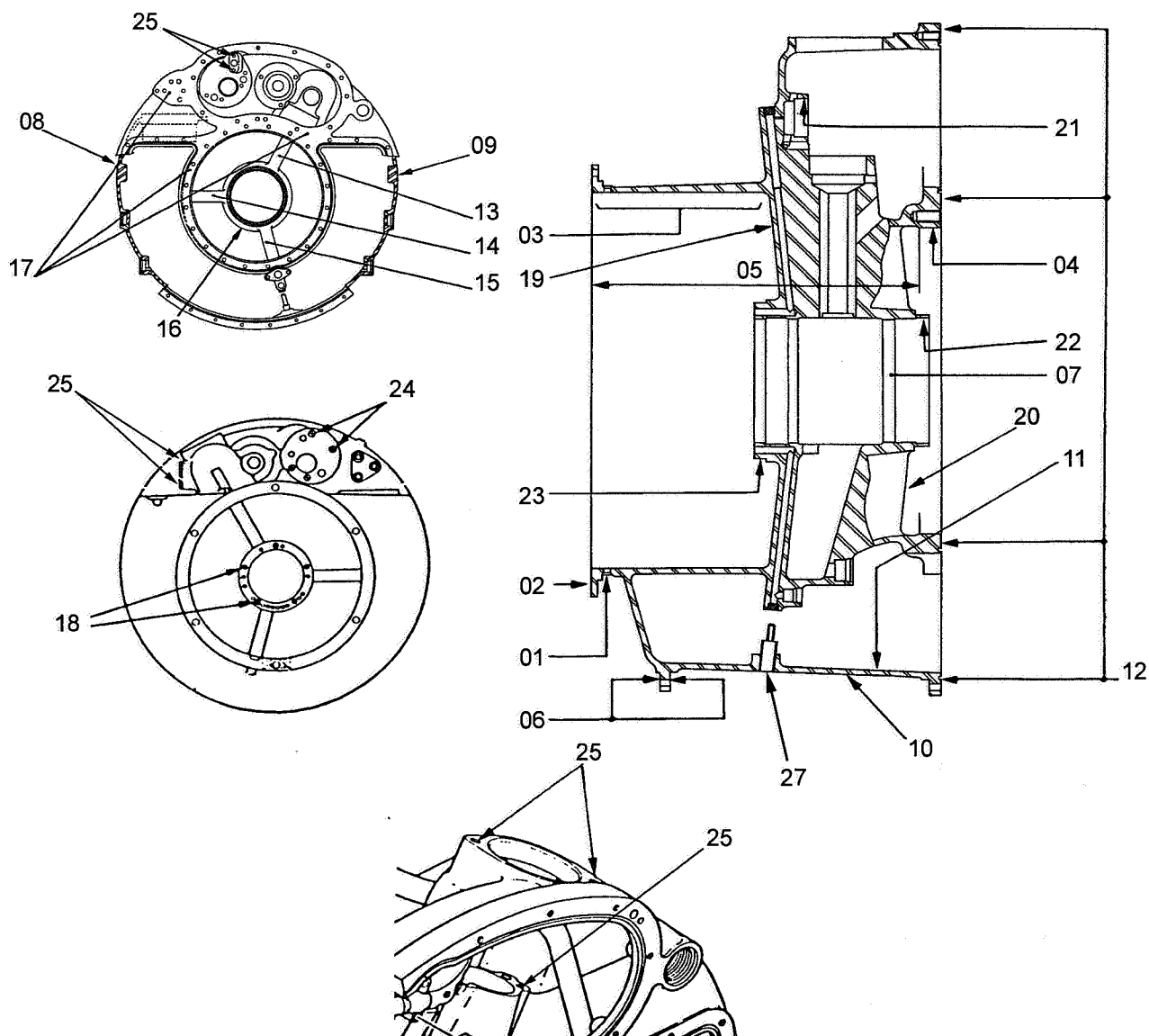


**TURBOMECA  
MAKILA  
OVERHAUL MANUAL**

2. Table of visual and view-room checks

A. AIR INTAKE CASING						ITEM: 0522	
REMARKS: "Magnesium" version (pre-mod. TU82)						FIGURE: 301	
HEALTH INSPECTION: CTB Task 70-30-53-230-801 (W2), Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
01	Corrosion	083	Any value		x	x	SP-0522-04 SP-0522-03
	Dimension beyond maxi. Criteria	109	Diameter > 7 mm			x	SP-0522-07
02	Corrosion	083	Depth < 1 mm		x	x	SP-0522-04 SP-0522-03
			Depth > 1 mm		x	x	RP-0522-03 SP-0522-03
03	Corrosion	083	Depth ≤ 2 mm		x	x	SP-0522-04 SP-0522-03
04	Corrosion	083	Max. depth 1 mm, continuous over 90° of circumference		x		SP-0522-04 SP-0522-03
			Max. depth 3 mm, continuous over 120° of circumference		x	x	RP-0522-03 SP-0522-03
05	Corrosion	083	Depth ≤ 2 mm		x	x	SP-0522-04 SP-0522-03
06	Corrosion	083	Maximum total depth of both faces = ½ flange		x	x	SP-0522-04 SP-0522-03
07	Contact wear	184	Diameter within tolerances		x	x	Chromating with pad CTB Task 70-41-76-330)
07	Dimension beyond maxi. Criteria	109	Diameter > 91.022 mm		x	x	RP-0522-01

