Part # 11390298
82-04 S10 Level 2 Complete Air Suspension System

Front Components:

1	11393001	HQ Series Front Shockwaves for Strong Arms
1	11399599	Front Tru-Turn Suspension Package
1	11399100	Front MuscleBar

Rear Components:

1	11396799	Rear AirBar – Bolt-on 4 Link
1	11390801	Rear HQ Series Shocks

Part # 11393001
82-02 S-10 Front HQ Series Shockwaves
For Use w/ StrongArms

ShockWave Assembly:

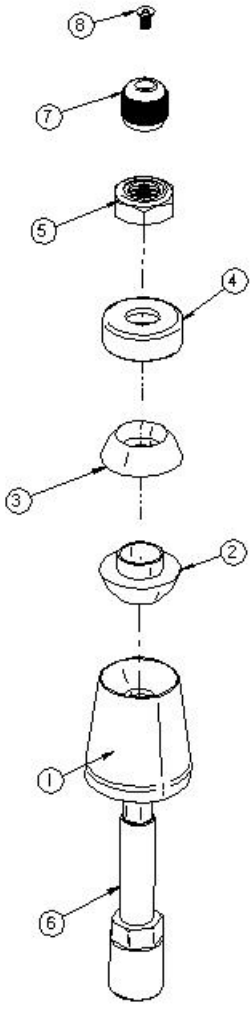
2	24090399	104mm Master Series rolling sleeve assembly
2	24129999	2.6” stroke HQ Series shock
2	90001994	.625” I.D. bearing
4	90001995	Bearing snap ring
2	90009988	Short Delrin stud top – 2”
2	70008913	Locking Ring

Components:

2	90002312	Short Delrin stud top base – 2”
2	90001902	Aluminum cap for Delrin ball
2	90001903	Delrin ball upper half
2	90001904	Delrin ball lower half
2	31954201	¼”npt x ¼” tube swivel elbows

Hardware:

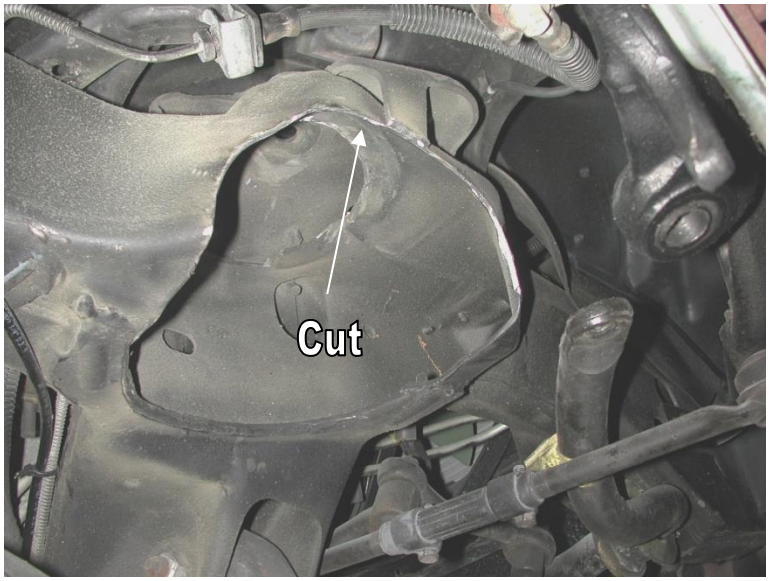
2	99562003	9/16” SAE Nylok jam nut	Stud top hardware



1. Stud top aluminum base
2. Delrin ball lower half
3. Delrin ball upper half
4. Aluminum cap
5. 9/16” SAE Nylok jam nut
6. Threaded stud (screwed onto shock shaft)
7. Rebound adjusting knob
8. Screw

SHOCKwave®
by Air Ride Technologies

Installation Instructions



1. For air spring clearance some trimming must be done on the outer portion of the coil spring pocket. The amount of trimming necessary will vary from one car to another, it is best to install the Shockwave onto the lower arm and inflate the bellow. Check clearance throughout full suspension travel. **(Inflated diameter of this Shockwave is approximately 6.5")**

4. This is best done with a cut off wheel or plasma cutter. Make the cuts round, square corners will create a fracture point.

Allowing the shockwave will rub will result in failure, this is not a warrantable situation.

7. Apply thread sealant to a 90 degree air fitting and screw it into the top of the Shockwaves. The fitting location can be rotated by twisting the bellow while holding the shock body.

8. Place the Shockwave up into the coil spring pocket with the stud protruding through the factory shock hole. See assembly diagram on next page.

9. Fasten the Shockwave to the factory lower control arm using the ½" x 3 ¼" bolt, Nylok nut & aluminum spacers supplied w/ the StrongArms.

13. The best ride quality will occur around 50-60% suspension travel; depending on vehicle weight this typically occurs around 100-110 psi.

The care and feeding of your new ShockWaves

1. Although the ShockWave has an internal bumpstop, **DO NOT DRIVE THE VEHICLE DEFLATED RESTING ON THIS BUMPSTOP. DAMAGE WILL RESULT.** The internal bumpstop will be damaged, the shock bushings will be damaged, and the vehicle shock mounting points may be damaged to the point of failure. **This is a non warrantable situation.**

2. Do not drive the vehicle overinflated or "topped out". Over a period of time the shock valving will be damaged, possibly to the point of failure. **This is a non warrantable situation!** If you need to raise your vehicle higher that the ShockWave allows, you will need a longer unit.

