

FOUR-IN-ONE

# AUTOCAR

LARGE 3 LITRE SALOONS

£1,500 - £3,000

## Road Test Comparisons

3

### BMW 2500

**AT A GLANCE:** New German six-cylinder. Outstanding performance and refinement; excellent finish and high standard of comfort. Superb engine and gearbox combination, smooth ride, very good handling and stability. An example in its class.



### CITROEN DS 21 PALLAS

**AT-A-GLANCE:** Latest big Citroen with the optional Bosch electronic fuel injection. Improved performance and flexibility but still rather noisy engine. Excellent road-holding, superlative ride and comfort. Expensive.



### TRIUMPH 2.5 PI Mk.2

**AT-A-GLANCE:** Bigger-engined, fuel-injected version of Triumph 2000 Mk.2, sharing all the recent improvements. Fast, well equipped and comfortable, with excellent control layout. Price now rather high but still very good value in its class.



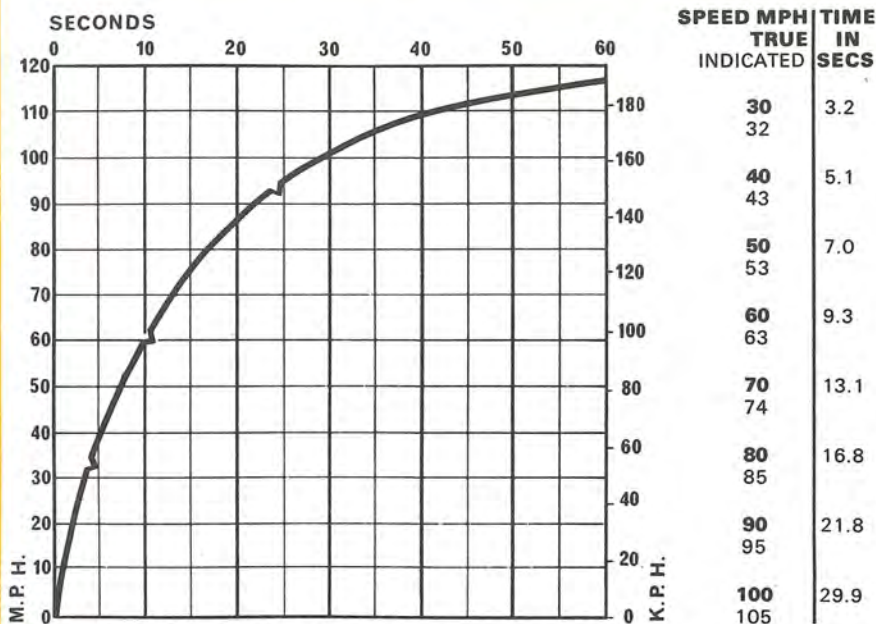
### VOLVO 164

**AT-A-GLANCE:** Spacious saloon, powered by exceptionally smooth six-cylinder engine. Good performance, with average economy. Ride could be better. "Slow" steering, but adequate handling. Lavishly equipped, soundly constructed and very well finished.





# BMW 2500 (2,494 c.c.)



| SPEED RANGE, GEAR RATIOS AND TIME IN SECONDS |               |               |               |                |
|----------------------------------------------|---------------|---------------|---------------|----------------|
| mph                                          | Top<br>(3.64) | 3rd<br>(5.01) | 2nd<br>(7.72) | 1st<br>(14.01) |
| 10-30                                        | 11.4          | 7.5           | 4.7           | 2.9            |
| 20-40                                        | 9.2           | 6.3           | 4.0           | —              |
| 30-50                                        | 9.3           | 6.1           | 4.1           | —              |
| 40-60                                        | 9.4           | 6.1           | 4.5           | —              |
| 50-70                                        | 10.3          | 6.7           | —             | —              |
| 60-80                                        | 11.0          | 7.7           | —             | —              |
| 70-90                                        | 11.6          | 9.4           | —             | —              |
| 80-100                                       | 14.8          | —             | —             | —              |

Standing  $\frac{1}{4}$ -mile  
17.2 sec 81 mph  
Standing kilometre  
31.6 sec 101 mph  
Test distance 977 miles  
Mileage recorder 10  
per cent over-reading

## MAXIMUM SPEEDS

| Gear       | mph | kph | rpm   |
|------------|-----|-----|-------|
| Top (mean) | 121 | 194 | 6,150 |
| (best)     | 121 | 194 | 6,150 |
| 3rd        | 93  | 150 | 6,500 |
| 2nd        | 62  | 100 | 6,500 |
| 1st        | 34  | 55  | 6,500 |

## BRAKES

(from 70 mph in neutral)

Pedal load for 0.5g stops in lb

|   |       |    |       |
|---|-------|----|-------|
| 1 | 28-20 | 6  | 23    |
| 2 | 25    | 7  | 23-26 |
| 3 | 28    | 8  | 25-28 |
| 4 | 25    | 9  | 25-30 |
| 5 | 25    | 10 | 25-32 |

RESPONSE (from 30 mph in Neutral)

| Load          | g      | Distance |
|---------------|--------|----------|
| 20lb          | 0.42   | 72ft     |
| 40lb          | 0.72   | 42ft     |
| 60lb          | 0.80   | 38ft     |
| 80lb          | 0.85   | 35.4ft   |
| Handbrake     | 0.27   | —        |
| Max. Gradient | 1 in 3 | —        |

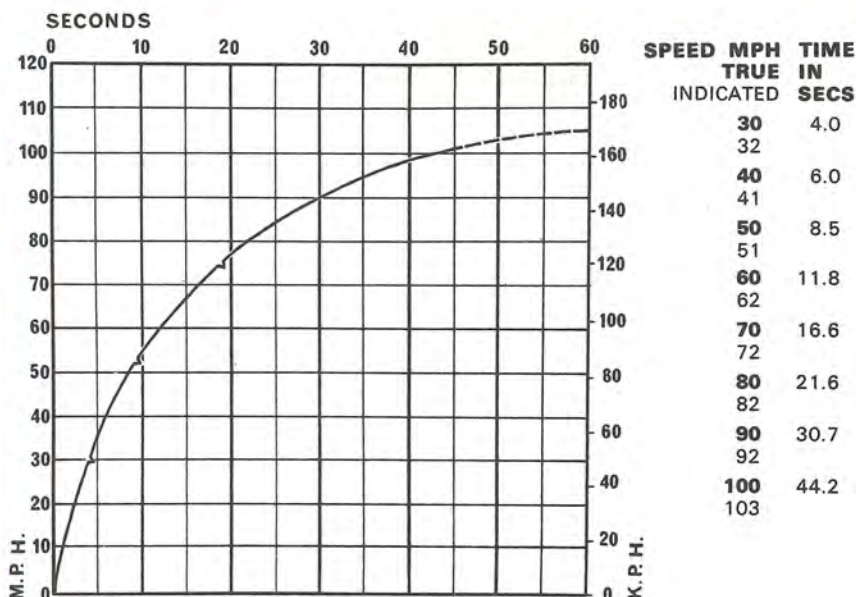
## CLUTCH

Pedal 35lb and 5.75in.