# TURBOMECA MAKILA OVERHAUL MANUAL



## LOCATION OF FINDINGS

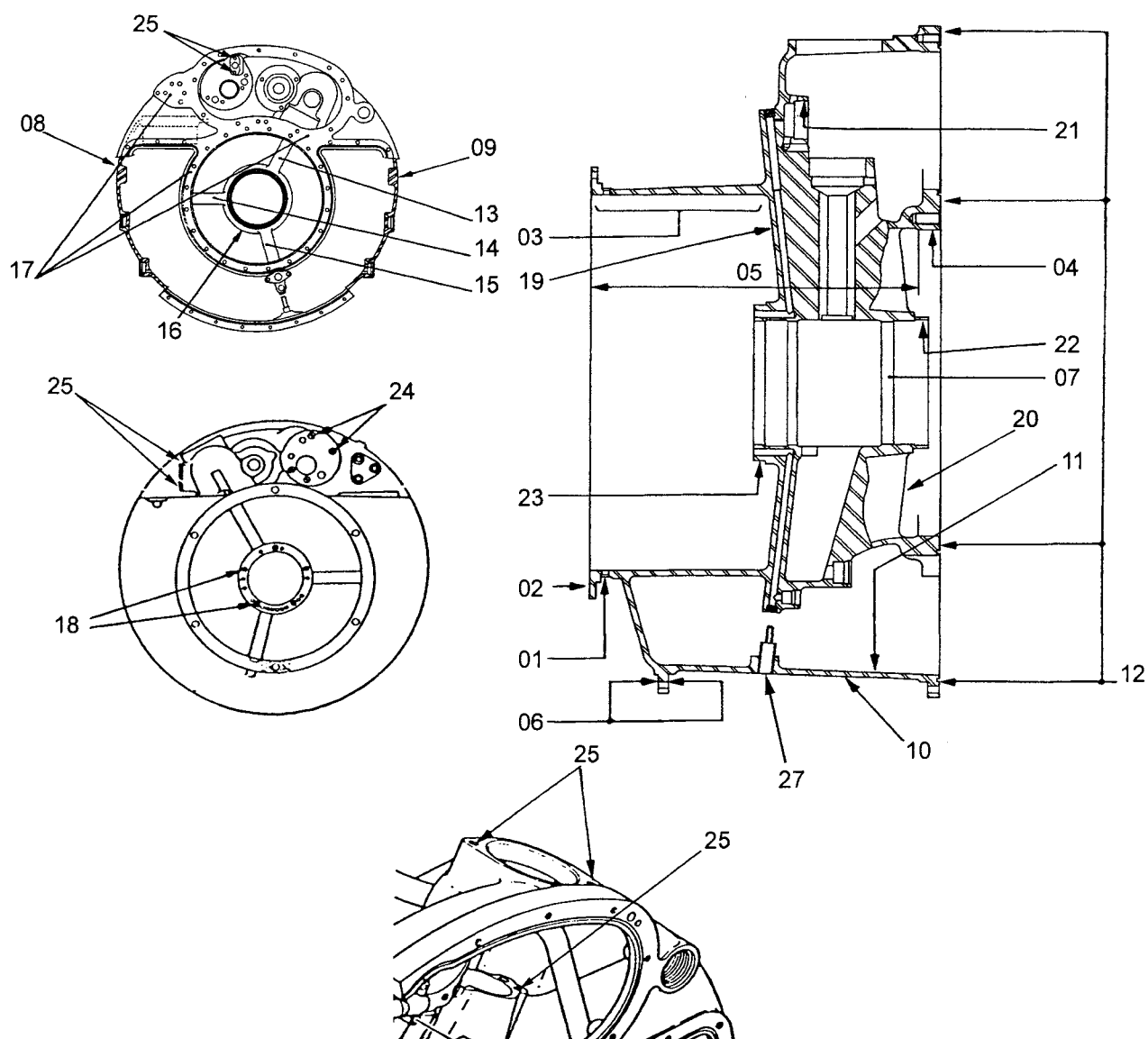
- |   |                                     |
|---|-------------------------------------|
| 01 - Bottom attachment of cleaning manifold | 14 - RH strut profile               |
| 02 - Front face of front flange             | 15 - Lower strut profile            |
| 03 - Air path front zone                    | 16 - Outside of hub                 |
| 04 - Counter-casing centering piece         | 17 - Front and rear sealing faces   |
| 05 - Air path                               | 18 - Thread insert tapping 5 x 0.80 |
| 06 - Front engine mount fixing tab          | 19 - Upper strut leading edge       |
| 07 - Rear centering of complete hub         | 20 - Strut trailing edge            |
| 08 - Outer casing, LH side                  | 21 - Housing of bearing "6001"      |
| 09 - Outer casing, RH side                  | 22 - Seal recess (CA 38066)         |
| 10 - Outer casing, bottom point             | 23 - Inlet cone centering           |
| 11 - Inner casing, rear zone bottom point   | 24 - Thread insert tapping 7 x 1.00 |
| 12 - Inner edge of rear flange rear face    | 25 - Thread insert tapping 5 x 0.80 |
| 13 - Upper strut profile                    | 26 - Not used                       |
|   | 27 - Shank end screw                |

Figure 301 - Inspection of air intake casing pre-mod. TU82

**TURBOMECA  
MAKILA  
OVERHAUL MANUAL**

A. AIR INTAKE CASING (continued)						ITEM: 0522	
REMARKS: "Magnesium" version (pre-mod. TU82)						FIGURE: 301	
HEALTH INSPECTION: CTB Task 70-30-53-230-801 (W2), Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
08	Paint flaking	509	With no traces of corrosion		x	x	SP-0522-03
			With traces of corrosion		x	x	SP-0522-04 + SP-0522-03
09	Paint flaking	509	With no traces of corrosion		x	x	SP-0522-03
			With traces of corrosion		x	x	SP-0522-04 + SP-0522-03
10	Paint flaking	509	With no traces of corrosion		x	x	SP-0522-03
			With traces of corrosion		x	x	SP-0522-04 + SP-0522-03
11	Corrosion	083	Max. depth: ½ thickness		x	x	SP-0522-04 + SP-0522-03
	Paint flaking	509	With no traces of corrosion		x	x	SP-0522-03
			With traces of corrosion		x	x	SP-0522-04 + SP-0522-03
12	Corrosion	083	Any value		x	x	Smoothing/trimming + chromate treatment with pad (CTB Task 70-41-76-330)
13	Corrosion	083	Max. depth = 2 mm		x	x	SP-0522-04 + SP-0522-03
14	Corrosion	083	Max depth = 2 mm		x	x	SP-0522-04 + SP-0522-03
15	Corrosion	083	Max depth = 2 mm		x	x	SP-0522-04 + SP-0522-03

