

## EXHIBIT F

LLB6717

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## STAR PIT-SET MTU INSTALLATION

### I. PIT COVER PREPARATION

The STAR MTU requires a drilled hole with a minimum diameter of 1.750 and a maximum diameter of 1.790. Typically a 1.750 core drill is used for cast-iron covers.

The cover thickness can be from .250" to 1.375". MTU's for thicker covers (typically concrete) can be supplied upon request.

Both the top and bottom cover surface must be evaluated before the hole location is chosen. The hole location must be selected so that the strength of the lid is not reduced. (See warning below). For example, ribs on the underside of the cover must not be cut when boring the hole.

The top surface of the cover must provide a consistent mounting surface for the MTU flange. In general, the flange is designed to be placed over a smooth surface, or one covered with closely spaced ribs or bumps that are usually found on a non-skid surface. However, if the surface is interrupted with raised letters or other irregular details, the hole should be located so that the flange misses these. If necessary, lettering that is covered by the flange can be removed with a simple machining operation that is performed at the time the hole is bored. Often, a cold chisel will remove the lettering.

### II. SPACER SELECTION

The pit-set MTU housing is passed through the cover hole and joined with the flange which is snapped over the end of the housing. The MTU is secured by tightening the three clamping screws.

Before this is done, it is necessary to select the proper number of spacers so that the adjustment range is correct. When the proper number of spacers are used, the top surface of the cover (flange contact surface) will fall between the two lines embossed on the housing. This measurement is performed with the clamp in place and the clamping screws fully retracted.

### III. MTU MOUNTING

When the spacer count is verified, the housing is passed through the hole. The flange is snapped over the top of the housing. **Do not attempt to snap the flange in place by pressing with the palm of your hand.** This tends to apply pressure to the tube and not the flange. Instead, cup the hand and press with the fingers on the flange only; this is done while the housing is held in place with the other hand. When a loud "snap" is heard, then the flange is in place. Note that the flange may pass beyond the detent location and towards the cover. This is not a problem; when the screws are tightened the flange will slide towards the end of the housing and snap into place with a loud "snap".

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The screws must be tightened evenly so that the clamping forces remain equal. Once the screws contact the cover they should each be turned only a fraction of a turn at a time in a circular pattern to insure even clamping. A torque wrench must be used to set torque at 4 in - lbs. (64 in - oz). A torque-setting nut driver (such as Grainger P/N 6C486) is essential. The clamping screws require a 5/16" socket.

#### IV. INSPECTING MTU INSTALLTION

Proper mounting can be verified by checking that all segments of the flange are properly seated around the MTU housing. If any of the segments are not smooth and flush with the top surface at the housing, it means that the cover surface was not smooth or that debris was present under the flange. In this case the flange must be removed and the installation redone. (See below).

#### V. METER-MTU WIRING

The MTU may be wired to the meter either before or after installation in the cover. In fact, in some cases it may be convenient to pre-wire registers and MTU's at the meter shop.

It is necessary to use the proper splicing equipment to connect the register and MTU. If connection is made at the register, the connections must be carefully sealed using compounds recommended by the meter manufacturer. If the register is supplied with an integral cable and a cable-to-cable splice is made, a gel-filled splice box such as 3M DBR-6, designed for direct burial, must be used to seal the individual splices. This is absolutely essential with pulse-type resistors (RTR, Weigand, or Reed Switch). Refer to Hexagram wiring information for hook-up details.

#### VI. PROGRAMMING

The Psion hand-held programmer, along with the standard adapter, cable, and probe is used to program the STAR pit-set MTU's. The probe is held over the blue dot on the housing throughout the programming cycle. See the Programming Manual for details.

#### VII. MTU REMOVAL

The flange is designed to permanently snap onto the MTU housing. When an MTU is to be removed, it is necessary to cut the flange to facilitate its removal from the housing. This can be done by loosening the clamp screws and cutting the flange at one of its slots using tin snips, wire cutter, or chisel.

#### **WARNING:**

**Drilling the pit cover may compromise the cover strength. Hexagram is not responsible for damages due to the cover modifications.**