312595

GETRAG

Part Submission Warrant

Part Name: Output Shaft 1 | Customer Part Number: 250.6.4316.35

Shown on Drawing No.: 250.6.4316.35 | Organization Part #:

Engineering Change Level: h C007260_MIP_1 | Dated: 11-gen-17

Additional Engineering Changes: | Dated:

Safety and/or Government Regulation ☐ Yes ☑ No | Purchase Order No.: | Weight (kg): 1.9700

Checking Aid No.: | Checking Aid Engineering Change Level: | Dated:

ORGANIZATION MANUFACTURING INFORMATION

GETRAG MODUGNO
Organization Name & Supplier/Vendor Code

VIA DEI CICLAMINI N°4
Street Address

MODUGNO BARI 70026 ITALY
City Region Postal Code Country

CUSTOMER SUBMITTAL INFORMATION

Customer Name/Division

Buyer/Buyer Code

DCT250
Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ☐ Yes ☐ No ☑ n/a

Submitted by IMDS or other customer format:

Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☑ n/a

REASON FOR SUBMISSION (Check at least one)

- ☐ Initial Submission
- ☑ Engineering Change(s)
- ☐ Tooling: Transfer, Replacement, Refurbishment, or additional
- ☐ Correction of Discrepancy
- ☐ Tooling Inactive > than 1 year
- ☐ Change to Optional Construction or Material
- ☐ Supplier or Material Source Change
- ☐ Change in Part Processing
- ☐ Parts Produced at Additional Location
- ☐ Other - please specify below

REQUESTED SUBMISSION LEVEL (Check one)

- ☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
- ☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
- ☑ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
- ☐ Level 4 - Warrant and other requirements as defined by customer.
- ☐ Level 5 - Warrant with product samples and complete supporting data reviewed at organization's manufacturing location.

SUBMISSION RESULTS

The results for ☑ dimensional measurements ☑ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ☑ Yes ☐ NO (If "NO" - Explanation Required)

Mold / Cavity / Production Process

DECLARATION

I hereby affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of 2000 / 24 hours. I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.

EXPLANATION / COMMENTS: **Drawing correction with standard Tip diameter tolerance used for topping machining (increased)**

Is each Customer Tool properly tagged and numbered? ☑ Yes ☐ No ☑ n/a

Organization Authorized Signature: | Date: 24/01/2017

Print Name: Camarda Ettore | Phone No.: tel 390805858220 | Fax No.:

Title: Area 1 Manager | E-mail: ettore.camarda@magna.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: ☑ Approved ☐ Rejected ☐ Other

Customer Signature: | Date: 24.01.17

Print Name: | Customer Tracking Number (optional):

