

# Furnas Series 54 Fine Adjustment Rotary Limit Switches

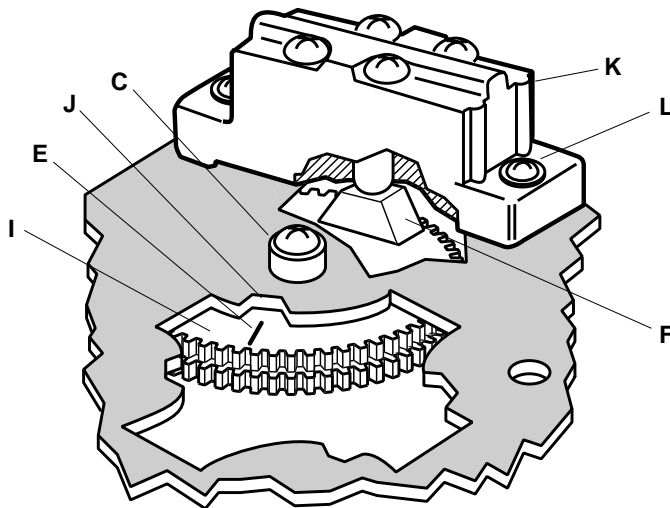
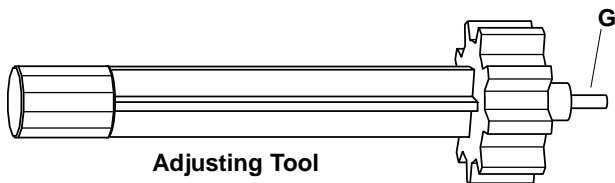
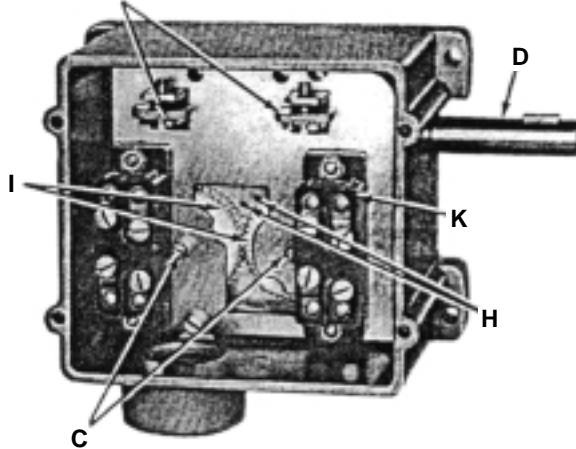


Workplace Solutions

## Adjustment and Maintenance Instructions

### Standard Dwell Cams with Fine Adjustment Feature Catalog No. 54BB73 & 54EB73

Fine Adjustment  
Wheels



#### Legend

C - Cam Screw	H - Guide Hole
D - Drive Shaft	I - Cam Gear Assembly (White for Standard Dwell)
E - Timing Line (Black on white cam)	J - Notch
F - Cam	K - Contact Block
G - Adjustment Tool	L - Contact Block Screw

#### OPERATION

Rotation of drive shaft (D) in either direction causes all cam gear assemblies (I) to turn, actuating the contact blocks (K). A timing line appears in the notch (J) when the corresponding contact block is actuated. Cam for each contact block is independently adjustable. Each contact block contains one normally open and one normally closed contact set.

	<b>WARNING</b>
	<p><b>Hazardous Voltage. Can cause death, serious personal injury, or property damage.</b></p> <p>Disconnect power before working on this equipment.</p>

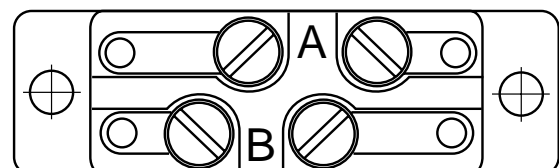
<b>CAUTION</b>
<p>When mounting Rotary Limit Switch, align drive shaft (D) with coupling to minimize stress on shaft and bushings.</p> <p><b>DO NOT USE HAMMER OR SIMILAR TOOL TO FORCE COUPLING OR SPROCKET ONTO DRIVE SHAFT.</b></p> <p>Excessive stress on shaft may result in damage to rotary limit switch and could invalidate warranty.</p>

#### ADJUSTMENT

1. Set fine adjustment wheels at midpoint to allow for further adjustment in either direction.
2. Operate the equipment until the desired travel limit is reached, taking into account coasting or braking distance.
3. Loosen the screw (C) for the cam wheel which actuates the contact block you wish to adjust.
4. Insert the adjustment tool (G) into the guide hole (H) closest to the cam wheel being adjusted. Engage teeth on adjustment tool with teeth on cam wheel.
5. Rotate adjusting tool, either direction, until the black line (E) appears in the notch (J). This will be the approximate position at which the contact block will be actuated.
6. Tighten the cam screw (C). Avoid over-tightening which could damage screw and screw threads.
7. Make fine adjustments by turning fine adjustment wheels by hand.

