

# Fan

Change: Several types added

Job No.

20-12

The fan is fixed to the water pump, or to a fan bearing bracket, or to the belt pulley on the crankshaft depending on the type version.

The kind of mounting depends on the location of the radiator.

Model	Fan Mounting	on the engines of type				
OM 636	on the belt pulley of the water pump (see Figure page 27)	636. { 915 916 918 931 932 933 936 938 940	636.917- { 000 001 021 023 040 090 180 190 221 222 223 240 251	636.917- { 252 253 260 261 271 272 273 274 280 290 300 310 320 330 350 360 370** 390 391 400 410 411 430 440	636.917/ { 0* 2 3 4 5 9 10 12 14 15 17 18	636.917/ { 19 20 23 24 25 26 27 29 30 31 32 33
	on the belt pulley of fan bearing bracket (see Figure page 33)	636. { 919 930 934 935 937 939	636.917- { 022 224 225 254 340 370* 380 420	636.917/28  * up to engine No. 636.917-370-034 607		
	on the outer belt pulley of the crankshaft (see Figure 20-12/1 and Figure page 36)	636. { 912 914	636.917-270	and 636.917/0 version K		
	Depending on the intended use, the engines without fan are provided with: Circulation cooling with heat exchanger and water pump, or Circulation cooling with heat exchanger and centrifugal pump and water pump (see Job No. 20-3).					
OM 621	on belt pulley of water pump (refer to Figure page 37)	621 { 910 912 913 914				

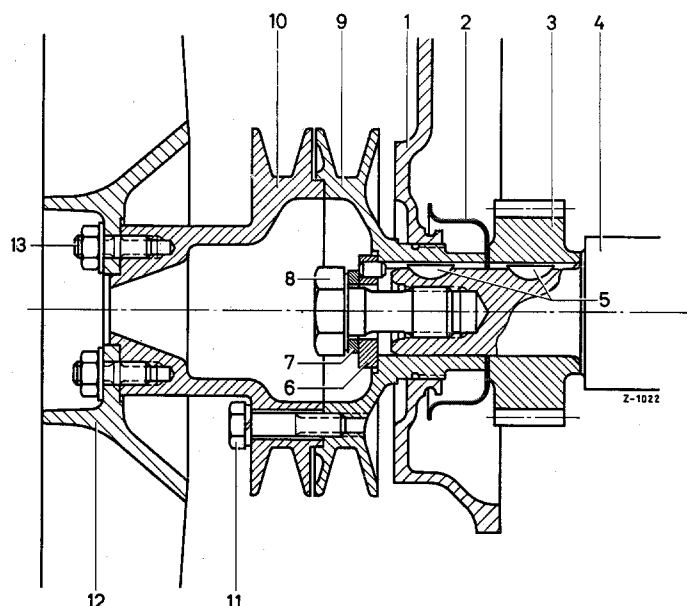


Figure 20-12/1

Fan mounted to the outer pulley on the crankshaft OM 636

- 1 Timing gear housing cover
- 2 Oil baffle plate
- 3 Crankshaft sprocket
- 4 Crankshaft
- 5 Woodruff key
- 6 Washer with pin
- 7 Lock washer
- 8 Necked down bolt Part No. 636 031 00 71
- 9 Pulley Part No. 636 206 01 10 for generator and water pump drive
- 10 Pulley Part No. 636 200 00 05 for air compressor drive
- 11 Hex. hd. screw
- 12 Fan
- 13 Hex. nut with spring washer

As of now, the newly developed 6-blade electron fan Part No. 636 205 04 06 is used for the engines of the type

636.917- { 090  
180  
251  
260  
261  
270  
290  
350  
390  
391  
400

and/or { 10  
636.917/ { 19  
30

The new electron fan is considerably lighter than the sand-casting fan previously used, and therefore it can be recommended for installation in place of the sand-casting fan. The characteristic features of the two versions are shown in Figure 20-12/2.

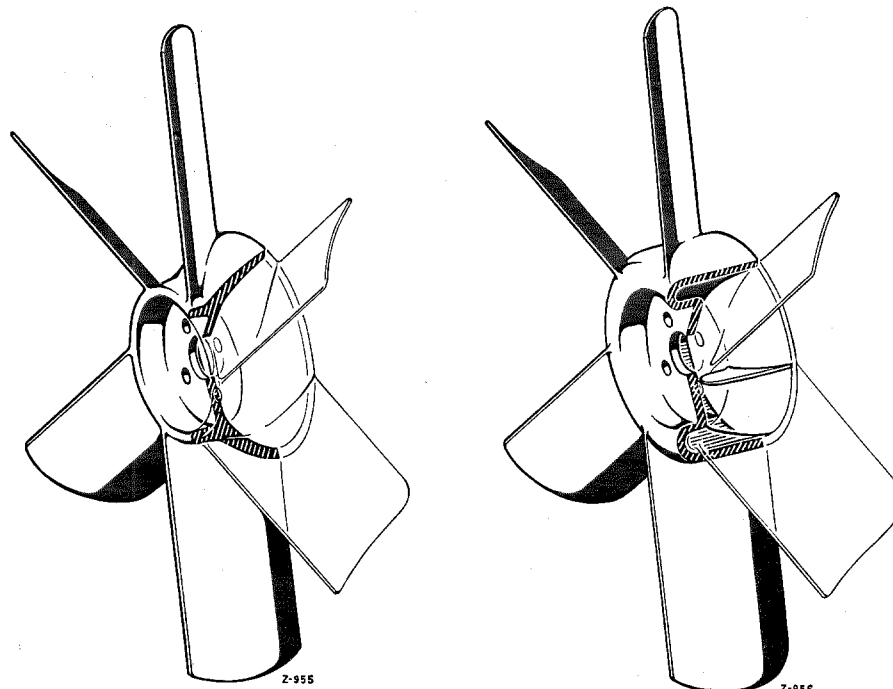


Figure 20-12/2

Aluminum Version (sand casting)  
Part No. 636 205 00 06  
Final weight approx. 1200 grams

