

THE BARE FACTS ON MAINTENANCE

Tips On Maintaining Your Enercon Corona Treating System.

Second Quarter 2000

Our Customers are Priority # 1

Our Customer Service Program begins long before the customer ever receives his new Enercon Corona Treating System. Quite often, customers perform a variety of tests in our Corona Treating Laboratory to help them determine the parameters of the system that they are about to order. Our engineers and applications specialists, along with our laboratory equipment are available, free of charge, to customers and prospective customers to help them resolve the corona treating issues confronting them. In addition, we offer machine operator and machine maintenance training at our facility, also free of charge. Quite often, this training takes place before a system is delivered.

Some customers prefer to have this training conducted at their facility in conjunction with start-up of their new system. In these situations, we send a Field Service Engineer to the customer's facility to supervise the installation of our equipment, start it up, and

provide operator and maintenance training. This service is provided at a rate 40% below our standard service rates, plus travel and living expenses.

We have found that more than half of all emergency service situations can be diagnosed via the telephone. For this reason, we maintain around-the-clock, emergency service capability. A fully qualified Field Service Engineer is never further away than your telephone. A Field Service Engineer can be dispatched quickly if the situation requires it.

All of our equipment is warranted against defects in materials and workmanship for a period of 15 months from shipment or 12 months from start-up, whichever is shorter. Any parts or labor that may be required during the warranty period to resolve failures caused by normal wear and tear will be supplied free of charge. Travel and living expenses incurred are the responsibility of the customer.

Enercon has created, and is expand-

ing, yet another customer service tool - our website (www.enerconind.com). We now have troubleshooting tips and diagnostic procedures, along with drawings and schematics to facilitate problem resolution in the field available online. This has already proved extremely helpful to both our international and domestic customers.

We also offer preventative maintenance services for customers whose equipment is out of warranty. This service involves a complete inspection of the equipment, performance of any required repairs or maintenance, operator and maintenance training, and development of routine maintenance protocol with spare parts recommendations. We provide this service at a 20% discount from our standard service rates, plus travel and living expenses.

To find out more about how our Customer Service Program can work for you, please contact Ted Cox or Paul Reed at 262-255-6070.

the
enercon
edge

A Philosophy . . .
borne of
excellence . . .
rooted in
our people . . .
& driven by
technology.



IN THIS ISSUE ...

- ☞ CALIBRATION REFERENCE CHART
- ☞ DO YOU OWN A POWER LOK POWER SUPPLY?
A TRADE-UP OFFER YOU WON'T WANT TO MISS!

Special Power-Lok Trade-Up Offer

The Power-Lok Series of Power Supplies was the backbone of Enercon's product offerings into the early 1990's. Hundreds of these power supplies are still performing throughout the world today. However, the costs to maintain the Power-Lok Systems are steadily increasing, and the capabilities of these systems have been greatly surpassed.

As good as the Power-Lok Series was in its day, significant advances in circuitry designs and the available electronic devices have enabled Enercon to develop new power supplies, the Series 2000 and Series 9000, that will provide you with unparalleled performance and reliability at very competitive prices.

For the next six months, until August 31st, we will be offering special trade-in allowances for your old Power-Lok Power Supplies against our new state-of-the-art Series 2000 and Series 9000 Power Supplies. The time to trade-up is now! If you are interested in this trade-in program, call your Enercon Account Representative or John Smallshaw, Corona Treating Sales Manager, at 262-255-6070.

Operational and Maintenance Training

Here at Enercon we have offered operational and maintenance training for as long as we've been in business. Generally this training has been offered at our facility in Menomonee Falls, Wisconsin. Although we still provide periodic training programs in our shop, the vast majority of training requests that we receive today are for on-site training. Time and again our customers have told us that our on-site training program has been invaluable for them.

The advantages to this training approach are significant. Your equipment is used for the training. There is virtually no

limit to the number of your people who can benefit from the training. Operational and application issues can be addressed real-time, as they occur. Routine care and preventative maintenance issues can be demonstrated and discussed. Practical programs to keep your equipment in tip-top condition can be developed and implementation plans established.

Your investment for our on-site program is nominal. Our fee for a one-day, on-site program is \$1,500.00, for a two-day program \$2,200.00 and for a three-day program \$2,800.00. One day is usually sufficient to complete our

program. We suggest limiting the participants to no more than 5 per session. This allows us to maximize the hands-on learning experience for each of them. The two & three day programs have been designed to accommodate additional participants or to allow time to delve more deeply into specific operational or maintenance issues.

We would like to help you through our on-site training program. To learn more about our program or to schedule a session in your plant, call Ted Cox or Paul Reed at 262-255-6070, or send us an e-mail message at service@enerconmail.com.



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The Number you have dialed,
414 . . .
has been changed to
262 . . .



Effective September 25, 1999, Enercon Industries' area code
has been changed to 262.

Please make a note of this change.

Series 2000 Power Supply Meter Calibration

The front panel power meter on the Enercon Industries Series 2000 Power Supplies indicates the current operating output power level in kilowatts (kW). The meter circuit represents the actual power applied to the substrate. Factory calibration accounts for internal losses within the high voltage transformer. The displayed power value is internally calculated by logic circuits based on feedback inputs utilizing a stepped down voltage and a current transformer for the output current.