### MOTORWAY CRUISING

|                           |              |
|---------------------------|--------------|
| Indicated speed at 70 mph | 74 mph       |
| Engine (rpm at 70 mph)    | 3,550 rpm    |
| (mean piston speed)       | 1,980 ft/min |
| Fuel (mpg at 70 mph)      | 26.0 mpg     |
| Passing (50-70 mph)       | 6.1 sec      |

# Citroen DS 21 Pallas EFI (2,175 c.c.)



| SPEED RANGE, GEAR RATIOS AND TIME IN SECONDS |               |               |               |                |
|----------------------------------------------|---------------|---------------|---------------|----------------|
| mph                                          | Top<br>(3.73) | 3rd<br>(5.28) | 2nd<br>(8.02) | 1st<br>(14.21) |
| 10-30                                        | —             | 8.9           | 5.2           | 3.4            |
| 20-40                                        | 13.0          | 7.7           | 4.6           | —              |
| 30-50                                        | 12.5          | 7.5           | 4.9           | —              |
| 40-60                                        | 12.2          | 7.8           | 6.2           | —              |
| 50-70                                        | 13.9          | 8.5           | —             | —              |
| 60-80                                        | 16.2          | 10.0          | —             | —              |
| 70-90                                        | 18.1          | 15.8          | —             | —              |
| 80-100                                       | 23.1          | —             | —             | —              |

Standing  $\frac{1}{4}$ -mile  
18.5 sec 74 mph  
Standing kilometre  
34.3 sec 94 mph  
Test distance  
1,130 miles  
Mileage recorder  
2 per cent over-reading

## MAXIMUM SPEEDS

| Gear       | mph | kph | rpm   |
|------------|-----|-----|-------|
| Top (mean) | 112 | 180 | 5,460 |
| (best)     | 114 | 184 | 5,560 |
| 3rd        | 91  | 146 | 6,000 |
| 2nd        | 57  | 92  | 6,000 |
| 1st        | 32  | 51  | 6,000 |

## BRAKES

(from 70 mph in neutral)

Pedal load for 0.5g stops in lb

|   |       |    |       |
|---|-------|----|-------|
| 1 | 43    | 6  | 40-45 |
| 2 | 40    | 7  | 40-47 |
| 3 | 40-48 | 8  | 40-47 |
| 4 | 40-47 | 9  | 40-60 |
| 5 | 45-55 | 10 | 40-60 |

RESPONSE (from 30 mph in neutral)

| Load          | g      | Distance |
|---------------|--------|----------|
| 20lb          | 0.26   | 116ft    |
| 40lb          | 0.58   | 52ft     |
| 60lb          | 0.81   | 37.2ft   |
| Handbrake     | 0.36   | 84ft     |
| Max. Gradient | 1 in 4 | —        |

## CLUTCH

Pedal 38lb and 7.5in.

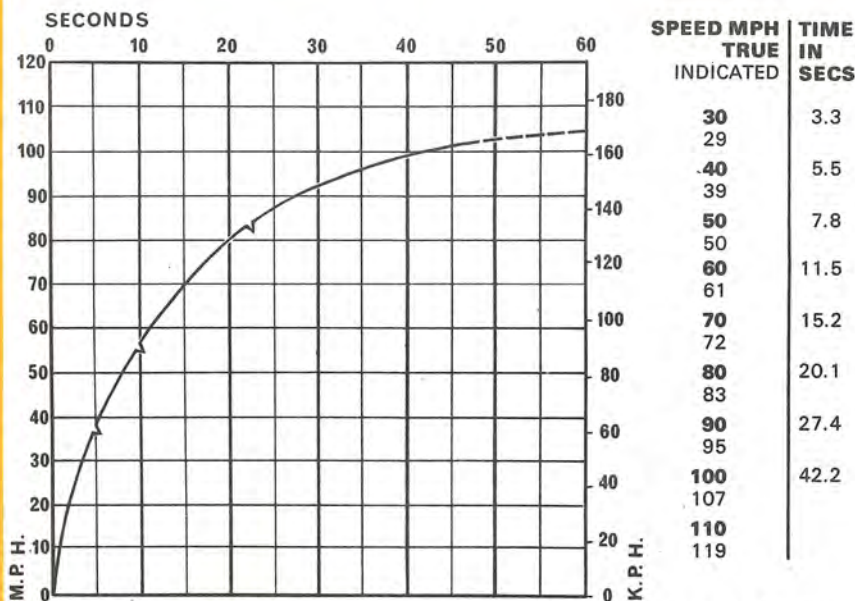
### MOTORWAY CRUISING

|                           |              |
|---------------------------|--------------|
| Indicated speed at 70 mph | 72mph        |
| Engine (rpm at 70 mph)    | 3,410 rpm    |
| (mean piston speed)       | 1,915ft/min. |
| Fuel (mpg at 70 mph)      | 29.7mpg*     |
| Passing (50-70 mph)       | 13.9 sec     |

\* Manufacturer's claimed figure



## Triumph 2.5 PI Mk 2 (2,498 c.c.)



### SPEED RANGE, GEAR RATIOS AND TIME IN SECONDS

| mph    | O.D. Top<br>(2.83) | Top<br>(3.45) | O.D. 3rd<br>(3.92) | 3rd<br>(4.78) | 2nd<br>(7.25) | 1st<br>(11.32) |
|--------|--------------------|---------------|--------------------|---------------|---------------|----------------|
| 10-30  | —                  | —             | 9.0                | 7.2           | 4.4           | 2.7            |
| 20-40  | 13.8               | 9.2           | 7.8                | 5.7           | 3.8           | —              |
| 30-50  | 12.2               | 9.3           | 8.2                | 6.1           | 4.0           | —              |
| 40-60  | 12.7               | 9.9           | 8.5                | 6.3           | —             | —              |
| 50-70  | 14.9               | 11.0          | 9.1                | 7.1           | —             | —              |
| 60-80  | 17.7               | 12.5          | 10.2               | —             | —             | —              |
| 70-90  | 23.2               | 14.5          | 13.2               | —             | —             | —              |
| 80-100 | 35.8               | 20.6          | 21.5               | —             | —             | —              |

### Standing 1/4-mile

18.1 sec 76 mph

### Standing kilometre

33.4 sec 95 mph

Test distance

1,056 miles

Mileage recorder

1.7 per cent

over-reading

## MAXIMUM SPEEDS

| Gear       | mph | kph | rpm   |
|------------|-----|-----|-------|
| Top (mean) | 106 | 171 | 5,250 |
| (best)     | 107 | 172 | 5,300 |
| O.D. Top   | 105 | 169 | 4,270 |
| O.D. 3rd   | 103 | 166 | 5,800 |
| 3rd        | 84  | 135 | 5,800 |
| 2nd        | 54  | 87  | 5,800 |
| 1st        | 35  | 56  | 5,800 |

