Rolls-Royce and Bentley Motor Cars

Postwar Vehicles - 1946 to 1999

Engine Settings

Proudly provided by the Rolls-Royce Owners Club of Australia for all Rolls-Royce and Bentley Enthusiasts

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A guide to engine settings - Post 1946

Applicable to

All Rolls-Royce and Bentley motor cars post 1946.

Introduction

The purpose of this Product Support Information Sheet is to give a quick reference to the general engine parameters required for the setting and servicing of our engines on a daily basis.
It must be noted however that due to the complexity of our fuel/engine management systems, some of the engine's parameters have been omitted and replaced by the respective Workshop Manual and appropriate page numbers. Where it refers to specific 'Notes", they can be found at the back of each section contained within this Product Support Information Sheet.

The information within this Product Support Information Sheet is split into two main areas. Sections 1 to 6 inclusive deal with motor cars equipped with SU and Solex carburetters manufactured between 1945 and 1986. They also include the early fuel injection cars built to comply with the Federal emission requirements. Sections 7, 8, and 9 deal with all engine management/fuel systems post 1987 and include the Bosch K, KE2, and Motronic fuel systems.

Index of sections

The information contained within this Product Support Information Sheet can also be found in a new pocket sized manual TSD 5353.

Section 1 -All cars from 1946 to 1965

Model type	Fuel	Spark plug gap	Ignition contact gap	Ignition timing	Tappet clearance	Engine idle	Engine fast idle
Silver Wraith Silver Dawn Bentley Mark VI Bentley 'R' Type 'R' Type Continental	97	0.025 in	0.020 in	2° btdc. Set on both cylinders 1 and 6	Inlet 0.006 in Exhaust 0.010 in to 0.012 in	550 rev/min	1800 rev/min
Silver Cloud I Bentley SI Bentley Continental SI Silver Wraith Long Wheelbase SI	97	0.025 in	0.020 in	2° btdc. Set on both cylinders 1 and 6	Inlet 0.006 in Exhaust 0.010 in to 0.012 in	550 rev/min	1800 rev/min
Silver Cloud II Bentley S2 Bentley Continental S2 Phantom V	97	0.025 in	0.020 in	2° btdc. Set on both cylinders A1 and B4		550-600 rev/min	1800 rev/min
Silver Cloud III Bentley S3 Bentley Continental S3 Phantom V	99	0.025 in	0.015 in	2° btdc. Set on cylinder A1 only		550-600 rev/min	1800 rev/min

Editorial Note based on comments from Club members after discussion:

The figures quoted above for idling and fast idle speed for the 6-cylinder cars seem too high. Suggested figures are:

4.25 & 4.5 Litre with Manual Transmission, 6.4:1 Compression Ratio: 350 RPM idle, 950 RPM fast idle
4.5 Litre with Manual Transmission, 6.75:1 Compression Ratio: 375 RPM idle, 950 RPM fast idle
4.5 Litre with Automatic Transmission, 6.4 & 6.75:1 Compression Ratio: idle 400 RPM in Neutral, 375RPM in gear at standstill, fast idle 950 RPM in Neutral.
4.9 Litre with Automatic Transmission, 6.6:1 Compression Ratio: idle 400 RPM in Neutral, 375RPM in gear at standstill, fast idle 950 RPM in Neutral.
4.9 Litre with Automatic Transmission, 8.0:1 Compression Ratio: idle 400-425 RPM in Neutral, 375RPM in gear at standstill, fast idle 950 RPM in Neutral.

- Engines equipped with automatic transmissions require idle speeds to be optimised in Neutral consistent with smooth running.
- Engines with a single carburettor will usually run satisfactorily at 25 RPM lower than those with twin S.U. carburettors.

Section 2 -United Kingdom and European specification 1965 to 1986. Also, ignition timing conversion chart for 95 RON unleaded fuel:

See Table 2

Note:
These cars have a float chamber vent connection on the carburetter cover and short air intakes.

Note:
These cars have extended air intakes and the float chamber vent connection on the carburetter cover blanked. The auto-choke pulldown has a delay valve fitted into the vacuum signal hose.

Note:
Similar to Note 3 except that the engine modification package alters the ignition setting. These engines have the suffix letter 'B' after the engine number

Items marked with an * require a modified distributor vacuum advance signal hose and throttle/jack damper hoses (see Workshop Manual TSD 4200, pages K5-1 to K5-18).

See Table 3

Section 3 - American specifications 1967 to 1986

See Table 4

Note:
This applies to all Emission control cars built between 1967 to 1972.

- Stage 1 - All cars prior to car serial number SRX 9001
- Stage 2 - a} Cars other than Long Wheelbase Car serial number SRX 9001 up to SRA 12030 Including SRX 12046 and SRX 12062 Excluding DRA 11808, DRA 11809, DRA 11839, DRA 11841, DRA 11875, DRA 11879, DRA 11880, DRA 11908, DRA 11912, DRA 11935, DRA 11936, CRA 11941, DRA 12018, DRA 12022, CRA 12025, DRA 12026
- Stage 2 - b) Long Wheelbase cars Car serial number LRX 9069 up to LRA 11922 Including LRX 11923
- Stage 3 - a) Cars other than Long Wheelbase Car serial number SRA 12030 onwards Including DRA 11808, DRA 11809, DRA 11839, DRA 11841, DRA 11875, DRA 11879, DRA 11880, DRA 11908, DRA 11912, DRA 11935, DRA 11936, CRA 11941, DRA 12018, DRA 12022, CRA 12025, DRA 12026 Excluding SRX 12046 and SRX 12062
- Stage 3 - b) Long Wheelbase cars Car serial number LRA 11922 onwards Excluding LRX 11923

Note:
Remove the air intake and blank off the hot idle compensator feed drilling; replace the air intake. Remove the inlet hose from the air injection system pressure relief valve and fit a blank over the valve (a suitable blank may be produced from a short length of rubber hose with one end plugged). Disconnect the EGR cut-off solenoid to the carburetter signal hose at the solenoid; blank off the hose. Unscrew and remove the pressure tapping cap from the weakening device.

