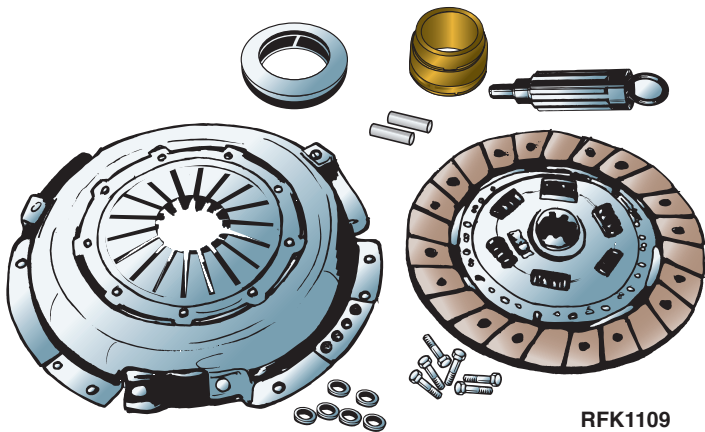


CLUTCH

TRF MAGIC CLUTCH FOR TR250, TR6

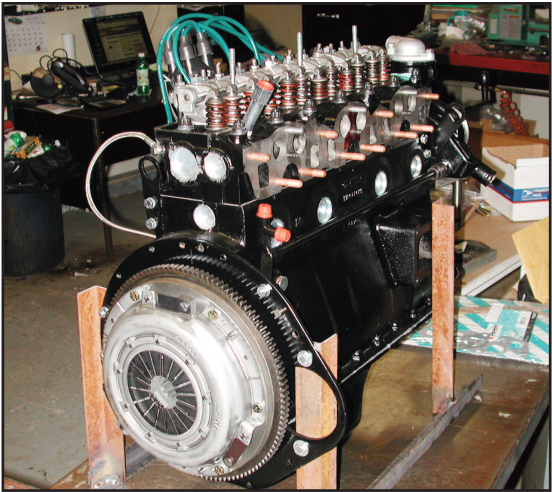
*“If You Have Experienced Chronic Clutch Problems, Please Read This Page Carefully”*

The Roadster Factory began listing its own uprated clutch more than a decade ago, and we sell a hundred of them every year on average. Our Magic Clutch Kit was developed by Dave Hagenbuch from ideas provided by J.K. Jackson of Tallahassee, Florida and by Dean Houston of British Sportscar Works in Boca Raton. The Magic Clutch was developed to solve long-term clutch problems experienced repeatedly by TR6 enthusiasts. The new clutch operates easily, and it includes a long-life throw-out bearing. We have not experienced clutch failures with the Magic Clutch even with customers who had repeated failures in the past.



Part No.	Description	No.	Off	List Price	Your Price
RFK1109	<b>Magic Clutch Kit</b> , expected to give long and trouble-free service; includes pressure plate, driven plate, bronze sleeve with uprated throw-out bearing, hardware, dowel pins, bear grease, and a clutch alignment tool	1			

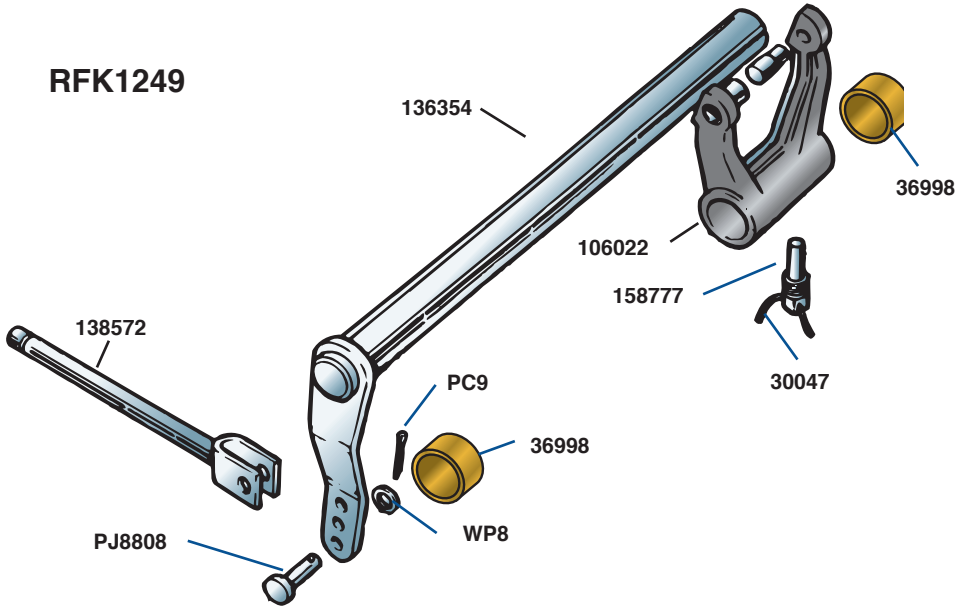
*Section Continues* ➤



Magic clutch Fitted to New TR5 Engine

## CLUTCH

## TRF MAGIC CLUTCH FOR TR250, TR6—Continued



Part No.	Description	No. Off	List Price	Your Price
RFK1249	<b>ADDITIONAL COMPONENTS KIT;</b> replace these components along with your new Magic Clutch	1		
136354	<b>Clutch Cross-Shaft,</b> with lever	1		
36998	<b>Bearing,</b> cross-shaft	2		
106022	<b>Fork,</b> throw-out bearing	1		
158777	<b>Taper Pin,</b> locking fork to cross-shaft; do not over-tighten, and secure with lock wire	1		
30047	<b>Wire,</b> securing taper pin	1		
138572	<b>Push Rod,</b> clutch slave cylinder	1		
PJ8808	<b>Pin,</b> joint, push rod clevis to cross-shaft lever	1		
WP8	<b>Washer,</b> lock, on joint pin	1		
PC9	<b>Pin,</b> cotter, securing joint pin	1		

**IMPORTANT NOTES**

Make sure that your flywheel is straight and flat. Have it trued by a machine shop, and have it balanced at the same time.

Always be sure that a new throw-out sleeve slides easily on the gearbox shaft. It must not bind or dig in, nor can it be too loose or it could cock. Use TRF's bronze sleeve as supplied with the Magic Clutch for best results. Lubricate the gearbox shaft with a bit of Mike Gassman's bear grease which is included in your Magic Kit.

Be sure that your gearbox is centered on your engine, as this will perfectly align your gearbox shaft in the crankshaft pilot bush. Originally, your gearbox was centered through the use of 3/8-inch dowel bolts at the two o'clock and the eight o'clock positions on the gearbox flange. These have often been lost, and 5/16-inch bolts substituted. This little mistake is a major cause of clutch failure. To replace lost dowel bolts, TRF supplies two dowel pins in the Magic Clutch Kit. Use them if your dowel bolts are gone!

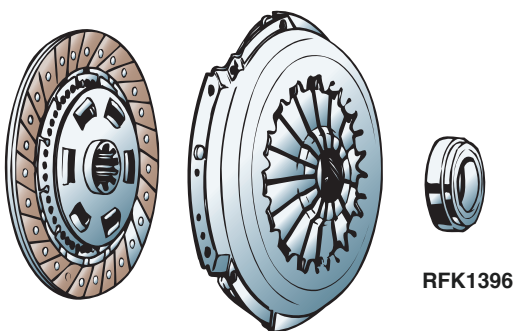
## CLUTCH

## OEM CLUTCH KITS, TR250, TR6

*“What Is an OEM Clutch Kit?”*

That is a good question! TR250 and TR6 models were built originally with either Borg & Beck clutches or Laycock clutches. Laycock clutches were generally preferred by enthusiasts, but Laycock was sold off to LUK, a major European clutch manufacturer, a long time ago. At that point, Borg & Beck clutches were the OEM clutch of choice, as it was the only one left. Borg & Beck clutches were manufactured by Automotive Products which also manufactured Lockheed brakes. This company was sold to Delphi Diesel, and then it was sold again, I think. That company is still manufacturing clutches, but the Borg & Beck name was sold separately. The new owner of the name does not allow the products of the original manufacturer to be sold as Borg & Beck anymore. I am not sure what happens if an old stock clutch in a Borg & Beck box is sold as Borg & Beck. Who knows?

