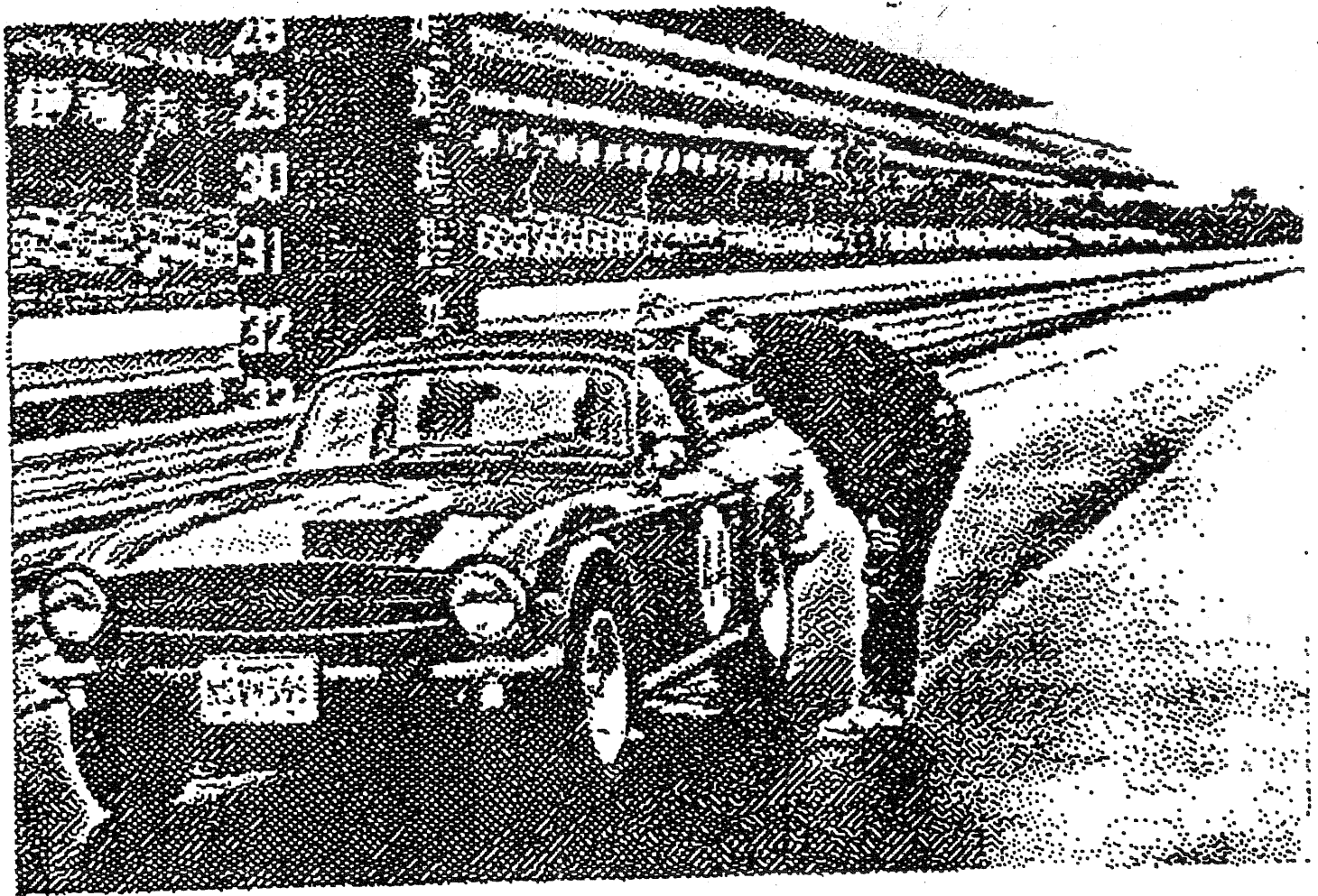


SIX TECH

by Leonard Renkenberger



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PREFACE

This manual is dedicated to the TR-6, the car I have always referred to as the M6-TC of the '70s. These happen to be, in my opinion, two of the greatest cars ever built. They are not the fastest, the most powerful, the best handling, the most valuable or the best at anything matter of fact. Perhaps that's why I feel they are so great. They were the epitome of sports car in their day and, most important, the average guy could afford them. The TC was the first and the TR-6 was the last. My TC has been with me since 1960 and the one TR-6 since March 26, 1970. I can not imagine what it would be like not having them - especially driving the TR-6 every day and the TC for occasional pleasure use on nice days and trips. All those poor souls chugging down the road in their 1987 Zapmobiles sure are missing a lot in life.