## BRAKES

(from 70 mph in neutral)

Pedal load for 0.5g stops in lb

|   |       |    |       |
|---|-------|----|-------|
| 1 | 25    | 6  | 35    |
| 2 | 25    | 7  | 35    |
| 3 | 30    | 8  | 35    |
| 4 | 30-35 | 9  | 35-40 |
| 5 | 30-35 | 10 | 35-40 |

### RESPONSE (from 30 mph in neutral)

| Load      | g    | Distance |
|-----------|------|----------|
| 20lb      | 0.38 | 79ft     |
| 40lb      | 0.71 | 42ft     |
| 50lb      | 0.86 | 35ft     |
| 60lb      | 0.96 | 31ft     |
| 70lb      | 0.98 | 31ft     |
| 80lb      | 1.02 | 30ft     |
| Handbrake | 0.20 | 150ft    |

Max. Gradient 1 in 3

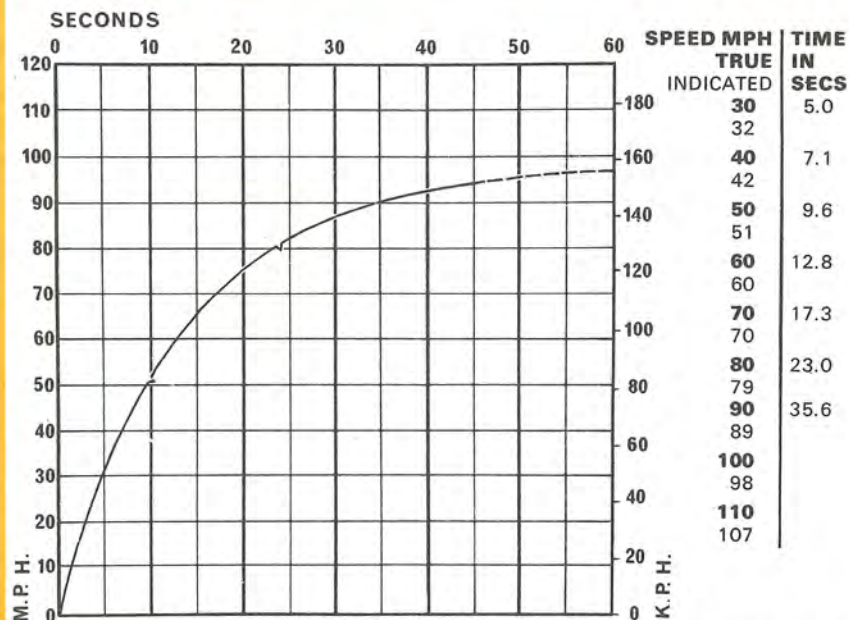
## CLUTCH

Pedal 30lb and 4.5in.

### MOTORWAY CRUISING

|                           |              |
|---------------------------|--------------|
| Indicated speed at 70 mph | 72 mph       |
| Engine (rpm at 70 mph)    | 2,840 rpm    |
| (mean piston speed)       | 1,723ft/min. |
| Fuel (mpg at 70 mph)      | 30.0 mpg     |
| Passing (50-70)           | 14.9 sec     |

## Volvo 164 Automatic (2,978 c.c.)



### SPEED RANGE, GEAR RATIOS AND TIME IN SECONDS

| mph   | Top<br>(3.31-6.62) | 2nd<br>(4.80-9.60) | 1st<br>(7.91-15.82) |
|-------|--------------------|--------------------|---------------------|
| 0-20  | —                  | —                  | 3.2                 |
| 10-30 | —                  | —                  | 3.8                 |
| 20-40 | —                  | —                  | 4.0                 |
| 30-50 | —                  | 6.9                | 4.4                 |
| 40-60 | —                  | 7.4                | —                   |
| 50-70 | —                  | 8.3                | —                   |
| 60-80 | —                  | 10.3               | —                   |
| 70-90 | 20.4               | 19.4               | —                   |

### Standing 1/4-mile

19.0 sec 73 mph

### Standing kilometre

34.7 sec 90 mph

Test distance

2,120 miles

Mileage recorder

1.8 per cent

under-reading

## MAXIMUM SPEEDS

| Gear       | mph | kph | rpm   |
|------------|-----|-----|-------|
| Top (mean) | 107 | 172 | 4,890 |
| (best)     | 113 | 182 | 5,160 |
| Inter      | 92  | 148 | 6,100 |
| Low        | 56  | 90  | 6,100 |

## BRAKES

(from 70 mph in neutral)

Pedal load for 0.5g stops in lb

|   |       |    |       |
|---|-------|----|-------|
| 1 | 30-20 | 6  | 30-50 |
| 2 | 30-20 | 7  | 30-60 |
| 3 | 30-20 | 8  | 30-70 |
| 4 | 30-40 | 9  | 20-50 |
| 5 | 30-40 | 10 | 25-55 |

### RESPONSE (from 30 mph in neutral)

| Load      | g    | Distance |
|-----------|------|----------|
| 20lb      | 0.33 | 91ft     |
| 40lb      | 0.58 | 52ft     |
| 60lb      | 0.86 | 35ft     |
| 80lb      | 1.02 | 29.5ft   |
| Handbrake | 0.27 | 111ft    |

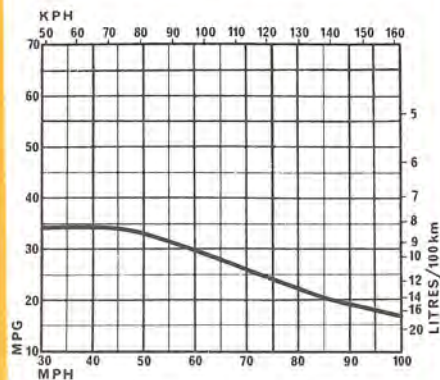
Max. Gradient 1 in 6

### MOTORWAY CRUISING

|                           |              |
|---------------------------|--------------|
| Indicated speed at 70 mph | 70mph        |
| Engine (rpm at 70 mph)    | 3,200 rpm    |
| (mean piston speed)       | 1,680ft/min. |
| Fuel (mpg at 70 mph)      | 20.5mpg      |
| Passing (50-70 mph)       | 7.7 sec      |



# BMW 2500 (2,494 c.c.)



## FUEL

(At constant speeds—mpg)

|         |      |
|---------|------|
| 30 mph  | 34.8 |
| 40 mph  | 34.8 |
| 50 mph  | 32.8 |
| 60 mph  | 29.4 |
| 70 mph  | 26.0 |
| 80 mph  | 22.5 |
| 90 mph  | 19.4 |
| 100 mph | 16.8 |

**Typical mpg** . . . . . 22 (12.8 litres/100km)  
**Calculated (DIN) mpg** 23.7 (11.9 litres/100km)  
**Overall mpg** . . . . . 21.8 (13.0 litres/100km)  
**Grade of fuel** Premium, 4-star (min. 97 RM)

