

Gunson's

Dwell Angle Information

The following data gives Dwell Angle information for over 2000 vehicle models from 1965 onwards (although much of the information is valid for earlier Models). Specific dates are only given in the YEAR column where it is of some guidance.

This information is a guide but the most reliable source of Dwell Angle information is the manufacturer of the vehicle. If in doubt, please check with them.

To use this data, first ascertain the make of Distributor on your vehicle and then consult the relevant section.

(It is not uncommon for two makes of distributor to be fitted to the same model).

Always check the Exception Sub-Section in case your vehicle is included.

When manufacturers give two tolerances we have shown the closest.

| Distributor/Car Make/Model | | Dwell Angle Degrees | |
|--|-------------------------------|--|-------------------------------------|
| LUCAS | | | |
| Aston Martin | Distributor Code | | |
| Austin | | | |
| BMC Austin-Healey | | 4 cylinder engines | 57-63 |
| Bond | | (60-66 Revised spec for CS1 points) | |
| Daimler | | 6 cylinder engines | 33-37 |
| Ford (GB) to 1968 only except RS & TC | | (38-44 Revised spec for CS1 points) | |
| Hillman | | 8 cylinder engines | 26-28 |
| Humber | | | |
| Jaguar | | | |
| Jenson-Healey | | | |
| Land Rover | | | |
| Lotus | | | |
| M.G. | | | |
| Mini | | | |
| Morgan | | | |
| Morris | 43D onwards (Later models) | 4 cylinder engines | 48-54 |
| Rover Range Rover | | (51-57 Revised spec for CS8 & CS19 points) (sliding contacts 54-60) | |
| Reliant | 45D | 6 cylinder engines | 30-36 |
| Sunbeam | 48D | (34-40 Revised spec for CS8 & CS19 points) | |
| Triumph | 54D | | |
| Vanden Plas | etc. | | |
| Wolseley | | | |
| EXCEPTIONS | | Year | |
| Aston Martin 6 1973 | 22D | 1973 | 34-38 |
| Triumph 2000 TR6 2.5PI | 22D | 1973 | 36-38 |
| Triumph Stag (Double C/B Points) | 35D | 1974 onwards | 29 ₁ 2-31 ₁ 2 |
| Daimler 8 cyl. | 20D8 | Up to 1969 | 31-37 |
| Reliant 3 Litre | 31D6 | 1967 | 32-35 |

FORD

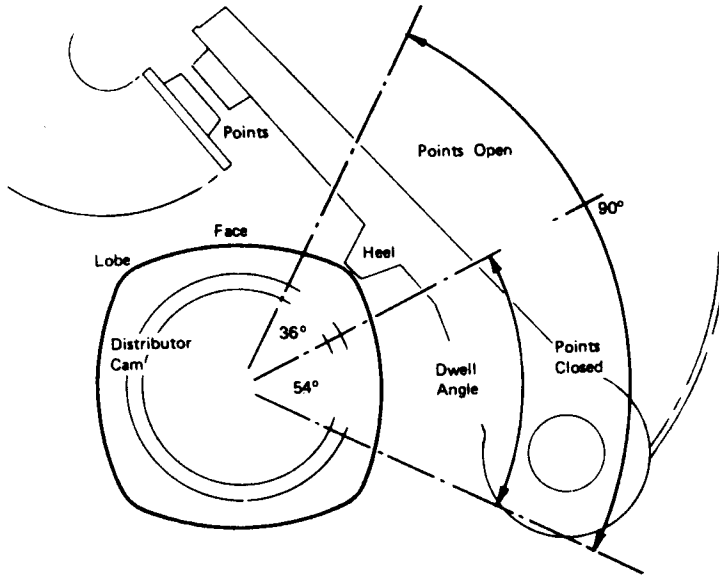
| | | |
|----------------|--|--------------------|
| Ford G.B. | | 4-cylinder engines |
| Morgan | Up to 1967 | 38-40 |
| Sunbeam V8 260 | | 6-cylinder engines |
| | | 35-38 |
| | After 1967 Refer to Autolite/Motorcraft Distributors (on next page). | 8-cylinder engines |
| | | 26-28 |

EXCEPTIONS

| | |
|----------------------|-------|
| Sunbeam V8 Tiger 289 | 26-31 |
|----------------------|-------|

METHODS OF EXPRESSING DWELL

Dwell can be expressed as an angle ($^{\circ}$) or a percentage (%). Both methods are correct and the way they relate is shown in the following example:-



A four lobe cam has four periods of 90 degrees (total 360 degrees). The points will be open and closed for a proportion of each period. The closed period is the Dwell Angle- here 54° Dwell.

In percentage terms this equals

$$\frac{54}{90} \times 100 = 60\%$$

To convert back to degrees

$$\frac{60\%}{100} \times 90 = 54^{\circ}$$

A three lobe cam has 3 periods of 120° .

A two lobe cam has 2 periods of 180° .

A six lobe cam has 6 periods of 60° . Etc.

For example a cam with one lobe has a dwell setting (according to the manufacturer) of 50%.