Where am I coming from and why did I prepare this book? I'm not sure. However, by attempting to help you and encourage you to keep your TR-6 on the road I'm really helping myself too. The more these cars are driven and restored the more parts suppliers are encouraged to keep making those vital gears, switches, and such. That keeps the cars drivable and so we go around the cycle again. I have a belief that if you know something, you have a duty to pass that knowledge on. I also believe this is doubly true in old car circles because you aren't going to learn it "on the job". I'm not talking about things you can find in shop manuals - they're written for people who already know what they are doing (or at least think they do). I'm concerned with the inherent weakness the manufacturer sure as Hell isn't going to mention in his manual, or the improvement of an assembly by substituting parts that technology hadn't invented when your car was built. I'm not suggesting I know it all - far from it. I've merely attempted to pass on some of the lessons I've learned behind the wheel and underneath a TR-6 for over 300,000 miles. I would like to encourage you to do the same.

There has been no attempt made to make this a "professional" looking publication - nor even too much of an attempt to use the correct grammar and spelling. There has been, however, a real attempt to explain things clearly in language the non-pro can understand. I hope we have succeeded on this latter point above all else.

You will be amazed at how much work you can do yourself if you have a few basic tools, preferably more than one shop manual and, most importantly, the confidence to try. Most jobs can really be subdivided into several smaller jobs and by doing this you'll find it is not so overwhelming as you may have thought. For example, body repair and a paint job seems mighty intimidating. However, if I said you could remove the left front fender, you'd probably agree. If I then said take a 1/4" drill and a grinding disc and grind the rust away from the edges of a rust hole in that fender you'd again agree you could do it. Then if you just put a fiberglass patch on the back, a little plastic filler on the front and sand it

a little, you've fixed the fender. Now you'd know you could do the other three. By then you'd probably be very justified and smart to take the rest of the job to a pro; but, you would have gained a tremendous amount of self confidence. Of course it is also obvious that you can't jump into a complete engine rebuild if you've never even been able to change the oil. Strive to gain skill but know your limits.

Many of the articles deal in basics, and more important they deal specifically in TR-6s. By that I mean not a generic article like all the "How to" books have. I once bought a "How to Fix your TV" Book. Trouble was the resistors and rectifiers in my TV weren't in the same place as the ones on the generic TV. I threw the book and TV out together. I promise you that you'll know how to do the job on your TR even though you can't do it on a lawnmower. The theory and tune-up articles are, I think, good examples of this. Incidentally, I can't fix lawnmowers either!

Also I'd like to qualify the difficulty level of the articles we present when applicable so that you don't feel intimidated by a job you could easily do but just don't know you can. The grading would work something like this:

D: Requires ability to recognize box end wrench and lift with both hands after appropriate study and preparation.

C: Able to open hood (bonnet) and know what carburetors (I spell in U.S. not British) look like - well, at least which side of engine they are on.

B: Knows what a torque wrench is and how to use it for something other than a hammer.

A: Able to remove a major assembly such as engine or differential and, with some help from manuals, disassemble and re-assemble it.

A+ Donald Healey, Bob Tullius, and Richard Petty call you "Your Highness".

