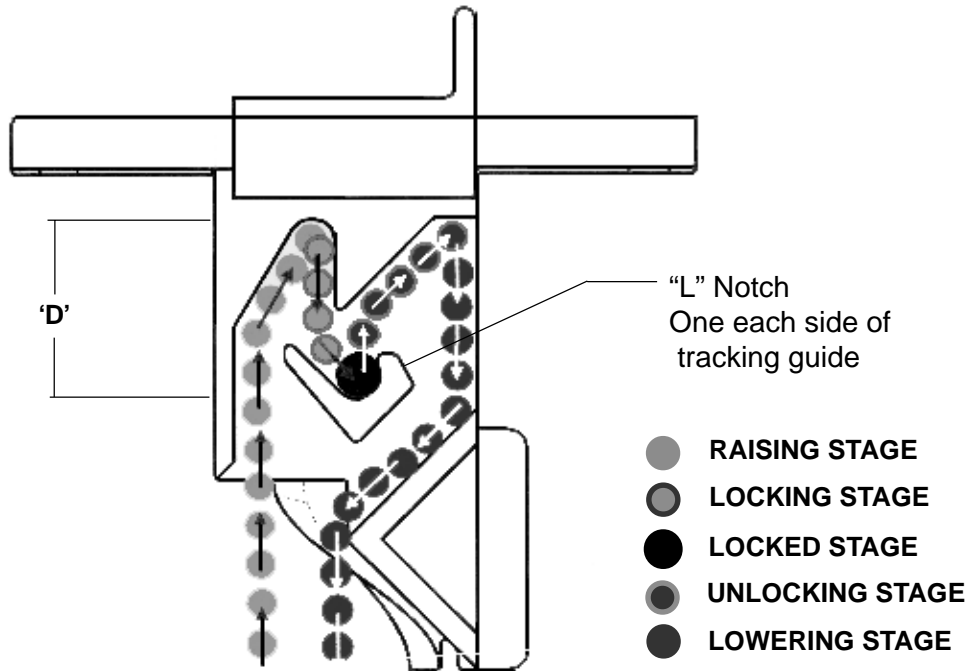


# HOW IT WORKS

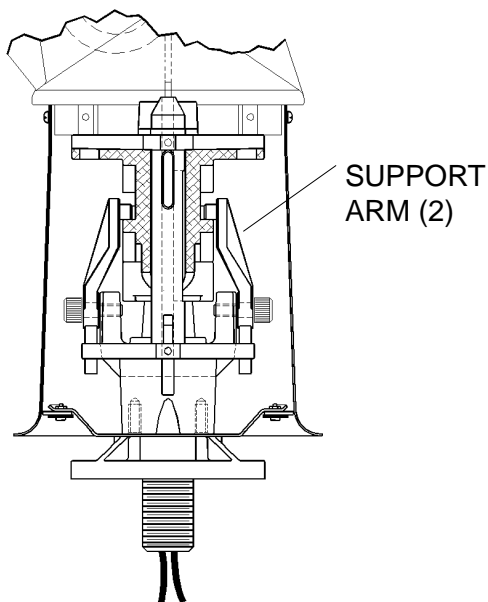
## The 5 Operating Stages of The Disconnect Unit

The distance 'D' illustrated at right represents the up/down movement of all disconnect units during the *LOCKING* and *UNLOCKING* stages.

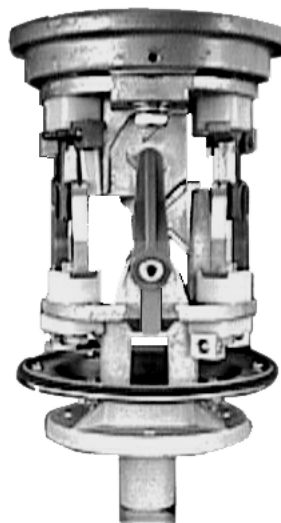


**When lowering or raising a lighting fixture or chandelier, there are 5 basic steps, or stages that the Disconnect Unit goes through.**

The principal part responsible for moving the support arms through the 5 stages is the **TRACKING GUIDE**. This guide is a precision cast series of angular surfaces strategically located to push the support arms in the required direction toward the center 'L' notches. The two L notches support the entire load of the fixture and components when the support arms are in the **LOCKED** stage. The drawing above shows the path the support arms take through the tracking guide. Different shaded dots shown above represents one of the 5 stages.



**LOCKED STAGE**



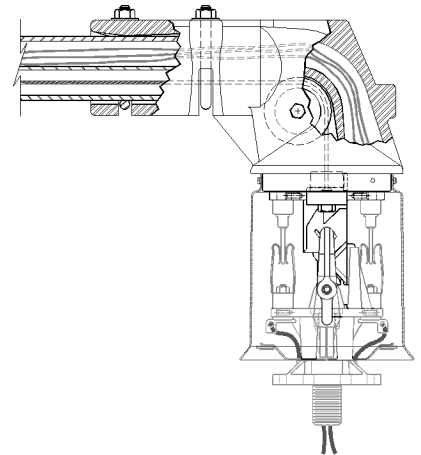
**LOWERING STAGE**

# THE 5 OPERATING STAGES

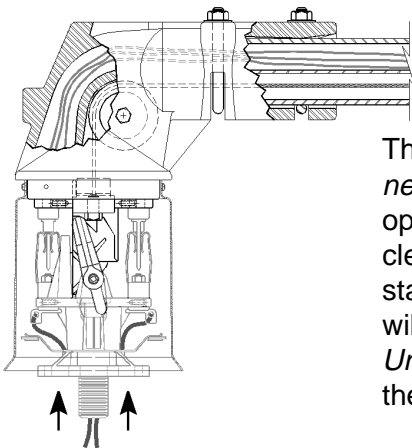
## 1

The first and most important stage is **LOCKED**. Generally, all aspects of the operation of the *Disconnect Unit* will begin and end in the locked stage. In the locked position, the twin support arms hold all the weight of the fixture. There is no tension on the operating cable, no locking of the gears, and no pressure on braking devices to hold the fixture secure in its operating position. The contacts are fully energized and the fixture is fully operational when the *Disconnect Unit* is **LOCKED**.

