENANCE — ASSEMBLY**

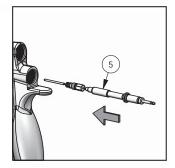


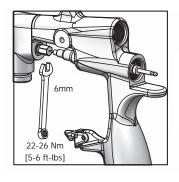


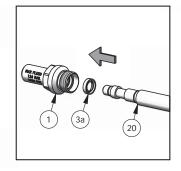


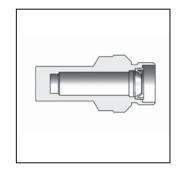


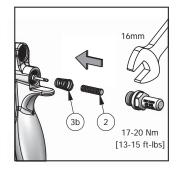


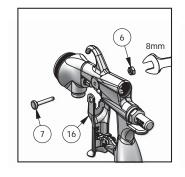


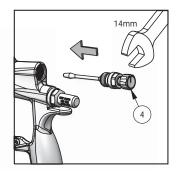


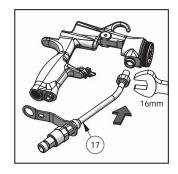


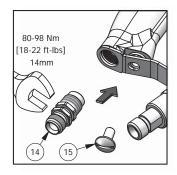












### TROPHY AA TIP OFFERING

### STANDARD TIP SIZES OFFERED

| PART<br>NUMBER | ORIFICE           | FAN WIDTH *  | CAPACITY **          |
|----------------|-------------------|--------------|----------------------|
| RS-0702        |                   | 50mm [2in]   |                      |
| RS-0704        | .18mm             | 100mm [4in]  | 106 CC               |
| RS-0706        | [.007in]          | 150mm [6in]  | [.028 GPM]           |
| RS-0708        |                   | 200mm [8in]  |                      |
| RS-0902        |                   | 50mm [2in]   |                      |
| RS-0904        |                   | 100mm [4in]  |                      |
| RS-0906        | .23mm             | 150mm [6in]  | 148 CC               |
| RS-0908        | [.009in]          | 200mm [8in]  | [.039 GPM]           |
| RS-0910        |                   | 250mm [10in] |                      |
| RS-0912        |                   | 300mm [12in] |                      |
| RS-1104        |                   | 100mm [4in]  |                      |
| RS-1106        |                   | 150mm [6in]  |                      |
| RS-1108        | .28mm             | 200mm [8in]  | 227 CC               |
| RS-1110        | [.011in]          | 250mm [10in] | [.060 GPM]           |
| RS-1112        |                   | 300mm [12in] |                      |
| RS-1114        |                   | 350mm [14in] |                      |
| RS-1304        |                   | 100mm [4in]  |                      |
| RS-1306        |                   | 150mm [6in]  |                      |
| RS-1308        |                   | 200mm [8in]  |                      |
| RS-1310        | .33mm<br>[.013in] | 250mm [10in] | 341 CC<br>[.090 GPM] |
| RS-1312        |                   | 300mm [12in] |                      |
| RS-1314        |                   | 350mm [14in] |                      |
| RS-1316        |                   | 400mm [16in] |                      |
| RS-1506        |                   | 150mm [6in]  |                      |
| RS-1508        |                   | 200mm [8in]  |                      |
| RS-1510        |                   | 250mm [10in] |                      |
| RS-1512        | .38mm<br>[.015in] | 300mm [12in] | 454 CC<br>[.120 GPM] |
| RS-1514        |                   | 350mm [14in] |                      |
| RS-1516        |                   | 400mm [16in] |                      |
| RS-1518        |                   | 450mm [18in] |                      |
| RS-1706        |                   | 150mm [6in]  |                      |
| RS-1708        |                   | 200mm [8in]  |                      |
| RS-1710        |                   | 250mm [10in] |                      |
| RS-1712        | .43mm<br>[.017in] | 300mm [12in] | 606 CC<br>[.160 GPM] |
| RS-1714        | []                | 350mm [14in] | []                   |
| RS-1716        |                   | 400mm [16in] |                      |
| RS-1718        |                   | 450mm [18in] |                      |
| RS-1816        | .46mm<br>[.018in] | 400mm [16in] | 681 CC<br>[.180 GPM] |

