MGC Ball Jointed Suspension (H435)

Strictly 1-4-1 Sales Only

Fitting Time 6-8 Hrs

Recommended Additional parts:
Spax Front Dampers (Adjust to 1st Click, then 6 clicks forward)
MGC ¾ Anti-Roll Bar
Poly Urethane Bushes
Up-rated Torsion Bars
Anti Roll Bar Links

PLEASE NOTE
We strongly advise when reusing any components (wishbone pivots, lower arms, torsion bars, wheel bearings, brake pads, discs, bushes, tyres etc) that you carry out a full inspection to ensure they are fit for further use. We recommend caliper lock tabs and split pins are replaced as a matter of course.

For driver safety and in order to derive the full benefits of the MGC Ball Jointed suspension we recommend that a professional four wheel alignment is carried out following installation.

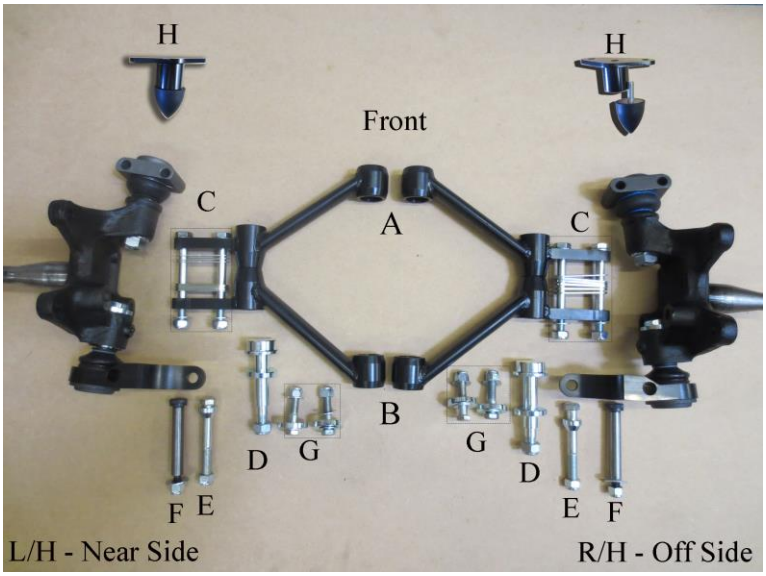
FOR REFERENCE
Please refer to sections 10.B7/ 10B8/ 10.B9/ 10C.1 of the MGC Workshop Manual.
Preferred Settings: (Tolerance +/- 0.25 degree).

Camber:	1 Degree
Castor:	5 Degrees
Tracking:	1/16 inch, 1.6mm overall (1.6 to 3 tolerance) **Must be the same each side**

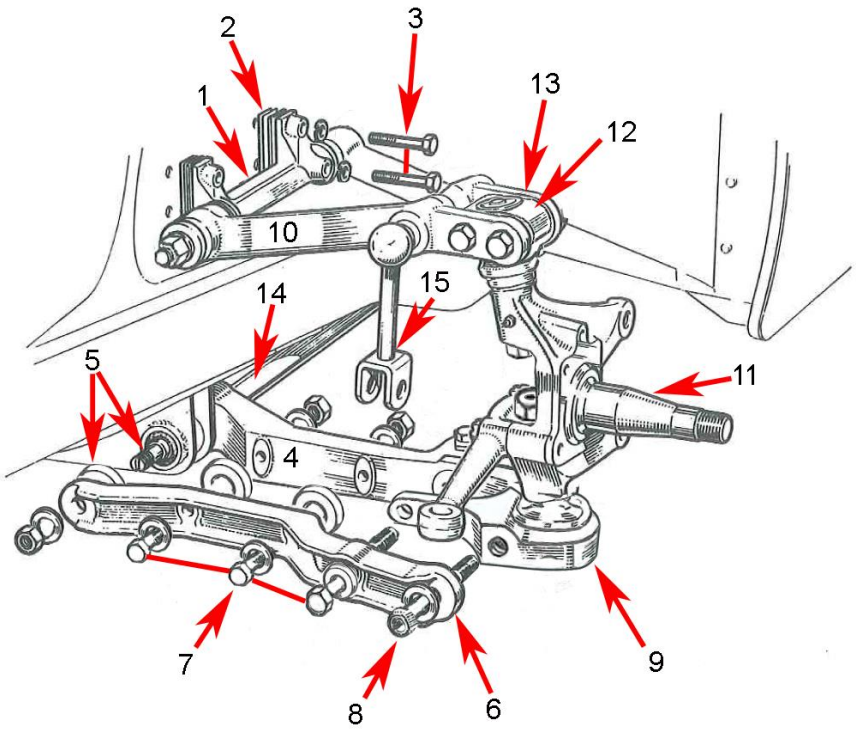
NB Shim Adjustment:
3mm gives 1 degree alteration.

