LEYLAND

# TRIUMPH

# Press Information On The TRIUMPH TR5 PI

**CONFIDENTIAL**

NOT FOR PUBLICATION
UNTIL OCTOBER 3rd 1967

## INTRODUCTION TO ANOTHER TRIUMPH FIRST

Earls Court 1952 marked the entry of Standard Triumph into the production sports car field and the beginning of what has been probably the most successful range of sports cars in the world. The eye-catching blend of established Triumph components with a new body shown at the 1952 Motor Show was, in greatly modified form, soon to be seen as the TR2 on the roads of Britain, Europe and the Americas. It was Britain's first 100 m.p.h. sports car to be sold at a popular price.

Since July 1953 over 112,000 TRs have been produced and over 90% of these exported, earning for the Company over £50 million in foreign exchange - a remarkable achievement for a single range of cars.

One of the landmarks in the development of the range came in 1955 with the introduction of the TR3 which featured increased comfort and greater power. In October 1956 this model was the first production car in the world to be fitted with disc brakes as standard equipment.

In 1961 the TR4 was introduced, and this marked a departure from the classic line of the earlier models, with Standard-Triumph's first sports car body designed by Giovanni Michelotti.

In 1965 - another first - the TR4A was introduced with independent suspension all round, and this Standard-Triumph became the first major British manufacturer to have this feature on its entire range of passenger cars.

The TR series has an unequalled record in motoring competition, having won awards all over the world in almost every type of motoring event. It is the only marque to have entered three cars and finished three cars, three years in succession in the gruelling Le Mans 24 Hour Race, and the record of five Coupes des Alpes in one Alpine Rally won by TRs has yet to be beaten.

Now, with the introduction of the TR5 PI the Company maintains its eminent position on the British sports car market - the TR5 is the first British production car to have fuel injection as standard equipment. This equipment is the result of many years research and development in co-operation with the Joseph Lucas Company who have been responsible for the fuel injection equipment fitted to the majority of the world's Grand Prix racing cars.

The TR5 PI continues the TR tradition. Fitted with a 2500 c.c. version of Triumph's successful 2 litre six cylinder engine, it combines outstanding performance plus the smoothness and flexibility associated with its sister saloon the Triumph 2000.

A greater degree of passenger comfort has also been provided by extensive restyling of the cars interior, and with a top speed of 125 m.p.h. it is the fastest production car ever marketed by the Company.

The TR5 will be available in all markets except the U.S.A. where a special version designed to meet the requirements of anti pollution legislation will be available in 1968.

The Company is confident that this new technical lead will vastly improve its penetration of overseas sports car markets, and continue its predecessors' record as a top contributor to Great Britain's export drive.

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TRIUMPH TR5

FEATURE BY FEATURE

Chassis and Bodywork

The attractive TR4A body line is retained with detailed alterations to the interior and exterior trim.

Revised stainless steel side flashes, a new radiator grille, indicator repeater lights, reversing lights, TR5 badges and "custom" wheel trims differentiate it from earlier models externally.

The interior has been extensively reworked. The seats are now covered with ventilated "Ambla" material, as in the 1300 and 2000 models, and new door trims with revised handles and anti-burst locks are incorporated.

The non-reflective wooden dash panel has rev. counter, speedometer, ammeter, fuel, oil pressure and temperature gauges, all with anti-glare bezels. There are warning lights for oil pressure, ignition, high beam and indicators. Blue lights illuminate the instruments and are controlled by a rheostat on the dash. Rocker switches operate the two-speed wipers and washer. Knobs operate choke, heater, fan and air distribution.

Lights are controlled by a lever on the column and a foot operated dip-switch.

A new hood is fitted. This incorporates a rigid channel section above the side window so that a positive weather seal is maintained at high speed. New catches attach the front of the hood to the screen top and the levers fold away in the locked position.

The heater system incorporates foot level vents as well as new face level vents for driver and passenger which are adjustable for flow and direction. The steering column is designed to collapse in the event of an accident and the steering wheel is padded to give maximum crash protection. The dash panel lip is also padded.

The chassis is generally similar to that of the TR4A though detail modifications have been made to accept the additional length of the 6-cylinder engine.

The suspension is independent all-round, by wishbone and coil springs at the front and trailing arms and coil springs at the rear as on the TR4A, but the rear suspension has been stiffened up by about 25% over the TR4A, to give even better roadholding.