Note:
Remove the air intake and blank off the hot idle compensator feed drilling; replace the air intake. Remove the air inlet hose from the air injection system pressure relief valve and fit a blank over the valve. Disconnect the EGR valve signal pipe at the cut-off solenoid 'Y' piece and blank off the open 'Y' piece hose connection. Unscrew and remove the pressure tapping cap from the weakening device.

Note:
Unscrew and remove the exhaust pipe blanking plug situated adjacent to the oxygen sensor. Fit the exhaust gas sampling adapter RH 9611 into the pipe. Connect a suitable Co meter to the exhaust sample probe. Switch the ACU off. Open the oil filler cap and disconnect the purge line at the restrictor, leave the restrictor fitted into the hose to the engine. Disconnect the oxygen sensor cable situated in the rear left-hand corner of the engine compartment.

Section 4 - Australian specifications 1976 to 1986

See Table 5

Note:
Remove the air intake and blank off the hot idle compensator feed drilling; replace the air intake. Remove the inlet hose from the air injection system pressure relief valve and fit a blank over the valve (a suitable blank may be produced from a short length of rubber hose with one end plugged). Disconnect the EGR cut-off solenoid to the carburetter signal hose at the solenoid; blank off the hose. Unscrew and remove the pressure tapping cap from the weakening device.

Note:
Remove the air intake and blank off the hot idle compensator feed drilling; replace the air intake. Remove the air inlet hose from the air diverter valve and fit a blank over the valve. Disconnect the EGR valve signal hose at the solenoid; blank off the hose. Unscrew and remove the pressure tapping cap from the weakening device.

Note:
Remove the air intake and blank off the hot idle compensator feed drilling; replace the air intake. Remove the air inlet hose from the air diverter valve and fit a blank over the valve. Disconnect the EGR valve signal pipe at the cut-off solenoid 'Y' piece and blank off the open 'Y' piece hose connection. Unscrew and remove the pressure tapping cap from the weakening device.

Note:
Unscrew and remove the exhaust pipe blanking plug situated adjacent to the oxygen sensor. Fit the exhaust gas sampling adapter RH 9611 into the pipe. Connect a suitable Co meter to the exhaust sample probe. Switch the ACU off. Open the oil filler cap and disconnect the purge line at the restrictor, leave the restrictor fitted into the hose to the engine. Disconnect the oxygen sensor cable situated in the rear left-hand corner of the engine compartment.

Section 5 - Japanese specifications 1976 to 1986

See Table 6

Note:
Remove the air intake and blank off the hot idle compensator feed drilling; replace the air intake. Remove the inlet hose from the air injection system pressure relief valve and fit a blank over the valve (a suitable blank may be produced from a short length of rubber hose with one end plugged). Disconnect the EGR cut-off solenoid to the carburetter signal hose at the solenoid; blank off the hose. Unscrew and remove the pressure tapping cap from the weakening device.

Note:
Remove the air intake and blank off the hot idle compensator feed drilling; replace the air intake. Remove the air inlet hose from the air injection system pressure relief valve and fit a blank over the valve. Disconnect the EHR valve signal pipe at the cut-off solenoid 'Y' piece and blank off the open 'Y' piece hose connection. Unscrew and remove the pressure tapping cap from the weakening device.

Note:
Unscrew and remove the exhaust pipe blanking plug situated adjacent to the oxygen sensor. Fit the exhaust gas sampling adapter RH 9611 into the pipe. Connect a suitable Co meter to the exhaust sample probe. Switch the ACU off. Open the oil filler cap and disconnect the purge line at the restrictor, leave the restrictor fitted into the hose to the engine. Disconnect the oxygen sensor cable situated in the rear left-hand corner of the engine compartment.

Section 6 - Middle East specifications 1984 to 1986

Model type	Rev/min	Timing		Fuel	Co idle speed	Co setting procedure	Fast idle speed
1984 to 1986 Naturally aspirated motor cars only	Static	5° btdc			2.5 - 3.5% 650 rev/min	Remove air intake, blank off idle	800 - 900 rev/min on
	2100	20° btdc	Disconnect vacuum			compensator drilling and	top of cam engine hot
	650	2-6° btdc	advance hose and blank off.			replace the intake Remove pressure tapping cap from	
	650	18-26° btdc	Disconnect vacuum manifold to air intake sensor hose at sensor, connect this hose (using an additional length of hose) to distributor vacuum capsule.			weakening device	

Section 7 - All naturally aspirated cars fitted with the Bosch K fuel system (VIN 20001 to 27799)

See Table 8

Section 8 - All Turbocharged cars fitted with the Bosch KE fuel system (VIN 20001 to 23935)

Model type	Co% idle speed	Timing	Fuel	Co setting procedure
All Bentley Turbo R cars from VIN 20001 to 23935 equipped with Bosch KE2 Jetronic fuel system 1987 and 1988 model year.	0.8% to 1.0% at 580 rev/min	See Figs. E14-1, E14-2, and E14-3	97 RON	Set Co with the ACU switched on and the crankcase completely sealed.