# TURBOMECA MAKILA OVERHAUL MANUAL



## LOCATION OF FINDINGS

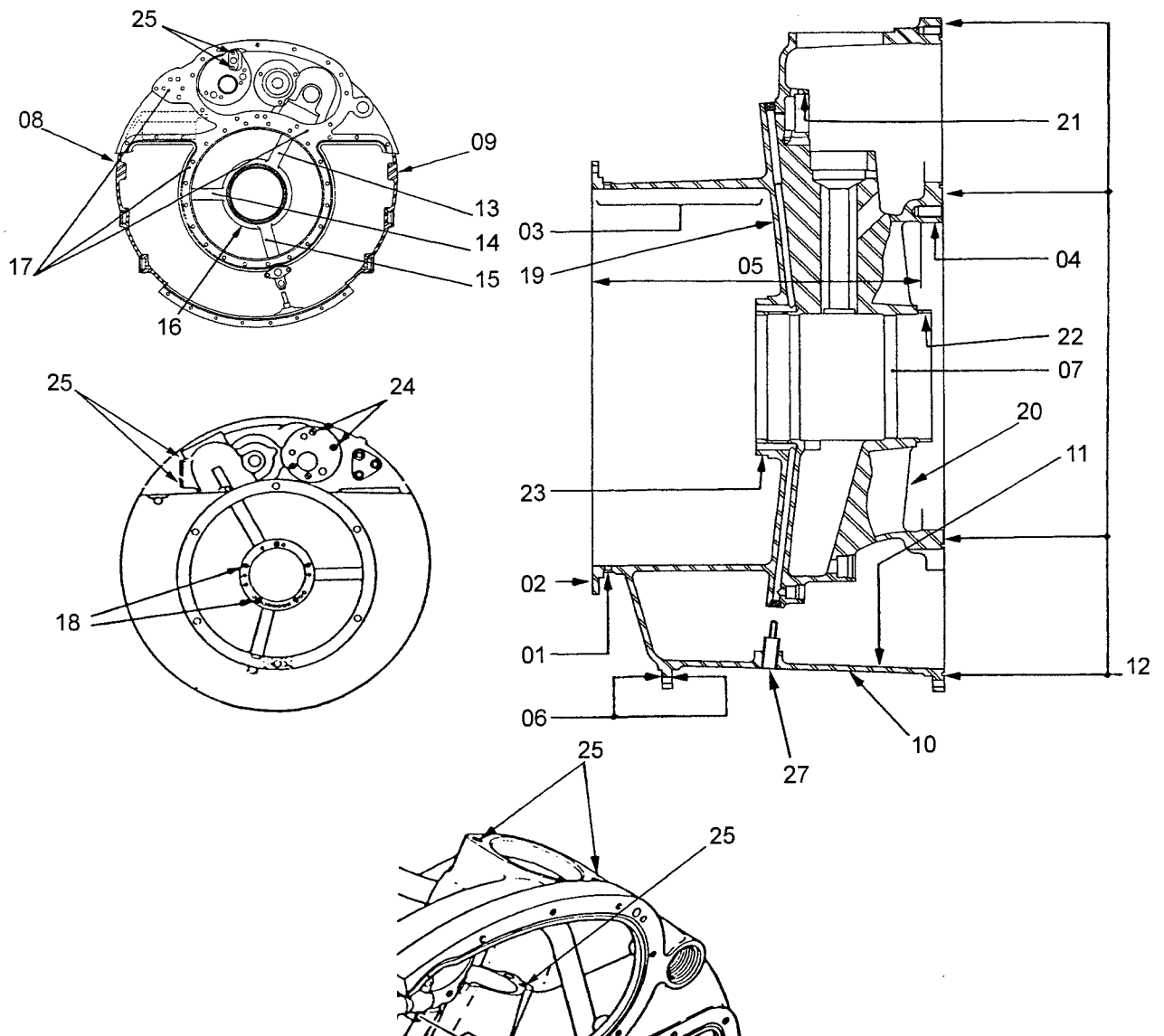
- |   |                                     |
|---|-------------------------------------|
| 01 - Bottom attachment of cleaning manifold | 15 - Lower strut profile            |
| 02 - Front face of front flange             | 16 - Outside of hub                 |
| 03 - Air path front zone                    | 17 - Front and rear sealing faces   |
| 04 - Counter-casing centering piece         | 18 - Thread insert tapping 5 x 0.80 |
| 05 - Air path                               | 19 - Upper strut leading edge       |
| 06 - Front engine mount fixing tab          | 20 - Strut trailing edge            |
| 07 - Rear centering of complete hub         | 21 - Housing of bearing "6001"      |
| 08 - Outer casing, LH side                  | 22 - Seal recess (CA 38066)         |
| 09 - Outer casing, RH side                  | 23 - Inlet cone centering           |
| 10 - Outer casing, bottom point             | 24 - Thread insert tapping 7 x 1.00 |
| 11 - Inner casing, rear zone bottom point   | 25 - Thread insert tapping 5 x 0.80 |
| 12 - Inner edge of rear flange rear face    | 26 - Not used                       |
| 13 - Upper strut profile                    | 27 - Shank end screw                |
| 14 - RH strut profile                       |                                     |

