

# THE TRIUMPH TR6 PLUS 6

# TR6+6



**A Project of the  
Long Island  
Triumph Association, Ltd.**

## HISTORY

In the early spring of 1969, a young engineering student saw for the first time the Triumph TR6 sports car. With his mind full of the rules of esthetics in design, the first thought that came to him was that the appearance of the vehicle would be more pleasing if the width of the car was increased by 10% or so. Nonetheless it was love at first sight and after 30+ years of owning, maintaining, eventually restoring and always loving the Triumph sports car, it was time to make that original thought a reality.

As a member of the Long Island Triumph Association (LITA), he summoned the combined talents of the membership to join him in the design, development and building of a TR6 widened by 6 inches (10%). The concept was greeted with enthusiasm and the club adopted the project as their own and work began in January of 2000. Using a donor car purchased for its overdrive transmission only, the project began with the total disassembly and analysis of the components to see the extent of their usefulness in the project. As the frame was considered to be useless it was decided to build a new frame from scratch using the old frame as a model. The Saturday tech-session was born and for the next two years the group met to work on the project.

As a result of the collaboration the project evolved into something much more involved than originally anticipated. Not only would the car be wider but it would it was to have a V8 engine, a modern 5 speed transmission, a radical suspension and changes to the body style that all agree would make the car more pleasing. The nose of the car would tilt forward as in the spitfire and Jaguar designs. The wheel wells will be slightly flared with lower profile tires on larger diameter rims would give the car a low racy look and the wider body would allow for interior changes in comfort and style.

Today, the rolling chassis you see here is the results of two years of work. The rear clip of the body (from the B post rearward) and the floorboards are already widened but not yet ready for display. Project completion is expected to be in the spring of 2005. We hope that we can make the project available for the publics review as the work progresses through cars shows and publications. The progress can be seen at any time at our clubs superior web site found at [longislandtriumph.org](http://longislandtriumph.org).

## SPECIFICATIONS

### ENGINE:

<b>TYPE</b>	All Aluminum Rover V8, 3.5 Liter
<b>BORE AND STROKE</b>	3.5 x 4.25 Inches
<b>COMPRESSION RATIO</b>	9.25:1
<b>BHP (ESTIMATED)</b>	200HP AT 4800 RPM
<b>TORQUE</b>	240 FT/LBS AT 3600 RPM
<b>CARBORATION</b>	Edelbrock 500CFM, 4 Barrel with Air Valve Secondaries
<b>CAM</b>	Iskandarian 262 Supercam
<b>EXHAUST</b>	Twin Runners with Low Restriction Turbo Mufflers Cast Iron Manifolds from a 4.2-Liter Rover

### DRIVE TRAIN:

<b>CLUTCH DIAMETER</b>	11 Inches
<b>ACTUATION</b>	Hydraulic Throwout Bearing
<b>TRANSMISSION</b>	Borg Warner T5, 5 Speed Manual
<b>FINAL DRIVE RATIO</b>	3.45:1 with a Standard Triumph Rear

### CHASSIS/BODY:

<b>BODY/FRAME</b>	Steel Frame Using 10 GA. 3X3 Box Body 20 GA. Steel Standard Triumph Issue
<b>BRAKES</b>	10.9 Inch Front Discs 9 X 1.75 Inch Rear Drums
<b>WHEELS</b>	16X7 Panasport Racing Wheels
<b>TIRES</b>	215X60HR16
<b>FRONT SUSPENSION</b>	Unequal Length A Arms, Coil Springs and Tube Shocks, 3/4 Inch Anti-Sway Bar
<b>REAR SUSPENSION</b>	Semi Trailing Arms with Coil Spring and Tube Shocks. Coil Over Shock Arrangement 1 Inch Anti-Sway Bar

### CALCULATED DATA:

<b>CURB WEIGHT</b>	2400 Lbs. (Estimated)
<b>WEIGHT DISTRIBUTION</b>	TBD
<b>WHEEL BASE</b>	88 Inches
<b>TRACK FRONT/REAR</b>	56.00/55.8
<b>OVERALL LENGTH</b>	157 Inches
<b>HEIGHT</b>	48.0 Inches
<b>HP TO WEIGHT RATIO</b>	12 Lbs./HP

## SESSION 1 - JAN 20, 2001

**1970 TR6 Donor Car was sitting outside for 2 seasons in weather. Car was thought to be unrestorable until dismantling began**



