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REAR SUSPENSION (G2341723)

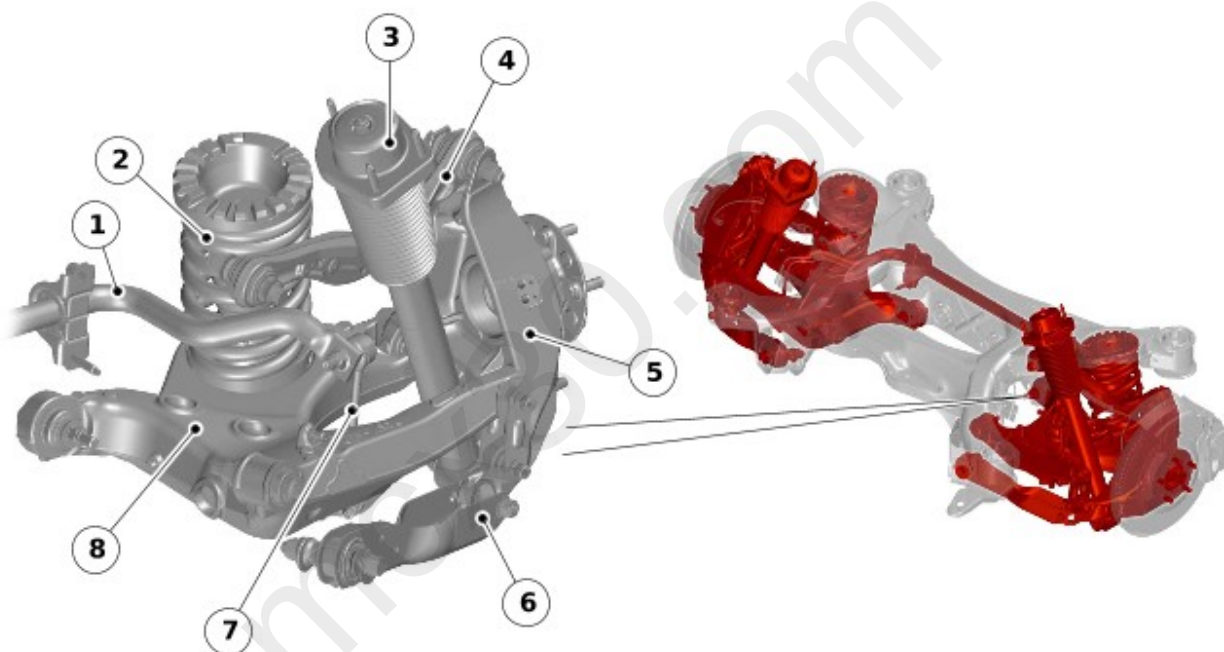
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COMPONENT LOCATION

COMPONENT LOCATION - 1 OF 2 - COIL SUSPENSION

 NOTE:

Rear left suspension components shown, rear right suspension components are similar.



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ITEM	DESCRIPTION
1	Stabilizer bar
2	Coil spring
3	Shock absorber
4	Upper control arm
5	Wheel knuckle, wheel hub and bearing assembly
6	Tie arm

