

**\*SIMPLY THE BEST** *ALWAYS 1ST. WITH THE LATEST DESIGN BREAKTHROUGHS*

Actual Inventors/Patentees . . .

**WISHBONE** - Adjustable Ball Joint. **STRUT** - Biggest/Quickest Adjustment. **BUSHINGS** - Single Wrench-On Car

**1888 847 9099** (24/7)

637 RIVER RD. JOHNS ISLAND  
SOUTH CAROLINA 29455 USA

[sales@kmacalignusa.com](mailto:sales@kmacalignusa.com)



**FINALLY — Resolve Costly / Premature / Excess “ EDGE ” Tire Wear !**

**Incl. 'M' & Latest  
F/G Models**

**BMW 1966  
(All)  
2024**

**New Generation  
ADJUSTABLE STRUT  
TOPS and BUSHINGS**

**Sedans, SUV,  
Wagons &  
MINI**

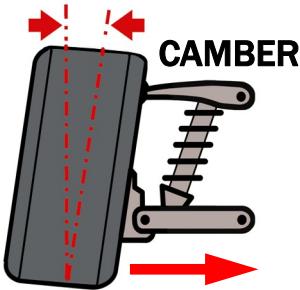
**Single wrench  
Adjustable**

**CAMBER & CASTER  
ADJUSTMENT KITS**

**ONLY TOE OEM!**

**Series 4**

**AT LAST “ FULL ” — Front and Rear Wheel Alignment — AGAIN MEANS WHAT IT SAYS**



**CAMBER**

**NEW CAR INDUSTRIES BEST KEPT SECRET**

Cost cutting & increasing speed of assembly lines means....

**ONLY FRONT & REAR TOE “ DIRECTIONAL ” ADJUSTMENT OEM !**

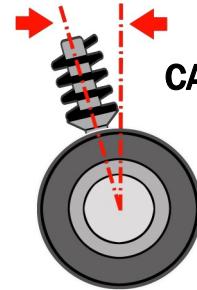
Even BMW 'M', Mercedes 'AMG'

No Essential Camber (or Caster) to adjust tire “ contact angles ”  
to resolve costly, premature excess edge load / wear.

Excess load also causing higher impact leading to ruptured  
side walls, rim damage.

**WITH KMAC—FIX IT RIGHT THE 1ST TIME !**

Re-instate adjustment for other than showroom height conditions — high cambered roads,  
wheel squat (load carrying, lowering), worn bushings. Wide profile tires, curb knock damage.



**CASTER**

## **FRONT & REAR ADJUSTABLE BUSHINGS, STRUT TOPS & ARMS**

Long term, Maintenance free - With twice load bearing area

**WORN EXPENSIVE OEM BUSHES ARE REPLACED AT SAME TIME WITH “ precisely ” adjustable**

Camber & Caster (Single Wrench). Most KMAC unique patented design

bushings being 2 axis / mono ball self aligning - without the use of air voids.

Allowing significant improvement to brake and steering response.

### **Front Adjusters**

#### **‘Strut’**

**Suspension** (In addition to)  
**Lower Arm Adjustable Bushings**  
Street Street/Race Full Race



Patented - Quickest / Biggest Adjustment

**Page 5 - 10**

### **Front Adjusters**

#### **Upper ‘A’ Arm**

**Suspension** (In addition to)  
**Lower Arm Adjustable Bushings**  
Camber & Caster



**'5' G30-38, F90, 95. '6' G32,X6,  
F96, 'M'. '7' G11, 12. '8' G14-16  
F01-18, F15-86, E70-72**

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### **Front / Rear**

#### **Bush kits**

Including “2-Axis / Mono Ball” designs  
Twice load bearing area of OEM



Patented - Quickest / Biggest Adjustment

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**WORLDS LARGEST  
RANGE**

**“BUSHINGS” — Popular / Quick Reference - See Pages 14, 15**

**Over 30 makes including . . .**

Acura, Alfa, Audi, Bentley, BMW, Camaro, Chrysler, Daihatsu, Datsun, Ford, General Motors, Holden,  
Honda, Hyundai, Infiniti, Iveco, Kia, Land Rover Discovery / Evoque, Lexus, Mazda, Mercedes, Mitsubishi,  
Mini, Mustang, Nissan, Opel, Pontiac, Porsche, Proton, Rover, Rolls Royce, Saab, Scion, Seat  
Skoda, Sprinter, Subaru, Suzuki, Tesla, Toyota, Triumph, Vito, Volkswagen, Volvo

**• COMPETITION PROVEN • BIGGEST ADJUSTMENT • NON SLIP LOCK SYSTEM •**

**OFTEN QUOTED “FULL FRONT AND REAR WHEEL ALIGNMENT”  
is actually only “Toe” - “directional” adjustment!**

(even the most exotic models AMG / Black Series or BMW ‘M’).

It's all to do with cost cutting & the ever increasing speed of assembly lines.

**No more ongoing trips to dealers or alignment shops or consistently trialing tire brands -**

**INSTEAD - RE INSTATE ADJUSTMENT FIX IT RIGHT THE 1st. TIME !**

**CAMBER** - Essential to adjust Tire contact angles resolving costly, premature excess edge load / wear which can also cause higher impact, ruptured side walls and rim damage.

**CASTER** - Correctly resolves steering pull, increases steering response, with better turn in and high speed directional control, along with reduced dive / lift under brake and acceleration.

**KMAC MAXIMUM POSSIBLE ADJUSTMENT RANGE**

... and its no wonder - Experience of Manufacturing Front & Rear Kits longer then any other company. Proudly “In-house” (not importing / relabeling), which also allows total control over quality & rapid / constant design improvements

**FRONT ADJUSTMENT**

‘STRUT’ SUSPENSION  
(Top Strut Mounts)  
CAMBER (& CASTER)  
Street, Street/Race, Full Race



UPPER WISHBONES  
Adjustable Bushings  
Retains OEM Hi Strength  
Forged arms !



**REAR ADJUSTMENT**

REAR PROVIDES Camber  
& ‘Extra’ Toe Adjustment  
(Precise single wrench)



ALSO TURNBUCKLE  
Adjustable Camber Arms  
Competition Rated  
Chromoly Steel not Alloy

All E36, 46, Z4  
E87-90  
MINI ‘01-‘24

**BUSHINGS: ALSO REPLACING THE HIGHEST WEARING & EXTRA FOR ‘TRACK’ DAYS or COLLISION DAMAGE**

The above Camber and Caster facility's are essential – the proper solution with capability of ongoing, precise adjustment to return vehicle to factory specs anytime. Result of day to day commuting - encountering high cambered roads, with excess passenger side edge wear, wheel “squat” through altered height - load carrying or lowering. Fitting wide profile tires / wheels or curb knock damage. The correct solution to resolving steering pull.

**TRACK DAYS** - With KMAC the combination of both “Adjustable” Strut Tops and also Front and Rear Bushing Kits allows to dial in extra negative Camber (and track width) to dramatically reduce understeer. Improving ability to hit those corner apex's every time and go deeper into the corners, with improved traction and braking response. In the pursuit of “front row of the grid” lap times.

**At KMAC we saw this need to design precisely adjustable bolt-on kits**, (like the OEM adjusters that were once available) and provide again the full range of adjustment capability. The unique patented designs for both the strut adjusters and bushings means KMAC kits can be fast and accurately adjusted (under load) direct on alignment rack. Bushings (prior to the KMAC design breakthrough of “Single Wrench” precise on car adjustment) has always required labour intensive bush removal and then the inaccurate and time consuming trialing / repositioning.

**The replacement bush kits provide Camber and Caster** for the Front and Camber for the Rear (with Extra Rear Toe adjustment to compensate for this new Camber facility). All are supplied with bush extraction and insertion tubes.

**Added bonus is (besides KMAC strut tops mounts) the 4 front and 4 rear KMAC bushes also replace the highest wearing suspension bushings.** And are designed for durability with more then twice the load bearing area. Most aftermarket brands merely eliminate the OEM air voids in the attempt to improve brake and steering response - but in reality can cause the opposite preventing the multi link / angled suspension arms of today's auto's traveling through their required arcs. Causing binding, locking up and actual breakage. KMAC bushings where required are Mono ball - 2 Axis / self aligning. Its no wonder situations in all out competition racing, where Race Safety scrutineers ongoing inspection / evaluation rule only KMAC bushings allowed to be used. The Rear Camber (and Toe) bushings also decrease rear end flex and can be fined tuned for maximum traction on race days.