## Engine and Transmission

The TR5 PI is powered by an enlarged version of the familiar 6-cylinder 2-litre engine which powers the Triumph 2000, Vitesse 2-litre and GT6. The bore of the engine remains the same at 74.7 mm. but the stroke is lengthened by 19 mm. to give a capacity of 2498 c.c. The most important feature of the new engine is that it is fitted with petrol injection equipment. It is the first British production engine to be so fitted, and the system chosen is that produced by Joseph Lucas. The advantages of this system are that the fuel is metered in exact quantities for all operating conditions directly into each inlet manifold and this gives smoother running, particularly at low speeds, better pick-up and greater torque. The removal of the carburettor choke and hot spot on the inlet manifold permit a larger air change to the engine resulting in greatly increased power output.

The injection system consists of a filter, an electric fuel pump supplying petrol at 100 lbs. sq. in. to a rotor metering unit which is driven at half engine speed. Fuel quantity is determined by a mixture control unit mounted integrally with the metering unit which is actuated by a manifold pressure device. Excess fuel is returned to supply from the filter and the metering unit. From the metering unit the fuel goes

to the injectors which are mounted in the separate inlet manifolds on the engine side of the throttle butterflies.

The engine develops 150 b.h.p. at 5,500 r.p.m. and 1970 lbs.in. torque at 3,500 r.p.m. These are increases of 46 b.h.p. or 45% and 380 lbs.in. torque or 23%. The increase in torque is most noticeable when the car is pulling in top gear and this in conjunction with the 6-cylinder smoothness gives a flexible effortless performance.

A four speed all synchromesh gear box is fitted with overdrive available as optional equipment. The rear axle and half shafts have been strengthened to transmit additional power of the $2\frac{1}{2}$ litre engine.

Performance

The TR5 outperforms its predecessor all the way through the speed range. The standing quarter mile through the gears is achieved in a time of $16\frac{1}{2}$ seconds, 1.2 seconds faster than the TR4A and 0-50 m.p.h. in 6.5 secs. 1.4 secs. faster. 40-60 m.p.h. in 7 secs. is an improvement of 1.2 secs and this is achieved with considerable less 'fuss' and noise from the engine compartment. The top speed is 125 m.p.h. (though this may be lower in some markets where local regulations dictate modifications for noise prevention.) It is a first class high speed

touring car and at 100 m.p.h. in overdrive top gear the engine is running at a mere 3860 r.p.m.

Brakes

Larger 10-7/8" dia. disc brakes are fitted to the front wheels and leading and trailing shoe drum brakes to the rear. They are power-assisted and a fail-safe system is incorporated. There are separate systems for front and rear operated from tandem master cylinders, which means that in the event of failure of one system, braking is assured by the second.

## Colours

| Body | Trim |
|---|---|
| White | Midnight Blue or Black |
| Wedgwood | Midnight Blue |
| Conifer | Black |
| Signal Red | Light Tan or Black |
| Royal Blue | Midnight Blue or Black |
| Valencia | Light Tan or Black |
| Jasmine | Light Tan or Black |

## Prices

| | List | P.T. | Total |
|---|---|---|---|
| Soft-top | £985 | £227. 8.11d. | £1212. 8. 11d. |
| Hard-top | £1020 | £235. 9. 4d. | £1255. 9. 4d. |

# SPECIFICATION OF THE TR5

## Brief Description

Two-seater convertible Sports Car. All weather equipment. Steel body rust proofed. Detachable windscreen. Doors hinged at front. Front and rear wings are bolted-on detachable type.

## Engine

| | | |
|---|---|---|
| Number of cylinders | ... 6 | |
| Bore of cylinders | ... 74.7 mm. | 2.94 in. |
| Stroke of crank | ... 95 mm. | 3.74 in. |
| Capacity | ... 2498 c.c. | 152 cu. in. |
| R.A.C. rating | ... 20.75 h.p. | |

## General Dimensions

| | | |
|---|---|---|
| Wheelbase | ... 7' 4" | 2,240 mm. |
| Track | | |
| Front - Disc Wheels | ... 4' 1¼" | 1251 mm. |
| Wire Wheels | ... 4' 1¾" | 1263 mm. |
| Rear - Disc Wheels | ... 4' 0¾" | 1239 mm. |
| Wire Wheels | ... 4' 1¼" | 1251 mm. |
| Ground Clearance | ... 6 in. | 152 mm. |
| Turning Circle (between kerbs) | 33 ft. | 10.1 metres |