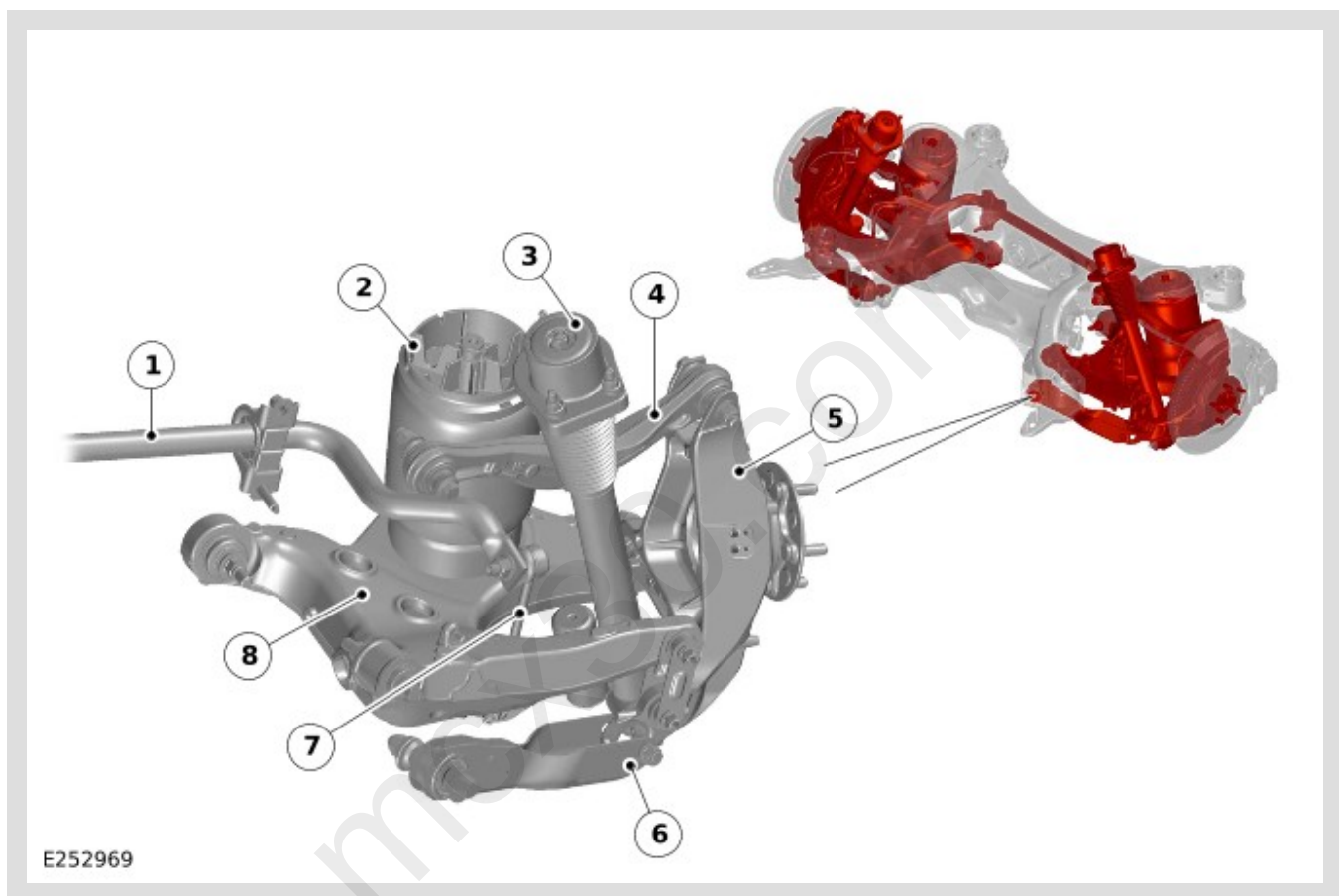
ITEM	DESCRIPTION
7	Stabilizer link
8	Lower control arm

COMPONENT LOCATION - 2 OF 2 - AIR SUSPENSION



NOTE:

Rear left suspension components shown, rear right suspension components are similar.



ITEM	DESCRIPTION
1	Rear stabilizer bar
2	Air spring
3	Shock absorber
4	Upper control arm
5	Wheel knuckle, wheel hub and bearing assembly
6	Tie arm
7	Stabilizer link
8	Lower control arm

