

Pattern and Instructions for Pin Wheel Formed on GM140 Fan Mold

Arrange 5 large and 5 small pieces as indicated in figure 1. Figure 1 has been cropped to fit a standard piece of paper for printing. The shapes extend beyond the page. Create a 1/2" void where all of the petals meet in the center as indicated in Figure 1 to allow for the pinwheel hardware to be added to the finished glass. Nip the ends of the petals with a mosaic nipper if necessary. Cut a 3/4" circle of glass to make a center piece to glue on to the screw used to add the pin wheel hardware and stem. Tack fire the glass using the tack fire schedule given in table 1 and then placed on GM140 (treated with glass separator) and slump using the slump schedule given in table 2.

To make the pin wheel spin

Hardware required: sleeve bearing (1/4" x 5/16" x 3/4"), threaded spacer (#8 32 female thread 1/2"l. 1/4" OD) flat head machine screw (#8 1.5"l.), 2 rubber washers (5/16" ID x 3/4" OD), metal flat washer (#8 1/2" OD). A hardware kit is available ("SPINKIT") which contains pin wheel hardware for 5 pin wheels.

Other Material required: 1/4" OD copper tube of desired length 1/4" (copper tube not included in SPINKIT).

1. Place the bronze sleeve bearing into the hole in the center of the glass pin wheel. The hole in the glass may require dremeling or filing to fit the 5/16" dia. of sleeve bearing.
2. Place a rubber washer onto the bearing on the front side of the glass pin wheel and another rubber washer onto the bearing on the back side of the glass pin wheel. Use E6000 glue to adhere the rubber washers to the glass on both sides and onto the bearing. Make sure that the bearing is not at an angle from front to back. Place the pin wheel face down on a flat surface and allow the glue to set. The rubber washers should hold the bearing in place while the glue sets.
3. Place the threaded spacer onto the screw and thread it to the head of the screw. For best results apply a lubricant such as Boron Nitride spray (MR97) to the outside surface of the threaded spacer.
4. Insert the screw with spacer into the glass with bearing.
5. Cut the desired length of 1/4" dia. copper tube (not included and available at hardware and lumber stores) with a pipe cutter. The cutting process creates a flange inside the hole of the copper tube. This flange will act as a thread for the screw.

Table 1 Tack Fire

Seg	Rate (min/hr)	Temp (degree F)	Hold (min)
1	275	1100	15
2	200	1225	10
3	200	1400	10
4	9999	960	90

Table 2 Slump on GM140

Seg	Rate (min/hr)	Temp (degree F)	Hold (min)
1	275	1000	10
2	275	1215	20
3	275	1230	2
4	9999	960	90

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