**ALSO SEE REAR COVER - PRODUCT BACKGROUND “BUSHINGS”**



# FINALLY FRONT & REAR ONGOING

NOW CAN ADJUST  
TIRE CONTACT ANGLES !  
**Camber, Caster (and extra Toe)**  
AUDI TO VOLVO

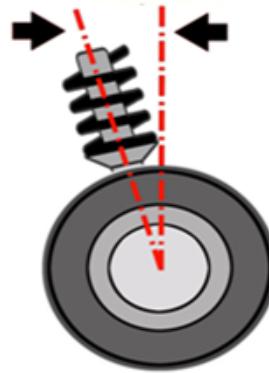


MAJORITY TODAYS AUTO'S ONLY HAVE BASIC  
**'TOE' "Directional Adjustment"**  
Even Exotic BMW 'M' / Mercedes 'AMG'



## CAMBER Plus CASTER

Adjusts tire "contact angle." **Correctly**  
compensates for costly, premature  
edge wear / Improves traction.



ALLOWS  
improved High  
speed directional  
stability along with

Mit der Spureinstellung alleine wird nur  
die Verschleissposition verschoben



## (NOT JUST "TOE")

Existing (directional adjustment)  
only alters wear position but  
increases the overall wear rate.

Better steering Response, Resolving steering pull, with Quicker turn in and  
Reduced Dive / Lift on Brake / Acceleration

**With KMAC - Fix It Right the 1st. Time!**

**AGAIN - FULL FRONT & REAR ALIGNMENT MEANS JUST THAT**



Compared Chosen  
KMAC - UK BMW  
Cup Series

## Audi to Volvo - Why KMAC

**WHAT YOU WOULD EXPECT** - Experience of Manufacturing  
Strut & Bushing Kits longer than any one else.  
Using all out competition motorsport to race test prove.  
Then proudly 'IN-HOUSE' manufacture with  
Total control over quality, rapid constant  
improvements - Not sourcing / relabeling imports.

## 56 Years Market Leadership - Through Innovation - Not Imitation

**KMAC AMONGST OTHERS, THE ACTUAL INVENTORS OF** — **BALL JOINT:** Slide adjustable (now the industry standard) along with **BUSHINGS:** On car single wrench — precisely adjustable (no more time consuming removal repositioning each time). **STRUTS:** 2 Bolt Flange - eliminating undersize "Crank Bolts" fail safe lock system with twice adjustment range. **TOP MOUNTS:** Aperture design - Biggest / Quickest adjustment system. **MUSTANG:** (2005 Up) - KMAC resolving the need to remove struts to change settings. **CAMARO:** (2010 up) resolving the need to drill strut towers to install. **BMW:** (2014 up 'F' Series) - Strut adjuster for the 1st. Time - both Camber & Caster adjustable.

- ✓ **Replacement top strut mounts** - Unique patented design provides the Biggest/and Quickest adjustment system and Stage 2 and 3 unlike other brands are not steel or soft billet alloy but ultimate very highest strength aircraft 7075 grade aluminum. Weight 1 kilo (2.2lbs).
- ✓ **Fit with or without adjustable coil-overs** Stage 2 and 3 strut tops also fitting all brands Coil-Overs 60-70mm I.D.. Include extra H/Duty self aligning (self lubed / PTFE lined) spherical bearings and with KMAC separate H/Duty fully sealed radial thrust bearings to absorb steering loads. Stage 2 and 3 centers are also replaceable for virtual lifetime usage.
- ✓ **And with KMAC bushings** - **56 years ongoing design experience** means constant improvements — Unique Mono ball / self aligning bushes (without the use of OEM air voids). Advantage of "Spherical Bearings", but with 2½ times the load bearing area. Result - dramatic improvement to brake and steering response (unlike unforgiving urethane bushes that can bind / lock up arms). .

● COMPETITION PROVEN ● BIGGEST ADJUSTMENT RANGE ● NON-SLIP LOCK SYSTEM ●

(And we always appreciate any ideas to further improve our market leadership).

SIMPLY  
THE BEST

WHAT YOU WOULD EXPECT

Leaders in Suspension  
Engineering Since 1964!WORLD'S  
LARGEST  
RANGE

FINALLY RESOLVE EDGE TIRE WEAR, GAIN TRACTION

**pace·mak·er** (pās/mā'kər), *n.* 1. one who sets the pace, as in racing. 2. a person, group, or organization that is the most progressive or successful and serves as a model to be imitated, followed, etc.

## BMW 1966 "TOTAL SYSTEM" FRONT - CAMBER (& CASTER) REAR - CAMBER (& EXTRA TOE)

incl. all latest 'F' & 'Mini' Series (also latest 'G' Series '5', '6', '7', '8', Z and X'5, X'6).

Today's Autos only have Front Toe "directional" adjustment - even exotic BMW 'M', Mercedes 'AMG', No Camber or Caster essential to adjust tire contact angles. It is all to do with cost savings & ever increasing speed of assembly lines. Excess edge load also causing ruptured side walls, rim damage.

### FRONT 'STRUT' ADJUSTERS: KMAC Inventors of the '3' STAGES ....

(Also inventors, Patentees of the "All Positional" system, allowing Biggest & Quickest Adjustment)



#### STAGE 1 (STREET)

Provides 'M' series "Caster" specs plus "Camber" for 1st time. Stage 1 design Similar to OEM. Steel with ball race thrust bearings and OEM style large shock absorbing centers. Centers (instead of rubber) are high performance elastomer

prevent spring drag, binding. Unlike other brands steel not plastic encased. KMAC ALSO DESIGNED TO FIT WITH OEM DIAM. SPRINGS & ALL BRANDS COIL OVERS 60 TO 70 DIA'S

#### STAGE 2 (STREET/RACE)

Unlike all other brands not steel or soft billet alloy. Instead ultimate very highest aircraft 7075 aluminium. Centers H/Duty spherical bearings PTFE lined "encased in elastomer", and replaceable while F Series similar to OEM but elastomer. Then separate H/Duty (85mm diam.) fully sealed thrust bearings for "steering loads" and to

#### STAGE 3 (FULL RACE)

All the Stage 2 features but no elastomer/flex for tauter/quicker steering response, more effective shock control. ("F" series - Again setting new standards, massive 30mm I.D. Self align spherical bearings)

### FRONT "LOWER ARM" ADJUSTERS ALSO NON "STRUT" SUSPENSIONS:

KMAC Inventors, Patentee's of the Single Wrench Adjustment System", accurately on car (under load - direct on alignment rack). No more what has plagued the industry for years - the time consuming and inaccurate need to disassemble and reposition bushings each time a new setting required!

Front Upper 'A' Arms  
Inner Bushings ....



RACE DAYS Extra Adjustment  
Also precise Camber & Caster

#### CAMBER - LOWER ARM INNER BUSHES:

for "EXTRA" Camber adjustment.  
RACE DAYS further reduce "Understeer"  
(and also increase track width).



#### CASTER - THRUST ARM INNER BUSHES:

KMAC MONO BALL / 2 AXIS design Caster adjustable (also improve brake and steering response).  
With 2 1/2 times the load bearing area of steel spherical bearings that soon pound out.

AVAILABLE FROM

### REAR "LOWER ARM" ADJUSTERS:

Again KMAC single wrench adjustment system. CAMBER where none existed before, or doubling existing adjustment range. EXTRA TOE adjustment to compensate for the new Camber facility ALL KMAC BUSH KITS SUPPLIED WITH EXTRACTION / INSERTION TOOLS.



**DONT BE SOLD SUBSTITUTES!**

STREET (or RACE - In the pursuit of hitting those corner apex's every time and front row of the grid lap times !)

# FRONT

# STRUT TOPS

CAMBER &  
CASTER

Latest Series 4

Patented  
Designs

BIGGEST  
RANGE

STRUT TOPS 3.5°'s Pos/Neg  
BUSHES 2°'s Pos/Neg

# BUSHINGS

Front & Rear  
See Page 11-15

2024 Incl. all  
(Front & Rear)  
"F & G" SERIES  
& MINI

Designed to fit  
with OEM diam.  
Coils or all strut  
brands (60-70mm)  
I.D. coil overs.

Replacement  
"no"  
Modifications



**STREET** Captive Ball Race thrust  
bearings with Elastomer  
STEEL

Elastomer bushings to extend  
life / commuter use. Thrust  
bearings for steering loads.



