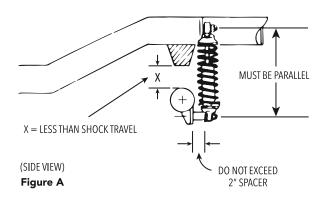


# (X-0016) SHOCK ABSORBER INSTALLATION GUIDE

There are four common basic causes of service problems:

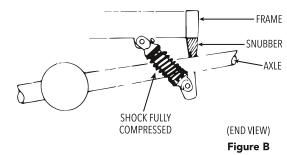
- Misalignment
- Bottoming
- Incorrect angularity
- Insufficient clearance

If you will pay particular attention to these problem areas as you follow the installation procedures described below, you will ensure maximum performance and prolong the life of your Aldan American adjustable shock absorbers.



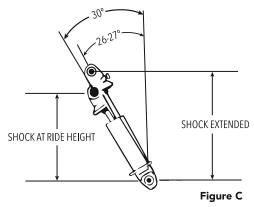
#### **ALIGNMENT**

The centerlines of shock mounting studs must be parallel to each other (Figure A). If shocks are installed on misaligned mounting studs, excessive shock bushing wear will result; in cases of extreme misalignment, shocks may break or suffer other permanent damage. This is the most common cause of shock absorber failure.



#### SHOCK TRAVEL

Suspension components must bottom out before the shock absorber bottoms. This means the axle must contact the frame snubber before the shock is fully compressed (Figure B). If the shock absorber bottoms first, damage to the shock or mounting bracket may occur.



#### **MOUNTING ANGLE**

The more vertical the shock, the firmer the ride; the less vertical, the softer the ride (but less support, especially on cornering). We recommend a mounting angle of 30 degrees from true vertical at ride height. Generally speaking, the weight of the car will collapse the shock 1-1/4 to 1-1/2 inches at ride height. Using this rule of thumb, you will achieve a 30 degree angle at ride height if the shock is mounted at 26 to 27 degrees when it is fully extended (Figure C). When designing your suspension mounting points, extend the shock to 2/3 at ride height; i.e.. if stroke is 3 inches, set the car up so that at ride height, the shock has room for 2 inches compression and 1 inch rebound. Do not design your suspension with the shock fully extended and the car at rest—allow it to sag, otherwise damage from excessive rebound force may occur.

#### **CLEARANCE**

When mounting coil-over shocks, be sure to allow adequate clearance between coil springs, spring retainer rings and frame or body components. If coil springs or retainer rings contact moving frame or body components, breakage of shock absorber. springs or retainer rings may occur.



The Aldan American adjustable shock has six valve damping positions, so you may dial in the ride you like. To increase firmness, rotate the adjusting knob (located at the top of the shock absorber) clockwise. When the knob is rotated all the way out (counterclockwise), the shock camping is at its softest setting (Figure D).

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### THE ULTIMATE SHOCK™

Figure D