Section 9 - All cars fitted with the Bosch Motronic fuel systems - Post Turbo (VIN 24519) and naturally aspirated cars (VIN 30001)

Model type	Co% idle speed	Timing	Fuel	Co setting procedure
All Turbocharged motor cars post VIN 24519 equipped with the Bosch Motronic fuel system. 1989 onwards including VIN 23155, 23211, 23212, and 23218.	0.9% ± 0.1% at 580 rev/min ± 20 rev/min	6° ± 1° btdc at 580 ± 20 rev/min.The current to the EHA should be stable at OmA ± 0.5 mA	97 RON to 95 RON	Set the Co with the ACU switched on and the crankcase completely sealed. Note: If the motor car is fitted with purge control, disconnect the purge hose from the inlet manifold and blank off the manifold tapping.
All catalyst equipped Turbo-charged motor cars post VIN 24519 equipped with Bosch Motronic fuel system. 1989 onwards including VIN 23214 and 23219.	0.9% ± 0.1% at 580 rev/min ± 20 rev/min	8° ± 1° btdc at 580 ± 20 rev/min.The current to the EHA should be oscillating about a median of OmA.	95 RON	Set the Co with the ACU switched on, the crankcase completely sealed and the EHA disconnected. Also, disconnect the purge hose from the inlet manifold and blank off the manifold tapping.

E14-1 Ignition timing graph - Idle: See Table 9
E14-2 Ignition timing graph - Part load: See Table 10
E14-3 Ignition timing graph - Full load: See Table 11

Table 2

Model type	Rev/min	Timing	Fuel	Co idle speed	Co setting procedure	Fast idle speed
1965 to 1976. All cars produced before car serial number SRH 8742	Static 500	TDC 3° btdc Twin point distributor. Contact points set to 0.014 in to 0.016 in	99 RON	4 - 4.5% 600 rev/min	See TSD 2476 pages K20 to K21	1850 | rev/min
1967 to 1976. All cars produced between car serial number SRH 8742 and SRD 22117	Static 800	TDC 5° btdc Single point distributor. Set dwell angle at idle to 26° to 28°	99 RON	4 - 4.5% 600 rev/min	See TSD 2476 pages K23 to K25	1850 | rev/min | |
	Static 800	TDC 5° atdc	97 RON	4 - 4.5% 600 rev/min	See TSD 2476 pages K23 to K25	1850 | rev/min
	Static 800	7° atdc 2° atdc	94 RON	4 - 4.5% 600 rev/min	See TSD 2476 pages K23 to K25	1850 rev/min|
1967 to 1976. All cars produced after car serial number SRD 22118	1200	15° btdc	97 Ron	4 - 4.5% 600 rev/min	See TSD 2476 pages K23 to K25	1850 | rev/min
1976 to 1981. Corniche and Camargue cars with	1850	25° btdc. Distributor vacuum	97 RON	0.2 - 0.5% 650 rev/min	ACU switched off and air cleaner/	1850 | rev/min
Solex 4A1 carburetters (see note 3)	1650	20° btdc advance signal	94 RON		silencer fitted. See TSD 4200 pages	|
	2350*	20° btdc. hose disconn- ected and blanked off	90 RON	2.5 - 3%	K5-1 to K5-22	|
1976 to 1981. Corniche and Camargue cars with	1850	25° Distributor btdc vacuum	97 RON	0.2 - 0.5% 650 rev/min	ACU switched off and air cleaner/	1850 | rev/min
Solex 4A1 carburetters (see note 4)	1650	advance signal hose	94 RON		silencer fitted. See TSD 4200 pages	
	2100*	disconnected and blanked off	90 RON	2.5 - 3% 650 rev/min	K5-1 to K5-22	
1976 to 1981. All Silver Shadow II, Silver Wraith II	1300	25° Distributor btdc vacuum	97 RON	1 - 4% 650 rev/min	ACU switched off 850 and air cleaner	- 900 | rev/min.
and Bentley T2 from car serial number SRF 30001	2050	25° advance btdc signal hose	94 RON		silencer fitt On	ip of | cam
equipped with 2 SU HIF 7 carburetters	2800	25° disconnected btdc and blanked off	90 RON		eng	ne hot |
1976 to 1981. All Silver Shadow II, Silver Wraith II	2200	20° Distributor btdc vacuum	97 RON	1 - 4% 650 rev/min	ACU switched off 850 and air cleaner/	- 900 | rev/min
and Bentley T2 from car serial number SRF 30001	2200	20° advance btdc signal hose	94 RON		silencer fitted. On	ip of | cam
with suffix letter 'B' at the end of the serial number	2200	17° disconnected btdc and blanked off	90 RON		eng	ne hot |
1976 to 1981. All Corniche and Camargue cars with	1200	15° Distributor btdc vacuum	97 RON	0.8 - 1.2% 600 rev/min	ACU switched off 185 and air cleaner/	| rev/min
the Solex 4A1 carburetter (see note 2)	1700	15° advance btdc signal hose	94 RON		silencer fitted. See TSD 4200, pages	|
	2200*	15° disconnected btdc and blanked off	90 RON	2.5 - 3% 600 rev/min	K5-1 to K5-22	|
1981 to 1986. All Silver Spirit, Silver Spur and	Static	5° btdc	97 RON	2.5 - 3.5% 650 rev/min		|
Bentley Mulsanne cars	2200	25° Hose from btdc vacuum			Remove air intake 850 and blank off hot	-900 | rev/min
	650	6-10° capsule btdc disconnected and blanked off			idle compensator On drilling, replace air intake. Unscrew and remove the pressure tapping	ip of | cam engine hot

