

Machine Cleaning

To ensure proper machine clean out and machine coolant recharging we are providing this summary as a suggested procedure for obtaining and maintaining a clean sump condition. These are only guidelines. For clarification or additional information regarding your particular application please give us a call.

Procedure

Kill:

In order to guarantee a clean sump it is necessary to eliminate bacterial and fungal growth present in the system. The most effective way to do this is to add a biocide/fungicide to the old coolant prior too clean out. In systems, which have an odor problem, but do not contain fungus, a sump conditioner should be added to the sump, (9-oz./40 gals.), one week before clean out to eliminate bacteria. For systems, which contain fungus, a fungicide should be used. The fungicide will effectively kill bacteria and eliminate fungus. Fungicides should be handled carefully. We recommend you call us for help regarding fungus contamination. To determine which contamination is present in your machine call **Star Metal Fluids**.

Clean:

- 1) Drain sump; clean all debris, swarf, chips and sludge from sump and machine bed.
- 2) Fill sump with Bosse WC-48 Sump Cleaner, (64 ounces/20 gallons of sump).
- 3) Circulate cleaning solution through lines, washing machine interior with brush. Index turret and purge each coolant port. Brush sides of sump at surface level to remove bio-slime. Circulation process approx. 1-hour.

Rinse:

- 1) Drain cleaning solution.
- 2) Fill machine with fresh water, adding 2% (50:1) solution of mixed coolant for rust protection.
- 3) Circulate through lines, rinsing all surfaces contacted by sump cleaner. Index turret to purge coolant ports. Circulation process approx. 20 minutes.
- 4) Drain. *Make sure all cleaners and cleaning solutions have been removed from sump, bed, lines, pump and turret.*

Charge:

After removing the rinse solution it is important to charge the machine as soon as possible with fresh coolant. Ideally the coolant should be premixed, **adding concentrate to water**, not water to concentrate, to the desired concentration. Please call us for the recommended coolant concentration per your application and type of coolant. When using reverse osmosis or deionized water always charge your machine with tap water*, using the purified water in make-up solutions only. When using a fluid proportioner always make sure the desired concentration is selected and metered accurately. When mixing by hand always stir until there is no marbling, (oil droplets on surface). For best results a refractometer should be used.

**Some coolants require all purified water. Call Star Metal Fluids for clarification*

Maintenance: To maintain a clean system the following steps should be taken:

- 1) Coolant Concentration
-maintain manufacturers recommended concentration. When using hard water increase concentration by 2%. Use a refractometer, part #VGN1EBX, to determine concentrate/water dilutions. Too lean – poor tool life, poor part finish, poor part size, rust & corrosion, rancidity, emulsion splitting. Too rich – heavy film on machine, poor cooling, skin irritation, nose & throat irritation, waste.
- 2) Water
-in hard water areas purified water should be used for maximum fluid life and performance. Reverse Osmosis or Deionized water is recommended for best results. Contact Star Metal Fluids for further water system information.
- 3) Tramp Oils
-keeping unwanted oils, i.e., way lubricants, hydraulic fluids, spindle fluids, tapping and treading compounds out of sump is important in order to maintain a fresh coolant condition and clean machine. These can be removed via wheel skimmers, belt skimmers, tube skimmers, Skimerators, and wet-dry vacuums. Unwanted fluids, or tramp oils, cover sump surfaces causing a breeding condition for bacteria. Layers of oil on the sump surfaces cut off the oxygen which coolants need. Call Star Metal Fluids for help in finding the right system for you.
- 4) Chips and Solids
-dirt, chips, and sludge are food for unwanted bacteria. Keep machine bed and sumps free of chip pockets that build up in corners and in hard to reach areas of your machine. Remove coolant periodically from sump and clean of swarf and chips, returning coolant afterwards. Bring concentration to recommended level.

Star Metal Fluids has a broad offering of coolant management tools and systems to help you manage metal working fluids. We look forward to working with you and your people offering customized training for operators, maintenance personnel. We guarantee your satisfaction!

