

APPENDIX II TO SUBPART D OF PART 18
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Figure 1
TYPICAL LAYOUT DRAWING OF A MACHINE

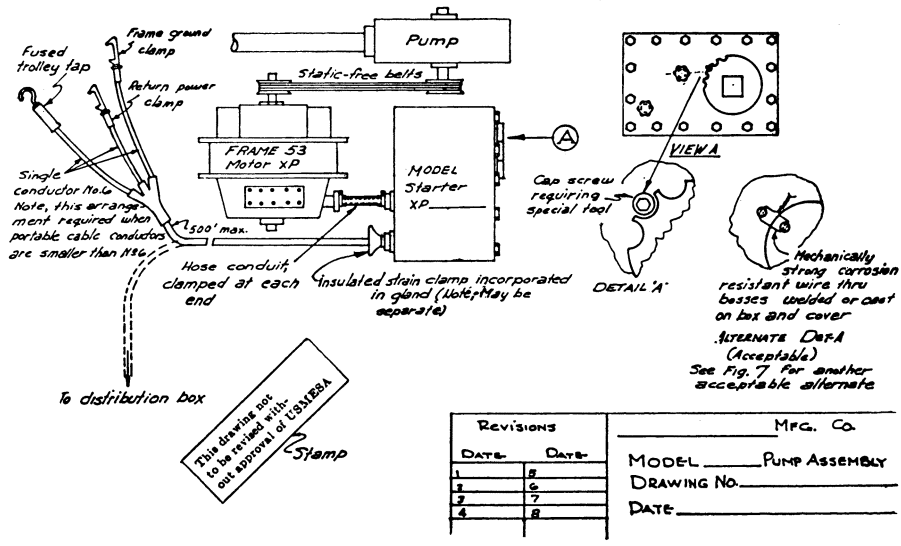


FIGURE 2—SAMPLE BILL OF MATERIAL

B. of M. No. _____
Date _____

Revision _____ Date _____
1. _____
2. _____
3. _____
4. _____
5. _____

Bill of Material (Electrical)

(Manufacturing Company)
Model: _____
(Unit Name)
Approval 2G- _____

Motor: _____
 (Manufacturing Company)

Frame _____
 Hp., _____ Volts, _____ Ph.,
 _____ Cy., _____ R.P.M.
 X/P _____ (Date).
 _____ (Date) Extension.

Starter: _____
 (Manufacturing Company)

Model _____
 Hp., _____ Volts.
 X/P _____ (Date)
 _____ Extension.
 (Date)

Cable—Motor to Starter:
 Cond. No. _____, _____"
 O.D., _____' Long

Hose—Motor to Starter Cable:
 _____" I.D., _____" O.D., _____' Long

Portable (Trailing) Cable—
 Type: _____
 Cond. No. _____, _____"
 O.D., _____' Long

Hose—for Portable Cable:
 _____" I.D., _____" O.D., _____' Long

Hose Clamps—
 2 for Motor-Starter Hose conduit _____" D
 1 for Portable Cable Hose conduit _____" D*

*Only when short length of hose is used. Trolley Tap—

 (Manufacturing Company)

Model _____ with _____-ampere fuse.

Rail Clamps, 2.
 1 Ground Clamp, Cat. No. _____

 (Manufacturing Company)

1 Return Power Conductor, Cat. No. _____

 (Manufacturing Company)

or—as Optional

Plug on outby end of potable cable for insertion into receptacle on distribution box or equivalent with short-circuit protective device set at _____ amperes.

Static-free Belt
 Model _____
 Style _____
 Catalog No. _____,

 (Manufacturing Company)

Guard for Belt—
 Material _____
 Overall Dimensions _____" Long × _____"
 Wide × _____" High

NOTE: The foregoing is intended as a guide. Additional electrical components used shall be completely identified.

FIGURE 3—MATERIAL TO BE INCLUDED WITH THE OPERATING INSTRUCTIONS—ON OR WITH THE WIRING DIAGRAM SUBMITTED TO EACH CUSTOMER

(SOMETIMES REFERRED TO AS "CAUTION STATEMENT")

CAUTION

To retain "permissibility" of this equipment the following conditions shall be satisfied:
 1. *General safety.* Frequent inspection shall be made. All electrical parts, including the portable cable and wiring, shall be kept in a safe condition. There shall be no openings into the casings of the electrical parts. A permissible distribution box shall be used for connection to the power circuit unless connection is made in fresh intake air. To maintain the overload protection on direct-current machines, the ungrounded conductor of the portable cable shall be connected to the proper terminal. The machine frame shall be effectively grounded. The

power wires shall not be used for grounding except in conjunction with diode(s) or equivalent. The operating voltage should match the voltage rating of the motor(s).

2. *Servicing.* Explosion-proof enclosures shall be restored to the state of original safety with respect to all flame arresting paths, lead entrances, etc., following disassembly for repair or rebuilding, whether by the owner or an independent shop.

3. *Fastenings.* All bolts, nuts, screws, and other means of fastening, and also threaded covers, shall be in place, properly tightened and secured.

4. *Renewals and repairs.* Inspections, repairs, or renewals of electrical parts shall not be made unless the portable cable is disconnected from the circuit furnishing power, and the cable shall not be connected again until all parts are properly reassembled. Special care shall be taken in making renewals or repairs. Leave no parts off. Use replacement parts exactly like those furnished by the manufacturer. When any lead entrance is disturbed, the original leads or exact duplicates thereof shall be used and stuffing boxes shall be repacked in the approved manner.