	650	22-30° Hose from btdc vacuum manifold to air intake sensor, disconnected at sensor and connected to vacuum capsule using additional length of hose			cap from weakening device	|
1981 to 1986. All Silver Spirit, Silver Spur and	2200	21° Hose from btdc vacuum	94 RON	2.5 - 3.5% 650 rev/min	Remove air intake 850 and blank off hot	- 900 | rev/min
Bentley Mulsanne cars	650	2-6° capsule btdc disconnected and blanked off			idle compensator On drilling, replace air intake. Unscrew and remove the pressure tapping	ip of | engine hot
	650	10-18° Hose from vacuum manifold to air intake sensor disconnected at sensor and connected to vacuum capsule using additional length of hos			cap from weakening device	|
1981 to 1986. All Silver Spirit, Silver Spur and	2200	17° Hose from btdc vacuum	90 RON	2.5 - 3.5% 650 rev/min	850	- 900 | rev/min
Bentley Mulsanne cars	650	2° capsule btdc disconnected to 2° and blanked atdc off			Remove air intake On and blank off hot idle compensator eng drilling, replace air intake. Unscrew	ip of | cam ne hot |
	650	10-18° Hose from vacuum manifold to air intake sensor, disconnected at sensor and connected to vacuum capsule using additional length of hos			and remove the pressure tapping cap from weakening device	|
1981 to 1986. All Corniche and Continental cars	Static	5° btdc		0.2 - 0.5% 650 rev/min	ACU switched off 185 and air cleaner/	| rev/min
	2100	20° Hose from btdc vacuum	97 RON		silencer fitted	|
	2100	20° capsule btdc disconnected	94 RON			|
	2100	16° and blanked btdc off	90 RON			|
1982 to 1986 Turbocharged motor cars	Static	4° ± .5° Basic setting btdc	97 RON	0.1 - 0.3% 650 rev/min	Remove air chest cover and switch	1850 rev/min
	650-700	4° ± .5° Vacuum hose btdc to distributo capsule disconnected and hose to carburetter blanked			off the ACU. Do not adjust the Co if exhaust extraction equipment has been used recently as a false reading will occur	
	650-700	4° ± .5° Carburetter btdc throttle jack damper retracted and hose clamped			Ensure carburetter is balanced before and after setting Co%	
	2100 -	17° Approach				
	2200	this speed from a higher figure				
	2100 -	22° ± 2° Apply a				
	2200	further minimum of advance 457,2mm Hg (ie 17°+ (18.0 in Hg) 22° = 39° to the btdc) distributor capsule				

Table 3

TableA United Kingdom history of highest available		
	Research octane number	Approximate number of degrees retardation from original settings for naturally aspirated vehicle built during period indicated
Pre1917	50	0
1922	56	0
1928	57	0
1931	76	0
1932	76	0
1935	81	0
1939	81	0
1939-1946	74	0
1953	92	0
1954	93	0
1955-1957	95	0
1958-1959	97	2 to 4
1960	98	3 to 6
1961-1970	99	4 to 8
1971-1973	100	5 to 10
1974	99	4 to 8
1975 to date	97	2 to 4
1989 Onwards		All Rolls-Royce and Bentley motor cars including Turbo 'R' are capable of running either on 97 or 95 RON fuel. For information concerning engine setting refer to the relevant Workshop Manual.

