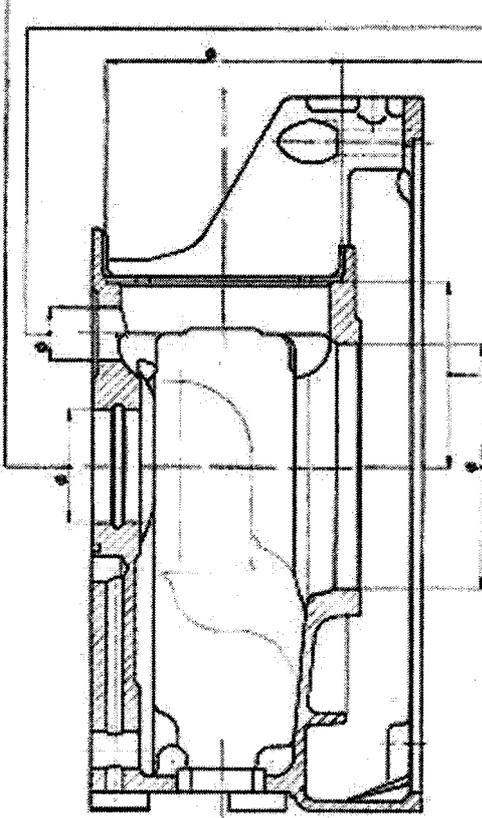
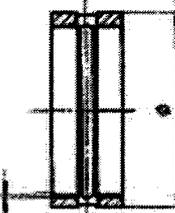


MEASUREMENT TABLE, WEAR

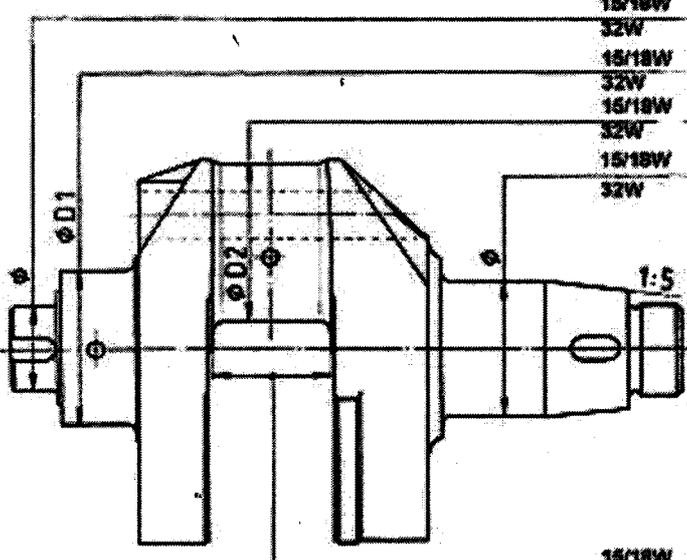
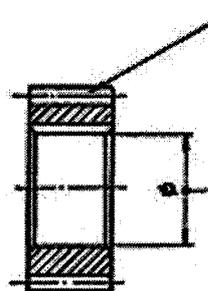
4. MEASUREMENT TABLE- WEARING PARTS

4.1 CRANKCASE

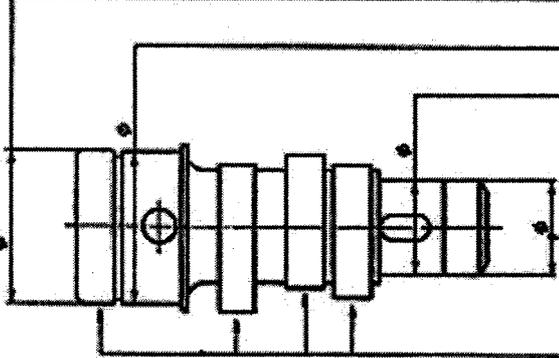
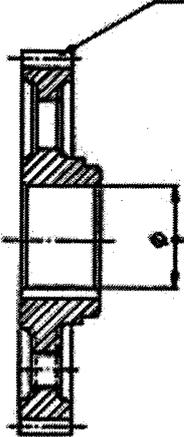
Part. Description		Dimension		
		Original max. mm	min. mm	max. Limit mm
Crankcase 	15/18W	45.971	45.355	45.985
	32W	46.016	46.000	46.030
		22.020	21.990	22.990
	15/18W	95.035	95.000	
	32W	104.100	104.100	
	15/18W	75.050	74.950	74.900
	32W	92.050	91.950	91.900
	15/18W	100.004	99.982	
	32W	128.004	127.979	
	Main bearing bush  <p>.5" Inrd layer</p>	15/18W	46.105	46.065
32W		46.075	46.035	
15/18W		inner diameter not fixed can only be checked when bush is pressed into crankcase via the bearing play, radial play:		
32W		0.02	0.04	0.09
		0.02	0.06	0.09
Bearing bush will have to be replaced when galvanically applied Layer "R" wears off (recognizable on shiny gold bronze color) and/or when scoring appears around circumference. The inner diameter should not be used to determinate wear, only the radial bearing play is important.				