This cam has a period of 360°

$$\frac{50\%}{100} \times 360 = 180^{\circ}$$

The Dwell angle is 180° on a 360° (1 cylinder) meter scale and will read as 45° on a 90° (4 cylinder) meter scale, or 30° on a 60° (6 cylinder) meter scale.

| Distributor/Car Make/Model | Year | Dwell Angle Degrees |
|----------------------------|------|---------------------|
|----------------------------|------|---------------------|

AUTOLITE/MOTORCRAFT

| | | |
|---|---|------------------------------------|
| Ford G.B. Reliant Gilbern A.C. | 1967 onwards Only applicable to some vehicles. Check exception column. | 38-40 (4 or 6 cylinder engines) |
|---|---|------------------------------------|

EXCEPTIONS

| | | |
|---|-------------------------------|----------------|
| Ford Cortina 1300-1600 | 1967 | 39-42 |
| Corsair 2000 | 1967 | 39-42 |
| Transit 1.7 & 2.0 | 1973/mid 75 mid 75 onwards | 38-42 48-52 |
| Fiesta, Escort, Capri, Consul Granada, Cortina 1300, 1600, 2000 & V4 Morgan 4.4 1600 | 1974 onwards 1976 onwards | 48-52 48-52 |

DELCO REMY A.C. DELCO

| | | |
|---|---|---|
| Bedford Bentley Bond Opel Saab Triumph Vauxhall | Only applicable to some vehicles. Check exception column. | 4-cylinder engines 35-37 6-cylinder engines 35-37 8-cylinder engines 29-31 |
|---|---|---|

EXCEPTIONS

| | | |
|---|---|--|
| Bedford HA Van from Eng. No. 16990329 | 1976 onwards | 49-51 |
| Bond Equipe 4S 1300 | 1967, 69/71 | 40-42 |
| Opel Ascona, Manta, Kadett, G.T. Coupe, Record D, Commodore, Diplomat, & Admiral 2.8 litres S & M Saab 99 Triumph Spitfire III Spitfire III GT6 Coupe GT6 Coupe Spitfire, GT6, Dolomite, TR7 Vauxhall Chevette Distributor No. 7992820 onwards Viva Distributor No. 204/7992820 onwards 1800 & 2.3 from Eng. No. 7992907 Cavalier 1.6/2.0 Astra, Carlton | 1971 onwards 1973 onwards 1970 onwards 1967, 1969-71 1968 1967-68 1969-71 1973 onwards 1975 onwards 1976 onwards 1976 onwards | 47-53 36-40 38-42 40-42 39-41 40 40-42 38-40 49-51 49-51 47-53 |

DUCELLIER/SEV

| | | |
|--|--|-------|
| Citroen Peugeot Renault Volvo | B.L. Chrysler Alfa Sud Land Rover | 55-59 |
|--|--|-------|

EXCEPTIONS

| | | |
|----------------------------|--------------|-------|
| Citroen | 1975 onwards | 53-57 |
| Volvo | Pre 1979 | 53-57 |
| Chrysler 160 180 | | 55-57 |
| 2 Litre | | 46-52 |
| Daf & Fiat 4 cyl | | 53-57 |
| Hillman Hunters | 1975 onwards | 55-57 |
| Lotus Europa | | 58-64 |
| Peugeot 604 | | 37-39 |
| Renault 30 | | 37-39 |
| Simca, Talbot, Matra Simca | | 55-57 |

| Distributor/Car Make/Model | Year | Dwell Angle Degrees |
|----------------------------|------|---------------------|
|----------------------------|------|---------------------|

BOSCH

| | | |
|---------------------------------------|---|--------------------|
| Auto Union | } | 4-cylinder engines |
| Audi, Ford (Germany), Fiesta | | 48-52 |
| Mercedes, Opel, Saab, Citroen | | 6-cylinder engines |
| 2.0 2.3 2.4, Vauxhall, Cavalier Astra | | 36-40 |
| Volkswagen | | 8-cylinder engines |
| BMW (6-cyl), Porsche (6-cyl.) | | 27-33 |

EXCEPTIONS

| | | |
|--------------------------------------|-------------------------|-------|
| Audi/Porsche | 1975 onwards/73 onwards | 44-50 |
| BMW (4), DAF | | 58-62 |
| Volvo (4-cyl) | | 59-65 |
| Volvo (6-cyl) | 1973 onwards | 39-45 |
| Volkswagen | 1970 onwards | 44-50 |
| Mercedes (Twin Points) 6-cyl | | 47-51 |
| Mercedes (Twin Points) 8-cyl | | 34-38 |
| Mercedes 6-cyl. Volvo (6-cyl) to '73 | | 37-43 |
| Alfa Sud | | 60-64 |

HITACHI

| | | |
|--------|---|--------------------|
| Datsun | } | 4-cylinder engines |
| Subaru | | 50-54 |
| Colt | | 6-cylinder engines |
| | | 35-40 |

LADA

52-58
(.4mm (.016") Gap
models only)

MITSUBISHI

| | |
|---------------------|-------|
| Mazda Wankel Engine | 56-60 |
| 4-cyl. (Piston) | 49-55 |

MARELLI

| | | |
|-----------------------------------|---|-------|
| Fiat 850-1600, 124 & Special, 900 | } | 57-63 |
| 125 (& 125 Polski-Fiat) | | |
| 124 (1600 & 1800) Sport, | } | 52-58 |
| T and Spider, 128, 127 | | |
| 132, 131, 125 Special | | |
| Strada Panda 45 | | |
| X1/9 | } | 47-53 |
| Lancia | | |
| Fiat 600D | } | 37-43 |
| Fiat 1800-2300 | | |
| 130 | | |
| Fiat 2 cylinder engines | | 38-40 |
| Seat 133 | | 54-62 |

SKODA

48-52

DENZO

| | | |
|----------|---|--------------------|
| Toyota | } | 4-cylinder engines |
| Suzuki | | 50-54 |
| Daihatsu | | 6-cylinder engines |
| | | 39-43 |

DENZO/HONDA

| | |
|---------------|-------|
| Honda S800 | 48 |
| Civic, Accord | 49-55 |