There 's a Triumph on my Stoep

(Rebuild 1955 Triumph TR2 TS 6766 - O)

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March 2007

Index.

Attachments

In the beginning.....

Don't ask me why I did it,
I must have been lonely, stupid or blind,
but it seemed to be a good idea at the time.
(In the words of Mike Batt).

There's a Triumph on my Stoep

THE DREAM

As is the case with most males who never grow up, I have always dreamed of some day owning a sports car of sorts, but with mortgages, school fees and generally just living, such dreams seemed very far away.

During our short stay in Bloemfontein I came very close to purchasing a Karman Ghia but this somehow never materialized. Our move to Port Elizabeth saw this quest continue but with less vigor due to the limited stock in this part of the world.

Dreams of classic cars were discussed over many a Friday night beer until in March 1999 Pete told me that his brother Robert had decided to sell his TR2. The possibility of buying the car was appealing but the timing was wrong financially and I had not seen the vehicle, which was in East London, 300kms away. Nevertheless after a few lengthy telephonic discussions with Robert, a business trip was arranged which ended up in East London and I was able to view the TR. At this stage I knew very little about a TR2 but was immediately attracted by its character.

ACQUISITION

The asking price for the car, which had not been running for over 10 years following a gearbox problem, was R12 500. After many lengthy family discussions and numerous rough cost estimates, which have proved to be hopelessly understated, the decision to buy the car was taken.

From that moment on the saga started. Firstly an extensive search was launched to find a car trailer to fetch the Triumph and eventually one was located in Perridgevale, and hired for R190 a day.

This saw Pete and I set off at first light on Saturday 8th of May 1999 with an enormous trailer hitched up behind the Isuzu. We made East London in good time without incident though the presence of the trailer had noticeably made the Isuzu thirsty, which on reflection was nothing in comparison with the return journey.

The initial encounter with the TR saw the first of a never ending sequence of challenges.

After standing for over 10 years the rear brakes had seized and we could not move the vehicle. The rear wheels were removed and the brakes slackened off but to no avail. After spraying Q 20 into the drums and rotating them with a tyre lever placed between the wheel nuts we eventually released the brakes to a degree. This enabled the car to be moved, but not without considerable effort. It took Pete, Rob, his son, the gardener and I, all our strength to push the car up the slope of the driveway and onto the trailer. The narrow track of the TR only just fitted over the well of the trailer that was obviously made for very large American cars.

The weather was threatening so a tarpaulin was tied over the TR before setting off for home. Apart from numerous stops to retie the tarpaulin which kept coming loose, the tow

home was uneventful though the Isuzu certainly felt the weight of the load as was seen from the fuel consumption.
On arriving home I was immediately faced with the problem of where to store the car as although our modest home boasted a double garage, wide enough to accommodate three vehicles, as well as a single carport, access to the garage was restricted by only having two single doors. We already had three cars, mine, Sue's and the Beetle for Georgie, so I was forced to leave the Isuzu out, as try as I might, I could not squeeze three cars into the garage.

PLAN OF ACTION
Once the TR was safely housed in the garage the situation was reassessed and a plan of action formulated. It was clear that firstly the hydraulics (brakes and clutch) would have to be attended to, and the gearbox repaired in order to get the car running. When this was achieved I would review the situation and sort out the problems as and when they arose with the axiom, if it works don't fix it!! The body appeared to be relatively free from rust though the paint was poor and it was clear that the car had been in a front end crash. The nose cone was poorly repaired with a lot of body filler and the headlights were out of alignment. The interior would require re-upholstery and the original soft-top and frame were missing, presumably removed when the detachable fiberglass hard top was fitted. When the hard top was removed it was revealed that the tonneau provided came nowhere near fitting. However the car was nevertheless mostly complete with original instrumentation and side screens.

SETTING UP
Not knowing much about Triumphs I decided that it would be beneficial to join the local branch of the Triumph Sports Car Club, and Errol Michell, on hearing that I had purchased the Triumph, persuaded me to join the Eastern Province Veteran Car Club as well, and it is through these clubs I have met many enthusiasts to whom I am eternally grateful for the invaluable advice and assistance so freely given.
As I had never embarked on this type of venture before I was not tooled up for the project and consequently the search then started for four trestles and a trolley jack. These items were eventually acquired, the car jacked up and all four wheels removed.

BRAKES
I first set about removing the brake drums that with the exception of the left rear came off without undue effort. However the left rear would not budge despite a little persuasion with a 10 lb hammer, which only resulted in my breaking a small piece away from the outer

lip. Lesson learned, never hit this outer lip with a hammer, it is far too fragile. I tried everything to remove this drum, from shocking it by administering sharp blows with a hammer between the wheel studs, to heating the drum with a blowtorch, but to no avail. After intense frustration lasting a couple of weeks and trying every conceivable method I could think of, it became apparent that the only way of removing this drum would be by means of a wheel puller. This

resulted in Pete and I eventually designing our own wheel-puller, as we could not beg borrow steal or buy one suitable for the job. Our simple device comprised two threaded bars with pieces of angle iron welded to the ends, which fitted behind the lip of the brake drum. These passed through a length of angle iron bearing against the end of the side shaft so as to apply outward pressure on the brake drum when the bolts of the treaded bars were tightened. Pete manufactured the tool and we put it to the test. As the nuts were tightened sequentially a creaking noise was made followed by a loud bang as the drum came loose. Success!! And the drum was not broken!!!

A close inspection revealed that the left rear drum had rusted tightly on the center cone preventing its easy removal. The right rear drum had cracks between the stud holes and the left front also had a piece broken out of the outer lip, similar to the damage I inflicted on the left rear. All four drums were taken for reconditioning resulting in 23 metal stitches to the right rear and brazing infill on the damage to the outer lips of the left front and rear drums. New bonded linings were fitted to the brake shoes though fortunately the drums did not require skimming. The linings were supposedly fitted to the profile of the drums though on later assembly one would never have believed it as they had to be filed in order to fit the drums.

The brake hydraulics were stripped and it was found that every cylinder was rusted solid. This resulted in all six cylinders having to be reconditioned with stainless steel sleeves. Fortunately the brake pistons were not badly corroded and could be reused. The lesson learned here is not to try and remove a stuck piston from the cylinder no matter how great the temptation, as the locating cap for the brake shoe is very flimsy and breaks away from top of the piston easily. The pistons were however removed from the cylinders by the specialists without difficulty, using compressed air. Similarly the clutch slave cylinder and brake and clutch master cylinder also required re-sleeving with stainless steel. Inspection of the brake lines revealed numerous fractures / crimping which would restrict flow of the brake fluid and so the decision was taken to systematically replace all the brake lines. All in all the brakes turned out to be a costly exercise.

From the outset I systematically marked every nut, bolt or part that was removed, either storing them in tins or plastic bank bags clearly labeled, and supplemented with sketches on fitting details. This process was adhered throughout the rebuild and proved to be invaluable, especially when refitting parts a long time after having removed them.

GEARBOX

The next saga was to sort out the gearbox. The four speed gearbox fitted to the car was clearly not the original one which would have been an overdrive gearbox as confirmed by the (O) suffix to the cars commission number. I was advised to replace the gearbox with an overdrive unit from a Triumph Chicane, but as this would cost at least R1200 for an un-restored unit, and there were none available at the time, I decided to reuse the gearbox I had, and replace it with an overdrive unit at a later date after I had the car running and on the road.

Things were going to plan. Firstly the hardtop had to be taken off and the seats, runners, carpets and all interior trim removed together with the transmission

tunnel cover. The gearbox was removed through the interior of the car, leaving the engine supported at the rear on a trolley jack, and taken to Igie who had agreed to repair and recondition it. Having never opened a gearbox before, I thought it prudent not to meddle in this area. A wise decision!! The fault was a broken tooth on the first gear counter shaft as well as a worn bearing. I was fortunately able to obtain a good second hand countershaft and we sourced a new bearing locally. Igie had to manufacture a special tool for the re-assembly of the box and we were back in business.