MEASUREMENT TABLE, WEAR

4.2 CRANKSHAFT

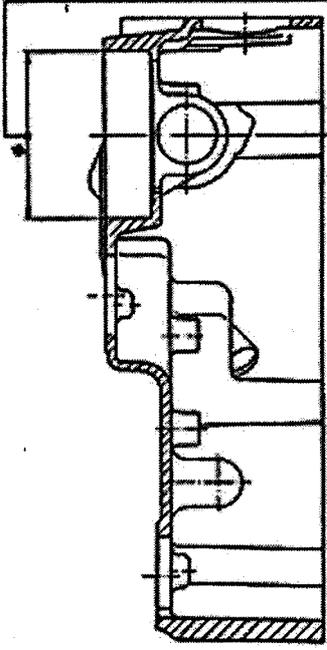
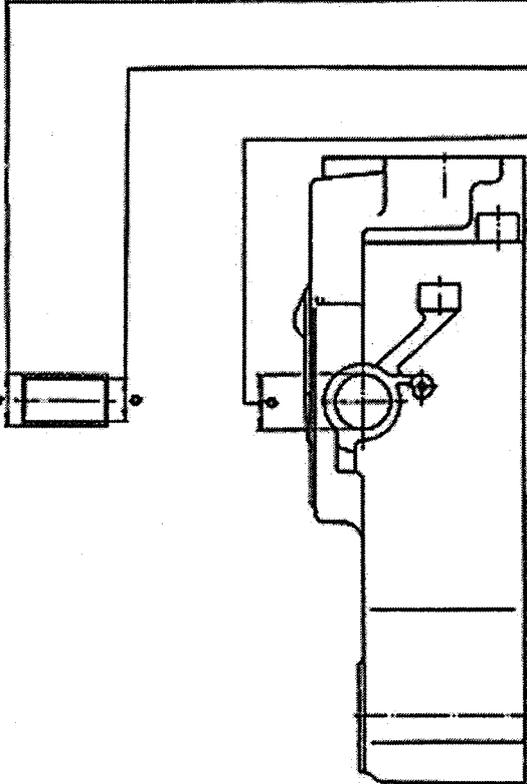
Part Description	Dimension																																							
	Original max. mm	min. mm	max. Limit mm																																					
Crankshaft 	15/18W	22.029	22.008	*																																				
	32W	22.029	22.008	*																																				
	15/18W	40.080	40.060	*																																				
	32W	41.010	39.990	*																																				
	15/18W	40.030	40.020	*																																				
	32W	47.960	47.940	*																																				
	15/18W	35.023	35.015	*																																				
	32W	45.020	45.009	*																																				
	15/18W	30.200	30.130	30.300																																				
	32W	30.250	30.160	30.350																																				
	Radial Bearing play	D1	0.020	0.050	0.080																																			
		D2	0.020	0.060	0.090																																			
	D1	0.030	0.060	0.110																																				
	D2	0.030	0.060	0.120																																				
Regrind Stages The crank pin and journal can be reground in 2 stages of 0.25 mm each and fitted with under size bearings																																								
	<table border="1"> <thead> <tr> <th></th> <th>ø D1</th> <th>ø D2</th> <th colspan="2">D1 corresponding D2 bearing</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="2">1</td> <td>39.830</td> <td>39.780</td> <td rowspan="2">775.033.4</td> <td rowspan="2">470.009.4</td> <td rowspan="4">15/18W</td> </tr> <tr> <td>39.810</td> <td>39.770</td> </tr> <tr> <td rowspan="2">2</td> <td>39.580</td> <td>39.530</td> <td rowspan="2">775.034.4</td> <td rowspan="2">470.012.4</td> </tr> <tr> <td>39.560</td> <td>39.520</td> </tr> <tr> <td rowspan="2">1</td> <td>40.985</td> <td>47.710</td> <td rowspan="2">775.035.4</td> <td rowspan="2">470.019.4</td> <td rowspan="4">32W</td> </tr> <tr> <td>39.740</td> <td>47.460</td> </tr> <tr> <td rowspan="2">2</td> <td>40.735</td> <td>47.690</td> <td rowspan="2">775.036.4</td> <td rowspan="2">470.020.4</td> </tr> <tr> <td>39.490</td> <td>47.460</td> </tr> </tbody> </table>		ø D1	ø D2	D1 corresponding D2 bearing			1	39.830	39.780	775.033.4	470.009.4	15/18W	39.810	39.770	2	39.580	39.530	775.034.4	470.012.4	39.560	39.520	1	40.985	47.710	775.035.4	470.019.4	32W	39.740	47.460	2	40.735	47.690	775.036.4	470.020.4	39.490	47.460			
	ø D1	ø D2	D1 corresponding D2 bearing																																					
1	39.830	39.780	775.033.4	470.009.4	15/18W																																			
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	39.490	47.460																																						
Crankshaft gear 	22.000	19.970	Tooth edges smooth, no scoring and wear.																																					
Heat gear to 90-100°C to obtain shrink-fit.																																								