## Overall Dimensions

| | | |
|---|---|---|
| Length ... | 12' 9-5/8" | 3902 mm. |
| Width ... | 4' 10" | 1470 mm. |
| Height (unladen) ... | | |
| Hood erect ... | 4' 2" | 1270 mm. |
| Top of screen ... | 3' 10" | 1170 mm. |
| Hood folded and screen removed ... | 3' 4" | 1020 mm. |

## Weight (Touring Trim)

| | | |
|---|---|---|
| Dry (excluding extra equipment) ... | 19¼ cwt. | 983 kg. |
| Complete (including tools, fuel, oil and water) ... | 20¼ cwt. | 1034 kg. |
| Gross vehicle weight (max.) | 24½ cwt. | 1256 kg. |

## Capacities

| | IMP. | | U.S.A |
|---|---|---|---|
| Fuel Tank ... | 11¼ galls. | 51 litres | 13.5 galls. |
| Engine Sump ... | 8 pints | 4.52 litres | 9.64 pints |
| Gearbox - from dry ... | 2 pints | 1.13 litres | 2.4 pints |
| Rear Axle - from dry ... | 1½ pints | 0.85 litres | 1.8 pints |
| Cooling System - with heater | 11 pints | 6.2 litres | 13.2 pints |

Tyre Size ... Dunlop SP41 165 HR 15

## Engine Speeds

| | Top | 3rd. | 2nd. | 1st. | Rev. |
|---|---|---|---|---|---|
| Engine speed at 10 m.p.h. | 471 | 626 | 947 | 1479 | 1516 |
| Engine speed at 10 k.p.h. | 296 | 393 | 595 | 940 | 952 |

Road speed at 1000 r.p.m. in top gear - 21.21 m.p.h.
Road speed at 2500 ft/min. piston speed in top gear - 85 m.p.h.

## Maximum Recommended Speeds in Intermediate Gears

| Gear | M.P.H. | K.P.H. |
|---|---|---|
| 3rd | 88 | 142 |
| 2nd | 58 | 93 |
| 1st | 37 | 60 |

## Performance Data

150 b.h.p. @ 5,500 r.p.m.

1970 lb.ins. @ 3,500 r.p.m.

## Acceleration

| | Speed Range | Time (secs) |
|---|---|---|
| Top Gear | 30 - 50 m.p.h. | 7.0 |
| | 40 - 60 m.p.h. | 7.0 |
| | 50 - 70 m.p.h. | 7.5 |
| | 60 - 80 m.p.h. | 8.0 |
| Through Gears | 0 - 30 m.p.h. | 2.8 |
| | 0 - 50 m.p.h. | 6.5 |
| | 0 - 60 m.p.h. | 9.0 |
| Top Gear | 50 - 80 k.p.h. | 7.0 |
| | 70 - 100 k.p.h. | 7.0 |
| | 90 - 120 k.p.h. | 7.5 |
| | 110 - 140 k.p.h. | 8.2 |
| Through Gears | 0 - 40 k.p.h. | 2.2 |
| | 0 - 80 k.p.h. | 6.5 |
| | 0 - 100 k.p.h. | 9.3 |
| Standing $\frac{1}{4}$ mile | ... ... | $16\frac{1}{2}$ secs. |
| Top Speed | ... ... | 125 m.p.h. |

This figure may be lower in some export markets where local noise regulations dictate a drop in engine power.