OVERVIEW

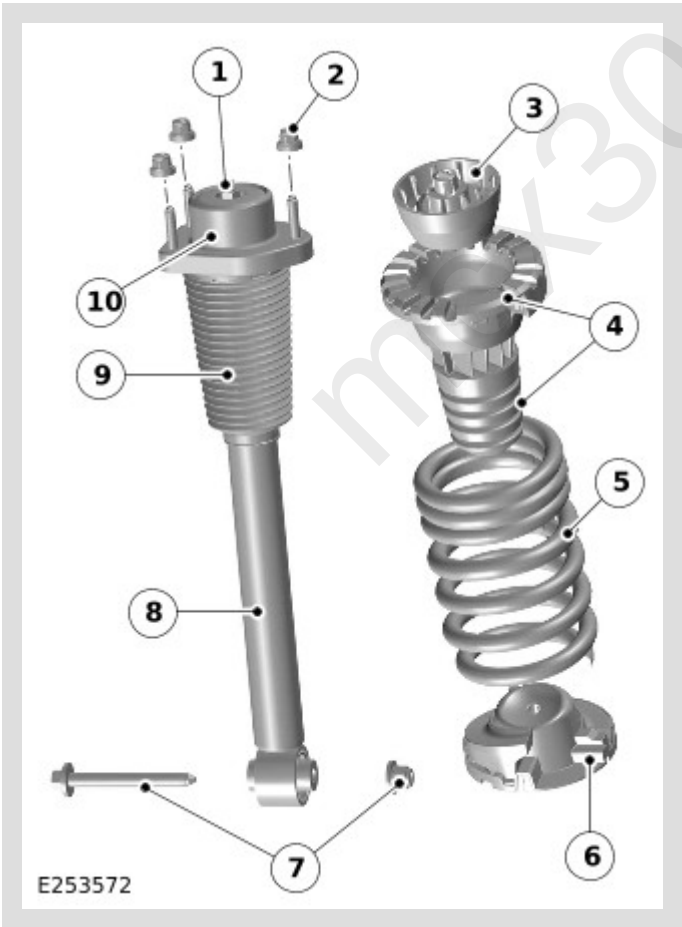
An advanced multi-link rear suspension is introduced providing superior dynamics and refinement with enhanced wheel articulation. The compact design of the rear suspension allows for a generous luggage compartment area. Lightweight aluminum chassis components are used extensively to advance suspension performance by increasing stiffness and reducing unsprung weight, while also reducing total vehicle weight.

The vehicle rear suspension is either equipped with:

- A shock absorber with coil spring. (Not available on Model 110 vehicles)
- An adaptive shock absorber with an air spring. (Standard equipment on Model 110 vehicles)
 - For additional information, refer to: [Vehicle Dynamic Suspension](#) (204-05 Vehicle Dynamic Suspension, Description and Operation).