Figure 301 - Inspection of air intake casing pre-mod. TU82

**TURBOMECA  
MAKILA  
OVERHAUL MANUAL**

A. AIR INTAKE CASING (Continued)						ITEM: 0522	
REMARKS: "Magnesium" version (pre-mod. TU82)						FIGURE: 301	
HEALTH INSPECTION: CTB Task 70-30-53-230-801 (W2), Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
16	Corrosion	083	Max. depth = 2 mm		x	x	SP-0522-04 + SP-0522-03
17	Flaking	509	If sealing is uncertain		x	x	SP-0522-06
18	Stripping	516	If thread insert only		x	x	SP-0522-05
19	Corrosion	083	If casing damaged		x	x	RP-0522-04
			Maximum depth = 2 mm		x	x	SP-0522-04 + SP-0522-03
20	Corrosion	083	Depth > 2 mm		x	x	Rejection
			Maximum depth = 2 mm		x	x	SP-0522-04 + SP-0522-03
21	Dimension beyond maxi. Criteria	109	Depth > 2 mm		x	x	Rejection
			Any value (theoretical $\varnothing 28^{+0.002}_{-0.011}$ )		x	x	RP-0522-07
<u>NOTE:</u> If the casing is not modified according to CA 38066, it is possible to modify it by applying SI 38066 - Refer to page 1400 of this chapter.							
22	Corrosion	083	Any extent		x	x	RP-0522-09
23	Corrosion	083	Any extent		x	x	RP-0522-08
24	Stripping	516	If thread insert only is damaged		x	x	SP-0522-05
25	Stripping	516	If casing damaged		x	x	RP-0522-10
			If thread insert only is damaged		x	x	SP-0522-05
			If casing damaged		x	x	RP-0522-04

# TURBOMECA MAKILA OVERHAUL MANUAL



## LOCATION OF FINDINGS

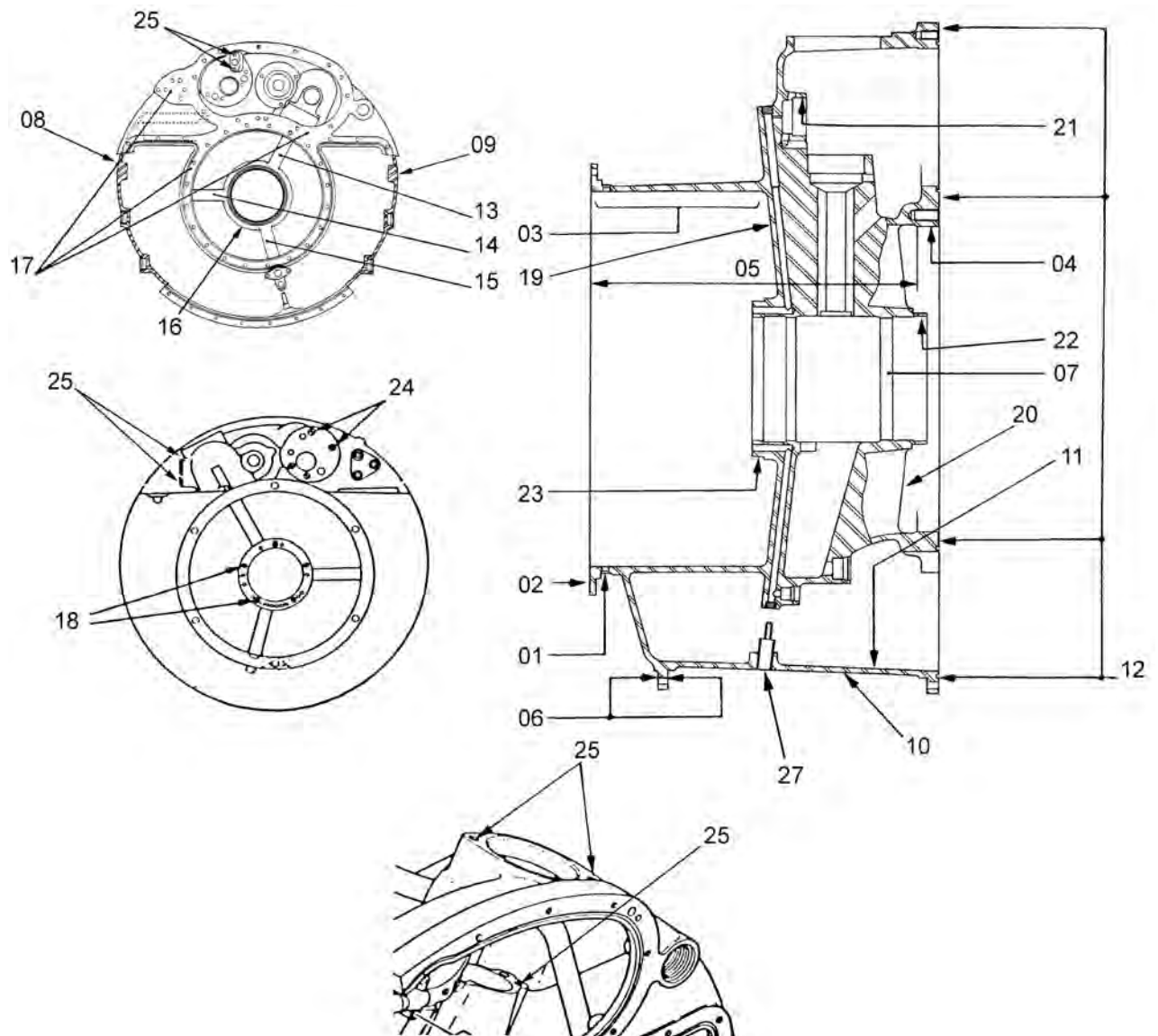
- |   |                                     |
|---|-------------------------------------|
| 01 - Bottom attachment of cleaning manifold | 15 - Lower strut profile            |
| 02 - Front face of front flange             | 16 - Outside of hub                 |
| 03 - Air path front zone                    | 17 - Front and rear sealing faces   |
| 04 - Counter-casing centering piece         | 18 - Thread insert tapping 5 x 0.80 |
| 05 - Air path                               | 19 - Upper strut leading edge       |
| 06 - Front engine mount fixing tab          | 20 - Strut trailing edge            |
| 07 - Rear centering of complete hub         | 21 - Housing of bearing "6001"      |
| 08 - Outer casing, LH side                  | 22 - Seal recess (CA 38066)         |
| 09 - Outer casing, RH side                  | 23 - Inlet cone centering           |
| 10 - Outer casing, bottom point             | 24 - Thread insert tapping 7 x 1.00 |
| 11 - Inner casing, rear zone bottom point   | 25 - Thread insert tapping 5 x 0.80 |
| 12 - Inner edge of rear flange rear face    | 26 - Not used                       |
| 13 - Upper strut profile                    | 27 - Shank end screw                |
| 14 - RH strut profile                       |                                     |