### LOCKED



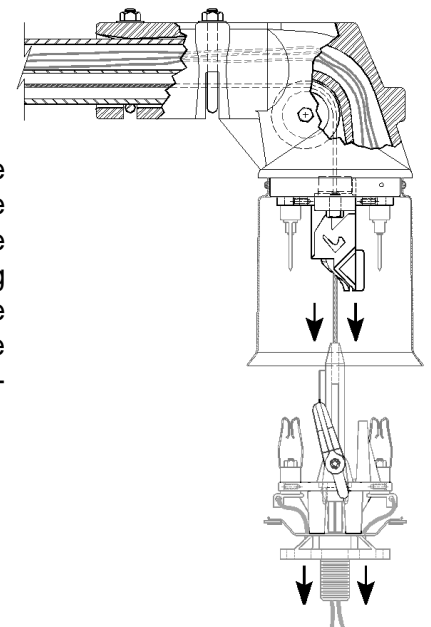
### UNLOCKING



The second stage is **UNLOCKING**. Before lowering the fixture, the *Disconnect Unit* must first be raised approximately 3/4 inch. During the slight raising operation, the support arms will be pushed to one side by the tracking guide to clear the support notches. The electrical contacts are still engaged during this stage. Each *Disconnect Unit* has a built-in positive stop that, when reached, will alert the operator to begin lowering the fixture. Every time the *Disconnect Unit* is raised from the 'locked' position, the support arms will move and unlock the *Disconnect Unit*.

## 2

### LOWERING

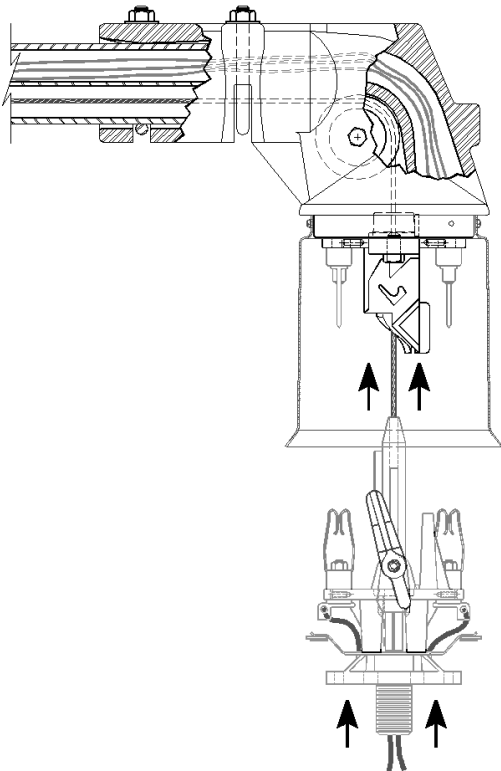


With the *Disconnect Unit* unlocked, **LOWERING** is the next stage. As the fixture is lowered, the bottom portion of the *Disconnect Unit* begins to separate from the tracking guide and the top portion of the *Disconnect Unit*. Next, the electrical contacts disconnect followed by the coming apart of all stabilizing guides. All the weight of the fixture now hangs from the control cable. There are no live electrical contacts to contend with as the fixture is lowered to the desired height for maintenance. Cleaning and repair work can be accomplished at this level.

## 3

# THE 5 OPERATING STAGES

## RAISING



After maintenance to the fixture, **RAISING** is the fourth of the operating stages. During this part, the fixture and moveable portion of the *Disconnect Unit* are raised to the top. As the fixture slowly approaches the upper portion of the *Disconnect Unit*, the control cable initially pre-positions the main guide post in the center hole of the tracking guide. With continued raising, the guide post centers itself in the tracking guide and rotates into its original orientation as the guide post's cast-in-place key follows the inclined helical surface of the tracking guide. Sustained raising of the camera will engage the next stabilizing key and guide slot of the *Disconnect Unit* as the support arms toggle through the tracking guide. The electrical contacts engage as the last step before the lower moveable portion of the *Disconnect Unit* reaches the very top. There is still tension on the control cable and the *Disconnect Unit* is not locked in place, the system must never be left in the **RAISING** stage. Proceed to the final stage: **LOCKING**.

The final phase of the 5 operating stages is **LOCKING**. During this stage, the fixture must be lowered approximately 3/4 inch so that the support arms of the lower portion of the *Disconnect Unit* move toward the center **L** notches of the tracking guide. After the slight lowering operation, the support arms are secured in the **L** notches. The *Disconnect Unit* is now in the **LOCKED** stage. The operating stages 1 through 5 may now be repeated over and over again with the fixture returning to its original operating position each time. The operating stages of the *Disconnect Unit* must always begin and end with the *Disconnect Unit* in the **LOCKED** position.

## LOCKING