March 2006 CFG-1001

GETRAG Production Part Approval

DIMENSIONAL TEST RESULTS

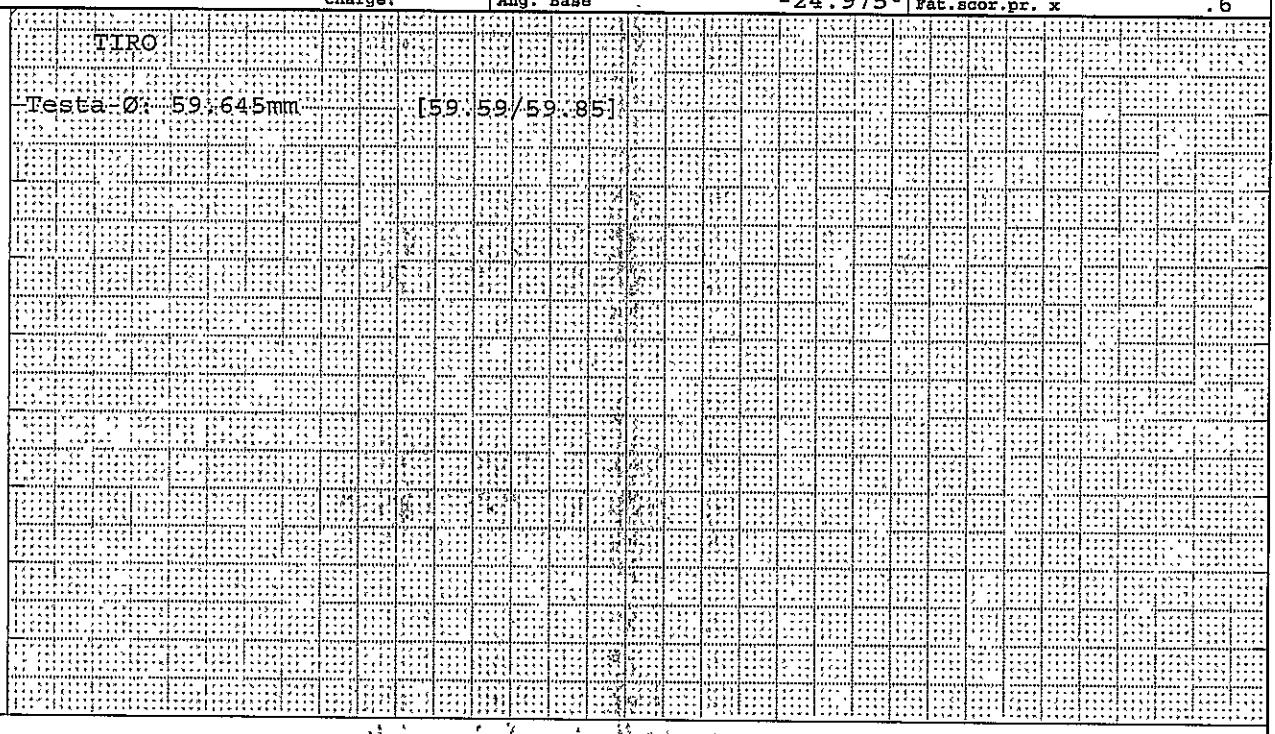
Organization:	GETRAG	Part Number:	250.6.4316.35
Supplier/Vendor Code:	GETRAG Modugno	Part Name:	Output Shaft 1
INSPECTION FACILITY:		Design Record Change Level:	11/01/2017
NA		Engineering Change Documents:	h C007260_MIP_1

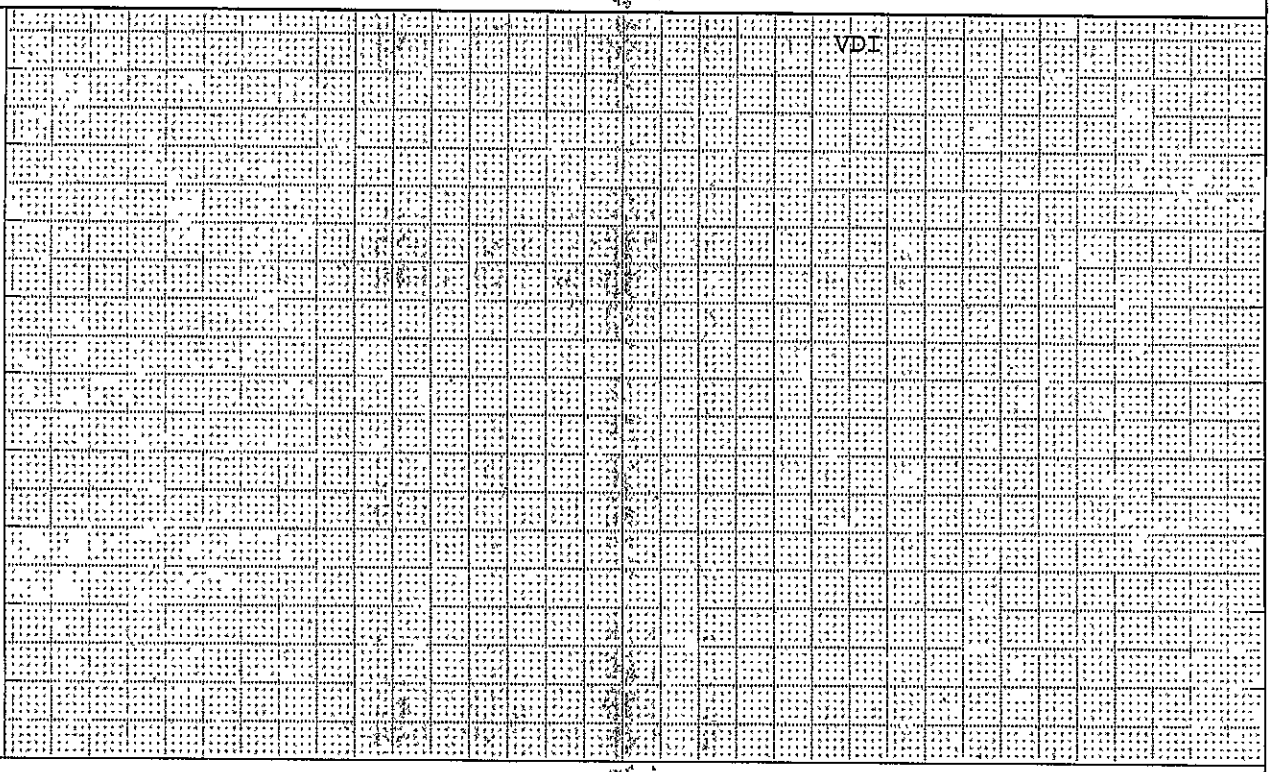
Item	Dimension/Specification	Specification / Limits		Test Date	Qty. Tested	Organization Measurement Results (Data) 1	2	3	4	5	controllo distruttivo	Ok	Not Ok
1	Diametro di testa	59.850	59.590		5	59.645	59.674	59.701	59.753	59.600		ok	