My recommendation to customers is to avoid this controversy altogether. If you purchase a TRF Magic Clutch listed in the previous section you will probably have a better clutch than any originally fitted to a TR250 or TR6 sports car at the factory. Nevertheless, I am going to include the clutches still manufactured on Tachbrook Road in Leamington Spa where we always purchased Borg & Beck clutches in the past. For any customer crazy enough to purchase an original throw-out bearing, I am also listing clutch kits with original RHP throw-out bearings in addition to the ones having our own Koyo bearing. If you could see an RHP bearing torn apart and displayed along with a Koyo bearing, you would never buy the RHP. The Koyo bearing will last and last, and the RHP will not last. I rest my case, but you can buy what you like. In case I wasn't clear enough above, I will say it again, buy a TRF Magic Clutch, and you can forget about clutch problems for years to come.



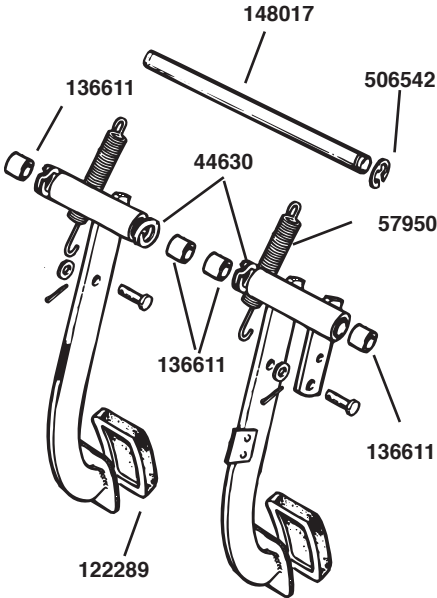
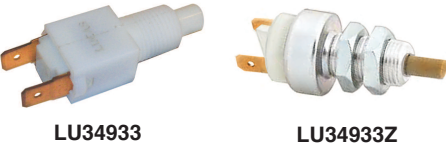
Part No.	Description	No. Off	List Price	Your Price
RFK226	<b>CLUTCH KIT</b> , original-equipment, with original throw-out bearing and attachment hardware	1	219.95	<b>184.99</b>
214321	<b>Pressure Plate</b>	1	91.95	<b>77.49</b>
148146	<b>Driven Plate</b>	1	94.95	<b>78.49</b>
GRB211	<b>Throw-out Bearing</b>	1	58.95	<b>49.99</b>
HP124	<b>Screw</b> , set, securing clutch to flywheel	6	1.25	<b>1.09</b>
WL208	<b>Washer</b> , lock, securing set screws	6	.45	<b>.39</b>
DP612	<b>Dowel Pin</b> , locating gearbox on rear engine plate	2	1.85	<b>1.59</b>
RFK1396	<b>CLUTCH KIT</b> , as above but with the substitution of a long-life Koyo bearing	1	239.95	<b>199.99</b>
HP122	<b>Throw-out Bearing</b> , long-life Koyo brand	1	71.95	<b>59.99</b>

CLUTCH

CLUTCH AND BRAKE PEDAL DETAILS, TR250, TR6

“Parts Now Available to Repair  
Wobbly Pedals”

Pedal shafts and bushes are wear items, and after lots of use, play will develop, allowing the pedals, particularly the clutch pedal, to wobble. Virtually all of the wearing items are now available, and the work is not too hard. A good time to do it is when you are replacing a master cylinder or doing other major work.



Part No.	Description	No.Off	List Price	Your Price
122289	<b>Pad</b> , brake and clutch pedals	2		
57950	<b>Spring</b> , pedal return	2		
LU34933	<b>Switch</b> , brake lights, cheap plastic part in Lucas box	1		
LU34933Z	<b>Switch</b> , brake lights, better quality replacement, metal switch may require some ingenuity for fitting	1		
<b>PEDAL SHAFT COMPONENTS</b>				
148017	<b>Shaft</b> , brake and clutch pedals	1		
136611	<b>Bush</b> , fitted in pedal pivots	4		
44630	<b>Washer</b> , double-coil, fitted between pedals	2		
506542	<b>Circlip</b> , ends of pedal shaft	2		

CLUTCH AND BRAKE PEDAL PADS, TR250, TR6

“TRF Has the Best Pedal Pads”

Not to brag, but it is true. We retooled for our own clutch and brake pedal pads when the ones off the original tooling became hard to recognize as pedal pads. Shortly, thereafter, they were discontinued, and TRF has become the pedal pad supplier to the world. We deserve this, however, as you will see if you purchase a pair of pedal pads. Ours are very crisp mouldings, and they have just the right firmness of rubber. We researched pedal pad firmness, and we have really got it right. Your car will love a new pair of pedal pads...



122289

Part No.	Description	No. Off	List Price	Your Price
122289	<b>Pedal Pad</b> , clutch or brake pedals	2		

## CLUTCH

## THROW-OUT BEARINGS AND SLEEVES, TR250, TR6

***“Purchase the Koyo Bearing Mounted on the Bronze Sleeve for Longest Service”***

Original RHP throw-out bearings are still desired by some enthusiasts just because they were original. However, they are clearly deficient when compared to the long-life Koyo bearing offered by The Roadster Factory. Bronze sleeves were used on TR2 through TR4A models, but they were changed to steel on TR250 and TR6. Cost had to be the reason for this change. We strongly suggest using the bronze sleeve. For this configuration, TRF assembles the bearing to the sleeve, and we sell it as a unit. Buying a bearing and sleeve assembly eliminates the chance that you might damage your new bearing during installation.



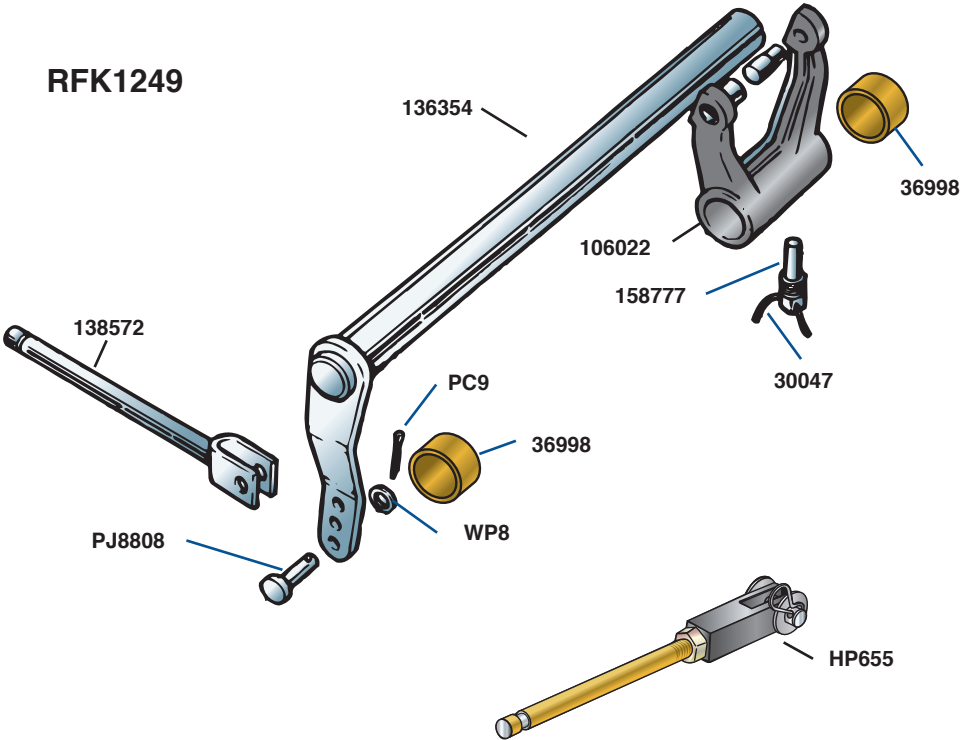
Part No.	Description	No. Off	List Price	Your Price
<b>THROW-OUT BEARINGS, without sleeves</b>				
GRB211	<b>Throw-out Bearing</b> , original-equipment	1	58.95	<b>49.99</b>
HP122	<b>Throw-out bearing</b> , long-life Koyo bearing	1	71.95	<b>59.99</b>
<b>SLEEVES, without throw-out bearings</b>				
147858	<b>Sleeve</b> ; original-equipment steel sleeve	1	34.95	<b>28.49</b>
HP147858	<b>Sleeve</b> ; uprated sleeve manufactured from 660 bronze	1	84.95	<b>69.99</b>
<b>BEARING AND SLEEVE ASSEMBLIES</b>				
RFK1830	<b>Bearing and Sleeve Assembly</b> , long-life Koyo bearing mounted on bronze sleeve, supplied with bear grease and dowel pins	1	149.95	<b>128.99</b>