**Crew of LITA members met at first tech session and managed to remove engine and tranny**



**Triumphant crew with extracted engine prior to separation of engine/tranny**

## SESSION 2 - JANUARY 27, 2001



**All connections between body & frame (ie: brake lines, wiring harness, gas lines, etc.) were removed. The steering linkages were extracted, facia was removed. Car was prepared for separation of body & frame**

### **SESSION 3 - FEBRUARY 10, 2001**



**Separation of Body from Frame**



**Pyramid chain structure was formed at c/g of body. All body/frame mounting points were removed (18 in total)**



**Frame now exposed was studied. Suspension & drivetrain components were removed**



**Our crew taking a break with Rover engine. Discussion was endless on how engine would mate with other systems in place**



**Just for kicks, the new engine for the TR6+6 was taken down from storage and partly assembled. The engine is a Rover V8, 215 CID**



**Wood blocks were fastened to the frame and engine was set in place. Engine would fit TR6 as is. When the car is widened, there will be even more room**

## 2002 Project Sessions

### Building a Frame

At the close of last year's project sessions, we determined it was too costly and not worth the time to attempt to restore the original frame. As you can see it is in pretty bad shape. A decision was made that we would start the 2002 project sessions by building a frame



**The old frame would be used as a template for the new frame. 3"x3" mild tubular steel will be used for all of the**

frame except the rear cross tube which would be made from 1"x2" mild tubular steel and the very front tips of the frame where the radiator brackets attach would be made from 2"x3" mild tubular steel and would be welded to the frame



All the frames curvatures would be accomplished by calculating the correct angles to cut the ends of the tube steel then butt and weld the ends together



The 3"x3" tube steel is being cut in the correct size pieces and its ends with the correct angles using a chop saw



Viola! The angles being calculated and cut correctly make the pieces fit nicely together and duplicate the curves of the old frame



**Measurements were taken several times over for frame squareness before the pieces were all spot welded together**



**As they say "measure many times, cut once" (or in this case "weld once")**

**The major portion of the new frame completed with some of the new pieces spot welded in place**



**Frame has been squared up to everyone's satisfaction and is awaiting final tack welds**

**LITA members with completed frame, now 6 inches wider than the original**

## 2003 Project Sessions

**At the beginning of this year's project sessions (began in Nov 2002), 2 good shock towers were cut off the frame of a donor TR6. The plan for the beginning of this new session was to install the shock towers onto the frame which was completed in the 2002 sessions**



**Before the front shock towers were welded in place, it was necessary to make sure they sat at the precise angles on the frame as original. To ensure this, the base of each tower was ground down as necessary as the angles were checked repeatedly**

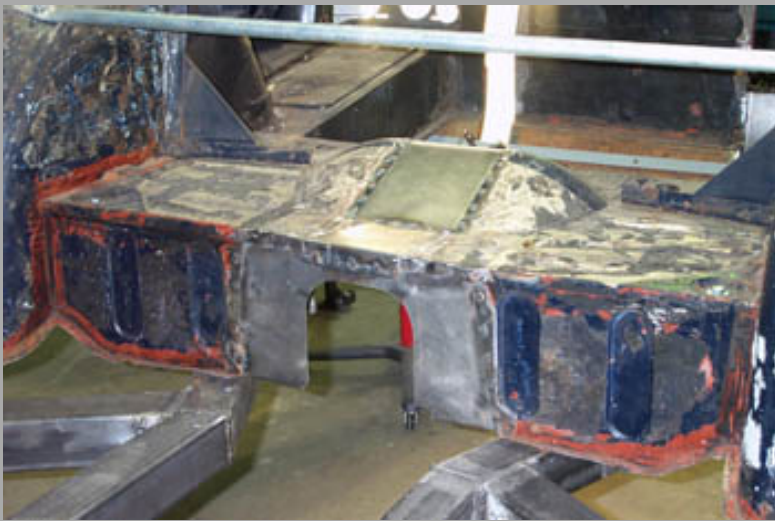


**Having put the frame aside, the project moves to the body. The back portion of the body is the first to be started with it being cut at the midline**





**Back valance has been cut in 2 places so as to retain the integrity of the trunk lock mechanism**



**New sheetmetal welded in place at heelboard and rear floor. Since sheet metal has been removed, temporary cross support braces have been installed to keep the integrity of the body straight and intact**



**Two 3" pieces of new sheetmetal have been cut, fitted and welded in place on the rear valance thus increasing its overall width by 6" as it should**



**The 2 rear fenders have been mounted on the the widened body and they fit perfectly!**