SIX TECH

ENGINE, CYLINDER HEAD, VALVE GEAR, AND MANIFOLDS

Double engine life with frequent bearing changes	E 1
Changing upper main bearings	E 2
Frequent engine thrust washer replacement is a necessity	E 3
Engine front oil seal improvement	E 5
Speedi-sleeves - a better idea	E 6
Matching a new or rebored block and new pistons	E 7
Repairing the oil pressure line	E 7
Oil all over the left side of your engine	E 8
Rocker shaft set screw	E 8
Curing/preventing rocker shaft, rocker, and cam failure	E 9
Cylinder head and manifold interchanges	E 11
The blue cloud, the sign of valve guide wear and what to do	E 12
Easy valve guide replacement	E 13
Raising your oil pressure and checking bearing condition	E 14
Don't raise your oil pressure and drop your temperature	E 16
Always use two manifold gaskets	E 17

CARBURETTORS, FUEL SYSTEM, AND EMISSION SYSTEM

Modifications and replacements for the Zenith-Stromberg CD carburetors on Triumph TR-250 and TR-6	C 1
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TUNE UP AND IGNITION

Distributor rebuild	TI 1
Accurate setting of ignition points and the ignition timing	TI 3
Home made static timing light for under \$5	TI 5

CLUTCH, GEARBOX, AND OVERDRIVE

Adapting a 'J' type overdrive to an early car	C6 1
Repair your 'J' type overdrive and save \$211.75 on a solenoid	C6 5
What nobody ever told you about clutch jobs	C6 7
If your clutch won't disengage after rebuilding and bleeding the slave cylinder	C6 10

DIFFERENTIAL, REAR AXLES, AND DRIVESHAFT

Rear hubs - probably the biggest problem you will ever face with your TR 6	DA 1
Extending the life of rear hubs	DA 6
Grease fittings for rear hubs and universals	DA 9
Differential rebuild without the factory tools	DA 9

STEERING AND FRONT SUSPENSION, SHOCKS AND SPRINGS

Rack and pinion mounts - stock and solid (with a consumer bulletin on the later)	FS 1
Preventive medicine for front suspension mount woes	FS 3

But when it does break - front suspension mount repair	FS 5
Front suspension rebuild for the beginner	FS 7
Wheel bearing adjustment when installing a new seal	FS 11
Easy tie rod end and ball joint removal	FS 12
Easy front wheel bearing cap removal	FS 14
Speedi-sleeve - a better idea for front end rebuilds	FS 14
Front wheel bearing wear and repacking wheel bearings	FS 15
A good cheap tool for packing bearings	FS 16
A better front wheel bearing seal	FS 16
Prolong the life of wheel bearings and make maintenance easier	FS 17
Extended tie rod end life	FS 20
<i>Oiling</i> your steering gear	FS 21

REAR SUSPENSION, SHOCKS AND SPRINGS

Revising the early TR 6 rear suspension geometry	RS 1
Rear suspension bump stop replacement	RS 3
Installing rear suspension bushings with hand tools	RS 4
Rear springs	RS 5

BODY, PAINT, GLASS, TOP, INTERIOR, WEATHERSTRIPPING, ETC.

Dashboard weekend	B 1
Rocker panel replacement for the every day car	B 4
Care and feeding of the door hinges	B 8
Front fender rust prevention splash shields	B 9
Rust prevention for the TR 6 rear fenders	B 12
Additional rear body splash shield	B 16
Selecting a color and a paint system	B 18
Correct silver or more silver silver for your wheels	B 28
Door handle escutcheon problem	B 28
Windscreen to door glass seals	B 28
Built in stereo speakers for your TR 6	B 29
Theftproof speakers and a parcel rail	B 32

ELECTRICAL, ALTERNATOR, SWITCHES, INSTRUMENTS, AND RADIO

One of Joe Lucas' most insidious inventions	ES 1
Emergency wiper switch for early (rocker switch) cars	ES 2
The Studebaker answer	ES 3
Early windshield washer switch replacement	ES 3
Before you replace that alternator	ES 4
Alternator brushes - preventive medicine for the high mile car	ES 5
Alternator mounting woes (or) don't let a red neck mechanic touch your alternator	ES 7
Easy alternator pulley removal	ES 8
GM alternator conversion	ES 9
Wiper switch replacement, "original" or cheap	ES 13
Speedometer and tach repair	ES 14
Stop light/tail light woes	ES 14

SAFETY AND MISCELLANEOUS

Is your pride and joy a candidate for a Ralph Nader witch hunt? Keeping it safe!	SM 1
Don't be in a hurry for your TR 6 to fire up	SM 4