4.3 CAMSHAFT

Part. Description	Dimension		
	Original max. mm	min. mm	max. Limit mm
<p>Camshaft</p> 	34.850	34.800	34.750
	35.018	35.002	
	22.031	22.022	
	21.930	21.910	21.860
			renew if scored
<p>Camshaft gear</p> 	22.000	21.980	<p>Tooth edges smooth, no scoring and wear.</p>
			Heat gear to 90-100°C to obtain shrink-fit.

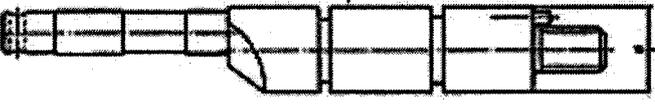
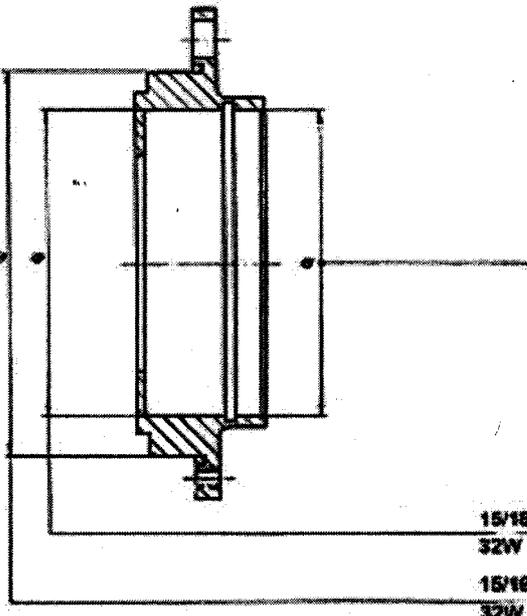
MEASUREMENT TABLE, WEAR

4.4 GEAR COVER

Part. Description	Dimension		
	Original max. mm	min. mm	max. Limit mm
Gear cover 	61.991	61.961	
		20.074	20.054
	16.142	16.092	
	when pressed into gearcover		
	16.100	16.080	16.150
	20.020	20.010	

