



Standard Specification for Food Service Equipment Manuals¹

This standard is issued under the fixed designation F760; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers requirements for manuals for food service equipment which shall contain, as a minimum, complete installation, operating, preventive maintenance and service instructions, including applicable charts and diagrams and an illustrated parts data section.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* For specific hazards statements see Section 4.

2. Significance and Use

2.1 This specification applies to manuals for food service equipment that in normal operation requires regularly scheduled servicing, inspection, or component replacement. The requirement for manuals for food service equipment that does not require regularly scheduled servicing shall be optional for each manufacturer.

3. Format

3.1 *Size of Paper*—8½ by 11 in. (or capable of being folded or unfolded to 8½ by 11-in. sheets).

3.2 *Type Size*—Nine point or larger for body of text; seven point for footnotes and tables.

3.3 *General*—Printed copies shall be legible, and may be bound. If loose leaf they shall be furnished in a single protective cover. The instructions portions of the manuals shall be in simple language, easily understood by personnel responsible for the installation, operation, and maintenance of the equipment. Subjects difficult to present in narrative form shall be clarified by the use of illustrations, charts, or tables with appropriate headings.

3.4 *Illustrations and Diagrams*—Manuals shall contain sufficient illustrations (line drawings or halftones, or both) to

locate and identify components necessary for operation and components that may require maintenance when their location cannot be clearly described in the text. Where necessary for clarity, manuals shall show configuration for the removal and reassembly of parts. As applicable, the following shall be included: schematic diagrams which show the functional arrangement of components; wiring diagrams which show the physical electrical connections of the circuit arrangement; and schematic piping diagrams which depict the interconnection of components, piping, tubing, or hose and the direction and sequence of liquid or gas flow. Diagrams shall be separate for gas and each type of liquid flow.

4. Hazards

4.1 Warning notices shall be used to indicate any condition or practice that could result in personal injury or possible loss of life.

4.2 Caution notices shall be used to indicate any condition or practice which, if not strictly observed or remedied, could result in damage to or destruction of the equipment.

5. Unpacking Instructions

5.1 When unusual unpacking conditions exist, instructions for unpacking as well as the locations of manuals if provided, shall be indicated on the outside of the shipping container.

6. Manual Instructions

6.1 Manuals may be furnished individually, or they may be combined.

6.2 *Installation and Start-Up Manual*—Installation instructions shall be furnished with equipment showing installation requirements. Inspection procedures for in-shipment damage shall be explained. Special installation instructions, such as foundation, ventilation, and clearance requirements, plumbing and electrical connections, mounting details, wiring diagrams, initial lubrication instructions, and alignment procedures, if applicable, shall be provided or pertinent references cited. Initial adjustment procedures and control settings shall be specified. Installation instructions shall include a statement that the installation must conform to local codes or, in their absence, nationally recognized codes.

6.3 *Operation Manual*—Operating instructions shall be furnished with the equipment. Theory of operation shall be

¹ This specification is under the jurisdiction of ASTM Committee F26 on Food Service Equipment and is the direct responsibility of Subcommittee F26.91 on Editorial and Nomenclature.

Current edition approved May 1, 2012. Published August 2012. Originally approved in 1982. Last previous edition approved in 2006 as F760 – 93 (2006). DOI: 10.1520/F0760-93R12.

provided for operating and maintenance personnel. Operating instructions shall include, but not be limited to the following:

- 6.3.1 Explanation of the use and function of each control or instrument used by the operator,
- 6.3.2 Start up and shut down procedures,
- 6.3.3 Normal operation procedures, and
- 6.3.4 Appropriate safety instructions.

NOTE 1—It is suggested that the manufacturer consider a standardized format for the operator instructions such as the “Job Performance Breakdown” recommended by the National Safety Council.²

6.4 *Maintenance Manual*—Where applicable, maintenance instructions shall be furnished with the equipment and shall include separate preventive maintenance instructions for cleaning, calibration, verification, lubrication, mechanical drives, electrical components, corrosion, inspection points (that is, sight glasses, gages), etc. Periodic cleaning and lubrication information shall be included, designating types of cleaning agents or lubricants required, lubrication frequency and intervals (monthly, quarterly, semiannually, hours of operation, etc.). Application points and lubrication capacity, (required amounts) of lubricants shall be adequately identified. Pictorial format for lubrication instructions is desirable. (Cleaning and lubrication that take place during repair, replacement and reassembly, shall be covered under the instructions for these operations.)

