



Safety First and Warranty Check List

RRS Pty Limited

Strut & Brake Kit

RRS constantly strives for the safest ultimate performance outcomes; therefore it is in the best interest of the owner of a vehicle fitted with RRS products to fill out these important safety checks.

OWNER NAME:	
OWNER ADDRESS:	
MAKE/MODEL:	
REGISTRATION No.	
CHASSIS/VIN No.	
RACK & PINION SERIAL No.	
INSTALLER NAME & ADDRESS:	
TECHNICIAN NAME & ADDRESS:	

ITEMS TO BE CHECKED – please tick yes or no

		Yes	No
1	Confirm kit fitted has been ordered correctly for vehicle		
2	Suspension & Steering components appear in sound condition		
3	Other brake components appear to be in sound condition		
4	Confirm brake lines are free of interference and not strained at any point of suspension travel or lock		
5	Check that all nuts & bolts (incl. ride height adjustment and camber adjustment bolt) are adequately tightened		
6	Check tightness of wheel nuts		
7	Check wheel alignment (adjust if necessary)		
8	Road test vehicle to assess braking performance		
9	Conduct brake testing using Brake Inertia Tester		
10	Make the driver aware that re-torque and maintenance of all RRS products should be done according to the RRS installation manual		
12	Road test		

Installed by:.....

Signed:.....

Date:.....

Check conducted by:.....

Signed:.....

Date:.....

Please return this document in the envelope supplied so that RRS can give you the best after sale service and you will also automatically become a member of the RRS preferred customer programme.



RRS appreciates any comments or feedback you are willing to give. If you have a photograph or testimony of your RRS enhanced vehicle to be posted on our “RRS RIDES” website notice board please attach to this form or email to sales@rrs-online.com

COMMENTS:

RRS is certified member of SEMA, FAPM and Australian Automotive Aftermarket Association

ATTENTION: IT IS VITALLY IMPORTANT THAT PRIOR TO COMMENCEMENT OF THE INSTALLATION OF ANY RRS COMPONENTS, ALL INSTRUCTIONS, WARRANTY CONDITIONS, WARNING AND SAFETY CHECKS ARE READ AND UNDERSTOOD, TO AVOID ANY UNNECESSARY COMPLICATIONS.

RRS Product Information

All **RRS** products are designed and developed for street and recreational use only and will not be warranted when subjected to conditions beyond their intended use (eg. motor-sport).

WARRANTY

RRS will guarantee any product found to be faulty in workmanship or materials within 12 months or 20,000 km/12,000 miles use (whichever occurs first). Warranty is not available for faults or failure caused by ordinary wear and tear, misuse, use of incorrect or defective associated component parts, or any cause occurring after the product has left **RRS** control. This warranty does not affect consumers' rights and remedies under local laws.

Further information:

If you need advise on correct fitting procedures or any other aspects of our product range, please phone your enquiry to the **RRS** office USA +1 866 805 1878 (connect to RRS Aust), **Australia +61 2 9907 3755.**



Safety First and Warranty Conditions

RRS has designed and tested quality products for specific usage and applications. It is intended that all RRS products will enhance all normal street usage situations provided that they are installed according to RRS instructions as laid out in the installation manual. RRS provides proven and predictable outcomes for all of our product applications.

The duty of care of correct and safe installation is the sole responsibility of the installer. If an incorrect installation or product application takes place for whatever reason; the vehicle will not be deemed road worthy under any circumstances and it should be noted that RRS is not responsible for any adverse outcomes resulting from

1. Choosing an incorrect product application.
2. Installing an incorrect product application.
3. Modifying any RRS products in any way.
4. Not following RRS installation procedures.
5. Not filling out the RRS safety and warranty card check list.
6. Not following RRS maintenance procedures.
7. Using non-compatible components to RRS products that are not within the RRS specifications.
8. Using a vehicle fitted with RRS products in any off road activity.
9. The safe usage of RRS products becomes the sole responsibility of the end user once the warranty period has expired.
10. The RRS product has not been subjected to conditions beyond those, which was intended such as being used in any form of motor sport.
11. That the installation of any RRS product has been checked by a qualified technician.
12. RRS will not be held responsible in any way shape or form for any activity that may require dismantling, reassembly, overhaul and or modification to any RRS product.