With the gear box out I decided that it would be wise to replace the clutch plate before refitting the gearbox. A new clutch plate could not be sourced locally and all the big clutch boys were not interested in reconditioning the old plate, as it was an odd size in modern terms. Eventually I came across Ranger Clutch in Kempston Road who willingly and confidently reconditioned the old clutch plate. The pressure plate and release bearing seemed fine and so were left well alone. However I was advised to first boil the release bearing in grease before re-fitting in order to ensure grease penetration, which resulted in some amusement. The thrust bearing was packed with grease and placed in a tin on the trusty gas cylinder. As luck would have it the gas cylinder ran dry before the grease was melted. It went without saying that it would not be acceptable for this operation to be conducted on the kitchen stove though I must admit the thought did cross my mind, so the only alternative was to flash up the Weber braai. This was duly done on the driveway fronting the street, and after some time the grease eventually melted, emitting the most revolting smell which drew strange looks from the neighbours and passersby.

This done, the clutch and gearbox were refitted though aligning the clutch to take the gearbox spline was a little tricky, as again the correct tool could not be sourced. A smaller guide was used (borrowed from Igie) and thickened up with masking tape. However after fitting the clutch this guide stuck fast when we tried to remove it and was only released after a bit of a struggle.

SPARES FROM TSCC

In July the family traveled to a hockey tournament in Bloemfontein and went on to Gauteng for the weekend where I was able to fit in a trip to see Harry Fairley who at that time held the spares portfolio for the Triumph Sports Car Club. Numerous spares were obtained from Harry including a new front suspension kit comprising replacement bushes, seals etc., as I had noticed that the front suspension showed excessive wear.

FRONT SUSPENSION

On returning home armed with the new suspension kit it was decided that this was what should be embarked upon next as it made sense to sort the suspension out before completing the hydraulics.

We tackled the left front first so as to keep the right front intact as a guide for reassembly. Once this was stripped it was noticed that in addition to all the bushes being worn the brass trunion also had excessive wear and required replacement. Fortunately I was able to obtain a new one from Harry Fairley. The new trunion however came fitted with a new pivot pin for the lower wishbone that required reaming of the

new bush to fit. This incidentally also resulted in a run around, as there are now only a few engineering works that posses imperial reamers let alone one the size required. Eventually I came across B.A. Engineering in Korsten who were able to do the job.
On stripping the suspension I had noticed that the coil spring compressed very easily and the experts, Springwell, confirmed that it was 12mm off specification and should be re-tensioned to the correct length. However, both left and right springs needed to be done together to ensure a balance. My theory of keeping the right suspension untouched until the left was completed was blown. The right suspension was striped and the springs re-tensioned together.
It was at this point that my initial plan of action started to go wrong. Stripping the right front suspension revealed that the car had been in a far more serious front end collision than I had thought, bending the chassis and drastically distorting the vertical link. Some repairs had been done to the suspension to get the car going though they did not install confidence in me. Again I was extremely lucky to obtain a second hand vertical link as the damaged one was unserviceable, and another trunnion had to be obtained from Harry Fairley. Although I was not comfortable with the state of the right front suspension I nevertheless reassembled it with a view to reassessing the situation once the car was running. Mistake!!.

CHANGE IN STRATEGY (WHO MOVED THE CHEESE)
I was now faced with the problem of how to tackle the engine compartment, as I did not wish to re-assemble the hydraulics only to remove them again for painting. At this point I called in various body restorers for quotations and advice, with the general consensus being that the body needed to be removed from the chassis to do the job correctly. This was exactly what I had been trying to avoid and resulted in a major shift in strategy. Eventually I accepted that a full body off rebuild was the only way to go, a wise decision, and in retrospect what I should have embarked upon right from the start. I set about stripping the trim and removing the body, which when reading the manual appears to be a relatively simple job. However when you come to do it, it is not just removing the 20 fixing bolts, but involves disconnection of all fuel lines and linkages, odometer, temperature gauge cables and pipes etc. as well as removing the steering column.

As the intention was to now send the body for complete restoration, all parts had to be striped, marked, and stored, including all the gauges and interior trim. This done, the body fixing bolts were removed quite easily with the exception of one in the drivers compartment which would not budge. Further investigation revealed that this bolt passed through the chassis and was secured by a cadged nut fixed to the underside of the chassis. The fixing bolt protruded past this nut and had

been bent over at some stage preventing its removal. No problem, I set about cutting off the bent section of the bolt with a hacksaw blade, and attacked it with vigor. I could not believe it, on cutting through the bolt the bent section fell away and dropped inside my T-shirt, lodging itself against my back. Being hot from the friction it caused me to jump up with a yell, hitting my head on the chassis and once more falling back against the hot bolt tip. I am now TR branded for life.

I was concerned that lifting the body from the chassis could break it in half if the sills were rusted, so before actually removing the body we decided to weld up a supporting frame as a precaution. Pete manufactured the frame that was cross braced and secured to the door hinge fixing points at the front, and the plates for the hood frame behind the door aperture.

To fit this frame we first had to remove the doors, which proved to be a mission in itself. The fine threaded door fixing screws were rusted fast and could only be removed with the use of a borrowed impact driver. Even then they had to be turned through at lease 360 degrees with the impact driver before being turned out with a screwdriver.

With the frame in place we tried to lift the body which although loose was still holding at the rear. This was caused by the exhaust having been bolted to the body shell at some stage, as a result of the fixing bracket on the chassis being broken. Once freed the body was lifted away from the chassis using a block, and the rolling chassis wheeled out.

BODY RESTORATION

The body restoration was entrusted to Bennie who had quoted a reasonable price and was strongly recommended, having re-sprayed Errol's 1940 Mercury. In early December 1999 the body was loaded on another enormous hired trailer and delivered to Bennie, leaving me the rolling chassis to work on while the body was restored. Once Bennie started working on the body I think the biggest shock came. Removal of the paint revealed that my original assessment that the body was reasonably free from rust could not have been further from the truth. The inner and outer sills on both sides as well as the doorposts were rusted right through and required replacement. The outer sills had in fact been repaired, but the replacement sills had also rusted through and were repaired yet again. The front fenders were rusted through behind the wheel arches and had also been poorly repaired with replacement metal and body filler more than 10mm thick in places. The front floor pan on both sides as well as the section below the petrol tank had rusted through and was poorly repaired with aluminum and tar. In addition the rear body panel below the boot lid as well the nose cone had also been badly damaged and poorly repaired, though luckily a spare nose cone had come with the car. Although badly rusted it was fortunately undamaged by accident.

The body restoration was a slow process, as work was held in abeyance for numerous other quick fix jobs in order to keep Bennies cash flow going. As work progressed it became apparent that there was very little of the car that had not been abused at some time or another. However not all was gloom as I had the most incredible fortune in borrowing a new

set of both inner and outer sills from Bruce for use as a template to have new ones made in galvanized steel. The striker plate section from the left door post as well as the leading tip of the left front fender had been damaged beyond repair. I was again fortunate in obtaining these replacements from Frikkie Viljoen, who had a donor body for his restoration project and did not require these sections. Once the extensive welding, panel replacement and brazing was completed it was decided to sandblast the entire car down to bare metal and start from scratch. Again the body was loaded on a large hired trailer and transported to the sandblasters, to be returned a day later in shinning

silver splendor. Thereafter the shell and parts were sprayed with MS Primer followed by white undercoat and light weight filler applied where required. I had decided that the car should be finished in British Racing Green which resulted in extensive research to determine the correct shade of colour, culminating in a touch up sample being imported from Moss to settle the issue. I could not get closer than that! Bennie then sprayed the car in a pale green flatting coat, which, after the great pains taken to determine the right BRG, stopped me dead in my tracks when viewed for the first time, much to his amusement. Eventually in October we reached the stage where the body was ready for final spray painting.

The tyres were removed from the road wheels, the rims straightened by Rimrite (as they were without exception all out of true), sand blasted and sprayed in matching colour by Bennie, in accordance with original specification.

