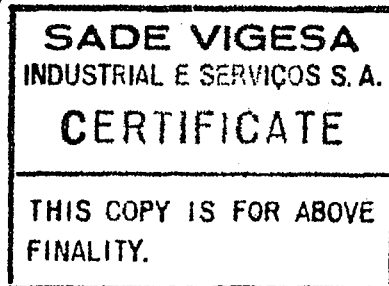


OPERATION/MAINTENANCE

MANUAL INDEX

JOB 1976 & 1977 - HP 2415/16

- . **SECTION 1 - OPERATION INSTRUCTIONS/MAINTENANCE**
- . **SECTION 2 - STRUCTURAL INSPECTION**
- . **SECTION 3 - CONTROL UNIT, MOTORS (G.E.)**
- . **SECTION 4 - METAL ENCLOSED SWITCHGEAR (SBI-SHALLBETTER INC.)**
- . **SECTION 5 - GEAR REDUCERS/COUPLINGS (FALK)**
- . **SECTION 6 - JACKTUATORS (NOOK INDUSTRIES)**
- . **SECTION 7 - ELEVATOR (CHAMPION)**
- . **SECTION 8 - RAIL BRAKE (HILLMAR)**
- . **SECTION 9 - BRAKES (BUBENZER)**
- . **SECTION 10 - M.H. DRUM BRAKE (MALMEDIE)**
- . **SECTION 11 - CABLE REEL (GLEASON)**
- . **SECTION 12 - AIR COMPRESSOR (CAMPBELL)**
- . **SECTION 13 - COMMUNICATION SYSTEM (GAI-TRONICS)**
- . **SECTION 14 - AIR CONDITIONER (CARRIER)**
- . **SECTION 15 - HEATER (CHROMALOX)**
- . **SECTION 16 - FAN (WALDO BROTHERS)**



- . SECTION 17 - WINDALARM (BELFORT INSTRUMENTS)
- . SECTION 18 - HYDRAULIC SYSTEM (ACTIVATION)
- . SECTION 19 - MAINTENANCE CRANE (SPH)
- . SECTION 20 - SPREADER (BROMMA)
- . SECTION 21 - ROPE REREEVING GEAR REDUCER (SEW)

WARNING

SPREADER BEAM AND CARGO BEAM CHANGES SHOULD BE PERFORMED IN THE AREA BETWEEN THE LEGS. DO NOT ATTEMPT TO CHANGE BEAMS IN THE BACKREACH AREA OR UNDER THE BOOM GIRDER.

K - WIND ALARM AND SHUTDOWN SYSTEM

(See Figs. k1 and k2)

THIS CRANE IS EQUIPPED WITH AN ANEMOMETER OR WIND SPEED MONITORING SYSTEM THAT WILL PROVIDE PRE ALARMS WHEN THE SUSTAINED WIND SPEED AT THE CRANE EXCEEDS 35 MPH. WHEN SUSTAINED WIND SPEEDS EXCEED 45MPH OR WIND GUSTS EXCEED 55 MPH AT CRANE, AN ALARM HORN WILL SOUND AND THE CRANE MOTIONS WILL BE SHUT DOWN AUTOMATICALLY.

1 - ANEMOMETER OR WIND ALARM COMPONENTS

THE WIND ALARM AND SHUTDOWN SYSTEM CONSISTS OF THE FOLLOWING:

A - WIND ALARM CONSOLE:

THIS UNIT IS LOCATED IN THE CAB (SEE FIG. K1). CALIBRATION TECHNIQUES AND REPLACEMENT PARTS INFORMATION ARE DISCUSSED IN THE MAINTENANCE MANUALS.

B - WIND SENSOR:

THE WIND SENSOR (SEE FIG. K2) IS LOCATED AT THE TOP OF THE A-FRAME. THIS UNIT GENERATES A 0-10VDC SIGNAL PROPORTIONAL TO WIND VELOCITY.

1.0 DESCRIPTION

The Belfort Crane Wind Alarm, P/N 2419496, is an electro-mechanical device which provides alarms and switches electrical functions with respect to specific wind speed conditions. The wind alarm weighs approximately eleven pounds and measures 8" x 8" x 8". The electrical components are housed in an oil-tight, 14 gauge steel, continuously welded console. The control surface is inclined at a 60° angle to facilitate viewing by the crane operator. The console may be mounted on a bulkhead, cabinet top, or table.

The wind alarm operates in conjunction with the Cat. No. 122 Aerovane Transmitter, which provides wind speed input signals.

Each wind alarm set consists of a Cat. No. 122 Aerovane Transmitter and a Wind Alarm Indicator. The following functions and indications are provided by the alarm system:

- a) Display of wind speed from 0 - 100 MPH on console panel meter.
- b) A flashing red light when sustained wind speed exceeds a preset lower limit. Provision is made for connecting an external, remote warning light to be actuated simultaneously.
- c) An internal audible "Sonalert" horn alarms when sustained wind speeds exceed a preset upper limit. Provision is made

2.0 SPECIFICATIONS

Range:	0 to 100 mph \pm 2% full scale
Set Point Adjustability:	Full range \pm 2% full scale
Input Impedance:	1150 ohms
Input Signal:	0.156 volt/mph (10.56 vdc @ 100 mph) from Aerovane Transmitter Cat. No. 122
Output:	115 vac for optional alarm signals and NO/NC contacts for brake signal
Contact Rating:	10 amperes resistive, 115 vac
Pre-Alarm Delay:	Adjustable 1 to 45 seconds
Power Requirements:	Non-Alarm: 115 vac, 0.5 amps, 60 watts Full-Alarm: 115 vac, 1.5 amps, 180 watts (Power requirements increase depending on optional alarms used.)

to connect an external, remote "Klaxon" horn or siren, to be actuated simultaneously.

d) Provisions are also made to supply a normal open or normal closed brake signal circuit which will automatically actuate the brake mechanisms when sustained wind speeds exceed the preset upper limit.

3.0 INSTALLATION

The Crane Wind Alarm is primarily designed for crane applications. When possible, the wind alarm should be bulkhead mounted inside the crane cab and within peripheral view of the crane operator.

The wind alarm is normally supplied with three 5/16 inch mounting holes in the rear wall of the console. The alarm should be solidly mounted to a suitable wall or bulkhead using 1/4" bolts or toggles. (Mounting hardware is not supplied with the unit.) Access to the mounting holes is accomplished by loosening the front panel lock screws and raising the front panel.

All inputs and outputs from the wind alarm are through the MS-3106 A-24-5 connector located on the left-hand side of the unit. Mating connectors are supplied with the wind alarm. (See Figures 1, 2, and 3.)

To complete the circuit between the