CLUTCH

CLUTCH MECHANICALS, TR250, TR6

*“Replace These Parts Every Time You Replace Your Clutch”*

The TR250 and TR6 clutch mechanisms are very sensitive to wear. Replace everything that could add play to the system to be sure of a good result before you perform all of the work required to install your gearbox. The alternative may be having to take it all apart again without a good idea of where you might find the problem. The TRF Magic Clutch is the best choice for a successful clutch job.



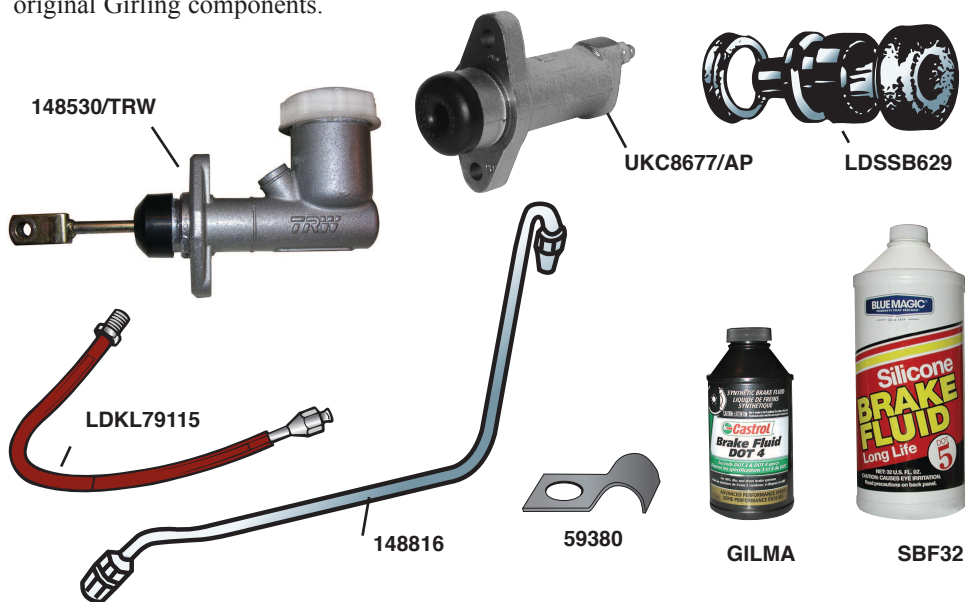
Part No.	Description	No. Off	List Price	Your Price
RFK1249	<b>ADDITIONAL COMPONENTS KIT;</b> replace these components along with your new Magic Clutch	1		
136354	<b>Clutch Cross-Shaft,</b> with lever	1		
36998	<b>Bearing,</b> cross-shaft	2		
106022	<b>Fork,</b> throw-out bearing	1		
158777	<b>Taper Pin,</b> locking fork to cross-shaft; do not over-tighten, and secure with lock wire	1		
30047	<b>Wire,</b> securing taper pin	1		
138572	<b>Push Rod,</b> clutch slave cylinder	1		
PJ8808	<b>Pin,</b> joint, push rod clevis to cross-shaft lever	1		
WP8	<b>Washer,</b> lock, on joint pin	1		
PC9	<b>Pin,</b> cotter, securing joint pin	1		
HP655	<b>Adjustable Push Rod Kit,</b> clutch slave cylinder; allows adjustment of clearance between throw-out bearing and clutch fingers for stock bearings and Koyo bearings; comes with instruction sheet; see Kastner’s second book, page 84	1		

## CLUTCH

## CLUTCH HYDRAULICS

***“Solve Any Clutch Hydraulic Problem with Components from This List...”***

When the last edition of this catalogue was published in 2008, it was still possible to purchase brand new Girling master cylinders, although TRW already owned Girling at that time. TRW is now producing clutch master cylinders for TR250, TR6 under its own name, and they are Girling quality or better, and they are similar in appearance to original Girling components.




Part No.	Description	No. Off	List Price	Your Price
148530/TRW	<b>Master Cylinder</b> , clutch, .75-inch bore, TR250, TR6, 1968-69	1		
GISP1967	<b>Repair Kit</b> , for the above	1		
154933/TRW	<b>Master Cylinder</b> , clutch, .7-inch bore, TR6, 1970-76	1		
GISP2102	<b>Repair Kit</b> , for the above	1		
UKC8677/AP	<b>Slave Cylinder</b> , clutch, Lockheed or TRW brand, all TR250, TR6	1		
LDSSB629	<b>Repair Kit</b> , for the above	1		
148816	<b>Pipe</b> , steel, clutch master cylinder to slave cylinder hose; pre-shaped pipe with correct end fittings	1		
59380	<b>Clip</b> , anchoring steel pipe to inner front fender	1		
YA583	<b>Screw</b> , securing clip to inner front fender	1		
LDKL79115	<b>Hose</b> , nylon, from steel pipe to slave cylinder	1		
GILMA	<b>Castrol Brake Fluid</b> , DOT4, 12 oz. container	A/R		
SBF32	<b>Blue Magic Silicone Brake Fluid</b> , preferred by many enthusiasts as it does not remove paint; not recommended by some hydraulic manufacturers, 32 oz. container, Blue Magic brand	A/R		

GEARBOX COMPONENTS



GEARBOX DRAIN AND FILL PLUGS, TR250, TR6

*“Choose Magnetic Drain Plugs to Clean Metal Bits from Gearbox Oil”*

The magnetic plug was specified as a drain plug for gearbox oil. The standard plug is used as an oil filler in the gearbox and oil drain in the engine and the rear axle. New plugs save frustration at oil change time.



RFT131



114774    155660

Part No.	Description	No. Off	List Price	Your Price
155660	<b>Plug</b> , oil drain, magnetic, gearbox drain	1		
114774	<b>Plug</b> , oil drain, standard; gearbox fill and drain, engine drain, diff fill and drain	5		
RFT131	<b>Combination Wrench</b> , with square hole for removing oil drain plugs	A/R		

GL4 GEAR LUBES, TR250, TR6

*“The Correct Grade for Classic Gearboxes with Yellow Metal Components”*

Commonly available gear lube from auto parts stores is GL5 which actually contains additives harmful to yellow metal components such as bronze bushes, gearbox synchros, thrust washers, etc. Some time ago, Castrol discontinued its version of GL4, and we had nothing to sell for classic car owners for a while. GL4 has now been reintroduced by American Refining Group, Inc., the makers of Brad Penn oils. This company now occupies the old Kendall refinery in Bradford, Pennsylvania, where Kendall, Amalie, and Wolf’s Head oils were produced, and we thank them for making this product available for British car enthusiasts.



