

Flywheel

Clearance between clutch face and clutch clamping face	29 ± 0.1	
Clearance between clutch face and flywheel attaching flange	new	overhaul
	12.5	up to 11.5
Departure from parallel between clutch face and clamping face for the crankshaft flange	0.05 mm at a diameter of 230 mm	

C. Engine Timing

Valves

	Valve head diameter	Shaft diameter	Length	Height of valve head	Valve seat angle	Hardness at valve shaft end
Inlet	$\frac{44.2}{44.1}$	$\frac{8.97}{8.95}$	128	1.5	90° ± 30	H Rc 55-61
Exhaust	$\frac{37.2}{37.1}$	$\frac{9.95}{9.93}$	112.75	2.25		

Valve Springs

	External diameter	Wire gage	Length L unloaded	Length L ₁ depressed under load P ₁		Length L ₂ under final load P ₂	
	mm	mm	mm	mm	kg	mm	kg
Inner	20.7	2.6	42	34.2	8.9	25.7	18.6 ⁺² ₋₁
Outer	30.6	4	47	38.4	23.1	29.9	45.9 ^{+4.5} _{-2.2}

Camshaft and Camshaft Bearings

Overhaul stage	1st Bearing (Timing gear end)		2nd Bearing		3rd Bearing (Flywheel end)	
	Shaft	Bearing	Shaft	Bearing	Shaft	Bearing
Standard size	$\frac{34.975}{34.959}$	$\frac{35.000}{35.016}$	$\frac{44.975}{44.959}$	$\frac{45.000}{45.016}$	$\frac{45.975}{45.959}$	$\frac{46.000}{46.016}$
Intermediate stage	$\frac{34.875}{34.859}$	$\frac{34.900}{34.916}$	$\frac{44.875}{44.859}$	$\frac{44.900}{44.916}$	$\frac{45.875}{45.859}$	$\frac{45.900}{45.916}$
1st Overhaul stage	$\frac{34.725}{34.709}$	$\frac{34.750}{34.766}$	$\frac{44.725}{44.709}$	$\frac{44.750}{44.766}$	$\frac{45.725}{45.709}$	$\frac{45.750}{45.766}$

Camshaft (continued)

Permissible eccentricity of intermediate bearing surface, cam base circles and camshaft timing gear hub, with camshaft supported by the outside bearings	0.025	
Hardness of bearing journals and cam base circles	Brinell hardness HB in kg/mm ²	Scleroscope hardness
	217 — 248	36 — 40
Hardness of cam nose incl. lifting flank	minimum 500	minimum 64

Camshaft Bearing Play

Radial play	End play
0.025 - 0.045	0.050 - 0.128

Chain Tensioner Pressure Spring

External diameter mm	Wire gage mm	Length L unloaded mm	Length L ₁ depressed under load P ₁		Length L ₂ under final load P ₂	
			mm	kg	mm	kg
15.6	1.1	118	44	1.85	38	$\begin{smallmatrix} +0.05 \\ 2-0.10 \end{smallmatrix}$

Tension Sprocket and Bearing

Diameter of pivot pin in cylinder head	$\begin{smallmatrix} 9.995 \\ 9.986 \end{smallmatrix}$
Bore in tension sprocket bearing	$\begin{smallmatrix} 10.000 \\ 10.015 \end{smallmatrix}$
Diameter of pivot pin in tension sprocket	$\begin{smallmatrix} 19.980 \\ 19.959 \end{smallmatrix}$
Bore in bushing	$\begin{smallmatrix} 20.000 \\ 20.021 \end{smallmatrix}$
Radial play of tension sprocket bearing on pivot pin in cylinder head	0.005 — 0.029
Radial play of tension sprocket	0.020 — 0.062

Rocker Arms and Supports

Base bore in rocker arm	$\begin{smallmatrix} 12.000 \\ 12.018 \end{smallmatrix}$	
External diameter of bushing	$\begin{smallmatrix} 12.039 \\ 12.028 \end{smallmatrix}$	
Internal diameter of bushing	rough-turned	final
	9.6	$\begin{smallmatrix} 10.000 \\ 10.015 \end{smallmatrix}$
Bore in rocker arm block	$\begin{smallmatrix} 9.985 \\ 10.000 \end{smallmatrix}$	
Diameter of rocker arm shaft	$\begin{smallmatrix} 9.987 \\ 9.972 \end{smallmatrix}$	
Radial play of rocker arm on shaft	0.013 — 0.046	
Permissible departure from parallelity between sliding surface and bore measured over a length of 100 mm	0.01	