3. The ShockWave is designed to give a great ride quality and to raise and lower the vehicle. **IT IS NOT MADE TO HOP OR JUMP!** If you want to hop or jump, hydraulics are a better choice. This abuse will result in bent piston rods, broken shock mounts, and destroyed bushings. **This is a non warrantable situation.**

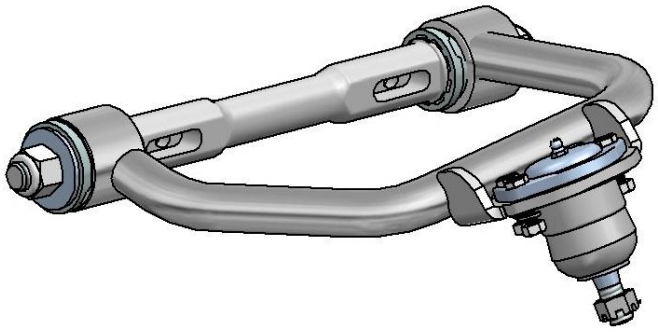
4. Do not let the ShockWave bellows rub on anything. Failure will result. **This is a non warrantable situation.**

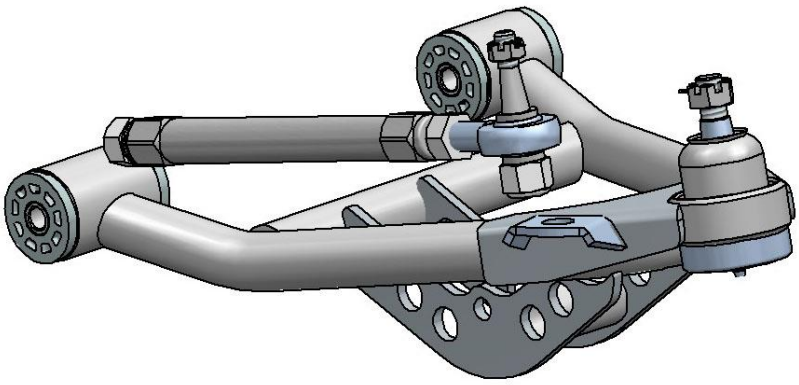
5. The ShockWave product has been field tested on numerous vehicles as well as subjected to many different stress tests to ensure that there are no leakage or durability problems. Failures have been nearly nonexistent unless abused as described above. If the Shockwave units are installed properly and are not abused, they will last many, many years. **ShockWave units that are returned with broken mounts, bent piston rods, destroyed bumpstops or bushings, or abrasions on the bellows will not be warrantied.**

Part # 11399599
82-03 S10 Tru-Turn Suspension Package

Front Components:

1	11323699	Upper Strong Arms
1	11322899	Lower Strong Arms
1	11329500	Tru Turn System





82-03 S10 Upper StrongArms

Components:

1	90002379	Drivers side arm
1	90002380	Passenger side arm
2	90000913	Upper ball joint
2	90000914	Caster Adjustable Cross shaft w/Hardware
2	70010826	Delrin Bushing – no ledge
2	70010827	Delrin Bushing – small ledge
4	70010759	Delrin Bushing – outer
4	90002737	Cross shaft T-washer
4	70011955	Zero Offset Caster Slugs

Hardware:

4	99431009	7/16-14 x 2 ½” Hex Bolt	Cross shaft to Frame
4	99432001	7/16”-14 Nylok Nut	Cross shaft to Frame
4	99433002	7/16” SAE Flatwasher	Cross shaft to Frame

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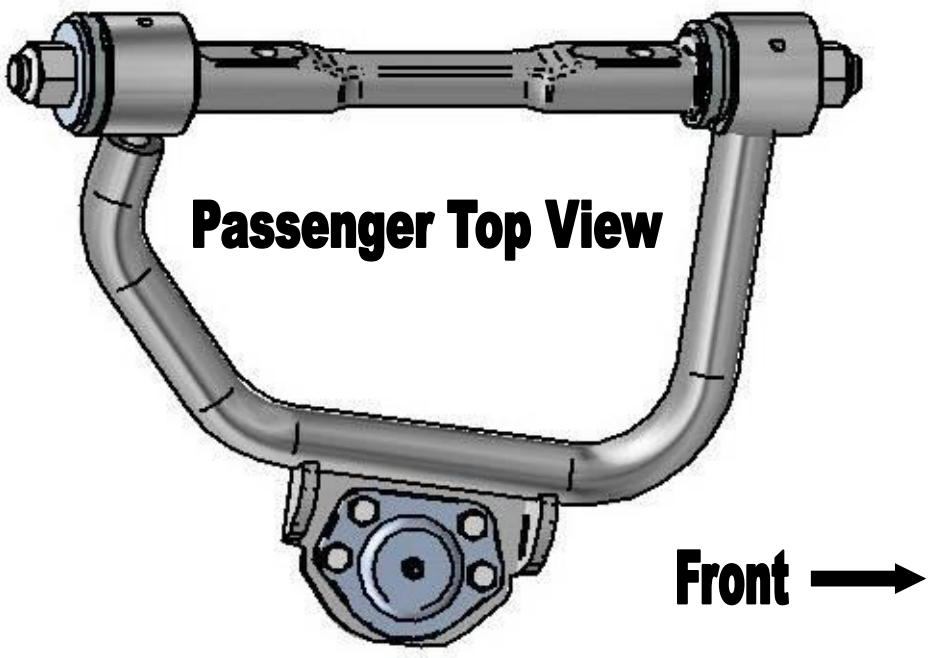
1. Fasten the upper arm to the frame using the supplied hardware. Reinstall the current alignment shims, but **vehicle must be realigned.**

2. Drop ball joint down through upper arm. Slide ball joint boot over stud, then place boot retainer over the boot. Clamp assembly tight w/ the hardware supplied.

