



# **Boost AO**

**Never Change Your Oil Again**

**Risk-Free Antioxidant Rebalancing | 100% Success Rate**



MAXIMIZING ASSET LIFE THROUGH TECHNOLOGY

# EXTEND THE LIFE OF YOUR TURBINE & COMPRESSOR OILS

## NEVER CHANGE YOUR OIL AGAIN

Fill-For-Life is Here

Boost AO is a critical step in our mission to reduce unnecessary oil waste and production by transforming your lubes into Fill-For-Life fluids. We've created a proprietary technology that can replace depleted antioxidants in oil – replenishing bad chemistry with good chemistry.

### BOOST AO BENEFITS

- 🔑 Indefinitely extends the life of your oil
- 🔑 Eliminates turbine / compressor oil purchases
- 🔑 No oil changes
- 🔑 No need for expensive and risky flushes
- 🔑 Transforms your oil from a consumable to an asset
- 🔑 Guarantee – no risk
- 🔑 100 % success rate
- 🔑 Reduces carbon emissions through demand reduction
- 🔑 Increases RULER™ test results
- 🔑 Increases RPVOT results

### ENVIRONMENTAL & FINANCIAL WINS

Great news for the Planet and your CFO

For every 1 gallon of Boost AO, 50 gallons are saved from the earth. Think about it: It took millions of years for the earth to make your oil – then a tremendous amount of time, energy and money to extract, ship, refine and formulate it. Shouldn't you do everything possible to extend the life of the oil you use, for as long as possible? Our customers enjoy the environmental benefits of not having to dispose of waste oil and lower CO2 emissions by reduced demand of oil. Even more, they are saving money on both ends. Boost AO customers do not have to pay for waste handling fees, nor do they have to spend money on new oil. Boost AO and Fluitec's Fill-For-Life mission makes it a win-win proposition for both you and the planet.



# HOW IT WORKS

## NEVER CHANGE YOUR OIL AGAIN, FILL-FOR-LIFE IS HERE

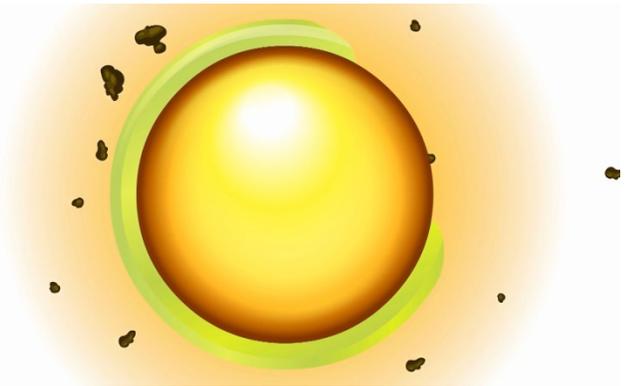
### Antioxidant Rebalancing

Boost AO is customized specifically for your oil and designed to rebalance your additive system. The formulation and treat rate are developed based on your original oil formulation and current condition of the in-service oil. The tailored additive components are blended into a concentrate having a similar viscosity of your in-service oil allowing Boost AO to be blended on-site with no special equipment

### Qualification Testing

Not every in-service oil is suitable for additive replenishment. Oil degradation products, mixed formulations and contamination are among some of the reasons that an oil may not be appropriate for restoring antioxidant health. Fluitec's scientists have developed a Qualification Test that is required prior to considering Boost AO. Qualification Testing includes running a battery of tests on your in-service oil, developing a customized Boost formulation, blending Boost AO at the specified treat rate with your in-service oil and performing compatibility testing according to ASTM D7155

### QUALIFICATION TESTING PROCESS



*Antioxidants are sacrificial and deplete*



*Boost Restores Antioxidant Systems*

# BOOST AO + ESP

## FILL-FOR-LIFE

### Boost AO + ESP (Electro-physical Separation Process™)

A true Fill-For-Life system will both replace antioxidants and remove oil degradation by-products. Fluitec provides Boost AO and our ESP System so you will never need to change your oil.

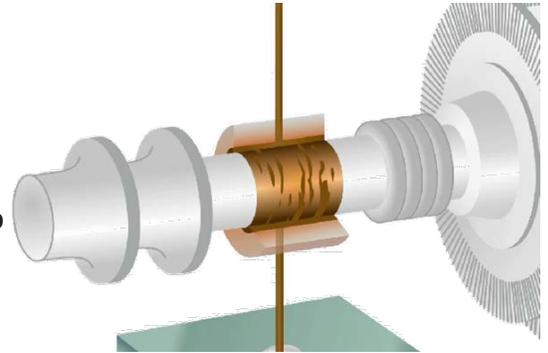
## BOOST AO and ESP WORKING TOGETHER

Through oxidative and thermal stresses, the sacrificial antioxidants in an oil will deplete. The by-product of these processes causes varnish. Boost AO will replenish depleted antioxidants into the oil, however the existing varnish-causing molecules also need to be removed.