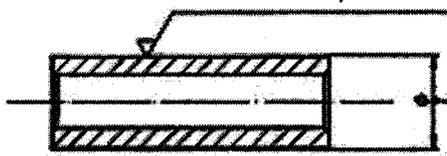
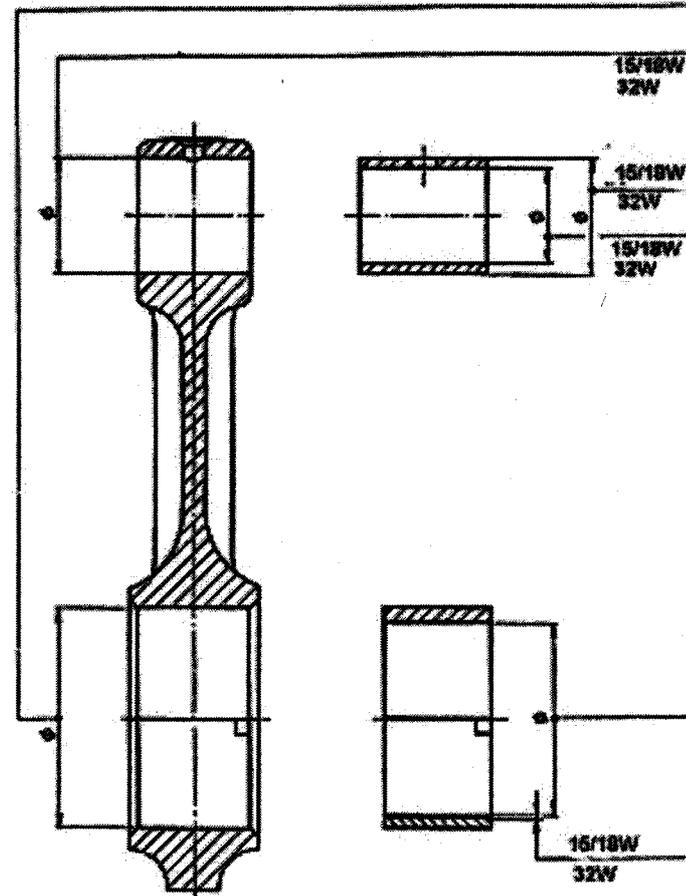
MEASUREMENT TABLE, WEAR

4.5 SHAFTS, BEARINGS

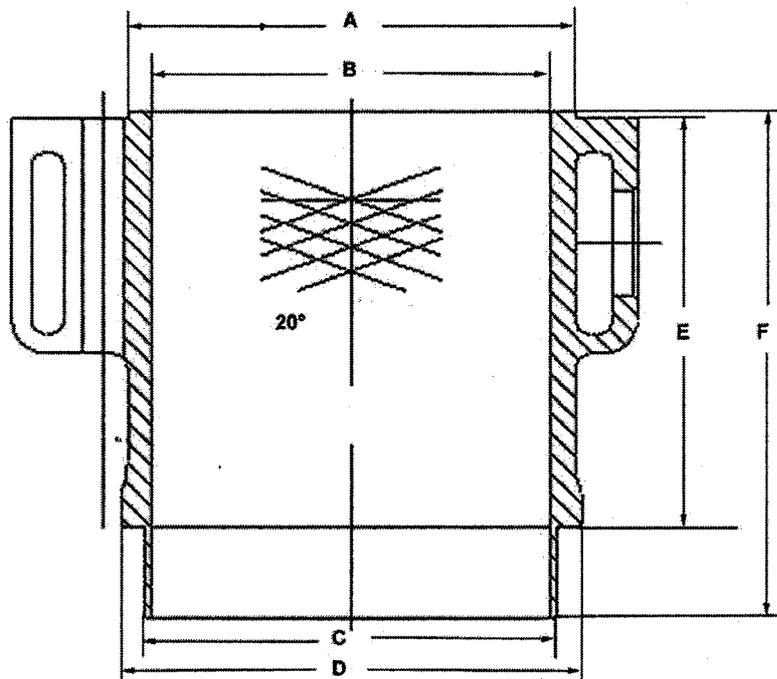
Part. Description	Dimension		
	Original max. mm	min. mm	max. Limit mm
Excentric shaft 	16.056	16.045	16.000
Main bearing housing 	15/18W 32W 15/18W 32W	80.046 99.982 79.986 99.982 100.035 128.027	80.000 99.967 100.010 128.000
Angle ring 	15/18W 32W	60.000 65.000	53.810 64.810 renew if scored

MEASUREMENT TABLE, WEAR

4.6 CONNECTING ROD

Part. Description	Dimension				
	Original max. mm	min. mm	max. Limit mm		
Piston pin 	22.000	21.996	renew if scored		
	26.000	25.996			
Connecting rod with bearings 	15/18W 32W	43.666 51.619	43.650 51.600	renew if scored	
	15/18W 32W	24.986 29.013	24.974 29.000		
	15/18W 32W	25.075 29.075	25.035 29.035		
	15/18W 32W	22.050 26.109	22.030 26.045		
	15/18W 32W	0.030 0.030	0.060 0.060		0.110 0.120
	inner diameter only to be checked via radial bearing play:				
	Both bearing shells will have to be renewed when the galvanically applied layer "B" wears off (recognisable on shiny gold-bronze color) and/or when scoring appears around circumference.				
	15/18W 32W				
	0.030 0.060 0.110 0.030 0.060 0.120				

