Operation

GLASCRAFT
COMPOSITES EQUIPMENT BY GRACO

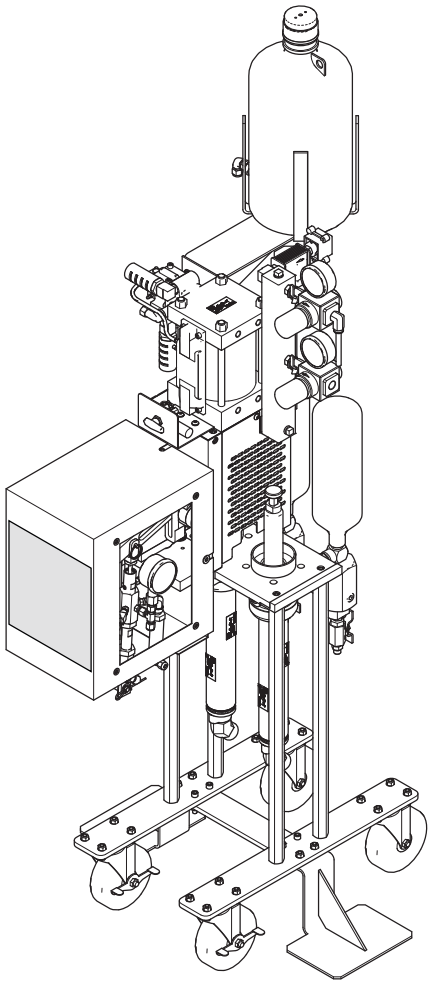
MCG

3A1909B
EN

Multi-Color Gel-Coat System.
For use with Polyester Resin and Gel-Coat. For professional use only.

See page 3 for model information.
See page 48 for maximum working pressure.

Important Safety Instructions
Read all warnings and instructions in this manual. Save these instructions.



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CE Ex II 2 G T6

Contents

Related Manuals

Manuals are available at www.graco.com.
Component manuals in English:

Manual	Description
3A0232	RS Gun, Cutter Operation-Repair
3A1218	Catalyst Pump Repair-Parts

Models

Part No.	No. of Colors	Pump Ratio	Mix Type	System Type	Hose Bundle
24K000	2	13:1	Internal	Chop	None
24K001	2	13:1	Internal	Chop	25
24K002	2	13:1	Internal	Chop	35
24K003	2	13:1	Internal	Chop	50
24K004	2	20:1	Internal	Chop	None
24K005	2	20:1	Internal	Chop	25
24K006	2	20:1	Internal	Chop	35
24K007	2	20:1	Internal	Chop	50
24K008	3	13:1	Internal	Chop	None
24K009	3	13:1	Internal	Chop	25
24K010	3	13:1	Internal	Chop	35
24K011	3	13:1	Internal	Chop	50
24K012	3	20:1	Internal	Chop	None
24K013	3	20:1	Internal	Chop	25
24K014	3	20:1	Internal	Chop	35
24K015	3	20:1	Internal	Chop	50
24K016	4	13:1	Internal	Chop	None
24K017	4	13:1	Internal	Chop	25
24K018	4	13:1	Internal	Chop	35
24K019	4	13:1	Internal	Chop	50
24K020	4	20:1	Internal	Chop	None
24K021	4	20:1	Internal	Chop	25
24K022	4	20:1	Internal	Chop	35
24K023	4	20:1	Internal	Chop	50
24K024	5	13:1	Internal	Chop	None
24K025	5	13:1	Internal	Chop	25
24K026	5	13:1	Internal	Chop	35
24K027	5	13:1	Internal	Chop	50
24K028	5	20:1	Internal	Chop	None
24K029	5	20:1	Internal	Chop	25
24K030	5	20:1	Internal	Chop	35
24K031	5	20:1	Internal	Chop	50
24K032	6	13:1	Internal	Chop	None
24K033	6	13:1	Internal	Chop	25
24K034	6	13:1	Internal	Chop	35
24K035	6	13:1	Internal	Chop	50
24K036	6	20:1	Internal	Chop	None
24K037	6	20:1	Internal	Chop	25
24K038	6	20:1	Internal	Chop	35
24K039	6	20:1	Internal	Chop	50

Models

Models	No. of Colors	Pump Ratio	Mix Type	System Type	Hose Bundle
24K040	2	13:1	Internal	Gel	None
24K041	2	13:1	Internal	Gel	25
24K042	2	13:1	Internal	Gel	50
24K043	2	20:1	Internal	Gel	None
24K044	2	20:1	Internal	Gel	25
24K045	2	20:1	Internal	Gel	50
24K046	3	13:1	Internal	Gel	None
24K047	3	13:1	Internal	Gel	25
24K048	3	13:1	Internal	Gel	50
24K049	3	20:1	Internal	Gel	None
24K050	3	20:1	Internal	Gel	25
24K051	3	20:1	Internal	Gel	50
24K052	4	13:1	Internal	Gel	None
24K053	4	13:1	Internal	Gel	25
24K054	4	13:1	Internal	Gel	50
24K055	4	20:1	Internal	Gel	None
24K056	4	20:1	Internal	Gel	25
24K057	4	20:1	Internal	Gel	50
24K058	5	13:1	Internal	Gel	None
24K059	5	13:1	Internal	Gel	25
24K060	5	13:1	Internal	Gel	50
24K061	5	20:1	Internal	Gel	None
24K062	5	20:1	Internal	Gel	25
24K063	5	20:1	Internal	Gel	50
24K064	6	13:1	Internal	Gel	None
24K065	6	13:1	Internal	Gel	25
24K066	6	13:1	Internal	Gel	50
24K067	6	20:1	Internal	Gel	None
24K068	6	20:1	Internal	Gel	25
24K069	6	20:1	Internal	Gel	50

Models

Models	No. of Colors	Pump Ratio	Mix Type	System Type	Hose Bundle
24K070	2	13:1	External	Chop	None
24K071	2	13:1	External	Chop	25
24K072	2	13:1	External	Chop	35
24K073	2	13:1	External	Chop	50
24K074	2	20:1	External	Chop	None
24K075	2	20:1	External	Chop	25
24K076	2	20:1	External	Chop	35
24K077	2	20:1	External	Chop	50
24K078	3	13:1	External	Chop	None
24K079	3	13:1	External	Chop	25
24K080	3	13:1	External	Chop	35
24K081	3	13:1	External	Chop	50
24K082	3	20:1	External	Chop	None
24K083	3	20:1	External	Chop	25
24K084	3	20:1	External	Chop	35
24K085	3	20:1	External	Chop	50
24K086	4	13:1	External	Chop	None
24K087	4	13:1	External	Chop	25
24K088	4	13:1	External	Chop	35
24K089	4	13:1	External	Chop	50
24K090	4	20:1	External	Chop	None
24K091	4	20:1	External	Chop	25
24K092	4	20:1	External	Chop	35
24K093	4	20:1	External	Chop	50
24K094	5	13:1	External	Chop	None
24K095	5	13:1	External	Chop	25
24K096	5	13:1	External	Chop	35
24K097	5	13:1	External	Chop	50
24K098	5	20:1	External	Chop	None
24K099	5	20:1	External	Chop	25
24K100	5	20:1	External	Chop	35
24K101	5	20:1	External	Chop	50
24K102	6	13:1	External	Chop	None
24K103	6	13:1	External	Chop	25
24K104	6	13:1	External	Chop	35
24K105	6	13:1	External	Chop	50
24K106	6	20:1	External	Chop	None
24K107	6	20:1	External	Chop	25
24K108	6	20:1	External	Chop	35
24K109	6	20:1	External	Chop	50

Models

Models	No. of Colors	Pump Ratio	Mix Type	System Type	Hose Bundle
24K110	2	13:1	External	Gel	None
24K111	2	13:1	External	Gel	25
24K112	2	13:1	External	Gel	50
24K113	2	20:1	External	Gel	None
24K114	2	20:1	External	Gel	25
24K115	2	20:1	External	Gel	50
24K116	3	13:1	External	Gel	None
24K117	3	13:1	External	Gel	25
24K118	3	13:1	External	Gel	50
24K119	3	20:1	External	Gel	None
24K120	3	20:1	External	Gel	25
24K121	4	20:1	External	Gel	50
24K122	4	13:1	External	Gel	None
24K123	4	13:1	External	Gel	25
24K124	4	13:1	External	Gel	50
24K125	4	20:1	External	Gel	None
24K126	4	20:1	External	Gel	25
24K127	4	20:1	External	Gel	50
24K128	5	13:1	External	Gel	None
24K129	5	13:1	External	Gel	25
24K130	5	13:1	External	Gel	50
24K131	5	20:1	External	Gel	None
24K132	5	20:1	External	Gel	25
24K133	5	20:1	External	Gel	50
24K134	6	13:1	External	Gel	None
24K135	6	13:1	External	Gel	25
24K136	6	13:1	External	Gel	50
24K137	6	20:1	External	Gel	None
24K138	6	20:1	External	Gel	25
24K139	6	20:1	External	Gel	50

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

- **See Important Safety Information - MEKP, Polyester Resins and Gel-Coats and Spraying and Lamination Operations section of this manual.**

⚠ WARNING




FIRE AND EXPLOSION HAZARDF

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- If there is static sparking or you feel a shock, **stop operation immediately.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.


TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDSs to know the specific hazards of the fluids you are using.
- Route exhaust away from work area. If diaphragm ruptures, fluid may be exhausted into the air.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.



SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses and couplings daily. Replace worn or damaged parts immediately.

Warnings

WARNING

MOVING PARTS HAZARD

Moving parts can pinch, cut or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

PRESSURIZED ALUMINUM PARTS HAZARD

Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

Important Safety Information

Methyl Ethyl Ketone Peroxide (MEKP)

MEKP is among the more hazardous materials found in commercial channels. Proper handling of the “unstable (reactive)” chemicals presents a definite challenge to the plastics industry. The highly reactive property which makes MEKP valuable to the plastics industry in producing the curing reaction of polyester resins and gel-coats also produces the hazards which require great care and caution in its storage, transportation, handling, processing and disposal.

Workers must be thoroughly informed of the hazards that may result from improper handling of MEKP, especially in regards to contamination and heat. They must be thoroughly instructed regarding the proper action to be taken in the storage, use and disposal of MEKP and other hazardous materials used in the laminating operation.

MEKP is flammable and potentially explosive, as well as potentially damaging to the eyes and skin.
Read material manufacturer’s warnings and material MSDS to know specific hazards and precautions related to MEKP.

Contaminated MEKP can become explosive. Prevent contamination of MEKP with other materials, which includes, but is not limited to polyester overspray, polymerization accelerators and promoters, and non-stainless metals. Even small amounts of contaminates can make MEKP explosive. This reaction may start slowly, and gradually build-up heat, which can accelerate until fire or an explosion result. This process can take from seconds to days.

Heat applied to MEKP, or heat build-up from contamination reactions can cause it to reach what is called its Self-Accelerating Decompisition Temperature (SADT), which can cause fire or explosion.

Spills should be promptly removed, so no residues remain. Spillage can heat up to the point of self-ignition. Dispose in accordance with manufacture’s recommendation.

Store MEKP in a cool, dry and well-ventilated area in the original containers away from direct sunlight and away from other chemicals. It is strongly recommended that the storage temperature remain below 86° F (30° C). Heat will increase the potential for explosive decomposition. Refer to NFPA 432.

Keep MEKP away from heat, sparks and open flames.

Current catalysts are premixed and do not require any diluents. GlasCraft strongly recommends that diluents not be used. Diluants add to the possibility of contaminates entering the catalyst system. Never dilute MEKP with acetone or any solvent since this can produce an extremely shock-sensitive compound which can explode.

Use only original equipment or equivalent parts from GlasCraft in the catalyst system (i.e.: hoses, fittings, etc.) because a hazardous chemical reaction may result between substituted parts and MEKP.

To prevent contact with MEKP, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons and goggles are required for everyone in the work area.

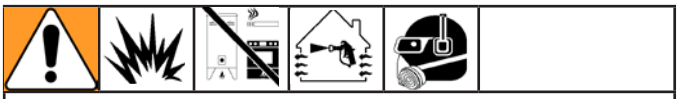
Polyester Resins and Gel-Coats

Spraying materials containing polyester resin and gel-coats creates potentially harmful mist, vapors and atomized particulates. Prevent inhalation by providing sufficient ventilation and the use of respirators in the work area.

Read the material manufacturer’s warnings and material MSDS to know specific hazards and precautions related to polyester resins and gel-coats.

To prevent contact with polyester resins and gel-coats, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons and goggles are required for everyone in the work area.

Spraying and Lamination Operations



Remove all accumulations of overspray, FRP sandings, etc. from the building as they occur. If this waste is allowed to build up, spillage of catalyst is more likely to start a fire.

If cleaning solvents are required, read material manufacture’s warnings and material MSDS to know specific hazards and precautions. (GlasCraft recommends that clean-up solvents be nonflammable.)

GlasCraft recommends that you consult OSHA Sections 1910.94, 1910.106, 1910.107 and NFPA No. 33, Chapter 16,17, and NFPA No. 91 for further guidance.

Grounding

This equipment must be grounded.

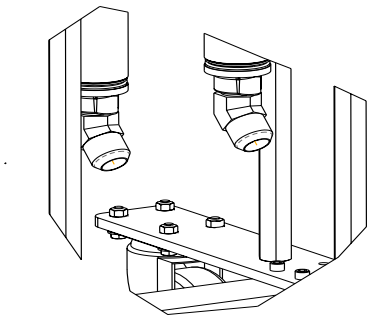
Ground the dispense gun through a connection to a GlasCraft approved grounded fluid supply hose.

Check your local electrical code and related manuals for detailed grounding instructions of all equipment in the work area.

A grounding wire and clamp are provided, assembly p/n 17440-00 with all MCG equipment.

Set-Up

1. Remove the cap plugs from the bottom inlet of each material pump.



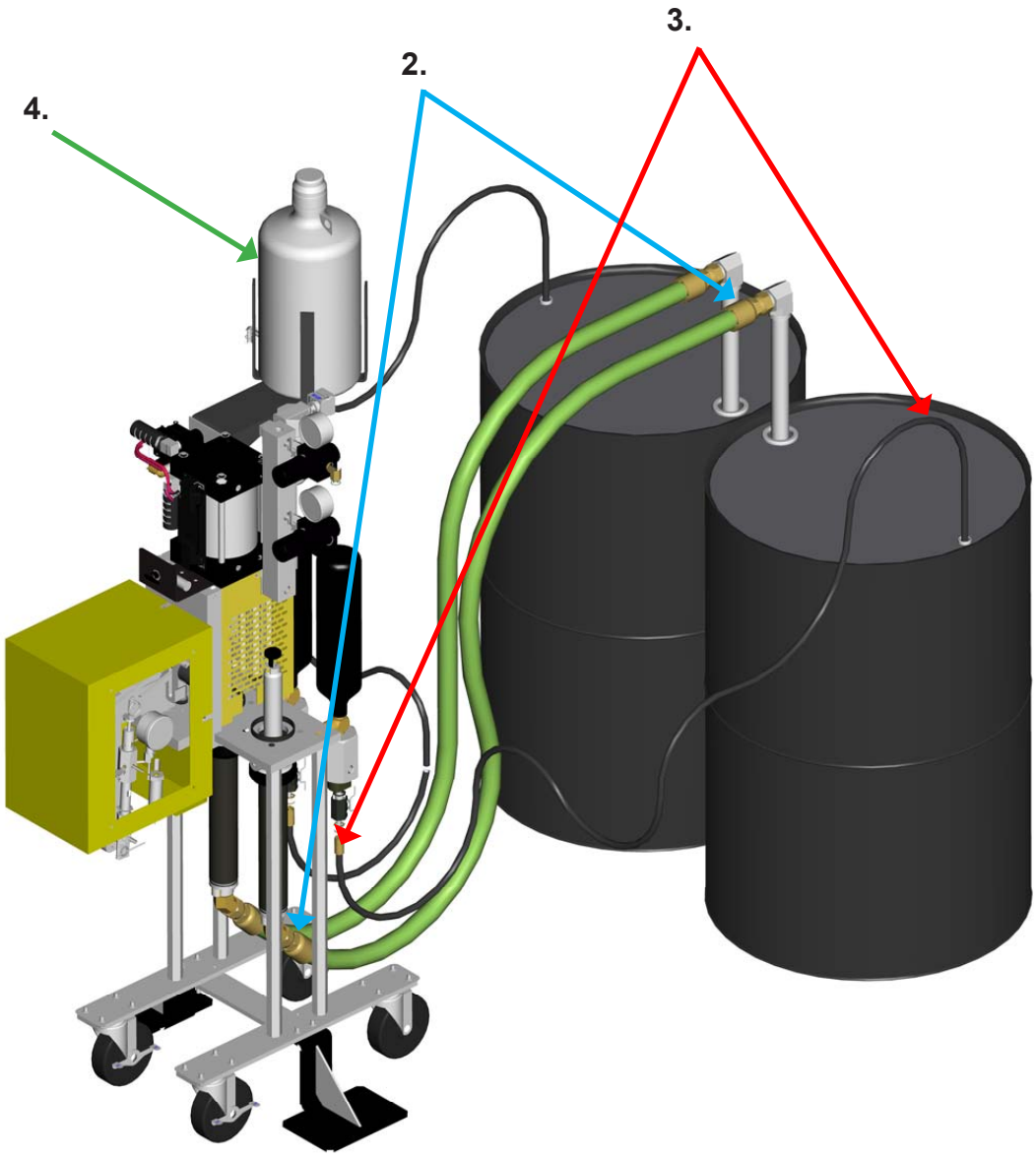
2. Attach one end of the green material hoses to the pump inlets and attach the other end to the pick-up tubes. Place the pick-up tubes into the material drums.