## OIL

Miles per pint (SAE 20W/50) . . . negligible

## FRONT ENGINE, REAR WHEEL DRIVE

### ENGINE

Cylinders . . . . . 6, in line  
 Main bearings . . . 7  
 Cooling system . . . Water, pump, fan and thermostat  
 Bore . . . . . 86.0mm (3.39in.)  
 Stroke . . . . . 71.6mm (2.82in.)  
 Displacement . . . 2,494 c.c. (152.2 cu.in.)  
 Valve gear . . . . . Single overhead camshaft  
 Compression ratio . 9.0-to-1 Min. octane rating: 97RM  
 Carburettors . . . . Two Solex 35/40 INAT  
 Fuel pump . . . . . Pierburg mechanical  
 Oil filter . . . . . Full flow, replaceable element  
 Max. power . . . . . 150 bhp (DIN) at 6,000 rpm  
 Max. torque . . . . . 155.4 lb.ft. (DIN) at 3,700 rpm

### TRANSMISSION

Clutch . . . . . Fichtel and Sachs diaphragm spring  
 Gearbox . . . . . Four-speed all-synchromesh  
 Gear ratios . . . . . Top 1.0  
 . . . . . Third 1.375  
 . . . . . Second 2.12  
 . . . . . First 3.85  
 . . . . . Reverse 4.13  
 Final drive . . . . . Hypoid bevel, 3.64-to-1

### CHASSIS and BODY

Construction . . . . Integral, with steel body

### SUSPENSION

Front . . . . . Independent, MacPherson struts, lower links, coil springs, telescopic dampers  
 Rear . . . . . Independent, semi-trailing arms, coil springs, telescopic dampers

### STEERING

Type . . . . . Worm and roller, power-assisted on test car  
 Wheel dia. . . . . 16.5 in.

### BRAKES

Make and type . . . ATE, discs front and rear  
 Servo . . . . . ATE vacuum  
 Dimensions . . . . F. 10.7in. dia.; R. 10.7in. dia.  
 Swept area . . . . F. 213 sq.in.; R. 213 sq.in. Total 426 sq.in. (292 sq.in./ton laden)

### WHEELS

Type . . . . . Pressed steel disc, fire stud fixing. 6.0in. wide rim  
 Tyres—make . . . . Various, Dunlop on test car  
 —type . . . . . SP Sport radial ply tubed  
 —size . . . . . 175-14in.

### EQUIPMENT

Battery . . . . . 12 Volt 55 Ah  
 Alternator . . . . . Bosch 44 amp a.c.  
 Headlamps . . . . . Hella tungsten-halogen 220/110 watt (total)  
 Reversing lamp . . Standard  
 Electric fuses . . . 10  
 Screen wipers . . . 2-speed, self-parking  
 Screen washer . . . Standard, electric  
 Interior heater . . . Standard, air-mixing type  
 Heated backlight . . Extra  
 Safety belts . . . . Standard in front, anchorages built in at rear  
 Interior trim . . . . Cloth seats pvc headlining  
 Floor covering . . . Carpet  
 Jack . . . . . Pillar type  
 Jacking points . . . 2 each side  
 Windscreen . . . . Toughened  
 Underbody protection . . Rubber underseal at wheel arches; wax compound elsewhere

### MAINTENANCE

Fuel tank . . . . . 16.5 Imp. gallons (low level warning lamp) (75 litres)  
 Cooling system . . 21.1 pints (including heater)  
 Engine sump . . . . 8.8 pints (5 litres) SAE 20W/50. Change oil ever 4,000 miles. Change filter element every 4,000 miles.  
 Gearbox . . . . . 2.1 pints SAE 80. Change oil every 16,000 miles  
 Final drive . . . . 3.2 pints SAE 90. No change needed  
 Grease . . . . . No points  
 Tyre pressures . . . F. 27; R. 26 psi (normal driving)  
 . . . . . F. 30; R. 31 psi (full load)  
 Max. payload . . . . 1,035lb (470kg)

### PERFORMANCE DATA

Top gear mph per 1,000 rpm . . . . . 19.7  
 Mean piston speed at max. power . . . 3,340 ft./min  
 Bhp per ton laden . . . . . 101

# Citroen DS 21 Pallas EFI (2,175 c.c.)

## FUEL

We are unable to quote our usual steady-speed fuel consumption figures because our flowmeter equipment is incompatible with fuel injection systems. The manufacturers were unable to furnish their own.

**Typical mpg** . . . . . 23 (12.3 litres/100km)  
**Calculated (DIN) mpg** 17.0\* (10.5 litres/100km)  
**Overall mpg** . . . . . 20.9 (13.5 litres/100km)  
**Grade of fuel** Premium, 4-star (min. 98 RM)  
 \*Maker's claimed figure

## OIL

Miles per pint (SAE 20W/40) . . . . . 1,100

## FRONT ENGINE, FRONT-WHEEL DRIVE

### ENGINE

Cylinders . . . . . 4, in line  
 Main bearings . . . 5  
 Cooling system . . . Water, pump, fan and thermostat  
 Bore . . . . . 90.0mm (3.54 in.)  
 Stroke . . . . . 85.5mm (3.36 in.)  
 Displacement . . . 2,175 c.c. (132.7 cu.in.)  
 Valve gear . . . . . Overhead, pushrods and rockers  
 Compression ratio . 8.5-to-1 Min. octane rating: 98 RM  
 Induction . . . . . Bosch indirect fuel injection  
 Fuel pump . . . . . Bosch high-pressure  
 Oil filter . . . . . Full flow, replaceable  
 Max. power . . . . . 125 bhp (net) at 5,250 rpm  
 Max. torque . . . . 135 lb.ft. (net) at 3,500 rpm

### TRANSMISSION

Clutch . . . . . Single dry plate  
 Gearbox . . . . . 4-speed, all-synchromesh  
 Gear ratios . . . . . Top 0.85  
 . . . . . Third 1.28  
 . . . . . Second 1.94  
 . . . . . First 3.25  
 . . . . . Reverse 3.15  
 Final drive . . . . . Spiral bevel, 4.37-to-1

### CHASSIS and BODY

Construction . . . . Integral steel chassis and body frame, detachable panels.

### SUSPENSION

Front . . . . . Independent; parallel semi-leading arms, hydropneumatic struts with height control, anti-roll bar  
 Rear . . . . . Independent; single trailing arms, hydropneumatic struts with height control, anti-roll bar

### STEERING

Type . . . . . Power-assisted rack and pinion  
 Wheel dia. . . . . 15½ in.