## Engine

| | | | |
|---|---|---|---|
| Number of cylinders | ... | 6 | |
| Bore of cylinders | ... | 74.7 mm. | 2.94 ins. |
| Piston area | ... | 263 sq. cm. | 40.7 sq. ins. |
| Stroke of crank | ... | 95 mm. | 3.74 in. |
| Capacity | ... | 2498 cc. | 152 cu. ins. |
| Firing Order | ... | 1, 5, 3, 6, 2, 4. | |
| Compression Ratio | ... | 9.5 : 1 | |
| Cylinder block | ... | Chrome cast iron. | |
| Cylinder head | ... | Chrome cast iron. | |
| Pistons | ... | Aluminium alloy. | |
| Connecting rods | ... | 60 ton steel with floating gudgeon pins. | |
| Crankshaft | ... | Robust construction with integral balance weights. Four main bearings. | |
| Bearings | ... | Aluminium tin bearings. | |
| Valves | ... | Push rod operated overhead valves. Stellite faced exhaust valves. | |
| Camshaft | ... | Five bearings, hyposine cams, chain driven. | |
| Cooling System | ... | 'No loss' system. | |
| Circulation | ... | Pump driven by vee belt. Thermostatically controlled flow. | |
| Fan | ... | 8 blades, 12.5" dia. polypropylene. | |
| Fuel System | ... | Tank at rear. Electric lift pump. Lucas fuel injection. | |
| Manifolds | ... | Three twin inlet manifolds with six throttle valves. Twin outlet exhaust manifold. | |
| Air Cleaner | ... | Replaceable paper element. | |
| Lubrication: | | | |
| Oil Pump | ... | High capacity, submerged, eccentric lobe type. Feed to main bearings, big ends and all camshaft bearings under pressure. | |
| Oil Filter | ... | Full flow type with replaceable element. | |
| Ignition | ... | Coil, automatic centrifugal and vacuum advance. | |
| Generator | ... | Lucas type 15 A.C. alternator. Vee belt drive. | |

| | | |
|---|---|---|
| Engine Mounting | ... | Flexible rubber mountings for engine and gearbox unit. |
| Exhaust System | ... | Twin pipe system flexibly mounted and insulated against noise transmission to the body. |
| Crankcase | ... | Closed circuit breathing system through one way valve to inlet manifold. |
| Flywheel | ... | Cast iron with hardened steel starter gear ring. |

## Transmission

| | | |
|---|---|---|
| Clutch | ... | Diaphragm type $8\frac{1}{2}$" dia. Hydraulically operated. |
| Gearbox | ... | Four forward ratios and reverse. |
| Gears | ... | Synchromesh on all forward ratios. |

| | Top | 3rd. | 2nd. | 1st | Rev. |
|---|---|---|---|---|---|
| Ratios ... | 1.00 | 1.33 | 2.01 | 3.14 | 3.22 |
| Overall Ratios ... | 3.45 | 4.59 | 6.94 | 10.83 | 11.11 |

| | | |
|---|---|---|
| Propellor Shaft | ... | All metal shaft, needle roller bearings. Short length to avoid whip and simplify frame construction. |
| Rear Axle : | ... | Final drive unit rubber mounted. |
| Drive | ... | Hypoid bevel gears. Taper roller bearings. |
| Ratio | ... | 3.45 : 1 |

## Suspension

| | | |
|---|---|---|
| Front | ... | Low periodicity independent system. Patented bottom bush and top ball joint wheel swivels. Coil springs controlled by telescopic dampers. Taper roller hub bearings. |
| Rear | ... | Semi-trailing arm independent suspension with coil springs controlled by piston dampers. Mounted on frame through rubber bushed pivots and with rubber insulation of spring. |

| | | |
|---|---|---|
| Wheels | ... | Steel disc type with simulated magnesium trims - $4\frac{1}{2}$J rim. |
| Brakes | ... | Caliper disc brakes on front wheels; total swept area 233 sq.in. 10-7/8" dia.<br>Drum brakes, 9 x $1\frac{3}{4}$" of leading and trailing shoe type on rear wheels; total swept area 99 sq.in.<br>Pedal operates through direct acting servo and tandem master cylinder to front and rear brakes independently.<br>Pressure differential valve and warning light fitted to left hand drive models only. |
| Frame | ... | Rigid structure. Channel steel pressings from box section side members braced by a cruciform member. Complete frame rust proofed. |
| Steering | ... | Rack and pinion type unit. 15" diameter (381 mm) 3 spoke type steering wheel with leather covered rim, and spokes and boss padded. $3\frac{1}{4}$ turns lock to lock. Energy absorbing steering control system. |
| Battery | ... | 12 volt, 57 amp.hr. located under bonnet. |