3. Attach the “fitting” end of the recirculation hoses to the bypass valve on the material pumps and place the other end in either the small or large bung of the material drum. Tape the hose to the pick-up tube.

4. Inspect the catalyst bottle for debris. Clean if necessary.

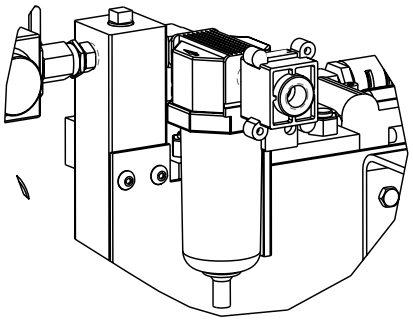
5. Fill the empty catalyst supply bottle with no more than two gallons of material.

6. Inspect the material hoses to make sure they are not bent.

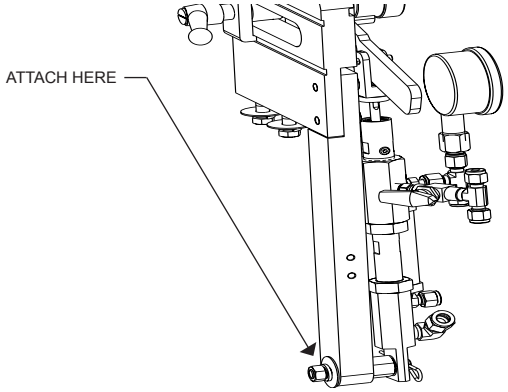


Set-Up

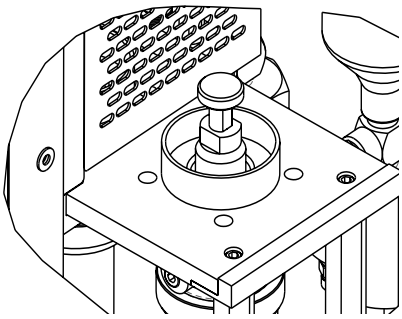
7. Connect a main air supply to the system. (GlasCraft recommends a minimum of 3/8”dia. airline.)



8. Attach the grounding clamp assembly (17440-00) to the catalyst pump.



9. Fill the lube cup at the top of the fluid section half (½) full of suitable pump lube.



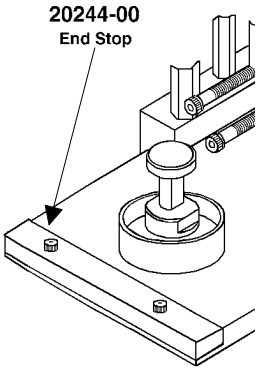
Additional Color Installation Instructions

When adding "ODD" number colors (i.e. third color, fifth color, etc.), you will need one hardware kit and one fluid section kit.

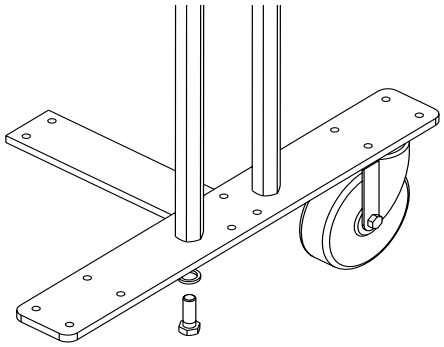
When adding "EVEN" number colors (i.e. fourth color, sixth color, etc.), you will need only one hardware kit and two fluid section kits.

Additional Color	
Part Number	**Description**
20265-00	HARDWARE PARTS KIT, 13:1
20266-00	FLUID SECTION KIT, 13:1
20265-01	HARDWARE PARTS KIT, 20:1
20266-01	FLUID SECTION KIT, 20:1

1. Remove end stop plate from existing track assembly.

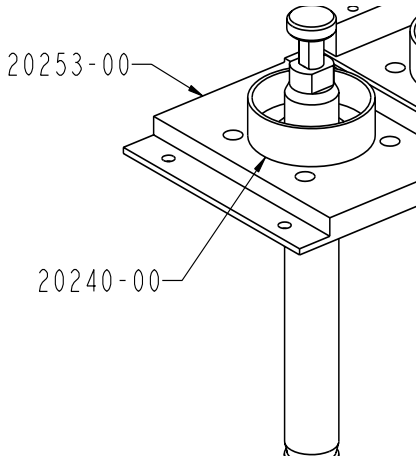


2. Assemble hardware kit components as shown.



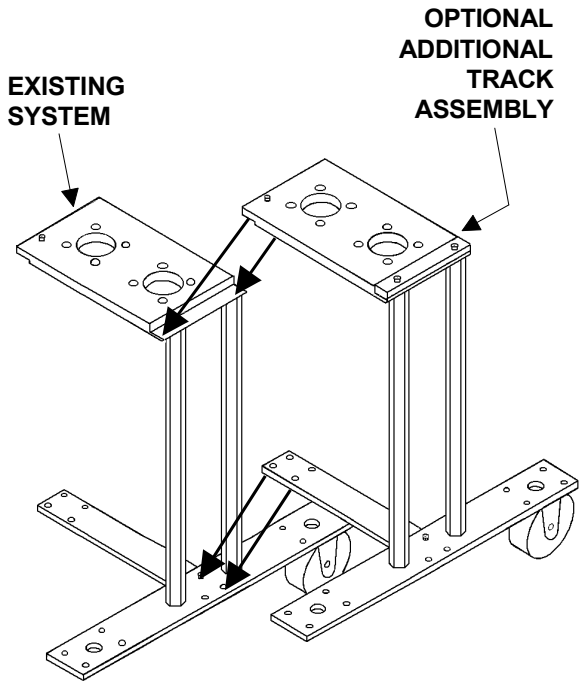
Finger tighten bolts and nuts until additional track assembly is fitted to existing track assembly.

3. Mount fluid section kit as shown.



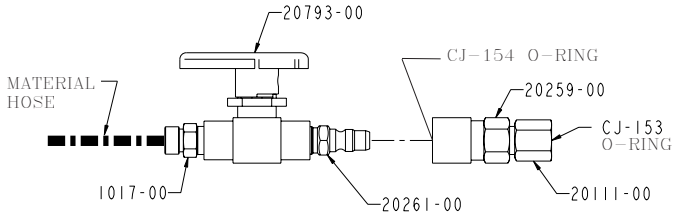
Be certain to assemble end stop plate, P/N 20244-00, to new the fluid section mounting plate, P/N 20253-00, before completing assembly.

4. Assemble additional track assembly to existing track assembly. Tighten all bolts and nuts securely.

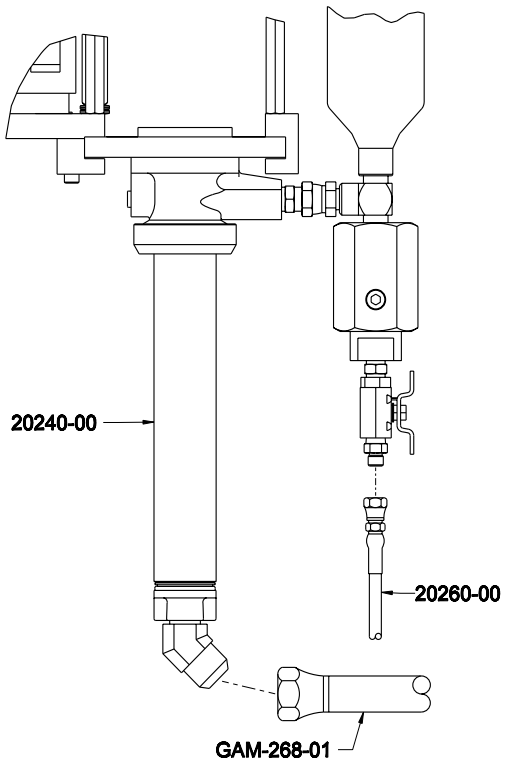


Set-Up

5. Assemble material valve and quick-disconnect fitting onto the material hose.



6. Install material hose, recirculation hose, and material pick-up kit, P/N GAM-268-01.



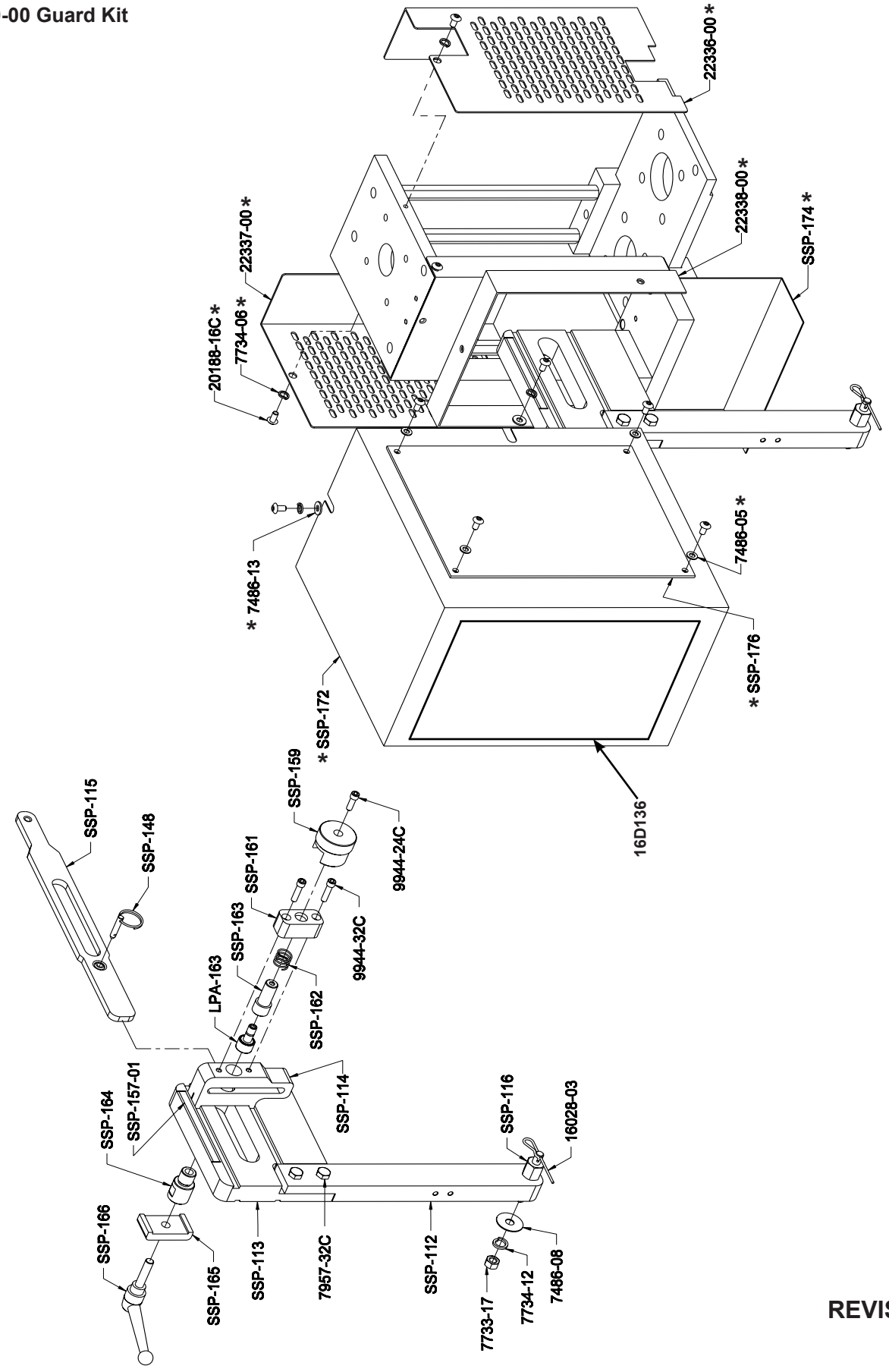
To avoid damage to equipment, be certain that all fittings, bolts and nuts are tightened securely before operating new fluid section assembly.

7. Follow **Start-Up Instructions** on page 20. Perform steps 5 through 13 for initial fluid section priming.

8. When priming process is complete, new fluid section is ready for use.

Set-Up

22349-00-00 Guard Kit

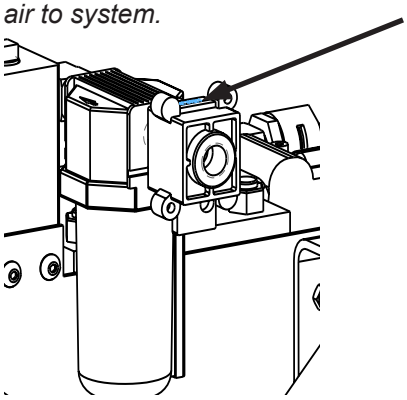


REVISION Y

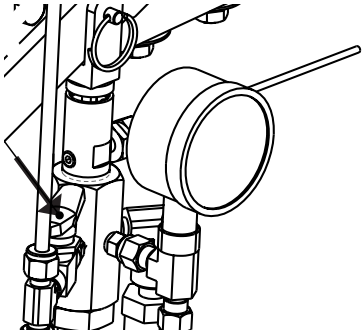
Pressure Relief Procedure

To relieve fluid and air pressures:

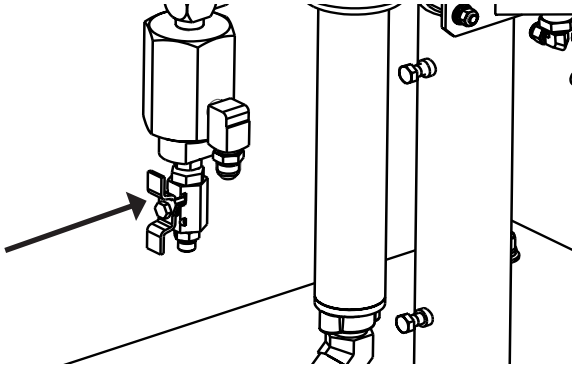
1. *Push down the yellow slide valve, P/N 21402-00, to bleed off air to system.*



2. *Open P/N 21228-00 on catalyst pump to the recirculation position.*



3. *Open P/N 21192-00 on bottom of material pump.*



4. *Verify the trigger lock is in the locked position. See Spray Gun manual for trigger lock location.*

Start-Up

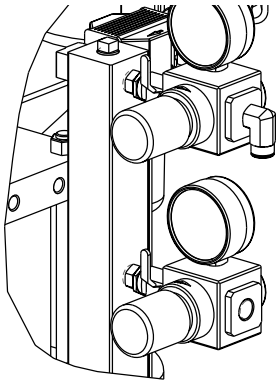
Refer to specific User Manuals for detailed component start-up and shut-down instructions.

Before Operating the System

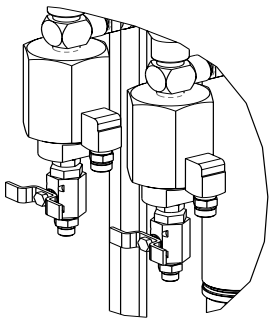
1. Make sure all hose connections are tight and secure.

Set all valves and regulators to “OFF” before turning on the main system air to avoid unintended pressurization. Not doing so can cause the pump to cycle unexpectedly, which could result in serious injury from splashing or moving parts.

2. Verify the ball valves on the manifold are off and all of the regulators are dialed down to zero. (Turning regulators counter-clockwise will dial them down.)



3. Close the bypass valves on each of the fluid sections. (Turn clockwise to close).

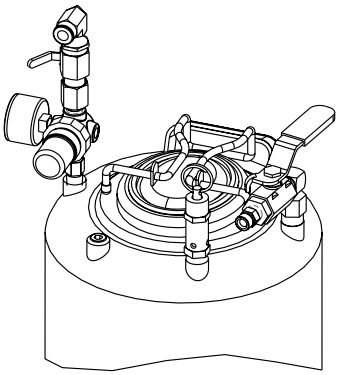


4. Each new GlasCraft system has been fluid tested at the factory. Our pump test solution is red-colored DBP (Di-N-Butyl Phthalate). There may be a residual amount of DBP in system that should be-evacuated before putting the unit into production. During the initial start-up, ½ to 1 gallon of material should be dispensed. This is typically adequate to remove the test material. If desired, the fluid pump can be flushed with a suitable cleaning solution to evacuate DBP before priming with material.

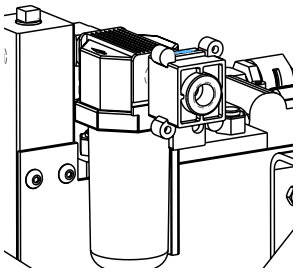
5. Review all service manuals, which contain detailed operation and safety instructions.