### BRAKES

Make and type . . . Citroën dual-circuit, disc front, drums rear  
 Servo . . . . . Citroën, high pressure  
 Dimensions . . . . F 11.6 in. dia. R 10.0 in. dia. 1.37 in. wide shoes.  
 Swept area . . . . F 260 sq.in., R 86 sq.in. Total 346 sq.in. (262 sq.in./ton laden)

### WHEELS

Type . . . . . Pressed steel discs, 5-stud fixing, 5.0 in. wide rim.  
 Tyres—make . . . . Michelin  
 —type . . . . . XAS radial ply tubed  
 —size . . . . . 185-15 in.

### EQUIPMENT

Battery . . . . . 12 Volt 55 Ah  
 Alternator . . . . . Ducellier 44 amp a.c.  
 Headlamps . . . . . Cibie tungsten-halogen 110/220 watt (total)  
 Reversing lamp . . Standard  
 Electric fuses . . . 8  
 Screen wipers . . . Two-speed  
 Screen Washers . . Standard electric  
 Interior heater . . . Standard, water-valve type  
 Heated backlight . . Standard  
 Safety belts . . . . Extra  
 Interior trim . . . . Nylon jersey seats and headlining  
 Floor covering . . . Carpet  
 Jack . . . . . Side pillar, hydraulic lifting on suspension  
 Jacking points . . . One each side under sills  
 Windscreen . . . . Toughened  
 Underbody protection . . Phosphor treatment under paint

### MAINTENANCE

Fuel tank . . . . . 14.3 Imp.gallons (65 litres)  
 Cooling system . . 20 pints (including heater)  
 Engine sump . . . . 7 pints (4 litres) SAE 20W/40. Change oil every 3,000 miles. Change filter element every 6,000 miles.  
 Gearbox and final drive . . 3.5 pints SAE 80 EP change oil every 12,000 miles.  
 Grease . . . . . 8 points every 3,000 miles  
 Tyre pressures . . . F 24; R 20 psi (all conditions)  
 Max. payload . . . . 1,014 lb. (460 kg)

### PERFORMANCE DATA

Top gear mph per 1,000 rpm . . . . . 20.5  
 Mean piston speed at max. power . . . 2,970 ft./min.  
 Bhp per ton laden . . . . . 105.5



# Triumph 2.5 PI Mk 2 (2,498 c.c.)

## FRONT ENGINE, REAR-WHEEL DRIVE

### ENGINE

|                   |                                     |
|-------------------|-------------------------------------|
| Cylinders         | 6, in line                          |
| Main bearings     | 4                                   |
| Cooling system    | Water; pump, fan and thermostat     |
| Bore              | 74.7mm (2.94in.)                    |
| Stroke            | 95.0mm (3.74in.)                    |
| Displacement      | 2,498 c.c. (152 cu. in.)            |
| Valve gear        | overhead, pushrods and rockers      |
| Compression ratio | 9.5-to-1, Min. octane rating: 100RM |
| Induction         | Lucas Mk1 fuel injection            |
| Fuel pump         | Lucas electric                      |
| Oil filter        | Full flow, renewable element        |
| Max. power        | 132 bhp (net) at 5,450 rpm          |
| Max. torque       | 153 lb. ft. (net.) at 2,000 rpm     |

### TRANSMISSION

|             |                                                                                                |
|-------------|------------------------------------------------------------------------------------------------|
| Clutch      | Laycock diaphragm spring, 8.5in. dia.                                                          |
| Gearbox     | Four-speed, all-synchromesh                                                                    |
| Gear ratios | Top 1.0 O/D top 0.82<br>Third 1.39 O/D third 1.14<br>Second 2.10<br>First 3.30<br>Reverse 3.37 |
| Final drive | Hypoid bevel, ratio 3.45-to-1.                                                                 |

### CHASSIS and BODY

|              |                           |
|--------------|---------------------------|
| Construction | Integral, with steel body |
|--------------|---------------------------|

### SUSPENSION

|       |                                                                                   |
|-------|-----------------------------------------------------------------------------------|
| Front | Independent, MacPherson struts, lower wishbones, coil springs, telescopic dampers |
| Rear  | Independent, semi-trailing arms, coil springs, telescopic dampers                 |

### STEERING

|            |                                 |
|------------|---------------------------------|
| Type       | Rack and pinion, power-assisted |
| Wheel dia. | 16.0 in.                        |

### BRAKES

|               |                                                                          |
|---------------|--------------------------------------------------------------------------|
| Make and type | Lockheed discs front, drums rear                                         |
| Servo         | Lockheed vacuum                                                          |
| Dimensions    | F 9.75 in. dia. R 9.0 in. dia. 1.75 in. wide shoes.                      |
| Swept area    | F 200 sq. in., R 99 sq. in.<br>Total 299 sq. in. (211 sq. in./ton laden) |

### WHEELS

|            |                                                      |
|------------|------------------------------------------------------|
| Type       | Pressed steel disc, 4-stud fixing, 5.0 in. wide rim. |
| Tyres—make | Goodyear                                             |
| —type      | G800 radial ply tubeless                             |
| —size      | 185 13in.                                            |

### EQUIPMENT

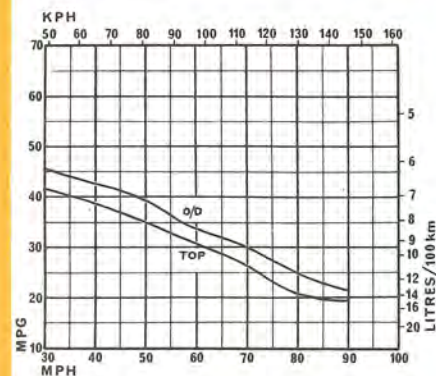
|                      |                                             |
|----------------------|---------------------------------------------|
| Battery              | 12 volt 56 Ah                               |
| Alternator           | Lucas 17ACR 34 amp a.c.                     |
| Headlamps            | Lucas four-lamp system, 150/75 watt (total) |
| Reversing lamp       | 2, standard                                 |
| Electric fuses       | 4                                           |
| Screen wipers        | Two-speed, self-parking                     |
| Screen washer        | Standard, electric                          |
| Interior heater      | Standard, air-blending type                 |
| Heated backlight     | Extra                                       |
| Safety belts         | Extra, mounting points front and rear       |
| Interior trim        | Pvc seats: Vynide headlining                |
| Floor covering       | Carpet                                      |
| Jack                 | Screw scissor                               |
| Jacking points       | 2 each side                                 |
| Windscreen           | Zone-toughened                              |
| Underbody protection | Wax coating                                 |

### MAINTENANCE

|                       |                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------|
| Fuel tank             | 14.0 Imp. gallons (63.6 litres)                                                                              |
| Cooling system        | 13.5 pints (including heater)                                                                                |
| Engine sump           | 8 pints (4.55 litres) SAE 20W/50.<br>Change oil every 6,000 miles. Change filter element every 12,000 miles. |
| Gearbox and overdrive | 4.3 pints SAE 90EP. Check level every 6,000 miles                                                            |
| Final drive           | 2 pints SAE 90EP. Check level every 6,000 miles                                                              |
| Grease                | 2 points every 24,000 miles                                                                                  |
| Tyre pressures        | F 26; R 30 psi (all conditions)                                                                              |
| Max. payload          | 1,012 lb (460 kg)                                                                                            |