Figure 301 - Inspection of air intake casing pre-mod. TU82

# TURBOMECA MAKILA OVERHAUL MANUAL

A. AIR INTAKE CASING (Continued)						ITEM: 0522	
REMARKS: "Magnesium" version (pre-mod. TU82)						FIGURE: 301	
HEALTH INSPECTION: CTB Task 70-30-53-230-801 (W2), Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
26	- Not used -						
27	Separated	736	Any value		x	x	RP-0522-15
	Breakage	052	Any value		x	x	RP-0522-15

# SAFRAN HELICOPTER ENGINES MAKILA OVERHAUL MANUAL



## LOCATION OF FINDINGS

- |   |                                     |
|---|-------------------------------------|
| 01 - Bottom attachment of cleaning manifold | 15 - Lower strut profile            |
| 02 - Front face of front flange             | 16 - Outside of hub                 |
| 03 - Air path front zone                    | 17 - Front and rear sealing faces   |
| 04 - Counter-casing centering piece         | 18 - Thread insert tapping 5 x 0.80 |
| 05 - Air path                               | 19 - Upper strut leading edge       |
| 06 - Front engine mount fixing tab          | 20 - Strut trailing edge            |
| 07 - Rear centering of complete hub         | 21 - Housing of bearing "6001"      |
| 08 - Outer casing, LH side                  | 22 - Seal recess (CA 38066)         |
| 09 - Outer casing, RH side                  | 23 - Inlet cone centering           |
| 10 - Outer casing, bottom point             | 24 - Thread insert tapping 7 x 1.00 |
| 11 - Inner casing, rear zone bottom point   | 25 - Thread insert tapping 5 x 0.80 |
| 12 - Inner edge of rear flange rear face    | 26 - Not used                       |
| 13 - Upper strut profile                    | 27 - Shank end screw                |
| 14 - RH strut profile                       |                                     |

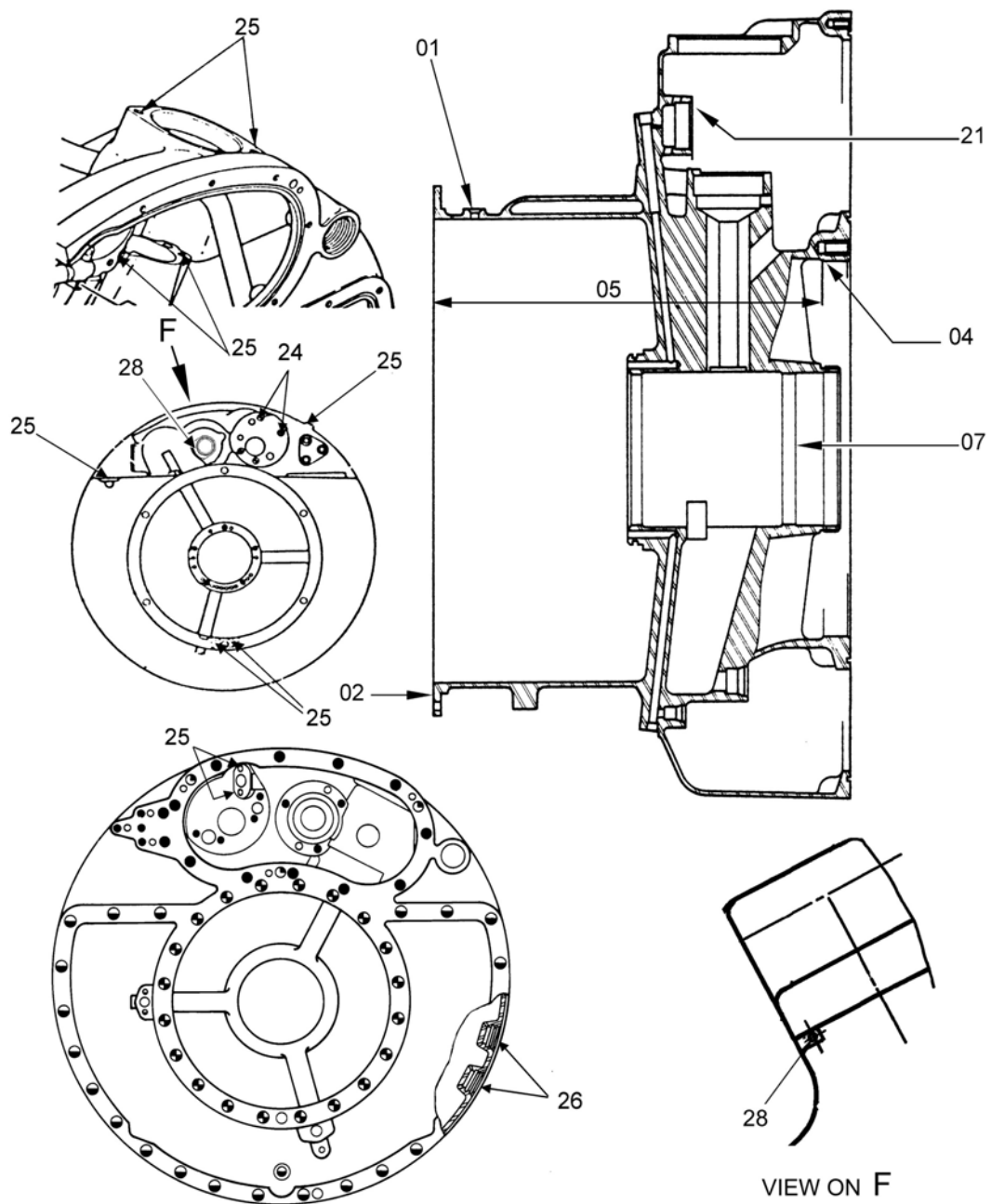
Figure 301 - Inspection of air intake casing pre-mod. TU82