DESCRIPTION

COIL SPRING AND SHOCK ABSORBER

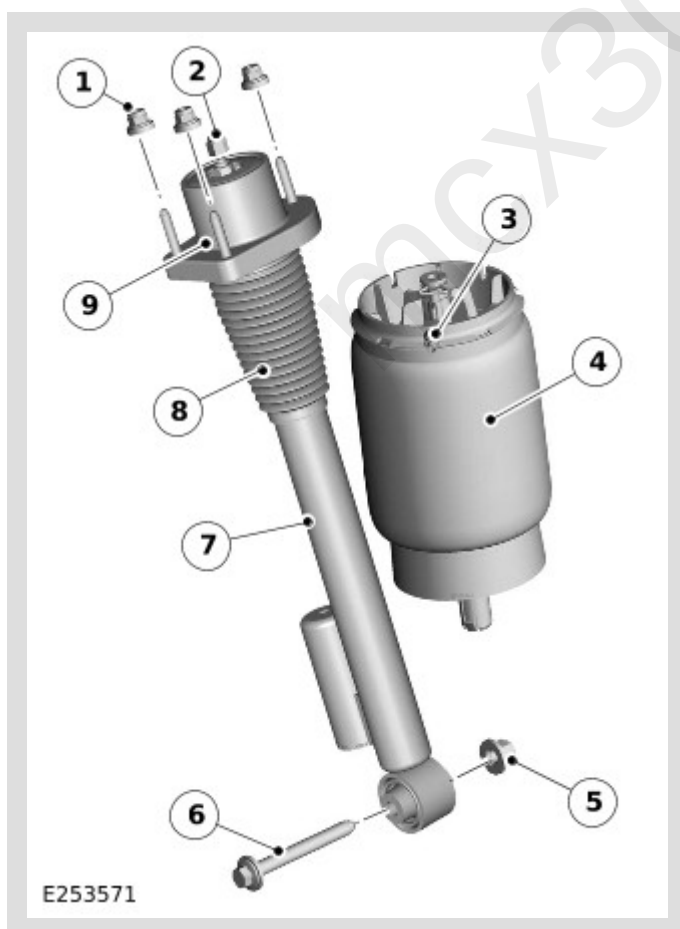


ITEM	DESCRIPTION
1	Nut - Shock absorber rod

ITEM	DESCRIPTION
2	Nut - Shock absorber to vehicle body
3	Upper spring cone
4	Upper spring seat and secondary spring aid
5	Coil spring
6	Lower spring seat and isolator assembly
7	Nut and bolt - Shock absorber to wheel knuckle
8	Shock absorber
9	Gaiter
10	Top mount

The coil springs and shock absorbers have been selected to deliver comfort in both on and off road driving conditions. The rear suspension design has been optimized with a specially developed secondary spring aid, which helps to deliver optimum ride and stability when the vehicle is heavily laden. The secondary spring aid is mounted inside the coil spring at the top of the shock absorber strut. The rubber spring aid has a complex design which acts as a supplementary spring/damper as the coil spring approaches the limit of its travel.

AIR SPRING AND ADAPTIVE SHOCK ABSORBER



ITEM	DESCRIPTION
1	Nut - Adaptive shock absorber to vehicle body
2	Nut - Adaptive shock absorber rod
3	Air connector
4	Air spring
5	Nut - Adaptive shock absorber to wheel knuckle
6	Bolt - Adaptive shock absorber to wheel knuckle
7	Adaptive shock absorber
8	Gaiter
9	Top mount

The air springs are located inboard of the adaptive shock absorbers and are retained between the subframe and the lower control arm.

Each air spring comprises a top cap assembly, a spring sleeve and a base piston. The spring sleeve is attached to the top cap and the piston with crimp rings. The spring sleeve is made from a flexible rubber material which allows the sleeve to roll up and down the air spring piston as the vehicle changes height. The top cap assembly comprises the plastic top cap with a spigot which protrudes through a hole in the subframe. This spigot includes a timing feature to provide the correct orientation of the air spring and is attached to the subframe with a spring clip.

On the side of the top cap is a connector which allows for the attachment of the air pipe from the valve block. The piston is made from plastic and is shaped to allow the spring sleeve to roll over its outer diameter. The base of the piston has a spigot with an integral clip to locate into the lower control arm.