BPGL4

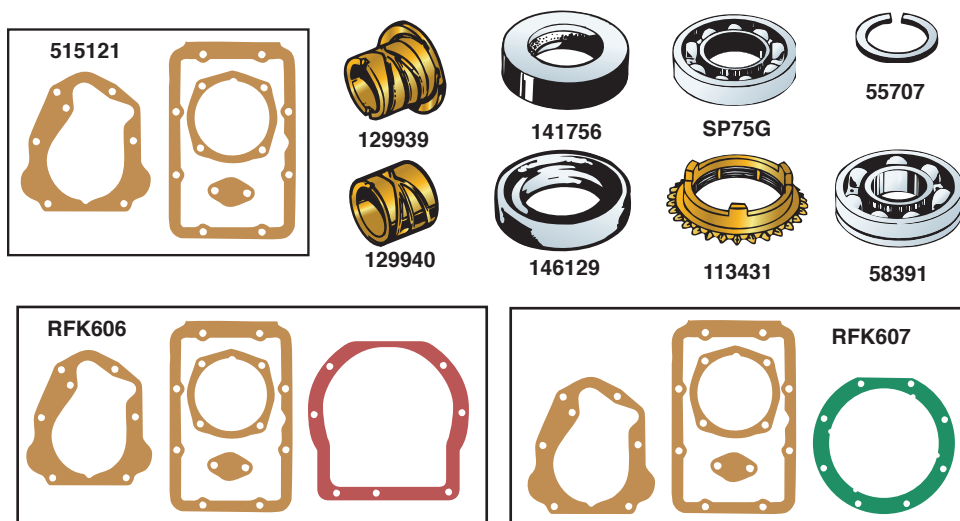
Part No.	Description	No.Off	List Price	Your Price
BPGL4	<b>Brad Penn GL4 Gear Lube</b> , SAE 80W-90, “The Green Oil,” supplied in quart containers with “needle” spouts	A/R		

## GEARBOX COMPONENTS

### GEARBOX—INDIVIDUAL COMPONENTS, ALL TR250, TR6

*“The Best Components We Can Find for Gearbox Rebuilding at Home”*

Listed here are individual components, many of which are also supplied in TRF's Gearbox Rebuild Kits. We heartily applaud those who maintain the British character of their cars by keeping original Triumph gearboxes. We believe that these folks are also preserving the driving skills which came with owning such a sports car, particularly when the car is also fitted with electric overdrive. If you want to keep your British gearbox forever, you should keep it in top condition all the time rather than waiting for something to break. Keeping bearings, bushes, and synchros in good condition while maintaining proper clearances will preserve your valuable gears for a long time.



Part No.	Description	No. Off	List Price	Your Price
<b>GASKET SETS AND OIL SEALS</b>				
515121	<b>Gasket Set</b> , non-overdrive gearboxes	1		
RFK606	<b>Gasket Set</b> , A-type overdrive gearboxes, 1968-72	1		
RFK607	<b>Gasket Set</b> , J-type overdrive gearboxes, 1973-76	1		
141756	<b>Seal</b> , oil, fitted in front end cover	1		
146129	<b>Seal</b> , oil, fitted in rear extension	1		
<b>MAINSHAFT PARTS</b>				
113431	<b>Synchronizer Cup</b> , gearbox	4		
129940	<b>Bush</b> , bronze, inside 1st and 3rd gears, 1968-73 approx.	2		
129939	<b>Bush</b> , bronze, top hat, inside 2nd gear, 1968-73 approx.	1		
153238	<b>Bush</b> , steel, inside 1st and 3rd gears, 1974-76 approx.	2		
UKC956	<b>Bush</b> , steel, top hat, inside 2nd gear, 1974-76 approx.	1		
58391	<b>Bearing</b> , mainshaft front and center, original RHP brand—this is the best one to use	2		
58391Z	<b>Bearing</b> , mainshaft front and center, cheaper replacement bearing—this should not be your first choice	2		
SP75G	<b>Bearing</b> , mainshaft rear; non-overdrive only	1		
55707	<b>Circlip</b> , retaining third gear on mainshaft	1		

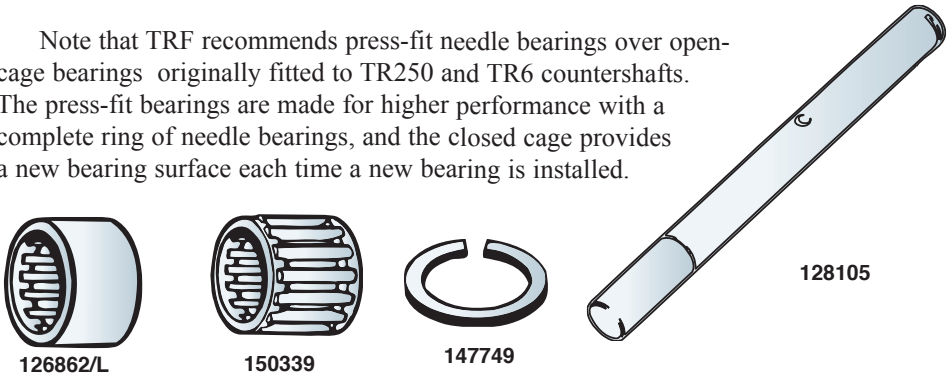
GEARBOX COMPONENTS

COUNTERSHAFT AND BEARINGS, TR250, TR6

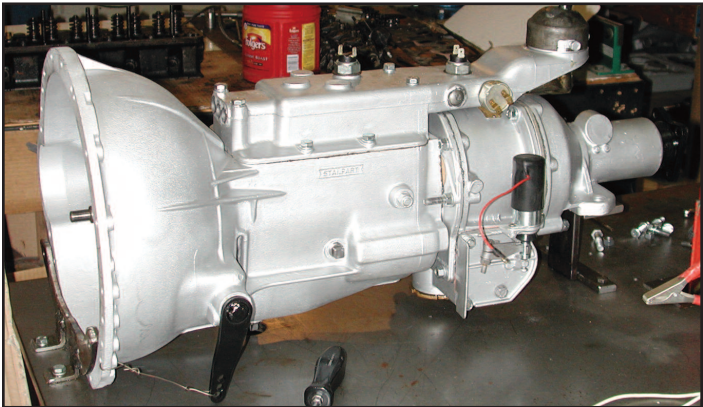
“Better Countershafts”

The Roadster Factory has found that readily available countershafts are not made as hard as they should be and that they are often not even machined correctly. We at TRF have solved the problem of knowing whether or not we are selling good countershafts by having our own shafts manufactured correctly at a U.S. manufacturer with high standards of quality. Regrettably, this adds some cost to the part, but we find that most customers are willing to pay a higher price for a critical part they can trust.

Note that TRF recommends press-fit needle bearings over open-cage bearings originally fitted to TR250 and TR6 countershafts. The press-fit bearings are made for higher performance with a complete ring of needle bearings, and the closed cage provides a new bearing surface each time a new bearing is installed.



Part No.	Description	No. Off	List Price	Your Price
128105	Countershaft, gearbox	1		
	BEARINGS, countershaft, original slide-in type			
150339	Bearing, needle, open cage type	2		
154396	Washer, bevel, behind needle bearings; to be fitted with bevel away from bearing	2		
147749	Circlip, retaining needle bearings in gear	2		
	BEARINGS, countershaft, press-fit type; we recommend these over original type and we recommend fitting circlips as well, since press-fit bearings can come out in use			
126862/L	Needle Bearing Assembly, press-fit type	2		
147749	Circlip, retaining needle bearings	2		



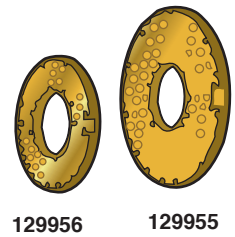
TR6 Gearbox with Overdrive

GEARBOX COMPONENTS

COUNTERSHAFT THRUST WASHERS, TR250, TR6

“Critical Parts for Countershaft Clearances”

There was a time recently when acceptable replacements were unavailable for these critical components, and TRF had suggested that used components were the best way to go. However, better components are on the market again, and we are happy to be able to sell them.

