

# MOTOR REPAIR

1964—1966 Models

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# TRIUMPH TR4

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### BODYWORK

To remove complete unit, remove battery, drain cooling, fuel and hydraulic systems. Remove bonnet, front bumpers and bumper support brackets, rear bumpers and bumper support brackets, spare wheel and tool kit. Disconnect oil pressure pipe from engine, revolution counter from base of distributor, clutch fluid pipe at flexible pipe, brake fluid pipe from top of three-way connector, heater water hoses, heater control cable, choke and accelerator control, cables from distributor, generator, starter motor and stop lamp, and fuel pipe at tank union.

Remove screws securing starter solenoid and move solenoid clear of engine, water control valve, water pipe from left-hand side of engine, upper pinch bolt from lower steering coupling. Slacken impact coupling and push the steering shaft upwards clear of lower coupling.

Remove carburettors, both seats, knob and grommet from change speed lever, grommet from base of handbrake lever and four bolts securing fascia support bracket to floor.

Remove 27 body mounting bolts from the following locations: Front of car: Two on front cross-member, one in each down member. Inside car: Four groups of four bolts, forward and rearward of door apertures, two each side transmission tunnel in line with front end of gearbox, two each side of rear edge of seat runner. Rear of car: One at each side of rear end frame, one bolt through centre of spare wheel panel.

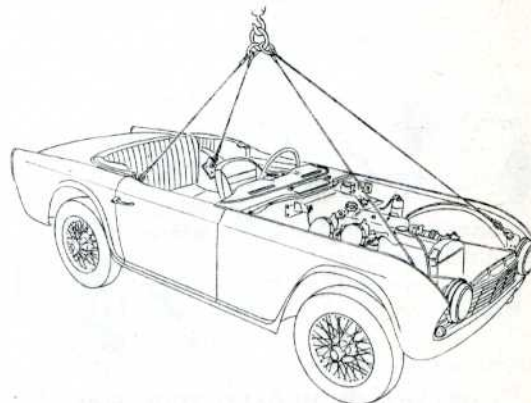
The method of lifting the body from the chassis will be determined by the equipment available to the repairer. In the example illustrated, four plates are made from 10SWG mild steel.

One plate is secured to each rear wheel arch utilising the safety harness anchorage screws, the remaining plates being secured to the front wing valance utilising the bonnet to valance hinge-

securing bolts. To refit: Secure body mounting pads in position using Bostik 1261 or similar compound. Using two  $\frac{1}{2}$  in. diameter rods, line up the holes in the body with those in the chassis as the body is lowered into position. Apply sealing compound between washers and main floor panel before fitting body mounting bolts inside the car. Reassemble by reversing the removal procedure and bleed the brake and clutch hydraulic systems.

**REMOVING WINDSCREEN.**—Pull off the draught welting from the screen pillars. Remove three bolts (22) with cover plates (21), one nut (24) with washer (25) from the bottom of each screen pillar (11). These nuts are accessible under the fascia. Slacken bolts (16) and (17) which are accessible when the door is opened. Lift out the windscreen assembly (11). Remove the rubber weatherstrip (23) from the back of the windscreen assembly.

To refit, remove old sealing compound from the contacting surfaces of the windscreen weatherstrip and the scuttle panel. Apply a fresh piece of sealing strip along the underside of the rubber and refit the windscreen assembly. There is provision

