1 Introduction

In this section

1.1 Technical Reference Manual

The information contained in this Technical Reference Manual pertains only to those models of products which are marketed by Datex-Ohmeda as of the effective date of this manual or the latest revision thereof. This Technical Reference Manual was prepared for exclusive use by Datex-Ohmeda service personnel in light of their training and experience as well as the availability to them of parts, proper tools and test equipment. Consequently, Datex-Ohmeda provides this Technical Reference Manual to its customers purely as a business convenience and for the customer's general information only without warranty of the results with respect to any application of such information. Furthermore, because of the wide variety of circumstances under which maintenance and repair activities may be performed and the unique nature of each individual's own experience, capacity, and qualifications, the fact that customer has received such information from Datex-Ohmeda does not imply in any way that Datex-Ohmeda deems said individual to be qualified to perform any such maintenance or repair service. Moreover, it should not be assumed that every acceptable test and safety procedure or method, precaution, tool, equipment or device is referred to within, or that abnormal or unusual circumstances, may not warrant or suggest different or additional procedures or requirements.

This manual is subject to periodic review, update and revision. Customers are cautioned to obtain and consult the latest revision before undertaking any service of the equipment.

CAUTION Servicing of this product in accordance with this Technical Reference Manual should never be undertaken in the absence of proper tools, test equipment and the most recent revision to this service manual which is clearly and thoroughly understood.

1.1.1 Manual overview

This manual covers service information for the CARESCAPE R860 ventilator.

This manual covers the following components:

*   Display unit
*   Integral electronics
*   Gas delivery components
*   Frame components

Other equipment

Other equipment may be attached to the system. Refer to separate documentation relative to these items for details.

1.1.2 User's Reference Manual

Refer to the CARESCAPE R860 User's Reference Manual for additional information about the operation of the system. Software 10 Users reference manual 2065490-001. Software 11 User's Reference manual 5839923.

1.1.3 Conventions used

Hard keys

Names of the hard keys on the face of the display and modules are written in bold typeface. Example:

Home

Menu selections

Menu selections are written in bold italic typeface. Example:

Procedures

Messages

Messages that are displayed on the screen are enclosed in single quotes. Example:

'Temp High'

Sections and headings

When referring to different sections or headings in this Technical Reference Manual, the name is written in italic typeface and is enclosed in double quotes. Example:

"*2 Theory of Operation*"

1.2 Essential Performance

The essential performance of the system consists of:

- Delivery of ventilation at the patient-connection port within the alarm limits set by the operator or the generation of an alarm.

The ventilator provides alarms relating to the following areas:

- Oxygen level
- Airway pressure
- Expired volume
- AC Mains failure
- Battery nears depletion
- Gas supply failure
- Gas failure cross flow

Essential performance is maintained through using this Technical Reference Manual for repair, maintenance, and calibrations. See "*3 Checkout Procedure*", "*5 Service Tests and Calibration*", and "*9 Repair Procedures*".

1.3 CARESCAPE R860

The CARESCAPE R860 combines sophisticated technology and an intuitive user interface. Icons represent configurable views of past (historical trends), present (patient status), and future patient needs (clinical decision support). The ventilator consists of a display, ventilator unit, cart with AC outlet (optional), EVair compressor (optional), and module bay with gas module (optional).

A wide selection of performance options give the user full control of the system configuration. This ventilator is a complete system featuring patient ventilation, monitoring, and the capability of interfacing with central monitoring. Full touchscreen capability allows the user to quickly and easily access patient information and procedures.

This ventilator supports adult, pediatric, and neonatal patients. The basic ventilator is equipped with adult and pediatric patient type software. The neonatal software option can be added or the ventilator can be set to enable the Neonatal-Only option. When the Neonatal-Only option is set, the ventilator is only intended to be used for neonatal patients and will not be able to enter the adult or pediatric patient types. This ventilator comes with standard ventilation modes as well as a purchasable neonatal patient option, ventilation modes, and clinical decision support features.

Configurations available for this product depend on local market and standards requirements. Illustrations or photos in this manual may not represent all configurations of the product. This manual does not cover the operation of every accessory. Refer to the accessory documentation for further information. The assembly of the ventilator system and modifications during its service life require evaluation to ensure the requirements of IEC 60601-1:2005 are met.