**SAFRAN HELICOPTER ENGINES  
MAKILA  
OVERHAUL MANUAL**

B. AIR INTAKE CASING						ITEM: A522	
REMARKS: "Aluminium" version TU82						FIGURE: 301F	
HEALTH INSPECTION: CTB Task 70-30-53-230-801 (W2), Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
01	Dimension beyond maxi. Criteria	109	Diameter > 7 mm			x	SP-0522-07
02	Corrosion	083	Corrosion depth ≤ 0.2 mm		x	x	Acceptable after chemical conversion (Refer to CTB Task 70-41-56-330-801)
			If more than this limit		x	x	Quarantine
	Chafing	184	Depth ≤ 0.2 mm		x	x	SP-A522-01
			Depth > 0.2 mm		x	x	Quarantine
04	Perpendicularity	415	Air path continuity (air intake casing/counter-casing) ensured Air path continuity not ensured		x	x	Acceptable as such SI 41778 Refer to Chapter 72-01-20, page 1400
04	Corrosion	083	Any extent		x	x	SP-A522-14 + RP-A522-13
05	Peened	433	Max. depth 0.5 mm		x	x	SP-A522-01
07	Chafing	184	Diameter within tolerances		x	x	Chromic acid anodisation with a pad (CTB Task 70-41-56-330-801)
			Diameter > 91.022 mm		x	x	RP-A522-12
21	Dimension beyond maxi. Criteria	109	Any extent		x	x	RP-A522-07
24	Stripping	516	If thread insert only is damaged		x	x	SP-0522-05
			If casing damaged		x	x	RP-0522-10
25	Stripping	516	If thread insert only is damaged		x	x	SP-0522-05
			If casing damaged		x	x	RP-0522-04
26	Flaking	510	Any extent		x	x	SP-A522-12

**SAFRAN HELICOPTER ENGINES**  
**MAKILA**  
**OVERHAUL MANUAL**



LOCATION OF FINDINGS

01 - Cleaning manifold attaching hole  
 02 - Front face of front flange  
 04 - Counter-casing centering  
 05 - Air path  
 07 - Rear centering of complete hub

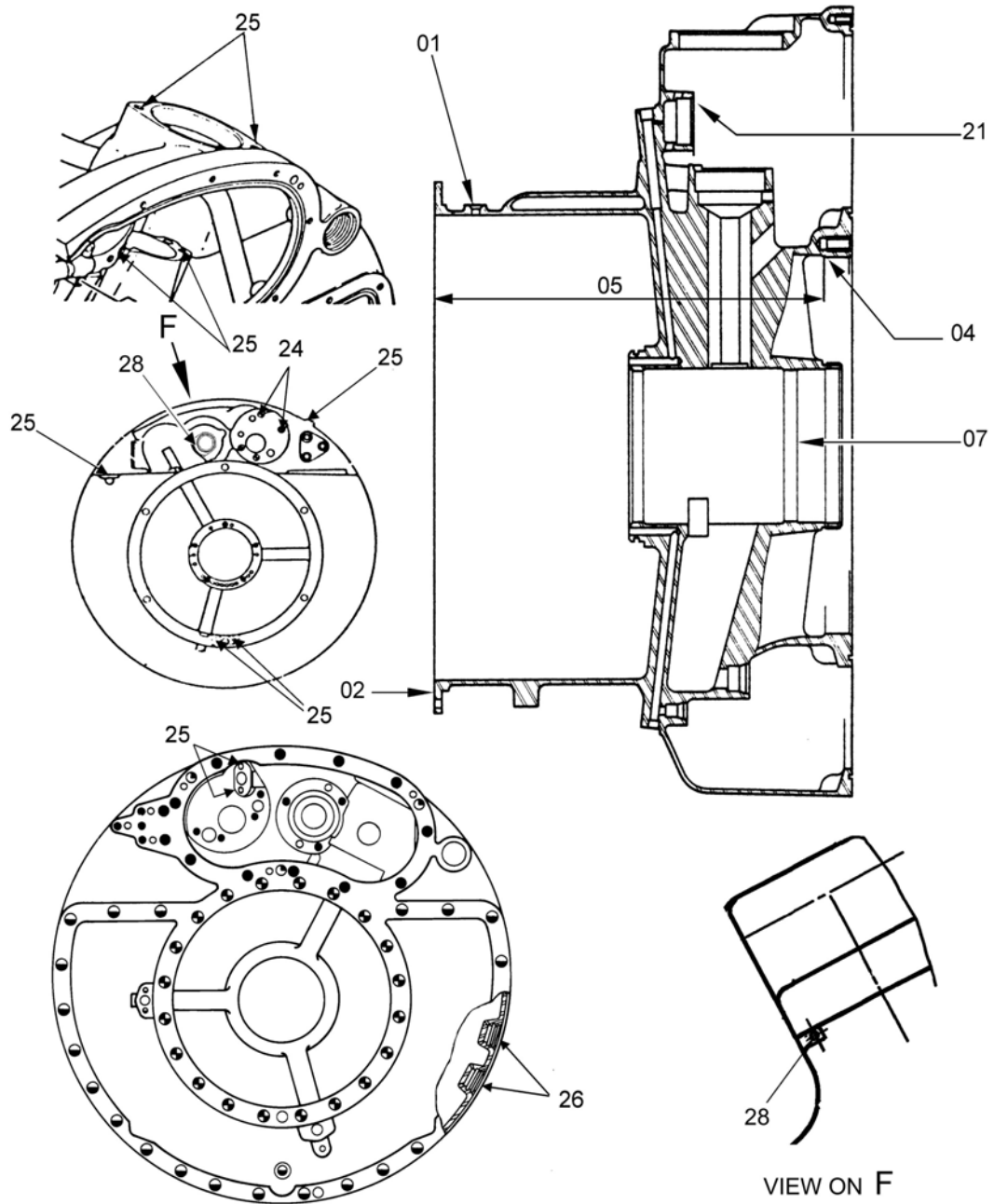
21 - Housing of bearing "6001"  
 24 - Tapping/helicoil 7 x 1.00  
 25 - Tapping/helicoil 5 x 0.80  
 26 - Bottom of oil level sight  
 28 - Hole Ø1.2 mm for lockwire