3. Fasten the ball joint to the spindle w/ the new castle nut and cotter pin supplied.

4. Tighten the cross shaft nuts enough to create drag on the delrin bushings, the arm should still move.



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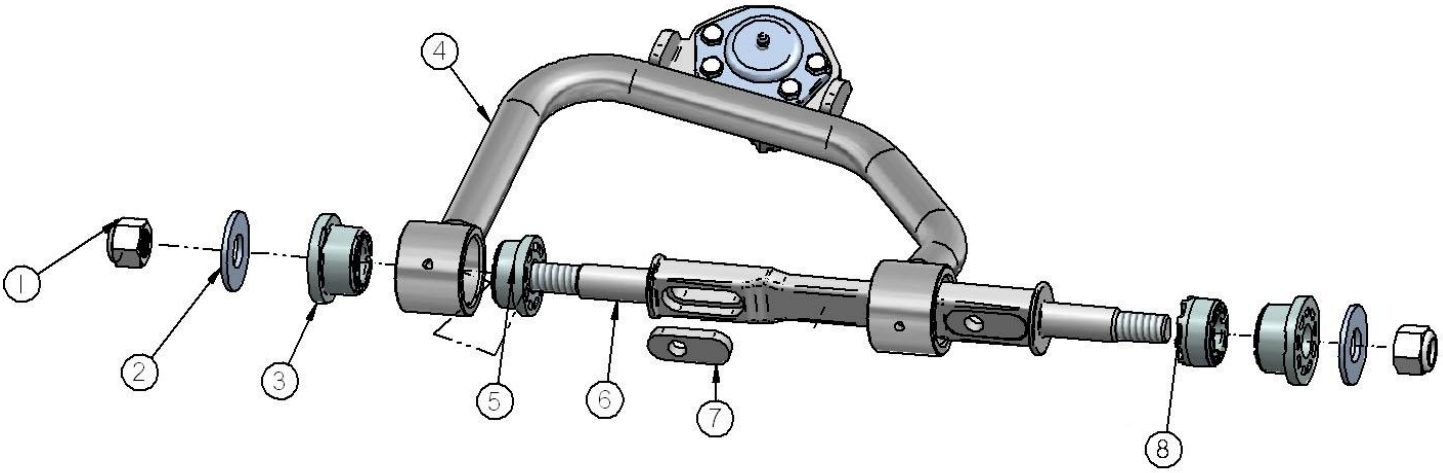
Passenger Side – Top View

Item #	Description	Qty.
1.	5/8 – 18 Toplock Jam Nut	4
2.	T-Washer	4
3.	Outer Delrin bushing	4
4.	Passenger side arm	1
4.	Driver side arm	1
5.	Inner Delrin bushing w/ledge	2
6.	Caster Adjustable Cross shaft	2
7.	Caster Slug	2
8.	Inner Delrin bushing no ledge	2



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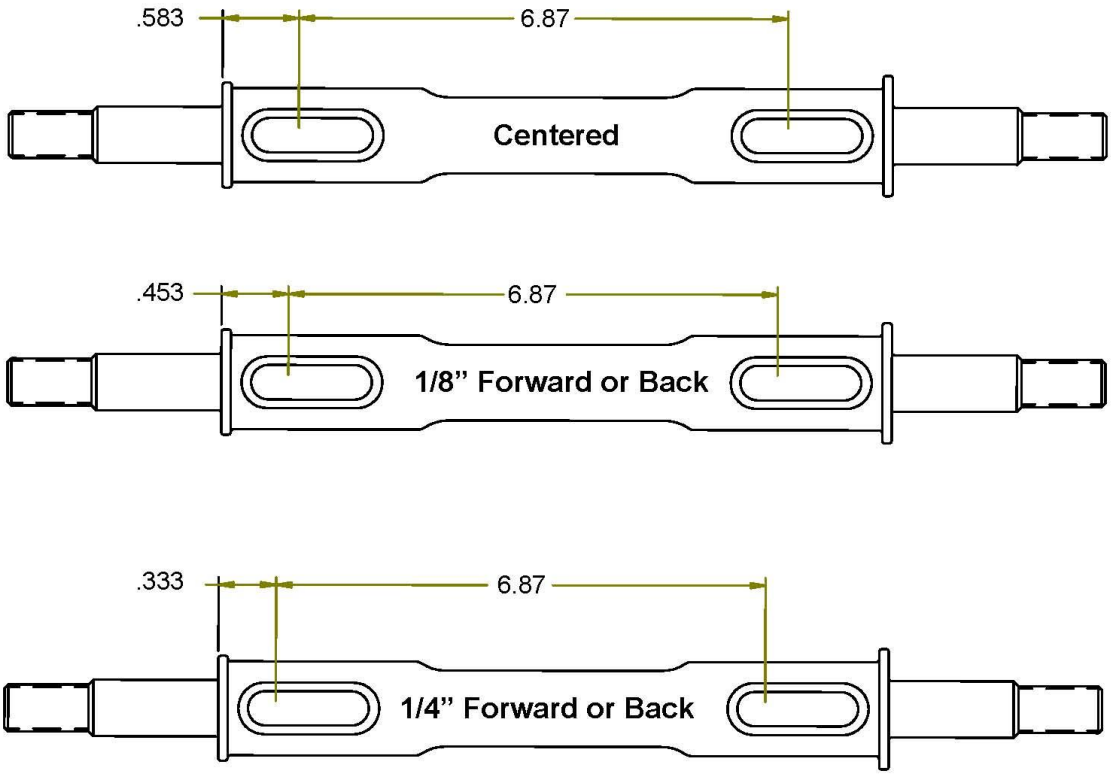

These Strong Arms come equipped with a changeable caster slug setup. This allows you to add or remove caster from the front suspension, if desired. The caster slugs that come in the kit are setup to put the control arm in the centered position, which is approximately 5 degrees of caster. The caster slugs allow you to add or remove caster without having to use a stack of shims. If more or less caster is desired, optional caster slugs can be purchased from your Ridetech dealer or Ridetech.