Electron Version (die casting)  
Part No. 636 205 04 06  
Final weight approx. 745 grams  
dynamically balanced,  
max. unbalance 15 cmg

The fan is mounted either by hex. hd. screws, or cylinder head screws (23), or stud bolts and hex. nuts. The nuts or screws, resp., are secured by lock washers. On the version according to Figure 20-8/14, a spacer washer (22) of the thickness of 4 mm, or 8 mm or 11 mm is mounted between the fan (21) and the pulley (1). With the help of the spacer (22), the distance between fan and radiator can be corrected (see Fig. 20-8/14).

In order to obtain the required distance of approx. 12 to 14 mm between the fan and the radiator at the engines of the type versions

636.	<div> <div>915</div> <div>916</div> <div>917</div> <div>918</div> <div>931</div> </div>	636.917-	<div> <div>000</div> <div>001</div> <div>190</div> <div>221</div> <div>222</div> <div>223</div> <div>224</div> <div>225</div> <div>271</div> </div>	636.917-	<div> <div>272</div> <div>273</div> <div>274</div> <div>280</div> <div>300*</div> <div>310</div> <div>320**</div> <div>330</div> <div>410</div> <div>411</div> <div>440</div> </div>
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\* up to engine No. 636.917-300-043 957

\*\* up to engine No. 636.917-320-039 277

spacer rings of the following dimensions are available:

Part No. 181 205 04 52	8 mm thick, 66 mm outer dia.
Part No. 181 205 05 52	4 mm thick, 66 mm outer dia.
Part No. 181 205 06 52	11 mm thick, 66 mm outer dia.

For the engines of the type versions

636.917-	<div> <div>090</div> <div>180</div> <div>240</div> <div>251</div> <div>252</div> <div>253</div> <div>254</div> <div>260</div> <div>280</div> <div>290</div> <div>300*</div> <div>320**</div> <div>350</div> <div>390</div> <div>391</div> <div>420</div> </div>	636.917/	<div> <div>10</div> <div>19</div> <div>25</div> <div>30</div> <div>31</div> <div>32</div> </div>
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use spacer ring Part No. 636 205 00 52 which is 11 mm thick and has an outer diameter of **64 mm**.

\* as from engine No. 636.917-300-043 958

\*\* as from engine No. 636.917-320-039 278

For engines of type versions 636.917-261 use compensating washer part No. 636 205 03 52 having a thickness of 14 mm and an outer diameter of 64 mm.

For the engines of the type versions

636.917-	<div> <div>021</div> <div>022</div> <div>023</div> <div>040</div> <div>050</div> <div>120</div> <div>270</div> <div>340</div> <div>360</div> <div>370</div> <div>400</div> <div>420</div> </div>	636.	<div> <div>932</div> <div>933</div> <div>936</div> </div>	636.917/	<div> <div>3</div> <div>5</div> <div>6</div> <div>13</div> <div>25</div> <div>28</div> <div>33</div> </div>
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a spacer ring was not provided.

For engines of type versions

636.917	<div> <div>254</div> <div>380</div> </div>
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use compensating washer part No. 636 205 02 26 having a thickness of 8 mm and an outer diameter of **65 mm**.

List of installed fans (refer to page 20-12/4).

# **List of Installed Fans**

Model	Part No. (Weight in grams)	O. D. in mm	Number of Blades	Installed in the engines with type designation
OM 636	636 205 00 06 (1200)	384	6	636.917 { 2 9
	636 205 01 06 (452)	430	4	636. { 919 934
	636 205 04 06 (745)	384	6	639.914 { 090 180 251 260 261 270* 290 350 390 391 400 636.917/ { 10 19 30 and in the engines of type designation 636.917/0, versions B, D, E, G and K. * as from engine No. 636.917-270-045 316
	636 205 06 06 (590)	384	4	636.917- { 240 252 253 254 261 300 320 636.917/ { 25 31 32
	136 205 08 06 (820)	380	4-blade blower	636.914 { 221 222 224 225 226 227 270* 271 272 273 274 380 410 411 440 636.917- { 23 29 and in the engines of type 636.917/0 Versions: L, M, N, O, P, V. * as from engine No. 636.917-270-045 315
	181 205 08 06 (415)	400	4	636. { 930 935 636. { 917/17 917-340 917-370* 917-420 * up to engine No. 636.917-370-034 607
	181 200 01 22 (430)	380	4	636. { 915 916 918 931 636.917- { 000 001 190 223 280 310 330 636.917/ { 12 14 15 20 23 25 and in the engines of type designation 636.917/0 Versions: A, C, H, Q, R, S, T, U, W, X, Y, Z.
	636 200 00 24 (1500)	400	6	636.917/18
	The engines of these types are delivered without fan ex DB- Plant Untertürkheim.	-	-	636. { 912 914 932 933 936 937 938 939 940 636.917- { 021 022 023 040 050 120 360 636.917/ { 3 4 5 6 11 13 16 21 22 24 26 27 28 33
OM 621	636 205 01 06 (452)	430	4	621.910 (for water pump with 4 attachment holes)
	180 205 02 06 (450)	430	4	621. { 910 912 914 (for water pump with 3 attachment holes)
	186 205 03 06 (480)	460	4	621.913