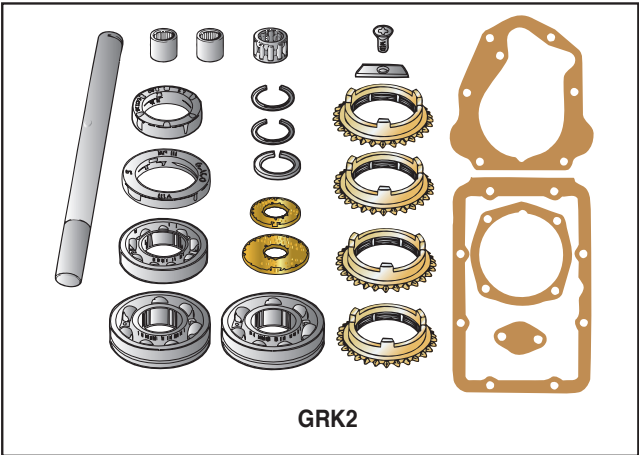


Part No.	Description	No.Off	List Price	Your Price
129955	Thrust Washer, front of countershaft	1		
129956	Thrust Washer, rear of countershaft	1		

GEARBOX REBUILD KITS, TR250, TR6

“Supplied with TRF’s Own Harder Countershafts and Much More...”

What do you replace every time you do a gearbox rebuild? We used to get this question every day at TRF. Then, we made up kits of components which include the things we would definitely replace every time. Countershaft, bearings, synchros, gaskets, critical circlips. In editing this catalogue, I’ve added a few more small components to make the kits even better. Take care to rebuild your gearbox when it needs it rather than after it has self-destructed, and it will serve you well for a long time to come.



Part No.	Description	No.Off	List Price	Your Price
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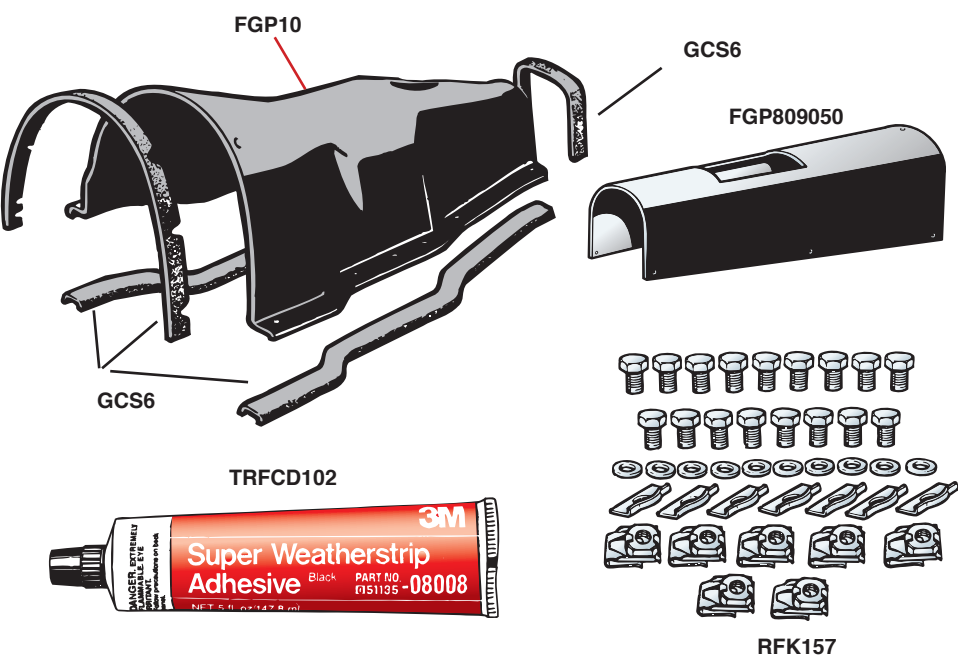
GEARBOX OVERHAUL KITS, including gaskets, mainshaft bearings, seals, synchros, countershaft bearings and thrust washers, critical circlips				
GRK1	Gearbox Kit, TR250 and TR6 up to gearbox no. CD20281; has press-in needle bearing in constant pinion gear	1		
GRK2	Gearbox Kit, TR6 after gearbox no. CD20281; needle bearing slides right into center of constant pinion gear	1		

GEARBOX COMPONENTS

PLASTIC GEARBOX COVERS, TR250, TR6

*“Permanent Replacements for Cardboard Originals”*

TRF’s plastic gearbox cover is precision-made from the same material as industrial hard hats, as this combines high-strength with light weight. We developed these from several generations of fibreglass gearbox covers back in the mid-1980’s. Other companies have copied our cover, but they have not beaten its high quality or its reasonable price. Beware, very nasty fibreglass gearbox covers available from one other vendor.



Part No.	Description	No. Off	List Price	Your Price
RFK779	<b>SPACE-AGE PLASTIC GEARBOX COVER AND INSTALLATION KIT;</b> fits all TR250, TR6; includes everything indented here...	1		
FGP10	<b>Gearbox Cover,</b> precision moulded plastic	1		
GCS6	<b>Rubber Seal Kit;</b> cement four seals to gearbox cover with weatherstrip adhesive	1		
RFK157	<b>Hardware Kit,</b> securing gearbox cover; forty-one pieces of correct hardware	1		
TRFC102	<b>Weatherstrip Adhesive,</b> 3M brand; use this to cement rubber seals to gearbox cover	A/R		
<b>RELATED COMPONENTS</b>				
FGP809050	<b>Drive Shaft Cover,</b> fitted over driveshaft tunnel and under carpet; precision made of black plastic to match gearbox cover, all TR250, TR6	1		
RFK1064	<b>Hardware Kit,</b> securing cover to driveshaft tunnel	1		

## DRIVE TRAIN

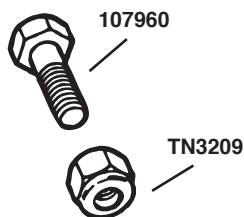
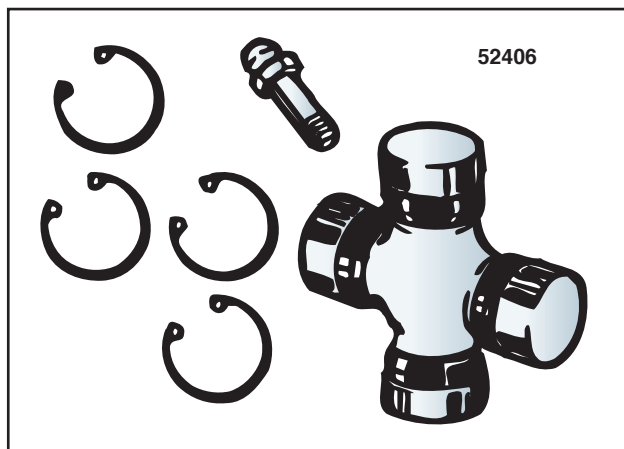
### UNIVERSAL JOINTS

#### *“Genuine Hardy Spicer U-Joints Come with Grease Fittings”*

TRF's universal joints include grease fittings to enable you to add as much life as possible to your drive line. Note that it is a good idea to replace hardware when you change U-joints, as this eliminates the slop from worn hardware which adds stress to new joints.