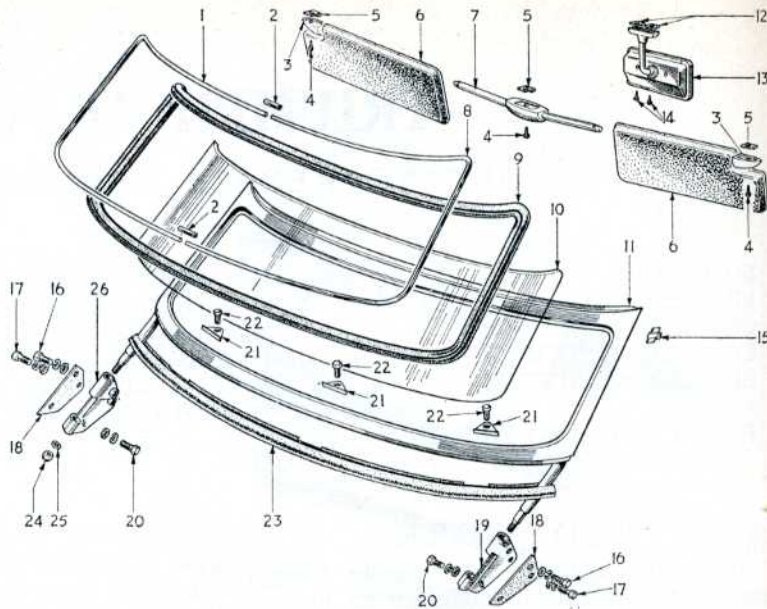


LIFTING THE BODY

# TRIUMPH TR4

## EXPLODED VIEW OF WINDSCREEN

1. Moulding
2. Cover plate
3. Mounting
4. Screw
5. Spire fix
6. Visor
7. Mounting
8. Moulding
9. Rubber weatherstrip
10. Windscreen glass
11. Frame
12. Packing piece
13. Mirror
14. Screws
15. Bracket
16. Bolt
17. Bolt
18. Packing piece
19. Mounting bracket
20. Bolt
21. Cover plate
22. Bolt
23. Seal
24. Nut
25. Washer
26. Mounting bracket



for limited adjustment between the windscreen frame and door glass.

If adjustment is required, slacken the bolts (16), (17) and (20) on both sides of the car, raise both door glasses, and move the top of the windscreen to provide a uniform clearance between the glass and the windscreen. Retighten the bolts.

Seal the windscreen frame to the rubber with sealing compound.

**REMOVING DOOR GLASS.**—Remove trim panel, loosely refit handle and lower the glass. Remove the inner weatherstrip by pushing its lower edge upwards from inside the door using a screwdriver. This weatherstrip is retained in position by seven small spring clips.

Partially raise the glass and remove two clips and leather washer and disconnect the regulator arms from the channel. Lift the glass out of the

door, taking care not to damage the water deflector panel which is attached to the glass by the channel.

To refit, fold the deflector flat against the inner side of the glass and place the glass into the door. Reconnect the regulator and lower the glass. Reposition the deflector panel. Using the hooked tool, hold the spring clips in position and push the inner weatherstrip back into place. The hooked tool may be used to fit any clip which may require renewing. Refit the trim panel.

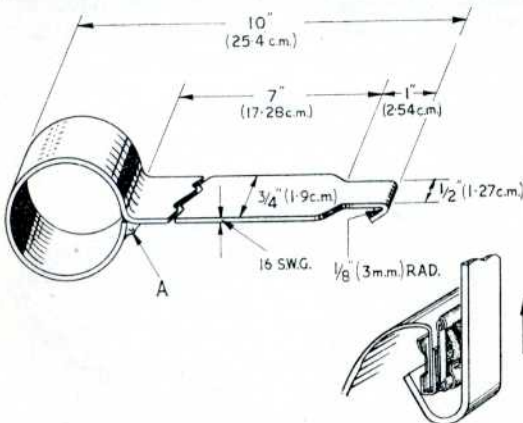
## BRAKES

The Girling hydraulic braking system is used, with front callipers and discs and rear drums ( $9 \times 1\frac{3}{4}$  in. leading and trailing shoes). The self-adjusting front brakes have Girling 11 in. discs with cast iron double-acting calliper units, each containing two quickly detachable friction pads.

**REPLACING PADS.**—Jack up the car and remove front wheels. Release two spring retainers and remove the pad retainer pins. Lift the friction pads and the anti-squeal plates from the calliper and renew them if worn. Do not attempt to relined worn pad assemblies.

Before fitting new pads, push pistons back to the full extent of their travel. Refit the pads and anti-squeal plates, positioning the arrow in the direction of wheel rotation. Insert the retainer pins and secure them with the spring retainer clips.

**Calliper cylinder maintenance.**—To replace piston sealing rings or dust excluders, dismantle as follows: Release the rigid pipe and locknut at the support bracket, unscrew the flexible hose from the calliper. Remove two bolts securing the calliper to its support bracket. Remove the calliper and withdraw the pistons from the body.



