



## TECHNICAL BULLETIN

**Model/Derivative:**

All models

**No:** TB0061 Issue 3

**Date:** 22.11.2004

**Section:** STEERING / SUSPENSION

**Title:**

WHEEL ALIGNMENT AND GEOMETRY DATA

**Affected range:**

All vehicles

**Description:**

This bulletin provides wheel alignment and geometry data for the entire model range.

In addition to the information provided here, a wall chart will be provided containing geometry figures and tyre pressures.

**Bulletin re-issue information:**

**This bulletin includes additional geometry data for new model introductions and revised geometry tolerances for all models (see note). Information on load weight compensation is also provided.**

**NOTE! The data provided refers to current and recent models. For vehicles produced before 1999 model year, refer to the relevant workshop manual.**

**Action required:** (for attachment – see page 2)

The attachments should be copied and made available to any technician involved in checking wheel alignment and geometry, ensure that the data tables provided are located next to the geometry equipment. Please ensure that the new / modified figures provided here are applied immediately, any previous data must be destroyed.

It should be noted that MG and Rover versions on the same platform e.g. Rover 75 & MG ZT (in most instances) have different geometry settings.

To enable easier data reference for the user, a wipe clean wall chart containing geometry figures and tyre pressures will be provided shortly.

*NOTE: The data provided here may differ from the information provided in trade publications and alignment equipment manufacturers manuals. We will shortly be in touch with these sources to advise amendment to their data. Until equipment data can be updated, the revised MG Rover figures supplied should in future be the only data used.*

**IMPORTANT:**

**Before commencing wheel alignment and geometry checking, ensure that all tyre pressures are correct.**

**The readings provided assume that the vehicle has a full tank of fuel and in an unladen condition.**

**The owner should be encouraged to fill the fuel tank prior to the geometry check being carried out.**

**If this is impractical, a weight compensation formula is provided later in this bulletin.**

**Parts information:**

Not applicable

**Warranty information:**

Not applicable

**Detail:**

Attached to this bulletin are tyre pressure and geometry tables. It is important that tyre pressures are checked and corrected if required before commencing geometry checking.

*NOTE: The pressures quoted are (cold) and for normal driving conditions.*

Most geometry figures provided with this bulletin are shown with a tolerance. Some such as 'Total Toe' have reduced since previous publications. The new tolerances provided for 'Total Toe' has been designed to allow a precise setting and improve customer satisfaction, always aim to set as near to the nominal figure as possible particularly where tyre wear is an issue. Some geometry settings are provided for information and checking only since they cannot be adjusted, if these are incorrect, it may indicate accident damage etc.

The table figures provided assume that the vehicle has a full tank of fuel and is in an unladen condition. The owner should be encouraged to fill the fuel tank prior to the geometry check being carried out. If this is impractical, a weight compensation method is required. The recommended method and formula is provided here.

To compensate for a part full fuel tank, the boot space must be weighted accordingly. Sufficient weights should be placed as far forward in the boot space as possible. The table below suggests the compensation weight required, any convenient (clean) weight can be used for this purpose. For convenience, water can be used for weight compensation purposes providing suitable clean containers are used.

1 kg of water = 1 litre of water (assuming water temperature is approximately 25° and measured at 1 standard atmospheric pressure).

The table shows the compensation weight in kg or litres (if water is used)

**Kg / Litre of water**

	<b>¾ full fuel tank</b>	<b>½ full fuel tank</b>	<b>¼ full fuel tank</b>	<b>Empty fuel tank</b>
CityRover	5	10	15	20
Rover 25 / MG ZR / Streetwise	8	16	24	32
Rover 45 MG ZS	9	18	27	36
Rover 75 / MG ZT including Tourer & MG ZT-T & V8	10	20	30	40
MG TF / MGF	10	20	30	40

See attachments for geometry figures & tyre pressures tables – all models

- Attachment 1 – normal tyre pressures displayed as bar/(lbf/in<sup>2</sup>)
- Attachment 2 – geometry displayed in degrees & minutes
- Attachment 3 – geometry displayed in decimal degrees

**GEOMETRY TABLE NOTES:**

Two geometry tables are provided to accommodate the different types of geometry equipment available, i.e. if your equipment displays degrees & minutes, use table attachment 2, if your equipment displays decimal degrees, use attachment 3.

