

Note 84  
**FORD - COSWORTH DFV**  
**Development 1967 - 1983**



Year	1967	1968	1969	1970	1971	1972	1973	1974	1975
DWC or (Principal User) (NoteA)	(Lotus)	Lotus	Matra	Lotus	Tyrrell	Lotus	Tyrrell	McLaren	(McLaren)
CWC or (Principal User)	(Lotus)	Lotus	Matra	Lotus	Tyrrell	Lotus	Lotus	McLaren	(Brabham)
Data Source References	DASO	59	543	543	543	42	543	17	17
Typical HP PP (NoteB)	405	415	430	430	450	450	460	460	465
@ RPM NP	9000	9500	10000	10000	10000	10000	10250	10250	10500
DASO					42				544
Best HP (NoteC)					470				485
@ RPM					10000				10750
<b>Analyses based on Typical HP</b>									
BMPP Bar (NoteD)	13.48	13.09	12.88	12.88	13.48	13.48	13.44	13.44	13.27
MPSP m/s	19.43	20.51	21.59	21.59	21.59	21.59	22.13	22.13	22.67
MVSP m/s	3.51	3.71	3.90	3.90	3.90	3.90	4.00	4.00	4.10
MGVP m/s	63.5	67.0	70.6	70.6	70.6	70.6	72.3	72.3	74.1
MPDP g	3648	4064	4503	4503	4503	4503	4731	4731	4965
DASO	59								
W kg (NoteE)	162								
PP/W HP/kg	2.5								
DASO	60	60	168	168	544	862	544		544
Price £ (NoteF)	Free	7500	7500	7500	7500	6500	7500		9266
Price @ 2002 Level (NoteG)		79958	75884	71317	65166	52721	55757		47780
2002 Price/PP £/HP		192.7	176.5	165.9	144.8	117.2	121.2		102.8

Year	1976	1977	1978	1979	1980	1981	1982	1983
DWC or (Principal User) (NoteA)	McLaren (Wolf)	Lotus	(Williams)	Williams	Brabham	Williams	(Williams)	
CWC or (Principal User)	(McLaren)	(Lotus)	Lotus	(Williams)	Williams	Williams	(McLaren)	(Williams)
Data Source References	DASO	17	543	543	18	18	18	59
Typical HP PP (NoteB)	465	465	475	480	485	490	495	510
@ RPM NP	10500	10500	10750	10800	10800	11100	11100	11200
DASO	544		19				18 Judd	18 Judd
Best HP (NoteC)	490		495				515	535
@ RPM	10750		10800				11300	11300
<b>Analyses based on Typical HP</b>								
BMPP Bar (NoteD)	13.27	13.27	13.24	13.31	13.45	13.22	13.36	13.64
MPSP m/s	22.67	22.67	23.21	23.32	23.32	23.96	23.96	24.18
MVSP m/s	4.10	4.10	4.19	4.21	4.21	4.33	4.33	4.91
MGVP m/s	74.1	74.1	71.6	72.0	72.0	74.0	74.0	74.6
MPDP g	4965	4965	5204	5253	5253	5548	5548	5649
DASO								59
W kg (NoteE)								154
PP/W HP/kg								3.31
DASO	544	544	19				59	
Price £ (NoteF)	10000	12500	17183				26185	
Price @ 2002 Level (NoteG)	44246	47740	60598				56808	
2002 Price/PP £/HP	95.2	102.7	127.6				114.8	

**Italics = Approximate Data**

**Geometric Data**

90 DegreeV8 : Bore (B) = 3.373" (85.6742mm); Stroke (S) = 2.550" (64.77mm); B/S = 1.323; Swept Volume (V) = 2987cc  
 4 Valves per Cylinder @ Included Angle (VIA) = 32 Degrees  
 Compression Ratio (R) = 11 in 1967 and *assumed* unchanged until 1978 when 12 and then *assumed* same until 1983  
 Inlet Valve Head Diameter (IVD) : 1967 to 1977 = 1.32" (33.5mm); 1978 to 1983 = 1.36" (34.5mm)  
 Total Inlet Valve Head Area/ Total Piston Area (IVA/PA) : 1967 to 1977 = 0.306; 1978 to 1983 = 0.324  
 Inlet Valve Maximum Lift (IVL) : 1967 to 1982 = 0.410" (10.4mm); 1983 = 0.460" (11.7mm)  
 Inlet Valve Open Duration (IOD) : 1967 to 1978 = 320 Crank Degrees; *assumed* same through 1983  
 Connecting Rod Length between centres (CRL) = 5.23" (132.8mm); CRL/S = 2.05

**Notes**

- DWC = Drivers' World Championship ; CWC = Constructors' World Championship.
- Not necessarily at the peak of the power curve, which may not have been attainable because of mechanical limits. Figures are derived mostly from published Team records.
- From 1971 onwards it appears from refs. (42) and (544) that the best engines gave around 20 HP more than the typical engine. Ref. (982) reports that there could be 70 HP difference between Best and Worst in mid-70s, reason unknown. From 1980 John Judd (Engines Development Ltd.) produced extra power by modifications specially for, and financed by, Williams.
- BMPP = BMEP @ PP and NP.  
 MPSP = Mean Piston Speed @ NP.  
 MVSP = Mean Inlet Valve Speed = (IVLmm x NP rpm)/(83.333 x IOD Crank Degrees).  
 MGVP = Mean Inlet Gas Velocity based on IVA @ NP.  
 MPDP = Maximum Piston Deceleration @ NP.
- W = Weight (excluding Starter Motor and various Ignition components, mounted on Gearbox).
- Still free to Lotus in 1968. Includes 8% VAT in 1973 and onwards.
- Adjusted by General Index of Retail Prices.