Start-Up
Internal Mix

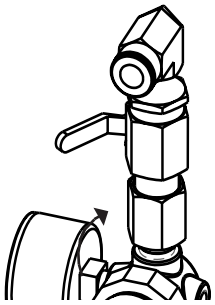
1. Fill the solvent pot with a suitable flushing material.



2. Open the main air valve at the manifold.

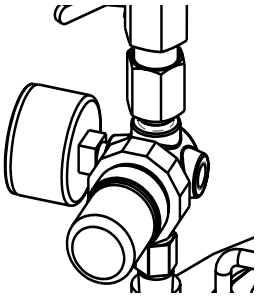


3. Open the ball valve at the solvent regulator.

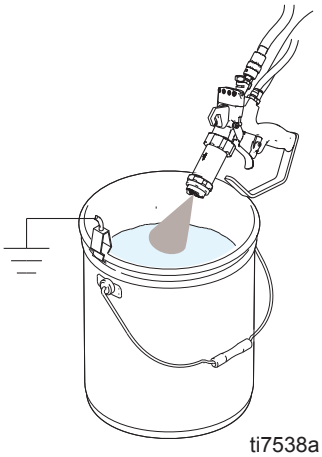


Start-Up

4. Adjust the solvent regulator between 90-100 psi.

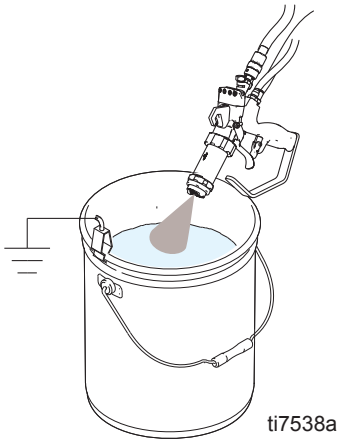


5. Using a proper collection container, open the solvent flush valve on the RS™ gun. Ensure that you have proper solvent flushing at the gun.



ti7538a

5. While continuing to hand prime the pump, trigger the gun into a suitable collection container.



ti7538a

6. Continue to hand prime the pump. With the trigger pulled, inspect the flow of catalyst from the nozzle.

7. Once all air is evacuated and a steady stream of catalysts is observed, the system is primed with catalyst.

8. Release the trigger and stop hand priming.

9. Solvent flush the gun.

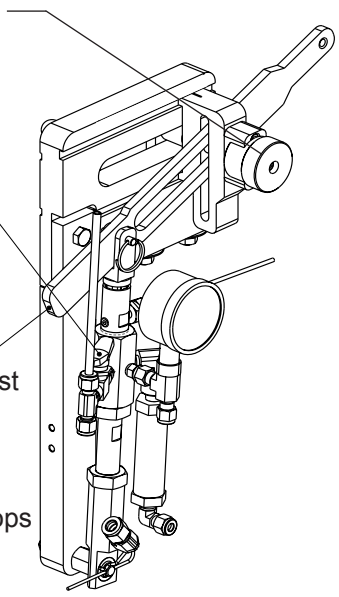
Catalyst

1. Pull and rotate the pivot knob to disengage the catalyst drive arm.

2. Turn the catalyst slave pump yellow ball valve to the open position.

3. Hand prime the pump until a steady stream of catalyst flows back to the bottle.

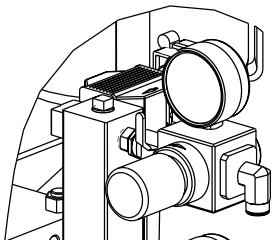
4. Close the ball valve. Hand stroke the pump until it develops 100-200 PSI.



Start-Up

Gel-Coat

1. Open the ball valve at the material regulator.



2. With the roller cam still unattached from the slave pump linkage arm, slowly begin to dial up the pressure at the material regulator. Between 5-15 psi, the pump will begin to cycle. The pump will continue to fill the system with material and will stall when the polyester arrives at the gun.

• Material viscosity, temperature, filler load, surface tension and other factors will ultimately determine the proper material pressure that will be required.

• GlasCraft recommends an initial start-up pressure of 20-25 psi.

3. Dial up the material pump pressure to initial start-up pressure.

4. Prime the slave pump to the proper pressure for operation of the dispense gun.

5. Rotate pivot knob, P/N SSP-159 to re-engage the catalyst drive arm.

There may be a small amount of air still in the material. It will push itself out quickly.

6. Check and confirm the following points:

• Confirm that you are getting a complete, consistent and uniform mix of catalyst. If red dye catalyst is being used, this will be easy to confirm visually.

• While triggering the gun onto a test panel, visibly inspect the fluid pressure gauge on the catalyst pump.

• The catalyst pressure will approximately match the fluid pressure generated by the material pump.

Example:

• With 13:1 pump dialed up to 20 psi at the regulator, you will have (13x20=260) 260 psi fluid pressure.

• With 20:1 pump dialed up to 20 psi at the regulator, you will have (20x20=400) 400 psi fluid pressure.

• While spraying the gun, inspect catalyst pressure gauge to confirm catalyst pressure.

• Because of material viscosity, size of nozzle, hose length and other factors, the catalyst pressure may not exactly match material pressure.

• Catalyst pressure will be approximately +/- 50 psi of material pressure.

7. After confirming an acceptable catalyst-to-material pressure, spray several test strips or panels to confirm geltime and uniform catalization. Catalyst pressure will stay consistent and steady.

8. Inspect material dispense pattern.

9. Adjust material pressure to achieve desired pattern of material.

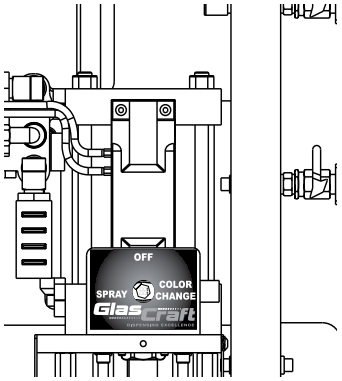
10. Solvent-flush the gun.

It is important to remember that after releasing the trigger, mixed material will remain in the head of the gun which will cure and clog the gun. Depending on the gel-time of the material, it will be necessary to: ***Pull the trigger and begin spraying again or solvent flush the gun.***

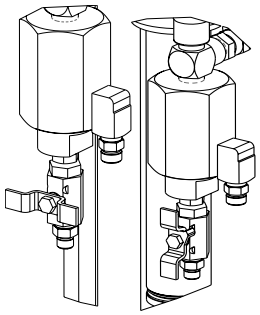
Start-Up

Color Change Procedure

1. Turn the air control valve clockwise to “COLOR CHANGE” position.

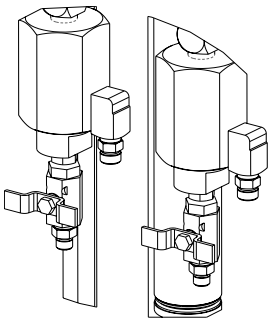


2. Turn the material valve, P/N 21192-00, from material hose to recirculating hose (handle in vertical position). This will relieve pressure on the material hose.

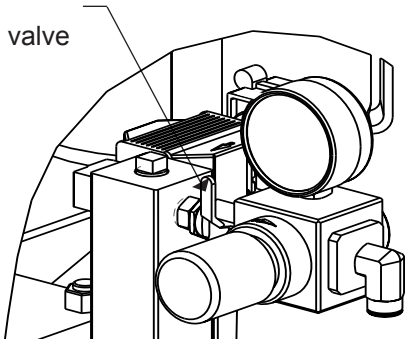


Pump will cycle to down stroke and stop.

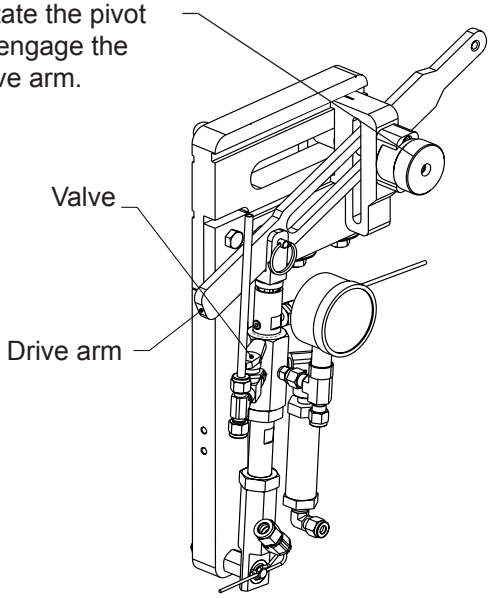
Once the pumps are in the down position, close material valve.



3. Turn the main air supply valve to the “off” position. This will relieve the air pressure on the air motor.

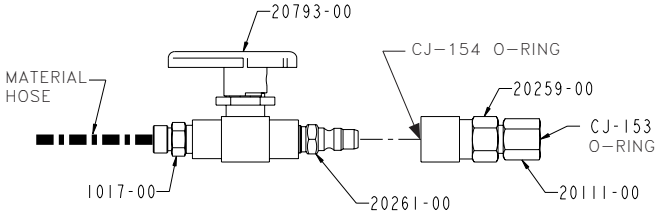


4. Pull and rotate the pivot knob to disengage the catalyst drive arm.



5. Turn material valve (at gun) clockwise to “OFF” position. Material valve is to remain in the “OFF” position until color material hose is required again.

6. Detach quick-disconnect fitting (Gun end), P/N 20259-00, from quick-disconnect fitting (hose end),P/N 20261-00.



Start-Up

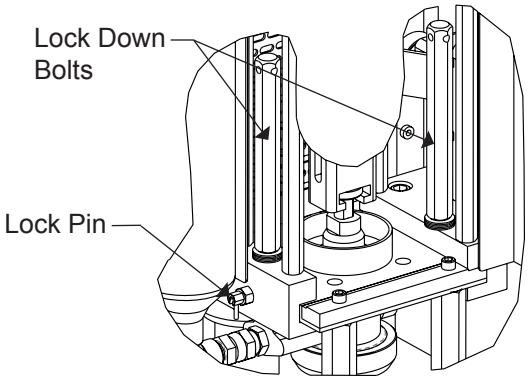
NOTICE

To prevent material from leaking out of the hose and causing property damage, turn the material valve to the "OFF" position.

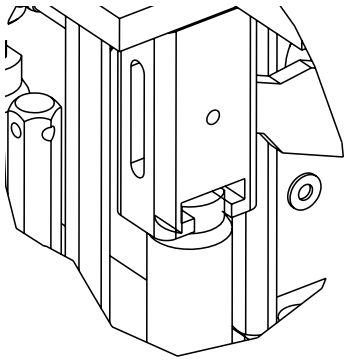
When not in use, coil and store the material hose in an out-of-the-way location. Clean the Quick-disconnect fitting of clean of dirt and overspray.

7. Securely attach the desired color material hose to the back of Spray Gun. Make certain that the material valve remains in the "OFF" position at this time.

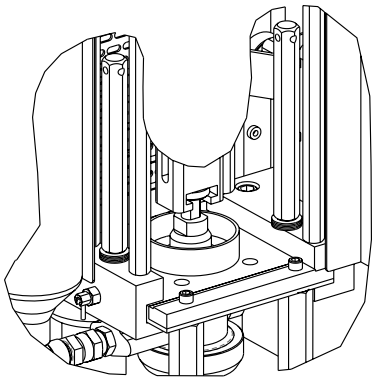
8. Loosen lock down bolts, P/N 20250-00.



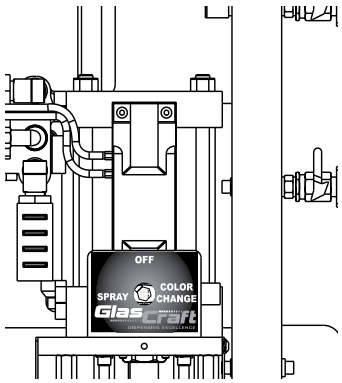
9. Slide air motor/slave pump assembly to the desired color pump fluid section and align the air motor and fluid section shafts.
The lock pin should now snap-in place.



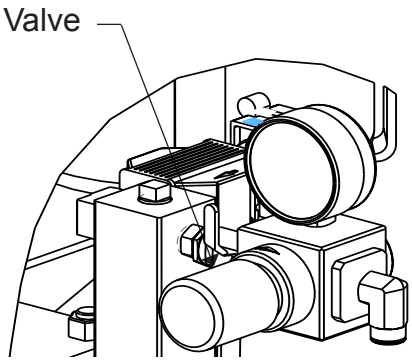
10. Tighten the lock down bolts securely.



11. Turn air control valve counter-clockwise from "COLOR CHANGE" to 'SPRAY" position.



12. Turn main air supply valve slowly "On" until pump stalls.



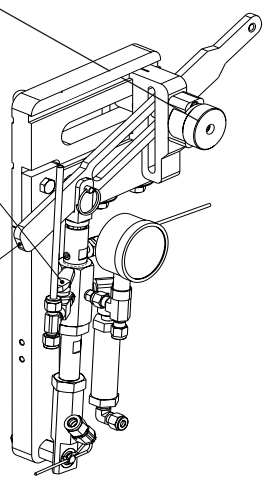
Start-Up

13. Pull and rotate Pivot knob to disengage the catalyst drive arm.

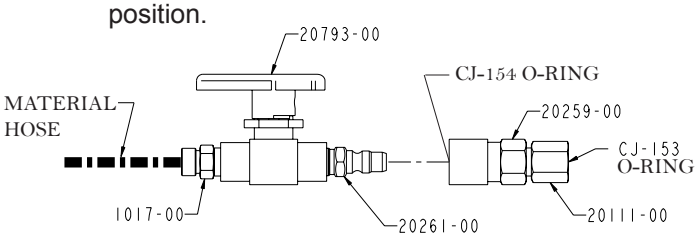
14. Turn the catalyst slave pump yellow ball valve to the open position.

15. Hand prime the pump until a steady stream of catalyst flows back to the bottle.

16. Close the ball valve. Hand stroke the pump until it developes 100-200 PSI.



17. Turn material valve on back of Gun to “On” position.

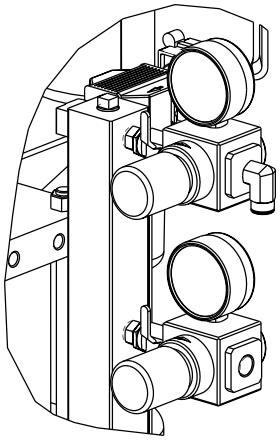


18. Color change procedure is now complete and normal spray operations may continue.

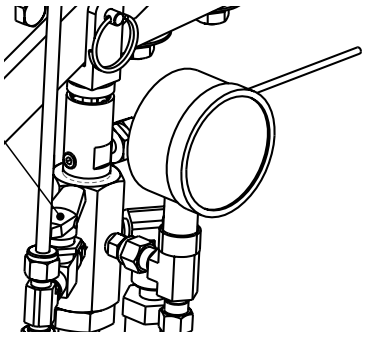
Shut-Down

1. Follow the **Pressure Relief Procedure** on page 16.

2. Turn the “On/Off” ball valves on the air manifold to their “Off” position.



3. Turn catalyst yellow ball valve, P/N 21228-00 to open/recirculation position to dump pressure and close the valve.



See Spray Gun User manual for proper shut-down procedures.