### PERFORMANCE DATA

|                                 |              |
|---------------------------------|--------------|
| Top gear mph per 1,000 rpm      | 20.2         |
| Overdrive top mph per 1,000 rpm | 24.6         |
| Mean piston speed at max. power | 3,380 ft/min |
| Bhp per ton laden               | 93.0         |



### FUEL

(At constant speeds—mpg)

|        | TOP  | O/D TOP |
|--------|------|---------|
| 30 mph | 41.6 | 45.4    |
| 40 mph | 38.4 | 42.4    |
| 50 mph | 35.0 | 39.2    |
| 60 mph | 30.4 | 33.7    |
| 70 mph | 26.3 | 30.0    |
| 80 mph | 20.8 | 25.0    |
| 90 mph | 19.8 | 21.3    |

Typical mpg . . . . . 23 (12.3 litres/100km)  
Calculated (DIN) mpg (direct) 23.9 (11.8 litres/100km)  
(overdrive) 27.3 (10.4 litres/100km)  
Overall mpg . . . . . 21.8 (13.0 litres/100km)  
Grade of fuel: Super Premium, 5-star (min. 100RM)

### OIL

Consumption (SAE 20W/50) . . . . . Negligible

# Volvo 164 Automatic (2,978 c.c.)

## FRONT ENGINE, REAR-WHEEL DRIVE

### ENGINE

|                   |                                   |
|-------------------|-----------------------------------|
| Cylinders         | 6, in line                        |
| Main bearings     | 7                                 |
| Cooling system    | Water; pump, fan and thermostat   |
| Bore              | 88.9mm (3.50 in.)                 |
| Stroke            | 80.0mm (3.15 in.)                 |
| Displacement      | 2,978cc (182 cu. in.)             |
| Valve gear        | Overhead; pushrods and rockers    |
| Compression ratio | 9.2 to 1, Min. octane rating 97RM |
| Carburettor       | Zenith-Stromberg 175 CD 2SE       |
| Fuel pump         | Mechanical                        |
| Oil filter        | Full flow                         |
| Max. power        | 130 bhp (net) at 5,000 rpm        |
| Max. torque       | 152 lb. ft. (net) at 2,500 rpm    |

### TRANSMISSION

|             |                                                                      |
|-------------|----------------------------------------------------------------------|
| Gearbox     | Borg-Warner Type 35 3-speed automatic with torque converter          |
| Gear ratios | Top 1.0—2.0<br>Inter 1.45—2.90<br>Low 2.39—4.78<br>Reverse 2.09—4.18 |
| Final drive | Hypoid bevel, ratio 3.31 to 1                                        |

### CHASSIS and BODY

|              |                           |
|--------------|---------------------------|
| Construction | Integral, with steel body |
|--------------|---------------------------|

### SUSPENSION

|       |                                                                                |
|-------|--------------------------------------------------------------------------------|
| Front | Independent, double wishbones, coil springs, telescopic dampers, anti-roll bar |
| Rear  | Live axle, trailing links, radius rods, coil springs, telescopic dampers       |

### STEERING

|            |                                   |
|------------|-----------------------------------|
| Type       | Power-assisted recirculating ball |
| Wheel dia. | 16.5 in.                          |

### BRAKES

|               |                                                                        |
|---------------|------------------------------------------------------------------------|
| Make and type | Girling, discs front and rear                                          |
| Servo         | Girling vacuum servo                                                   |
| Dimensions    | F 10.7 in. dia., R 11.6 in. dia.                                       |
| Swept area    | F 212 sq. in., R 198 sq. in. Total 410 sq. in. (267 sq. in./ton laden) |

### WHEELS

|            |                                                     |
|------------|-----------------------------------------------------|
| Type       | Pressed steel disc, 5-stud fixing, 4.5 in. wide rim |
| Tyres—make | Pirelli                                             |
| —type      | Cinturato radial ply tubeless                       |
| —size      | 165-15 in.                                          |

### EQUIPMENT

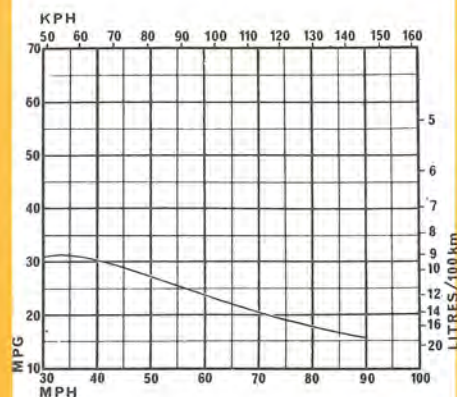
|                      |                                                              |
|----------------------|--------------------------------------------------------------|
| Battery              | 12 volt 60 Ah                                                |
| Alternator           | Bosch 55 amp a.c.                                            |
| Headlamps            | Bosch 90/80 watt (total)                                     |
| Reversing lamp       | Standard                                                     |
| Electric fuses       | 9                                                            |
| Screen wipers        | Two-speed                                                    |
| Screen washer        | Standard, electric                                           |
| Interior heater      | Standard, water-valve type                                   |
| Heated backlight     | Standard                                                     |
| Safety belts         | Standard, inertia-reel                                       |
| Interior trim        | Leather seats, PVC headlining                                |
| Floor covering       | Carpet                                                       |
| Jack                 | Screw pillar type                                            |
| Jacking points       | 2 each side under sills                                      |
| Windscreen           | Laminated                                                    |
| Underbody protection | Galvanized bottom rails before painting; underseal elsewhere |

### MAINTENANCE

|                |                                                                                                           |
|----------------|-----------------------------------------------------------------------------------------------------------|
| Fuel tank      | 12.7 Imp. gallons (58 litres)                                                                             |
| Cooling system | 23 pints (including heater)                                                                               |
| Engine sump    | 10.6 pints (6.0 litres) SAE 10W/30. Change oil every 6,000 miles. Change filter element every 6,000 miles |
| Gearbox        | 14.4 pints ATF. Check every 6,000 miles                                                                   |
| Final drive    | 2.8 pints SAE 90EP. Check every 6,000 miles                                                               |
| Grease         | No points                                                                                                 |
| Tyre pressures | F 21; R 26 psi (normal driving)<br>F 26; R 30 psi (fast driving)<br>F 26; R 30 psi (full load)            |
| Max. payload   | 1,056lb (478kg)                                                                                           |

### PERFORMANCE DATA

|                                 |              |
|---------------------------------|--------------|
| Top gear mph per 1,000 rpm      | 21.9         |
| Mean piston speed at max. power | 2,330 ft/min |
| Bhp per ton                     | 84.5 net     |



### FUEL

(At constant speeds—mpg)

|        |      |
|--------|------|
| 30 mph | 30.8 |
| 40 mph | 30.1 |
| 50 mph | 27.2 |
| 60 mph | 23.7 |
| 70 mph | 20.5 |
| 80 mph | 17.7 |
| 90 mph | 15.6 |