Kit Contents:

A	Top Wishbones Front	x 2	E	Lower Damper Bolts	x 2
B	Top Wishbones Rear	x 2	F	Lower Pivot Bolts	x 2
C	Trunnion Bolts + Shims	x 4	G	Lower Arm Fittings	x 4
D	Fulcrum Bolts & Spacers	x 2	H	Bump Stops	x 2



Assembly Schematic:



1. Wishbone Pivot
2. Camber Shims
3. Pivot Studs/Screws
4. Rear Lower Arm
5. Fulcrum Pin & Spacer
6. Front Lower Arm
7. Lower Arm Spacers & Bolts
8. Lower Pivot Bolt
9. Lower Ball Joint
10. Top Wishbone Arms Ft & Rr
11. Axle Assembly
12. Upright Trunnion
13. Top Joint Bolts & Castor Shims
14. Torsion Bar
15. ARB Link

Prior to fitting:
The car should be on a smooth hard level surface
Measure and note the height of the front centre hub to the middle of the wheel arch. (Image 1)

Image 1: Noting Ride Height

With the handbrake on, raise the front of the vehicle using a jack and secure using axle stands positioned appropriately under the chassis rails.
Safe workshop practice should be followed.

Disassembly:
Remove the wheels, brake calipers, hubs and disassemble the front suspension including the torsion bar. Leaving only the steering rack (with track rod ends), brake hose attached to the body and anti roll bar in place (if not changing bushes). (See Image 2)

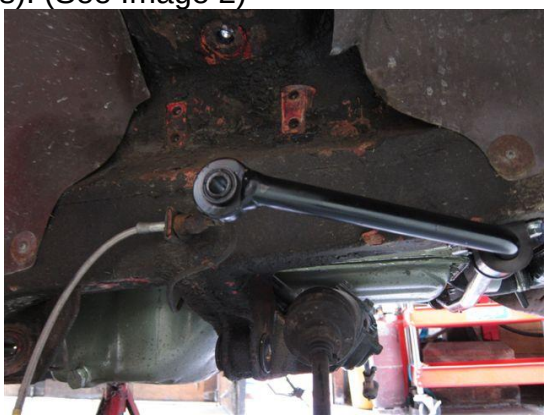


Image 2: Strip Down

Set aside calipers, hubs and dampers.
Remove the bump stop from the body mounts.
Clean the body surfaces around & behind the upper wishbone pivot for shims.
Clean, check lower arms for wear in the outer holes & splines for wear;
inspect all reused suspension components Wishbone Pivot Bar, Torsion Bars, Tie Bars and paint as required.
Pre-Assembly:

Pre assemble the kit by attaching the upper wishbone arms to the wishbone pivots using new bushes (See Image 3).

Image 3: Lose assembly of the upper wishbone

Fit a new bush in the rear lower arm.
Fit a new fulcrum bush to the chassis and locate the fulcrum bolts (Pack D) into the rear lower arm (see Image 4)

Image 4: Fit Fulcrum bolt and tie bar bush

Place all fixings into place (do not tighten)

Assembly
Fit the bump stop.
Loosely secure the upper wishbone pivot mounting to the car.
Loosely secure the rear of the tie bar to the chassis. (See Image 5)

Image 5: Securing Tie Bar

Drop the bolt into the yoke of the front Tie Bar. Secure loosely using lock nut. Locate the rear lower arm through the chassis bush, add fulcrum spacer ring. (See Image 6)

Image 6: Locating the lower arms

Place the front lower arm into place, (Pack G), with spacers between. Attach the lower ball joint of the upright to the lower arms by placing the shoulder bolt, (Pack F), through the assembly from the front. (See Image 7)