CHASSIS RESTORATION

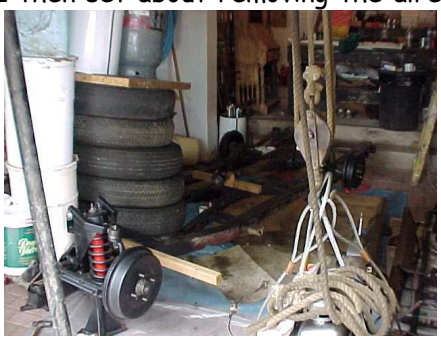
While the body was with Bennie the plan was to clean, paint and tidy up the chassis ready to receive the restored shell. However a closer inspection revealed that the right front

suspension had been more severely damaged than I had originally thought, and with the body removed it could clearly be seen that the fulcrum pins for the lower "A" arms were badly bent.

At this stage I called in David Hendersen, (an expert in restoration), for his opinion, which left me with no alternative but to strip the car down to a bare chassis. This was definitely something I had never contemplated doing. Once the reality of the situation had sunk in I set about the task before I could change my mind. The engine and gearbox were removed from the rolling chassis in one unit. Initially I attempted to lift this unit with a trusty old rope block and tackle but could not lift the weight! I then borrowed Pete's chain

block which was suspended from the garage rafters after first putting two stout supports in place. This did the job with ease, so much so that Tory at 11 years of age easily lifted the unit on her own, while I moved the rolling chassis away. The complete engine and gearbox unit was rested on a timber frame with a set of old casters to enable it to be pushed out of the way.

I then set about removing the already rebuilt front suspension. This really irked as I had



taken great pains to rebuild it with care. To my horror I found that I could not compress the coil springs to remove the shock absorbers, as they have to be compressed against the engine weight. What made it even worse was that the springs had been re-tensioned, and were now at full strength. I was however definitely not going to refit the engine and gearbox to perform this task so I set about weighting the chassis on the trestles with timber, all 5 wheels, 25litre paint tins, bricks and anything else of weight I could lay my hands on. I eventually managed to compress the springs sufficiently to drive out the holding bolts for the shocks, though my weighting system was precarious and would have given any safety officer nightmares. With the shocks out the springs were easily removed using a home made spring compressor and the front suspension completely disassembled for the second time.

Next the prop-shaft was marked and removed, and the diff and rear shock absorbers taken off. Removal of the leaf springs was a problem in that the pin holding the front of the right spring to the chassis was bent and consequently the spring was not fitted correctly, making it difficult to remove. After much persuasion with a 10 lb hammer, pushing kicking and pulling, the springs were eventually removed using a small puller borrowed from Pete. However the bushes had rusted to the shafts and were not able to be reused.

The car was now completely disassembled, and standing back made me wonder if I would ever get it back together again. What could have possessed me to do such a thing, I must have been out of my mind. Well there was no stopping now and surely things could only get better.

The chassis was loaded on the back of a bakkie and carted off to Dave Hendersen for straightening, together with the workshop manual giving all the critical chassis dimensions.

On returning the chassis a week later Dave confirmed that the car had been in a few major altercations, one at the right front, one at the left front, one on the right side and one up the rear!!

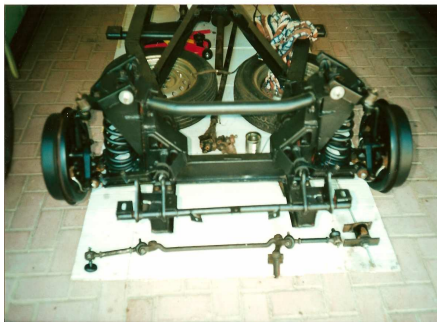
The fulcrum pins for both right and left lower A arms had to be straightened and the

radiator mountings repaired. The front fixing pin for the right side leaf spring was straightened and the right front chassis section at the wheel repaired. Numerous other minor repairs to the chassis were also effected at the same time. The chassis was now true and in accordance with original factory specifications. I was delighted as this now gave me a sound base from which to start the assembly process. However I was amazed at the abuse this poor car must have gone through during the course of its life. The extent of

the damage to the chassis, which is made of really heavy gauge metal, was incredible, and I can only think that the poor sod who drove the car when those accidents occurred must have instantly aged 20 years, if not having killed himself.
The chassis was then taken off to Parker Brothers for sand blasting, priming and epoxy painting. On retrieving the chassis I was disappointed in the finish as the paint had been applied by brush and not sprayed as I had envisaged. Perhaps I am a little fussy as after all it was only the chassis. Lesson to be learned, horses for courses, don't get specialists to work out of their field. I should have done it myself, though I don't have a spray gun!! However the finish was greatly improved by over painting the epoxy with stone chip, using a small roller that gave a slightly stippled finish, quite attractive in itself.

ASSEMBLY BEGINS

Assembly could now begin.
As I was about to embark on this stage a delay was caused by some halfwit lowlife scum, persisting in stealing the wing mirrors off the Isuzu, which I had had to leave parked in the street at night. There was now no option but to move it to under the carport, off the road. This meant that the TR would have to be moved and rebuilt in the double garage between Sue's Astra and the Beetle, which in turn would mean that I could not remove it once complete as the car would be sitting behind the brick pier between the garage doors. I could not have this so there was nothing for it but to bite the bullet and have the single garage doors removed and steel lintel fitted with a new 6m wide sectional overhead door, so as to accommodate three cars. This was an expensive exercise and caused a huge inconvenience as the garage had to be emptied of a million TR parts, tools etc. which had to be temporarily stored where ever I could find space. The lovely, restored chassis was relocated to the front stoep, being on prominent display to anyone entering the house, with other body parts stored all over the place, which did not make me the most popular lad in town.
Once the building operations were completed the chassis was moved to its new home and floor to ceiling shelving erected to store the incredible amount of parts.



The front suspension was reassembled, excluding the shock absorbers, which would be fitted once the engine and gearbox were in place. The rear leaf springs were re-tensioned by Springwell and refitted to the chassis using Nissan 1400 bakkie replacement rubbers for the rear shackles, though they had to be cut shorter to fit. The bushes for the fittings on the front of the leaf springs were unserviceable, and replaced with Vescanite, which was kindly turned to fit by Frikkie. The rear axel and Diff was cleaned and painted with stone chip after the inspection cover was removed and the inner casing cleaned. There was no apparent damage or excessive wear so a new gasket was cut and the cover refitted.
A new brake line from front to back was made up by CBS and fitted, a relatively easy task with the body off the chassis but near impossible with it in place. New rubber grommets to protect the brake and fuel lines where they pass through the chassis were imported from Moss UK as they could not be sourced locally. The entire fuel line was also replaced at this stage.

RETURN OF THE BODY

In early December 2000 Bennie completed the body restoration having taken almost a year to the day. Koos's trailer was borrowed and the body shell transported home. Needles to say it rained!! Getting the rolling chassis restored had taken longer than I anticipated and I now found myself in the situation that I had the body back from Bennie before the chassis was ready. The chassis and body consequently had to be stored side by side which took up garaging space for two cars, forcing me to leave the Beetle out in the elements until I was ready to put the body and chassis back together. This added huge pressure to get the body back on the chassis. The newly painted doors, boot lid bonnet and nose cone were also brought home and could not be stored in the garage for fear of getting scratched or damaged in the work process, and so were stored all around the house with the nose finding a temporary home on the couch in our bedroom. Again not popular though I did try and decorate it with Sue's Teddies!!

MOTOR AND EXHAUST

The motor was cleaned painted and fitted back on the chassis without actually striping it down. I decided that before embarking on a complete motor rebuild I might as well first start it to assess its condition.

On the 10th March 2001 with the help of Frikkie and Pete the motor was started after having stood for over 5 years without having been run. It started remarkably easily, ran sweetly and idled smoothly despite not having an effective silencer connected, and with no adjustment made to the carbs, which had been removed and refitted. I decided there and then to leave well alone. Again Koos's trailer was borrowed and the rolling chassis carted off to Frikkie at Kwikfit for the fitting of a stainless steel exhaust, which I was advised should be done prior to refitting the body. As the entire exhaust system was rotten the new stainless steel system was fitted right up to the manifold. I had not yet had new tyres fitted to the newly painted rims, so Bruce kindly loaned me four wheels in order to move the rolling chassis.