### STANDARD TIP SIZES OFFERED

| PART<br>NUMBER | ORIFICE           | FAN WIDTH    | CAPACITY<br>**        |  |
|----------------|-------------------|--------------|-----------------------|--|
| RS-1906        |                   | 150mm [6in]  |                       |  |
| RS-1908        |                   | 200mm [8in]  |                       |  |
| RS-1910        |                   | 250mm [10in] |                       |  |
| RS-1912        | .48mm<br>[.019in] | 300mm [12in] | 719 CC<br>[.190 GPM]  |  |
| RS-1914        |                   | 350mm [14in] |                       |  |
| RS-1916        |                   | 400mm [16in] |                       |  |
| RS-1918        |                   | 450mm [18in] |                       |  |
| RS-2110        |                   | 250mm [10in] |                       |  |
| RS-2112        |                   | 300mm [12in] |                       |  |
| RS-2114        | .53mm<br>[.021in] | 350mm [14in] | 908 CC<br>[.240 GPM]  |  |
| RS-2116        |                   | 400mm [16in] |                       |  |
| RS-2118        |                   | 450mm [18in] |                       |  |
| RS-2410        |                   | 250mm [10in] |                       |  |
| RS-2412        |                   | 300mm [12in] |                       |  |
| RS-2414        | .61mm<br>[.024in] | 350mm [14in] | 1173 CC<br>[.310 GPM] |  |
| RS-2416        |                   | 400mm [16in] |                       |  |
| RS-2418        |                   | 450mm [18in] |                       |  |
| RS-2710        |                   | 250mm [10in] |                       |  |
| RS-2712        |                   | 300mm [12in] |                       |  |
| RS-2714        | .69mm<br>[.027in] | 350mm [14in] | 1457 CC<br>[.385 GPM] |  |
| RS-2716        |                   | 400mm [16in] | ,                     |  |
| RS-2718        | 1                 | 450mm [18in] |                       |  |

<sup>\*</sup> Fan width based on 69 bar [1000 PSI] of water sprayed at 300mm [12in] from surface. Actual results may vary based on material sprayed.

### REPLACEMENT TIP SEALS FOR STANDARD STYLES:

RS-5000-K5 Multi-pack of 5 pieces RS-5000-K10 Multi-pack of 10 pieces

<sup>\*\*</sup> Capacity based on 34 bar [500 PSI] of fluid pressure using water pressure.

### TROPHY AA TIP OFFERING

### **FINE FINISH TIP SIZES OFFERED**

|                | PART ORIGINAL FAN WIDTH CAPACITY REPLACEABLE |                |                      |            |  |  |  |
|----------------|--|----------------|----------------------|------------|--|--|--|
| PART<br>NUMBER | ORIFICE                                      | FAN WIDTH<br>* |                      |            |  |  |  |
| RS-0909-F      | .23mm  | 250mm [10in]   | 148 CC               | DC FOEO KE |  |  |  |
| RS-0911-F      | [.009in]                                     | 300mm [12in]   | [.039 GPM]           | RS-5858-K5 |  |  |  |
| RS-1109-F      |  | 200mm [8in]    |                      |            |  |  |  |
| RS-1111-F      | .28mm  | 250mm [10in]   | 227 CC               | RS-5859-K5 |  |  |  |
| RS-1113-F      | [.011in]                                     | 300mm [12in]   | [.060 GPM]           | K2-2829-K2 |  |  |  |
| RS-1115-F      | ]  | 350mm [14in]   |                      |            |  |  |  |
| RS-1309-F      |  | 250mm [10in]   |                      |            |  |  |  |
| RS-1311-F      | .33mm  | 300mm [12in]   | 341 CC               | RS-5860-K5 |  |  |  |
| RS-1313-F      | [.013in]                                     | 350mm [14in]   | [.090 GPM]           |            |  |  |  |
| RS-1315-F      | ]  | 400mm [16in]   |                      |            |  |  |  |
| RS-1509-F      |  | 250mm [10in]   |                      |            |  |  |  |
| RS-1511-F      |  | 300mm [12in]   |                      |            |  |  |  |
| RS-1513-F      | .38mm<br>[.015in]                            | 350mm [14in]   | 454 CC<br>[.120 GPM] | RS-5861-K5 |  |  |  |
| RS-1515-F      |  | 400mm [16in]   |                      |            |  |  |  |
| RS-1517-F      |  | 450mm [18in]   |                      |            |  |  |  |
| RS-1709-F      |  | 250mm [10in]   |                      |            |  |  |  |
| RS-1711-F      |  | 300mm [12in]   |                      |            |  |  |  |
| RS-1713-F      | .43mm<br>[.017in]                            | 350mm [14in]   | 606 CC<br>[.160 GPM] | RS-5862-K5 |  |  |  |
| RS-1715-F      |  | 400mm [16in]   |                      |            |  |  |  |
| RS-1717-F      |  | 450mm [18in]   |                      |            |  |  |  |