In the section containing Streetwise, Rover 25, MG ZR rear 'Camber' and 'Total toe', references are made to 04 MY. This refers to a design change of the rear H frame at 04 model year introduction, see also Technical Bulletin TB0139 dated 19.11.04.

In the section containing Rover 45 'Trim heights' and 'Camber', references are made to 02.5 MY. This refers to a suspension change during 02.5 model year affecting trim heights and geometry (all derivatives). The change also included spring changes and deletion of rear anti-roll bar on 1.4, 1.6 & 1.8 vehicles.

# TYRE PRESSURES

Pressures (cold) normal driving conditions

MODEL / DERIVATIVE		Tyre pressures – bar/(lbf/in <sup>2</sup> )					
City Rover		175/60 R14					
	F	2.3 (34)					
	R	1.9 (28)					
Streetwise 1.4 & 1.6		195/60 R15	205/50 R16	205/45 R17			
	F	2.1 (30)	1.9 (28)	1.9 (28)			
	R	1.9 (28)	1.8 (26)	1.9 (28)			
Streetwise 1.8 & 2.0 TD	F	2.1 (30)	2.2 (32)	2.3 (34)			
	R	1.9 (28)	1.8 (26)	1.9 (28)			
Rover 25 1.1, 1.4 & 1.6 MG ZR 105, 120 & 160		175/65 R14	185/65 R14	185/55 R15	205/45 R16	205/50 R16	205/45 R17
	F	2.1 (30)	1.9 (28)	2.1 (30)	2.1 (30)	1.9 (28)	1.9 (28) 03 MY 2.1 (30) 04 MY
	R	2.1 (30)	1.9 (28)	2.1 (30)	2.1 (30)	1.8 (26)	1.9 (28) 03 MY 2.1 (30) 04 MY
MG ZR 120 Stepspeed	F	-	1.9 (28)	2.1 (30)	2.1 (30)	2.1 (30)	2.1 (30)
	R	-	1.9 (28)	2.1 (30)	2.1 (30)	1.8 (26)	2.1 (30)
Rover 25 TD MG ZR TD	F	-	2.1 (30)	2.3 (33)	2.2 (32)	2.2 (32)	2.3 (33)
	R	-	2.1 (30)	2.1 (30)	2.1 (30)	1.8 (26)	1.9 (28)
Rover 45 1.4 & 1.6 MG ZS 110 & 120		185/65 R14	195/55 R15	195/60 R15	205/45 R16	205/50 R16	205/45 R17
	F	1.9 (28)	2.1 (30)	2.2 (32)	2.3 (33)	2.1 (30)	2.1 (30)
	R	1.9 (28)	2.1 (30)	2.1 (30)	2.1 (30)	2.1 (30)	2.1 (30)
Rover 45 2.0 & 2.5 V6 MG ZS 180	F	-	2.2 (32)	-	2.3 (33)	-	2.3 (33)
	R	-	2.1 (30)	-	2.1 (30)	-	2.1 (30)
Rover 45 TD MG ZS TD	F	2.1 (30)	2.2 (32)	-	2.3 (33)	2.3 (33)	2.3 (33)
	R	2.1 (30)	2.1 (30)	-	2.1 (30)	2.1 (30)	2.1 (30)
Rover 75 1.8, 2.0 & 2.5 MG ZT 120, 160, 180 & 190		195/65 R15	215/55 R16	215/50 R17	225/45 R18		
	F	2.2 (32)	2.2 (32)	2.3 (34)	2.2 (32)		
	R	2.1 (30)	2.1 (30)	2.2 (32)	2.2 (32)		
Rover 75 TD MG ZT TD	F	2.3 (34)	2.3 (34)	-	2.2 (32)		
	R	2.2 (32)	2.2 (32)	-	2.2 (32)		
Rover 75 1.8 Tourer 1.8, 2.0 & 2.5 MG ZT-T 120, 160, 180 & 190	F	2.2 (32)	2.2 (32)	2.3 (34)	2.2 (32)		
	R	2.2 (32)	2.2 (32)	2.2 (32)	2.2 (32)		
Rover 75 Tourer TD	F	2.3 (34)	2.3 (34)	-	2.2 (32)		
	R	2.3 (34)	2.3 (34)	-	2.2 (32)		
Rover 75/75 Tourer V8 MG ZT/MG ZT-T 260	F	-	-	2.3 (34)	2.3 (34)		
	R	-	-	2.8 (40)	2.4 (36)		
MG TF		185/55 R15	195/45 R16	205/50 R15	215/40 R16		
	F	1.8 (26)	1.8 (26)	-	-		
	R	-	-	2.5 (36)	2.5 (36)		
MGF	F	1.8 (26)	-	-	1.7 (24)		
	R	-	-	1.9 (28)	1.9 (28)		