4.7 CYLINDER LINER

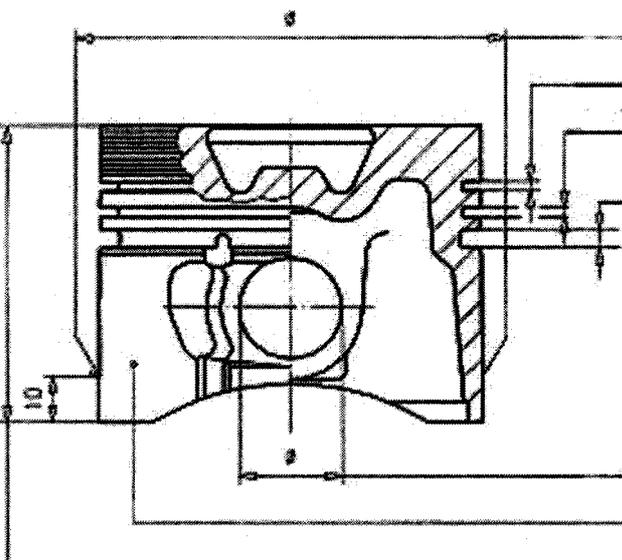
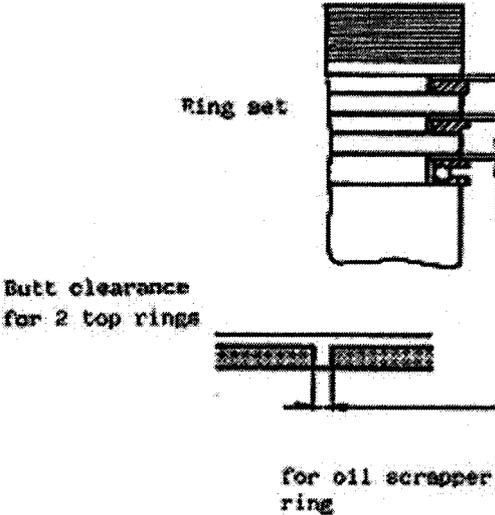


Dimensions :

	15W	18W	32W
A	92 -0,05	92 -0,05	109,2 -0,1
B	75,050 - 75,030	82,050 - 82,030	95,040 - 95,020
C	78,8 -0,1	85,0 -0,2	100,5 -0,2
D	95 -0,036 /-0,071	95 -0,036 /-0,071	117 -0,1 / -0,15
E	86,75 -0,025	86,75 -0,025	111,2 -0,025
F	105,75 -0,1	105,75 -0,1	138,2