Machine Cleaning

To ensure proper machine clean out and machine coolant recharging we are providing this summary as a suggested procedure for obtaining and maintaining a clean sump condition. These are only guidelines. For clarification or additional information regarding your particular application please give us a call.

Procedure

Kill:

In order to guarantee a clean sump it is necessary to eliminate bacterial and fungal growth present in the system. The most effective way to do this is to add a biocide/fungicide to the old coolant prior too clean out. In systems, which have an odor problem, but do not contain fungus, a sump conditioner should be added to the sump, (9-oz./40 gals.), one week before clean out to eliminate bacteria. For systems, which contain fungus, a fungicide should be used. The fungicide will effectively kill bacteria and eliminate fungus. Fungicides should be handled carefully. We recommend you call us for help regarding fungus contamination. To determine which contamination is present in your machine call **Star Metal Fluids**.

Clean:

- 1) Drain sump; clean all debris, swarf, chips and sludge from sump and machine bed.
- 2) Fill sump with Bosse WC-48 Sump Cleaner, (64 ounces/20 gallons of sump).
- 3) Circulate cleaning solution through lines, washing machine interior with brush. Index turret and purge each coolant port. Brush sides of sump at surface level to remove bio-slime. Circulation process approx. 1-hour.

Rinse:

- 1) Drain cleaning solution.
- 2) Fill machine with fresh water, adding 2% (50:1) solution of mixed coolant for rust protection.
- 3) Circulate through lines, rinsing all surfaces contacted by sump cleaner. Index turret to purge coolant ports. Circulation process approx. 20 minutes.
- 4) Drain. *Make sure all cleaners and cleaning solutions have been removed from sump, bed, lines, pump and turret.*

Charge:

After removing the rinse solution it is important to charge the machine as soon as possible with fresh coolant. Ideally the coolant should be premixed, **adding concentrate to water**, not water to concentrate, to the desired concentration. Please call us for the recommended coolant concentration per your application and type of coolant. When using reverse osmosis or deionized water always charge your machine with tap water*, using the purified water in make-up solutions only. When using a fluid proportioner always make sure the desired concentration is selected and metered accurately. When mixing by hand always stir until there is no marbling, (oil droplets on surface). For best results a refractometer should be used.

**Some coolants require all purified water. Call Star Metal Fluids for clarification*

Maintenance: To maintain a clean system the following steps should be taken:

- 1) Coolant Concentration
-maintain manufacturers recommended concentration. When using hard water increase concentration by 2%. Use a refractometer, part #VGN1EBX, to determine concentrate/water dilutions. Too lean – poor tool life, poor part finish, poor part size, rust & corrosion, rancidity, emulsion splitting. Too rich – heavy film on machine, poor cooling, skin irritation, nose & throat irritation, waste.
- 2) Water
-in hard water areas purified water should be used for maximum fluid life and performance. Reverse Osmosis or Deionized water is recommended for best results. Contact Star Metal Fluids for further water system information.
- 3) Tramp Oils
-keeping unwanted oils, i.e., way lubricants, hydraulic fluids, spindle fluids, tapping and treading compounds out of sump is important in order to maintain a fresh coolant condition and clean machine. These can be removed via wheel skimmers, belt skimmers, tube skimmers, Skimerators, and wet-dry vacuums. Unwanted fluids, or tramp oils, cover sump surfaces causing a breeding condition for bacteria. Layers of oil on the sump surfaces cut off the oxygen which coolants need. Call Star Metal Fluids for help in finding the right system for you.
- 4) Chips and Solids
-dirt, chips, and sludge are food for unwanted bacteria. Keep machine bed and sumps free of chip pockets that build up in corners and in hard to reach areas of your machine. Remove coolant periodically from sump and clean of swarf and chips, returning coolant afterwards. Bring concentration to recommended level.

Star Metal Fluids has a broad offering of coolant management tools and systems to help you manage metal working fluids. We look forward to working with you and your people offering customized training for operators, maintenance personnel. We guarantee your satisfaction!