As the steering linkage had not been refitted it was no easy task getting the TR on to the trailer with its narrow track hardly fitting the trailer wheel troughs, and consequently the front wheels continuously turning outwards. The rolling chassis was eventually winched onto the trailer with a chain block while the front wheels were physically held straight. However removing it from the trailer after the fitting of the exhaust proved a lot easier as the nose of the trailer was lifted and the rolling chassis allowed to roll off backwards with the front wheels easily controlled to follow in a straight line.

BODY TO CHASSIS

The body was then fitted to the rolling chassis and the Beetle regained its rightful place in the garage. The fitting of the body provided further challenges that I had not anticipated

as it was no simple task to get all the body packing in place, (made from old conveyor belt donated by Bennie), as well align all the holes for the fixing bolts. I struggled for days to get this right but with the new sills and fixing plates having been fitted without Bennie having the chassis to check alignment it was inevitable that a problem would occur. I eventually aligned all fixing bolts with the exception of the passenger side front two in the cockpit. These were about 5mm out of line, and so new holes had to be made to effect fixing. The exhaust fouled the body at the rear and required adjustment, which was one of the pitfalls of fitting it before the body was refitted.

FENDERS

The next step was to fit the fenders. I obtained a very nice soft vinyl fender weld from the Rubber Man in George but was very disappointed when it bulged at every fixing bolt. I tried everything I could think of to resolve this and only after considerable reflection did it strike me that the flat washers used were distorting into the oval fender boltholes and pushing the fender weld up. Once thicker washers were fitted the situation was considerably improved, though not perfect, as I would have liked it. Fitting silver metal fender weld can solve this problem, but this is not authentic for a TR2 and so I decided against it.

UPHOLSTERY

George Tyler was commissioned to do the upholstery work on strong recommendation from Erol and numerous members of the EPVCC. Having decided on BRG for the body, the trim colour was agonized on for quite some time with the final vote being cast in favor of beige in preference to black. The first mission was to source material for the upholstery with the initial preference being for leather. However cost and availability resulted in my opting for vinyl with its stronger durability qualities. It was here that I had the most remarkable good fortune in locating a consignment of MB Lex used on C class Mercs., which had become redundant due to the change in colour specification for the new models. I was able to obtain sufficient vinyl and piping for the job from the East London supplier Lear Corporation.

The next challenge was to locate matching carpeting, which proved to be far more difficult. With modern cars now being fitted with molded floor pan carpeting there is very little automotive carpeting around and beige seemed impossible to obtain. George remembered that Nel's had had beige carpeting that he had used for hearses and suggested that they might have sufficient left for the job. After searching through their store we eventually located 3 pieces in 1,2m squares, which proved a reasonable match to the vinyl. Matching carpet binding was sourced from Meyers.

To keep the production line rolling I decided to give the loose trim items, seats, dashboard, edging trim etc., to George to complete while I continued with the assembly work. I decided to make every effort to retain the original seat springs for authenticity and comfort. When George started stripping the seats and removed the covers with their grotty kitchen floor linoleum inserts, glued in place by some Philistine in the past, the original seat fabric was revealed intact, which provided a perfect pattern to work from.

However when this was removed another shock was install for me. The seat springs were rusted through and falling apart, with the drivers seat being the worst as the back rest frame was also rusted right through in places and the metal base pan torn at most of the rail fixing points. These seats must have been in poor condition for some time as the drivers seat had been stuffed with news papers, (The Argus, Die Burger and the Landbou dated March / April 1967) in an attempt to prevent driver's posterior from being pierced by rusty springs.
Due to cost considerations I was left with no alternative but to relent and have new seat bases made from composite foam with layers of various densities for comfort. After the rust and cracks were repaired and the seats recovered the final product really turned out well.

DOORS

Before fitting the doors the timber inserts supporting the side screen brackets had to first be restored as they were riddled with old screw holes, which were filled and sanded before painting. When fitting the door latches, as a touch of nostalgia, I left one still painted in "Old English White" to bear witness to the cars original colour, the only trace still remaining on the car.

The door panels were another challenge as only one original panel remained which provided a template for fabricating new panels from hardboard, with door pockets constructed from automotive cardboard sourced from Meyers. Fixing screws for the door panels were originally a chromed button head type which could not be sourced locally so a compromise of stainless steel flat headed self tapping screws were used, which, when fitted in the chrome cup washers, proved acceptable. One of the brass door hinges was badly cracked and I was lucky to get a replacement from Bruce, with the old one braised and kept as a spare. The fine threaded hinge screws were all replaced, and with the memory of how difficult they had been to remove, a generous coating of "copper slip" was applied when refitting the doors.

DASHBOARD AND GUAGES

The loose trim items were completed and brought home as I needed to fit the dashboard. The other items could be installed later, together with the carpets and fitted trim, when the car was mobile. Before installing the dashboard all the gauges, speedometer and rev counter had to be pulled apart, cleaned, checked and fitted. I was very apprehensive of doing this delicate task as I thought specialist knowledge was required but could not find any such specialist willing to tackle the task, and so had no alternative but to do so myself. I was however given some sound advice from a retired instrument maker, encouraging me to proceed on my own but not to attempt this work standing up at a workbench. As the work is delicate one should sit at an uncluttered table working methodically. This I found to be very good advice and was able

to strip and clean all my gauges without incident, even to the extent of calibrating the temperature gauge by immersing the sensor in boiling water from the kitchen kettle. Fortunately the gauges were all original and intact with no broken or cracked glass, though I did have the bezels re-chromed along with the rear over-riders. The plastic warning and indicator light housings were damaged but I was able to repair these without too much trouble. The timber frame at the edge of the scuttle was also restored, sanded and painted before fitting the dashboard.

WHEELS AND TYRES

The next step was to secure new tyres, which are now becoming more difficult to obtain. Originally the car was fitted with 145 or 155 x 15 tyres but most owners now opt for 165 x 15. I was not keen to oversize and fit 165's as these will not fit into the spare wheel well unless deflated. However 155's are now only available in Michellan's at a premium price, so I was forced to go the 165 route in Marbours at a more realistic price. The tyres removed from the car were all different sizes, varying from badly worn 165's and 155's to a serviceable 145 which I was able to salvage as a spare. This was very fortunate in that being the original tyre size it was comfortably accommodated in the spare wheel well which is very tight on a TR2.

The new tyres were purchased and to my dismay I was informed that the rims were still out of true despite having been straightened. The rims were returned to Rimrite who confirmed that they were still out of true but could not straighten them any better than they had done as the old steel used was too hard with a spring quality causing the metal to revert back to its previous alignment. Eventually after obtaining all the spare rims I could lay my hands on, the five best were selected, straightened as best as possible and re-sprayed. However in truth I suspect that technology at the time of manufacture could not produce rims to the specification we now demand. Nevertheless I had no alternative but to accept the rims in this state with the view that if they proved problematical I would have to consider fitting spokes or mini-lites though the cost is daunting, and it was for this very reason that I opted to keep the original pressed steel rims.

STEERING

The next task was to recondition and fit the steering mechanism. New tie rod ends were purchased locally and a second hand idler arm obtained from Frikkie to replace my original one, which showed excessive wear. I thought it prudent to replace the steering box seal before refitting, as it was sure to leak. However the control arm needed to first be removed to reach the seal. Despite the use of a large puller the control arm would not budge with the only alternative being to shock it loose. This would most likely damage the steering box and was not recommended, so a thicker grade lubricant was used and the steering box refitted without replacing the seal. If a leak manifested itself a replacement could be imported but this would be costly. The steering column, which incidentally boasts a dent and slight bend in the outer casing from the cars shady past, was first cleaned and painted before installation with new gaskets and cover plate bolts.