TRFC103



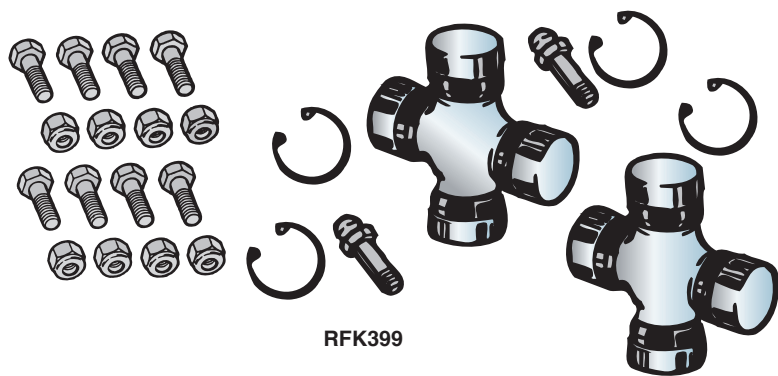
Part No.	Description	No. Off	List Price	Your Price
	<b>UNIVERSAL JOINTS, with grease fittings</b>			
52406	<b>Universal Joint</b> , drive shaft	2		
52406	<b>Universal Joint</b> , rear axle shafts	4		
	<b>CORRECT HARDWARE</b>			
107960	<b>Special Bolt</b> , securing drive shaft flanges	8		
107960	<b>Special Bolt</b> , securing rear axle shaft flanges to diff flanges	8		
TN3209	<b>Nyloc Nut</b> , securing special bolts	16		
GHF243	<b>Cleaveloc Nut</b> , alternative metal locking nut for even better locking	16		
YN2908	<b>Nyloc Nut</b> , securing rear hub flanges to studs on trailing arms	12		
TRFC103	<b>Loctite Threadlocker</b> ; drive shaft flange bolts come loose even with new nyloc nuts; Loctite helps to keep them tight	A/R		

DRIVE TRAIN

TRF MAGIC KITS—UNIVERSAL JOINTS, TR250, TR6

*“You Get Everything You Need Under One Part Number”*

TRF universal joint kits save you a little money, they make ordering easy, and you get everything you need by ordering just one part number. All hardware is the correct grade and the correct design, and all TRF universal joints come with grease fittings...



Part No.	Description	No. Off	List Price	Your Price
RFK328	<b>Complete Kit;</b> includes six universal joints for drive shaft and both rear axle shafts, plus new flange bolts, nyloc nuts, and Loctite threadlocker	1		
RFK399	<b>Drive Shaft Kit;</b> includes two universal joints, flange bolts and nyloc nuts	1		
RFK327	<b>Rear Axle Shaft Kit;</b> includes two universal joints, flange bolts and nyloc nuts for bolts and for hub flange	2		

AXLE SHAFT RUBBER BOOTS, TR250, TR6

*“New Boots Protect your Universal Joints and Your Precious Slip Joints”*

Keep boots in good condition to protect your investment in more valuable parts. Don’t forget to pull axles apart to lubricate the splines of the slip joints anytime you are replacing universal joints. This kind of work will keep your car working well for a long time without expensive repairs.



Part No.	Description	No. Off	List Price	Your Price
213844	<b>Rubber Boot;</b> protects inner U-joints	2		
140753	<b>Rubber Boot,</b> sealing slip joints	2		
140606	<b>Wire,</b> securing rubber boots	4		

## DRIVE TRAIN

### REAR HUB BEARINGS—TIMKEN BRAND, TR250, TR6

***“Rear Hubs Are Safety Critical and Require Careful Work During Rebuilding”***

You can rebuild your own hubs, but the work requires great attention to detail. Begin by reading everything you can on the subject. The final bearing clearance is critical, and you want to aim for almost no movement as long as the hub continues to roll smoothly. Too much play at the hub makes a lot of play on the wheel rims. Never reuse a collapsible spacer once it has been collapsed. If you think you have made a mistake during assembly, disassemble and start over again with a new spacer. Your safety and the safety of your passengers depends on this job being done well.



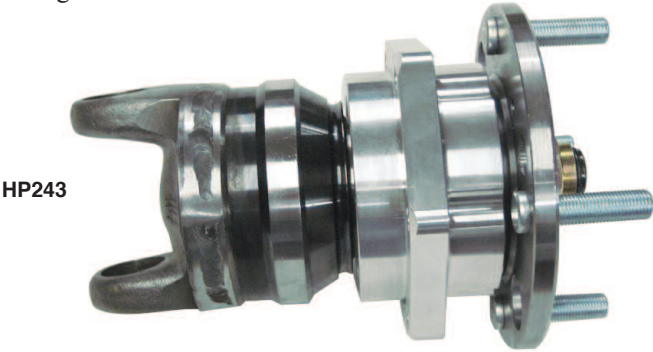
Part No.	Description	No. Off	List Price	Your Price
RFK1442	<b>BEARING KIT</b> , rear hub, Timken bearings, high-quality seals, collapsible spacer, cotter pin; fits all TR250, TR6	2		
HP610	<b>Bearing</b> , inner, Timken brand	2		
HP611	<b>Bearing</b> , outer, Timken brand	2		
HP608	<b>Seal</b> , inner, Chicago Rawhide brand	2		
GHS133	<b>Seal</b> , outer	2		
138272	<b>Spacer</b> , bearing, collapsible	2		
PC13	<b>Pin</b> , cotter	2		
	<b>WHEEL BEARING GREASE</b>			
CAWB1	<b>Castrol Wheel Bearing Grease</b> , 28 oz. resealable tub	A/R		

DRIVE TRAIN

BETTER REAR HUBS, TR250, TR6

*“Uprated Design, Uprated Materials, and Modern Hub Bearings”*

Rear hubs have always been a problem on the IRS TR’s. Flex of the stock axle can result in eventual failure with the possibility of disastrous results in the worst-case scenario. In the best-case scenario, bearing clearances are difficult to set, and wobbly wheels are very common with stock hubs unless they are built by an experienced craftsman. The hubs listed here are a much stronger design which transfers the side forces directly from the hub to the large bearing. Sealed, double-row hub bearings are modern, large diameter type with angular contact. Hubs listed here may be used with original axles, and they are completely built up and ready to assemble to your car in the same way as original hubs.



Part No.	Description	No.Off	List Price	Your Price
<b>HEAVY-DUTY REAR HUBS;</b> each hub comes with a Hardy Spicer greaseable universal joint for installation on a stock axle				
HP243	<b>Hub Assembly,</b> fitted with wheel studs for stock wheels	2		
HP244	<b>Hub Assembly,</b> fitted with wheel studs for wire wheels	2		
HP245	<b>Hub Assembly,</b> fitted with wheel studs for use with alloy wheels	2		



Rear View of Chassis Ready for Installation of Differential

## DRIVE TRAIN

### BETTER REAR AXLE AND HUB ASSEMBLIES, TR250, TR6

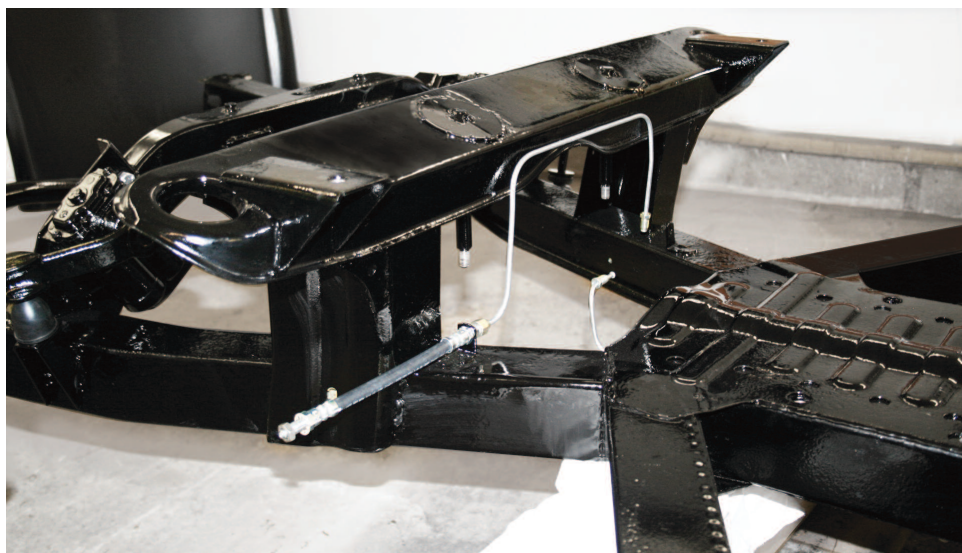
*“Stronger Design and Better Materials, Including Hubs Described on Page 70.”*

New axle shafts include heavy-duty greaseable universal joints and heavy-duty hubs as listed in the previous section. These assemblies install in the same way as stock units through the trailing arms, and they bolt right up to the stock flanges on the differential.