**STREET / RACE** Self align  
Spherical Bearings with Elastomer  
ALL ALLOY - Ultimate 7075 grade

Also features "Top Seats" with  
separate thrust bearings for  
steering loads. Suit OEM  
(and all 60-70mm Coil Overs)



**FULL RACE**  
Self align Spherical Bearings  
ALL ALLOY - Ultimate 7075 grade

Also features "Top Seats" with  
separate thrust bearings for  
steering loads. Suit OEM  
(and all 60-70mm Coil Overs)

1,2,3,4,5  
Page 5-6

6, 7  
Page 7-8

8, X  
Page 8

'M' & Mini  
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Don't Be Sold Substitutes  
**SIMPLY THE BEST**

KMAC - EXPERIENCE OF MANUFACTURING  
KITS LONGER THAN ANY OTHER COMPANY!

BMW FRONT & REAR - ALL 1966 to 2024

**CHECK LIST** - Re All The Features Not Found In Other Brands . . . F20 - F83/87 1/2/3/4 Series incl. 'M'

✓ Biggest adjustment range Camber (AND ALSO CASTER). ✓ Quickest to change both settings. ✓ Fit also with "Adaptive Suspension" and / or Strut brace. ✓ No height increase. KMAC unique design also allows "full" shock travel / absorption. ✓ Manufactured — Unlike other brands not from steel or soft billet alloy but ultimate/highest aircraft 7075 grade aluminum. ✓ Includes separate H/Duty radial thrust bearings fully sealed for steering loads / prevent noise / spring drag / binding. ✓ Fit with OEM diam. springs or all brands of coil overs (60-70mm I.D.)!

• **STAGE 2 (STREET / RACE)** - "Centers" similar to OEM but elastomer not rubber for improved steering response and day to day commuting.

• **STAGE 3 (FULL RACE)** - "Centers" Extra H/Duty (Twice Industry Standard) Self align spherical bearings (Self lubed - PTFE lined). No elastomer / flex for Tauter / Quicker response

• STAGE 2 & 3 Centers are also replaceable for virtual lifetime usage.

• Also see page 11 Front "Lower Arm" Camber (& Caster) bushings

ADJUST FOR EVEN TIRE WEAR or RACE DAYS

REDUCE UNDERSTEER - DEEPER INTO CORNERS WITH  
INCREASED TRACTION & BRAKING RESPONSE

BMW 1, 2, 3 & 4 Series

(Incl. 'X' - also see page 7 - 'M' Series Page 8)

F20, F21 '1' ('11-'20) F22, F23 '2' ('14-'20) incl. 'M' (F87- if Carbon Fibre Strut Brace see Page 9) Incl. Adaptive Suspension  
Front Camber & Caster (3/5 bolt strut mount) Stage 2 kit (Street / Race) #192616-2 N pair \$695

\* **TRACK DAYS - ALSO SEE ADJ. BUSHINGS PAGE 11** Stage 3 kit (Full Race) #192616-3 N pair \$695

F45 '2' incl 'X' Active Tourer ('14-'19) F46 '2' incl. 'X' Gran Tourer ('15-'20) F48 X1 ('15-'20) incl. 'M'

\* Front Camber & Caster Stage 2 kit (Street / Race) #195316-2 N pair \$695  
Stage 3 kit (Full Race) #195316-3 N pair \$695

E81, E82, E87, E88 '1' ('04-'14) incl. 'M'

Front Camber & Caster Stage 1 kit (Street) #192416-1 J pair \$380  
Stage 2 kit (Street / Race) #192416-2 L pair \$545  
Stage 3 kit (Full Race) #192416-3 L pair \$545

F30,31,35 '3' ('12-'20) F32,33,36 '4' ('14-'19) Incl. 'X' Drive (Carbon Fibre Strut Brace Page 8)

\* Front Camber & Caster (3/5 bolt strut mount) Stage 2 kit (Street / Race) #192616-2 N pair \$695  
Stage 3 kit (Full Race) #192616-3 N pair \$695

F87 'M2', F80 'M3', F82 / F83 'M4' ('14-'20) Carbon Fibre Strut Brace

Incl. Adaptive Suspension

\* Front Camber & Caster (3/5 bolt strut mount) Stage 2 kit (Street / Race) #192716-2 P pair \$795  
Stage 3 kit (Full Race) #192716-3 P pair \$795

E90, E91, E92, E93 '3' ('05-'13) ('M' see page 9), E46 '3' ('98-'05) ('M' see page 9)

E36 '3' 316, 318, Roadster / Z3 ('95-'02), 320, 323, 325 (7/92-'98). (E36 'M', Z3 'M' Stage 2 & 3 see page 9)

Stage 1 kit (Street)	#192416-1 J pair \$380
Stage 2 kit (Street / Race)	#192416-2 L pair \$545
Stage 3 kit (Full Race)	#192416-3 L pair \$545

\*

E36 '3' 320, 325 ('91-6/92).

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#192316-1 J	pair	\$380
	<b>Stage 2 kit</b> (Street / Race)	#192316-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#192316-3 L	pair	\$545

\* TRACK DAYS - ALSO SEE ADJ. BUSHINGS PAGE 11

E30 '3' ('82-'94) Incl. 'M'

Front Camber & Caster	<b>Stage 1 kit</b> (Street) E30 Incl 'M'	#193316-1 J	pair	\$380
	<b>Stage 2 kit</b> (Street / Race) E30 Incl 'M'	#193316-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race) E30 Incl 'M'	#193316-3 L	pair	\$545

E21 '3' ('75-'83), E10 1502 - 2002 ('66-'77)

Front Camber & Caster	<b>Stage 1 kit</b> (Street) 1502-2002, E21	#192016-1 J	pair	\$380
	<b>Stage 2 kit</b> (Street / Race) 1502-2002	#192016-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race) 1502-2002	#192016-3 L	pair	\$545
Front Camber & Caster	<b>Stage 2 kit</b> (Street / Race) E21	#192116-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race) E21	#192116-3 L	pair	\$545

## BMW 5 Series

'5' G30, 31, 38, F90, 95 'M'. F07, F10, F11, F18 ('10-'17). NON-STRUT MODELS - Bushings Camber &amp; Caster



**CAMBER** adjustable "BUSHES" Pair Improve traction, Resolve premature edge tire wear. Adjusts lower arms retains top of tire clearance (Race days increase track width)  
 G30, 31, 38, F90, 95 'M' #194516-6K \$480  
 F07, 10, 11, 18 #194516-1K \$480, 'M' #194516-3K \$480  
 (Up to 2° Pos or Neg).



**CASTER** adjustable "BUSHES" Pair Compensate for Camber change. Correctly resolves steering pull, reduced dive / lift. Mono ball / 2 Axis for improved brake and steering response.  
 G30, 31, 38, F90, 95 'M' #196016 K \$480  
 F07, 10, 11, 18 incl. 'M' #194516-2 K \$480

ABOVE **CAMBER** (lower control arm inner) and **CASTER** (inner thrust arm) bushes are precisely adjustable - Single wrench accurately (under load) on vehicle. Unique KMAC patented design. No special tools required.



**ADDITIONAL ADJUSTMENT "UPPER WISHBONE ARMS" (CAMBER & CASTER)**  
 Replacement "Inner Bushes" Set of 4 (Fit without arm removal) Up to extra 2 degrees Pos. or Neg. G30-38, F90, 95 #194516-4J \$380

E60, E61 ('03-'10) ('M' Series Stage 1,2&amp;3 See Page 9)

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#192416-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#192416-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#192416-3 L	pair	\$545

E39 '5' 518, 520, 523, 525, 528, Z8 ('96-'04) 530, 535, 540 ('96-9/97) Incl. 'M' (Excl. air susp.)

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#192416-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#192416-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#192416-3 L	pair	\$545

E39 '5' 530, 535, 540 (10/97-'04) Incl. 'M' (Excl. air susp.)