Figure 301F - Inspection of air intake casing TU82

**SAFRAN HELICOPTER ENGINES  
MAKILA  
OVERHAUL MANUAL**

B. AIR INTAKE CASING						ITEM: A522	
REMARKS: "Aluminium" version TU82						FIGURE: 301F	
HEALTH INSPECTION: CTB Task 70-30-53-230-801 (W2), Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
28	Stripped	516	However stripped		x	x	Drill a through hole Ø1.2 mm adjacent to the existing hole and obey a min. gauze thickness of 1 mm (Refer to Figure 301F) + chemical conversion (Refer to CTB Task 70-41-56-330-801)

**SAFRAN HELICOPTER ENGINES  
MAKILA  
OVERHAUL MANUAL**



LOCATION OF FINDINGS

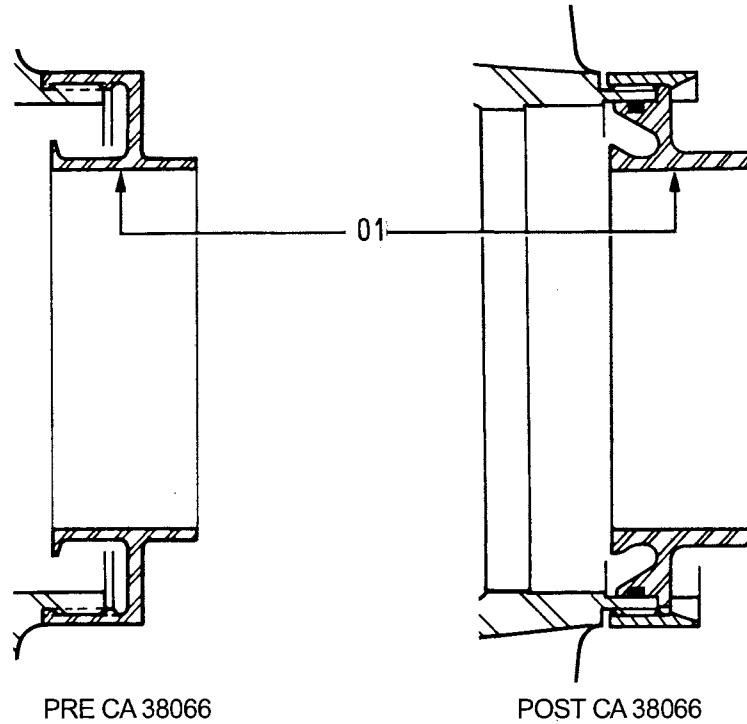
- |                                       |                                |
|---------------------------------------|--------------------------------|
| 01 - Cleaning manifold attaching hole | 21 - Housing of bearing "6001" |
| 02 - Front face of front flange       | 24 - Tapping/helicoil 7 x 1.00 |
| 04 - Counter-casing centering         | 25 - Tapping/helicoil 5 x 0.80 |
| 05 - Air path                         | 26 - Bottom of oil level sight |
| 07 - Rear centring of complete hub    | 28 - Hole Ø1.2 mm for lockwire |

Figure 301F - Inspection of air intake casing TU82

**SAFRAN HELICOPTER ENGINES  
MAKILA  
OVERHAUL MANUAL**

<b>C. AXIAL COMPRESSOR FRONT LABYRINTH RING</b>						<b>ITEM: B522</b>	
<b>REMARKS:</b>						<b>FIGURE: 302</b>	
<b>HEALTH INSPECTION:</b> CTB Task 70-30-53-230-801 (W2), Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
01	Rub	471	Depth $\leq$ 0.1 mm Depth $>$ 0.1 mm Any value		x  x	x	Acceptable  Rejection  Rejection: systematically apply S.I. 38066