HP246

Part No.	Description	No.Off	List Price	Your Price
<b>REAR AXLE AND HUB ASSEMBLIES,</b> bolt right up to stock differential and stock trailing arms				
HP246	<b>Axle and Hub Assembly,</b> fitted with wheel studs for stock wheels	2		
HP247	<b>Axle and Hub Assembly,</b> fitted with wheel studs for wire wheels	2		
HP248	<b>Axle and Hub Assembly,</b> fitted with wheel studs for alloy wheels	2		



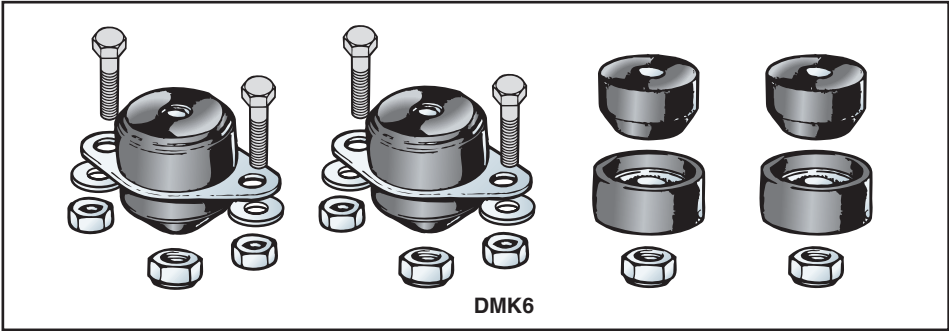
TR6 Chassis Ready for Rear Suspension

DRIVE TRAIN

DIFFERENTIAL MOUNTINGS—ORIGINAL RUBBER TYPE,  
ALL TR250, TR6

*“Consider Using the Rubber Mounts with the Stability Cups Listed in the Following Section”*

You must keep your diff mountings in good condition to prevent frame damage. If your frame brackets are cracked or broken or if the bolts welded to the frame have come loose, have them welded at a frame shop while the diff is out of the car. Racers in England have been using the original rubber mounts recently with the stability cups listed in the following section. Other possibilities include urethane mountings, but I fear that some of the inexpensive ones currently available are much too hard.



Part No.	Description	No. Off	List Price	Your Price
DMK6	TRF DIFF MOUNTING KIT; high quality rubber mountings and essential hardware	1		
134235	Diff Mounting, rubber, front, upper	2		
134236	Diff Mounting, rubber, front, lower	2		
147783	Diff Mounting Assembly, rear	1		
134234	Washer, special, large and heavy, fitted on all four diff mountings, front and rear; special washers not included in kit listed above	4		
BPGL4	Brad Penn GL4 Gear Lube, SAE 80W-90; “The Green Oil,” supplied in quart containers with “needle” spouts	A/R		

## DRIVE TRAIN

### DIFFERENTIAL MOUNTINGS—STABILITY CUPS, ALL TR250, TR6

#### *“The Latest Diff Mount Technology for Fast Road and Full Race”*

The English racing gurus are now saying that original rubber diff mounts with new machined aluminium stability cups work better in fast road and racing conditions than urethane mounts. Precision machined aluminium cups take the place of the large washers under the rear mounts only to limit flexing of the mounts during stress from hard cornering and acceleration. The gurus say that the axle shafts stay better positioned using this technology, and there is some indication that frame bolts are less stressed when the cups are fitted. This is what the gurus are saying, and U.S. vintage racers seem to agree. That is why Joe Alexander of Alexander Racing Enterprises (ARE) has produced a run of beautifully-machined aluminium cups for TRF customers.



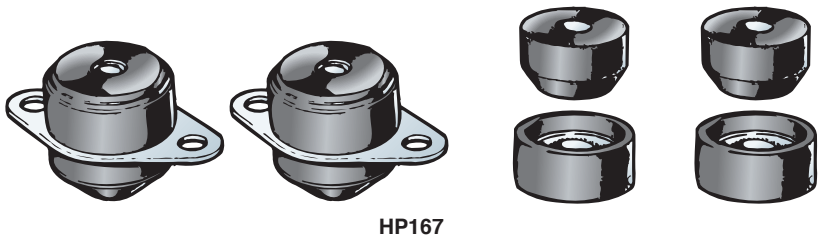
Part No.	Description	No.Off	List Price	Your Price
HP238	<b>Stability Cups;</b> one pair of precision machined aluminium cups to stabilize rear diff mounts only	1		

DRIVE TRAIN

DIFFERENTIAL MOUNTINGS—URETHANE VERSIONS,  
ALL TR250, TR6

*“Several Versions Available in Several Price Ranges”*

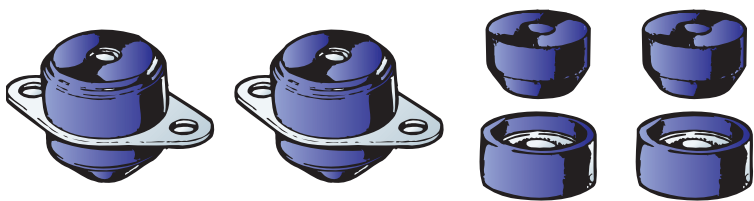
Commonly available urethane diff mounts offered by several vendors appear to be too hard to me. I think they would transmit too much shock to the chassis frame that could lead to damage to which the chassis mountings are susceptible anyway. Nevertheless, they are very popular. I don’t have better ones available now at a reasonable price, although I had worked with an English manufacturer on this several years ago. I am going to list them anyway, and I will try again to see what I can find. When a price shows up in the online version of this catalogue, that means they are in stock. Also available are very expensive race-quality versions which I shall list as well. All diff mounting kits include two upper front mounts, two lower front mounts, and two rear mount assemblies.



HP167



RFK1057



HP180

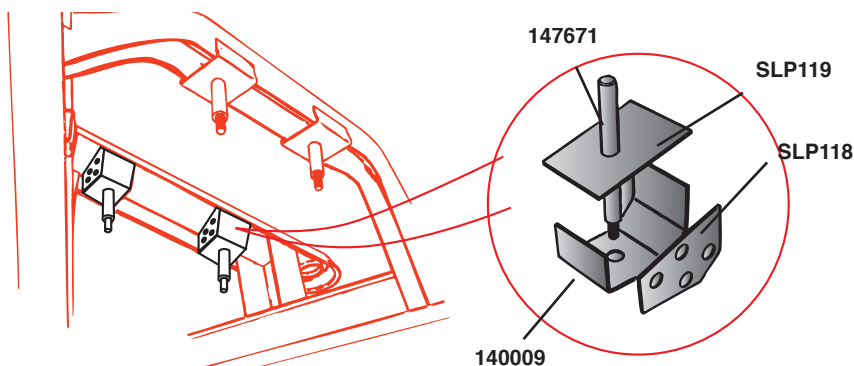
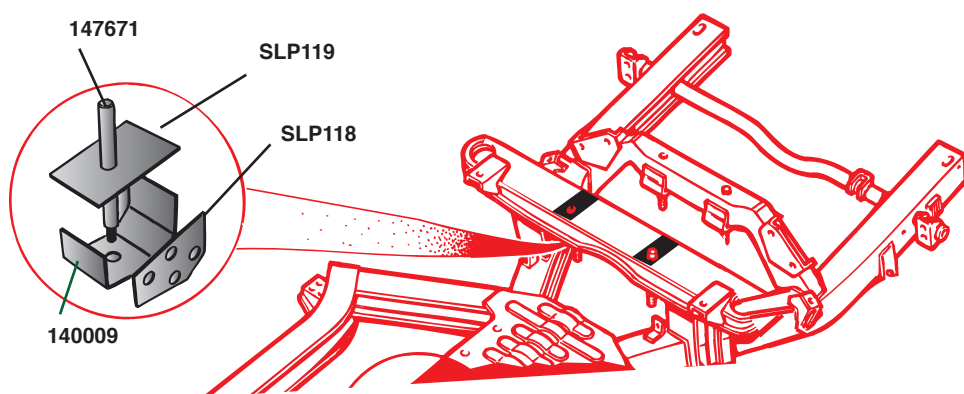
Part No.	Description	No.Off	List Price	Your Price
HP167	<b>Diff Mounting Kit</b> , urethane; these are the mounts that I think are too hard	1		
RFK1057	<b>Diff Mounting Kit</b> , urethane; these are the mounts that I shall recommend when they are available	1		
HP180	<b>Diff Mounting Kit</b> , purple urethane by Super Pro, “Standard Ride”	1		
HP183	<b>Diff Mounting Kit</b> , purple urethane by Super Pro, “Firm Ride”	1		

## DRIVE TRAIN

### DIFFERENTIAL MOUNTINGS—CHASSIS FRAME REPAIRS, ALL TR250, TR6

#### *“The Parts You Need for a Permanent Fix”*

As mentioned above, you may find some chassis frame damage when you remove your differential. Generally, this is confined to the bolts on the crossmember closest to the front of the car and often just to the RH side. If you are making a repair, however, it makes a sense to do both sides. Listed here are the parts you will need to completely replace and reinforce the front mounting brackets.