## WHEEL ALIGNMENT & GEOMETRY - ALL MODELS (Degrees & Minutes)

MODEL / DERIVATIVE	FRONT						REAR				
	Trim height (±10 mm)	Camber	Maximum cross camber differential	Castor	KPI	Total toe	Trim height (±10 mm)	Camber	Maximum cross camber differential	Thrust	Total toe
City Rover	388	-10' + 50' -0'	1° 00'	2° 30' ± 1° 00'	11° 48' ± 1° 00'	0° 02' to 0° 32'	388	0° 00' ± 0° 30'	1° 00'	0° 00' ± 0° 16'	0° 30' ± 0° 30'
Streetwise	401	-0° 02' ± 0° 45'	1° 00'	2° 32' ± 1° 00'	11° 40' ± 1° 00'	0° 00' ± 0° 6'	401	Pre 04 MY -0° 20' ± 0° 45'	1° 00'	0° 00' ± 0° 06'	Pre 04 MY 0° 09' ± 0° 6'
								Post 04 MY -1° 20' ± 0° 45'			Post 04 MY 0° 18' ± 0° 6'
Rover 25	386	-0° 20' ± 0° 45'	1° 00'	1° 42' ± 1° 00'	12° 07' ± 1° 00'	0° 00' ± 0° 6'	386	Pre 04 MY -0° 20' ± 0° 45'	1° 00'	0° 00' ± 0° 06'	Pre 04 MY 0° 16' ± 0° 6'
								Post 04 MY -1° 20' ± 0° 45'			Post 04 MY 0° 25' ± 0° 6'
MG ZR & Rover 25 Gti	366	-0° 40' ± 0° 45'	1° 00'	2° 38' ± 1° 00'	12° 29' ± 1° 00'	0° 00' ± 0° 6'	366	Pre 04 MY -0° 20' ± 0° 45'	1° 00'	0° 00' ± 0° 06'	Pre 04 MY 0° 16' ± 0° 6'
								Post 04 MY -1° 20' ± 0° 45'			Post 04 MY 0° 34' ± 0° 6'
Rover 45	Pre 02.5 MY 365	Pre 02.5 MY 0° 00' ± 0° 45'	1° 00'	1° 38' ± 1° 00'	Pre 02.5 MY 10° 42' ± 1° 00'	0° 00' ± 0° 6'	Pre 02.5 MY 373	Pre 02.5 MY -0° 50' ± 0° 45'	1° 00'	0° 00' ± 0° 06'	0° 22' ± 0° 6'
	Post 02.5 MY 355	Post 02.5 MY 0° 13' ± 0° 45'			Post 02.5 MY 10° 55' ± 1° 00'		Post 02.5 MY 363	Post 02.5 MY -0° 56' ± 0° 45'			