SIGNATURE	TITLE	DATE
Vicenti D.	ME	24/01/2017

Ruota cilindrica Evolvente/Elica

Nr. prog.: STI0412_06 0	P26 B7590	Controllore:	turno a	Data:	24.01.2017 10:52
Denominazione:	Output Shaft 1	Numero denti z	20	Largh.fasc.dent. b	34.42mm
Numero disegno.:	250.6.4316.35-IF	Modulo m	2.3mm	Tratto evolv, La	6.97mm
Commessa/serie nr.:	1	Angolo pressione	20°	Tratto elica Lß	27.54mm
Masch.Nr.:	M001 Spindel: Formnestol	Angolo elica	-26.7°	Inizio elab. M1	5.16mm
Untersuchungszweck:	Laufende Messung	ø Base db	47.6847mm	Palpatore ø	(#2C) 1mm
Werkzeug:	Charge:	Ang. Base	-24.975°	Fat.scor.pr. x	.6





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Ruota cilindrica Evolvente/Elica

Nr. prog.:	STI0412_06 0 P26 B7590	Controllore:	turno a	Data:	24.01.2017 10:53
Denominazione:	Output Shaft 1	Numero denti z	20	Largh.fasc.dent. b	34.42mm
Numero disegno.:	250.6.4316.35-IF	Modulo m	2.3mm	Tratto evolv. La	6.97mm
Commessa/serie nr.:	2	Angolo pressione	20°	Tratto elica Lß	27.54mm
Masch.Nr.:	M001 Spindel: Formmestol	Angolo elica	-26.7°	Inizio elab. M1	5.16mm
Untersuchungszweck:	Laufende Messung	Ø Base db	47.6847mm	Palpatore Ø	(#2C) 1mm
Werkzeug:	Charge:	Ang. Base	-24.975°	Fat.scor.pr. x	.6

TIRO

Testa-Ø: 59.674mm [59.59/59.85]

VDI

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Ruota cilindrica Evolvente/Elica

Nr. prog.: STI0412_06_0	P26 B7590	Controllore:	turno a	Data:	24.01.2017 10:55
Denominazione:	Output Shaft 1	Numero denti z	20	Largh.fasc.dent. b	34.42mm
Numero disegno.:	250.6.4316.35-IF	Modulo m	2.3mm	Tratto evolv. La	6.97mm
Commessa/serie nr.:	3	Angolo pressione	20°	Tratto elica Lß	27.54mm
Masch.Nr.:	M001 Spindel: Formmaschine	Angolo elica	-26.7°	Inizio elab. M1	5.16mm
Untersuchungszweck:	Laufende Messung	Ø Base db	47.6847mm	Palpatore Ø	(#2C) 1mm
Werkzeug:	Charge:	Ang. Base	-24.975°	Fat.scor.pr. x	.6

TIRO

Testa-Ø: 59.701mm [59.59/59.85]

VDI

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Ruota cilindrica Evolvente/Elica

Nr. prog.: STI0412_06 0	P26 B7590	Controllore:	turno a	Data:	24.01.2017 10:56
Denominazione:	Output Shaft 1	Numero denti z	20	Largh.fasc.dent. b	34.42mm
Numero disegno.:	250.6.4316.35-IF	Modulo m	2.3mm	Tratto evolv. La	6.97mm
Commessa/serie nr.:	4	Angolo pressione	20°	Tratto elica Lß	27.54mm
Masch.Nr.:	M001 Spindel: Formnestl	Angolo elica	-26.7°	Inizio elab. M1	5.16mm
Untersuchungszweck:	Laufende Messung	Ø Base db	47.6847mm	Palpatore Ø	(#2C) 1mm
Werkzeug:	Charge:	Ang. Base	-24.975°	Fat.scor.pr. x	.6