RRS is excluded from any responsibility or adverse outcomes that may result from any unusual adverse weather conditions or any adverse road surfaces that could promote rapid wear or fatigue.

Safe driving and roadworthiness is the sole responsibility of the installer and technician who signs the warranty and safety first checklist.

It is necessary for this checklist to be returned to your nearest RRS representative within 21 days of completion

All RRS products incorporate the most advanced quality and manufacturing processes available today. RRS design solves complex problems with simple solutions.



WARNING AND SAFETY

To avoid failure or voiding your warranty a number of safety checks must be strictly adhered to:

1. All suspension and steering components should be checked for excess wear or damage and replaced if necessary
2. The condition of all other brake components should be checked for excess wear or damage and replaced if necessary
3. Make sure that if silicone or other brake fluids are being used that they are compatible with GM standard brake fluid, which is used to assemble and test your new callipers. It is the responsibility of the fitter of the RRS Kit to verify brake fluid compatibility or use correct procedure to change to a different kind of fluid
4. The RRS strut and brake conversion kit is ONLY designed to be used with OEM Ford Disc Brake combinations e.g. Ford fitted: - booster, master cylinder, brake pedal, rear brake combinations designed to work with front discs by Ford
5. Bedding in of disc pads should be done according to Ford recommended procedure.
6. After installation of the RRS kit it is vitally important that the flexible brake line is fitted so that no interference with any other component occurs, and also that the line is free and flexible (not strained) at ANY point of suspension travel or turning lock to lock
7. Prior to road testing the wheel alignment and ride height must be set. The ride height lock rings must be secured, then all nuts and bolts checked for correct torque wrench setting and that the camber adjuster bolt is secured with locking material such as **loctite**.
8. After road testing front wheel nuts must be checked at least two times to ensure correct stud seating to avoid the loosening of wheel nuts.
9. During regular servicing of your vehicle, the top spherical bush must be greased and properly maintained.
10. If any other use, other than recommended by RRS for your RRS Kit is intended, it should be known that all warranty is void and the purchaser of the said kit do so at their own risk.
11. Any modifications to the RRS kit will put all responsibility for safety and warranty on the person or persons responsible for the said modifications.
12. Tyre wear and condition is not the responsibility of RRS therefore wheel alignment settings given by RRS are a guideline only and it is the responsibility of whoever wheel aligns the vehicle fitted with the RRS Kit to ensure good wear characteristics according to the driver usage.

13. Any problems encountered by the fitter of the RRS Kit must:
 - a) be checked with the fitting instructions prior to driving
 - b) consult RRS for directions prior to driving
 - c) should be rectified by a qualified RRS recommended repairer.

14. RRS supplies a preliminary R.T.A. engineers report, however legal roadworthiness is the sole responsibility of the owner of the vehicle having a RRS Kit fitted. Therefore it is recommended that the current State Laws applicable to the vehicle being modified are strictly adhered to.

15. If you have any queries or concerns regarding RRS products, please speak directly to RRS or one of our consultants.

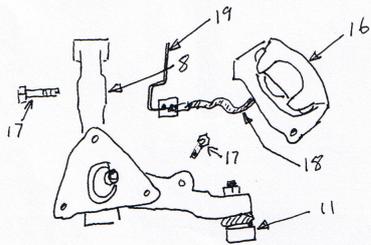
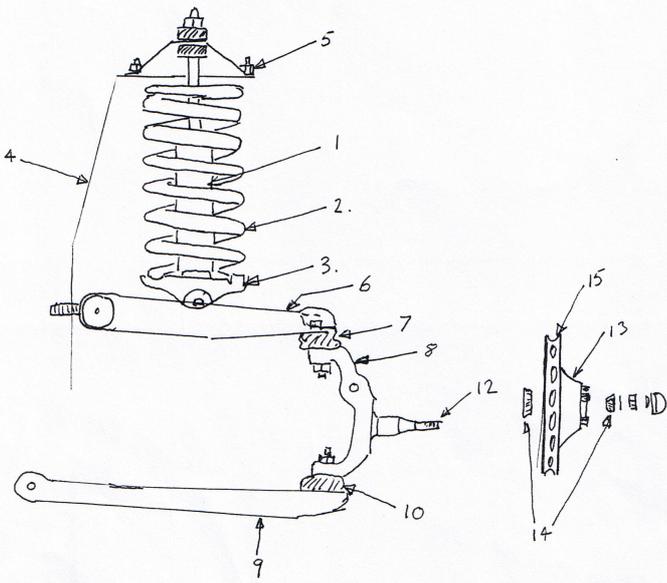
These are general guideline recommendations and therefore should be considered as a starting point to allow fine-tuning to suit specific requirements. For further advice please contact RRS directly on + 61 2 9907 3755 USA +1 866 597 4662 (connection RRS Aust)