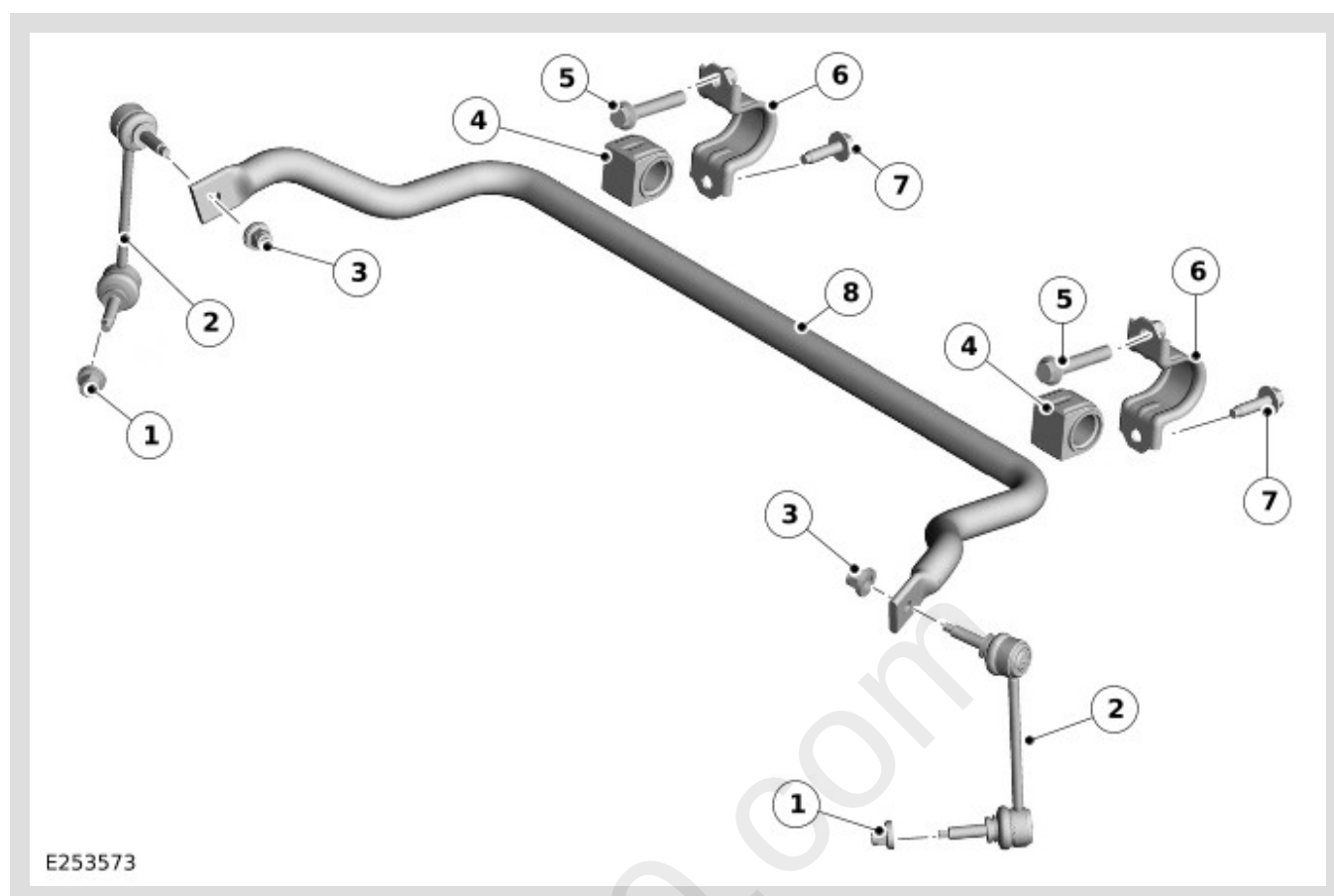
ADAPTIVE SHOCK ABSORBER

The adaptive shock absorber assembly is a mono tube design, the lower end of the shock absorber is attached to the wheel knuckle through a bush. The adaptive shock absorber top mount is secured to the vehicle body with 3 nuts.

The adaptive shock absorber incorporates a specially tuned elastomer that controls the suspension bump travel and optimizes the vehicle ride and handling. The shock absorber rod uses a stop to limit the rebound travel of the suspension.

The shock absorber functions by restricting the flow of hydraulic fluid through internal galleries within the shock absorber. The shock absorber rod moves axially within the shock absorber. The movement of the shock absorber is limited by the flow of fluid through the galleries, providing damping of undulations in the terrain. The shock absorber rod is sealed at its exit point from the shock absorber body to maintain the fluid within the unit and to prevent the ingress of dirt and moisture. The seal also incorporates a wiper to keep the rod clean.

STABILIZER BAR AND LINKS



ITEM	DESCRIPTION
1	Nut - Stabilizer bar link to lower control arm
2	Stabilizer link - left and right
3	Nut - Stabilizer bar link to stabilizer bar
4	Bush - Stabilizer bar to subframe
5	Bolt - Subframe to stabilizer bar bracket
6	Bracket - Stabilizer bar to subframe
7	Bolt - Stabilizer bar bracket to subframe
8	Stabilizer bar

The stabilizer bar is fabricated from hardened steel tube. The stabilizer bar operates, through a pair of links, from their attachment to the lower control arm.

The stabilizer bar is mounted on the subframe rear cross member and is attached with 2, compression rubber bushes which wind up torsionally in operation. The bushes are bonded to the bar to allow a better system performance. Brackets, which are pressed onto the bushes, are attached to the cross member with bolts.