<sup>\*</sup> Fan width based on 69 bar [1000 PSI] of water sprayed at 300mm [12in] from surface. Actual results may vary based on material sprayed.

### TWIST TIP SIZES OFFERED

| PART<br>NUMBER | ORIFICE     | F     | AN WIDTH        | CAPACITY<br>****   |
|----------------|-------------|-------|-----------------|--------------------|
| 9-211-75       | .28mm [.011 | in]   |                 | 454 CC [.120 GPM]  |
| 9-213-75       | .33mm [.013 | in]   | 100mm           | 681 CC [.180 GPM]  |
| 9-215-75       | .38mm [.015 | in]   | [4in]           | 908 CC [.240 GPM]  |
| 9-217-75       | .43mm [.017 | in]   |                 | 1173 CC [.310 GPM] |
| 9-307-75       | .18mm [.007 | in]   |                 | 189 CC [.050 GPM]  |
| 9-309-75       | .23mm [.009 | in]   |                 | 341 CC [.090 GPM]  |
| 9-311-75       | .28mm [.011 | in]   |                 | 454 CC [.120 GPM]  |
| 9-313-75       | .33mm [.013 | in]   | 150mm<br>[6in]  | 681 CC [.180 GPM]  |
| 9-315-75       | .38mm [.015 | in]   |                 | 908 CC [.240 GPM]  |
| 9-317-75       | .43mm [.017 | in]   |                 | 1173 CC [.310 GPM] |
| 9-319-75       | .48mm [.019 | in]   |                 | 1457 CC [.385 GPM] |
| 9-409-75       | .23mm [.009 | in]   |                 | 341 CC [.090 GPM]  |
| 9-411-75       | .28mm [.011 | in]   |                 | 454 CC [.120 GPM]  |
| 9-413-75       | .33mm [.013 | in]   |                 | 681 CC [.180 GPM]  |
| 9-415-75       | .38mm [.015 | in]   | 200mm           | 908 CC [.240 GPM]  |
| 9-417-75       | .43mm [.017 | in]   | [8in]           | 1173 CC [.310 GPM] |
| 9-419-75       | .48mm [.019 | in]   |                 | 1457 CC [.385 GPM] |
| 9-421-75       | .53mm [.021 | in]   |                 | 1779 CC [.470 GPM] |
| 9-435-75       | .89mm [.035 | n]    |                 | 4959 CC [1.31 GPM] |
| 9-509-75       | .23mm [.009 | in]   |                 | 341 CC [.090 GPM]  |
| 9-511-75       | .28mm [.011 | in]   |                 | 454 CC [.120 GPM]  |
| 9-513-75       | .33mm [.013 | in]   |                 | 681 CC [.180 GPM]  |
| 9-515-75       | .38mm [.015 | in]   |                 | 908 CC [.240 GPM]  |
| 9-517-75       | .43mm [.017 | in] 2 | 50mm [10in]     | 1173 CC [.310 GPM] |
| 9-519-75       | .48mm [.019 | in]   |                 | 1457 CC [.385 GPM] |
| 9-521-75       | .53mm [.021 | in]   |                 | 1779 CC [.470 GPM] |
| 9-523-75       | .58mm [.023 | in]   |                 | 2158 CC [.57 GPM]  |
| 9-525-75       | .64mm [.025 | in]   |                 | 2536 CC [.670 GPM] |
| 9-611-75       | .28mm [.011 | in]   |                 | 454 CC [.120 GPM]  |
| 9-613-75       | .33mm [.013 | in]   |                 | 681 CC [.180 GPM]  |
| 9-615-75       | .38mm [.015 | in]   |                 | 908 CC [.240 GPM]  |
| 9-617-75       | .43mm [.017 | in]   |                 | 1173 CC [.310 GPM] |
| 9-619-75       | .48mm [.019 | in]   |                 | 1457 CC [.385 GPM] |
| 9-621-75       | .53mm [.021 | in]   | 300mm<br>[12in] | 1779 CC [.470 GPM] |
| 9-623-75       | .58mm [.023 | in]   | [12.11]         | 2158 CC [.57 GPM]  |
| 9-625-75       | .64mm [.025 | in]   |                 | 2536 CC [.670 GPM] |
| 9-627-75       | .69mm [.027 | in]   |                 | 2801 CC [.740 GPM] |
| 9-631-75       | .79mm [.031 | in]   |                 | 3899 CC [1.03 GPM] |
| 9-635-75       | .89mm [.035 | n]    |                 | 4959 CC [1.31 GPM] |
| 9-713-75       | .33mm [.013 | in]   |                 | 681 CC [.180 GPM]  |
| 9-715-75       | .38mm [.015 | in]   | 350mm<br>[14in] | 908 CC [.240 GPM]  |
| 9-717-75       | .43mm [.017 | in]   | []              | 1173 CC [.310 GPM] |