Caster Explained:

To understand caster you need to picture an imaginary line that runs through the upper ball joint and extends through the lower ball joint. From the side view the imaginary line will tilt forward or backward. The tilting of this imaginary line is defined as caster.

Caster is measured in degrees by using a caster camber gauge. If the imaginary line described above tilts towards the back of the car, at the top, then you will have positive caster. If the imaginary line tilts forward then you would have negative caster.

Positive caster provides the directional stability in your car. Too much positive caster will make the steering effort difficult. Power steering will allow you to run more positive caster. Negative caster requires less steering effort but can cause the car to wander down the highway.

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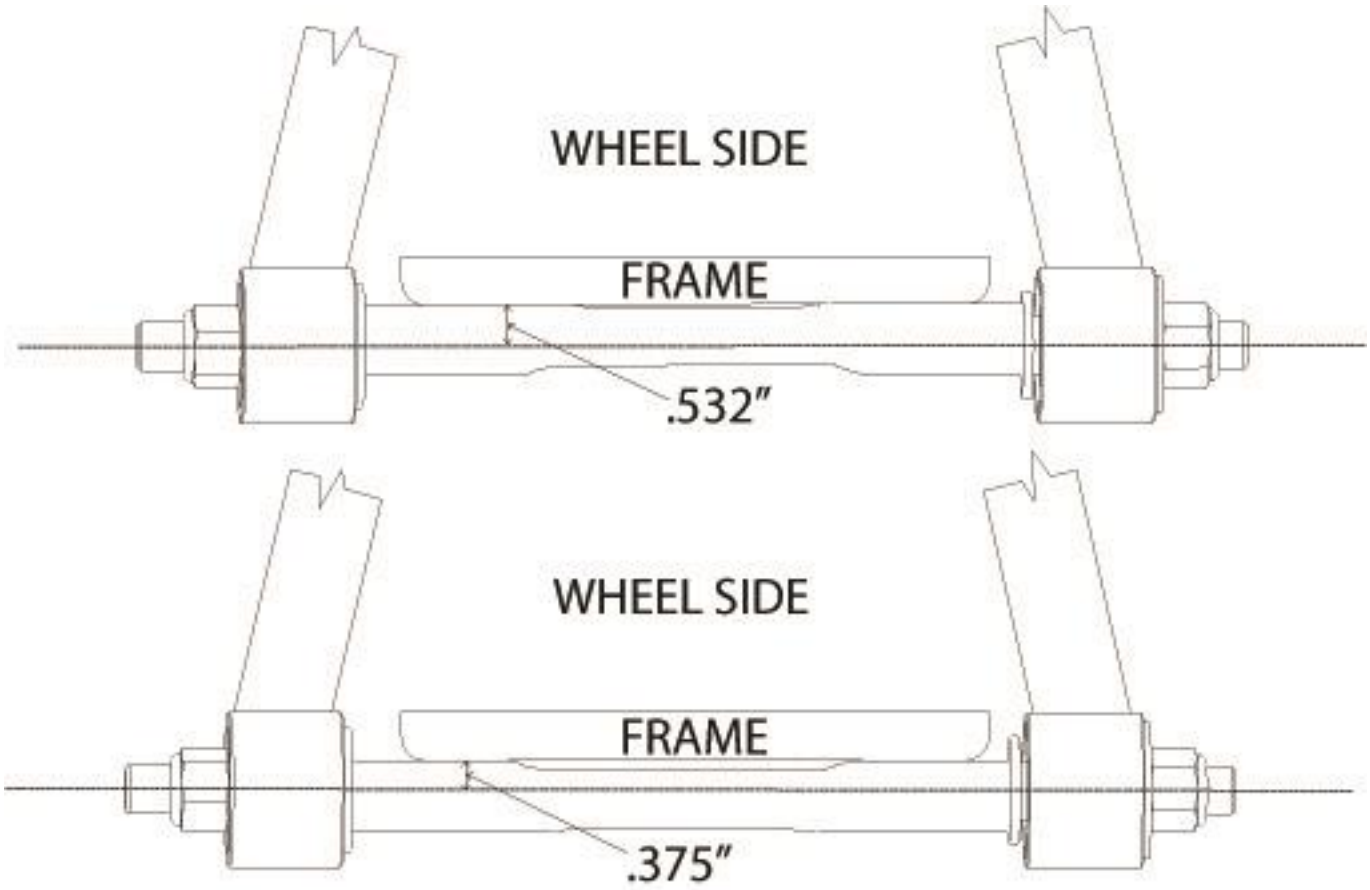


Offset Upper Cross Shaft

The cross shaft that is used in the upper control arm is offset. The offset combined with the caster slug option allows you to achieve the alignment setting you desire with minimal shims. To change the direction that the Icon faces, simply spin the cross shaft in the control arm.

If you are after an aggressive **Track or Autocross Alignment**, bolt the control arm to the frame bracket with the arm offset to the inside of the car (like the top illustration). The Ridetech Icon will be facing the engine.

If a **Street Alignment** is desired, bolt the control to the frame bracket with the arm offset to the outside of the car (like the bottom illustration). The Ridetech Icon will be facing the wheel.