The links have a ball joint at each end, are equipped with hardened steel washers pressed onto the ballpins at both ends. The bottom ball joint is attached to the link at 90° to the link axis. The ball joint is located in a hole in the lower control arm and secured with the hardened steel washer on 1 side of the interface and a self-locking nut on the other. The top ball joint is attached to the link at 90° to the link axis. The ball joint is located in a hole in the end of the stabilizer bar and secured with the hardened steel washer on 1 side of the interface and the self-locking nut on other.

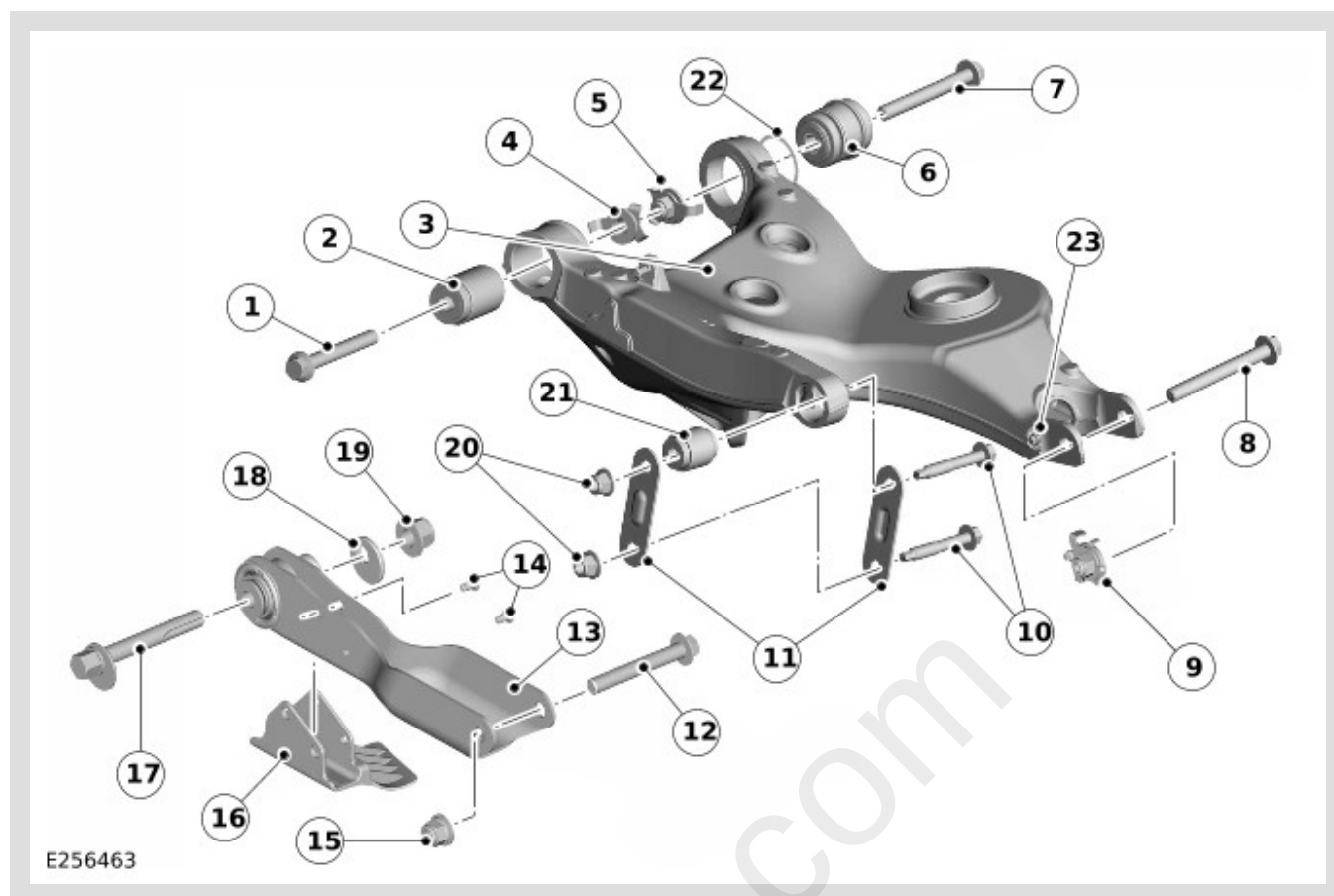
UPPER CONTROL ARM



ITEM	DESCRIPTION
1	Bolt - Upper control arm to subframe
2	Bush - Upper control arm to subframe
3	Flag-nut - Upper control arm to subframe
4	Upper control arm
5	Bolt - Upper control arm to wheel knuckle
6	Bush - Upper control arm to wheel knuckle
7	Nut - Upper control arm to wheel knuckle

The upper control arm is made from forged steel with a machined bush housing on both ends. A bush is pressed into each of the housings. The inner end locates in brackets on the upper section of the subframe. The outer end of the control arm locates in lugs at the top of the wheel knuckle.

LOWER CONTROL ARM AND TIE ARM



ITEM	DESCRIPTION
1	Bolt - Lower control arm to subframe