I had thought that this procedure would be straightforward but was in for a surprise. The steering box could not be aligned into its fixing bracket as the column fouled on the front brace between the suspension towers as well as on the dashboard. It appeared that the obvious solution was to remove the front brace, but two of the fixing bolts, one on either

side, were covered by shrouds forming part of the body. Short of bending these shrouds away the bolts could not be removed, and so with the body newly painted I decided against this and removed the dashboard instead. This was quite a mission as I had already refitted the dashboard complete with instruments and wiring. I later found that through persistent effort and with a wish and a prayer, the shroud could be eased to permit the removal of the bolts!!

WIREING

The original wiring loom removed from the car was a sight to behold and filled me with fear and a vision of the car bursting into flames at any time. Sue, as a Christmas gift had, unbeknown to me, arranged for a new loom to be manufactured locally, using the wiring diagram and a sample borrowed from Bruce. What an unbelievable gift. I certainly could not have reused the original one.

My knowledge of electric's was suspect, but increasing costs left me no option but to study the wiring diagram and act as auto-electrician. Having removed the old loom myself I was familiar with its routing, and so before fitting I was able to lay the new loom out on the floor, in roughly the form it would follow. With the aid of an inexpensive multi-meter purchased for the purpose, I traced and tagged both ends of every wire, which gave me a better understanding of the loom. This made the fitting and connecting of the wires relatively easy, though getting the loom through the grommets in the firewall without tearing off my tagging took a lot of patience.

The tricky part was connecting of the multitude of wires to the fuse box and voltage regulator. In my newfound electrical wisdom I was carried away to the extent that I decided to tin the wire ends before connecting. A difficult task at the best of times, but with the loom in place one needs three hands and inevitably I managed to brand myself with the soldering iron, which elicited a string of profanities. To make matters worse my efforts were wasted, as the thick wires would not fit the apertures in the connectors of the fuse box and voltage regulator without being distorted out of round, which the tinning precluded. I was forced to cut off my efforts and leave the wire ends bare, but I still carry the scar to remind me of my folly.

CARBURETTORS

Although the car had started easily and idled relatively smoothly, I was concerned at the poor condition of the carburetors and so contacted Riener Holtsberg, (an expert on S.U.'s), for advice. Riener confirmed that they had been severely butchered, requiring extensive repairs, and agreed to take on this task, but the worsening of the exchange rate following the world trade center attacks, resulted in this being an expensive exercise. However the final result was stunning with the carbs. coming back already set up and mounted on a piece Oak, all bright and shiny with polished brass and aluminum looking better than new.

WATER PUMP

As the motor had stood for some years without running I decided to check the water pump while it was easily assessable. This was removed with ease and revealed that the seal was

very brittle and the bearings a little noisy. Seals and the right size bearings could not be found forcing me to look to replacing the pump unit. The Triumph Club had one in stock in the Tvl. but this was an imported component and very expensive. However Frikkie managed to source a new pump for a Massey Fergusen Tractor from Bepco, which is almost the same except for the pulley shaft being a little longer, and most important it was a lot less expensive. This pump was adapted by simply fitting a small spacer to the shaft outside of the pulley, which Frikkie kindly manufactured for me. I subsequently learned that Leon Smith of Strydom Motors specializes in reconditioning water pumps and would have been able to recondition my old one.

FAN

The original metal fan was damaged to the extent that one of the four blades was broken off and I was advised that as a modification it was common in any event to replace the original steel fan, which was not very efficient, with a nylon one as used on a Nissan 1400 bakkie. This I duly did and found that it was incredibly cheap and only required minor adaptations to the positioning of the fixing bolt holes and enlarging the center crank hole.

RADIATOR

Silverton were commissioned to re-core the radiator, and for authenticity the original crank handle hole through the core was retained though I think I might in the future rue the day I decided this if overheating problems are experienced. To fit the radiator was not straight forward as the fixing brackets were realigned when the chassis was straightened resulting in the holes not correctly aligning with the radiator fixing points, which was resolved by elongating the holes. The radiator rubber mountings were adapted from shock absorber rubbers cut to the correct thickness, new rubber hoses sourced from G.V. Donald and a new radiator cap fitted. The metal extension pipe between the bottom radiator hose and the water pump housing was rusted through and replaced with a section of copper pipe sourced from, and bent to the correct angle, by a local plumber.

PETROL TANK AND FUEL LINES

The original petrol tank had at some stage been removed, I suspect during times of fuel rationing, and replaced with an alternative tank filled from inside the boot, with the filler pipe hole through the body closed up. Bennie had reinstated this hole and fortunately a replacement fuel tank had been sourced by Robert and came with the car though the fixing straps were missing.

At the same time as re-coring the radiator Silverton were also commissioned to pressure test the petrol tank which turned out to be a wise decision as numerous holes were revealed necessitating the galvanizing of the tank and fitting of a new base plate to replace the rusted section.

Templates were made and new metal straps cut accordingly by Metal Man. The fuel tank was then fitted with rubber cushioning underneath and between the fixing straps and the tank. As with everything else this operation was not without its difficulties as bending the straps

to the correct profile while allowing for the rubber packing and correctly locating the fixing points was not easy. To cap it all I found to my dismay that after having fitted the tank I could now not fit the float and sensor unit which I had specifically left till last to try and avoid it getting damaged in the fitting process. There was no option, I had to again remove the tank, fit the float and sensor and refit the tank.
The original fuel cap was missing and I was lucky to obtain a replacement through an advertisement in the newspaper smalls.
The new fuel line was fitted and in my drive for authenticity I decided to retain the original stop cock located in the engine compartment. This stopcock uses a cork seal which I duly replaced with an imported one from Moss. The system is reliant on the cork first being soaked in fuel so as to swell and form a seal. From the outset this never sealed efficiently and ended up landing me in a predicament. After fitting the cork dried out and when five liters of fuel was poured into the fuel tank the fuel literally poured out through the stopcock seal and onto the garage floor. As a result of the gravity feed there was no way of stopping this flow short of placing a basin under the car, which was only effected after half the fuel had leaked on to the floor and following a mad panic to find a container. This called for radical measures and PE Hydraulics and Pneumatics came to the rescue by manufacturing a clever modification to the stopcock which from the outside cannot be seen. The simple solution was to remove the cork seal and replace it with a brass cylinder which they manufactured with three groves to take neoprene O rings. This was fitted and works like a dream.

ELECTRICS

The loom had by now been fitted and only required connecting to the ignition system to get the car going. It was time to test my newly gained electrical skills. I soldiered forth and was very confident as step-by-step things were working, lights wiper motor etc.
However the acid test came when the ignition was switched on and we attempted to start the motor again. Smoke came forth from the wiring loom at the voltage regulator, my confidence was shattered!!. After rechecking my electrical connections about a thousand times and again removing the generator and voltage regulator, which I had retested, the fault was traced to an incorrect connection on the wiring from the ignition switch to the ignition warning light which caused a dead short. This I imagine is what caused the voltage regulator to give up the ghost and I was luckily able to source a replacement from Dougie Steyn who specializes in Mini's which used the same Lucas system. The rest of the electrics are really quite straight forward if the wiring diagram is followed.
However, tracing the electrical fault resulted in the dashboard panel housing the instrumentation having to be removed numerous times, which on each occasion required that the oil line to the oil pressure gauge be disconnected. As fate would have it on the last replacement of the panel for some reason I omitted to reconnect this line, which needless to say pumped oil all over the place when the engine was started. Luckily the carpets had not yet been fitted.

TEST DRIVE / NOSE CONE AND GRILL

Once the electrics had been sorted out the time came for the first test drive, no nose cone, bonnet or lights etc etc but the car was rolling. This was the moment I had been waiting for as I had never ever driven a TR before, or for that matter ever driven in one.