Table 4

Model type	Rev/min	Timing		Fuel	Co idle speed	Co setting procedure	Fast idle speed
1967 to 1972. Stage 1 Emission cars (see note 1)	500	TDC		94 RON	5.5 - 6% 550 - 600 rev/min	See TSD 2476, pages U37 to U39	2000 rev/min
Stage 2 Emission cars (see note 1)	Static 800	TDC 5° btdc	Disconnect vacuum pipe from vacuum retard tap an and blank off connection on tap	94 RON	5.5 - 6% 600 rev/min	See TSD 2476, pages U40 to U42	2000 rev/min
Stage 3 Emission cars (see note 1)	Static 800	TDC 5°	Disconnect vacuum pipe from vacuum retard tap an blank off connection on tap	94 RON	5.5 - 6% 600 rev/min	See TSD 2476, pages U43 to U45	2000 rev/min
All 1973 cars fitted with Emission control equipment	Static 800	TDC 5° btdc		94 RON	5 - 5.5% 600 rev/min	See TSD 2476, pages U32 to U34	2000 rev/min
All 1974 cars. These cars have the letter 'C' as the last letter of the car serial number	Static 1500	TDC 15° btdc	With vacuum retard disconnected	94 RON	4.5 - 5% 600 rev/min	See TSD 2476, page U699 (Part 2)	2000 rev/min
All 1975 cars. These cars have the letter 'D' as the last letter of the car serial number	Static 1200	TDC 15° btdc		94 RON	3.75 - 4.25% 600 rev/min	See TSD 2476, pages U105 to U107 (Part 2)	1900-2100 rev/min
All 1976cars. These cars have the letter 'E' as the last letter of the car serial number	Static 1200	9° btdc 15° btdc	Disconnect feed hose at vacuum advance capsule, blank off fee hose	94 RON	3.75 - 4.25% 600 rev/min	See TSD 2476, pages U182 to U185 (Part 2)	1900-2100 rev/min
All 1977/1978 cars.	Static 1200 650	9° btdc 15° btdc 7 - 13° btdc	Except California. Disconnect hose at distributor vacuum advance capsule and blank off feed hose	94 RON	1 - 4% 650 rev/min Note: Do not attempt to adjust th Co% if it is within 2.5 t 4%	See Note 5 and TSD 4200, pages U5-11 and U5-12	1850 rev/min
	650	Approx 19° btdc	Disconnect hose from vacuum manifold to purge line restrictor at restrictor en Connect suitable hose between this hose and distributor vacuum capsule	.			
All 1979/1980 cars	Static	9° btdc	Except California	94 RON	1 -4% 650 rev/min	See TSD 4200 pages U5-11 and	1850 rev/min
	1200	15° btdc	Disconnect hose at		No attempt	U5-12	
	650	7-13° btdc	distributor vacuum advance capsule and blank off feed hose		should be made to adjust the Co% if it is within 2.5 t 4%	See Note 8	
	650	Approx. 19° btdc	Disconnect hose from vacuum manifold to purge line restrictor at restrictor en Connect suitable	.			

			hose between this hose and distributor vacuum capsule				
1980 Californian specification equipped	Static	3° btdc	Disconnect hose at				
with Bosch fuel injection cable	1450	14-16° btdc	distributor vacuum. Retard solenoid and fit a blank t the solenoid valve connection (see TSD 4200 pages U6-1 and U6-2	94 RON	0.5 - 0.7% 650 rev/min	See TSD 4200 pages U2-56 and U2-57	Not applicable
1981 to 1986 North American specification equipped with Bosch fuel injection	Static	3° btdc	Disconnect vacuum advance hose from distributor side of vacuum retard solenoid and fit a blank t			See TSD 4400 pages U2-59 to U2-60	
	1450	14-16° btdc	the solenoid valve connection. Disconnect vacuum advance hose from on top o the throttle housing connection See TSD 4400 page U7-2	94 RON	0.5 - 0.7% 650 rev/min	See Note 9	Not applicable

Table 5

Model type	Rev/min	Timing		Fuel	Co idle speed	Co setting procedure	Fast idle speed
1976 Silver Shadow, Silver Shadow Long Wheelbase,	Static	4° btdc		91 RON Min	5 - 5.5% 600 rev/min	See TSD 2476, pages U32 to U34	
Bentley T, Corniche and Camargue	1600	15° btdc	Disconnect feed hose at vacuum advance capsule; blank off feed hose	95 RON whereve possibl			1850 rev/min
1977/1978 Silver Shadow II, Silver Wraith II, Bentley T2,	Static	9° btdc		91 RON Min			850 - 900 rev/min
Corniche and Camargue	1200	15° btdc		95 RON whereve	1-4% 650 rev/min	See Note 5	on tip of cam
	650	7-13° btdc		possibl			engine hot
1979 Silver Shadow II, Silver Wraith II, Bentley T2	Static	9° btdc		91 RON Min			850-900 rev/min
Corniche and Camargue	1200	15° btdc		95 RON whereve	1-4% 650 rev/min	See Note 6	on tip of cam
	650	7-13° btdc		possibl			engine hot
1980 Silver Spirit, Silver Spur, Bentley Mulsanne,	Static	9° btdc		91 RON Min			850-900 rev/min
Corniche and Camargue	1200	15° btdc		95 RON whereve	1 - 4% 650 rev/min	See Note 7	on tip of cam
	650	7-13° btdc		possibl			engine hot
1981 to 1986 Silver Spirit, Silver Spur, Bentley	Static	5° btdc		91 RON Min	0.5 - 0.7% 650 rev/min		850-900 rev/min
Mulsanne, Corniche and Camargue	2000	25° btdc		95 RON whereve		See Note 7	on tip of cam
	650	5-11° btdc		possibl			engine hot
1986 All cars except Silver Spirit, Silver Spur, Bentley	Static	3° btdc		91 RON Min	0.5 - 0.7% 650 rev/min		Not
Mulsanne, Turbo and Corniche	1450	14-16° btdc	Disconnect vacuum advance hose from on top of the throttle housing connection and blank off the throttle housing connection	95 RON whereve possibl		ee Note 9	applicable