View from underneath

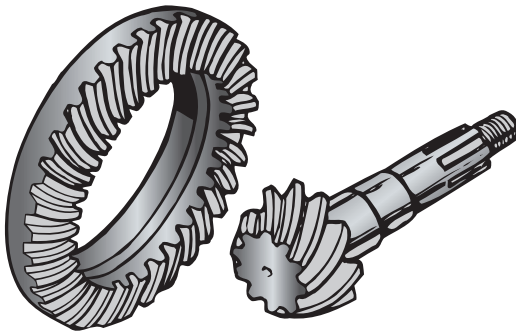
Part No.	Description	No. Off	List Price	Your Price
147671	<b>Bolt</b> , diff mounting; welded to chassis	2		
140009	<b>Bracket</b> , supporting bolts; welded to chassis	2		
SLP118	<b>Reinforcement</b> , for boxing in support brackets; welded to brackets	4		
SLP119	<b>Reinforcement</b> , reinforcing weld for bolt to crossmember; welded to top of crossmember	2		

## DRIVE TRAIN

## CROWN WHEELS AND PINIONS, TR250, TR6

*“The Heart of the Differential”*

I am not going to list many rebuild components for differentials in this Glove Box Catalogue. In fact, you can find a complete listing with illustrations on Plates CZ and DA in Volume 1 (Blue) of TRF's TR6 catalogue which is posted online. Similar coverage is found in the red paper TR250 catalogue on Plate BJ. This section is listing crown wheel and pinion sets only. There are several qualities of this product in the market place, and TRF offers ones which are made in Germany. These may cost a little more, but we have found them to be the best. The diffs we have built with the German crown wheels and pinions have been quiet and long-lasting. Various axle ratios were originally offered by Triumph, and the stock ratios are the most readily available. These are 3.7 : 1 for models with carburettors and 3.45 : 1 for P.I. models. Often used with A-type overdrive, 4.1 : 1 is also available, and another ratio has reached the market just as I am writing—it is 4.3 : 1. I am not sure what the application would be for this one, perhaps a drag car with overdrive! If any other ratios become available, we will add them to the online version of this catalogue, and we will include them in the next paper edition.



502127

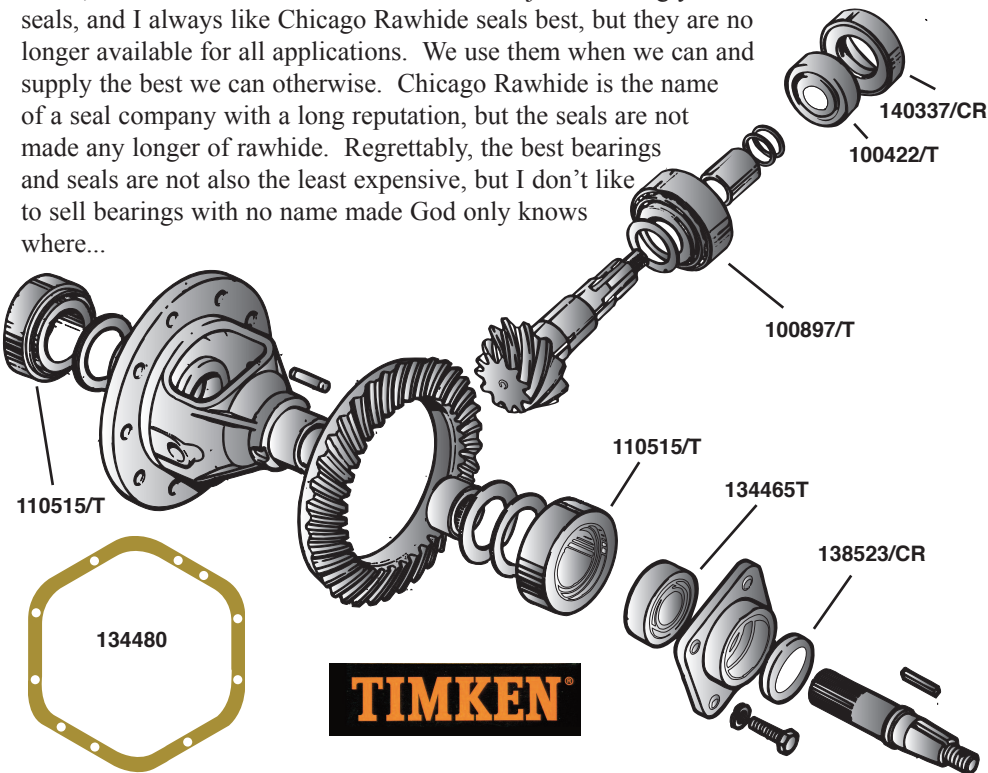
Part No.	Description	No.Off	List Price	Your Price
502127	<b>Crown Wheel and Pinion Set, 3.7 : 1</b> ratio, correct for TR250, TR6 models with carburettors	1		
516398	<b>Crown Wheel and Pinion Set, 3.45 : 1</b> ratio, correct for TR5, TR6 models with P.I.	1		
505014	<b>Crown Wheel and Pinion Set, 4.1 : 1</b> ratio, often used with A-type overdrive	1		
	<b>NEWLY AVAILABLE</b>			
502523	<b>Crown Wheel and Pinion Set, 4.3 : 1</b> ratio (Drag car with overdrive?)	1		

DRIVE TRAIN

DIFFERENTIAL BEARINGS AND OIL SEALS, TR250, TR6

*“TRF Stocks and Sells the Best Bearings by Name”*

When I build expensive mechanical units, engines, gearboxes, differentials, or whole sports cars for that matter, I always use the best components I can find. Bearings are products on which I never like to scrimp, and I choose brand-name bearings whenever I can. When it comes to diff building, and I built another one this year for my TR3A, I generally use Timken bearings which are available for both pinion bearings and for the diff carrier. Timken bearings are not available for the inner axle shafts, and I use NTN or SKF for these. I feel just as strongly about oil seals, and I always like Chicago Rawhide seals best, but they are no longer available for all applications. We use them when we can and supply the best we can otherwise. Chicago Rawhide is the name of a seal company with a long reputation, but the seals are not made any longer of rawhide. Regrettably, the best bearings and seals are not also the least expensive, but I don't like to sell bearings with no name made God only knows where...



Part No.	Description	No. Off	List Price	Your Price
TRFCD292	<b>DIFF BEARING AND SEAL KIT;</b> includes only brand name products indented here...	1		
100897/T	<b>Bearing,</b> pinion head; the one closest to the gear; always Timken brand	1		
100422/T	<b>Bearing,</b> pinion shank; the one furthest from the gear; always Timken brand	1		
140337/CR	<b>Oil Seal,</b> pinion; always Chicago Rawhide brand	1		
110515/T	<b>Side Bearing,</b> differential carrier; always Timken brand	2		
134465/T	<b>Axle Bearing;</b> inner axle shafts; always NTN brand or SKF brand	2		
138523/CR	<b>Oil Seal,</b> inner axle shafts, located on sides of diff housing	2		
134480	<b>Gasket,</b> rear cover; we include two gaskets in this kit because we like to use two with gasket cement on both sides of both gaskets	2		