TIRO

Testa-Ø: 59.753mm [59.59/59.85]

VDI

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Ruota cilindrica Evolvente/Elica

Nr. prog.: STI0412_06 0	P26 B7590	Controllore:	turno a	Data:	24.01.2017 10:57
Denominazione:	Output Shaft 1	Numero denti z	20	Largh.fasc.dent. b	34.42mm
Numero disegno.:	250.6.4316.35-IF	Modulo m	2.3mm	Tratto evolv. La	6.97mm
Commessa/serie nr.:	5	Angolo pressione	20°	Tratto elica Lß	27.54mm
Masch.Nr.:	M001 Spindel: Formnestl	Angolo elica ß	-26.7°	Inizio elab. M1	5.16mm
Untersuchungszweck:	Laufende Messung	Ø Base db	47.6847mm	Palpatore Ø	(#2C) 1mm
Werkzeug:	Charge:	Ang. Base	-24.975°	Fat.scor.pr. x	.6

TIRO

Testa Ø: 59.6mm [59.59/59.85]

VDI

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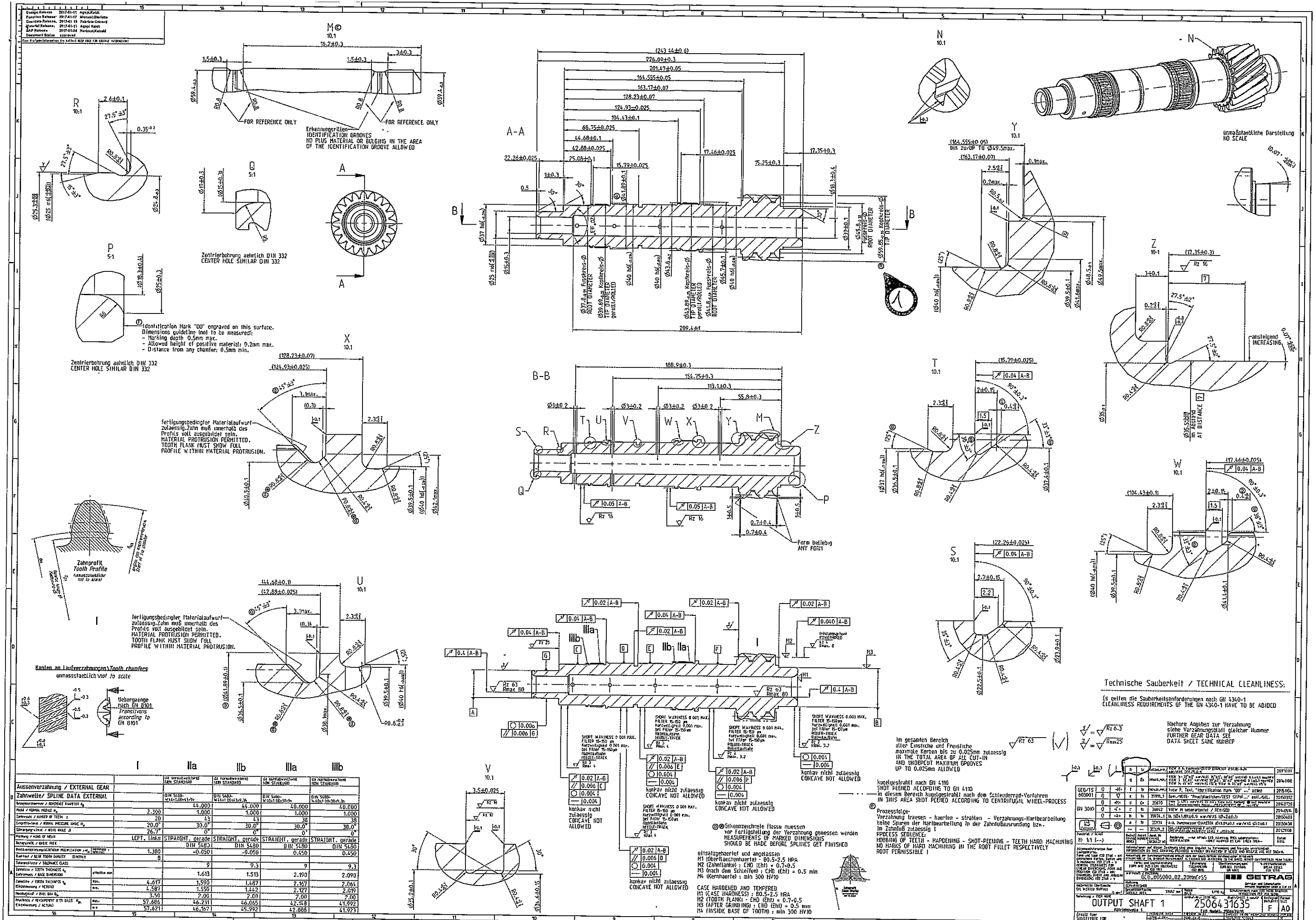
Drawing 4316 update from index "g" to "h"					
Short description:	h	1x	007260_HIP_1	VIEW A-A; Kopfkreis-Ø71 IP DIAMETER Ø59.85-0.26 war/WAS Ø59.85-0.16	20170111