MG ZS	345	-0° 20' ± 0° 45'	1° 00'	4° 15' ± 1° 00'	11° 10' ± 1° 00'	0° 00' ± 0° 6'	353	-1° 03' ± 0° 45'	1° 00'	0° 00' ± 0° 06'	0° 22' ± 0° 6'
Rover 75/75 Tourer	408	-0° 21' ± 0° 45'	1° 00'	3° 27' ± 1° 00'	12° 26' ± 1° 00'	0° 10' ± 0° 6'	399	-0° 30' ± 0° 45'	1° 00'	0° 00' ± 0° 06'	0° 22' ± 0° 6'
Rover 75/75 Tourer (V8)	408	-1° 10' ± 0° 15'	1° 00'	3° 24' ± 1° 00'	11° 46' ± 1° 00'	0° 12' ± 0° 6'	400	-1° 45' ± 0° 15'	1° 00'	0° 00' ± 0° 06'	0° 36' ± 0° 6'
MG ZT/ZT-T	388	-0° 30' ± 0° 45'	1° 00'	4° 11' ± 1° 00'	12° 36' ± 1° 00'	0° 00' ± 0° 6'	379	-1° 00' ± 0° 45'	1° 00'	0° 00' ± 0° 06'	0° 22' ± 0° 6'
MG ZT/ZT-T 260	398	-1° 10' ± 0° 15'	1° 00'	3° 30' ± 1° 00'	11° 52' ± 1° 00'	0° 12' ± 0° 6'	390	-2° 05' ± 0° 15'	1° 00'	0° 00' ± 0° 06'	0° 36' ± 0° 6'
MGF	368	-0° 30' ± 0° 30'	1° 00'	5° 6' ± 1° 00'	11° 40' ± 1° 00'	-0° 20' ± 0° 6'	363	-1° 00' ± 0° 30'	1° 00'	0° 00' ± 0° 06'	0° 20' ± 0° 6'
MGF Trophy	348	-1° 00' ± 0° 30'	1° 00'	5° 28' ± 1° 00'	12° 11' ± 1° 00'	-0° 10' ± 0° 6'	343	-1° 28' ± 0° 30'	1° 00'	0° 00' ± 0° 06'	0° 20' ± 0° 6'
MG TF without Sports Pack 1	358	-0° 10' ± 0° 30'	1° 00'	5° 16' ± 1° 00'	11° 24' ± 1° 00'	0° 00' ± 0° 6'	353	-1° 14' ± 0° 30'	1° 00'	0° 00' ± 0° 04'	0° 30' ± 0° 6'
MG TF with sports pack 1	348	-0° 25' ± 0° 30'	1° 00'	5° 28' ± 1° 00'	11° 40' ± 1° 00'	0° 00' ± 0° 6'	343	-1° 33' ± 0° 30'	1° 00'	0° 00' ± 0° 04'	0° 30' ± 0° 6'