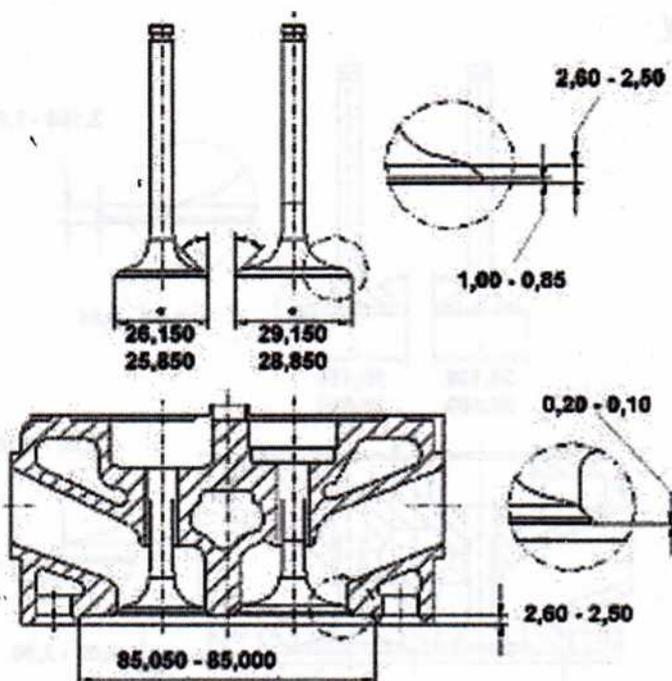
MEASUREMENT TABLE, WEAR

4.9 PISTON 32W

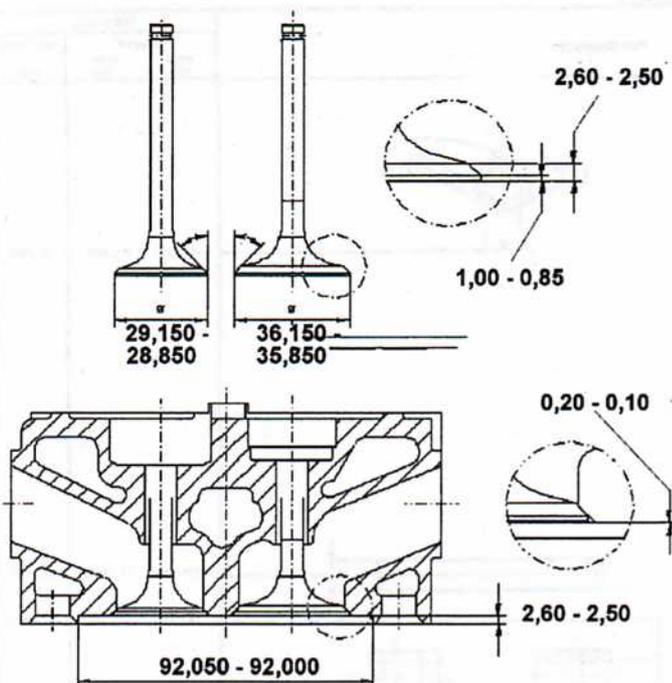
Part. Description	Dimension		
	max. mm	Original min. mm	max. Limit mm
	94.947	94.933	
	2.100	2.080	
	2.060	2.040	
	4.060	4.040	
	26.008	26.003	renew if longitudinally scored
	0.125	0.090	0.15
	0.085	0.050	0.13
	0.085	0.050	0.13
	0.650	0.400	1.1
	0.450	0.250	1.1
<p>Butt clearance are caused by piston ring wear and wear of cylinder liner surface. We recommend always to exchange cylinder liner, piston and rings together.</p>			

4.10 CYLINDER HEAD 15/18W

Cylinder head 15W



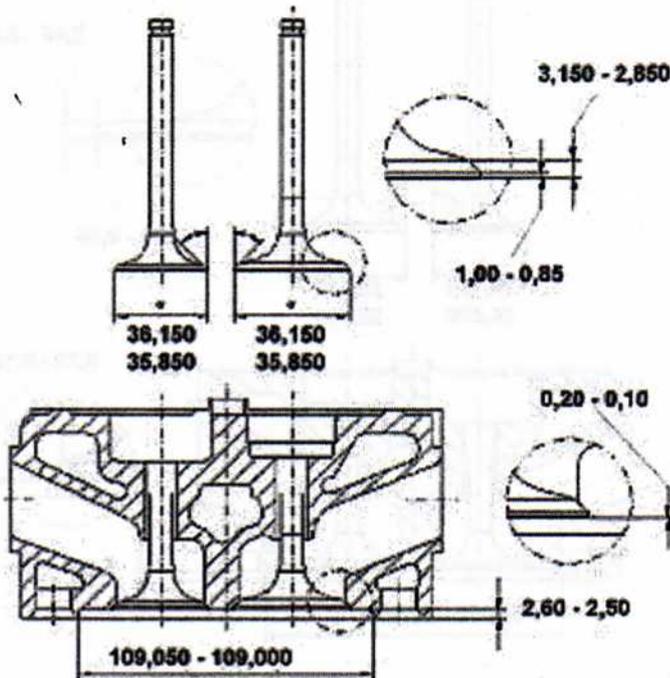
Cylinder head 18W



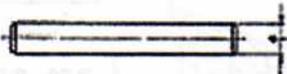
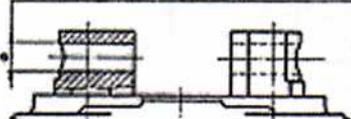
MEASUREMENT TABLE, WEAR

4.11 CYLINDER HEAD 32W

Cylinder head 32W



Rocker arm 15/18/32W

Part Description	Dimension		
	Original max. mm.	min. mm.	max. Limit mm.
	12,016	12,000	12,000
	11,904	11,956	11,962
	12,010	12,000	12,000