4. Stop the material pump with the pump shaft in the UP position. Clean the shaft of any over-spray or foreign material.

5. Empty the material pump lube cup. Clean and refill with a clean, compatible lubricant.

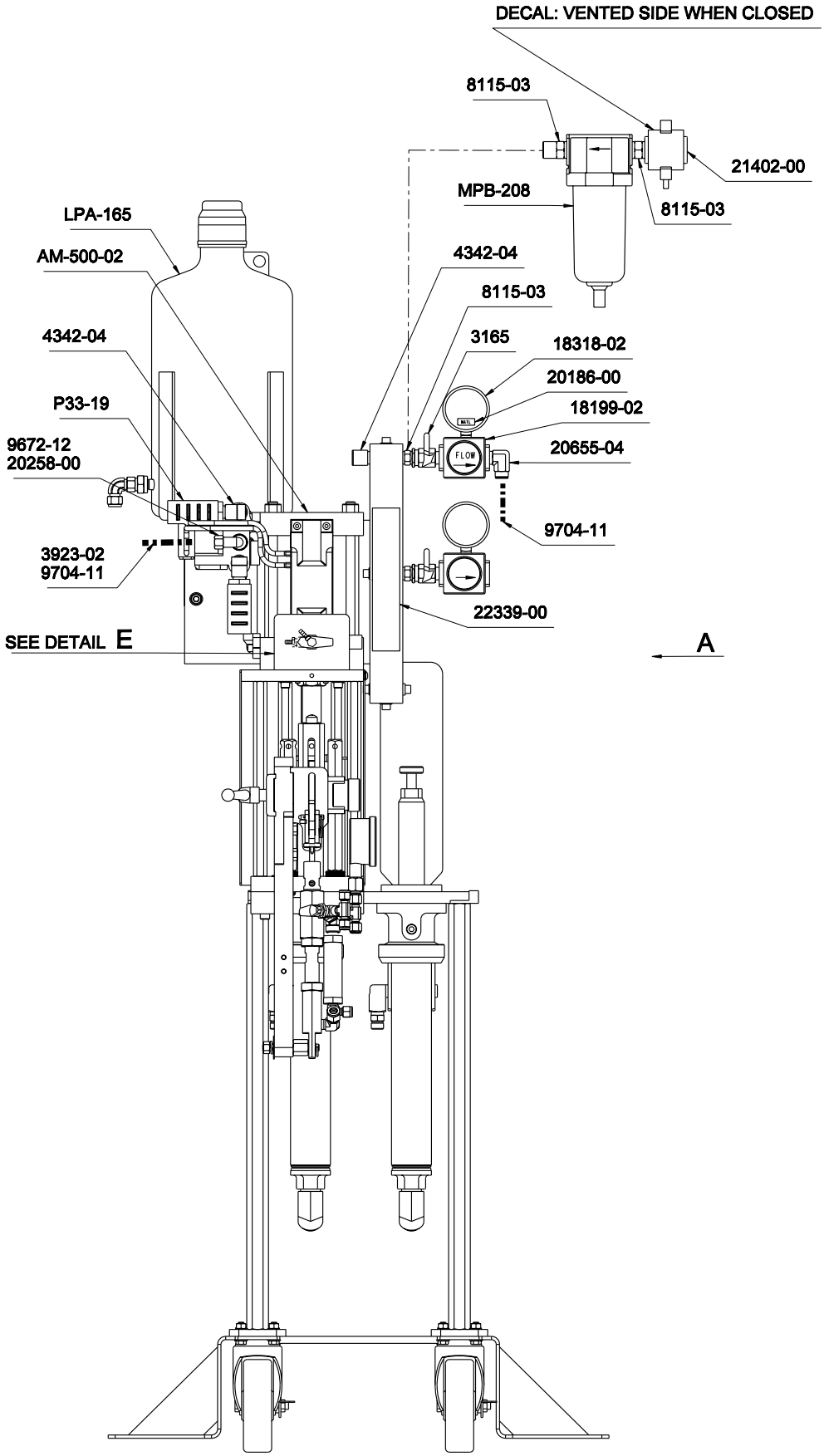
GlasCraft recommends you contact your gel-coat or material supplier for their recommendation of a lubricant that will be suitable for use with your material.

6. Cycle the material pump so that the shaft is left in the DOWN position during the shut-down period.

NOTICE

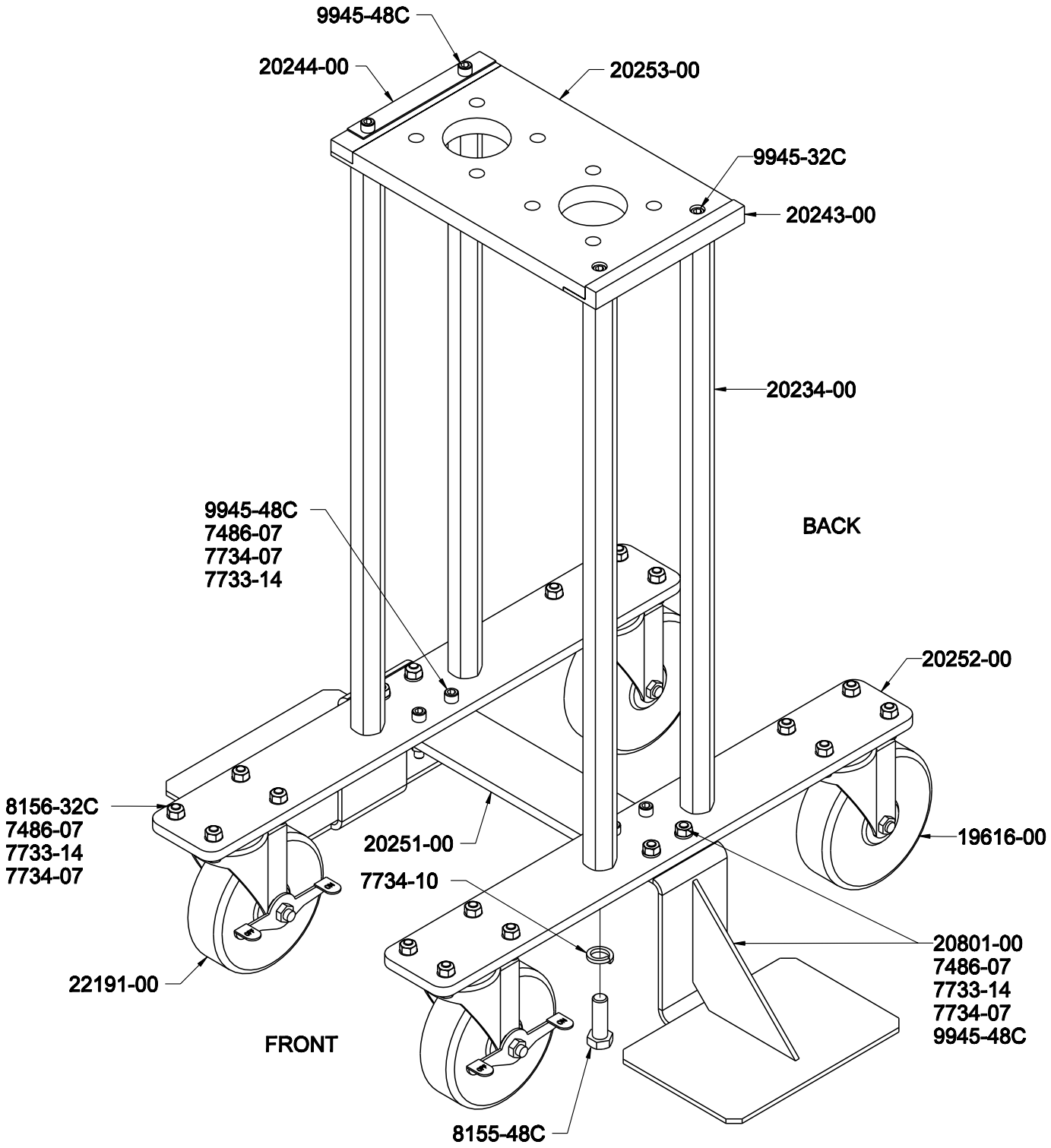
To prevent damage to the upper pump seals, ensure the pump shaft is stopped in the DOWN position.

13:1 MCG Unit Assembly



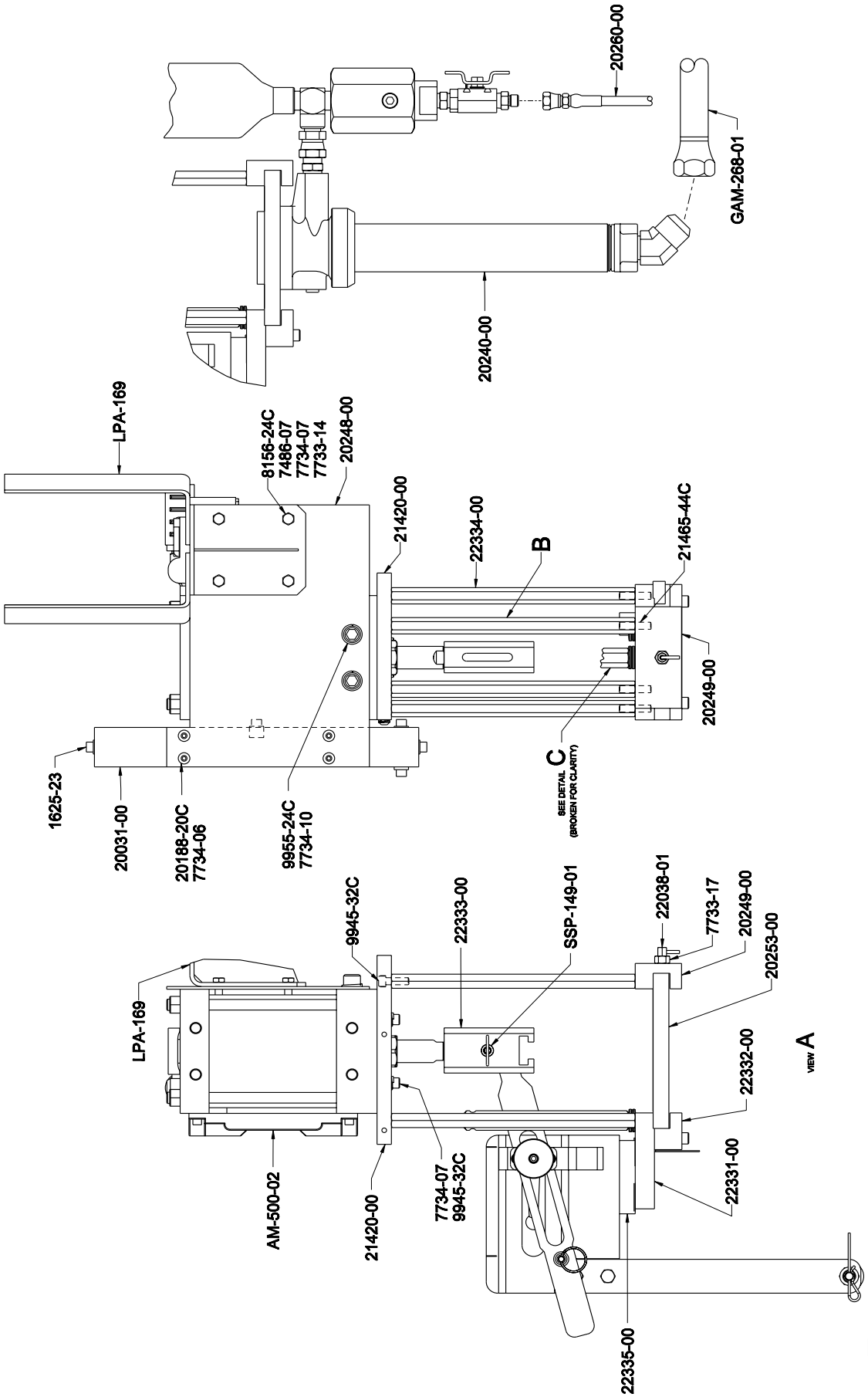
REVISION Y

13:1 MCG Unit Assembly



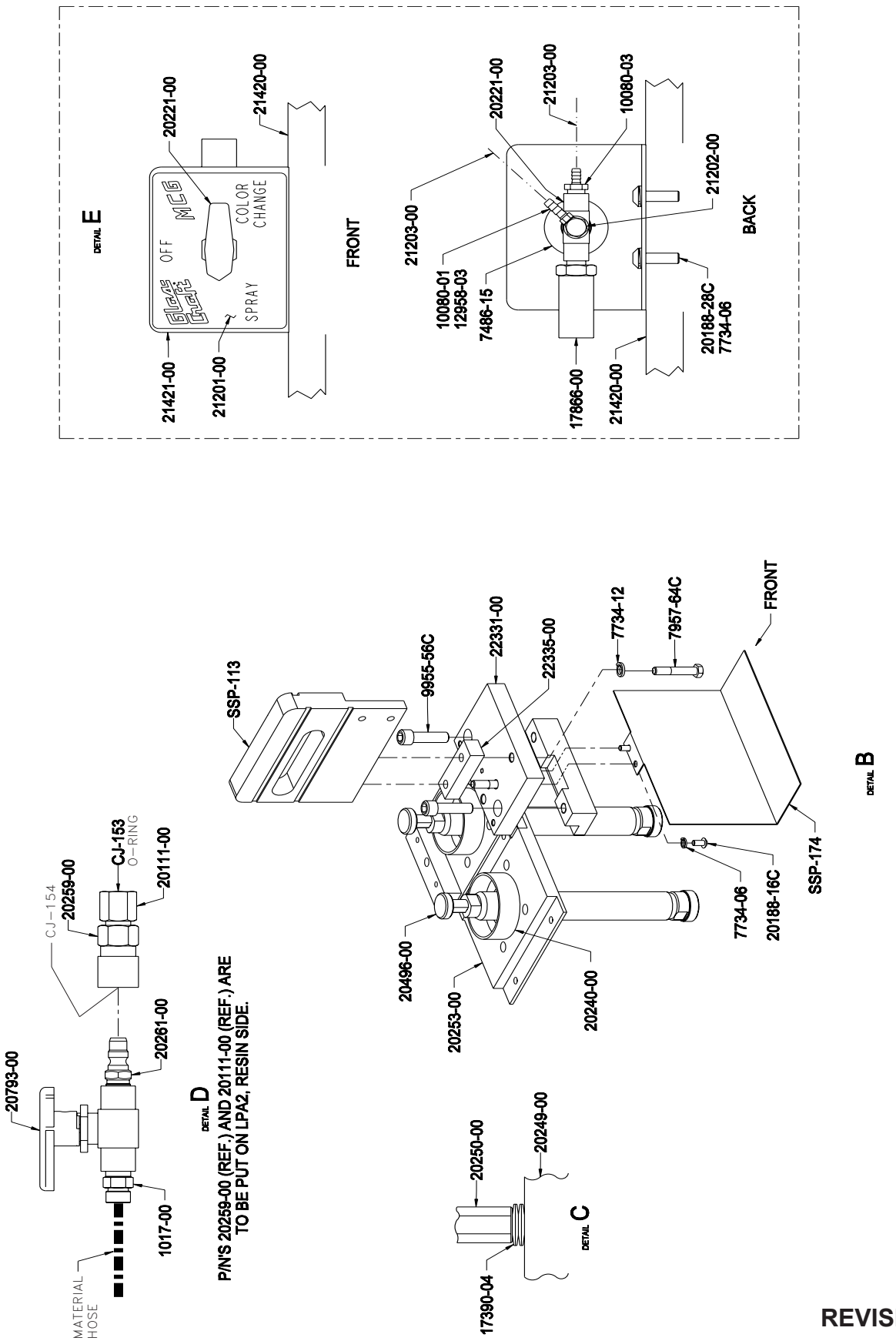
REVISION Y

13:1 MCG Unit Assembly



REVISION Y

13:1 MCG Unit Assembly



REVISION Y

13:1 MCG Unit Assembly

Part Number	Description
AM-500-02	5” AIR MOTOR
CJ-153	O-RING
GAM-268-01	PICK-UP TUBE
LPA-163	CAM FOLLOWER
LPA-165	CATALYST JUG
LPA-169	BOTTLE SUPPORT
MPB-208	AIR FILTER
P33-19	EXHAUST SILENCER
SM	SERVICE MANUAL
SSP-112	PLATE EXTENSION
SSP-113	PLATE ADAPTER
SSP-114	SLAVE SLIDER
SSP-115	SLAVE PUMP DRIVE ARM
SSP-116	HEX ADAPTER
SSP-148	RELEASE PIN
SSP-149-01	LOCKING DETENT PIN
SSP-157-01 ◆	CALIBRATION DECAL
SSP-159	PIVOT KNOB
SSP-161	SLAVE LOCK
SSP-162	COMPRESSION SPRING
SSP-163	PIVOT HANDLE
SSP-164	SLIDER INSERT
SSP-165	SLIDER LOCK
SSP-166	CLAMPING HANDLE
10080-01	FITTING
10080-03	FITTING
1017-00	FITTING
12958-03	GASKET FITTING
16028-03	HITCH PIN
1625-23	PIPE PLUG FITTING
17390-04	WASHER
17440-00	GROUNDING CLAMP
17866-00	PNEUMATIC SILENCER
18199-02	AIR REGULATOR
18245-01	HEAT SHRINK TUBING
18318-02	AIR GAUGE
19616-00	SWIVEL CASTER
19845-00	LITERATURE KIT
20031-00	MANIFOLD BLOCK
20111-00	ADAPTER
20186-00 ◆	MATERIAL DECAL
20188-20C	SCREW
20188-28C	SCREW

Part Number	Description
20221-00	BALL VALVE
20234-00	CART STANDOFF
20240-00	FLUID SECTION
20243-00	AIR MOTOR END STOP
20244-00	AIR MOTOR END STOP
20248-00	MOUNTING PLATE
20249-00	SLIDE MOUNT
20250-00	SLIDE PLATE FASTENER
20251-00	TIE PLATE
20252-00	CASTER PLATE
20253-00	FLUID SECTION MOUNTING PLATE
20254-00	EXPANDABLE SLEEVING
20258-00	ELBOW FITTING
20259-00	QUICK CONNECT BODY
20260-00	BLEED HOSE
20261-00	QUICK CONNECT STEM
20655-04	ELBOW FITTING
20793-00	BALL VALVE
21201-00 ◆	SYSTEM OPERATION DECAL
21202-00	FITTING
21203-00	POLYURETHANE TUBING
21402-00	LOCKOUT VALVE
21420-00	MOUNTING PLATE GUARD
21421-00	OPERATION BRACKET
21465-44C	STUD
22038-01	SPRING PLUNGER
22039-01	RATCHET BOX WRENCH
22191-00	LOCKING SWIVEL CASTER
22331-00	SSP MOUNTING PLATE
22332-00	SSP MOUNTING PLATE
22333-00	ADAPTER
22334-00	STANDOFF
22335-00	SPACER
22339-00	MCG MANIFOLD DECAL
3165	BALL VALVE
3923-02	SPIRAL WRAP
4342-04	ELBOW FITTING
7486-07	FLAT WASHER
7486-08	FLAT WASHER
7486-14	FLAT WASHER
7733-14	HEX NUT
7733-17	HEX NUT