82-03 S10 Lower StrongArms

For Use w/ Shockwaves or CoilOvers

Components:

1	90002377	Driver side lower arm
1	90002378	Passenger side lower arm
2	90000896	Ball joint
2	90000516	Inner bushing sleeve
2	90001094	Inner bushing sleeve
8	70010759	Delrin bushing half
4	90002062	Aluminum spacer – Shock to lower arm

Hardware:

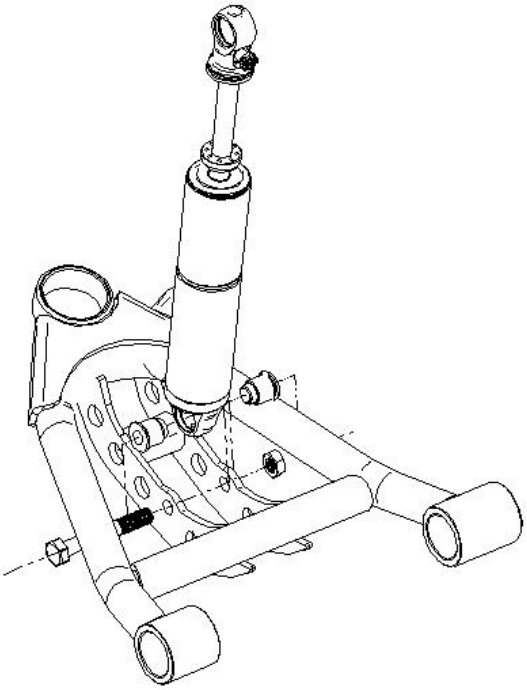
2	99501024	½”-13 x 3 ¼” Gr.5 bolt	Shockwave to lower arm
2	99502001	½”-13 Nylok nut	Shockwave to lower arm

STRONGARMS™
by Air Ride Technologies

Installation Instructions

1. After removing the factory lower control arm, clean the bushing mounting surfaces on the frame to make sure they are fairly smooth.

2. Fasten the lower arm to the frame with the factory hardware.



3. Swing the lower StrongArm up to the shock and secure with the ½" x 3 ¼" bolt and Nylok nut, an aluminum spacer must be installed on each side of the bearing.

4. Slide the ball joint boot over the stud, then push the stud up through the spindle. Secure w/ the new castle nut and cotter pin supplied.

5. Grease the ball joints.

STRONG ARMS™
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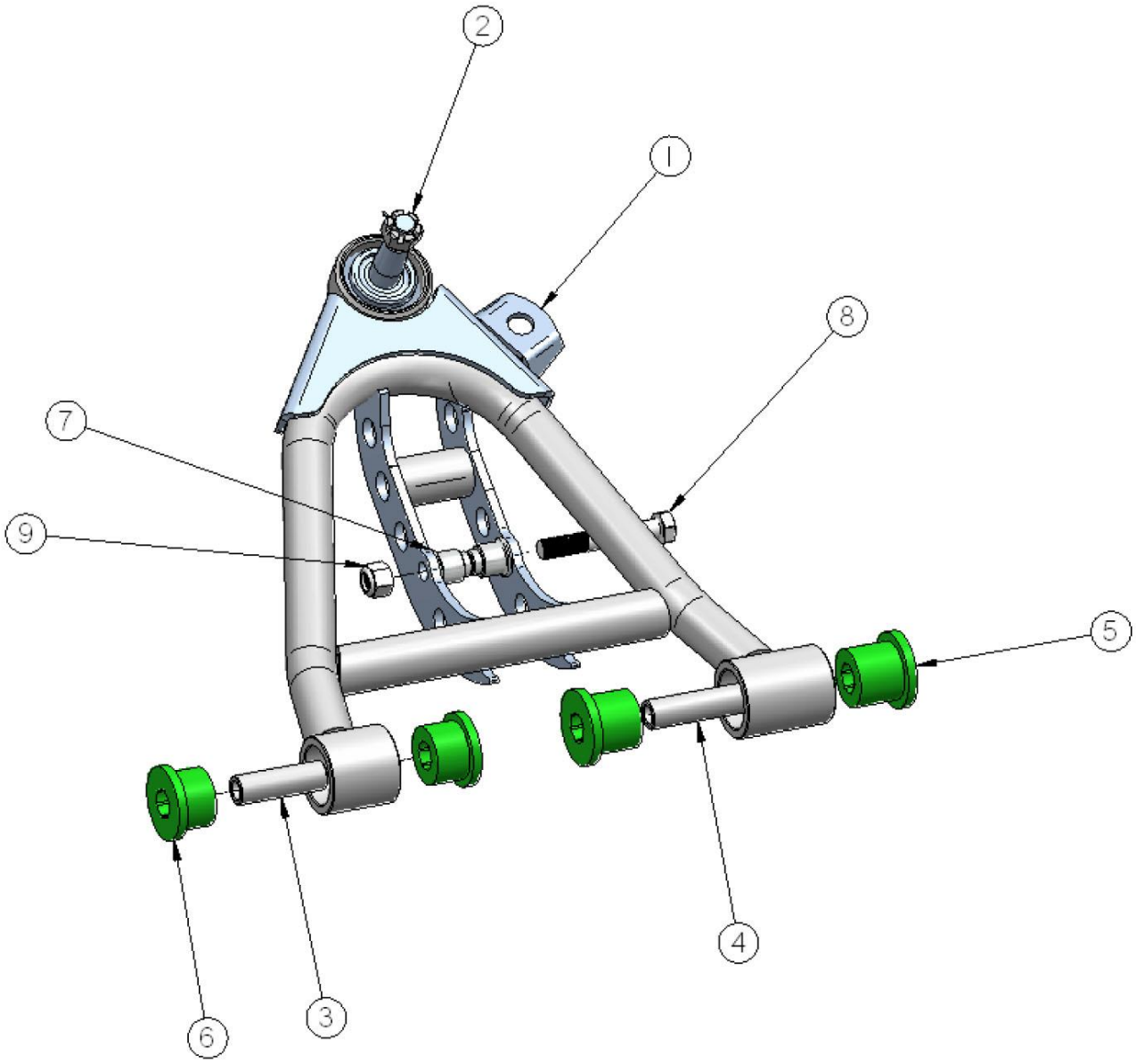
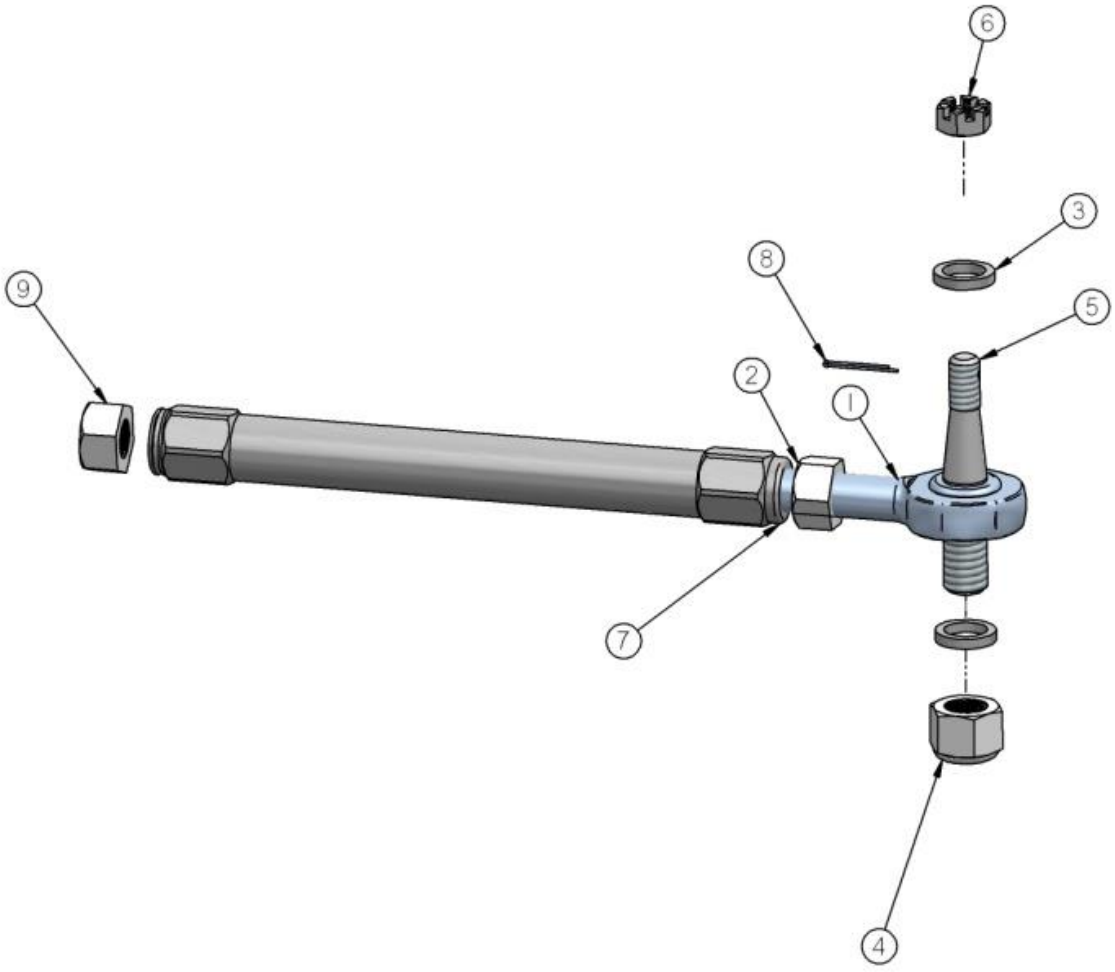
Item #	Description	Qty.
1.	Driver side arm	1
2.	Ball Joint	1
3.	Inner bushing sleeve – narrow	1
4.	Inner bushing sleeve – wide	1
5.	Delrin bushing half	2
6.	Delrin bushing half	2
7.	Aluminum bearing spacer	2
8.	1/2”-13 x 3 ¼” bolt	1
9.	½”-13 Nylok nut	1