<b>CAUTION</b>
<p>Terminal of individual snap switch must be wired same polarity.</p>

**Contact Block Terminals Viewed from Top**  
A Terminals N.C.



B Terminals N.O.

## CIRCUIT OPERATION

Switch Terminals	Position of Line* on Cam Gear	
	Not in Notch	In Notch
A – NC		
B – NO		

\*Timing line is black on white standard dwell cam.  
Line is white on black long dwell cam.

## FIELD MODIFICATIONS



Contact Block Kit*	Cat. No.
Standard Cam	54BBGB
Long Dwell Cam	54EBGB

\*Includes contact block, cam & screws)

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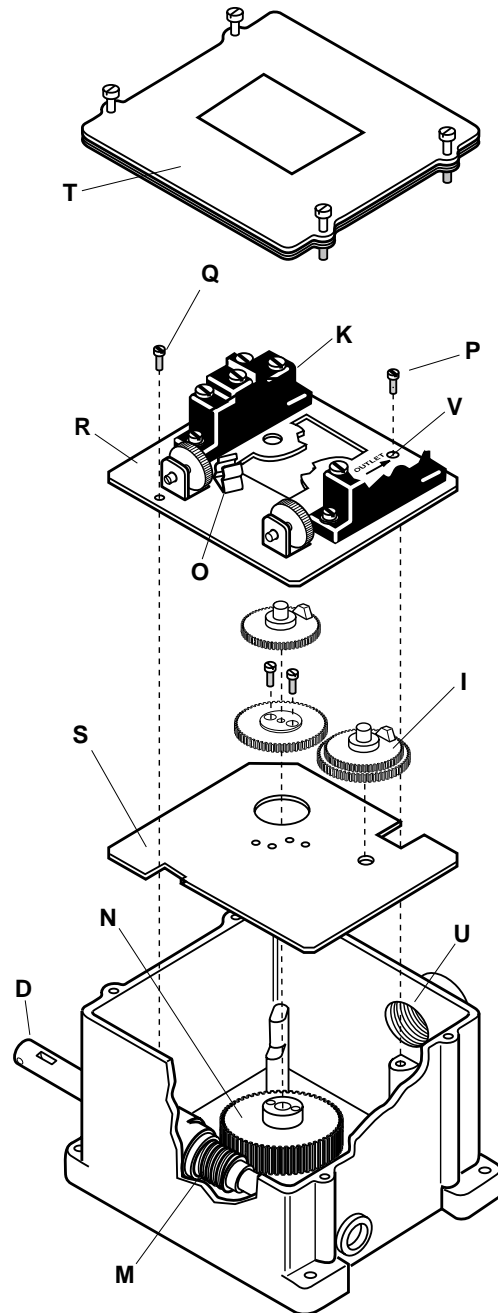
## CONTACT BLOCK KIT INSTALLATION

1. Remove switch cover (T) and disconnect wiring to contact blocks.
2. Remove top plate (R) which is secured by two screws (Q). Top plate screws are also used to attached ground terminal (P) to the top plate.
3. Lift out old cam gear assembly (I) and replace with a new assembly.
4. Verify that the bottom plate (S) can be easily moved around in the switch housing.
5. Place top plate (R) into switch housing with the outlet arrow (V) pointing towards the threaded outlet (U).

### CAUTION

To prevent gear (N) from binding, push top plate (R) towards threaded outlet (U) and tighten top plate screws (Q) securely.

6. Identify the contact block which corresponds to new cam gear assembly. Remove two machine screws which secure that contact block to top plate.
7. Install new contact block and contact block screws.
8. Adjust cam gear assembly as outlined on page one (over).
9. Connect wiring to new contact block and replace switch cover.



### Legend

D - Drive Shaft Assembly	P - Ground Screw
I - Cam Gear Assembly	Q - Top Plate Screws
K - Contact Block	R - Top Plate
L - Contact Block Screw	S - Bottom Plate
M - Steel Worm	T - Cover
N - Worm Gear Assembly	U - Threaded Outlet
O - Adjustment Tool Clip	V - Outlet Arrow



**Workplace Solutions**

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