6.5 *Service Manual*—Instructions suitable for use by qualified service personnel may be furnished with the equipment or shall be furnished separately if requested and shall include, but not be limited to the following:

6.5.1 *Troubleshooting*—Malfunctions that might occur during operation shall be cited. Troubleshooting data and fault isolation techniques, when used, shall indicate the symptom or trouble. The instructions shall include test hookups to deter-

² Available from National Safety Council (NSC), 1121 Spring Lake Dr., Itasca, IL 60143-3201.

mine the cause of trouble and instructions for the restoration of the equipment to operating conditions.

6.5.2 *Repair and Component Replacement*—Instructions shall be furnished in proper sequence for repairing or replacing equipment components, or both. Test, adjustment, and check-out data after reassembly shall be included. Illustrations, including exploded views, should be used as necessary.

6.5.3 *Special Tools*—If special tools are needed to perform servicing, sources of supply shall be provided along with the appropriate tool part numbers.

6.5.4 *Parts List*—A parts list shall be provided as part of the service manual or may be furnished separately. The parts list shall provide positive identification of all replacement parts for the equipment and shall include sufficient information to obtain replacement parts from the parts manufacturer or the equipment manufacturer or his authorized service agency. A worldwide list of authorized service agencies shall be furnished when such an agency exists. Clear and legible illustrations shall be provided to identify component parts and parts’ relationships. Exploded views should be used wherever possible. Part numbers and part names may be shown on illustrations or separately listed. When the illustrations omit the part numbers and part names, both the illustrations and separate listings shall show either index, reference, or key numbers that will cross-reference the illustrated part to the listed part. Parts in the listing shall be grouped by assemblies, subassemblies, and modules, with detail parts identified to the assembly of which they are components. Common commercial hardware and bulk items which are not of special design, such as bolts, washers, nuts, screws, fittings, keys, hinges, wire, cable, gasket material, tubing, and hose, obtainable from a wide range of sources, may be listed by the manufacturer and show the notation “Commercial” (or the abbreviation “Coml”) instead of a part number. When used, the part name (nomenclature or description) shall be complete enough to facilitate substitution of equivalent items.

SUPPLEMENTARY REQUIREMENTS

The following supplementary requirements apply to Naval shipboard procurement. Where provisions of this supplement conflict with Specification F760, this supplement shall prevail.

S1. Technical Manual

S1.1 A technical manual shall be provided with all food service equipment. The manual shall incorporate the following topics:

- S1.1.1 Installation and start-up,
- S1.1.2 Operation,
- S1.1.3 Maintenance,
- S1.1.4 Servicing,
- S1.1.5 Troubleshooting,
- S1.1.6 Repair and component replacement,
- S1.1.7 Parts lists, and
- S1.1.8 Wiring diagrams and schematics.

S1.2 *Cover*—All technical manual covers shall include the following:

- S1.2.1 Technical Manual Identification Number (TMIN),
 - S1.2.2 Publication Stock Number (PSN),
 - S1.2.3 Distribution and destruction notice statement, and
 - S1.2.4 A barcoding label that includes the TMIN and PSN.
- S1.3 All naval shipboard manuals shall include the following:
- S1.3.1 List of effective pages,
 - S1.3.2 Change record,
 - S1.3.3 Technical manual validation certificate,
 - S1.3.4 Approval and procurement record,
 - S1.3.5 Identifying technical publication sheet,
 - S1.3.6 A safety summary sheet that shall include general safety notices along with specific warnings and cautions that appear elsewhere in the manual, and

S1.3.7 Technical Manual Deficiency/Evaluation Report (TMDER).

S2. Special Tools

S2.1 Any special tools manufactured solely for use on a manufacturer's piece of equipment shall be included with the equipment.

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