Table 6

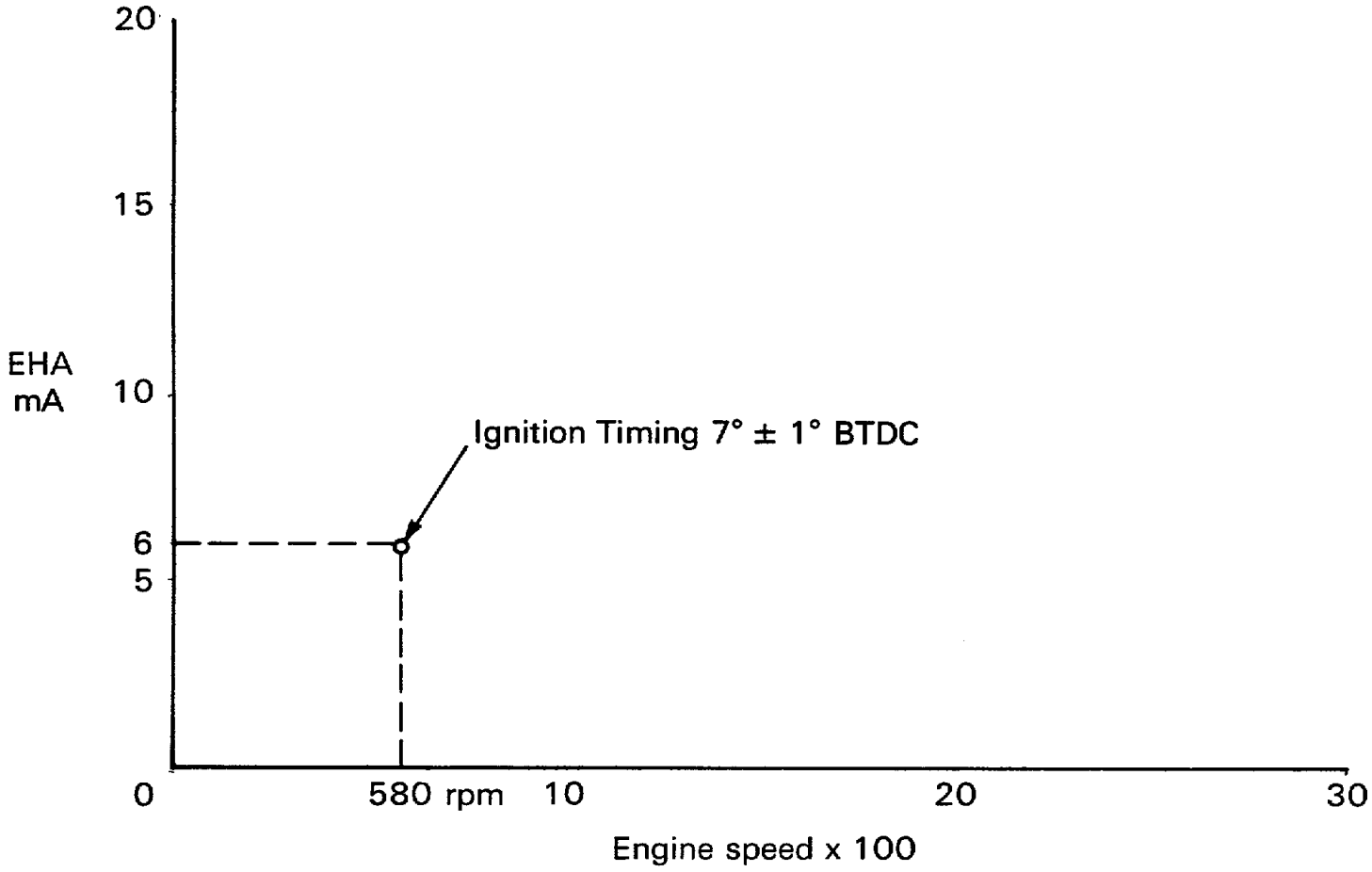
Model type	Rev/min	Timing		Fuel	Co idle speed	Co setting procedure	Fast idle speed
1975 Silver Shadow, Silver Shadow Long Wheelbase,	Static	TDC		91 RON Min	3 - 4% 600 rev/min	See TSD 2476 pages U32 to U34	1850 rev/min
Bentley T, Corniche and Camargue btdc	1600	15°		95 RON wherever possible			
1976 Silver Shadow, Silver Shadow Long Wheelbase,	Static	4° btdc		91 RON Min	5 - 5.5% 600 rev/min	See TSD 2476 pages U32 to U34	1850 rev/min
Bentley T, Corniche and Camargue	1600	15° btdc	Disconnect feed hose at vacuum advance capsule, blank off feed hose	95 RON wherever possible			
1977 to 1979 Silver Shadow II, Silver Wraith II,	Static	9° btdc		91 RON Min			800 - 900 rev/min
Corniche and Camargue	1200	15° btdc		95 RON wherever	1 - 4% 650 rev/min	See Note 5	on tip of cam
	650	7-13° btdc		possible			engine hot
1980 Silver Spirit, Silver Spur, Bentley Mulsanne	Static	9° btdc		91 RON Min			800 - 900 rev/min
and Camargue	1200	15° btdc		95 RON wherever	1 - 4% 650 rev/min	See Note 8	on tip of cam
	650	7-13° btdc		possible			engine hot
1981 to 1986 Silver Spirit, Silver Spur, Corniche,	Static	5° btdc	Disconnect vacuum	91 RON Min	0.5 - 0.7% 650 rev/min		
Camargue, Bentley Mulsanne and Continental	1450	14-16° btdc	advance hose from distributor side of vacuum retard solenoid and fit a blank to the solenoid valve connection. Disconnect vacuum advance hose from on top of the throttle housing connection and blank off the throttle housing connection	95 RON wherever possible		See Note 9	Not applicable