## Body Specification

| | | |
|---|---|---|
| Type | ... | 2 seater convertible sports or 2 seater hard top with detachable roof panel. All weather equipment. Steel body. Detachable windscreen. Zone toughened safety glass. Safety styled window regulator handles and internal door release control handles. Doors hinged at front. Full anti-burst locks. Front and rear wings bolted on detachable type. |
| Upholstery | ... | P.V.C. leathercloth. 'Ambla' ventilated seat facings. |
| Seating | ... | Two bucket type seats with deep shaped squab. Adjustable fore and aft. Both seats pivot forward for access to rear, and are retained by self-locking quick release catches. |
| Instruments | ... | 5 in. tachometer with 5 in. speedometer with trip, positioned in front of driver. Separate instruments for ammeter, fuel, water temperature and oil pressure, Ignition and high beam warning lights. Direction indicator warning light. Oil pressure warning light. Brake failure warning light and hazard warning light on left hand models only. Recessed blue illuminated instruments with non-glare bezels. |
| Controls | ... | Combined ignition lock, starter control with third position for accessories. Knobs for choke, heater, fan and air distribution. Rocker switches for windscreen wipers, windscreen washers and hazard warning lights. Rheostat switch for variable intensity of instrument illumination. Three position lighting control lever incorporating daylight flasher on steering column for off, side and head lamps. Foot-operated dipswitch. Direction indicators operated by lever on steering column. |

Luggage Accommodation

Enclosed glove locker with lock, fitted in facia panel on passenger side. Luggage space behind seats and in boot. Spare wheel housed below boot floor.

Petrol Tank ... Mounted between rear wheel arches, with petrol filler cap centrally situated in deck panel.

Locks ... Full anti-burst locks. Both doors lock externally by ignition key. One piece bonnet arranged with pull type lock under left hand side of dash with an independent safety catch incorporated. Lockable handle for boot lid.

GENERAL EQUIPMENT

Interior ... Interior dipping mirror with breakaway support. Padded, swivelling sun visors with vanity mirror on passenger side. Dull wood finish facia with padded surround incorporating a shielded control panel for occupant safety.. Ashtray in top of facia. Door waist rails padded. Carpet with thick felt underlay. Safety belts.

Exterior ... Headlamps to suit market requirements. Front parking lights mounted outboard of headlamps. Front direction indicators mounted below headlamps. Direction indicator repeaters on wings. Side marker lamps on rear wings. Brake lights and reflectors mounted integrally with parking lamps and direction indicators at rear. Two reversing lamps. Number plate illumination lamps mounted on overriders. Windscreen washers. Exterior mirror mounted on driver's door, adjustable from driving seat. Twin windtone horns in concealed mounting.
The fabric top in P.V.C. leathercloth with black interior embodies a large backlight together with quarter lights and is fitted with safety styled

header catches. Bonnet is hinged at front and provided with prop.
One piece bumpers front and rear, with chromium plated overriders. Self parking twin two-speed electric screen wipers. Scuttle ventilator flap. Spare wheel and tyre. Wheelbrace, jack and tool roll.

Heating and Ventilation ... Heater with two speed blower, provides air of the required temperature to the interior of car. It incorporates windscreen demister and defroster. Face level ventilation provided through two directional fresh air vents in facia and foot level ventilation provided through two vents under facia.

## Interior Dimensions

| | | | Ins. | Mm. |
|---|---|---|---|---|
| Seat width (each) | | ... | 19 | 483 |
| Seating width (between doors) | | ... | 48½ | 1232 |
| Seat height (from floor) | | ... | 8¾ | 222 |
| Seat depth (fore and aft) | | ... | 18 | 457 |
| Head room (from seat cushion) | | ... | 34 | 864 |
| Steering wheel clearance from seat cushion | | ... | 5.5 | 140 |
| Steering wheel clearance from seat squab | Min. | ... | 15 | 381 |
| | Max. | ... | 19 | 483 |
| Squab to clutch pedal | Min. | ... | 36 | 914 |
| | Max. | ... | 40 | 1016 |
| Width of door opening at waist | | ... | 28 | 720 |
| Interior width (between sills) | | ... | 48¾ | 1230 |
| Maximum interior height | | ... | 40½ | 1030 |
| Luggage space (behind seats) | | ... | | |
| Length | Min. | ... | 15 | 380 |
| | Max. | ... | 19 | 483 |
| Width (between rear wheel arches) | | ... | 33-3/8 | 845 |
| Height - front (floor to top of front squabs) | | | 21 | 535 |

## Luggage boot

| | | | | |
|---|---|---|---|---|
| Height | Min. | ... | 7½ | 190 |
| | Max. | ... | 13½ | 340 |
| Depth (fore and aft) | Max. | ... | 20 | 510 |
| Width | Max. | ... | 46½ | 1180 |
| Boot opening width | Max. | ... | 40 | 1015 |
| | Min. | ... | 38½ | 980 |
| Capacity | 5.6 cu. ft. | | | .16 cu. m. |