<sup>\*\*\*</sup> Fan width based on 152 bar [2200 PSI] of latex sprayed at 300mm [12in] from surface. Actual results may vary based on material sprayed.

<sup>\*\*</sup> Capacity based on 34 bar [500 PSI] of fluid pressure using water pressure.

<sup>\*\*\*\*</sup> Capacity based on 152 bar [2200 PSI] of fluid pressure using latex.

### WARRANTY POLICY

This product is covered by Carlisle Fluid Technologies' materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. Failure to reasonably follow any maintenance guidance provided may invalidate any warranty.

For specific warranty information please contact Carlisle Fluid Technologies.

Carlisle Fluid Technologies is a global leader in innovative finishing technologies. Carlisle Fluid Technologies reserves the right to modify equipment specifications without prior notice.

DeVilbiss®, Ransburg®, ms®, BGK®, and Binks® are registered trademarks of Carlisle Fluid Technologies, Inc.

© 2018 Carlisle Fluid Technologies, Inc. All rights reserved.

For technical assistance or to locate an authorized distributor, contact one of our international sales and customer support locations.

| Region                                | Industrial/Automotive                                | <b>Automotive Refinishing</b>              |
|---------------------------------------|--|--|
| Americas                              | Tel: 1-800-992-4657<br>Fax: 1-888-246-5732           | Tel: 1-800-445-3988<br>Fax: 1-800-445-6643 |
| Europe, Africa,<br>Middle East, India | Tel: +44 (0)1202 571 111<br>Fax: +44 (0)1202 573 488 |  |
| China                                 | Tel: +8621-3373 0108<br>Fax: +8621-3373 0308         |  |
| Japan                                 | Tel: +81 45 785 6421<br>Fax: +81 45 785 6517         |  |
| Australia                             | Tel: +61 (0) 2 8525 7555<br>Fax: +61 (0) 2 8525 7575 |  |

For the latest information about our products, visit www.carlisleft.com