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193616-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#193616-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193616-3 L	pair	\$545

E34 '5' 530, 535, 540, Incl. M5 ('88-'96), 525 ('88-8/92), 518, 520, 524 ('88-6/90) Incl. 'M'

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193416-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#193416-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193416-3 L	pair	\$545

E34 '5' 525 (9/92-'96) 518, 520, 524 (7/90-'96) Incl. 'M'. E28 '5' ('82-'88) Incl. M

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193316-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#193316-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193316-3 L	pair	\$545

E28 '5' incl M5, 518, 520, 525, 528, 533, 535 ('81-'88)

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193316-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#193316-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193316-3 L	pair	\$545

E12 '5' (9/76-'81)

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193216-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#193216-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193216-3 L	pair	\$545

E12 '5' ('72-8/76)

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193116-1 J	pair	\$380
*	<b>Stage 2 kit</b> (Street / Race)	#193116-2 L	pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193116-3 L	pair	\$545

## G32 '6' G06/X6 'M', F96 ('17-'24). F06, F12, F13 '6' ('11-'17) NON-STRUT MODELS - Bushings Camber &amp; Caster



**CAMBER** adjustable "BUSHES" Pair Improve traction, Resolve premature edge tire wear. Adjusts lower arms retains top of tire clearance (Race days increase track width)  
 G32, G06, X6 'M', F96 #194516-6K \$480  
 F06, F12, F13 #194516-1K \$480, , 'M' #194516-3K \$480  
 (Up to 2° Pos. Or Neg.)



**CASTER** adjustable "BUSHES" Pair Compensate for Camber change. Correctly resolves steering pull, reduced dive / lift. Mono ball / 2 Axis for improved brake and steering response  
 G32, G06 X6 'M', F96 #196016K \$480  
 F06-13 #194516-2K \$480

ABOVE **CAMBER** (lower control arm inner) and **CASTER** (inner thrust arm) bushes are precisely adjustable - Single wrench accurately (under load) on vehicle. Unique KMAC patented design. No special tools required.

**ADDITIONAL ADJUSTMENT "UPPER WISHBONE ARMS" (CAMBER & CASTER)**

Replacement "Inner Bushes" Set of 4 (Fit without arm removal) Up to extra 2 degrees Pos. or Neg. G32, G06, X6 F96 'M'. F06, 12, 13 #194516-4J \$380

## E63, E64 '6' ('03-'10) Excl. 'M' (Page 9)

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#192416-1 J pair	\$380
<b>* TRACK DAYS - ALSO SEE ADJ. BUSHINGS PAGE 11</b>	<b>Stage 2 kit</b> (Street / Race)	#192416-2 L pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#192416-3 L pair	\$545

## E24 '6' (5/82-'89) Incl. 'M'

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193316-1 J pair	\$380
<b>*</b>	<b>Stage 2 kit</b> (Street / Race)	#193316-2 L pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193316-3 L pair	\$545

## E24 '6' ('77-4/82) Incl. 'M'

Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193216-1 J pair	\$380
<b>*</b>	<b>Stage 2 kit</b> (Street / Race)	#193216-2 L pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193216-3 L pair	\$545

## BMW 7 Series

## G11, G12 ('15-'24). G07X ('19-'24), G70 ('22-'24). F01, F02, F03 '7' ('09-'15) NON-STRUT MODELS



**CAMBER** adjustable "BUSHES" Pair Improve traction, Resolve premature edge tire wear. Adjusts lower arms retains top of tire clearance (Race days increase track width)  
 G07/X, G11, G12, G08, G14-16 #194516-8K \$480  
 F01, F02, F03 #194516-1K \$480  
 (Up to 2° Pos. Or Neg.)



**CASTER** adjustable "BUSHES" Pair Compensate for Camber change. Correctly resolves steering pull, reduced dive / lift. Mono ball / 2 Axis for improved brake and steering response  
 G07/X, G11, 12, G08, G14-16 #196016 K \$480  
 F01-F03 #194516-2K \$480

ABOVE **CAMBER** (lower control arm inner) and **CASTER** (inner thrust arm) bushes are precisely adjustable - Single wrench accurately (under load) on vehicle. Unique KMAC patented design. No special tools required.

**ADDITIONAL ADJUSTMENT "UPPER WISHBONE ARMS" (CAMBER & CASTER)**

Replacement "Inner Bushes" Set of 4 (Fit without arm removal) Up to extra 2 degrees Pos. or Neg. G07/X, G11-12, G14-16 F01, F02, F03, F04 #194516-4J \$380

## E65, E66, '7' ('02-'08)

<b>*</b>	Front Camber & Caster <b>Stage 1 kit</b> (Street)	#194316-1 J pair	\$380
E38 '7' ('94-'01)	(Smaller diam. coil over use -2 or -3)		
	Front Camber & Caster <b>Stage 1 kit</b> (Street)	#193616-1 J pair	\$380
<b>*</b>	<b>Stage 2 kit</b> (Street / Race)	#193616-2 L pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193616-3 L pair	\$545

## E32 '7' ('86-'94)

<b>*</b>	Front Camber & Caster <b>Stage 1 kit</b> (Street)	#193416-1 J pair	\$380
	<b>Stage 2 kit</b> (Street / Race)	#193416-2 L pair	\$545
	<b>Stage 3 kit</b> (Full Race)	#193416-3 L pair	\$545

## BMW 7 Series cont.

(8)

E23 '7' ('77-'86)

Front Camber & Caster Stage 1 kit (Street)	#193816-1 J	pair	\$380
Stage 2 kit (Street / Race)	#193816-2 L	pair	\$545
Stage 3 kit (Full Race)	#193816-3 L	pair	\$545

\* TRACK DAYS - ALSO SEE ADJ. BUSHINGS PAGE 11

E3 '7', E9 2500, 2.8, 3.0/2/3 ('68-'77)

Front Camber & Caster Stage 1 kit (Street)	#191716-1 J	pair	\$380
Stage 2 kit (Street / Race)	#191716-2 L	pair	\$545
Stage 3 kit (Full Race)	#191716-3 L	pair	\$545

## BMW 8 Series

E31 '8' 840, 850 ('90-'00)

Front Camber & Caster Stage 1 kit (Street)	#192316-1 J	pair	\$380
Stage 2 kit (Street / Race)	#192316-2 L	pair	\$545
Stage 3 kit (Full Race)	#192316-3 L	pair	\$545

## BMW Z Series ('M' Series Stage 2 & 3 See Page 9)

G29 ('18-'20)

Front Camber & Caster Stage 2 kit (Street/Race)	#192816-2 P	pair	\$795
Stage 3 kit (Full Race)	#192816-3 P	pair	\$795

E89 Z4 ('09-'17) E85 Z4, E86 Z4 ('02-'08) E36/7 Z3, E36/8 Z3 ('96-'02) ('M' Page 9)

Front Camber & Caster Stage 1 kit (Street)	#192416-1 J	pair	\$380
Stage 2 kit (Street / Race)	#192416-2 L	pair	\$545
Stage 3 kit (Full Race)	#192416-3 L	pair	\$545

## BMW X Series

F45 (14-20), F46 (15-20), F48 X1 ('15-'20)

Front Camber & Caster Stage 2 kit (Street / Race)	#195316-2 N	pair	\$695
Stage 3 kit (Full Race)	#195316-3 N	pair	\$695

F22, 23, 30, 31, 32, 33, 34, 35, 36, 'X'Drive ('15-'20) \*Carbon Fibre Strut Brace see F80-83 Page 8

Stage 2	#192616-2 N	pair	\$695
Stage 3	#192616-3 N	pair	\$695

F25 X3 ('11-'20), F26 X4 ('14-'20)

Front Camber & Caster Stage 2 kit (Street / Race)	#192916-2 N	pair	\$695
Stage 3 kit (Full Race)	#192916-3 N	pair	\$695

E84 X1 ('09-'15) E83 X3 ('03-'09) E90-93'X Drive ('09-'13)

Front Camber & Caster Stage 1 kit (Street)	#192416-1 J	pair	\$380
Stage 2 kit (Street / Race)	#192416-2 L	pair	\$545
Stage 3 kit (Full Race)	#192416-3 L	pair	\$545

G05 X5 ('17-'24), G06 X6 ('17-'24), F15, F85 'M' X5 ('14-'19), F16, F86 'M' X6 ('15-'19), E70/'M' X5 ('06-'13).

E71/'M' X6 ('08-'14) NON-STRUT MODELS - Lower arm Adj. Bushings Camber & Caster (or Top Arms)



**CAMBER** adjustable "BUSHES" Pair Improve traction, Resolve premature edge tire wear. Adjusts lower arms retaining top of tire clearance (Race days increase track width)

G05, G06 #194516-6K \$480  
E70-72, X5/6/M #193816 i \$345  
F15, 16, F85, 86 #193816-5K \$480  
(Up to 2° Pos. Or Neg.)



**CASTER** adjustable "BUSHES" Pair Compensate for Camber change. Correctly resolves steering pull. Reduced dive / lift. Mono ball / 2 Axis for improved brake and steering response.