Typical mpg . . . . . 19 (14.9 litres/100km)  
Calculated (DIN) mpg 18.7 (15.1 litres/100km)  
Overall mpg . . . . . 17.9 (15.8 litres/100km)  
Grade of fuel . . . . . Premium, 4-star (min. 97 RM)

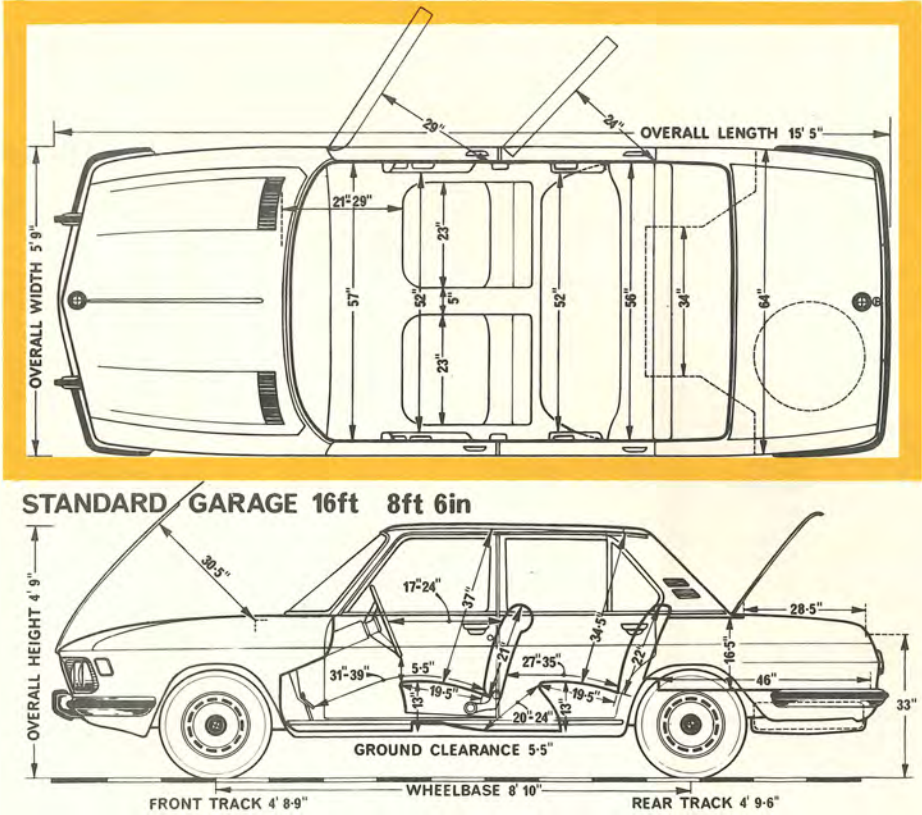
### OIL

Miles per pint (SAE 10W/30) . . . . . 220\*

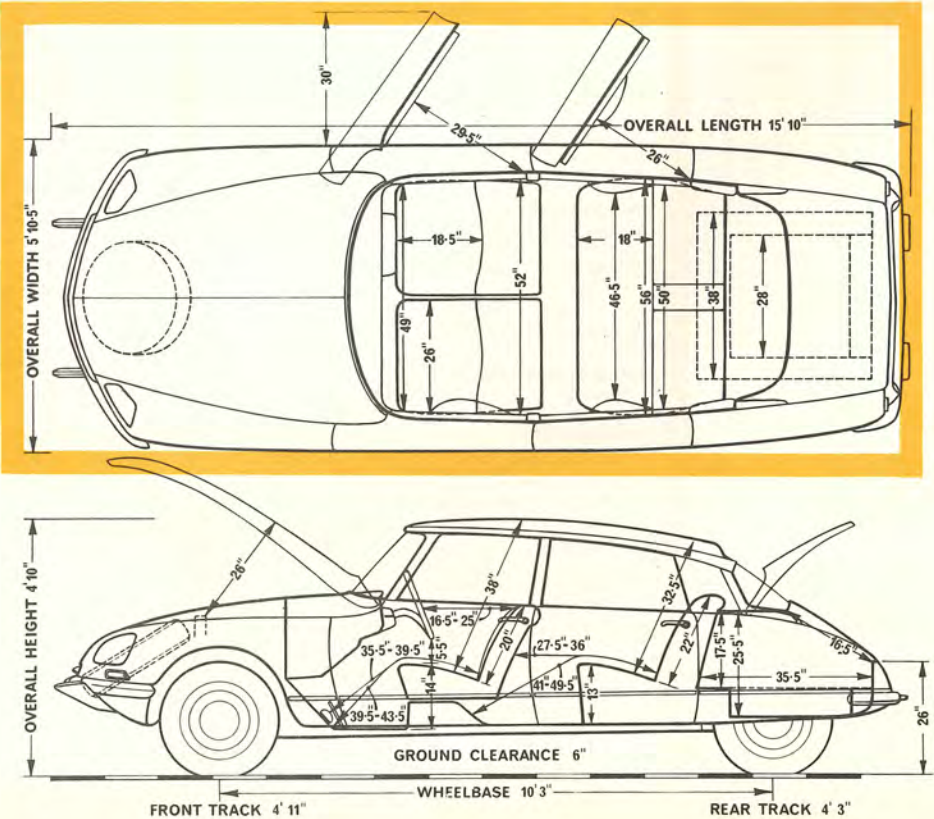
\*Adversely affected by leaking timing cover gasket



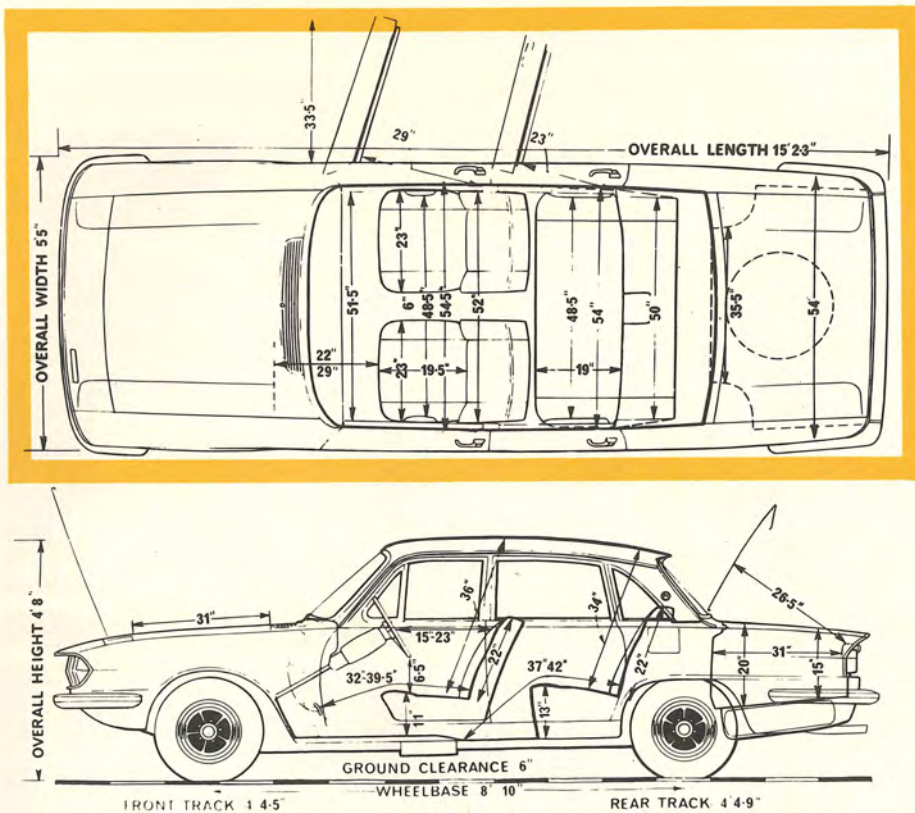
# BMW 2500 (2,494 c.c.)



