TRIUMPH TR250 - TR6
ELECTRICAL
MAINTENANCE HANDBOOK

A dmp PUBLICATION

DM Publishing, Alcoa, TN

NOTE: The material in this manual is provided as an aid to Triumph owners who want to do their own electrical trouble shooting and repair. The author makes no claims for its accuracy or suitability for use, although every effort was made to make it as correct as possible. Standard-Triumph didn't always correctly document the electrical systems when the cars were built, and often made undocumented changes on the production line. Also, in the over two decades since these cars were new, it is not uncommon for them to have been modified by previous owners; Therefore, the material in this manual should be used with discretion, and is to be used at the readers risk. This information should be considered general rather than specific to any particular vehicle, and no warranties exist, either expressed or implied

PREFACE

LUCAS - PRINCE OF DARKNESS?

Unfortunately, that is the typical response to the electrical systems in our Triumphs. I say "unfortunately," because the Lucas electrical components are just as good and as reliable as any. ANY 25 year old car that has been neglected, perhaps stored in a barn or a field for 15 of its 25 years, will have problems with the electrical components. Why does Lucas have such a bad reputation? Simply because Lucas supplied components to virtually all British cars during the era we are now concerned with. You have a bad switch in your Triumph, your buddy has a failure in his MG, and yet another friend has similar problems in his Jaguar. With Lucas being the only commonality, it's easy to assume Lucas is the problem. If you have problems with a 25 year old Chevrolet, and your buddy is experiencing the same type of problems with his old Ford, you both are much more likely to attribute the problems to age than to manufacturer, as the electrical components are not made by the same company.

With proper maintenance and care, Lucas electrical components will provide many years of reliable service; without proper care, no manufacturer's parts will last for the quarter to half century we expect our cars to serve.

For the last few years, I have been a member of the Triumphs mailing list (Courtesy of Mark Bradakis and the Fat Chance Garage) at autox.team.net*. Problems with electrical systems seem to occupy as much or more time on the list as any other single type of problem, and I have spent a fair amount of time trying to provide list members with simple, yet complete, solutions to those problems. It seemed as if everyone, regardless of the condition of their car - show car or beater, has electrical problems from time to time. After the first year or so, I recognized the need for a ready, reliable, source of help for these electrical problems. It occurred to me that if I could put answers to all the electrical problems that might be encountered during the course of Triumph ownership into a book, and if the book were complete, thorough, and most of all, easy to understand, I would be doing a great service to my fellow Triumph enthusiasts, and perhaps save a number of the Triumphs from the scrap yard as well. This, then, is my attempt at that book.

WHO AM I?

Many of you who buy this book know me from the Triumphs mailing list; the fact that you bought this book indicates that you have a reasonable confidence in my electrical expertise. For those who don't know me, a little background material may be in order. My first electrical experience began with a four year tour of duty in the USAF as a radar technician. Following that, I attended the University of Tennessee, where I earned a BSEE. Starting part time while still a student, and ending with early retirement in '94, I spent 28 years designing instrumentation and control systems for nuclear power plants with the Tennessee Valley Authority.

None of which qualifies me as an expert in Triumph electrical maintenance. I have no formal training in automotive applications, nor am I certified as an automotive authority by any certifying agency. I bought

** If you are not already a member of the Triumphs mailing list, you really should join. It's free (although contributions are welcomed), it's easy, and it's an invaluable source of information (and moral support) for Triumph owners. All models of Triumphs are represented, although the more popular TR series are discussed more often than others. To join, just send an e-mail to: majordomo@autox.team.net with NOTHING in the body of the text EXCEPT two words:* ***subscribe triumphs***

Within a few moments, you will get a confirmation email, with directions for initiating your subscription. Return the confirmation, and within another few moments, you will begin receiving mail from some of the more than 700 members world wide.

my first TR6 in 1990, and I have spent the years since applying my electrical background to an understanding of the principles and foibles of automotive electrical systems, particularly as they pertain to Lucas and British cars. Electrical principles are the same, regardless of the application, but the particular requirements of an automobile can create some unusual designs. At first glance, some automotive systems appear to be an exercise in stupidity, yet when studied further, turn out to be a quite clever solution to a peculiarly automotive problem.

This book, then, is not the writings of an "expert." It is, rather, a compilation of the experiences and the research of an amateur Triumph enthusiast, just like yourself. I have spent many hours in research during the preparation of this manual, and I would like to say that it is without error, but the nature of the problem prevents that. In spite of my best efforts, I am sure there will still be errors. There is no official documentation available from Triumph that can be relied upon with absolute certainty (in many cases, the official documentation is ***very*** wrong!), and the availability of truly original examples to evaluate is limited. Any errors in the book, however, should be of a minor nature, and shouldn't impact the overall usefulness of the manual. It is my intention that the supporting material - circuit descriptions, operational diagrams, theoretical explanations, etc., - that accompany each chapter of the book will provide sufficient background material that the reader will be able to work around any errors that may exist.

I hope you enjoy this book as much as I have enjoyed writing it. If it saves you any where near the time it has taken me to write it, it will be well worth your money. Hopefully, we can keep the evil electrical gremlins at bay, and keep our Triumphs on the road!

Dan Masters,
(DANMAS@aol.com)
June, 2000

NON-ELECTRICAL PROBLEMS

Electrical problems may be among the most vexing you're likely to encounter during a restoration of a Triumph, but they are not the only problems encountered. The scope of this manual is limited to electrical problems, but there is available an excellent book covering most of the remainder of the restoration activities. Written by well known British author Roger Williams and available from most book dealers, it is entitled "How To Restore Triumph TR5/250 & TR6," Published by Veloce Publishing, ISBN 1-901295-92-3.

ACKNOWLEDGMENTS:

First of all, I would like to thank Ken Gano, Irv Korey, and Dave Massey for their kind assistance in reviewing the manuscript for accuracy and completeness. I would also like to think Frank Bandre, Dave Gauthier, Bill Kelley, Tom O'Malley, Anthony Rhodes, John Rossi, Brian Schlorff, Bob Sykes, Randall Young, and Peter Zaborski (and many others, too numerous to list) for their help in resolving many of the wiring configuration concerns. Without their help, I would not have the confidence to offer this book for fear of errors. Of course, all errors remaining are of my making alone, and I take full blame for them.

I would also like to thank the members of the autox.team.net Triumphs and Spitfire mailing lists for allowing me the opportunity to participate in the "on-line" Internet discussions of technical issues involving these cars. I have learned much more from answering electrical questions than I have taught.

Most of all, I would like to thank Christa, my lovely wife of 30 years, for her patience and understanding, most particularly, her willingness to cheerfully, and (almost) without complaint, allow the inevitable "honey-does" to stack up while I pursued the writing of this manual.

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