## OPTIONAL EXTRAS

Laycock de Normanville overdrive on 2nd. 3rd. and top gears, electrically operated, ratio .82.
This gives overall ratios and engine speed as follows:

| | O/D Top | Top | O/D 3rd. | 3rd. | O/D 2nd. | 2nd. | 1st. |
|---|---|---|---|---|---|---|---|
| Overall Ratios | 2.83 | 3.45 | 3.76 | 4.59 | 5.69 | 6.94 | 10.83 |
| Engine speeds: | | | | | | | |
| 10 m.p.h. | 386 | 471 | 514 | 626 | 777 | 947 | 1479 |
| 10 k.p.h. | 240 | 296 | 319 | 393 | 482 | 595 | 940 |

Oil capacity of gearbox and overdrive unit from dry:

$3\frac{1}{2}$ IMP. pts. 2.0 litres. 4.2 U.S.pts.

Hood for use with roof panel removed (hard top only)

Tonneau cover (fabric)

Short front undershield

Wire wheels and hubs - centre locking nut type (with tubed tyres only)

Radio - Agent fitment

Michelin 165 SR-15 XAS tyres

Goodyear 185 HR-15 G800 red banded tyres

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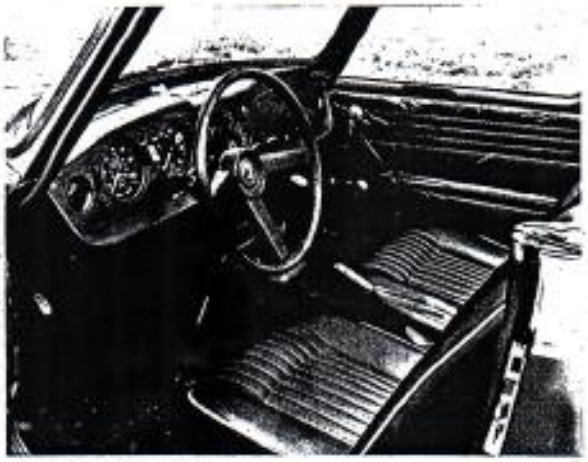
Negative No. 71876



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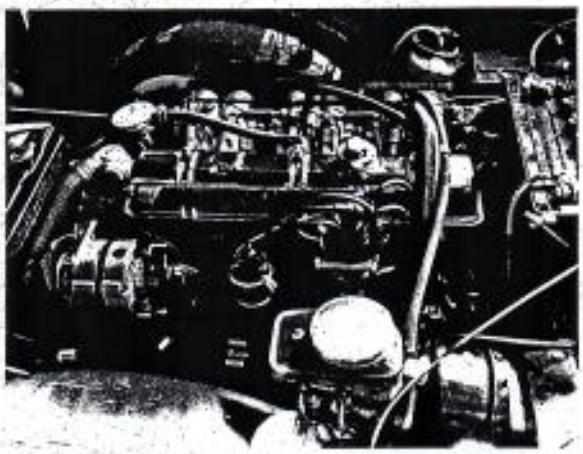

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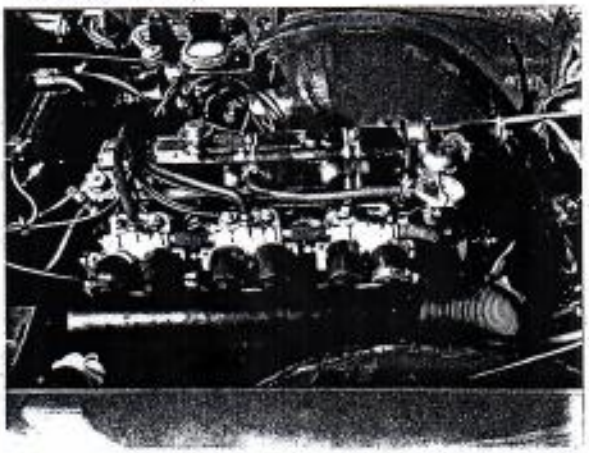

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## PHOTOGRAPH ORDER FORM

PLEASE SEND ME THE FOLLOWING 10" × 8" GLOSSY PRINTS OF THE TRIUMPH TR5 P.I.

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