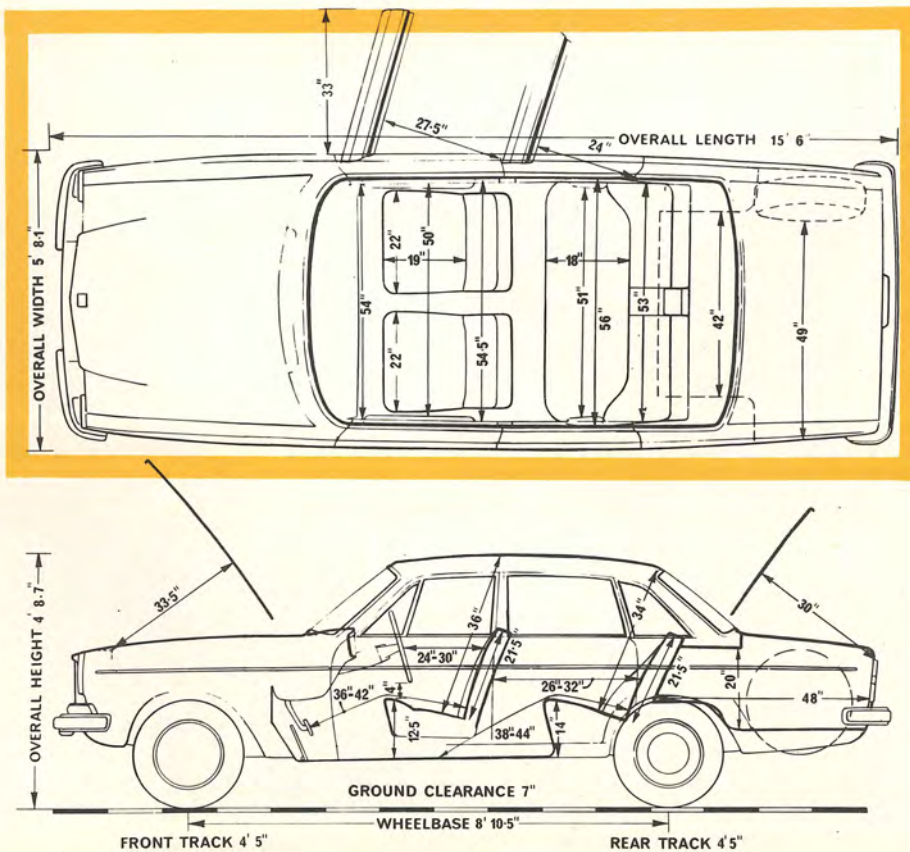
# Citroen DS 21 Pallas EFI(2,175 c.c.)



## Triumph 2.5 PI Mk 2 (2,498 c.c.)



## Volvo 164 Automatic (2,978 c.c.)





## BMW 2500

### PERFORMANCE SUMMARY

|                                   |          |
|-----------------------------------|----------|
| Mean maximum speed                | 121 mph  |
| Standing start $\frac{1}{4}$ mile | 17.2 sec |
| 0-60 mph                          | 9.3 sec  |
| 30-70 mph through gears           | 9.9 sec  |
| Typical fuel consumption          | 22 mpg   |
| Miles per tankful                 | 365      |

### PRICES

|                 |        |     |    |
|-----------------|--------|-----|----|
| Basic           | £2,294 | 0s  | 0d |
| Purchase Tax    | £702   | 15s | 4d |
| Total (in G.B.) | £2,996 | 15s | 4d |



## CITROEN DS21 PALLAS

### PERFORMANCE SUMMARY

|                                   |          |
|-----------------------------------|----------|
| Mean maximum speed                | 112 mph  |
| Standing start $\frac{1}{4}$ mile | 18.5 sec |
| 0-60 mph                          | 11.8 sec |
| 30-70 mph through gears           | 12.6 sec |
| Typical fuel consumption          | 23 mpg   |
| Miles per tankful                 | 320      |

### PRICES

|                      |        |     |     |
|----------------------|--------|-----|-----|
| Basic                | £1,721 | 13s | 1d  |
| Purchase Tax         | £528   | 6s  | 11d |
| Seat belts (approx.) | £10    | 0s  | 0d  |
| Total (in G.B.)      | £2,260 | 0s  | 0d  |



## TRIUMPH 2.5 PI Mk.2

### PERFORMANCE SUMMARY

|                                   |          |
|-----------------------------------|----------|
| Mean maximum speed                | 106 mph  |
| Standing start $\frac{1}{4}$ mile | 18.1 sec |
| 0-60 mph                          | 11.5 sec |
| 30-70 mph through gears           | 11.8 sec |
| Typical fuel consumption          | 23 mpg   |
| Miles per tankful                 | 320      |

### PRICES

|                      |        |    |    |
|----------------------|--------|----|----|
| Basic                | £1,220 | 0s | 0d |
| Purchase Tax         | £375   | 1s | 4d |
| Seat belts (approx.) | £14    | 0s | 0d |
| Total (in G.B.)      | 609    | 1s | 4d |



## VOLVO 164

### PERFORMANCE SUMMARY

|                                   |          |
|-----------------------------------|----------|
| Mean maximum speed                | 107 mph  |
| Standing start $\frac{1}{4}$ mile | 19.0 sec |
| 0-60 mph                          | 12.8 sec |
| 30-70 mph through gears           | 12.3 sec |
| Typical fuel consumption          | 19 mpg   |
| Miles per tankfull                | 240      |

### PRICES

|                 |                    |    |     |
|-----------------|--------------------|----|-----|
| Basic           | £1,692             | 0s | 0d  |
| Purchase Tax    | £519               | 5s | 10d |
| Seat belts      | Fitted as standard |    |     |
| Total (in G.B.) | £2,211             | 5s | 10d |