	PPAP Requirements	Required	Note for ind. "b"	PPAP Docs updated
1	Design Records	Yes		Yes
2	Authorized Engineering change documents	Yes	see dwg	Yes
3	Customer Engineering approval	n.a.		
4	DFMEA	NO		
5	Process flow diagram(s)	NO		
6	PFMEA	NO	only drawing correction with increased tolerance	
7	Control plan	Yes	Correlation sheet change	Yes
8	Measurement system analysis studies	NO		
9	Dimensional results	Yes		Yes
10	Records of Material / Performance test results	NO		
11	Initial process studies	NO		
12	Qualified laboratory documentation	NO		
13	Appearance Approval Report (A.A.R.)	n.a.		
14	Sample Production Parts	Yes		Yes
15	Master sample	Yes		Yes
16	Checking aids	n.a.		
17	Customer-Specific Requirements	NO		
18	Part Submission Warrant (PSW)	Yes		Yes

	Other requirements			
1	PSW Raw part	NO		
2	PSW E.P. part	NO		
3	PSW Engagement Rings	NO		

Design Release	2017-01-11	Agopian/Reich
Function Release	2017-01-17	Michael/Oberlata
Quality Release	2017-01-18	Fabrizio Ciccarelli
Plant Release	2017-01-31	Appel Robert
SAP Release	2017-01-26	Hartmut/Kobold
Document Status	approved	

Form Prüfpunktbeschreibung (ex Zeichn) REF FREE FOR DELETE INFORMATION



Aussenverzahnung / EXTERNAL GEAR						
Zahnwelle/ SPLINE DATA EXTERNAL		DIN 5480-W44x1.00x43x9v	DIN 5480-W35x1.00x30x9v	DIN 5480-W40x1.00x35x9v	DIN 5480-W40x1.00x38x9.3v	
Bezugsdurchmesser / REFERENCE DIAMETER d_B		44.000	44.000	40.000	40.000	
Modul / NORMAL MODULE m_n		1.000	1.000	1.000	1.000	
Zahnzahl / NUMBER OF TEETH z		43	43	38	38	
Eingriffswinkel / NORMAL PRESSURE ANGLE α_n		30.0°	30.0°	30.0°	30.0°	
Schraegungswinkel / HELIX ANGLE β		0°	0°	0°	0°	
Richtung / SENSE OF HELIX		LEFT, links	STRAIGHT, gerade	STRAIGHT, gerade	STRAIGHT, gerade	
Bezugsprofil / BASIC RACK		DIN 5480	DIN 5480	DIN 5480	DIN 5480	
Profilverschiebungsfaktor/ACTUAL MODIFICATION x_m	Toleranz / TOLERANCE	1.380 -0.050	-0.050	0.450	0.450	
Qualitaet / GEAR TOOTH QUALITY DIN3962		8				
Toleranzklasse / TOLERANCE CLASS		9	9.3	9	9.3	
Zahndicke / TOOTH THICKNESS s_B Sollmaass / GAGE DIMENSION	effective mm	1.613	1.513	2.190	2.090	
Zahndicke / TOOTH THICKNESS s_B Ebenenmessung / MEASURED	max.	1.617	1.590	1.487	2.167	2.064
	min.	1.587	1.550	1.442	2.127	2.019
Messkugelmass / BALL DIA D_M		3.50	2.00	2.00	2.00	2.00
Pruefmass / MEASUREMENT OVER BALLS M_M Ebenenmessung / ACTUALS	max.	57.686	46.231	46.065	42.448	41.992
	min.	57.621	46.167	45.992	42.088	41.923