G05, G06 #196016 K \$480  
F15-86, E70-72 #193816-4 J \$380

ABOVE **CAMBER** (lower control arm inner) and **CASTER** (inner thrust arm) bushes are precisely adjustable - Single wrench accurately (under load) on vehicle. Unique KMAC patented design. No special tools required.



**ADDITIONAL ADJUSTMENT "UPPER WISHBONE ARMS" (CAMBER & CASTER)**

Replacement "Inner Bushes" Set of 4 (Fit without arm removal) Up to extra 2 degrees Pos. or Neg. E70-72, F15, 16, 85, 86 X5/6/M #194516-7J \$380  
G05X, G06X/M #194516-4J \$380

E53 X5 ('99-'06)

\*Not air suspension - (See bushings Camber 193616-6 H, Caster 193616-4 i)

\*

Front Camber & Caster Stage 1 kit	#194116-1 J	pair	\$380
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G05,F90,95,M5('17-'24), G06/X,F96'M'(20-24) G07,G11,G12 'M' ('20-'24), F10,M5,F06,F12,F13 M6 ('11-'17)



**CAMBER** adjustable "BUSHES" Pair Improve traction, Resolve premature edge tire wear. Adjusts lower arms retains top of tire clearance (Race days increase track width)

G05, F90, F95, G06, F96 #194516-6K \$480  
G11, G12 #194516-8K \$480  
F06-13 #194516-3K \$480



**CASTER** adjustable "BUSHES" Pair Compensate for Camber change correctly resolves steering pull, reduced dive / lift. Mono ball / 2 Axis for improved brake and steering

G05, F90, F95, G06/X, F96, G11, G12 #196016 K \$480  
F06, 07,10,11,12,13 #194516-2K \$480

ABOVE **CAMBER** (lower control arm inner) and **CASTER** (inner thrust arm) bushes are precisely adjustable - Single wrench accurately (under load) on vehicle. Unique KMAC patented design. No special tools required.



#### ADDITIONAL ADJUSTMENT "UPPER WISHBONE ARMS" (CAMBER & CASTER)

Replacement "Inner Bushes" Set of 4 (Fit without arm removal) Up to extra 2 degrees  
Pos. or Neg. G05, F90, F95, G06/X, F96, F06-13 #194516-4J \$380

<b>F87 'M2', F20, F21 '1', F22, F23 '2' ('11-'20)</b>	<b>No Carbon Fibre Strut Brace</b>	<b>Incl. Adaptive suspension</b>
Front Camber & Caster (3 / 5 bolt mount)	<b>Stage 2 kit</b> (Street / Race)	#192616-2 N pair \$695
	<b>Stage 3 kit</b> (Full Race)	#192616-3 N pair \$695
<b>F80 M3, F82 / F83 M4 ('14-'20)</b>	<b>Incl. Carbon Fibre Strut Brace</b>	<b>Adaptive Suspension</b>
Front Camber & Caster (3 / 5 bolt mount)	<b>Stage 2 kit</b> (Street / Race)	#192716-2 P pair \$795
	<b>Stage 3 kit</b> (Full Race)	#192716-3 P pair \$795
<b>F87 'M2' F20, F21 '1', F22, F23 '2' ('14-'20)</b>	<b>Carbon Fibre Strut Brace</b>	<b>Adaptive Suspension</b>
Front Camber & Caster (3 / 5 bolt mount)	<b>Stage 2 kit</b> (Street / Race)	#192716-2 P pair \$795
	<b>Stage 3 kit</b> (Full Race)	#192716-3 P pair \$795
<b>F30, F31, F35 '3' 'M' ('12-'20)</b>	<b>F32, F33, F36 '4' 'M' ('14-'20)</b>	<b>Incl. 'X' Drive, 'M'</b>
Front Camber & Caster (3 / 5 bolt mount)	<b>Stage 2 kit</b> (Street / Race)	<b>Adaptive Suspension</b>
	<b>Stage 3 kit</b> (Full Race)	<b>Carbon Fibre Strut Brace</b>
		#192716-2 P pair \$795
		#192716-3 P pair \$795
<b>F45 '2' 'M' incl 'X' Active Tourer ('14-'20)</b>	<b>F46 '2' 'M' incl 'X' Grand Tourer ('15-'20)</b>	<b>F48 X1 'M' ('15-'20)</b>
	<b>Stage 2 kit</b> (Street / Race)	#195316-2 N pair \$695
	<b>Stage 3 kit</b> (Full Race)	#195316-3 N pair \$695
<b>E90, E92, E93, M3 ('08-'13)</b>		
Front Camber & Caster	<b>Stage 2 kit</b> (Street / Race)	#193616-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#193616-3 L pair \$545
<b>E82 M1 (07-13)</b>		
Front Camber & Caster	<b>Stage 2 kit</b> (Street / Race)	#193616-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#193616-3 L pair \$545
<b>E46 M3 ('96-'06)</b>		
	<b>Stage 2 kit</b> (Street / Race)	#193616-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#193616-3 L pair \$545
<b>E36 M3 ('92-'99)</b>		
	<b>Stage 2 kit</b> (Street / Race)	#191916-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#191916-3 L pair \$545
<b>E30 M3 ('86-'92)</b>		
Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193316-1 J Pair \$380
	<b>Stage 2 kit</b> (Street / Race)	#193316-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#193316-3 L pair \$545
<b>E85 Z4 M ('02-'08), E86 Z4 M ('06-'08), E89 Z4 ('09-'17)</b>		
	<b>Stage 2 kit</b> (Street / Race)	#193616-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#193616-3 L pair \$545
<b>Z3 M ('97-'02)</b>		
	<b>Stage 2 kit</b> (Street / Race)	#192416-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#192416-3 L pair \$545
<b>E60, E61 M5 ('05-'10)</b>	<b>E63, E64 M6 ('05-'10)</b>	
Front Camber & Caster	<b>Stage 1 kit</b> (Street)	#193616-1 J pair \$380
	<b>Stage 2 kit</b> (Street / Race)	#193616-2 L pair \$545
	<b>Stage 3 kit</b> (Full Race)	#193616-3 L pair \$545

Front Camber & Caster <b>Stage 1 kit</b> (Street)	#192416-1 J pair	\$380
Stage 2 kit (Street / Race)	#192416-2 L pair	\$545
Stage 3 kit (Full Race)	#192416-3 L pair	\$545

## E39 M5 ('10-'97-'04)

Stage 1 kit (Street)	#193616-1 J pair	\$380
Stage 2 kit (Street / Race)	#193616-2 J pair	\$545
Stage 3 kit (Full Race)	#193616-3 J pair	\$545

## E34 M5 ('89-'95)

Front Camber & Caster <b>Stage 1 kit</b> (Street)	#193416-1 J pair	\$380
Stage 2 kit (Street / Race)	#193416-2 L pair	\$545
Stage 3 kit (Full Race)	#193416-3 L pair	\$545

## E28 M5 ('85-'88)

*	Stage 1 kit (Street)	#193316-1 J pair	\$380
	Stage 2 kit (Street / Race)	#193316-2 L pair	\$545
	Stage 3 kit (Full Race)	#193316-3 L pair	\$545

## E24 M6 ('83-'89)

*	Front Camber & Caster <b>Stage 1 kit</b> (Street)	#193316-1 J pair	\$380
	Stage 2 kit (Street / Race)	#193316-2 L pair	\$545
	Stage 3 kit (Full Race)	#193316-3 L pair	\$545

## BMW MINI (All models 2001 - 2024)

All the  
very latest Design  
Updates!