All RRS products incorporate the most advanced quality and manufacturing processes available today. RRS design solves complex problems with simple solutions

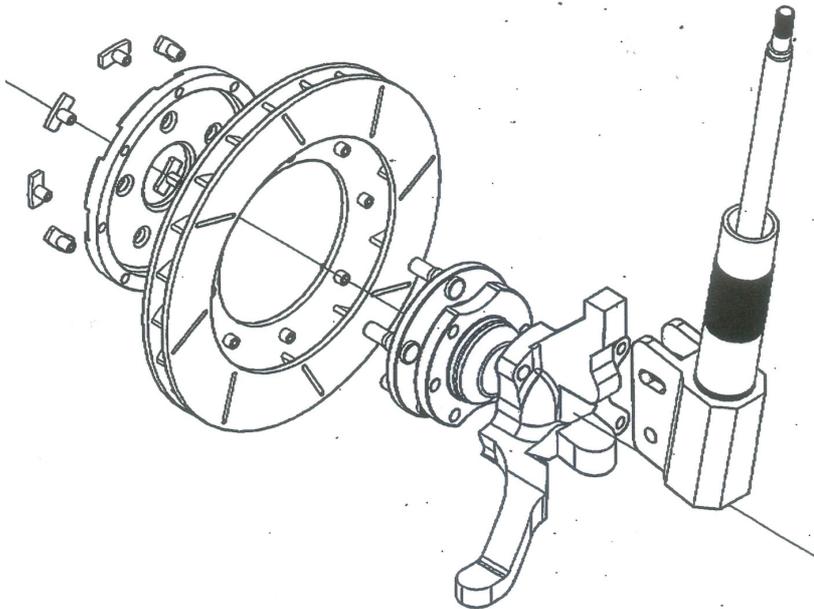
RRS advise any steering and suspension modifications to your vehicle must be inspected by a certified engineer to comply with state regulations.



RRS COIL OVER FRONT END



◀ ORIGINAL STYLE DOUBLE WISH BONE



◀ RRS COIL-OVER

RRS INSTALLATION INSTRUCTIONS

Installation of the RRS Strut and Brake Conversion Kit

It is advised that an authorized automotive repairer install this Kit, adhering to the following instructions to guarantee safe trouble free motoring.

Ford production vehicles XK (1960) through to XF (1985) Falcon and Ford Mustang 1964 ½ through to 1973 are fitted with an independent front suspension that is comprised of the following components: -

- 1.** a telescopic shock absorber mounted within
- 2.** a coil spring
- 3.** a spring saddle that acts as platform for the coil spring and a attaching base for the shock absorber
- 4.** the spring tower, which acts as the upper spring seat and attaching point for the
- 5.** upper shock absorber bracket.

The spring saddle is attached to the

- 6.** upper wishbone, which is pivotally mounted to the spring tower and at its outer end attaches to the upper end of the
- 7.** steering knuckle through an
- 8.** upper ball joint.

The steering knuckle has a

- 9.** lower control arm attaching point via a
- 10.** lower ball joint,. The steering knuckle also features an arm to attach
- 11.** the outer tie rod end as part of the steering linkage.

Furthermore, the steering knuckle comprises a

- 12.** stub axle, which in turn is fitted with a
- 13.** front hub
- 14.** wheel bearings
- 15.** and front disc.

The front

- 16.** brake calliper is attached to the steering knuckle by
- 17.** two bolts. There is a
- 18.** flexible line from the calliper to the chassis mounted
- 19.** hard brake line.