Image 7: Lower Ball Joint Location

Swing the upper trunnion into place between the two sections of the top wishbone, locating with the bolts and shims, Pack C, as follows, 2 thick ones between the rear arm and the trunnion, the rest between trunnion and front arm. (See Image 8)

Image 8: Fitting Upper Trunnion

This should give a nominal setting of 5 degrees of castor. This can be roughly checked (see image 9)

Image 9: Checking Castor

Fit anti roll bar link.
Locate the damper, secure loosely from inside the engine bay, raise the suspension assembly to meet the lower damper mount and secure with the bolt and cone using Pack E (see image 10).

Image 10: Securing the Damper

Leave on full droop.
Fit hub assembly, disc and calliper (see image 11)

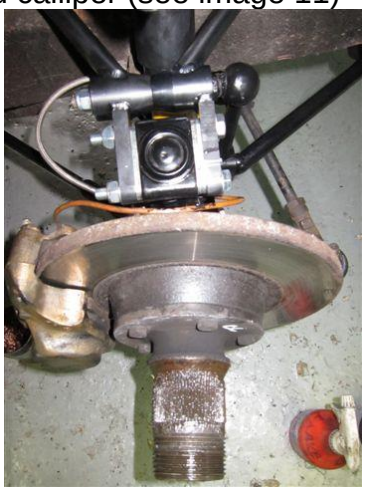


Image 11: Re-fit Hub, Caliper & Disc

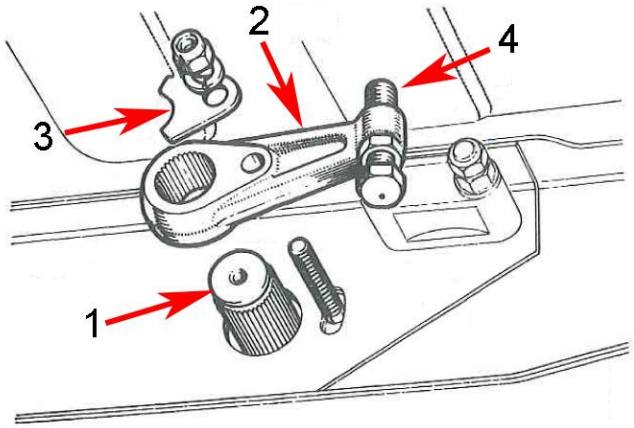
Raise the assembly so the lower arm is horizontal. Set the camber by placing shims between the top wishbone pivot and the body (See Images 12 & 13).

Image 12: Camber Shims, Image 13: Locating Shims behind Pivot

Reassemble the torsion bar to the lower arm and the vernier arm, locating plate. (See Image 14)

Image 14: Torsion Bar Vernier

Secure the front and rear of the tie bar
Re attach anti roll bar once both sides are complete.
Lower the car to assess ride height, measure and compare with previous setting and adjust accordingly. (See diagram & workshop manual)



1. Torsion Bar
2. Vernier Lever
3. Retaining Plate
4. Vernier Adjusting Screw

Adjust ride height as follows:

Slacken adjuster locking nut, remove torsion lever from splines
For LH Torsion Bar rotate anti-clockwise spline
For RH Torsion Bar Rotate clockwise one spline
Re attach
Measure ride height, Optimum ride height 14 ½”
When achieved secure lock nuts.

For driver safety and in order to derive the full benefits of the MGC Ball Jointed suspension we recommend that a professional four wheel alignment is carried out following installation.

NB Exercise caution when conducting road tests, taking time to become accustomed to the changes and remembering to check all settings, tightening nuts and bolts as necessary prior to and after initial test drive. When making adjustments ensure they are replicated on both sides of the axle. Nyloc nuts should be used once only and the correct reassembly procedure followed. If you require additional nyloc nuts in order to carry out adjustments, please contact our spares team.

Troubleshooting:

Should you require technical assistance at any point either during assembly or whilst carrying out final adjustments please do not hesitate to contact our technical sales team, weekdays 9am to 5.30pm or Saturday 9am to 12 noon on 00 44 (0) 1954 231318 or via email sales@mgocspares.co.uk