

Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

## Description

AOC series forced air oil coolers are used for high-efficiency oil cooling in hydraulic systems. Units utilize the latest in heat transfer technology to reduce the physical size and provide the ultimate in cooling capacity. By maintaining a lower oil temperature, hydraulic components and fluids work better and have a longer life expectancy.

## General Safety Information

1. Do not exceed the pressure rating of the oil cooler, nor any other component in the hydraulic system.
2. Do not exceed the published maximum flow rates as the potential can result in damage to the hydraulic system.
3. Release all oil pressure from the system before installing or servicing the oil cooler.
4. These oil coolers are not suitable for use in hydraulic systems operating with water-glycol or high water base fluids without a corrosion inhibitor suitable for aluminum and copper component protection.

## Unpacking

After unpacking the unit, inspect for any loose, missing or damaged parts. Any minor damage to the cooling fins can generally be corrected by gently straightening them.

## WARNING

*Do not exceed the maximum pressure of 300 PSI, or the maximum temperature of 350°F as oil cooler failure can occur.*

1. These hydraulic oil coolers should be installed on either the low pressure return line, or a dedicated recirculation cooling loop.
2. Turn off the hydraulic system and drain any oil from the return lines before installing these coolers.
3. A strainer located ahead of the cooler inlet should be installed to trap scale, dirt, or sludge that may be present in piping and equipment, or that may accumulate with use. A thermostatic or spring loaded bypass/relief valve installed ahead of the cooler may be helpful to speed warm-up and relieve the system of excessive pressures.

**CAUTION** Use of a back-up wrench is recommended to prevent twisting of the manifolds when installing the oil piping. If pipe sealant is used on threads, the degree of resistance between mating parts is less, and there is an increased chance for cracking the heat exchanger fittings. Do not over tighten.

4. Piping must be properly supported to prevent excess strain on the heat exchanger ports.

## Operation

Once unit is installed, turn the fan by hand to eliminate possible part interference because of damage in shipment or installation. Observe the fan operation upon initial startup. The system may then be operated.

## Maintenance

Inspect the unit regularly for loose bolts and connections, rust and corrosion, and dirty or clogged heat transfer surfaces (cooling coil).

## Heat Transfer Surfaces

Dirt and dust should be removed by brushing the fins and tubes and blowing loose dirt off with compressed air. Should the surface be greasy, the cooler should be brushed or sprayed with a mild alkaline solution, or a non-flammable degreasing fluid. Follow with a hot water rinse and dry thoroughly. A steam cleaner may also be used effectively. *Do not use caustic cleaners.*

## Casing Fan and Motor

Dirt and grease should be removed. Rusty or corroded surfaces should be sanded clean and repainted.

## Internal Cleaning

At least once a year, piping should be disconnected and degreasing agent or flushing oil circulated through the unit to remove sludge from turbulators and internal tube surfaces to return the unit to full thermal capacity. A thorough cleaning of the entire system in the same manner is preferable to avoid carry-over from uncleaned piping, pumps and accessories. The strainer or any filtering devices should be removed and serviced following this cleaning operation.

## Trouble Shooting Chart

| Symptom                | Possible Cause      | Corrective Action                                 |
|------------------------|---------------------|---|
| Not cooling adequately | Not enough air flow | Consult specifications and adjust if required     |
|                        | Unit is fouled      | Clean exchanger (see maintenance)                 |
|                        | Unit is undersized  | Check specifications and change size if necessary |
| Leaking at connections | Not tight           | Tighten carefully                                 |
|                        | No thread sealant   | Remove pipe, apply thread sealant and reinstall   |