TORQUE SPECIFICATION FOR RRS FRONT END

1. Wheel nuts 100 – 125nm
2. Tie rod ends and ball joint 40 – 60nm
3. Steering knuckle to Strut tube, attaching bolts in two stages:
Stage 1 = 85nm
Stage 2 = 100nm
4. Front calliper to steering knuckle, attaching bolts 80 – 90nm plus
40° – 50°
5. Wheel bearing hub to steering knuckle, attaching bolts. This is done in three stages:
Stage 1 = 85nm
Stage 2 = 100nm
Stage 3 = 100nm then turn through 90°
6. Top hat attaching bolts 35nm
7. Strut insert, attaching nut 125nm

Recommended wheel alignment specifications for your Ford:

Caster positive 4.5° plus or minus 1°

Camber negative .5° to negative .75°

Toe in 2mm to 3 mm

Toe out on turns

Outer 17.75°

Inner 20°

These are general guideline recommendations and therefore should be considered as a starting point to allow fine-tuning to suit specific requirements. For further advice please contact RRS directly on 61 2 9907 3755 or USA 866 597 4662 (to connect with RRS Aust)



CHASSIS PREPARATION AND THE FITTING OF THE RRS STRUT & BRAKE ASSEMBLY KIT

1. Once the old suspension components have been removed from the vehicle the chassis should be cleaned and inspected.



2. Some of the original Ford upper spring seat pressings may have deformities that may need dressing with a hand disc grinder or die grinder to allow an interference free fitting of the RRS upper mounting plate



3. If your vehicle is a '65 -'73 Mustang, '66 Falcon, Fairlane etc. it will require 3 holes to be drilled through the original spring seat. These holes should be positioned directly under the original coach bolt



RRS no longer use grease nipple application



New fit 2014

4. Using the original shock mount bracket as a template drill, 3 x 8 mm (5/16") holes through the spring seat pressing



5. Make sure that the rubber spring insulator is removed and discard



6. Grease the top bearing with chassis grease prior to install
Strut Leg Assembly



Crush spacers: -

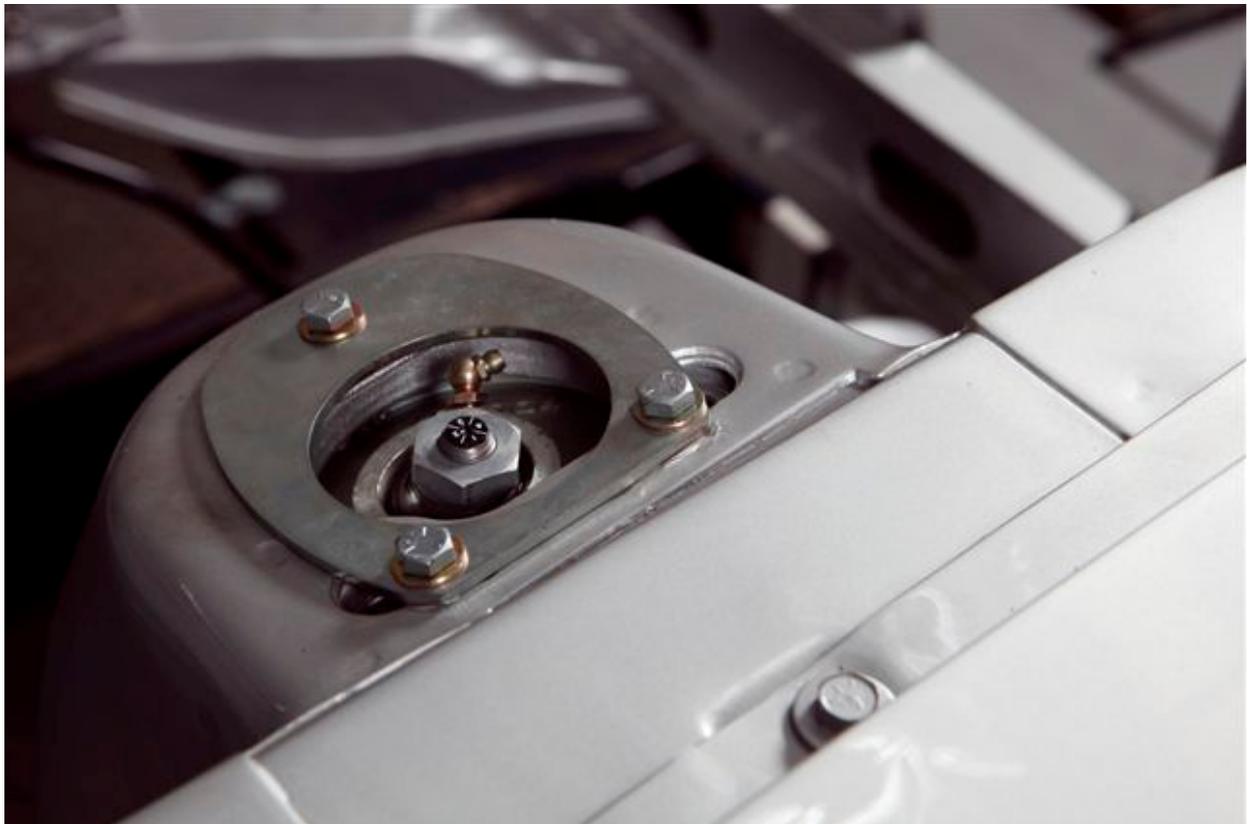
Drop into where original coach bolts for the shock absorber mount and then slide around to where 'new' holes are drilled to stop the top of panelling crushing up – (crush spacers)