- ✓ KMAC patented Design - Biggest & Quickest Adjustment System (Camber & Caster)
- ✓ Fit OEM diam. Springs & all Coil overs (60-70mm I.D.)
- ✓ STAGE 1 (Street), STAGE 2 (Street/Race), STAGE 3 (Full Race)

**ALSO SEE PAGE 12** - All model MINI adjustable control arms and bushings....

**"In the pursuit of front row of the grid lap times on track days"**

**FRONT LOWER CONTROL ARMS** - Inner rear bushings (Ultimate Mono ball / 2 Axis / Self aligning - Extra 1•5 degrees Pos. Caster or kits to resolve steering pull)

● Experience of Manufacturing adjuster kits longer than any other company ●

## Mini Mk III - F55, F56, F57 ('14-'24)

## 3 &amp; 5 door hatch

Front Camber & Caster <b>Stage 2 kit</b> (Street / Race)	#195416-2 N pair	\$695
*	TRACK DAYS - ALSO SEE ADJ. BUSHINGS PAGE 13 Stage 3 kit (Full Race)	#195416-3 N pair \$695

## Mini Mk III - F54 ('15-'17), F60 ('16-'24)

## Incl. Clubman / Countryman

Front Camber & Caster <b>Stage 2 kit</b> (Street / Race)	#195316-2 N pair	\$695
*	Stage 3 kit (Full Race)	#195316-3 N pair \$695

## Mini Mk II - R55, R56, R57, R58, R59, R60, R61 (11/06-'16) Coupe, Roadster, Country Man

*	Stage 2 kit (Street / Race)	#195216-2 L pair	\$545
	Stage 3 kit (Full Race)	#195216-3 L pair	\$545

## Mini Mk I - R50, R52, R53 (3/02-10/06)

Stage 2 kit (Street / Race)	#195116-2 L pair	\$545
Stage 3 kit (Full Race)	#195116-3 L pair	\$545

## Mini Mk I - R50, R53 ('01-2/02)

Front Camber & Caster <b>Stage 1 kit</b> (Street)	#195016-1 J pair	\$380
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# BMW BUSHINGS INCLUDING ADJUSTABLE CAMBER, CASTER, TOE<sup>11</sup>

(Front & Rear)

Experience of Manufacturing kits  
Longer than any other company!

Unique Patented Designs - Quickest, Biggest Adjustment Systems

All the popular (premature wear) and critical (\*Race Winning) Bushes . . .

Series4

All KMAC kits come with bush extraction/insertion tubes. With added feature of "additional adjustment" to compliment KMAC "Top of Strut" adjusters.

## KMAC Patented Designs . . .

Fast / precise - single wrench adjustment. Accurately under load. (Unlike other brands that require removal each time to change settings).

## Don't be Sold Substitutes

SUSPENSION ENGINEERING  
Since 1964!

\* KMAC bushes feature 2 axis, mono ball design. OEM rubber bushes use air voids for 2 axis movement. Allowing shudder, wheel tramp, loss of traction under braking and acceleration.

\* While today's aftermarket bush brands even though they eliminate the OEM air voids, the consequence is

2 AXIS movement is restricted, preventing the modern multi-link suspension arms travelling through their required arcs causing binding /

locking up which can lead to even more severe shudder, wheel tramp, loss of traction and fatigue breakage of arms.

**KMAC kits also significantly extend wear life having more than twice the load bearing area**

G30, 31, 38, F90, 95 'M' ('17-'23). G32, X6 'M', F96 'M' ('17-'23). G11, 12, G14, 16 ('19-'23)

F20-F83/87. E82, E83, E84, E85, E86, E87, E88, E89, E90, E91, E92, E93. Incl. 'M'

MINI PAGE 13



2 Axis / Mono Ball

● All above kits allow up to 28mm(1 1/8") Extra Neg (Or Pos.) Camber (plus track width further lowering lap times Race days).

G30, 31-38, F90, 95. G32 X6. F96 incl. 'M'

FRONT CAMBER - Inner Arm (Pair) G11, 12, G14-16  
ADJUSTMENT FOR 1ST. TIME. Precise accurate single wrench. Unique KMAC patented design allowing direct on Align rack UNDER LOAD.

Resolve Costly, premature edge tire wear.

F15, 16, 85, 86 X5/6, incl. 'M'

E70-72 X5/6, incl. 'M'

F20, 22, 23, 25, 26 30-36, E84, 87. incl. 'X', 'M'

E81, 82, 87-89 incl. 'M' excl. 'X'

E24 (5/82-89) 28, 31, 32, 34, 38, 52, 53, 60-66, 83 'X' incl. 'M'

#194516-6 K \$480

#194516-8 K \$480

#194516-1 K \$480

#194516-3 K \$480

#193816-5 K \$480

#193816 i \$345

#193616-8 H \$320

#193916-4 J \$380

#193616-6 H \$320

'5' G30, 31, 38, F90 G05/X, F95. '6' G32, G06/X, F96. '7' G11, 12. '8' G14-16 incl. 'M'



FRONT CASTER - Thrust Arm (Pair) F01, 02, 03

F06, 07, 10, 11, 12, 13, 18 incl. 'M'

F20, 21, 22, 23, 30-36 incl. 'M' excl. 'X'

F22, 23, 30-36 'X' Drive

F80-83, 87 'M'

F25, 26 X3/4

F45-48

F15, 16, 85, 86 E70-72, X5/6 incl. 'M'

E53, 83 'X'

E84 'X'

E85, 86

#196016 K \$480

#194516-5 K \$480

#194516-2 K \$480

#193916-5 J \$380

#193916-7 J \$380

#193916-6 J \$380

#193816-6 J \$380

See Mini p13

#193816-4 J \$380

#193616-4 i \$345

#193616-9 i \$345

See E46 p12

#193916-2 i \$345

#193916-2 i \$345

#193616-7 i \$345

#193816-9 i \$345

See Page 13

2 Axis / Mono Ball

## PRECISE ADJUSTMENT.

Compensate for Camber change. Resolve steering pull, Improve hi-speed directional control. KMAC are also Mono ball / Self aligning significantly improving Brake & Steering response.

E15, 16, 85, 86 E70-72, X5/6 incl. 'M'

E53, 83 'X'

E84 'X'

E85, 86

E81, 82, 87-93 incl. 'M'

E60-67

E38, 39, 52 (6 Cyl)

(8 Cyl)

E3, E9, E10, E12, E21, \*E23, E24, 28, 31, 32, 34

#196016 K \$480

#194516-5 K \$480

#194516-2 K \$480

#193916-5 J \$380

#193916-7 J \$380

#193916-6 J \$380

See Mini p13

#193816-4 J \$380

#193616-4 i \$345

#193616-9 i \$345

See E46 p12

#193916-2 i \$345

#193916-2 i \$345

#193616-7 i \$345

#193816-9 i \$345

See Page 13



REAR Lower Inner CAMBER & TOE adjust. (2 pair)

F20, 21, 22, 23, 30-36 incl. 'M'

F25-26 X

F45-48

F01, 02, 03, 'M' Series - F06, 07, 10, 11, 12, 13

F06, 07, 10, 11, 12, 13, 18

#193926-5 K \$480

#193926-8 K \$480

See MINI P13

#194626 N \$695

#194526 K \$480

#193926-7 K \$480



3.0°'s POS/NEG 'M' Series

No OEM Adjustment K-MAC up to 3°'s Pos. or Neg. & Extra TOE (Retains OEM Hi Strength forged alloy arms)

E81, 82, 84, 87, 88, 90-93 excl. 'M'

(E83, 85, 86, 89. see E46) 'M' (Camber only)

'M' (Toe arm Turnbuckle adjustable) also non 'M'

E70-72, F15, 16, 85, 86 (5/6) incl. 'M' 'X'

E53X, 60-66

E38, 39

E39 'M', E52 (Z8)

#193926 K \$480

#193926-4 J \$380

#193926-1 J \$380

#193826 K \$480

#193726 J \$380

#193526 J \$380

#194026 J \$380

Precise single wrench adjustment  
NOTE: Designed to allow for wide profile tires by maintaining clearance top of tire to outer fender when adjusting to reduce costly, premature inner edge (Neg.) wear.

## All kits include Bush extraction / insertion tubes

**F01, F02, F03, F04, F06, F07, F10, F11, F12, F13, F15, F16, F18, E38, E39, E52, E53, E60-66, E70, E71, E72 Incl. 'M'**

 <b>REAR Upper / Inner Camber adj. (Pair)</b> E81,82,84,87,88,90-93 incl. 'M' <b>REAR Lower Arm CAMBER &amp; TOE Kits F20,21,22,23,30-36 incl.'M'</b> With above rear provides Camber and also full adjustability of the (10) multi link arms	<b>#193926-3 G \$295</b> <b>#193926-9 G \$295</b>
 <b>REAR Thrust Arms Turnbuckle Adjustable Camber / Toe</b> (Pair) (E83,85,86,89 see E46) E81, 82, 84, 87, 88, 90-93 incl. 'M' Resolve fatigue breaking F20, 21, 23, 30-36 incl. 'X', 'M' of OEM arms. Turnbuckle adjustable - Chromoly tube. F45,46, 48	<b>#193926-2 K \$480</b> <b>#193926-6 K \$480</b> See MINI P13