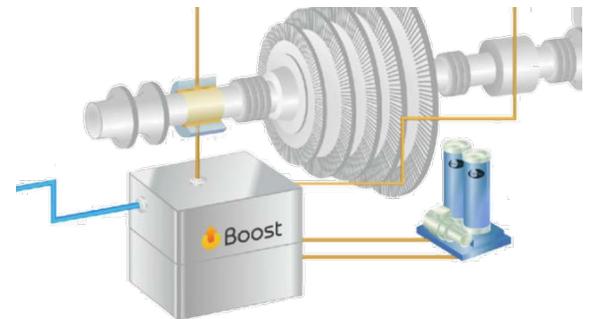
This is why Fluitec created ESP. This technology relies on the principles of chemisorption. ESP selectively removes oil degradation products that are in suspension or in solution without disturbing the fluid's additive system. For optimal performance, ESP media is fully customized for each application and is selected based on oil type and condition.

## VITA ESP SYSTEMS

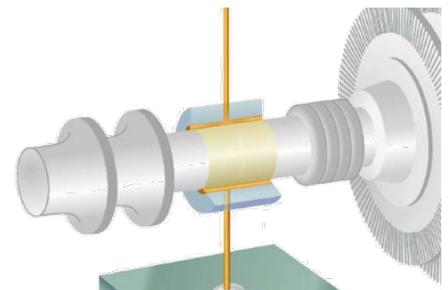
Use Fluitec's VITA ESP delivery systems to remove varnish from the oil while Boost AO replenishes the antioxidants.



*Depleted antioxidants create varnish causing byproducts in the oil*



*ESP removes the Varnish from the oil and Boost AO replenishes antioxidants*



*System cleanliness and antioxidants are restored*



VITA ESP III



VITA ESP II

# BOOST AO CASE STUDY



## CHALLENGES

The Operations and Maintenance Team at SRP believes that oil is the lifeblood of any rotating equipment. There are many lube oil degradation problems that are widely acknowledged in the power generation industry, including varnish, sticking valves and elevated bearing temperatures. Oil analysis indicated a high varnish potential in their oil (MPC test) and antioxidant depletion (RPVOT and RULER™ tests). SRP worked with Fluitec to correct these issues. SRP knew they had to act fast or they would start experiencing efficiency issues that could lose some serious revenue.

## RESULTS, RETURN ON INVESTMENT and ENVIRONMENTAL IMPACT

SRP turned to Fluitec for the solution to remove and control varnish contamination and then, once qualified, used Boost AO to replenish the depleted antioxidants. This was over a decade ago since the initial Boost AO treatment and has never changed the oil. They use routine oil analysis to monitor their oil's condition. Their latest result shows the oil is as good as (even better than) new oil because of their use of Boost AO.

SRP achieved well over 150% of the industry standard for oil life due to Boost AO. Their initial goal of 100,000 hours (~ 13 years) of oil life is soon to be reached and are looking to double that goal to 200,000 hours without any oil changes.

“When you consider we would have changed the oil twice by now and even conservatively averaging lube oil related trips and fail-to-starts the savings are in the millions. In addition, by not having to change the oil, we have saved over 50,000 gallons of oil from being produced and wasted. With no lube-related trips and downtime, our efficiency goes up which relates to less fuel wasted and less CO2 emissions”

“Fluitec has transformed the oil in our fleet of gas and steam turbines into Fill-for-Life lubricants.”

**Mark Joy**  
O & M Supervisor, Maintenance  
SRP



# BOOST AO SPECIFICATIONS & WARRANTY

SIZE	DIMENSIONS	WEIGHT
5 gal Pail (19 L)	13 x 13 x 16 (inches) 33 x 33 x 40.7 (cm)	41 lbs 19 kg
55 gal Drum (208 L)	23 x 23 x 36 (inches) 58.5 x 58.5 x 91.5 (cm)	462 lbs 210 kg
330 gal Tote (1250)	48 x 40 x 36 (inches) 122 x 102 x 91.5 (cm)	2,696 lbs 1223 kg
HS CODE	3811.29.0000	



## Boost AO Warranty

Fluitec warrants that Boost AO is compatible with the existing turbine oil and will not cause any adverse performance effects to the in-service lubricating oil or to the lube oil system\*.

The addition of Boost is warranted to meet the oxidative and viscometric performance requirements of OEM and International Standard Body turbine oil specifications, including:

- Alstom HTGD 90117
- GEK 32568J
- GEK 27070
- GEK 28143A
- GEK 46506D
- Siemens TLV 9013 04
- Siemens Westinghouse M spec 55125Z3
- Solar ES 9-224
- ASTM D4304
- British Standards Institution BS 489
- DIN 51515

**NOTICE:** Use of electrostatic filtration can remove anti-foam additives from most turbine formulations including Boost AO products. We do not recommend using electrostatic filtration of turbine oils and our Boost AO products