7. Lift the RRS Strut leg assembly into place, making sure the strut is fitted to vehicle. Attach the three mounting bolts, making sure that you fit either the load spreader plate supplied or original shock mounting bracket and torque the nuts to 25ft/lbs or (35nm)





Mounting plates not required if using RRS Billet Caps



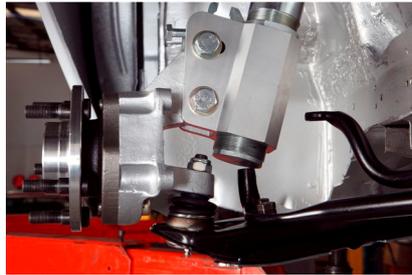
IMPORTANT:

The grease nipple mounting lug on ALL RRS front coil-over conversions must point to the middle of the radiator support panel.

If the grease nipple points in any other direction, it is probable that the strut top mounting plate is installed incorrectly

RRS no longer use grease nipple application @ 2014

8. To lower some vehicles the original steering stop may need to be trimmed to clear the bottom of the strut leg



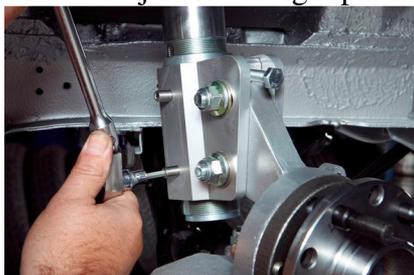
9. Connect the steering knuckle to the lower ball joint, tighten ball joint nut and split pin



10. With a jack under the lower control arm, lift the steering knuckle high enough to connect the strut leg with the two large nuts and bolts supplied