◆ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

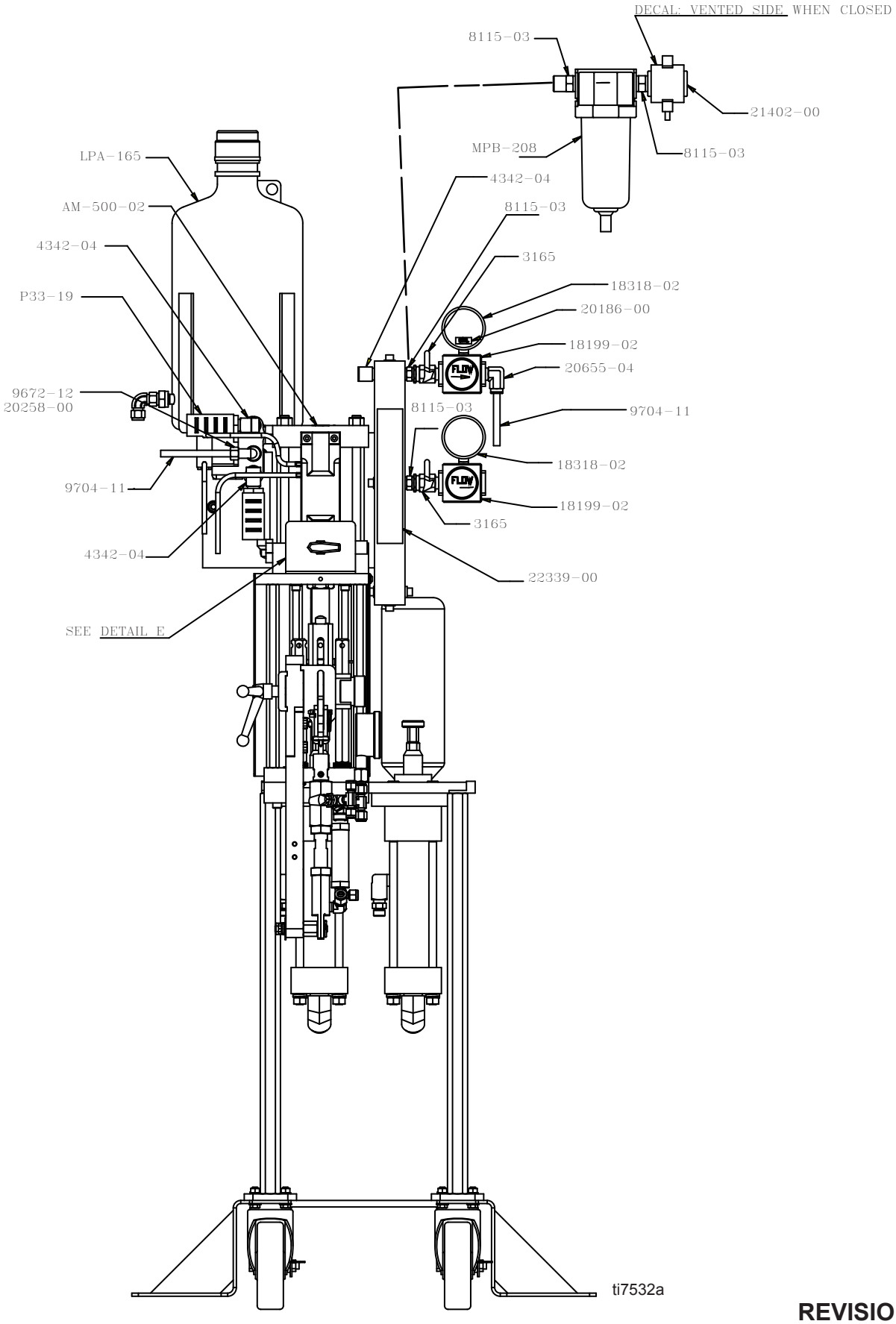
REVISION Y

13:1 MCG Unit Assembly

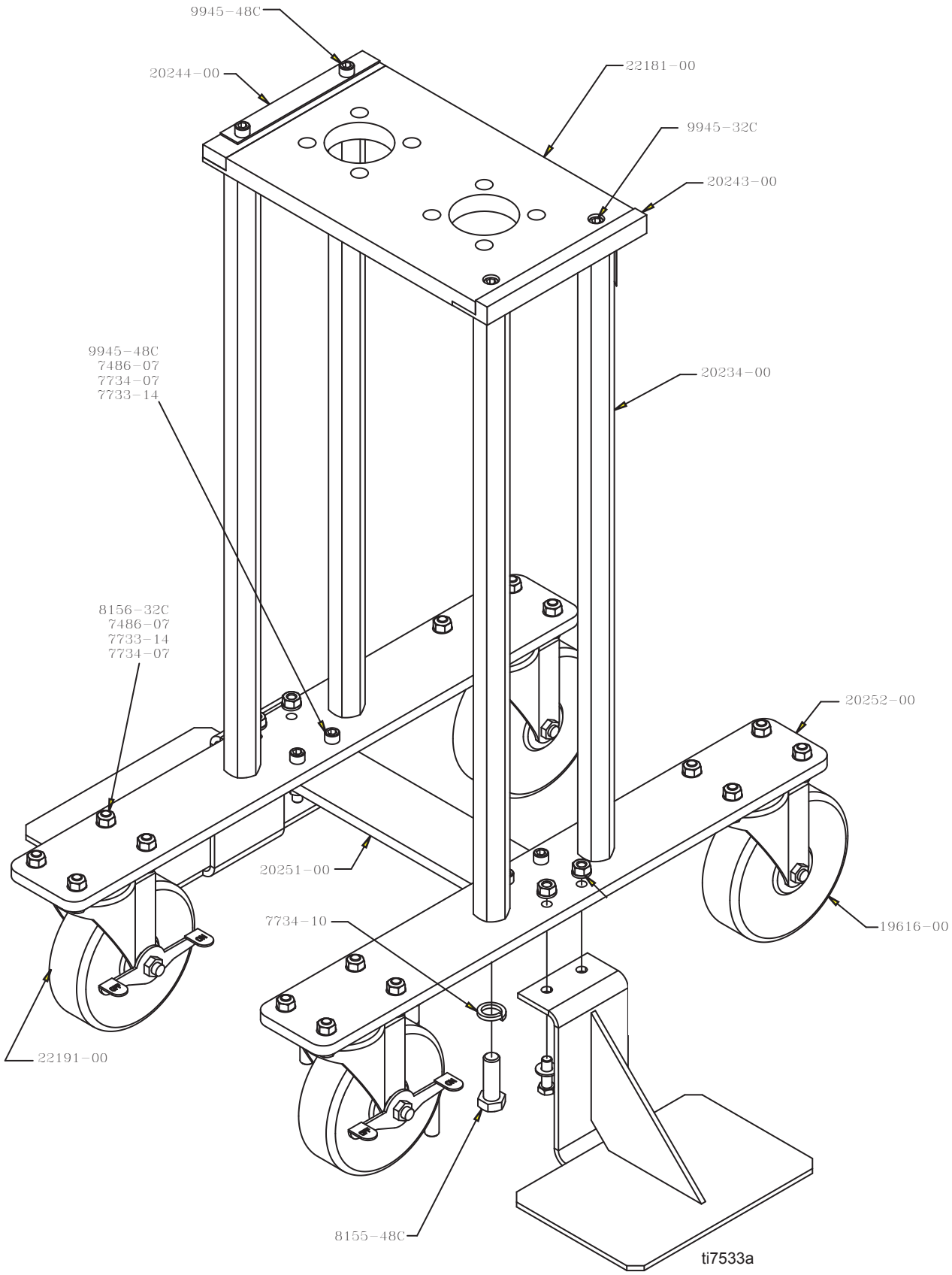
Part Number	Description
7733-17	HEX NUT
7734-06	LOCK WASHER
7734-07	LOCK WASHER
7734-10	LOCK WASHER
7734-12	LOCK WASHER
7957-32C	SCREW
7957-64C	SCREW
8115-03	PIPE FITTING
8155-48C	SCREW
8156-24C	SCREW
8156-32C	SCREW
9672-12	PIPE FITTING
9704-11	TUBING
9944-24C	SCREW
9944-32C	SCREW
9945-32C	SCREW
9945-48C	SCREW
9955-24C	SCREW
9955-56C	SCREW