DETAILS OF HOOKED TOOL FOR FITTING SPRING CLIPS

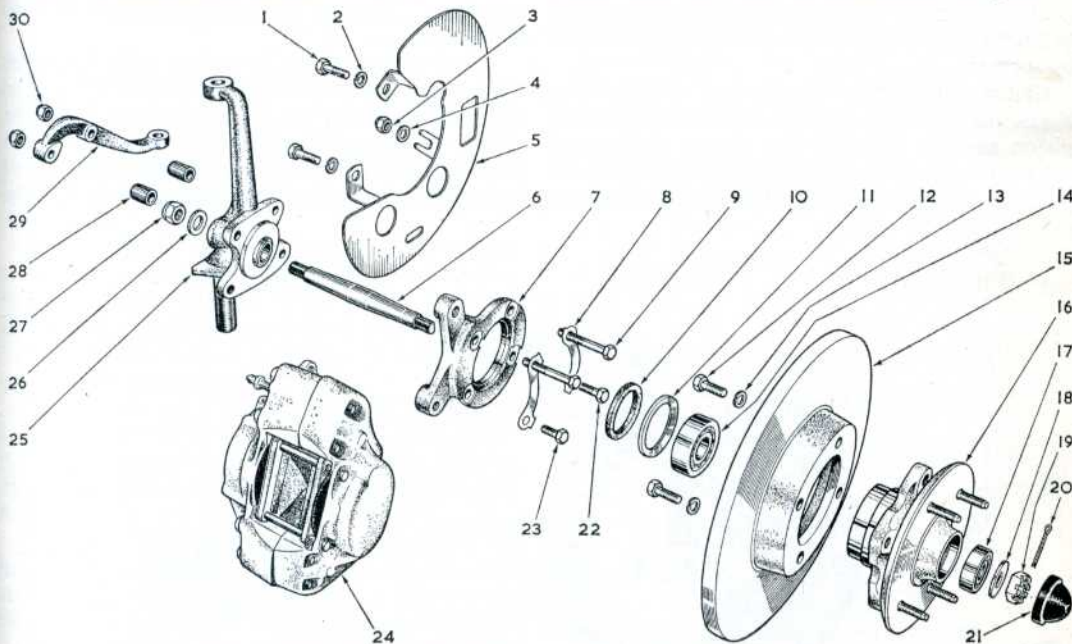
Carefully remove the rubber sealing ring from its recess. Clean the piston, cylinder and rubbers with clean brake fluid. Examine all components for serviceability and renew where necessary.

**Reassembly.**—Lubricate the surfaces of the bore and piston with clean brake fluid. Fit a new piston seal into the recess in the cylinder. Locate the projecting lip of the rubber dust excluder in its recess in the cylinder. Insert the piston, closed-end leading, into the cylinder, taking care not to damage the polished surface. Push piston fully home and engage the outer lip of the dust excluder with the recess in the piston. Replace the friction pads. Assemble the calliper over the disc, and refit shims between calliper and mounting bracket. Refit the flexible brake hose and bleed the system.

the toe of the leading shoe is adjacent to the wheel cylinder piston, and its heel is located in a slot in the abutment. The heel of the opposite shoe locates in a slot at the closed end of the wheel cylinder body.

Lightly smear a thin film of white (zinc base) grease over the six shoe-contact pads and over the area on which the wheel cylinder and spring plate slide. Do not contaminate the shoe linings with grease or oil.

Assemble the brake shoes, pull-off springs and shoe anchor-pins to the left hand brake assembly. The right hand side assembly is symmetrically opposite. Refit the brake drum; turn the adjuster fully 'in' and turn it back one notch to free the drum. Refit the road wheel and lower the jack.



EXPLODED VIEW OF DISC BRAKE AND HUB ASSEMBLY

- |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|
| 1. Bolt             | 9. Bolt             | 17. Outer tape race | 24. Calliper unit   |
| 2. Spring washer    | 10. Felt seal       | 18. Washer          | 25. Vertical link   |
| 3. Nyloc nut        | 11. Seal retainer   | 19. Slotted nut     | 26. Plain washer    |
| 4. Plain washer     | 12. Bolt            | 20. Split pin       | 27. Nyloc nut       |
| 5. Dust shield      | 13. Spring washer   | 21. Hub cap         | 28. Distance pieces |
| 6. Stub axle        | 14. Inner tape race | 22. Bolt            | 29. Steering arm    |
| 7. Calliper bracket | 15. Disc            | 23. Bolt            | 30. Nyloc nut       |
| 8. Tab plate        | 16. Hub             |                     |                     |

**DISCS.**—Maximum permissible run-out on the friction faces of the discs is .002 in. (0.0508 mm.). The discs may be machined to a thickness of .440 in. (11.18 mm.) to rectify excessive run-out or scored faces. Maximum permissible finish of the disc machining is 15-30 micro inches measured circumferentially, 50 micro inches measured radially.

**BRAKE SHOES.**—The rear brake-shoe linings are shorter in length than the platforms to which they are attached. The end of the shoe having the greater length of platform exposed is the 'toe', whilst the other end is the 'heel'. When installed,

**To renew piston seal.**—Remove the brake shoes, drain the hydraulic system, uncouple the brake pipe and disconnect the cable from the wheel cylinder lever. Remove the dust cover, abutment plate and spring plates.

Withdraw the wheel cylinder and handbrake lever from the backplate. Extract the piston from the wheel cylinder body and renew if scored or damaged. Reassemble the brake components by reversing the removal procedure.

**BRAKE ADJUSTMENT.**—Front brakes are self-adjusting. Each rear brake is provided with an adjuster protruding from the backplate.