82-03 S10 TruTurn System without Spindles

Item #	Part #	Description-Specification	Qty.
1.	90001590	Heim end	2
2.	99800002	5/8”-18 RH jam nut	2
3.	90002373	Heim End Spacer	4
4.	99622003	5/8”-18 Lock Nut-35 ft lbs	2
5.	90002374	Tie Rod Stud	2
6.	99432005	7/16”-20 castle nut-35 ft lbs	2
7.	90002375	Adjusting sleeve	2
8.	99952002	3/32” cotter pin	2
9.	99800003	5/8”-18 LH jam nut	2



Installation instructions:

NOTE: The number in (#) is the number of the part in the drawing on the previous page.

1. Raise and safely support the front of your vehicle at a comfortable working level
2. Remove existing outer tie rod and adjuster leaving the inner tie rod.
3. Install the (5) Tie Rod Stud into your factory spindle using the (6)7/16" castle nut. Torque the nut to 35 ft lbs and install (8) cotter pin. **NOTE:** If none of the holes line up tighten the nut until you can get the hole to line up e\with a slot.
4. Install the (7) Right Hand thread nut onto the (1) heim end and (9) Left hand nut onto the factory tie rod.
5. Antiseize the threads on the factory tie rod and heim end to prevent the threads from galling.
6. The left hand threaded side of the (7) adjuster goes onto the factory tie rod; it has a groove cut into the end of the adjuster. You will want the thread engagement the same on the tie rod end and the heim, the easy way to do this is set then nut on the tie rod 1 1/4" from the end of the tie rod and thread the adjuster on so that it touches the nut.
7. Install the heim end into the other end of the adjuster. Start by threading the lock nut all the way on the heim end and thread the heim end into the adjuster so that it touches the nut.
8. Install the heim end side of the tie rod onto the tie rod stud using the (3) aluminum spacer on top and bottom of the heim end and then install the (4)5/8" lock nut. Torque nut to 35 ft lbs.
9. Set the center to center length of the tie rod assembly to 17 3/4" by turning the adjuster out. This will get you close on the toe setting but it will need to be aligned.
10. Adjust the camber and toe roughly until you can get the vehicle to a proper alignment shop. The recommended alignment settings are:

Camber - -.5 to -1.5 [within .3 from side to side]
Caster – 4 to 7 degrees positive
Toe - 1/16" to 1/8" toe in
Feel free to experiment with alternative alignment settings that may be more appropriate for your particular driving style.