REVISION Y

20:1 MCG Unit Assembly

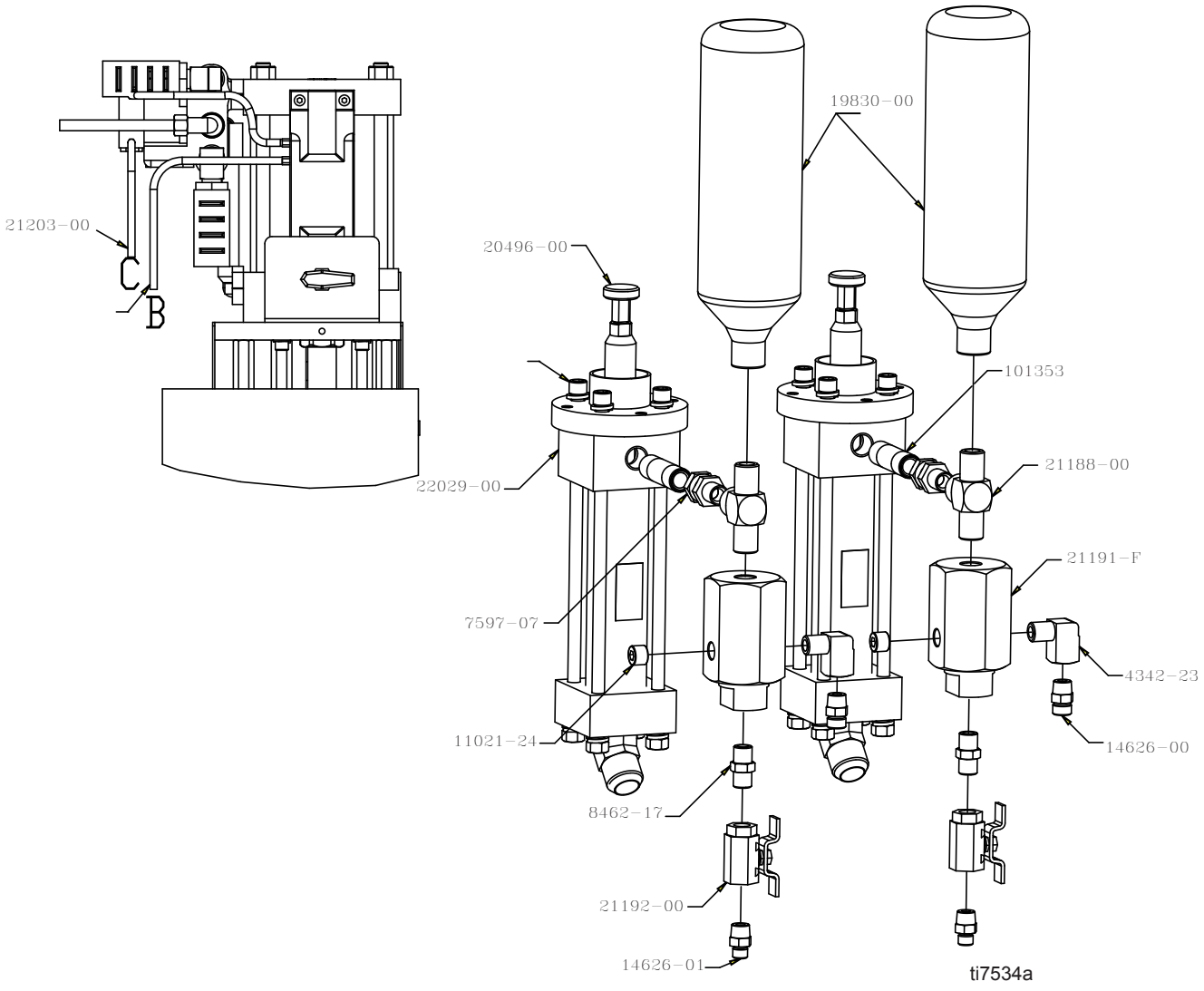


20:1 MCG Unit Assembly

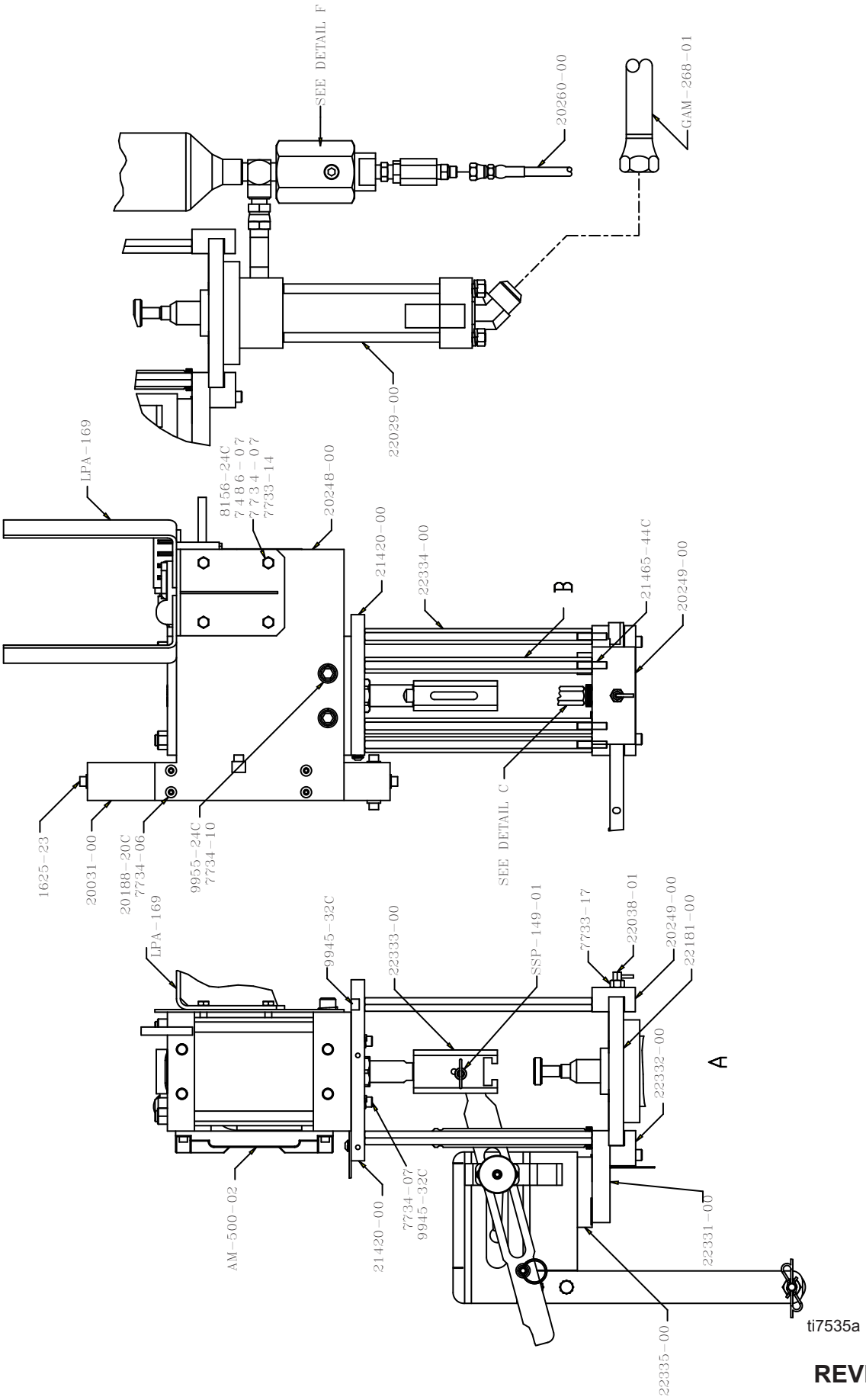


REVISION A

20:1 MCG Unit Assembly

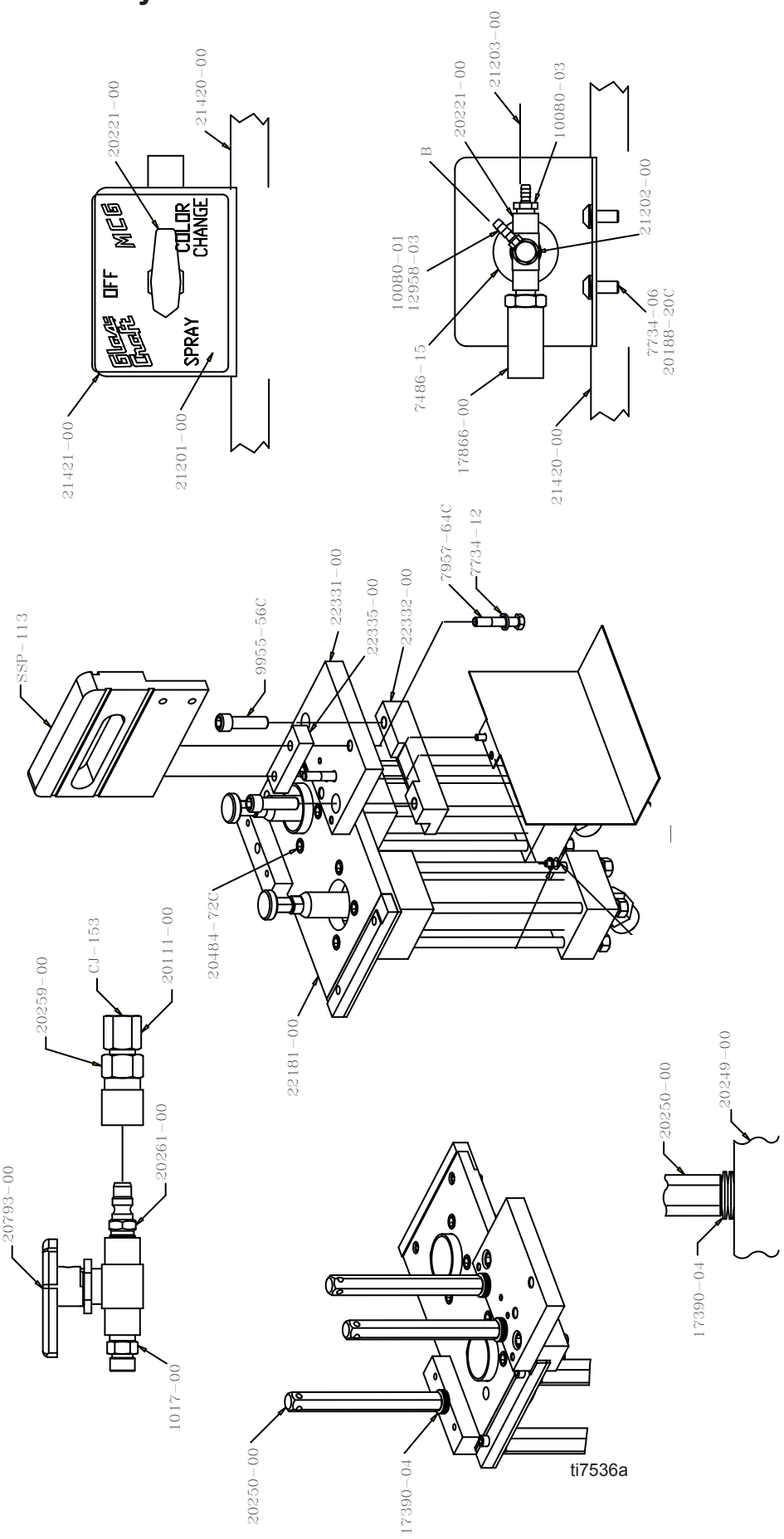


20:1 MCG Unit Assembly

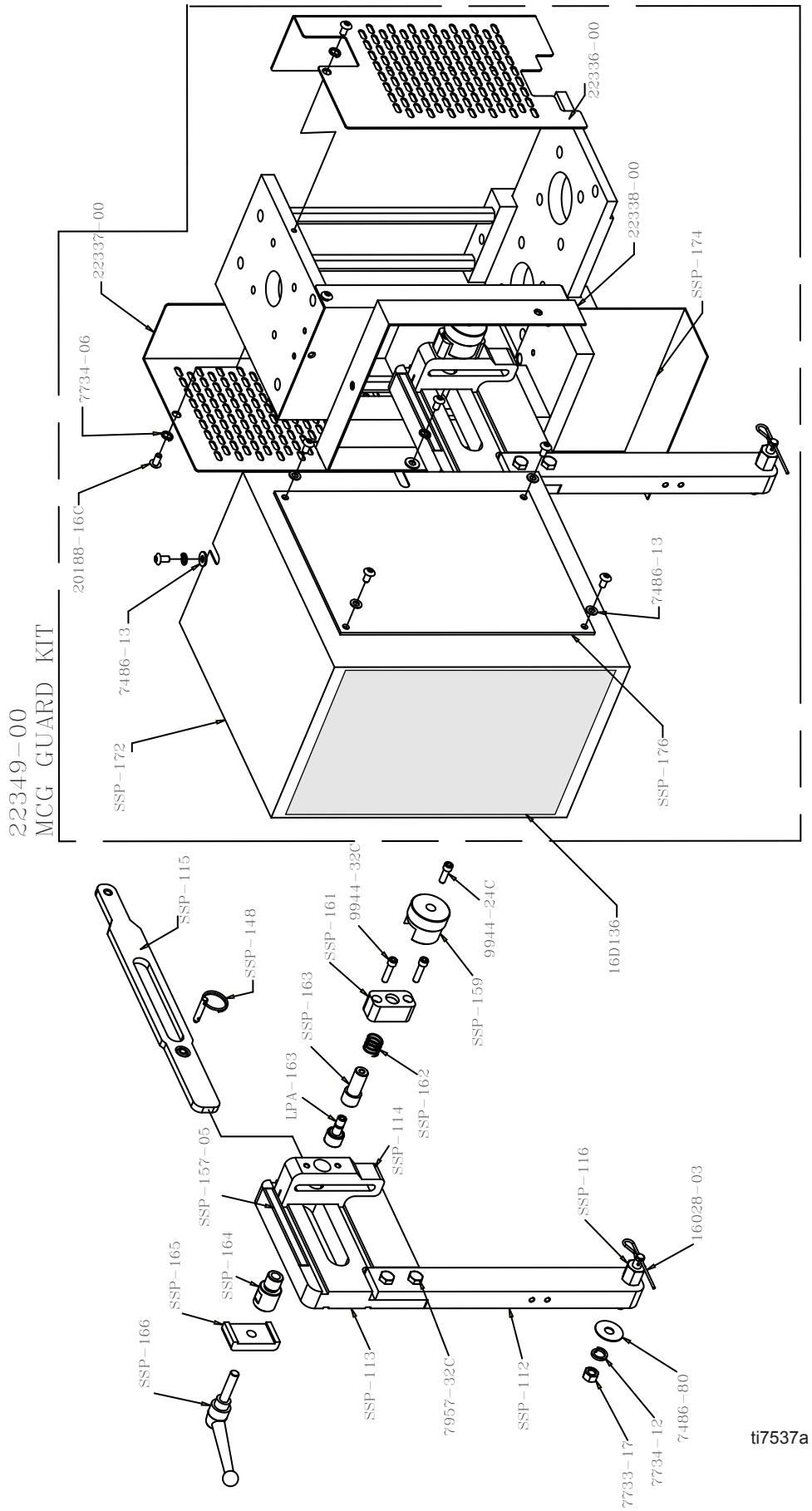


REVISION A

20:1 MCG Unit Assembly



20:1 MCG Unit Assembly



REVISION A

20:1 MCG Unit Assembly

Part Number	Description
3165	BALL VALVE
280583	PROPORTIONER
293537	ARTWORK
10080-01	FITTING
10080-03	FITTING
1017-00	FITTING
11021-24	PLUG
12958-03	GASKET
14626-00	FITTING
14626-01	FITTING
15X406 ◆	LABEL
16028-03	HITCH PIN
1625-23	PIPE PLUG
17390-04	SPRING WASHER
17440-00	CLAMP
17866-00	MUFFLER
18199-02	REGULATOR
18318-02	GAUGE
19616-00	CASTER
19830-00	SURGE CHAMBER
20031-00	MANIFOLD BLOCK
20111-00	ADAPTER
20186-00 ◆	LABEL
20188-20C	SCREW
20221-00	BALL VALVE
20234-00	EXTENSION
20243-00	STOP
20244-00	STOP
20248-00	MOUNTING PLATE
20249-00	BRACKET
20250-00	FASTENER
20251-00	PLATE
20252-00	MOUNTING PLATE
20258-00	FITTING
20259-00	QUICK CONNECT HOUSING
20260-00	HOSE
20261-00	QUICK CONNECT STEM
20484-72C	SCREW
20496-00	COUPLING
20655-04	FITTING
20793-00	BALL VALVE
21188-00	FITTING
21191-F	FILTER

Part Number	Description
21192-00	BALL VALVE
21201-00 ◆	LABEL
21202-00	FITTING
21203-00	HOSE
21402-00	LOCKOUT VALVE
21420-00	MOUNTING PLATE
21421-00	BRACKET
21465-44C	STUD
101353	FITTING
22029-00	PUMP
22038-01	SPRING PLUNGER
22039-01	TOOL
22181-00	MOUNTING PLATE
22191-00	CASTER
22331-00	MOUNTING PLATE
22332-00	MOUNTING PLATE
22333-00	SHAFT ADAPTER
22334-00	EXTENSION
22335-00	SPACER
22339-00 ◆	LABEL
22349-00	GUARD KIT
3923-02	WRAPPER
3A1909	MANUAL
4342-04	FITTING
4342-23	FITTING
7486-07	WASHER
7486-08	WASHER
7486-15	WASHER
7597-07	FITTING
7733-14	NUT
7733-17	NUT
7734-06	WASHER
7734-07	WASHER
7734-10	WASHER
7734-12	WASHER
7957-32C	SCREW
7957-64C	SCREW
8115-03	FITTING
8155-48C	SCREW
8156-24C	SCREW
8156-32C	SCREW
8462-17	FITTING
9672-12	FITTING

◆ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

20:1 MCG Unit Assembly

Part Number	Description
9704-11	HOSE
9944-24C	SCREW
9944-32C	SCREW
9945-32C	SCREW
9945-48C	SCREW
9955-24C	SCREW
9955-56C	SCREW
AM-500-02	MOTOR
CJ-153	O-RING
GAM-268-01	TUBE
LPA-163	CAM
LPA-165	JAR
LPA-169	BOTTLE SUPPORT
MPB-208	AIR FILTER
P33-19	MUFFLER
SSP-112	EXTENSION
SSP-113	ADAPTER
SSP-114	GUIDE
SSP-115	ARM
SSP-116	ADAPTER
SSP-148	RELEASE PIN
SSP-149-01	DETENT PIN
SSP-157-05 ◆	LABEL
SSP-159	KNOB
SSP-161	SLAVE LOCK
SSP-162	COMPRESSION SPRING
SSP-163	HANDLE
SSP-164	INSERT
SSP-165	SLIDER LOCK
SSP-166	HANDLE

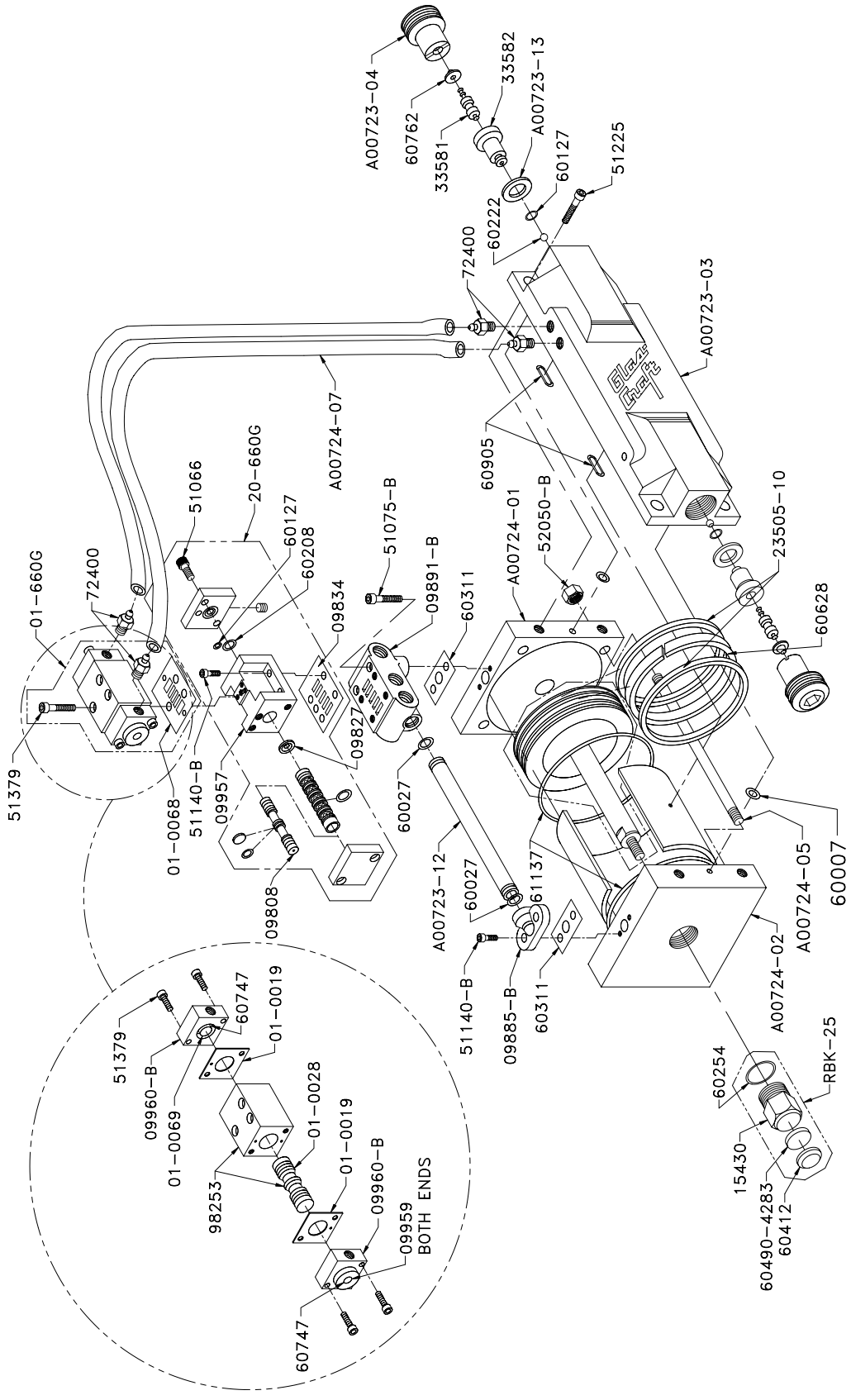
◆ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

MCG Guard Kit

Part Number	Description
16D136 ◆	SAFETY LABEL
20188-16C	SCREW
22336-00	RIGHT GUARD
22337-00	LEFT GUARD
22338-00	FRONT GUARD
7486-13	WASHER
7734-06	WASHER
SSP-172	SURROUND GUARD
SSP-174	BRACKET
SSP-176	WINDOW GUARD