**TURBOMECA  
MAKILA  
OVERHAUL MANUAL**



LOCATION OF FINDINGS

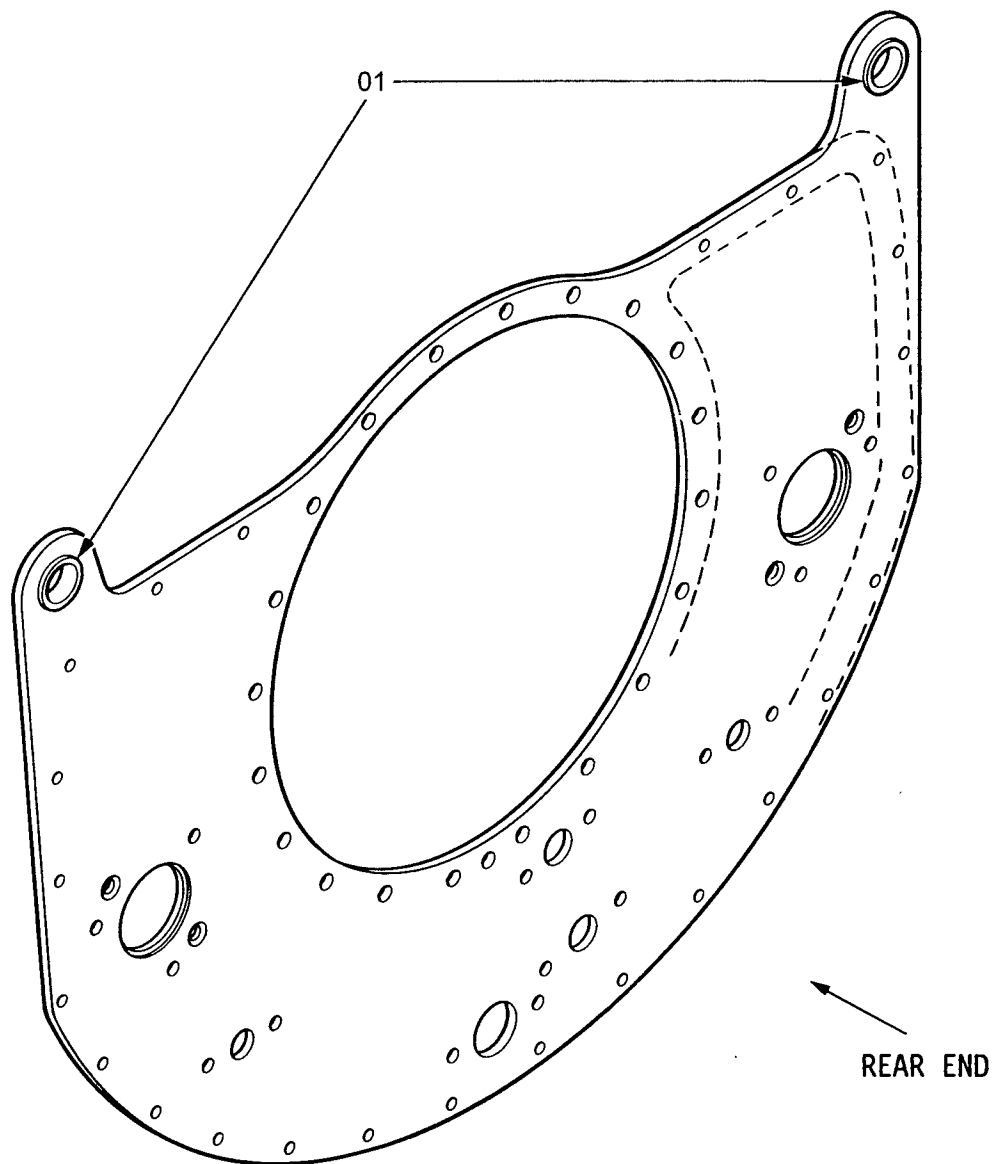
01 - Bore of labyrinth ring

Figure 302 - Inspection of axial compressor front labyrinth ring

# TURBOMECA MAKILA OVERHAUL MANUAL

D. CLOSING PLATE						ITEM: 0675	
REMARKS:						FIGURE: 303	
HEALTH INSPECTION: CTB Task 70-30-53-230-801 - Crack = Rejection							
LOCA	FINDINGS	CODE	CRITERIA		REP.	O/H	ACTION
01	Distorted (folding)	116	Plate not removed: max. fold angle = 15°		x		Acceptable
			Plate removed		x		SP-0675-01
			Any value			x	SP-0675-01

**TURBOMECA  
MAKILA  
OVERHAUL MANUAL**



LOCATION OF FINDINGS

01- Hoisting rings

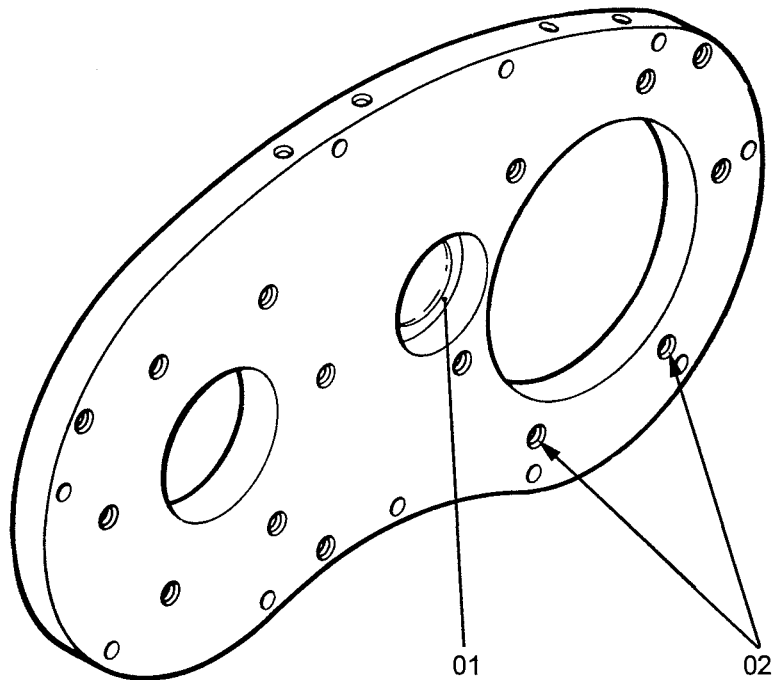
Figure 303 - Inspection of closing plate



# TURBOMECA MAKILA OVERHAUL MANUAL

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**TURBOMECA  
MAKILA  
OVERHAUL MANUAL**



LOCATION OF FINDINGS

- 01 - Bearing housing mating face
- 02 - Thread inserts

Figure 304 - Inspection of complete plate