ISO certification requires periodic verification and validation of the meter circuits. For metering circuit accuracy and repeatable measurements, it is necessary to verify the meter indications. The Calibration

Reference Chart allows for quick reference points to check the calibration of the meter.

Caution: *The following measurements must be performed with the equipment energized. Only qualified technicians should perform the measurements. Observe all safety precautions.*

Locate the specific model number of the power supply in the Calibration Reference Chart. Connect a DC voltmeter to the specified wires in the Chart. Record the voltage. Connect the Fluke 36 Clampmeter or an in-line current meter at the specified point referenced in the Chart. Plug the measured values into the formula and calculate the measured power.

Power (kW) = DC Voltage X DC Current X .95 (Power Correction Factor)

Due to the frequency of operation, it is imperative that the test device has the necessary frequency range to accurately measure the variable. The current measurement can be accomplished by the use of an in-line DC current meter capable of the required current range, or a Fluke Model 36 Clampmeter. If your measuring apparatus provides for a calculated power discrepancy of greater than 10%, contact Enercon Industries Technical Service Department for assistance.

Calibration Reference Chart

Power Supply Model Number	DC Voltage Measurement	DC Current Measurement
LM3353-XX, LM3354-XX, LM3355-XX, LM3512-XX, LM3479-XX, LM3622-XX.	Wire 27 and Wire 28 at the Rectifier or at E20 and E21 on the Power Board Respectively.	Either Wire 27 or Wire 28 between the Rectifier and the Power Board.
LM4045-XX, LM4046-XX, LM4047-XX.	Wire 7 and Wire 8 at the Rectifier or E20 and E21 on the Power Board Respectively.	Either Wire 7 or Wire 8 between the Rectifier and the Power Board.
LM37290XX, LM3730-XX, LM3731-XX, LM3732-XX.	Wire 16 and Wire 17 at J7 and J2 on the Power Board Respectively.	At Wire 17 at J4 on the Power Board.
LM4097-XX.	Wire 30 and Wire 35 at C5, Output Cap.	At Wire 31 at the DC Choke.



Enercon Enhances Service Via E-mail

Technology is rapidly changing the way we communicate. E-mail allows for faster, more accurate, and detailed communications. E-mail accommodates field troubleshooting, international communications, digital picture transfer and inexpensive communications.

At the present time, system prints are available. Soon complete manuals will be available for delivery via E-mail. If your prints are lost or illegible, contact Enercon Industries for a complete set sent via E-mail. (Note: E-mail Drawings are available in AutoCad Format.

Specify the format requirement for your system.)

Please include your system Serial Number and Model Number. Once your request is received, a response will be sent very quickly.

Please e-mail requests to: service@enerconmail.com

Millennium Maintenance Planner

The **2000 Monthly Maintenance Planner** is a useful guide for scheduling maintenance and ordering parts. The planner includes the following:

Monthly Calendar - Convenient for recording maintenance reminders. A Maintenance Checklist for each month provides a subtle reminder for maintenance checks that should be performed.

Power Supply Parts List - Contains replacement part numbers for Compak 2000 Series, Compak 9000 and Power Lok II Power Supplies. Reference designators are provided to ensure the proper parts can be easily identified.

Component Identification and Parts List - Expanded parts lists and components identification diagrams, including the Electrode Assembly, the Segmented Electrode Assembly, and Treater Station.

Spare Parts - A complete list of Spare Parts and Part Numbers.

Corona Treating Lab/Surface Tension Testing - Enercon's large-scale, 760 sq. foot corona treating laboratory can help determine the proper pre-treat and post-treat surface in dyne/cm., as well as important sizing data for a particular treating applications. Unlike a smaller laboratory, Enercon's lab can effectively test substrates at actual production line speeds and web width, yielding more accurate data.

Additional information included in the planner describes the policies for testing materials, the policy for in-house equipment trials, directions, and local accommodations.

If you wish to receive your free copy of the **2000 Monthly Maintenance Planner**, call Customer Service today at (262)255-6070.

We all know that routine preventative maintenance is a very important aspect of every successful manufacturing operation. An aggressive preventative maintenance program is the best insurance against unwanted downtime and scrap. Over the years many of our customers have asked us to give them guidance, and sometimes a hand, with their preventative programs.

We now have formalized this service. At a rate that is 20% below our standard service rates we will become an integral part of your PM program. Our new Preventative Maintenance Service will provide you with a fully trained and experienced field service engineer. In addition to making sure

that your Enercon Corona treaters are cleaned and tuned up and performing correctly, our engineer will provide hands on training for your operators and maintenance personnel. He will also work with your personnel to develop an ongoing maintenance program that reflects your specific requirements.

Call us at 262-255-6070 or drop us an email at service@enerconmail.com if you have any interest in our new Preventative Maintenance Service. It doesn't matter if you just need a little coaching or you would like an on-site field service engineer, we'll be here to help you.

At Enercon "we live to serve".

Check Out Enercon's New Preventative Maintenance Program