What had I let myself in for !! The first trip around the block was quite a revelation, motor roaring, suspension as hard as hell, steering a little wandering and brakes, well you have to stand on them, but what a thrill. This really injected new drive into me to get the car completed. The Triumph clubs Nationals were just around the corner and I was determined to have the car ready and attend. The next step was to have the upholstery completed but to do this I needed to get the car to George, but before doing so I needed to fit the nose cone. I didn't think this would pose to much of a problem as Bennie had fitted it during the body restoration and it should be a simple matter of sliding it into place and putting in the holding bolts. What I overlooked was that Bennie had fitted the nose cone prior to attachment of the scuttle to the chassis, which caused a distortion. There was no way the nose cone would fit which resulted in a few visits by Bennie and a lot of remodeling to the side fixings necessitating the re-spraying, of the entire nose cone. It was then fitted but even so this is still not an easy job.

The original grill was made of a cast alloy and had been broken, with corrosion causing the chrome plating to flake and bubble. After numerous enquiries I accepted that this could not be repaired and had a new stainless steel grill cut by Laser Tech using the original as a template. This was a good decision and the finished product came out beautifully. (Laser Tech now has the template on computer file) The crank handle guide was missing but I as fortunately able to source a replacement and Bennie had opened the locating hole in the nose cone to the correct dimensions, making for easy fitting. The TR2 badge that came with the car had seen better days with the enamel having been broken out in places so a new one was imported from Moss at great cost. (I took David Hendersen's advice of not to compromise on the bright work and finishes as these are what ultimately make the difference to the finished product – wise words). The grill, front badge, crank guide and lights were fitted to the nose cone before it was installed.

BADGE BAR

Unfortunately the one part I have still not been able to source at a reasonable cost is a front bumper, as it seems to have been a past fashion to discard them in the interests of a more sporty appearance, which was the case with my car. I understand that a Ford Anglia front bumper can be modified to fit with the over-riders inverted, but I was not happy with this compromise. As an alternative I designed a badge bar incorporating a number plate housing and spot light mounting brackets, based on the one I had seen on Bruce's car. A cardboard mock up was made and Stainless Steel Fabrications manufactured the part, which fitted perfectly.

HEADLIGHTS

The chrome head light rims were badly damaged from previous accidents and I was able to replace them with good second hand ones from a Mini, which were acquired from Dougie Steyn. The plain sealed beams that were on the car were initially refitted but were

subsequently replaced with two Tripoid units that came as spares. However these units needed the reflectors to be restored, and the only way to achieve this was to carefully grind through the metal retaining rims so as to separate the reflectors from the glass. The reflectors were then re-silvered by Metglo at Brackenfel in the Cape. Reassembly was also tricky as the reflectors had to be glued back to the glass with white silicone. This also served to waterproof the seam, with the fixing bracket keeping them firmly in place.

COCKPIT UPHOLSTERY

I was now becoming pressed for time and needed to get the car to George for the upholstery but had not yet fitted the bonnet as I had still to work out how to secure the new duz fasteners to stop it from flying open, so I decided to take the car to George without the bonnet and sort out the fasteners while he did the upholstery.

As the vehicle was not licensed but running I could not justify hiring a trailer to transport it to George, and was loath to take out a temporary license, which would only be valid for 3 days. I would then have had to renew the licence in order to bring the car home again. There was nothing for it but to take a chance. This saw me set off at the crack of dawn traveling the 10kms or so of back roads to George's house followed by Sue in the Benz to shield me from traffic from the rear. All went well until about 3 kms from our destination when a Police vehicle turned in behind me. My heart was in my mouth, panic struck and I was rapidly thinking of excuses such as temporary insanity, why else would I drive an un-licensed car without a roadworthy certificate, or my wife made me do it, you know what women are, etc

etc. imagining that I would possibly spend the night behind bars. However, totally unconcerned the Police vehicle turned into a side street, mercifully never to be seen again. Wow what guilt can do to you. And to think I hadn't even bothered to fit any number plates to the car.

The car was left with George who really did a stunning job on the interior, carpets tonneau, side screens and hood, but when the car was ready to come home I took out a temporary license!!!

The detail of the interior trim was based on the original panels stripped from the car, as well as the detailed descriptions and photographs shown in Bill Piggots book The Original TR. As neither hood nor frame came with the car I had to source these items and was luckily able to purchase a frame from Anne Mannors. Together with the tappet cover (after first removing the unoriginal chrome plating) the frame was powder coated in black by Eastern Switchgear. Both came out very nicely. Rather than importing a hood I decided to have one made by George together with a tonneau cover, and Rob Elliot very kindly lent me the hood he had imported for his TR2, from which George was able to cut a pattern, which he now has in store for future orders, and make the hood to the correct design. Both the hood and tonneau were made from the same MB Lex used for the interior trim.

DOOR SILLS

The original aluminum sills covering the seams on the base of the door aperture were in a very poor condition and Sue was able to source replacement stainless steel ones that were purpose made by Freezepoint. On hearing what the part was requited for, they really went out of their way to help and especially set up their machine to make the complex bend required, charging only a very reasonable price.

While George did the upholstery I fitted the Duz fasteners to the bonnet. To do this Sue's assistance was requested and the installation was done on patio table with the newly painted bonnet protected by blankets. The job was nerve-wracking as it requires an aluminum ferrule to be placed through a hole in the bonnet and burred over in such a manner so as not to constrict the center hole for the fastener. This was eventually done using the ball ends of various sized engineers hammers as well as a canvas eye fastening tool, all in all a rather Heath Robinson procedure, but effective as we achieved the goal without inflicting damage to the bonnet.

SIDE SCREENS

The last of the upholstery items to be completed was the side screens which George covered while the car was prepared for the roadworthy test, a very tight schedule. The original side screens had been modified to have split Perspex windows without the channels being changed to accommodate this and all panels were cracked or very badly scratched, requiring replacement. I decided to revert back to the original solid Perspex style window with a single channel. The screens were covered in the same MB Lex used for the upholstery, hood and tonneau but there was no time to have new Perspex cut before the Nationals so the original scratched and cracked windows were refitted. These were subsequently replaced with new single piece Perspex, supplied and cut to size by Maizle Plastics in accordance with a cardboard templates I made.

ROADWORTHY

On getting the car back from George I was left with three days to get the roadworthy certificate, so three days leave was taken and it was a case of pull out all the stops and get it done. First step was to fit the bonnet and have the wheel alignment sorted out so I made an appointment with Wheel Tec specialists. Well that was a disaster as they said the suspension was loose and accordingly could not do the setting. Again it was Frikkie to the rescue. We put the car on the Kwick Fit hoist and Jacko tightened the offending bolts. Time was running out so it was then a quick trip across the road to Maxipress who adjusted the wheel alignment manually as modern equipment cannot handle a TR2, and then off for roadworthy test. This was it, I had one shot at getting the roadworthy, otherwise I would not be attending the Nationals in my car. With a prayer and lots of luck we sailed through the road worthy, the two young testers being more taken with the car than looking for faults, and I think more than anything else just wanting to drive it. More a case of check on

this and that etc but nothing causing a train smash. The paper work and registration was done, number plates fitted, and we were on our way to the Nationals, totally unprepared with lots of unfinished areas, but we made it!!.

NATIONALS

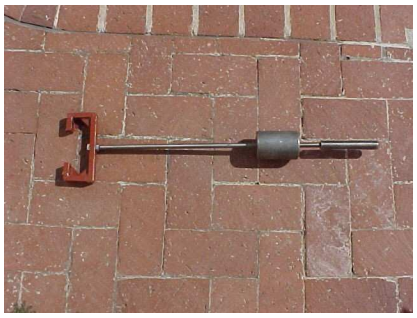
The TSCC Storms River Nationals were held in April 2002 during school term so we could not arrange a family holiday for the duration of the festivities and had to settle for a weekend trip with the main objective being the concourse. Tory drove with me in the TR and Sue and George followed in the Benz with a boot full of spares, tools tow rope etc. Amazingly the trip down went smoothly without a hitch though I was constantly monitoring the temperature and oil pressure gauges. I decided that the car must be entered in the d'etat category of the concourse as I had striven for authenticity in the restoration with very few compromises and this would be an acid test of my achievements.