Table 8

Model type	Co idle speed	Rev/min	Timing	Remarks
All naturally aspirated Rolls-Royce and Bentley motor cars from VIN 20001	0.6% - to 0.7% at 580	Static	6° btdc	Initial static setting. A1 piston approaching tdc; distributor rotor arm on A1 firing position
to 27799 conforming to a European specification fitted with the Bosch K Jetronic fuel system.	rev/min	2000	30° btdc + 1°	Vacuum advance hose disconnected and exposed hose leading to throttle body blanked off. Approach engine rev/min from a higher speed
Note: Oil filler cap should be open when checking exhaust Co%.		580 (idle speed)	2° btdc to 10° btdc	Air conditioning function switch in LOW position. Ensure that the compressor clutch is in the engaged position and record ignition timing figure.
		580 (idle speed)	12° btdc to 16° btdc further advanced than the figure recorded above.	Initial vacuum of 635 mm Hg (25 in Hg) applied, then reduce to 508 mm Hg (20 in Hg). Ensure that the compressor clutch is in the engaged position when taking ignition timing figure. Ignition timing figure should be between 14° btdc and 26° btdc.
All naturally aspirated Rolls-Royce and Bentley motor cars from VIN 20001	0.6% - to 0.7% at 580	Static	1° btdc	Initial static setting. A1 piston approaching tdc; distributor rotor arm on A1 firing position
to 27799 conforming to a Middle East and Taiwan specification. Also, Swiss specification from 1988 fitted with the Bosch K Jetronic fuel system.	rev/min	2000	25° btdc ± 1° (Middle East) 30° btdc ± 1° (Taiwan)	Vacuum advance hose disconnected and exposed hose leading to throttle body blanked off. Approach engine rev/min from a higher speed
		580 (idle speed)	3° atdc to 5° btdc (Middle East)	Air conditioning function switch in LOW position. Ensure that the compressor clutch is in the engaged position and record ignition timing figure
			2° btdc to 10° btdc (Taiwan)	
		580 (idle speed)	12° btdc to 16° btdc further advanced than the figure recorded above	Initial vacuum of 635 mm Hg (25 in Hg) applied, then reduce to 508 mm Hg (20 in Hg). Ensure that the compressor clutch is in the engaged position when taking ignition timing figure. Ignition timing figure should be between 9° btdc and 21° btdc.
All naturally aspirated Rolls-Royce and Bentley motor cars from VIN 20001	0.5% - to 0.7% at 580	Static	10° btdc	Initial static setting. A1 piston approaching tdc; distributor rotor arm on A1 firing position
to 27799 conforming to a North American, Japanese, and Australian specification. Also, Swiss specification from 1988 fitted with the	rev/min	1400±25	20° btdc ± 1°	Vacuum advance hose disconnected and exposed hose leading to throttle body blanked off. Approach engine rev/min from a higher speed
Bosch K Jetronic fuel system.		580 (idle speed)	6° btdc to 14° btdc	Air conditioning function switch in LOW position. Ensure that the compressor clutch is in the engaged position and record ignition timing figure
Note: Oil filler cap should be open when checking exhaust Co%.				|

		80 (idle speed)	0° btdc to 14° btdc further advanced than the figure recorded above	nitial vacuum of 635 mm Hg (25 in Hg) applied,	then reduce to 508 mm Hg (20 in Hg). Ensure that the compressor clutch is in the engaged position when taking ignition timing figure. Ignition timing figure should be between 16° btdc and 28° btdc.