Sub-Assembly Drawings

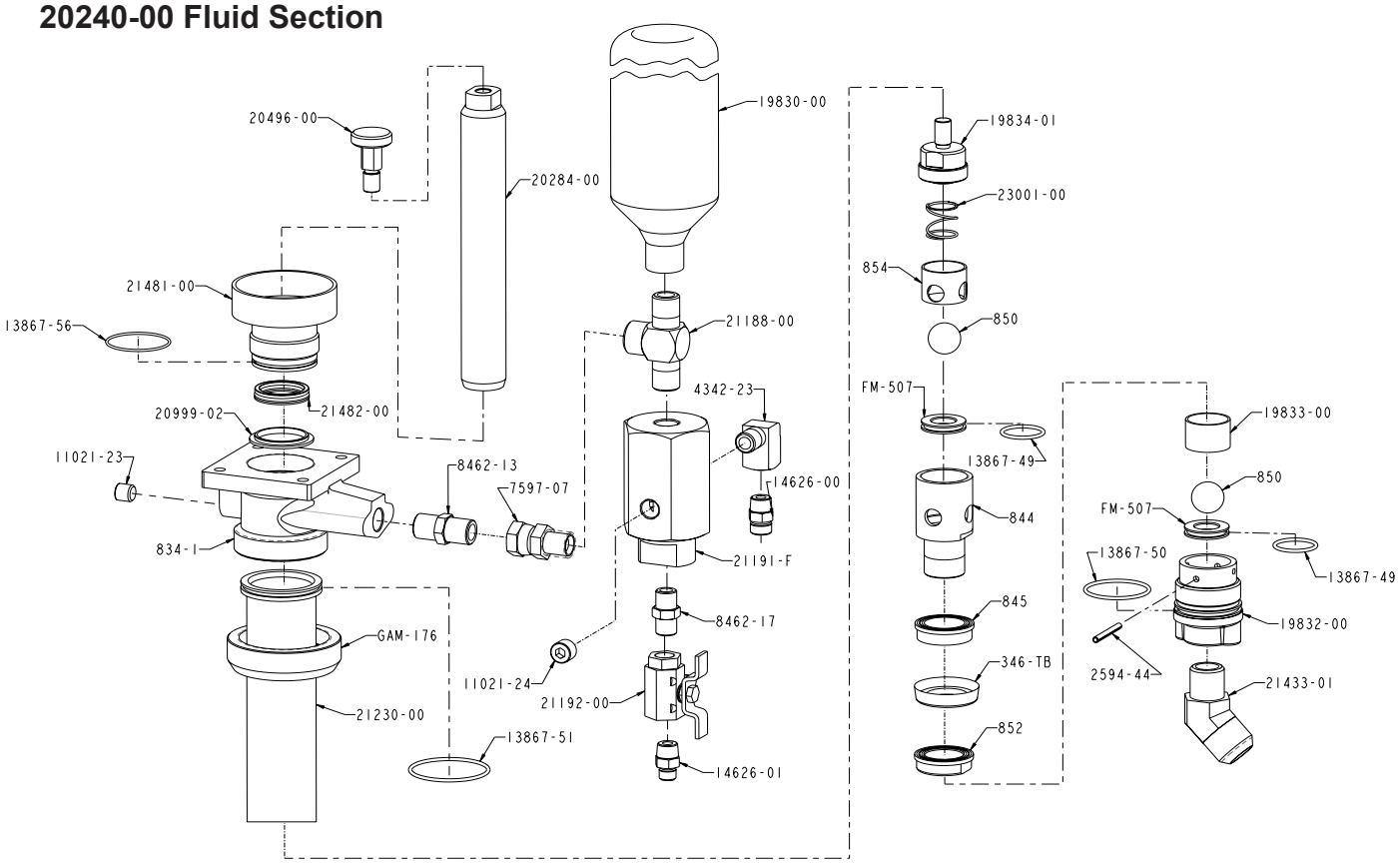
AM-500-02 Air Motor Assembly



REVISION S

Sub-Assembly Drawings

20240-00 Fluid Section



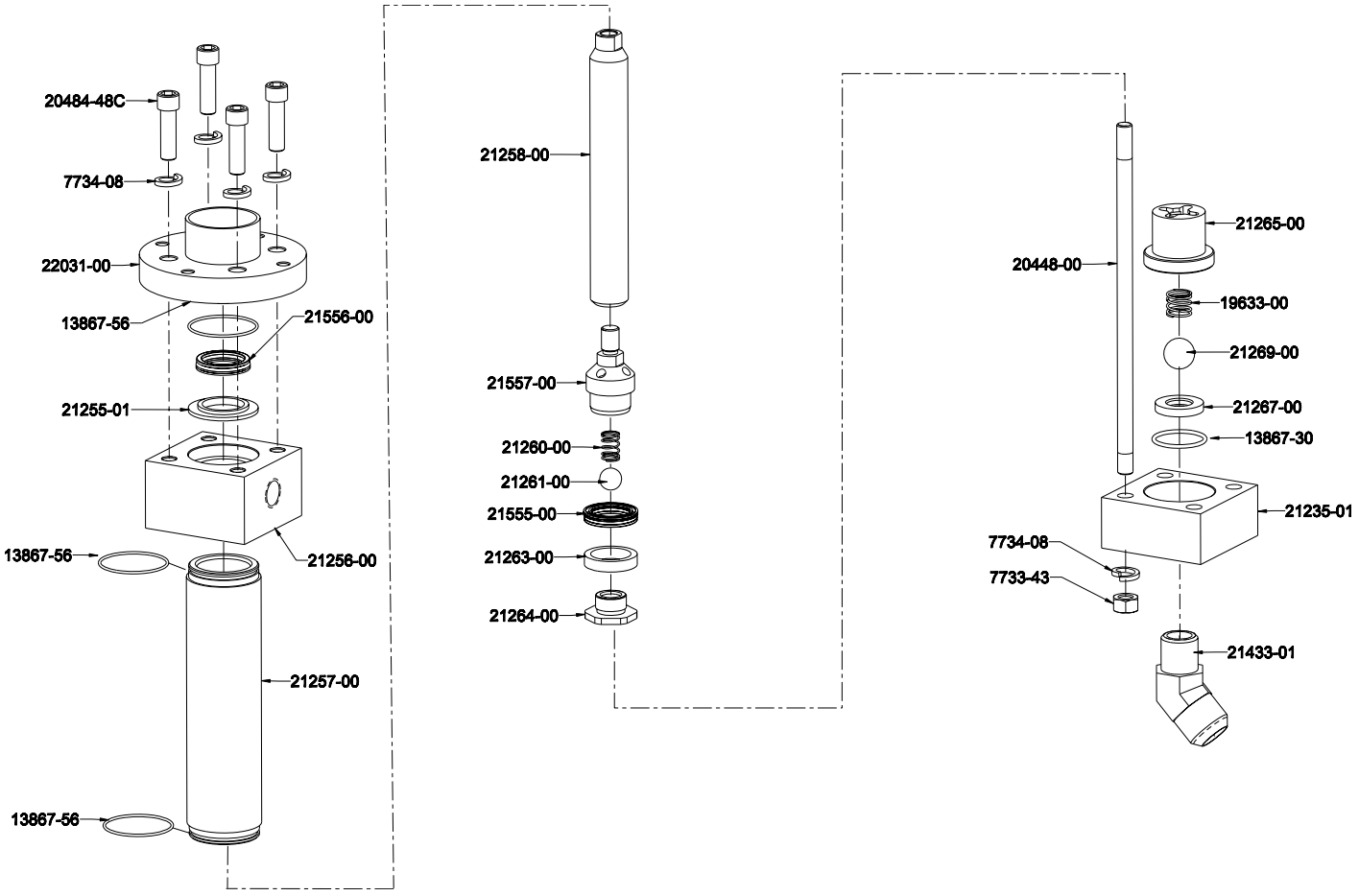
Part Number	Description	Qty.
FM-507	VALVE SEAT	2
GAM-176	RETAINING RING	1
11021-23	PIPE PLUG	1
11021-24	PIPE PLUG	1
13867-49	O-RING	2
13867-50	O-RING	1
13867-51	O-RING	1
13867-56	O-RING	1
14626-00	FITTING	1
14626-01	FITTING	1
19830-00	SURGE CHAMBER	1
19832-00	FOOT VALVE HOUSING	1
19833-00	VALVE FOOT SPACER	1
19834-01	VALVE BODY ADAPTER	1
20284-00	PUMP SHAFT	1
20496-00	QUICKSLIDE COUPLING	1
20999-02	WASHER	1
21188-00	PIPE TEE	1
21191-F	FLUID FILTER	1
21192-00	BALL VALVE	1

Part Number	Description	Qty.
21230-00	LOWER CYLINDER	1
21433-01	ELBOW FITTING	1
21481-00	HOUSING SEAL	1
21482-00	HIGH VISCOSITY SEAL	1
23001-00	COMPRESSION SPRING	1
2594-44	ROLL PIN	1
346-TB	CYLINDER MATERIAL CUP	1
4342-23	ELBOW FITTING	1
7486-07	WASHER	4
7597-07	FITTING	1
7733-14	HEX NUT	4
7734-07	LOCK WASHER	4
834-1	CYLINDER PUMP ADAPTER	1
844	LOWER CUP VALVE BODY	1
845	LOWER CUP SPACER	1
8462-13	FITTING	1
8462-17	FITTING	1
850	BALL VALVE	2
852	LOWER CUP RETAINER NUT	1
854	VALVE BODY SPACER	1
9945-48C	SCREW	4

REVISION DD

Sub-Assembly Drawings

22029-00 Fluid Section



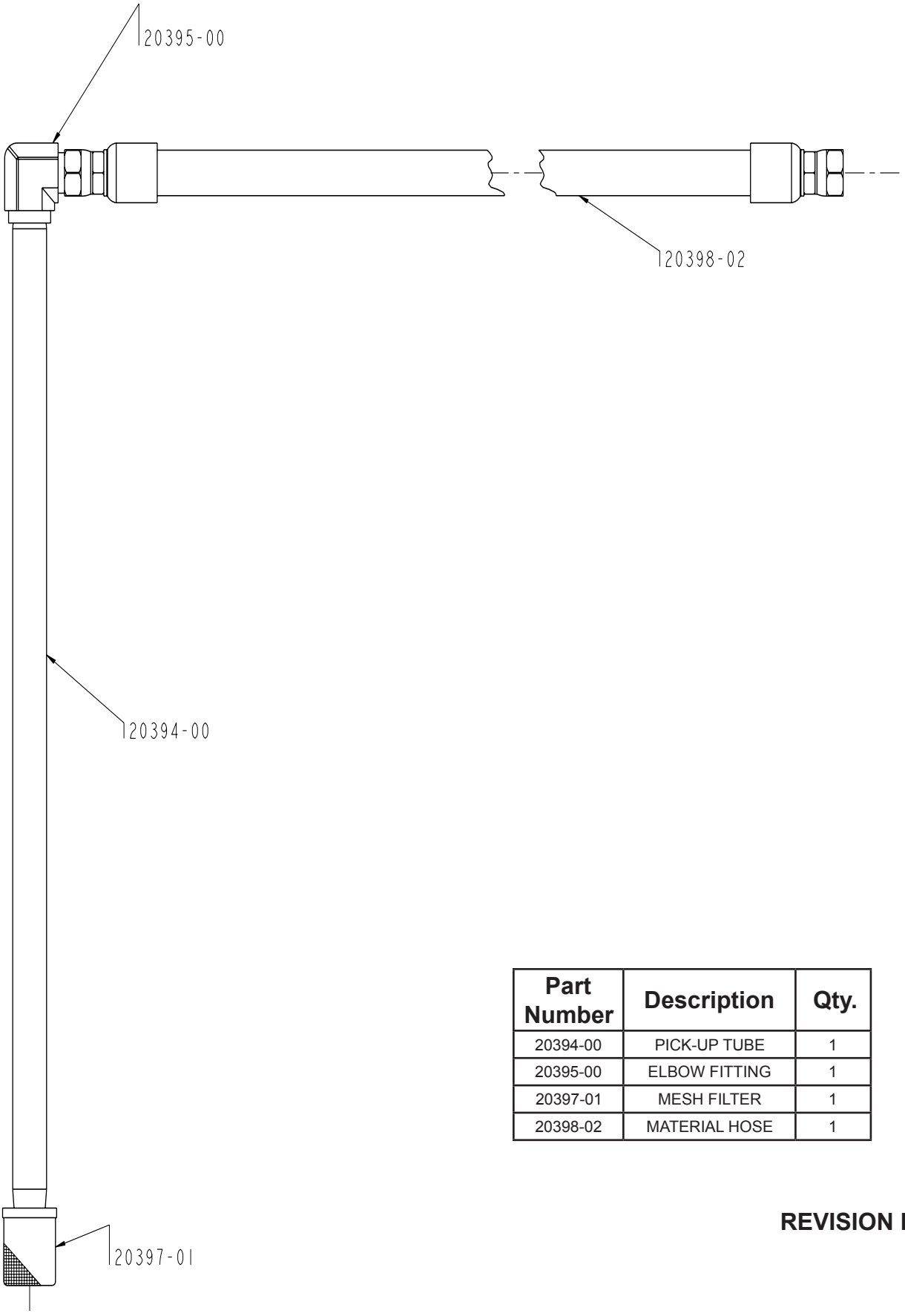
Part Number	Description	Qty.
13867-30	O-RING	1
13867-56	O-RING	3
19633-00	COMPRESSION SPRING	1
20448-00	TIE ROD	4
20484-48C	SCREW	4
21235-01	PUMP BASE	1
21255-01	UPPER SUPPORT WASHER	1
21256-00	PUMP HEAD	1
21257-00	PUMP CYLINDER	1
21258-00	PUMP SHAFT	1
21260-00	SPRING	1
21261-00	SST BALL	1
21263-00	PISTON GUIDE	1

Part Number	Description	Qty.
21264-00	TRANSFER HOUSING SEAT	1
21265-00	BALL HOUSING	1
21267-00	FOOT VALVE SEAT	1
21269-00	FOOT VALVE BALL	1
21433-01	ELBOW FITTING	1
21555-00	LOWER PUMP SEAL	1
21556-00	UPPER PUMP SEAL	1
21557-00	TRANSFER HOUSING	1
22031-00	SEAL HOUSING	1
7733-43	HEX NUT	4
7734-08	LOCK WASHER	8
SM-1429	PARTS LIST	1

REVISION D

Sub-Assembly Drawings

GAM-268-01 Material Pick-Up Kit

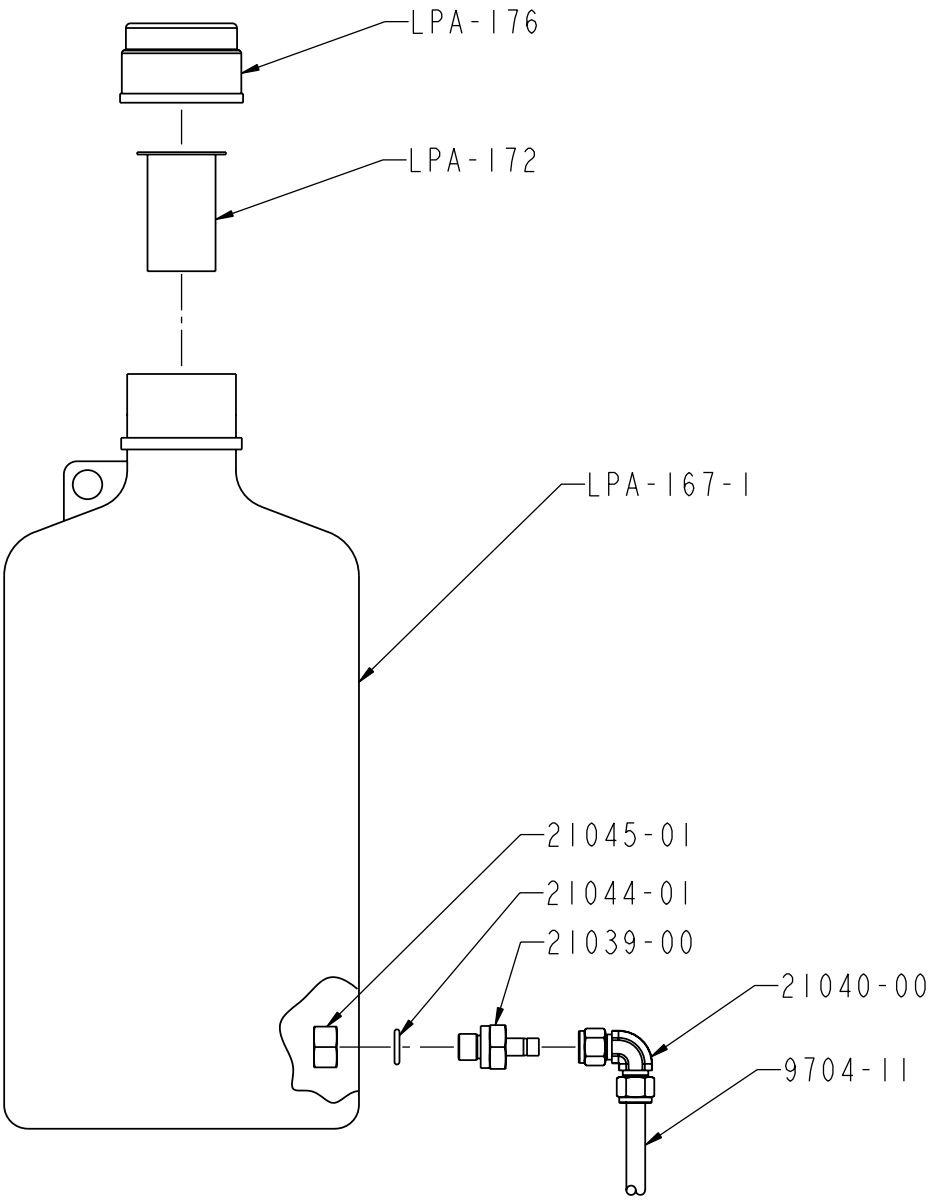


Part Number	Description	Qty.
20394-00	PICK-UP TUBE	1
20395-00	ELBOW FITTING	1
20397-01	MESH FILTER	1
20398-02	MATERIAL HOSE	1

REVISION D

Sub-Assembly Drawings

LPA-165 Catalyst Bottle



Part Number	Description	Qty.
LPA-167-1	BOTTLE	1
LPA-172	SCREEN	1
LPA-176	CAP	1
21039-00	TUBE ADAPTER	1
21040-00	ELBOW FITTING	1
21044-01	SEAL	1
21045-01	HEX NUT	1
9704-11	TUBING	5

REVISION N

Maintenance

Before performing any maintenance on this System - Follow pressure relief procedures on page 16.

GlasCraft recommends the use of TGC MCG TOOL & GUN CLEANER for...
> cleaning of spray guns, spray tips, rollers, brushes, hoses, etc. ...as well as any general shop clean-up!

It is recommended that the following service be performed on a weekly basis.

1. Inspect and lubricate catalyst slave pump linkage. (See catalyst slave pump User Manual.)

2. Inspect pump shafts on material and catalyst pumps, making certain they are clean and free of overspray or foreign material. Clean and lubricate as required.

3. Inspect gun valve needle shafts, making certain they are clean and free of over-spray or foreign material. Clean and lubricate as required. (See Spray Gun User Manual.)