Installation notes:

A. MAKE SURE that the cotter pins are properly installed in all appropriate places [C] to ensure that the castle nuts do not become loose and fail. These are VERY important connections!

Part # 11399100
S-10 Front MuscleBar

Components:

1	11399101	Sway bar kit (Includes the following)
	2	Polyurethane frame bushing
	2	Frame bushing strap
	4	10mm x 1.5mm x 30mm flange bolt
4	90000924	10mm end link
8	90000717	Small T-bushing
2	90001092	Tube of Lithium grease

Hardware:

4	99112002	10mm x 1.5 Nylok nut	PosiLink
2	99115001	10mm x 1.5 x 36mm stud (use Loctite)	

MUSCLEbar™
by Air Ride Technologies

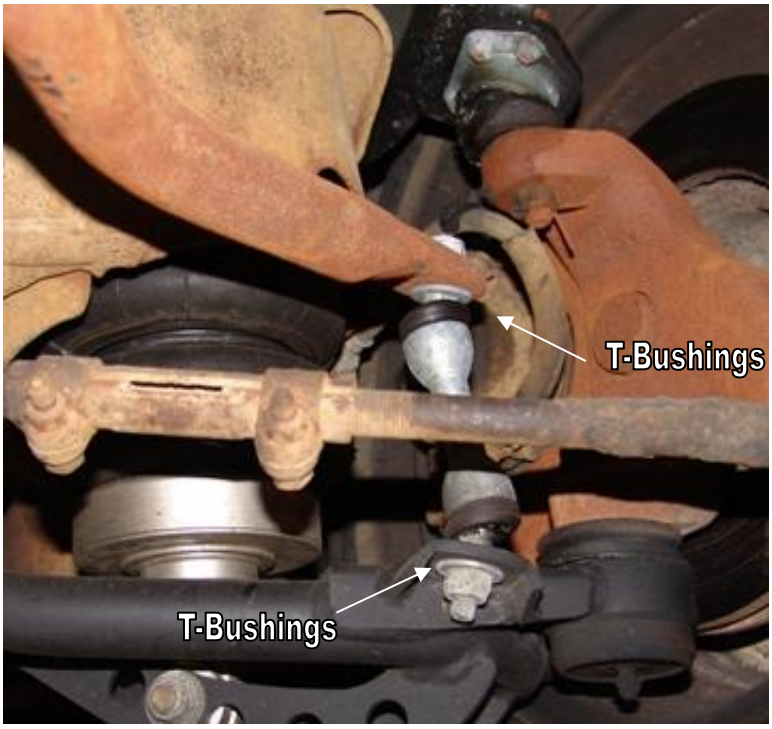
Installation Instructions

*******This sway bar is designed for use with our front StrongArms*******

1. Apply lithium grease to the poly bushings and slide them over the sway bar.

2. Slide the bushing strap over the bushing. Bolt the sway bar to the frame using the 10mm x 30mm bolts supplied.

Note: Some trucks did not come with a factory sway bar. In this case the holes may need to be drilled and tapped.



3. Bolt the PosiLinks to the sway bar and lower control arm. The holes in the arm and bar are larger than the PosiLink studs, so T-bushing are supplied and must be installed on the top and bottom of the bar and the control arm tabs.

4. Check sway bar clearance through full suspension travel and from lock to lock.

Make sure that the PosiLinks do not bind.

Part # 11396799
82-02 S-10 Rear AirBar

Components:

2	90009000	Tapered sleeve air spring
1	90000384	Upper air spring bridge assembly
1	90000385	Lower air spring bridge assembly
1	90000386	Upper control arm axle bracket
2	90000070	Lower air spring roll plate
1	90000387	Gas tank bracket
1	90000388	Gas tank bracket w/ control arm mount
1	90000389	Upper control arm
5	90001942	Rubber bushing for upper arm
2	90001584	Threaded rod end
2	90000988	Lower bar – TW 24.50” (C-C 26.25”)
4	90001085	Poly bushing half
2	90001094	Inner bushing sleeve
2	90001618	½” shock stud
2	90001083	Medium bump stop
4	99566001	9/16” SAE x 4 ¾” U bolts w/ nuts & washers

Hardware Kit: (Part # 99010004)

1	5/16 x 1” uss bolt	brake line
1	5/16 uss nyloc	brake line
1	5/16 flat washer	brake line
2	3/8 x 1” uss bolts	lower airspring mounting
4	3/8 x ¾ “ uss bolts	upper airspring mounting
6	3/8 lock washers	airspring mounting
6	3/8 sae flat washers	airspring mounting
16	3/8 x 1 1/4 uss bolts	upper bar mount/ upper x-member
16	3/8 uss nyloc	upper bar mount/ upper x-member
32	3/8 sae flat washers	upper bar mount/ upper x-member
4	7/16 x 1 uss bolts	differential bar mount (set screw)
5	5/16 x 1 ¾” uss bolts	differential bar mount
5	5/16 sae flat washers	differential bar mount
5	5/16 lock washers	differential bar mount
2	½ x 2 ½” uss bolts	shock mounting
2	½” uss nyloc	shock mounting
5	5/8 x 3” sae bolts (grade 8)	thru bar bolts
5	5/8 sae nyloc jam nuts	thru bar bolts