The car achieved an 85.85% rating placing it fourth in its class behind the Transvaaal vehicles of Donald McDonald (98.42%), John Roets (94.65%) and Jon Lewis (91.65%). This was very gratifying and as there was still a great deal of unfinished work to be completed on the car, I was more than happy with the result, having highlighted the areas for improvement.

WHEEL BEARING

After the concourse we had to set off for home on Sunday afternoon and all went well until we reached the Humansdorp turnoff when a very distressing noise started from the right rear. We limped into Humansdorp and on closer inspection discovered that the wheel bearing decided to cash in its chips. Disaster, we couldn't drive the car or tow it home and so after some hectic phoning around eventually managed to arrange to store the TR overnight in the Humansdorp Kwick Fit workshop (thanks to Frikkies influence). We all trundled home in the Benz and the next morning Pete and I set off on the recovery mission with Koos's trailer in tow.

SIDESHAFTS

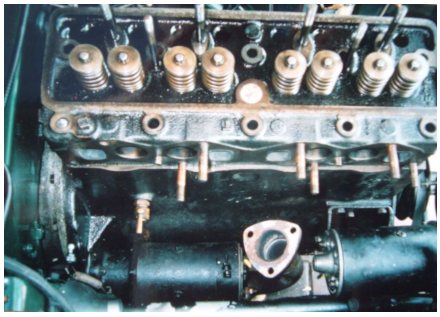


On getting the car home and on stands in the garage again I proceeded to strip down the rear axel and soon came to a stand still as I could not extract the side shafts. After trying everything I could think of Igie lent me a sliding hammer to try. I did not have a fixing bracket to fit to the wheel studs and so I had to have one made up at B.A. Engineering, and decided at the same time to get my own sliding hammer made, a beefed up version of Igie's one. The tool manufactured was a bit

of overkill but it certainly did the trick with one or two wacks.

The right rear bearing was a basket case and I thought it prudent to replace both left and right bearings at the same time so the left side was striped down as well. I was horrified to find that there were two different side shafts in the car with a marked twist in the spline of one of the shafts, at the diff side, caused I am sure by many a hearty wheel spins!!! I was luckily able to replace the damaged side shaft with a second hand unit of the correct specification and purchased the new wheel bearings and seals off the shelf from Bearingman.
Once the car was back on the road I needed to get some mileage done to let the car settle in and sort out any problems.

ENGINE REBUILD
Very soon a disturbing engine noise manifested itself, which started of erratically and soon became a permanent occurrence. I was able to trace the noise to number 1 cylinder and so in search of the problem I started to strip down the head and found a bent pushrod. I was sure that this was the problem and replaced the pushrod with one sourced from the club. Sadly the noise was still there and so I decided that there was no option but to remove the head.



All the nuts were systematically loosened but the head would not come free. I then proceeded to remove all the studs, which came out with remarkable ease apart from the right rear on number 4 cylinder. With all the other studs out the head could be moved laterally but the stud was turning with the head. I borrowed a stud remover from Frikkie to try and free it but only succeeded in snapping the stud off flush with the head.
I was now in trouble and left with no alternative but to remove the motor. With the engine out the head could be rotated through 360 degrees and removed together with the stud, which was seized in the head aperture.
Having gone this far I decided I might as well go the whole hog and fully recon the motor while it was out, so block and head were sent to Nat Potgieter at Master Engines. Nat bored out the seized stud and stripped the subassembly down to assess the condition. This revealed that there was some wear on the bearings, but the crank was in very good nick, having at some time been cut and hard chromed back to original spec. There was a little wear on the cylinders and it was found that the original 83mm bore loose sleeves had at some stage been replaced with bigger 87mm bore sleeves, increasing the engine capacity from 1991cc to 2193cc. New pistons, rings and sleeves were available off the shelf from BEPCO, the local Massey Fergusen Tractor agents, in 85mm or 87mm bore so I opted to retain the bigger size, 87mm with its 2193cc capacity. This however necessitated the block having to be machined to fit

the new sleeves, as for some reason they were slightly bigger externally than the ones being replaced. I also obtained standard main and big end bearings, thrust washers and gasket sets (top and bottom), from BEPCO. Bearing Man made up a new timing chain and an oil pump was purchased from the TSCC. Cam and small end bushes were not available so Nat

manufactured these together with rocker shaft bushes, new head studs, head nuts, a few manifold studs and new brass manifold nuts. The head was skimmed, and the exhaust manifold first refaced before being aluminum metal sprayed by Robbie Deyzel Engineering, who also cut and hard chromed the rocker shaft back to spec as it was badly worn. The valves were ground, new valve guides fitted, the rockers refaced and a new brass Welch Plug made and fitted to the rear of the head.

There was a large amount of loose rust flakes in the water jacket of the block, with the outer surfaces of the old cylinder sleeves badly corroded. Clearly the previous owners had not believed in using anti-freeze!! Accordingly, as a precaution, the radiator was flushed even though the core had recently been replaced.

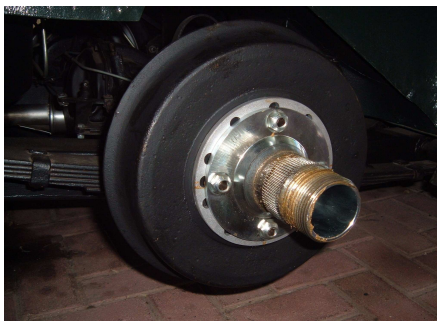
After two months the motor came back, newly painted and shrink-wrapped for protection. On refitting the motor was run for 500miles on Helix multigrade (Red) and then replaced with Helix Super Oil. The reconditioned motor was noticeably very tight during the run in stage with a consequent tendency to run hotter than previously. To address this a restrictor was fitted to the bypass hose, which did help a bit.

BATTERY

However the most noticeable effect of the tight motor was the strain on the battery with the engine being harder to turn. I had previously fitted a 610 battery which was adequate for the old "loose" motor but could not handle turning the tight motor and was for ever having to be recharged. On referring to the cars original spec I found it was hopelessly too small and changed to a Willard 652, which meets the original spec. What a difference!! Aesthetically it is also more pleasing as being 278mm long as opposed to the 255mm of the 610, it takes up more of the 360mm battery compartment.

WHEELS.

The car was now running smoothly with the only real irritation being the out of true steel rims, which produced a vibration at about 100kms per hour, typical of wheel balance



problems. This was tolerated while I waited for the exchange rate to improve. My patience however did not hold out and with a rush of blood to the head I took the plunge and ordered four 60 spoke wire wheels from Moss. I had enquired as to the price of 48, 60 and 72 spoke wheels and decided to go for the 60-spoke option, which was a little less expensive than the 72. Moss however got the order messed up and sent me 72 spoke wheels. They offered to take them back, but with the freight costs I decided to keep them as they are a stronger wheel and have

the added advantage of being a 5.5"J as opposed to the 5.0"J of the 60 spoke rims. The 5.5"J can take either a 165 or 175 tyre, and with 15 x 165's becoming difficult to obtain, this provides for a little more flexibility in tyre selection.

Fitment was by means of bolt on splined hub extension to take the wire wheel and spinner,

which came in a set of four together with special replacement wheel nuts. However the wheel studs are too long and consequently must be shortened by 9mm to take the hub extension. I was not happy with this and instead fitted standard 9mm universal aluminum spacers. They worked like a charm, extending the track and giving the car quite a muscle look by filling the wheel arch. The only down side was that I still had a standard TR2 diff, which I understand is prone to run wheel bearings with the fitment of wider wire wheels. I did however have a spare TR3 diff that is stronger and recommended for wire wheels, which I decided to recondition in time and fit, if or when the need arose.

Only four spoke wheels were bought as the wheel well will not accommodate either the 60 spoke 5.0"J or 72 spoke 5.5"J rim, so I kept an original steel rim with a 145 tyre as a "Marie Biscuit" type spare. The beauty of having fitted the wheel spacers is that to use the steel rim spare wheel all that is needed is to take off the four wheel nuts holding the spacer and hub extension, remove them, and the steel rim can be fitted, using four original wheel nuts.