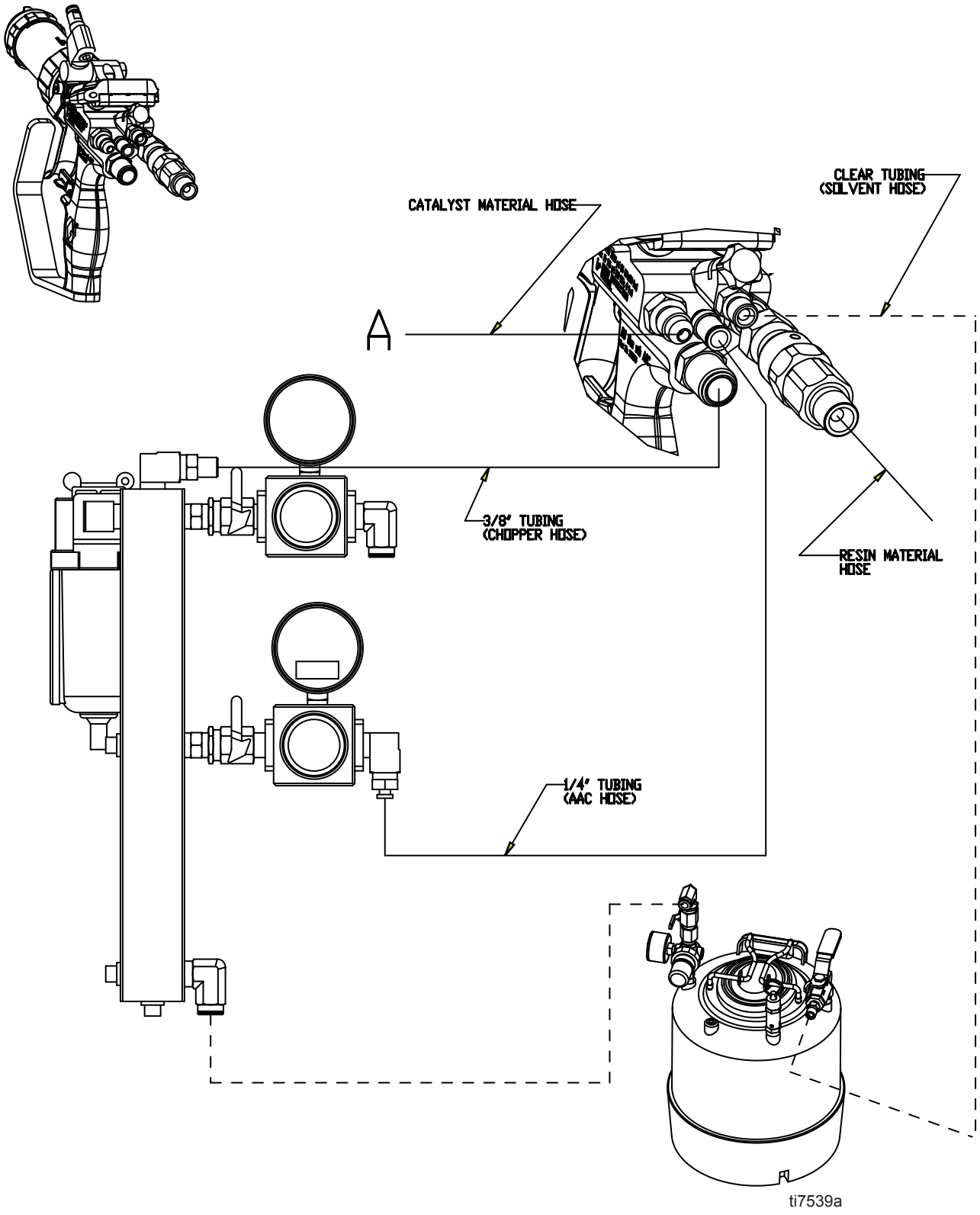
Make certain all air and material valves are in their "OFF" position.

GlasCraft recommends that you contact your gel-coat and/or material supplier concerning material pot-life during extended periods of shut-down.The decision as to whether or not to leave material in your system should be based on information from your material suppliers as well as GlasCraft. Contact GlasCraft Technical Department for any questions.

Consult your local authorized GlasCraft distributor for more information concerning system storage.

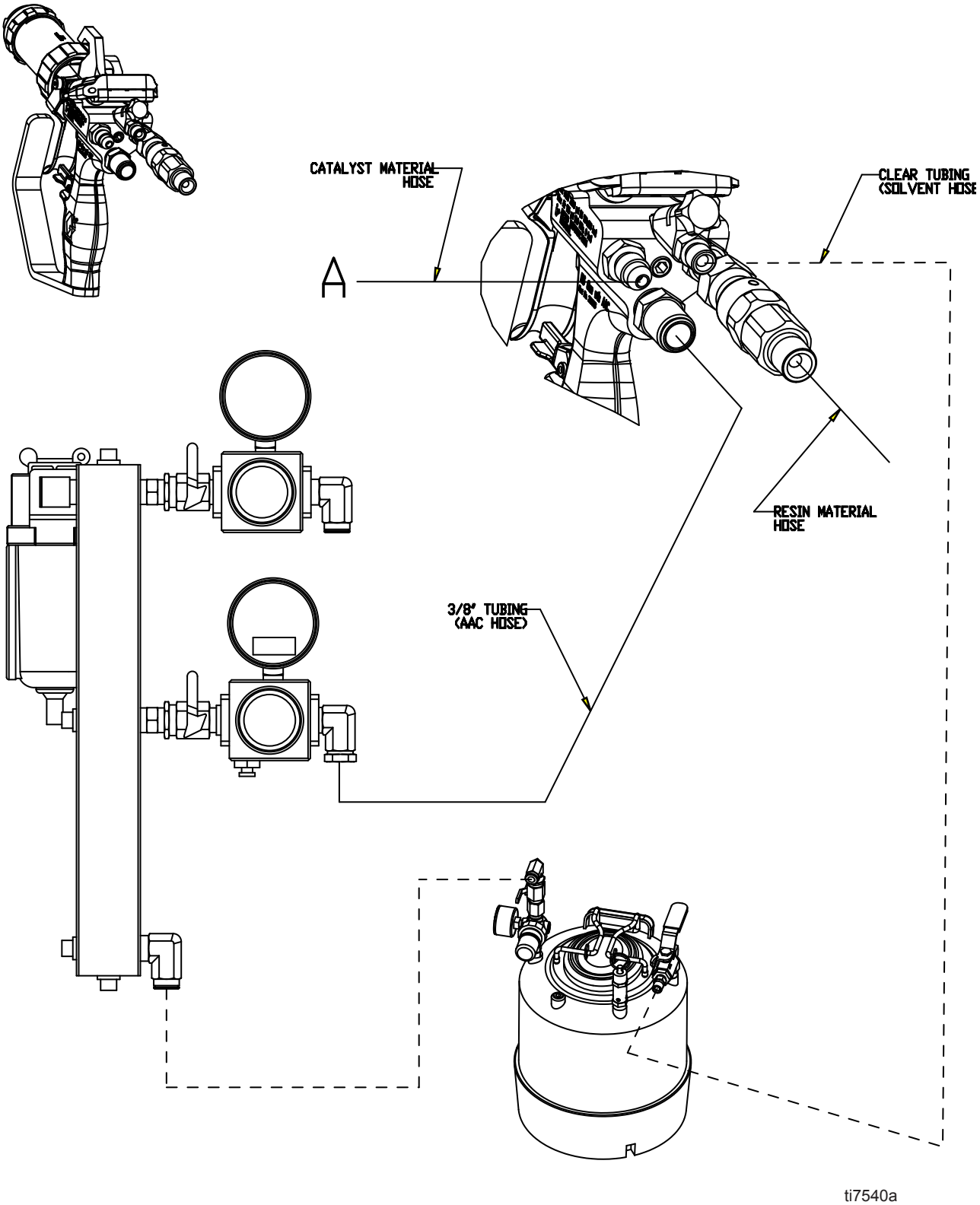
Routings

24J779 - Internal Mix Chop Gun



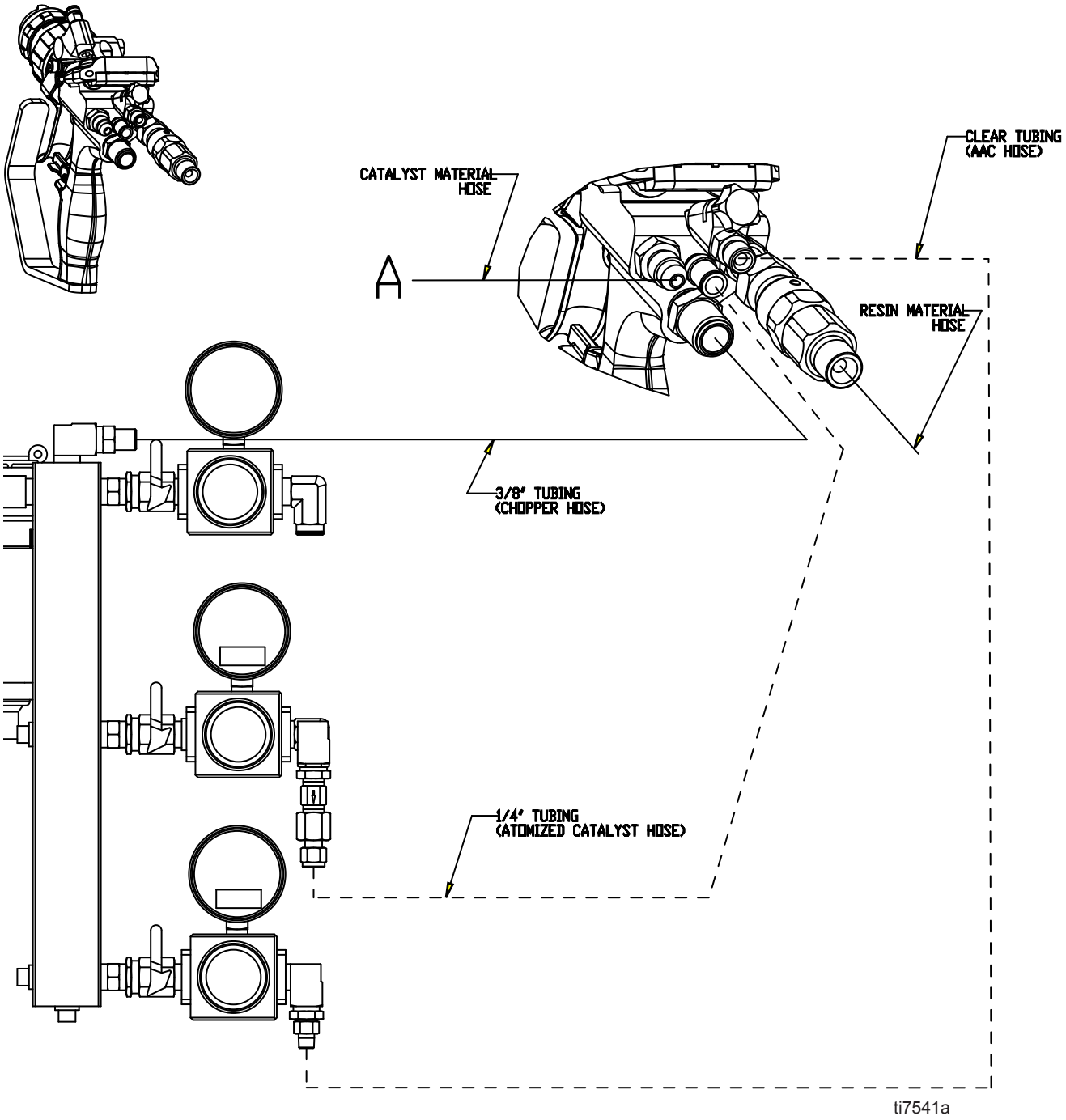
Routings

24J778 - Internal Mix Gel Gun



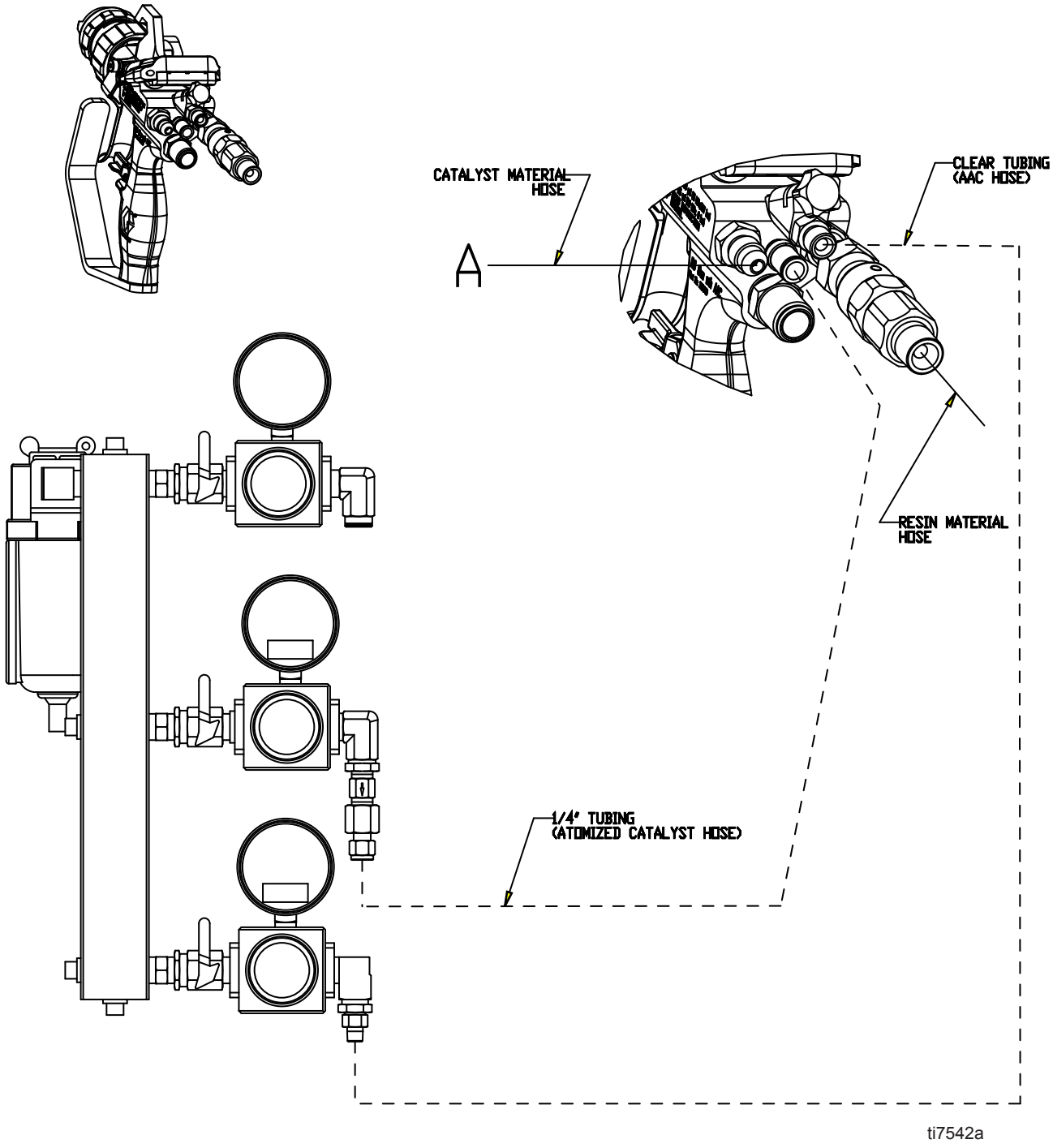
Routings

24J780 - External Mix Chop Gun



Routings

24J781 - External Mix Gel Gun



Technical Data

Category	Data
Maximum Fluid Working Pressure (13:1)	1300 psi. (9 MPa, 90 bar)
Maximum Fluid Working Pressure (20:1)	2000 psi (14 MPa, 138 bar)
Maximum Air Inlet Pressure	100 psi (0.7 MPa, 7 bar)
Typical Flow Rate of Pattern Guns	Refer to gun manual
Maximum Fluid Temperature	100° F (38° C)
Air Inlet Size (Chopper)	Refer to gun manual
A Component (Catalyst) Inlet Size	#4 JIC
B Component (Resin) Inlet Size	1 5/16-12 UN-2A Male
A Component (Catalyst) Outlet Size	#4 JIC
B Component (Resin) Outlet Size	1/4-18 NPS Male
Solvent Flush	1/8 NPS Male
Sound Pressure (20240-00)	84.83 dB(A)
Sound Pressure (22029-00)	84.83 dB(A)
Sound Power, measured per ISO 9614-2 (20240-00)	87.04 dB(A)
Sound Power, measured per ISO 9614-2 (22029-00)	87.04 dB(A)
Dimensions (2-Color)	30 L X 30 W X 59 H (760 X 760 X 1500 mm)
Weight (2-Color)	230 Lbs. (105 kg)
Wetted Parts	Catalyst- Chemically coated aluminum, stainless steel, chemically resistant o-rings Resin- Carbon steel, carbide, chemically resistant o-rings.

Notes

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties. In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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Graco Information

For the latest information about Graco products, visit www.graco.com.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.
Phone: 1-800-746-1334 **or Fax:** 1-330-966-3006

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Original Instructions. This manual contains English. MM 3A1909

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