Technical Support Line: (952) 985-5675 Email: sales@QA1.net

ASSEMBLY INSTRUCTIONS
QA1 Proma Star® (DD, DS), Ultra Ride® (US), Aluma Matic® (ALN),
Stocker Star® (TD, TS, TR, TN)

TOOLS AND SUPPLIES REQUIRED

• Floor Jack   • Jack Stands   • Wrenches (SAE and/or Metric)   • Socket Set (SAE and/or Metric)
• Snap Ring Pliers   • Spanner Wrench Set (QA1 P/N T114W or T115W)   • Permatex® Anti-Seize Lubricant

Stocker Star Stock Mount shocks (Non-Coil-over)

QA1 Stocker Star shocks are designed to bolt into the factory shock mounting location on stock ride height vehicles. Shock length should be verified if the ride height has been altered to ensure adequate shock travel. Refer to a repair manual for shock installation for your specific vehicle. Some Stocker Star shock part numbers are cataloged for multiple vehicles and contain multiple sleeve sizes for bushing style mounts. Find the correct sleeve size for your vehicles mounting bolts and install into bushings before installation.

Note: When using factory GM lower control arms you may need to enlarged the opening on certain applications to fit QA1 adjustable shocks. **(Figure 1)**

Hardware included with t-bar style connections is 3/8"-24.

'70-'81 Camaro / Firebird Rear Shock Installation

Tx702 shocks come with 2" shock rod extensions that may be needed on '70-'81 rear shocks. If the rear shock length (at ride height) measures 17-3/4" long or longer, install the shock rod extensions onto the shock. Hold the t-bar of the shock and loosen the jam nut at the base of the eyelet with a 7/8" wrench. Using a small amount of Loctite (blue), install the extension on the rod followed by the eyelet. Snug the jam nut against the extension then install into the factory shock mounts.
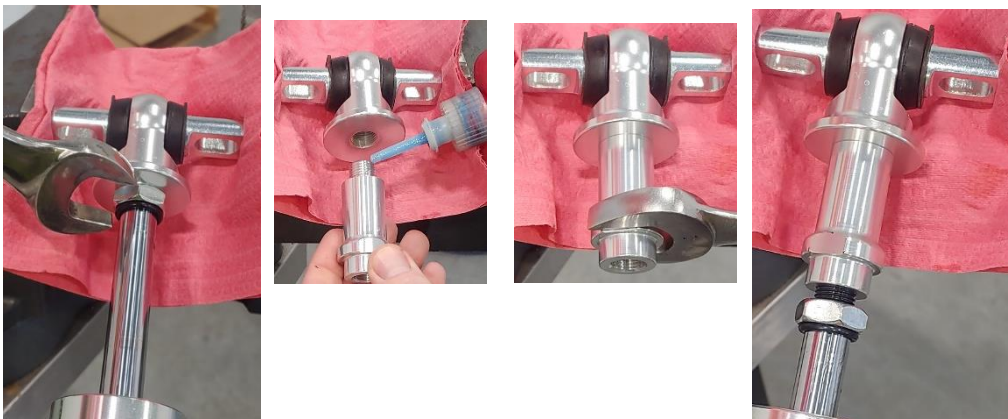

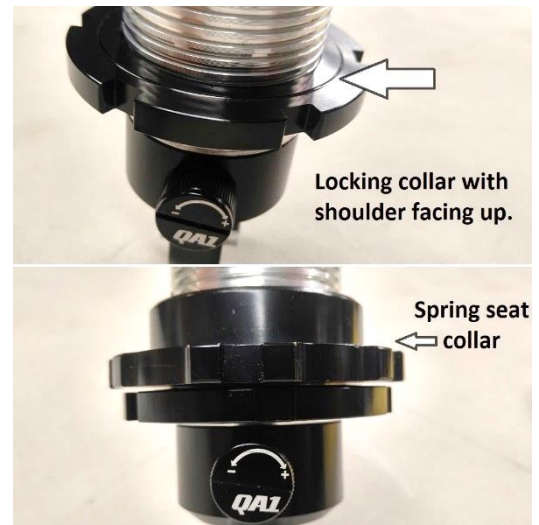**Figure 1**

Coil-Over Shock Assembly

1. Thread the aluminum locking collar (shoulder up) onto the shock, followed by the spring seat collar (shoulder up) down to the bottom shock thread - NO FURTHER. Now is a good time to lubricate the threads of the shock with **Permatex® Anti-Seize lubricant.**

Locking collar with shoulder facing up.

2. QA1 highly recommends using the optional Thrust Bearing Kit (QA1 P/N 7888-109) for ease of adjustment. If the thrust bearing kit is used, coat both sides of the washers with **Permatex® Anti-Seize lubricant**. Install the stainless steel spring seat washer, followed by the bearing and finally, the second washer. When complete, the thrust bearing kit will resemble a "needle bearing sandwich". When using the thrust bearing kit the stainless steel washer that came with your shock will not be needed. Due to the shortened height of the Aluma Matic spring seat collar the spring will locate (be centered) by the top .170" of the collar.

Spring seat collar

3. If the thrust bearing kit is not used, coat one side of the stainless steel spring seat washer that came with your shock with **Permatex® Anti-Seize lubricant**. Place the lubricated side of the washer down on the spring seat.

Permatex® Anti-Seize lubricant

4. Pull the piston rod out to its fully extended position. This will be easier with the shock adjustment knob(s) turned counter-clockwise to the softest setting. Slide the spring over the shock down to the spring seat adjuster and install the spring cap.