2	Bush - Lower control arm to subframe
3	Lower control arm
4	Flag nut and washer - Lower control arm to subframe
5	Flag nut and washer - Lower control arm to subframe
6	Cross axis joint - Lower control arm to subframe
7	Bolt - Lower control arm to subframe
8	Bolt - Lower control arm to wheel knuckle
9	Flag nut - Lower control arm to wheel knuckle
10	Bolt - Integral link
11	Integral link - Lower control arm to wheel knuckle
12	Bolt - Tie arm to wheel knuckle
13	Tie arm
14	Plastic retainer - Air deflector

ITEM	DESCRIPTION
15	Nut - Tie arm to wheel knuckle
16	Air deflector - Tie arm
17	Toe adjustment bolt - Tie arm to subframe
18	Toe adjustment washer - Tie arm to subframe
19	Toe adjustment nut - Tie arm to subframe
20	Nut - Integral link
21	Bush - Integral link
22	Retaining ring
23	Screw flag nut to lower control arm

LOWER CONTROL ARM

The lower control arm is cast aluminum with a bush and cross axis joint pressed into the inner section of the control arm. The bush and the cross axis joint provides for the attachment to the subframe. The bushes are located between brackets on the subframe and secured with bolts and nuts. The lower control arm has a platform which provides the attachment for the fitting of either a coil or air spring, and a location hole for the attachment of the stabilizer link.