11. Adjust ride height prior to spring preload adjustment



12. Adjust spring tension to desired feel and final height requirements and securely lock the 2 x spring settings



13. Slide disc onto bearing hub. Pull into position evenly with nuts and washers (not supplied)



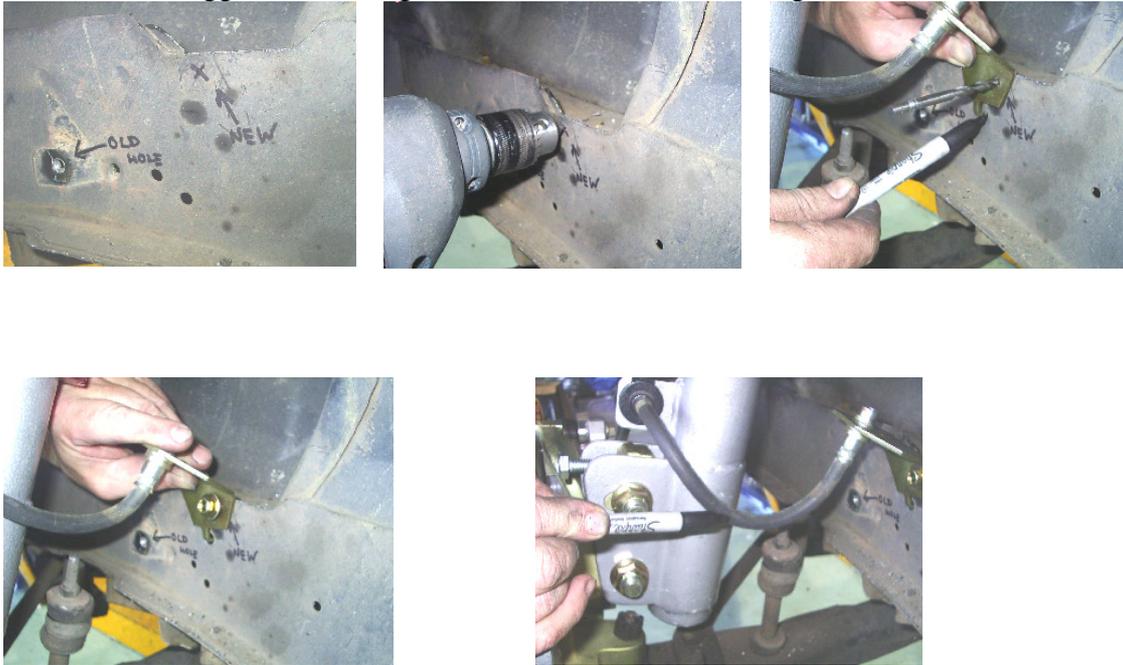
14. Warning: Do not over-tighten nuts to avoid stud or disc damage, however make sure that disc is fully seated on bearing hub otherwise calliper misalignment will occur



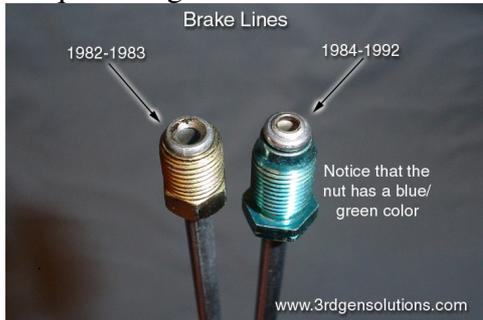
15. Fit calliper to hub carefully, screw calliper bolts into position and tension bolts to the recommended settings.



16. RRS suggests mounting the line bracket to the rail edge



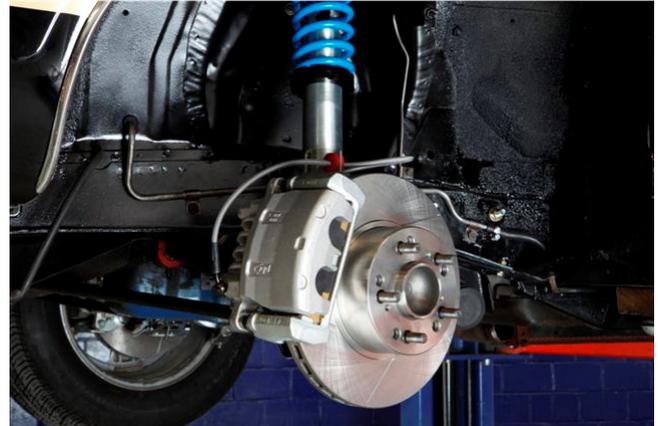
17. The flexible brake line may need to be pulled through the insulator guide to provide adequate length to enable the mounting bracket to be attached to the frame rail



18. Check the original brake hard line fitting because there are many different sized and thread types used

19. If required remove the old hard line and have a qualified repairer re-flare the line and use the new fitting as supplied or alternatively have a new line made to suit using the supplied fitting

20. Mount the flexible brake line to the chassis making sure that it does not interfere with any other component (eg. Sway bar) and that it is not strained from lock and lock to avoid brake failure



21. Attach the hard line to the new brake hose and bleed the brake hydraulic system



22. Fit the new tie rod or tie rod adaptor sleeve, supplied with the RRS kit, counting the same number of turns as the old tie rod end into the rod end adjuster sleeve



23. Attach the road wheels, lower the vehicle to the ground to assess the desired vehicle height, jack the vehicle back up, remove the road wheels and adjust the lock-rings up to raise the vehicle or down to lower the vehicle using the supplied spanners. Double check that the desired vehicle height has been achieved



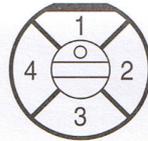
24. The vehicle is now ready for a wheel alignment. Camber adjustment should be made by adjusting the bolt in the top of the steering knuckle after loosening the two large strut leg bolts

25. A suitable locking material e.g. *loctite* should be used on the camber bolt to avoid it shaking loose



Wheel alignment specifications recommended by RRS can be fine tuned for individual applications or requirements

AGX Adjustable Gas Shocks



(Top Type)



(Side Type)

ADJUSTMENTS

The AGX 4&8 stage adjustable twin tube gas cartridge can be adjusted without removing it from your car. It is completely adjustable to the desired damping force (stiffness) needed for your kind of driving. Right and left shocks must be set equally.