5. Once the spring and upper spring seat are in position, turn the spring seat collar up to take up any slack in the spring/seat in preparation for installation. **NOTE:**
The following Proma Star shock and spring length combinations will use an alternative assembly procedure:

DD/DS/US301, 302	7" springs
DD/DS/US303, 304	9" springs
DD/DS/US401, 402	10" springs

a) Loosen jam nut from upper shock eyelet and unscrew eyelet from the piston rod.

b) With the spring seat collars threaded to the bottom of the shock install the spring and spring cap

c) Re-install upper shock eyelet onto the piston rod

d) Use 7/8" wrench under the top coil and spring cap to tighten the jam nut against the eyelet.

PROMA STAR

Shock Part Number	Compressed Length	Extended Length	Recommended Ride Height	Recommended Spring Length
DD/DS 301, 302	8 ¾"	11 ⅛"	9 ½" – 10"	7"
DD/DS 303, 304	9 ½"	12 ¾"	10 ¾" – 11 ¼"	7"/8"/9"
DD/DS 401, 402	10 ⅛"	14"	11 ½" – 12 ½"	9"
DD/DS 403, 404	11 ⅛"	15"	12 ½" – 13 ½"	10"
DD/DS 501, 502	11 ⅝"	16 ⅞"	14" – 15"	12"
DD/DS 601, 602	12 ⅝"	18 ¾"	15 ¼" -16 ¾"	14"
DD/DS 701, 702	13"	19 ½"	16" – 17 ½"	14"
DD/DS 901,902	15"	23 ⅝"	18 ½" – 21 ½"	14"

ALUMA MATIC

Shock Part Number	Compressed Length	Extended Length	Recommended Ride Height	Recommended Spring Length
ALN3855P	8 ⅝"	11 ⅜"	9 ¾" – 10 ¼"	7"
ALN4855P	10 ⅛"	14 ⅜"	12" – 12 ½"	9"/10"
ALN5855P	11 ⅛"	16 ⅜"	13 ½" – 14"	12"

ULTRA RIDE

Shock Part Number	Compressed Length	Extended Length	Recommended Ride Height	Recommended Spring Length
US302	8 ¾"	11 ⅛"	9 ½" – 10"	7"
US304	9 ½"	12 ¾"	10 ¾" – 11 ¼"	7"/8"/9"
US402	10 ⅛"	14"	11 ½" – 12 ½"	9"
US404	11 ⅛"	15"	12 ½" – 13 ½"	10"
US502	11 ⅝"	16 ⅞"	14"-15"	12"
US602	12 ⅝"	18 ¾"	15 ¼" – 16 ¾"	14"

DO NOT VOID YOUR WARRANTY!

Permatex® Anti-Seize Lubricant should be used on coil-over threads to prevent galling. Failure to lubricate the coil-over threads with Anti-Seize prior to making ride height adjustments will cause damage to your shock absorber and will void any warranty. All ride height adjustments must be made with the vehicle weight completely unloaded from the suspension. Please call QA1 Technical Support with any questions.

Ride Height Adjustments-

Shock valving adjustments should be set at the softest setting until final ride height is set. Turn all adjustment knobs counter-clockwise (-) until the knob stops.

Make all ride height changes with the car off the ground and the suspension unloaded. Apply **Permatex® Anti-Seize lubricant** before making any adjustments to the ride height. Once you have the ride height set, tighten the lock nut against the spring seat adjuster using spanner wrench part number T114W or T115W.

NOTE:

After each ride height adjustment, roll the vehicle a couple feet back and forth to un-scrub the tires for an accurate measurement of your adjustment.

Note: A four-wheel alignment should be performed by a qualified alignment shop after any changes to the suspension system.

Shock Valving Adjustments

QA1 shocks have 18 damping settings per knob. There are 6 clicks per revolution of each knob, and each knob has 3 complete revolutions. The knob set fully counter-clockwise is the softest setting - start your adjustments from that point. The following are recommended base settings to begin testing with. Do not be afraid to adjust the shocks to find the best settings for your vehicle/driving style.

Front Shock Valving Adjustments

	Shocks with one adjuster knob:	*Shocks with two adjuster knobs:*	
		Compression	*Rebound*
Drag Racing:	0-6 clicks	12-18 clicks	0-6 clicks
Nice ride and handling:	0-6 clicks	0-6 clicks	2-8 clicks
Firm ride & improved handling:	6-12 clicks	6-12 clicks	8-14 clicks
Aggressive handling:	13-18 clicks	13+ clicks	14-18 clicks

Rear Shock Valving Adjustments

	Shocks with one adjuster knob:	*Shocks with two adjuster knobs:*	
		Compression	*Rebound*
Drag Racing:	4-10 clicks	7-12 clicks	2-8 clicks
Nice ride and handling:	0-6 clicks	0-6 clicks	2-8 clicks
Firm ride & improved handling:	6-12 clicks	6-12 clicks	8-14 clicks
Aggressive handling:	13-18 clicks	13+ clicks	14-18 clicks

READ ALL INSTRUCTIONS CAREFULLY AND THOROUGHLY PRIOR TO STARTING INSTALLATION. PRODUCTS THAT HAVE BEEN INSTALLED ARE NOT ELIGIBLE FOR RETURN. USE PROPER JACKING LOCATIONS. DEATH OR SERIOUS INJURY CAN RESULT IF INSTRUCTIONS ARE NOT CORRECTLY FOLLOWED. A QUALITY CHASSIS MANUAL, AVAILABLE AT YOUR LOCAL PARTS STORE, MAY ALSO AID IN YOUR INSTALLATION.

• DISCLAIMER / WARRANTY •

Dedicated Technical Support Team

QA1 is dedicated to providing quality support and instructions. We employ passionate racers and car enthusiasts that know our products and the industry to better serve you.

Give our tech support line a call at **1.800.721.7761**

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