STEP 7) Fasten the End-Plate (Item No. 8) to the EndTube Insert (Item No. 7) following the detail to the right using
(2x) $5 / 16^{\prime \prime}-18 \times 3 / 4^{\prime \prime}$ Button Head(Item No. 13) (2x) $5 / 16$ " Split Washers (Item No. 17)

Do not overtighten


STEP 8) Fasten the Stopper Angle (Item No. 9) to the End Plate (Item No. 8)
following the detail to the right using
(2x) 5/16" - $18 \times 3 / 4$ " Button Head(Item No. 13)
(2x) 5/16" Split Washers (Item No. 17)
(2x) 5/16" - 18 Acorn Nut (Item No. 15)



STEP 9) Tension the Hinge springs to the desired torque following the instructions below. Gates should close under their own torque without excessively slamming.

## Installation Instructions

## CAUTION: Do not exceed three (3) holes tension

 for 180 degrees door opening, or four (4) holes tension for 90 degrees door opening.WORK SAFELY USE PROPER SAFETY PROTECTION

## 1. Hinge Installation:

Install Hinge in normal manner with tension adjustment up as shown.
2. Adjusting Spring Torque:
(A) Place the door in the closed position.
(B) Insert Tension Lever in right hand hole in the adjustment slot see figure 1 .
(C) Rotate Tension Lever to the left and insert Tension Pin loosley in hole to the right of Tension Lever as shown in figure 2.
(D) Release Tension Lever until Tension Pin contacts the right hand side of the Adjustment Slot.
(E) Remove Tension Lever and check the door for closing force, if desired closing force is not achieved, repeat steps A to E until closing force is satisfactory.
(F) When the hinges have been adjusted to close the door properly, drive the Tension Pin flush with the hinge tube.

CAUTION: Do not exceed three (3) holes tension for 180 degrees door opening, or four (4) holes tension for 90 degrees door opening.

STEP 10) Install 1 3/4" Caps (Item No. 10) onto the H -Frame


U-Bolt position may be rotated to ensure tight Gap between Stopper Angle and Guard-rail.



STEP 2) Using the U-Bolts (Item No. 21) from the hardware pack, clamp the Hinge Adapter Angles (Item No. 2) to the desired guard-rail post. U-Bolts provided are designed to clamp around $11 / 2^{\prime \prime}$ O.D. tubing. If mounting to square tubing, U-Bolts can be ignored and Hinge Adaptor Angles may be mounted directly to tubing using long through bolts.

The tops of the Hinge Adapter Angles should be 2 1/4" from the desired height for the top rail of the U-Gate.
(2x) U-Bolts (Item No. 21)
(4x) $5 / 16$ " Split Washers (Item No. 17)

(4x) $5 / 16^{\prime \prime}$ Nuts (Provided with Item No. 21)
(Complete Step 3 prior to tightening U-Bolts completely)

NOTE: You may use the alternate hole locations in the Hinge Adapter Angle to reach your desired height when required.

U-Bolts must be mounted using one of the two top hole locations, and one of the two bottom hole locations.


Chamfered

STEP 3) Remove the Hinges (Item No. 1) from their packages and set the other contents of the box to the side.

Open the Hinges to reveal 6 chamfered holes.

## These holes must face the direction of the closing swing-gate.

Failure to do this will cause the springs to fail prematurely.
Hinges must be installed with the tension adjustment slot up.
Place the Hinges (Item No.1) between the Hinge Adaptor Angles (Item No. 2)in the correct orientation.

Secure the angles to the Hinges using
(4x) 1/4" - 20 Buttonheads (Item No. 14)
(4x) 1/4" Flat Washers (Item No. 20)
(4x) 1/4" Split Washers (Item No. 18)
(4x) 1/4" - 20 Acorn Nuts (Item No. 16)

Note: By default, the U-Bolts should be rotated so the hinge is located on same plane as the stopping surface of the guard-rail. The position of the U-Bolt can be rotated later to fine tune the gap between Stopper Angle (not yet installed)
With the Hinge Adaptor Angles set to the correct position, tighten the U-Bolt hardware.


STEP 5) Measure the opening between the guard-rail posts.

This will be used to determine which hole of the MidTube (Item No. 5) is used.

Note: The Mid-Tube must be inserted in the correct orientation. Hole "B" (1" from the end) is closer to the end of the Mid-Tube than Hole "C". Hole "B" must be inserted into the H -Frame first.

## For openings between 16" and less than 29"

Insert the Mid-Tube into the H-Frame lining up Holes "A" and Hole "C". Do not insert hardware. The Mid-Tube should be sticking out 3/4" from the H-Frame.

## For openings between 29" and 41"

Insert the Mid-Tube into the H-Frame lining up Hole "A" and Hole "B". Do not insert hardware. The Mid-Tube should be sticking out 12 3/4" from the H-Frame.


STEP 4) Place the H-Frame (Item No. 3) angle on the chamfered-hole
 closing side of hinge

Secure the H-Frame and Label Plate to the Hinge using
(4x) 1/4" - 20 Buttonheads (Item No. 14)
(4x) 1/4" Flat Washers (Item No. 20)
(4x) $1 / 4$ " Split Washers (Item No. 18)
(4x) 1/4"-20 Acorn Nuts (Item No. 16)


STEP 6) Place End-Tube Insert (Item No.7) into End-tube (Item No. 6) using your hand. Using a small hammer, lightly tap the End-tube insert until fully seated. Do this for both top and bottom End-Tubes.

Insert the End-Tube into the Mid-Tube with the End-Tube Insert facing out. Using your measuring tape, measure the gap between the End-Tube Insert and the guard-rail post. The EndTube insert should be between $5 / 8^{\prime \prime}$ and $15 / 8^{\prime \prime}$ from the guardrail post.

## For openings between 16" and less than 29"

Line-up the proper End-Tube hole with Holes "A" and "C" from the previous step.

Fasten the End-Tubes in place using
(2x) $5 / 16^{\prime \prime}-18 \times 2$ 1/4" Button Head (Item No. 11)
(2x) $5 / 16^{\prime \prime}$ Flat Washers (Item No. 19)
(2x) $5 / 16^{\prime \prime}$ Split Washer (Item No. 17)
(2x) 5/16" - 18 Acorn Nut (Item No. 15)

## For openings between 29" and 41"

Line-up the proper End-Tube hole with Hole "C" ensuring that Holes " A " and " B " are still lined up from the previous step.


Fasten the H -Frame to the Mid-Tube using
(2x) $5 / 16^{\prime \prime}-18 \times 2$ 1/4" Button Head (Item No. 11)
(2x) $5 / 16^{\prime \prime}$ Flat Washers (Item No. 19)
(2x) $5 / 16$ " Split Washer (Item No. 17)
(2x) 5/16" - 18 Acorn Nut (Item No. 15)
Fasten the Mid-Tube to the End-Tube using
(2x) $5 / 16^{\prime \prime}-18 \times 2$ " Button Head (Item No. 12)
(2x) $5 / 16^{\prime \prime}$ Flat Washers (Item No. 19)
(2x) $5 / 16^{\prime \prime}$ Split Washer (Item No. 17)
(2x) 5/16" - 18 Acorn Nut (Item No. 15)


Between 5/8" - 1 5/8" from End-tube insert to guardrail