Table 9



Procedure

1. T.P.S. – Bridge Black and Blue/Purple ECU side
2. EZ58F Vacuum pipe connected to manifold

Notes

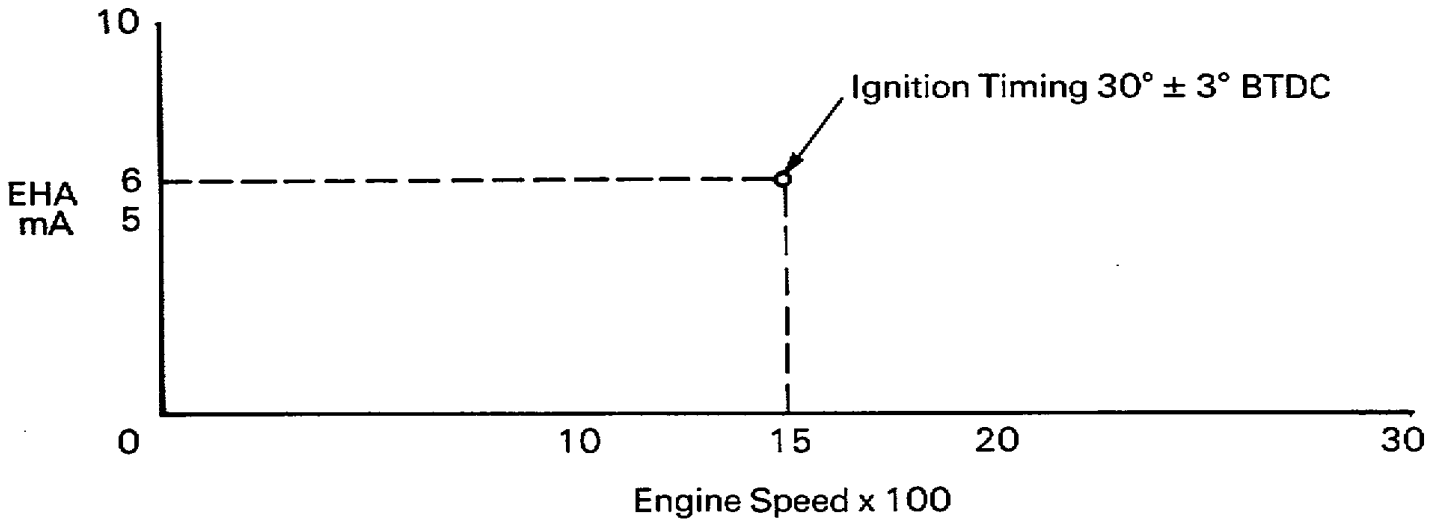
A. Milliamp readings ± 0.5

B. Engine speed ± 10

EHA – Electro Hydraulic Actuator

T.P.S. – Throttle Position Switch

Table 10



Procedure

1. T.P.S. disconnected
2. Apply a minimum vacuum of 20 in Hg at idle to EZ58F ECU vacuum pipe (blank manifold). Engine speed should drop 100 rpm (approx)
3. Increase engine speed to 1500 rpm whilst applying a vacuum of 12 in Hg to EZ58F ECU vacuum pipe see graph for results

Notes

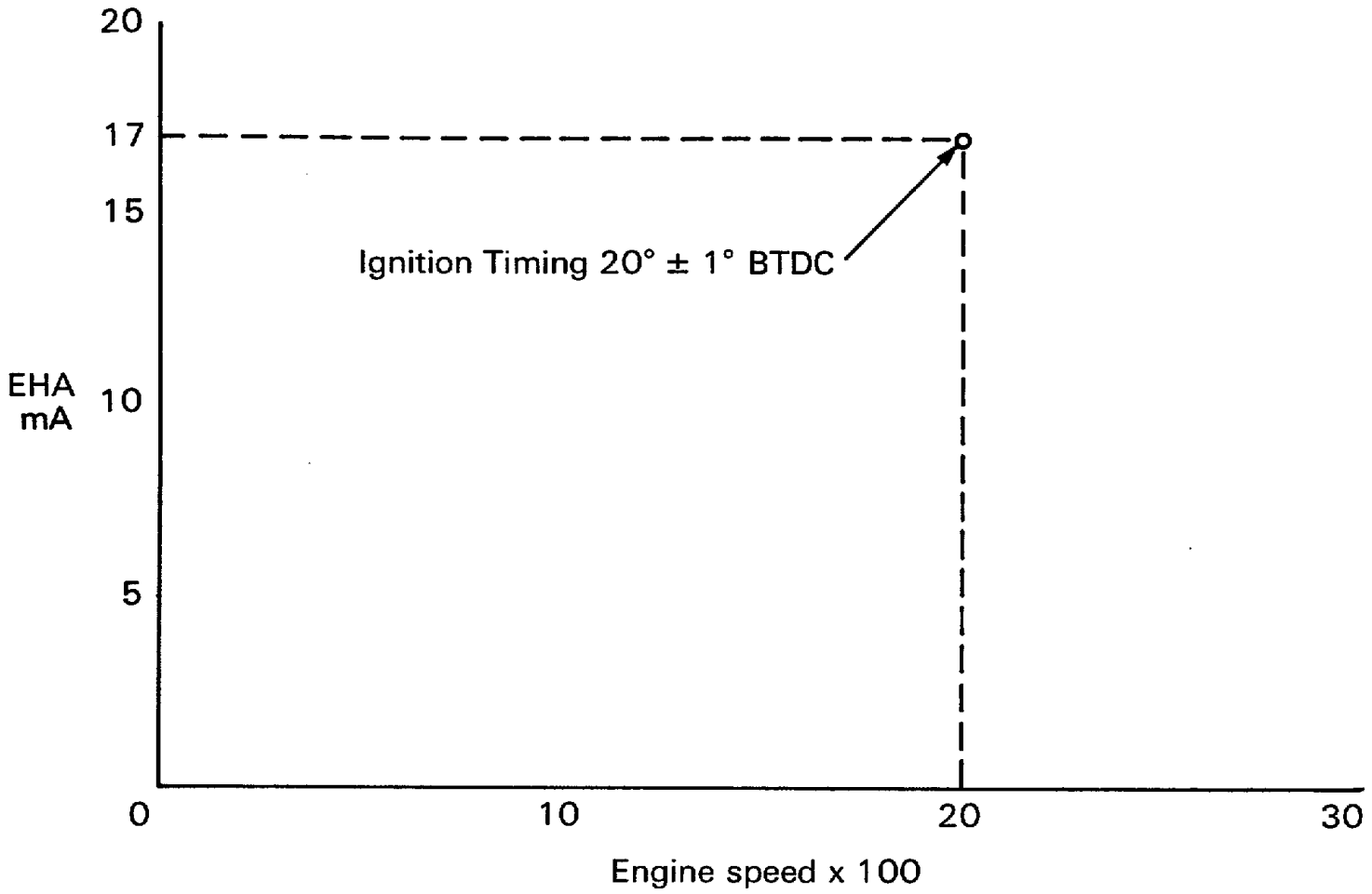
A. Milliamp readings ± 0.5

B. Engine speed ± 50

EHA – Electro Hydraulic Actuator

T.P.S. Throttle Position Switch

Table 11



Procedure

1. T.P.S. – Bridge Black and Yellow/Purple ECU side
2. EZ58F Vacuum pipe connected to manifold

Notes

A. Milliamp reading ± 0.5

B. Engine speed ± 50

EHA – Electro Hydraulic Actuator

T.P.S. – Throttle Position Switch