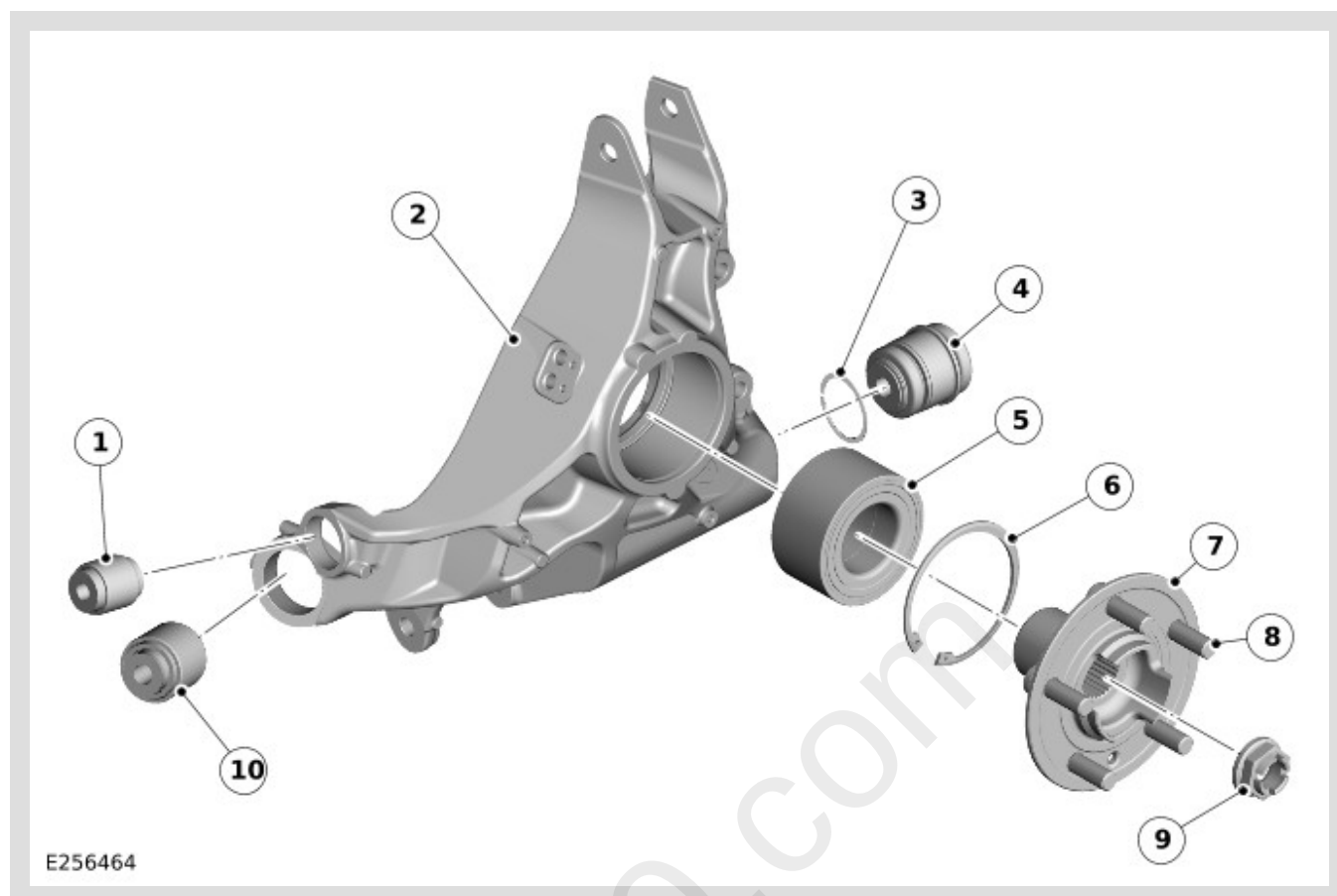
The outer section of the control arm has a second bush, that attaches to the forward end of the wheel knuckle by links which provide castor control. Lugs at the rearward end of the lower control arm attached to the cross axis joint within the rear wheel knuckle.

TIE ARM

The tie arm is pressed steel construction with a bush, pressed into a machined bore.

The inner bush locates between brackets on the subframe and is secured with a special eccentric bolt, washer and nut. This allows for the adjustment of the rear wheel toe. Rotation of the bolt moves the eccentric head within a recessed slot in the bracket, and allows toe adjustment within the set limits.

WHEEL KNUCKLE, WHEEL HUB AND BEARING ASSEMBLY



ITEM	DESCRIPTION
1	Bush - Integral link
2	Wheel knuckle
3	Retaining ring
4	Cross axis joint -Lower control arm to wheel knuckle
5	Wheel hub bearing
6	Circlip - Wheel hub bearing
7	Wheel hub
8	Wheel stud (quantity 5)
9	Nut - Rear halfshaft to wheel hub
10	Bush - Tie arm to wheel knuckle

The rear wheel knuckle is an aluminum casting which provides for the attachment of the rear upper and lower control arms and the tie arm. The rear wheel knuckle also provides the mounting locations for the wheel hub and wheel bearing assembly.

The wheel hub assembly comprises the wheel hub and the bearing. A wheel bearing is pressed into the wheel knuckle with a circlip added to secure it. The wheel hub is pressed into the wheel bearing. The 5 studs are pressed into the wheel hub and provide for the attachment for the brake disc and road wheel. The wheel hub has a splined center bore which mates with corresponding splines on the halfshaft. Rotation of the halfshaft is passed through the splines to the wheel hub, which rotates on the ball bearing.

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