TROUBLESHOOTING
TIPS FOR CHEMICAL AND GUN USAGE

To check the condition of the Bioclean Chemical Injection Gun, spray chemical #1 on dark surface and look at the sudsy white richness of the chemical as it is sprayed. Then spray chemical #2 on same surface and compare. Both chemicals should have the same look.

IF CHEMICAL #2 IS NOT AS WHITE IN APPEARANCE AS CHEMICAL #1:

You may have clouded out your soap. Clouding out soap is a common problem. Employees are under the impression that the more soap you put in, the better it will clean. This is wrong!! The water in your soap drum will take only so much product and cannot accept any more. If you put too much product in the soap tank, the water will accept part of your chemical blend and reject the others causing a problem referred to as clouding out. This will negatively affect the cleaning ability of the soap until this is corrected. **To correct this problem:** Add water to your soap mix or start out with a new drum. Remember, ***do not exceed 3 lbs. soap to 10 gal. of water.***

IF BOTH CHEMICALS ARE WEAK IN APPEARANCE:

Switch out the questionably operating gun with an operable spare gun and resume. Check and fix spare gun when time is available later in the day and replace on truck.

GUN TROUBLESHOOTING PROCEDURES:

1. Operate gun with rinse valve open and look for obvious problems; leaks, broken parts, blown or leaking bypass hose, leaking rinse valve lever, cracked or broken plastic barbed fittings. Turn the chemical selection valve to the soap selection while pulling the trigger. If water sprays out of chemical selector valve while trigger is pulled your check valve has failed or is sticking. Disassemble check valve and look for broken spring, lost sealing o-ring, or possible garbage stuck inside check valve.
2. Close the rinse valve while still actuating the gun. With the other hand switch the chemical selector valve to the prewash selection and cover the barbed fitting on the prewash side, feeling for vacuum. With that side blocked, use another finger and feel for vacuum on the other barbed fitting. YOU SHOULD NOT GET A VACUUM ON THE OPPOSITE SIDE OF SELECTED SIDE! If you do feel a vacuum on both sides, the gun will draw chemical from both sides at the same time, neutralizing the chemical and not cleaning effectively. If it has failed, replace the o-rings and white teflon rings on the caps of the chemical selection valve. Also inspect the brass ball and

lever of the chemical selection valve, replace as needed. If this checks out, switch the chemical selector to the soap position and repeat these steps.

3. Fill test jug to full line and connect the test jug to soap side of chemical selection valve. Turn chemical selection valve to soap direction. For exactly 60 seconds, pull the trigger on the gun while watching chemical draw on the jug. After 60 seconds the water line in the test jug should fall within acceptable guidelines. If it does not draw an acceptable amount, the chemical will be weak and negatively affect the cleaning ability of the gun. If it is low, check for these possible problems:
    a. Bad rinse valve-Disconnect bypass hose from swivel fitting. With rinse valve closed, suck on bypass hose and create a vacuum. If it sucks air or water, the rinse valve has failed and needs replacement. If it passes the initial test, then stick your tongue over the hose end to maintain the vacuum inside the bypass hose. If it holds vacuum for 5 seconds or more, the rinse valve is good. If it loses vacuum slowly or cannot hold a vacuum at all, replace rinse valve.
    b. Injector-replace injector nozzle. If nozzle looks newer and in good condition and not plugged, check age of injector. If injector is over 10 months to 1 year old it may need to be replaced. ***If the injector is replaced, the spray tip should be replaced at the same time!***
    c. Tip-Inspect tip for wear or possible plugged or cracked condition. If it is worn, then replace.
4. Check the gun to see if water is spraying out of the end of the gun without the trigger being pulled. If it is or if water is leaking out of the trigger plunger itself, depending on severity, you may want to replace the trigger kit within the gun trigger. Excessive leakage can cause water heater to prematurely ignite! Refer to the "Trigger Kit Breakdown" diagram for disassembly and reassembly order of parts.
5. If water is leaking out behind your rinse valve lever, remove your lever. With a good quality 9/16" wrench, tighten the nut. Test gun under pressure to see if that has fixed the leak. If so, replace handle. If not, repeat steps to tighten nut.
6. When wash gun passes inspection, Bioclean recommends swiping the swivel end with anti-seize and return to truck.