**E46 (2/01 up) \*'M' see below, E85 / E86 Z4 ('02-'08) Incl. 'M'**

 <b>FRONT Control Arm Inner Rear Bushes</b> No Caster offset Resolve premature failure. One Caster offset Improve braking / traction. <b>*Both Caster offset</b> (KMAC - Not solid but self aligning) <b>*E46'M'</b>  <b>• Extra Positive Caster - for Anti-dive/lift</b> No Caster offset Improved directional control. One Caster offset Quote P/N ending in —'3' <b>Up to 1.5°</b> Or fit to resolve "Steering pull" (—2 light pull, —3 strong pull)	<b>#193518-1 G \$295</b> <b>#193518-2 G \$295</b> <b>#193518-3 G \$295</b>  <b>#193618-1 G \$295</b> <b>#193618-2 G \$295</b> <b>#193618-3 G \$295</b>
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**E30, E36, Z3. Incl. 'M', E46 incl. 'M' (to 1/01) \*Excl. 'M'**

 <b>FRONT Control Arm Inner Rear Bushes</b> (Pair) Resolve premature failure. No Caster offset Improve braking / traction. One Caster offset (KMAC - Not solid but self aligning) <b>*Both Caster offset</b>  <b>• Extra Positive Caster - for Anti-dive/lift</b> No Caster offset Improved directional control. One Caster offset Quote P/N ending in —'3' <b>Up to 1.5°</b> Or fit to resolve "Steering pull" (—2 light pull, —3 strong pull)	<b>#192418-1 G \$295</b> <b>#192418-2 G \$295</b> <b>#192418-3 G \$295</b>
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**E36 (not 316, 318 Ti), E46, E83, E85/E86(Z4 '02-'08), E89(Z4 '09-'18). Incl. 'M'**

 <b>REAR Lower/Outer Arm Camber Adjustable Bushes</b> (Pair) Precise single wrench adjustment. Doubles existing adjustment range to resolve costly premature inner edge wear, improve traction.	<b>#192426 H \$320</b>
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 <b>REAR Trail Arm Front Bushes</b> (Pair) ULTIMATE H/DUTY KIT <b>Specially designed to improve traction and enhance cornering stability by containing side load / G forces.</b> Resolves also separation of center mount tubes and premature failure of OEM bushes.	<b>#192428-1 H \$320</b>
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 <b>REAR H/Duty Camber "Turnbuckle Adjustable" Lower Arms</b> (Pair) High strength tapered chromoly tube (not alloy) with self align elastomer Bushings. Genuine KMAC - Providing extra Camber adjustment (Pos. Or Neg). Precise "turnbuckle adjustable" on car. Unlike the OEM pressed steel arms or aftermarket alloy arms KMAC are extra H/Duty competition rated.  <b>+- Up to 2.0°</b> Track days - increase track width or fine tune for maximum traction.	<b>#192526 L \$545</b>
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**E24 (5/82-89), E28, 31, 34, 38, E39, 52, 53, 60-66, 83**

	FRONT Control Arm <b>Camber</b> Adjustable Inner Bushes (Pair) E24 (5/82-89), E28, 38, E39, 52, 53, 60-66, 83 E31, E34	#193616-6 H \$320 #193616-7H \$320
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**E24 (5/82-'89), E31, E32**

	FRONT Thrust Arm <b>Caster</b> Adjustable Inner Bushes (Pair) •Also improved Steering & Braking response. E24 (5/82-89) E31, E32	#193316-5 H \$320 #193416-5H \$320
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**E23 (9/82-'86), E24 (5/82-89), E28 (520, 525 - 4/86-'88, 528, 535-'82-'88), E32, E34**

	REAR <b>Camber &amp; Toe</b> adjustable Bushes (2 Pair) Precise single wrench adjustment. Replaces all 4 main rear bushings. KMAC - Maximum adjustment and extended bush life.	#193326 H \$320
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**E3, E9, E10 (1502-2002), E12, E21, E23 ('77-'9'82), E24 ('77-4/82), E28 (520,525 '82-4/86), E30, E36 (316, 318 Ti), Z3 Incl. 'M'**

 + - Up to 1.25	REAR <b>Camber &amp; Toe</b> Adjustable Bushes (2 Pair) <b>Like all KMAC bushings - all the features:</b> Absolute maximum adjustment range, Patented "single wrench" adjustment system. Strongest and long term maintenance free. Unlike other brands nickel chromed centers with spiral grease grooves. Fail safe lock system. Professional bush extraction tool included.	#192026 G \$320
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**E3, E9, E12, E21, E23, E24 ('77-4/82)**

	FRONT Thrust Arm to Chassis Bushes (Pair) Improve Steering & Braking response	#192118-1 D \$95
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**MINI R50 - R61, F54, F55, F56, F60. Incl. F22, F45, F46, F48**

 70mm diam.	FRONT Control Arm Inner Rear Bushes (Pair) R60, R61, F54, F55, F56, F57, F60 F45, F46, F48 • 2 Axis / Mono Ball • (KMAC - Not solid but self aligning) *Extra Positive Caster - for Anti-dive/lift Improved directional control. Quote P/N ending in -'3' Or fit to resolve "Steering pull" (—2 light pull, —3 strong pull)	No Caster offset One Caster offset ★Both Caster offset * + - Up to 1.5° #195218-1 H \$320 #195218-2 H \$320 #195218-3 H \$320
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 66mm diam.	FRONT Control Arm Inner Rear Bushes (Pair) R50 - R59 • 2 Axis / Mono Ball • (KMAC - Not solid but self aligning) *Extra Positive Caster - for Anti-dive/lift Improved directional control. Quote P/N ending in -'3' Or fit to resolve "Steering pull" (—2 light pull, —3 strong pull)	No Caster offset One Caster offset ★Both Caster offset * + - Up to 1.5° #195118-1 H \$320 #195118-2 H \$320 #195118-3 H \$320
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 + - Up to 2.0°	REAR CAMBER Competition rated H/Duty (Chromoly steel not extruded alloy control arms) turnbuckle adjustable on car (2 axis 95 elastomer bushings) R50-R61, F54,F55,F56, F57, F60 ★Also F45, F46, F48	#195026 K \$480
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# Quick Reference / “Popular” FRONT Strut Tops

## ADJUSTER KITS - Camber & Caster

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STAGE 1 (STREET). STAGE 2 (STREET/RACE). STAGE 3 (FULL FACE)

<b>F80, 82, 83, 87 (Carbon Fibre strut Brace)</b>	
* KMAC - ALL STAGE 2 & 3 Fit with OEM diam springs or all smaller Coil overs.	#192716-2P STREET/RACE \$795 #192716-3P FULL RACE \$795
<b>F20, 21, 22, 23, 30, 31, 32, 33, 35, 36 incl 'M'</b>	
	#192616-2N STREET/RACE \$695 #192616-3N FULL RACE \$695
<b>E90, 91, 92, 93, E46, 82, 85, 86, 87, 88 (excl 'M')</b>	
	#192416-1J STREET \$380 #192416-2L STREET/RACE \$545 #192416-3L FULL RACE \$545
<b>'M' E90, 91, 92, 93, E46, 82, 85, 86</b>	
	#193616-1J STREET \$380 #193616-2L STREET/RACE \$545 #193616-3L FULL RACE \$545
<b>E36, 316, 318 ('91-'03), 320, 323, 325 (7/92-98) Z3</b>	
	#192416-1J STREET \$380 #192416-2L STREET/RACE \$545 #192416-3L FULL RACE \$545
<b>E36 'M', Z3M</b>	
	#191916-2L STREET/RACE \$545 #191916-3L FULL RACE \$545
<b>E30 incl 'M'</b>	
	#193316-1J STREET \$380 #193316-2L STREET/RACE \$545 #193316-3L FULL RACE \$545
<b>E60, 61, 63, 64, E39 (518-528)</b>	
	#192416-1J STREET \$380 #192416-2L STREET/RACE \$545 #192416-3L FULL RACE \$545
<b>E39, 530-540 incl 'M'</b>	
	#193616-1J STREET \$380 #193616-2L STREET/RACE \$545 #193616-3L FULL RACE \$545
<b>E34 525 (9/92-96), 518-524 (7/90-96) incl M</b>	
See Catalog all models back to 1968	#193416-1J STREET \$380 #193416-2L STREET/RACE \$545
<b>MINI F55, 56, 57 ('14-'24)</b>	
	#195416-2N STREET/RACE \$695 #195416-3N FULL RACE \$695
<b>F54 ('15-'17)</b>	
	#195316-2L STREET/RACE \$695 #195316-3L FULL RACE \$695
<b>R55, 56, 57, 58, 59, 60, 61 (11/06-'16)</b>	
	#195216-2L STREET/RACE \$545 #195216-3L FULL RACE \$545
<b>R50, 52, 53 (3/02-10/06)</b>	
	#195116-2L STREET/RACE \$545 #195116-3L FULL RACE \$545