The effect of the spoke wheels was dramatic, both aesthetically, and practically. The 100km per hour vibration was eliminated and the cars directional stability vastly improved. The down side was the costs as they are expensive and require the fitment of tubes, even with tubless tyres, but this is far outweighed by the plusses. However cleaning 72 spoke wire wheels is a nightmare!!

SPOT LIGHTS

A set of Lucas Ranger spot lights which came with the car were fitted to the badge bar, and although they were not correct for the period, they were nevertheless all I had at the time. Subsequently they were replaced with a set of genuine Lucas spotlights from the 50's era with a chromed button in the centre of the lens, which I obtained from Hannes Scheepers of the EPVCC. The fitment of these again tested my electrical ability, and on advice wired them through a relay

OVERDRIVE GEARBOX AND TR3 DIFF

The rebuild was now complete with the only improvements outstanding being the fitment of the overdrive gearbox and uprated TR3 diff.

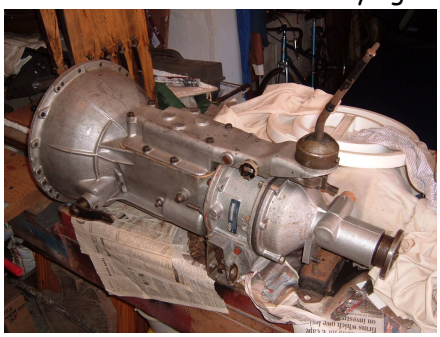
At the time that I discovered the side shaft problem, I took the precaution of exchanging the spare nose cone and other small body spares for a TR3 diff, and managed to eventually locate a Triumph 2000 A type Leycock overdrive gearbox. Both, however, required reconditioning. I subsequently was given another spare nosecone so the swop turned out to be a good deal.

Owen Chandley of Emanual stripped the gearbox, which revealed that it was a basket case with extensive damage to the main shaft. The gearbox had been acquired from Auto crash, who following Owens chastising provided me with a second box free of charge. This second

gearbox appeared to be seized, but when opened proved serviceable. However Owen sadly passed away before being able to effect the re-conditioning. The gearboxes were recovered and passed on, together with the spare TR3 diff, to Eddie Jansen to recondition.

The diff was tackled first and proved the more costly of the two, requiring new imperial bearings of an unusual size, which were eventually sourced through Eagle Bearings in Commercial Road but were quite expensive.

The two gearboxes were stripped and it was found that with the exception of the overdrive unit the components were not compatible. The serviceable gearbox unfortunately had a shorter pilot shaft and Nat Potgieter was accordingly commissioned to manufacture an extension adaptor. Neither the original TR2 clutch plate nor that of a Triumph 2000 could be used due to the difference in spline size and clutch face of the two. After studying the universal clutch manual it was found that a standard clutch plate for a Holden HR series would fit and a new one was purchased off the shelf from Ranger Clutches in Uitenhage.



Both gearboxes were missing solenoids and speedometer drive units. I obtained a solenoid from Charles Mitchell in Bloemfontein, but the speedometer drive and housing was more difficult. I purchased a new speedometer drive gear from Alan Dickens of Super Tune, also in Bloemfontein, but unfortunately he did not also have the bushed housing.

Eddie reconditioned the gear box and fitted new seals leaving me to source the speedometer housing and adjust the solenoid action. Eventually I managed to source the correct bush housing to fit the gearbox casing only to find that the speedometer drive obtained from Alan was not compatible, so I will have to import one from Moss.

FUTURE PROJECTS

In order to minimize the time that the car is off the road I decided to fit the overdrive gearbox and TR3 diff together, once the restoration of both units is complete. The gearbox only requires fitting the solenoid and speedometer unit once the correct drive is sourced, but the fitment will most likely be another story. A lot more work will be required before the Diff can be fitted as the brake system from the TR2 is a Lockheed one and that of the TR3 is a Girling, which are not compatible. Accordingly a whole new rear brake system will have to be built up for this Diff before fitting and this will take a little time and cost.

The car is however running well for the moment on the four speed box and the original TR2 Diff so there is no pressing need to action this change, which will be my next project as soon as the time becomes available. I have no doubt that the overdrive gearbox will transform the car and I will wonder why I did not do it ages ago!!

I don't think the car will ever be completely finished as there is always something to be sorted out or improved, with constant maintenance, cleaning and polishing to keep it in good

shape, particularly in respect of the underside and engine compartment, but I guess that is what owning a Classic Car is all about.
The fiberglass hardtop that came with the car has been stored and its restoration and fitment will also be a future project. The car is so much nicer with the hood down, topless, that I have not worried too much about the hardtop. However I will first have to find a system of fitment that does not damage the cockpit trim, leave unsightly brackets or restrict the fitment of the soft to before I seriously consider its fitment, though in rain it must be a big plus.

Costs

SUMMARY ELEMENTAL COSTS		
1999 to 2006		
(Total Project Cost R85,256.23)		
Element	**Cost**	**Percentage**
Purchase Price	12,500.00	14.66%
Body Restoration (Repair, remove rust, and paint)	9,900.83	11.61%
Chassis Restoration	2,219.95	2.60%
Brakes	2,655.62	3.12%
Suspension	1,761.00	2.07%
Upholstery / interior	7,561.00	8.87%
Recondition Engine	6,899.56	8.09%
Trim; Mechanical; Repairs etc	29,004.46	34.02%
Overdrive Gearbox and TR3 Diff	3,413.21	4.00%
Spoke Wheels	9,339.79	10.96%
Total	**R85,256.23**	**100.00%**

DISPLACEMENT CALCULATIONS

$\frac{\text{Pye}}{4} \times \text{Bore squared (in cms)} \times \text{Stroke (in cms)} \times 4$ = cc (Cubic centimeters)

Original TR2 (83mm bore)

$\frac{3.142}{4} \times (8.3 \times 8.3) \times 9.2 \times 4$

$= 0.7855 \times 68.89 \times 9.2 \times 4$ = 1991cc

Upgrade 1 available: (85mm bore)

$0.7855 \times 72.25 \times 9.2 \times 4$ = 2088cc

Upgrade 2 available: (87mm bore)

$0.7855 \times 75.69 \times 9.2 \times 4$ = 2193cc

SPESIFICATIONS AND CAPACITIES
GEARBOX DIFF AND FUEL TANK

1) GEARBOX SPESIFICATIONS AND CAPACITIES

ORIGINAL TR2 GEARBOX

Ratios;

1st gear	3.38 : 1	
2nd gear	2.0 :1	
3rd gear	1.325 :1	
4th gear	1.0 : 1	(overdrive 0.82 : 1)
Rev	4.28 : 1	

TRIUMPH 2000 / 2500 OVERDRIVE GEAR BOXES

Laycock de Normanville

Ref; Haynes Triumph Mk I & Mk II, 2000, 2500 & 2.5 1963 to 1977 (1998 cc to 2498cc)

Ratios

1st gear	3.28 : 1	
2nd gear	2.10 :1	
3rd gear	1.39 :1	(overdrive 1.11 : 1 Type J and 1.14 ; 1 Type A)
4th gear	1.0 : 1	(overdrive 0.797 : 1 Type J and 0.82 ; 1 Type A)
Rev	3.37 : 1	

GEARBOX CAPACITIES

Type A overdrive gearbox	4.3 pints	2.4 L
Type J overdrive gearbox	3.6 pints	2.0L
(Without overdrive	2.5 pints	1.42L)

GEARBOX OIL

Manual gearbox and overdrive; SAE 90EP Gear Oil Castrol Hypoy
Shell Spirax "G" Gear Oil 80W50

2) DIFF CAPACITIES

ORIGINAL TR2 and TR3 DIFF

Capacity	1.5 pints	0.85 litres

DIFF OIL

Shell Spirax "A" Axel Oil 80W90

3) FUEL TANK CAPACITY

Capacity	12.5 gallons	77 litres
	Lead Replacement Fuel	