



## Installation Instructions

# CA & CNA Self-Compensating and A & NA Adjustable 2" & 3" Bore Series

Maximum efficiency of operation can be obtained by carefully following these instructions:

### GENERAL

Install the ACE shock absorber on a surface of sufficient strength. Align the shock absorber rod end button with the load striking surface. This will help to avoid side-loading. **Use the full stroke of the shock absorber up to the last .09 inch (2.3 mm)** and provide a solid mechanical stop to prevent bottoming out.

**Guard the shock absorber to protect it** from foreign materials such as acids, steam, weld flash, solvents, cutting fluids, as well as dust and debris. Mount in an area consistent with the operating temperature range of the shock absorber, not to exceed 75° F (24° C) ambient if cycled at full energy capacity. To allow maximum heat dissipation, **do not paint the shock absorber**. Applications using two or more shock absorbers should have the load balanced equally between them.

Note: Self-contained models CA, CNA, A and NA models, are pre-filled with ATF and are ready for use after proper installation.

### FRONT OR REAR FLANGE MOUNTING INSTALLATION (Figures 1 & 2)

Install the ACE CA or A model shock absorber with flange to a mounting structure of sufficient strength. Assure that the bolts are securely tightened. See comments above in General section concerning addition of mechanical stop.

### SIDE-FOOT MOUNT INSTALLATION (Figures 3 & 3A)

Bolt side-foot mount assembly to the mounting structure. Assure that the bolts are securely tightened. Four 5/8 inch (16 mm) bolts, grade 8 or higher, are required. **In order to prevent movement of the side foot-mount assembly, weld a key into position behind the rear foot bar.**

Figure 1. . .Front Flange Mounting

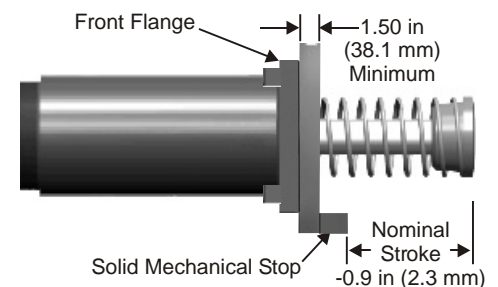


Figure 2. . .Rear Flange Mounting

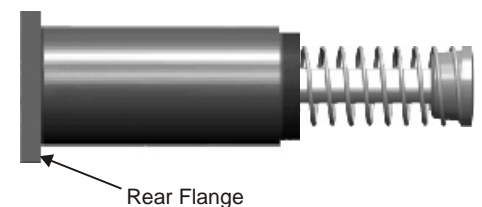


Figure 3. . .2" Bore Side-Foot Mounting

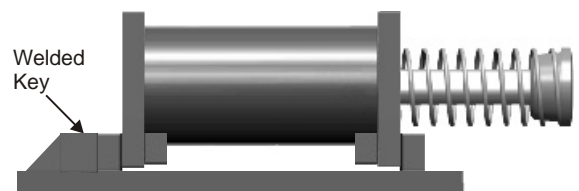
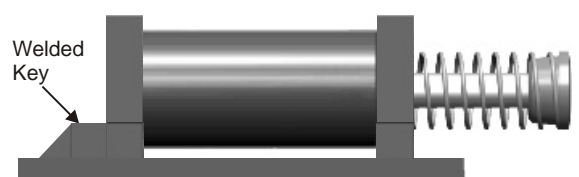


Figure 3A. . .3" Bore Side-Foot Mounting



### ACE Controls Inc.

World leader in deceleration technology  
ISO 9001:2000 Certified

#### CLEVIS MOUNT INSTALLATION (Figure 4)

Fasten the rear clevis and the rod clevis to the mating clevis members of the equipment. **Make sure the shock absorber is using the full stroke minus .09 inch (2.3 mm) so that it does not bottom out.**

Assure that the equipment cannot pull the rod out any farther than the shock absorber strike will allow.

#### ADJUSTMENT FOR (A) 2" & 3" LARGE BORE SERIES (Figure 5)

**Proper adjustment is important** for the efficient operation of the ACE adjustable shock absorber. All units are preset at the factory at 5. After installation of the shock absorber, cycle the machine a number of times. Turn the hex socket adjuster, on the bottom of the shock absorber, against the scale marked 0 to 9 until optimum deceleration is achieved (i.e. smooth deceleration throughout the stroke). **If hard impact is experienced at the start of the stroke, turn adjuster toward 9. If hard set-down is experienced at the end of stroke, turn adjuster toward 0.** If the final setting is less than 2 or greater than 8, a different shock absorber should be utilized.

Note: flanges, side-foot mount and clevis mount assemblies are available from ACE Controls directly or through distributors. See the ACE main catalog or visit the ACE web site for stocking distributor locations.

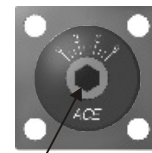
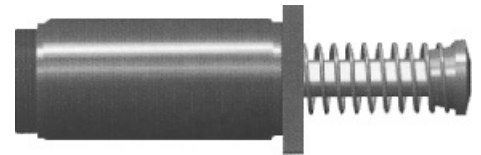
#### CAUTION NOTE: CLEVIS MOUNT INSTALLATION

The rear clevis mount is shipped loose. After appropriate adjustment of the shock, apply thread lock adhesive to the clevis flange mounting bolts and torque to 110-121 ft-lbs (150-165 Nm).

Figure 4. .Clevis Mount



Figure 5. .Adjustment



5/16" (8 mm)  
hex socket adjuster,  
adjustable models only