# Quick Reference / "Popular" Bushings

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## FRONT / REAR ADJUSTABLE - CAMBER, CASTER, TOE

Also Resolve Premature Wear (& Race Winning Bushes)

Product Features  
see page 11-13

### NON STRUT MODELS G30,31,38,F90,95. '6' G32,X6,F96 'M' G11-12. F01-12, F18 incl 'M'

<b>FRONT</b> CONTROL ARM <b>Camber</b> Adjustable Inner Bushes (Pair)	G30-38, F90, 95, G32, X6, F96 G11, 12, G14-16 F01-13, 18 06-13 'M'	#194516-6 K \$480 #194516-8 K \$480 #194516-1 K \$480 #194516-3 K \$480
THRUST ARM <b>Caster</b> Adjustable Inner Bushes (Pair)	G30-38, F90, 95, G32, X6, F96, G11-16 F01, 02, 03, 04 F06, 07, 10, 11, 12, 13, 18	#196016 K \$480 #194516-5 K \$480 #194516-2 K \$480
<b>REAR</b> Inner <b>Camber &amp; Toe</b> Adjustable Bushes (Pair)	F06, 07, 10, 11, 12, 13, 18	#194526 K \$480

Up to 2 degrees - Pos. or Neg. NOTE: Purposefully designed to allow for wide profile tires by maintaining clearance top of tire to outer fender when adjusting to reduce costly, premature inner edge (Neg.) wear

### F20 - F83 - 89, E90 - 93, F20 - 36, F87 Incl. 'M'

<b>FRONT</b> CONTROL ARM <b>Camber</b> Adjust Inner Bushes (Pair) E81,82,87-89 incl.'M',90-93 excl 'M' (In addition to adj. strut tops - see page 4) F20,21,22,23,25,26,30-36,87,E84 incl. 'X' 'M'	#193916-4 J \$380 #193616-8 H \$320
THRUST ARM <b>Caster</b> Adjustable Inner Bushes (Pair)	E60-67, E81, 82, 87-93 incl. 'M' F20, 21, 22, 23, 30-36. incl. 'M' F80 - F83, 87 'M'
<b>REAR</b> Lower <b>Camber &amp; Toe</b> Adjustable Inner Bushes (2 pair)	E81,82,84'X',87,88,90-93 excl 'M' 'M' (Camber) (E83, 85, 86, 89. see E46) F20, 21, 22, 23, 30-36, 87 incl. 'X', 'M'

### E46 (2/01 up 66mm diam.) E85 / E86 (z4 '02-'08). Incl. 'M'

<b>FRONT</b> CONTROL ARM Inner Rear Bushes (Pair) 2 Axis / Self Aligning  (Incls. Extra Pos. Caster offset) Resolve premature failure. Improve braking / traction.	*Extra Positive Caster - for Anti-dive/lift. Improved directional control. (-3)	No Caster offset One Caster offset *Both Caster offset	#193518-1 G \$295 #193518-2 G \$295 #193518-3 G \$295
E46 'M' (60mm diam.)	No Caster offset One Caster offset *Both Caster offset	#193618-1 G \$295 #193618-2 G \$295 #193618-3 G \$295	

### E30, E36, E46 (to 1/01), Z3. Incl. 'M'

<b>FRONT</b> CONTROL ARM Inner Rear Bushes (Pair) 2 Axis / Self Aligning  (Incls. Extra Pos. Caster offset) Resolve premature failure. Improve braking / traction.	*Extra Positive Caster - for Anti-dive/lift. Improved directional control. (-3)	No Caster offset One Caster offset *Both Caster offset	#192418-1 G \$295 #192418-2 G \$295 #192418-3 G \$295
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### E36 (not 316, 318 Ti), E46, E83, E85/86(z4 '02-'08), E89(z4 '09-'18). Incl. 'M'

<b>REAR</b> LOWER / OUTER ARM <b>Camber</b> Adjustable Bushes (Pair) Doubles existing adj. range to resolve costly premature inner edge wear, improve traction.	#192426 H \$320
TRAIL ARM Front Bushes (Pair) Specially designed to improve traction and enhance cornering stability by containing side load / G forces. Resolves also separation of center mount tubes and premature failure of OEM bushes.	#192428-1 H \$320

### E3, E10 (1502-2002), E12, E21, E23 (7/77-9/82), E24 ('77-4/82), E30, E28 (520,525 '82-4/86), E36 (316, 318 Ti), Z3 Incl. 'M'

<b>REAR</b> <b>CAMBER &amp; TOE</b> Adjustable Bushes (2 Pair) Replaces all 4 main rear bushings. KMAC - Maximum adjustment and extended bush life.	#192026 G \$295
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### E23 (9/82-'86), E24 (5/82-89), E28 (520, 525 - 4/86-'88, 528, 535-'82-'88), E32, E34

<b>REAR</b> <b>CAMBER &amp; TOE</b> Adjustable Bushes (2 Pair) Replaces all 4 main rear bushings. KMAC - Maximum adjustment and extended bush life.	#193326 H \$320
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# PRODUCT BACKGROUND RE KMAC BUSHINGS

**60 Years Market Leadership - Through Innovation - Not Imitation**

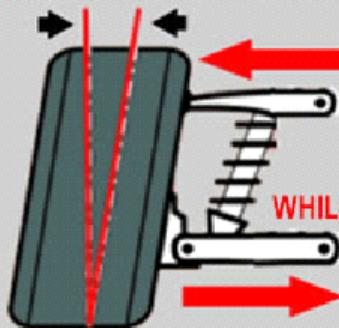
- ◆ **KMAC BUSHINGS SIMPLY REPLACE** and overcome the premature failure of existing OEM bushings, which can cause suspension sag, rattles, squeaks, and resultant loss of brake, traction and steering response. All kits are supplied with bush extraction/insertion tubes and instructions.
- ◆ **OEM rubber bushes use air voids** for “two-axis” movement (which is essential as majority today's vehicles have multi link arms with different angle mount points) but the air voids can also reduce steering response, allow shudder, wheel hop and loss of traction under braking and acceleration .
- ◆ **While the majority of aftermarket brands eliminate these air voids**, but in so doing they restrict the two-axis movement which can increase binding, locking up as arms travel through there required suspension arcs. This causing even more severe wheel hop, loss of traction!
- ◆ **KMAC bushes where needed therefore feature a unique “two-axis mono ball” design. Allowing power to the ground / maximum traction / braking.** The KMAC designs also significantly extend wear life having more then twice the load bearing area of OEM bushes. With over 50 years of proven bush design technology means they are noiseless, long term, maintenance free.
- ◆ **Today's Auto's have only Toe 'in' or 'out' - directional adjustment.** This is all dealers or alignment shops can adjust (with broad “in spec” tolerance margins) much to the frustration of owners who then can assume changing tire brands is the solution - that somehow this will alter tire Camber angles! When what is required is full adjustment Front Camber and Caster, Rear Camber (and extra Toe) to fix it right the 1st. time.
- ◆ **With the result - No more ongoing trips to dealers or alignment shops.** KMAC bushes resolving costly, premature edge tire wear, improving traction and steering response. Reduced dive/lift under brake/acceleration and allow “ongoing” adjustment capability to resolve steering pull or curb knock damage. Essential wide-profile Tires, altered height through load carrying, lowering or “Race days”-

## WITH ADJUSTMENT BEING JUST A “SINGLE WRENCH”

**This KMAC patented invention has revolutionised the industry . . .**

Where other brands require the labour intensive shimming of control arms or removal of actual bushings each time, then to reinsert at a different setting - now with KMAC it is done on car, direct on alignment rack (accurately under load). Simply by rotating the bush bolt head to the precise setting required.

**WIDE PROFILE TIRES, LOWERED SUSPENSION, LOAD CARRYING, CURB KNOCK DAMAGE**



**BEWARE** - The industry standard is “Rear Top Link Adjuster arms” which **DECREASE** outer fender clearance and the metal end links soon pound out.

**WHILE** - KMAC elastomer bushes are Lower Arm Adjuster's **RETAINING** outer fender clearance (plus widening track width if adjusting for extra Negative Camber on Race days)

● **COMPETITION PROVEN** ● **BIGGEST ADJUSTMENT** ● **NON SLIP LOCK SYSTEM** ●