## WHEEL ALIGNMENT & GEOMETRY - ALL MODELS (Decimal Degrees)

MODEL / DERIVATIVE	FRONT						REAR				
	Trim height	Camber	Maximum cross camber differential	Castor	KPI	Total toe	Trim height	Camber	Maximum cross camber differential	Thrust	Total toe
City Rover	388	-0.17° + 0.83° - 0°	1.0°	2.5° ± 1.0°	11.8°	0.03° to 0.53°	388	0.0° ± 0.5°	1.0°	0.0° ± 0.27°	0.5° ± 0.5°
Streetwise	401	-0.03° ± 0.75°	1.0°	2.53° ± 1.0°	11.67° ± 1.0°	0.0° ± 0.1°	401	Pre 04 MY -0.33° ± 0.75° Post 04 MY -1.33° ± 0.75°	1.0°	0.0° ± 0.10°	Pre 04 MY 0.0015° ± 0.1° Post 04 MY 0.3° ± 0.1°
Rover 25	386	-0.33° ± 0.75°	1.0°	1.70° ± 1.0°	12.12° ± 1.0°	0.0° ± 0.1°	386	Pre 04 MY -0.33° ± 0.75° Post 04 MY -1.33° ± 0.75°	1.0°	0.0° ± 0.10°	Pre 04 MY 0.27° ± 0.1° Post 04 MY 0.42° ± 0.1°
MG ZR & Rover 25 Gti	366	-0.67° ± 0.75°	1.0°	2.63 ± 1.0°	12.48° ± 1.0°	0.0° ± 0.1°	366	Pre 04 MY -0.33° ± 0.75° Post 04 MY -1.33° ± 0.75°	1.0°	0.0° ± 0.10°	Pre 04 MY 0.26° ± 0.1° Post 04 MY 0.57° ± 0.1°
Rover 45	Pre 02.5 MY 365 Post 02.5 MY 355	Pre 02.5 MY 0.0° ± 0.75° Post 02.5 MY 0.22° ± 0.75°	1.0°	1.63° ± 1.0°	Pre 02.5 MY 10.7° ± 1.0° Post 02.5 MY 10.92° ± 1.0°	0.0° ± 0.1°	Pre 02.5 MY 373 Post 02.5 MY 363	Pre 02.5 MY -0.83° ± 0.75° Post 02.5 MY -0.93° ± 0.75°	1.0°	0.0° ± 0.1°	0.37° ± 0.1°
MG ZS	345	-0.33° ± 0.75°	1.0°	4.25° ± 1.0°	11.17° ± 1.0°	0.0° ± 0.1°	353	-1.05° ± 0.75°	1.0°	0.0° ± 0.1°	0.37° ± 0.1°
Rover 75/75 Tourer	408	-0.35° ± 0.75°	1.0°	3.45° ± 1.0°	12.43° ± 1.0°	0.17° ± 0.1°	399	-0.5° ± 0.75°	1.0°	0.0° ± 0.1°	0.37° ± 0.1°
Rover 75/75 Tourer (V8)	408	-1.17° ± 0.25°	1.0°	3.4° ± 1.0°	11.77° ± 1.0°	0.2° ± 0.1°	400	-1.75° ± 0.25°	1.0°	0.0° ± 0.1°	0.6° ± 0.1°
MG ZT/ZT-T	388	-0.5° ± 0.75°	1.0°	4.18° ± 1.0°	12.6° ± 1.0°	0.0° ± 0.1°	379	-1.0° ± 0.75°	1.0°	0.0° ± 0.1°	0.37° ± 0.1°
MG ZT/ZT-T 260	398	-1.17° ± 0.25°	1.0°	3.5° ± 1.0°	11.87° ± 1.0°	0.2° ± 0.1°	390	-2.08° ± 0.25°	1.0°	0.0° ± 0.1°	0.6° ± 0.1°
MGF	368	-0.5° ± 0.5°	1.0°	5.1° ± 1.0°	11.67° ± 1.0°	-0.33° ± 0.1°	363	-1.0° ± 0.5°	1.0°	0.0° ± 0.1°	0.33° ± 0.1°
MGF Trophy	348	-1.0° ± 0.5°	1.0°	5.47° ± 1.0°	12.18° ± 1.0°	-0.17° ± 0.1°	343	-1.47° ± 0.5°	1.0°	0.0° ± 0.1°	0.33° ± 0.1°
MG TF without Sports Pack 1	358	-0.17° ± 0.5°	1.0°	5.27° ± 1.0°	11.4° ± 1.0°	0.0° ± 0.1°	353	-1.23° ± 0.5°	1.0°	0.0° ± 0.06°	0.5° ± 0.1°
MG TF with sports pack 1	348	-0.42° ± 0.5°	1.0°	5.47° ± 1.0°	11.67° ± 1.0°	0.0° ± 0.1°	343	-1.55° ± 0.5°	1.0°	0.0° ± 0.06°	0.5° ± 0.1°