4-Stage Type (Top Adjustments)

1. Insert screwdriver into adjustment dial and push down. Turning the dial without pushing down will cause damage to the shock. Damping force is measured as 1 (soft) through 4 (hard) .
2. Turn until the desired adjustment is dialed.
3. Release screwdriver. If properly positioned, the adjustment dial will pop up and lock into position.

4&8 Stage Type (Side Adjustments)

1. Change damping force (stiffness) by turning the dial. Damping force is measured as 1 (soft) through 4or8 (hard) .
2. "Click" indicates adjustment is properly positioned. If the "click" does not sound, the dial needs to be turned a little bit further until the "click" is heard.



Ray Cross and Associates

Consultant Mechanical & Automotive Engineer (M.I.E. Aust.)
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29th April 2003

Mr. Matthew Pankau
Revelation Racing Supplies
22/26 Wattle Road
BROOKVALE – 2100

REPORT No. 2003-25

As requested I hereby submit an evaluation and assessment of your Revelation Racing Supplies (RRS) Conversion Kit for early model Ford vehicles for installation of upgraded front disc brakes and McPherson Strut type front suspension.

The kit has been extensively road and track tested by RRS and components subjected to quality tests by ETRS Test Laboratory.

A detailed report on steering and suspension geometry and performance is held by RRS.

SUITABLE VEHICLES :

It is proposed to fit the kit to the following vehicles :

Australian - XK to XF Falcons, Fairlanes, Fairmonts, LTDs

USA - 1965 to 1972 Mustangs - 1967 to 1970 Cougars, Montegos, Rancheros, Sprints.

CONVERSION KIT :

The Conversion Kit essentially consists of :

1. Suspension tower upper mounting plate with spherical bearing.
2. 2 Eibach Coil Springs.
3. 2 modified VT Commodore/Statesman front struts with inbuilt bump stops.
4. RRS "Investment cast" LH / RH uprights and steering knuckles complete with wheel bearings and machined to suit Ford stud pattern.
5. 2 new DBA VT Commodore/Statesman type front brake rotors with new twin piston PBR caliper assemblies and new flexible brake hoses.

Note : The Kit to be installed as per RRS installation instructions.

All fasteners high tensile – ISO grade 8.8 or equivalent.

All tapers machined to match OEM ball joints.

Kit is constructed from all new components.

No heating, bending or welding of any components required for installation.



COMPLIANCE :

The conversion if installed as directed in the RRS Installation Manual and fitted with rims approved by RRS meets the requirements of following sections of NSW Code of Practice for modified vehicles.

Section 3.3 - Brakes
Section 3.4 - Steering
Section 3.5 - Suspension

Note: Road testing and Brake testing of each modified vehicle by Authorised Signatory required for Certification.
Check for correct installation by Authorised Signatory required at time of inspection.

FEATURES :

Makes a classic Ford muscle car and early Falcons handle and brake like a modern high performance vehicle.

Improved steering geometry - Produces a more accurate and responsive steering feel.
Suits modern radial type tyres.

Improved suspension geometry - Decreased un-sprung weight.

Decreased chassis stress and deflection.

More effective shock absorber dampening.

Readily adjustable vehicle ride height.

All suspension and steering operating clearances maintained or improved.

TESTING :

The conversion has been successfully and extensively road tested for improved handling, braking and reliability in a number of different vehicles and also track tested for performance under race conditions at Wakefield Raceway in a 1966 Mustang.

A summary of results is held by RRS.

CONCLUSION :

The inspection and assessment shows the conversion kit is manufactured to sound engineering practice and to a high level of Quality Assurance.

I believe the conversion is safe and offers considerable advantages in handling and braking and meets the requirements of the NSW RTA Code of Practice for modified vehicles.



R. C. CROSS