5. *Cable requirements.* A flame-resistant portable cable bearing a MSHA assigned identification number, adequately protected by an automatic circuit-interrupting device shall be used. Special care shall be taken in handling the cable to guard against mechanical injury and wear. Splices in portable cables shall be made in a workmanlike manner, mechanically strong, and well insulated. Not more than five temporary splices are permitted in a portable cable regardless of length. Connections and wiring to the outby end of the cable shall be in accordance with recognized standards of safety.

FIGURE 4—SAMPLE FACTORY INSPECTION FORM

Date _____

Inspector _____

MACHINE

Designation: _____

Type: _____ Serial No. _____

MOTOR

Manufacturer: _____

Serial No.: _____ Type: _____

Frame: _____

Hp. _____ F.L. Speed: _____ Volts: _____ Amps. _____

Winding: _____ X/P No. _____ (or parts list designation).

STARTER

Manufacturer: _____

Serial No. _____ Type: _____

Hp. _____ Volts: _____ X/P No. _____ (or parts list designation).

Short-circuit protection _____ amps.

Overload-current protection _____ amps.

PORTABLE CABLE

Manufacturer: _____

Type: _____ Conductors: _____

Length: _____ O.D. _____ MSHA No. _____

Is all wiring around machine adequately protected from mechanical damage? _____

By hose conduit _____, Troughs _____

Metal tubing _____, Other _____

By removal of all sharp corners or edges? _____

Is wiring separated from hydraulic components? _____

Is an adequate insulated strain clamp provided for the portable cable? _____

Are all packing glands properly packed so that 1/8-inch clearance remains between packing nut and stuffing box? _____

Are lockwashers (or equivalent) provided for all explosion-proof enclosure fastenings? _____

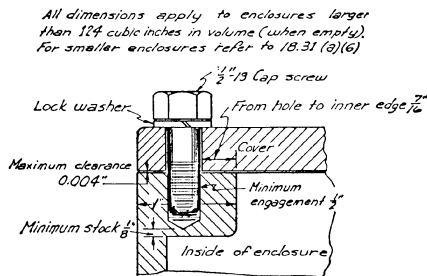
Are all plane joints securely fastened so that an 0.005-inch feeler gage cannot be inserted? _____

Are all threaded covers secured? _____

How? _____

Are all electrical connections secure _____ and properly insulated where necessary? _____

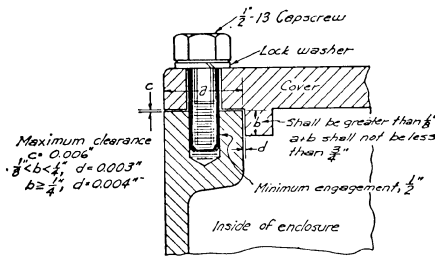
NOTE: Add appropriate material for each explosion-proof enclosure when more than a motor and starter are on a machine.



TYPICAL PLANE JOINT

Figure 5

All dimensions apply to enclosures larger than 124 cubic inches in volume (when empty). For smaller enclosures refer to 18.31 (a) (6)



TYPICAL COMBINATION JOINT

Figure 6

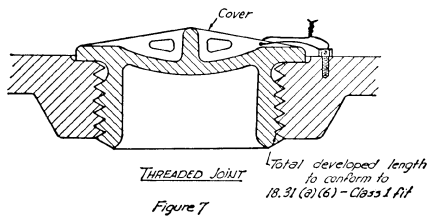


Figure 7

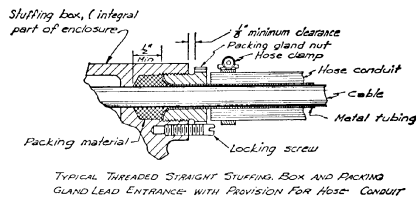
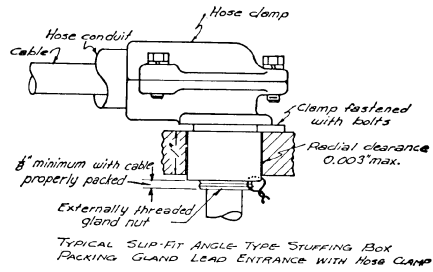
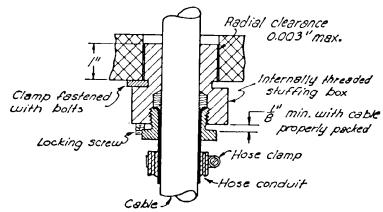


Figure 8

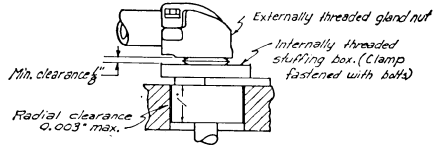


TYPICAL SLIP-FIT ANGLE TYPE STUFFING BOX PACKING GLAND LEAD ENTRANCE WITH HOSE CLAMP



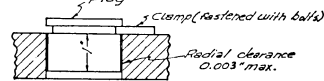
TYPICAL SLIP-FIT STRAIGHT TYPE STUFFING BOX AND PACKING GLAND LEAD ENTRANCE

Figure 9



TYPICAL SLIP-FIT ANGLE TYPE STUFFING BOX AND PACKING GLAND LEAD ENTRANCE

Plugs shall be secured by spot welding or brazing, weld may be on plug, clamp, or fastening bolt



TYPICAL PLUG FOR SPARE LEAD ENTRANCE HOLE

Figure 10

[33 FR 4660, Mar. 19, 1968, as amended at 42 FR 8373, Feb. 10, 1977; 42 FR 25855, May 20, 1977]

Subpart E—Field Approval of Electrically Operated Mining Equipment

SOURCE: 36 FR 7007, Apr. 13, 1971, unless otherwise noted.

§ 18.90 Purpose.

The regulations of this subpart E set forth the procedures and requirements