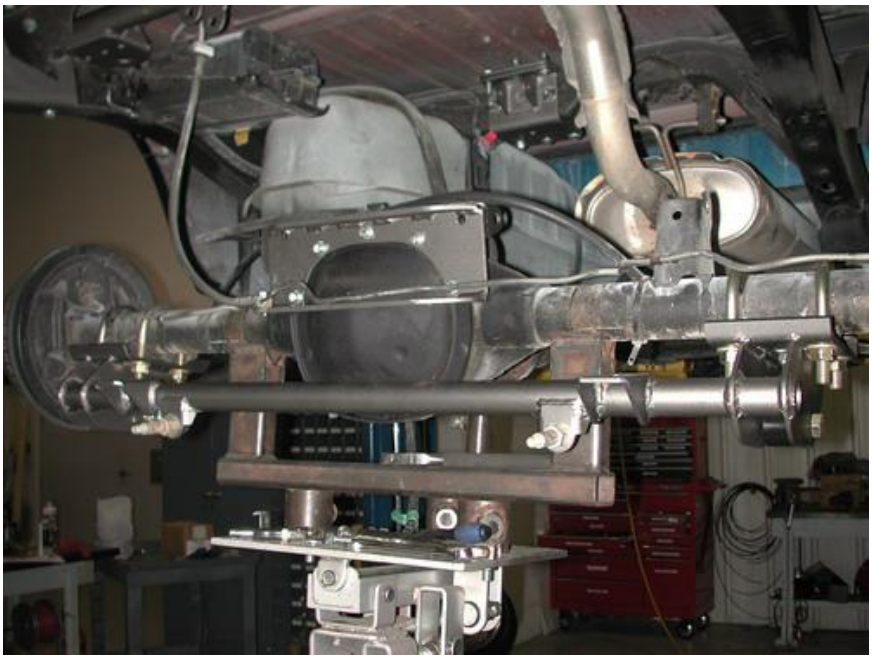
AirBAR®
by Air Ride Technologies

Installation Instructions

1. Raise truck and support under the frame at a safe, comfortable working height.
2. Support rear axle with jack stands.
3. Remove leaf springs.

4. Remove oem bumpstop and bracket using a die grinder and a cutoff wheel.

5. This is how the frame should look after oem bump stop removal.



6. Install lower airspring/shock crossmember onto rear axle housing using the supplied u bolts as shown to the left.

7. Install the upper control arm axle bracket onto the housing cover using the supplied fasteners as shown to the left. **Make sure to tighten all the link bolts at ride height.**

8. Install upper airspring/shock crossmember. This crossmember will be located by the OEM upper shock brackets. You will also need to drill 2 additional mounting hole in each framerail, using the crossmember as a template, to complete the installation.

9. This is a close up view of the upper airspring/shock crossmember installation.

10. Install the upper control arm frame mount onto the gas tank crossmember. This is a 2 piece mount that is bolted around the tank crossmember and is located via the bungs on the inside of the bracket that are inserted into existing holes in the tank crossmember. The threaded holes are used locate bolts that prevent the bracket assembly from rocking on the crossmember. The bracket can be welded as an alternative.

NOTE: *Due to the various locations of the emissions equipment, etc. over the years, you may need to relocate items such as the charcoal canister, fuel lines, brake lines, and electrical wiring. A little thought and care goes a long way here! Typically the fuel lines, brake lines and wiring can be simply move aside if they are in the way, while the charcoal canister may need to be repositioned entirely.*

11. Install the lower bars into the axle bracket and the OEM leafspring mount. You will use the OEM leafspring bolt for the front and the supplied bolt for the axle bracket end.

12. Install the upper control arm into the axle housing bracket and the gas tank bracket. **NOTE:** The upper control arm is NOT symmetrical. If it is installed upside down, it will position the rear axle approx 4” to the right. If you incur this problem simply flip the control arm over.

13. Install the airsprings into the upper and lower airspring/shock crossmembers. Be sure to use the supplied lower plates under the bottom of the airspring to prevent damage to the airspring when fully deflated.

14. Install shocks into the upper and lower airspring/shock crossmembers using the supplied shock studs on the bottom and the supplied bolts on top. When properly installed these shocks will not bottom out under full deflation and will capture the airspring extension under full inflation. DO NOT USE SUBSTITUTE SHOCKS WITHOUT CAREFULLY CHECKING THESE DIMENSIONS! Shocks are purchased separately.

It is the final responsibility of the installer and vehicle driver to insure that the airspring will not rub on anything at any time! *Failure to follow this guideline will result in immediate failure of the airspring and will NOT be a warranty situation.*

Part # 11390801
82-02 S-10 HQ Series Rear Shock Kit

Components:

2	22949999	HQ Smooth Body Shock Cartridge
4	70011138	¾” ID Shock Bushing
2	90002102	½” ID Inner Sleeve
2	90002103	5/8” ID Inner Sleeve

Shock adjustment 101- Single Adjustable

Rebound Adjustment:

How to adjust your new shocks.

The rebound adjustment knob is located on the top of the shock absorber protruding from the eyelet.

You must first begin at the ZERO setting, then set the shock to a soft setting of 20.

-Begin with the shocks adjusted to the ZERO rebound position (full stiff). Do this by rotating the rebound adjuster knob clockwise until it stops.

-Now turn the rebound adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use).

Take the vehicle for a test drive.

-if you are satisfied with the ride quality, do not do anything, you are set!

-if the ride quality is too soft increase the damping effect by rotating the rebound knob clock wise 3 clicks.

Take the vehicle for another test drive.

-if the vehicle is too soft increase the damping effect by rotating the rebound knob clock wise 3 additional clicks.

-If the vehicle is too stiff rotate the rebound adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

Note:

One end of the vehicle will likely reach the desired setting before the other end. If this happens stop adjusting the satisfied end and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.