

BENTLY NEVADA		No. 145004	Rev FR	Page 1 of 8
Proximitor MODIFICATION		Cage Code: 3WAP1	Name: O. Lieder	
3300 XL 5mm/8mm 9m Recalibration to Various Target Materials			Approved: On AS400	

Revision	Name	Approved	Description
FN	D.Michaliovas	D.Michaliovas	ECM 500000244415: Added Rows 156 and 157 to Table 1
FP	J. Thornton	J. Thornton	ECM 500000247387: Added Row 158 to Table 1
FR	D.Michaliovas	D.Michaliovas	ECM 500000248764: Added Row 159 to Table 1

GE INTERNAL
 PROPRIETARY INFORMATION – THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF GENERAL ELECTRIC COMPANY AND MAY NOT BE USED OR DISCLOSED TO OTHERS, EXCEPT WITH THE WRITTEN PERMISSION OF GENERAL ELECTRIC COMPANY.
 © 2000 GENERAL ELECTRIC COMPANY & BENTLY NEVADA, INC. MINDEN, NEVADA USA

Purpose

This modification calibrates the 3300XL Series, 5mm/8mm, 9-Meter Proximitor Sensor to various target materials. It can be applied to Proximitor Sensors with or without approvals.

Restrictions

- These modifications may exhibit increased probe interchange sensitivity.
- These modifications may exhibit increased E-zero tolerance.
- Bently Nevada Engineering performs material calibrations at +23 °C (±3 °C). Temperature related permeability effects are expected to be similar to AISI 4140, but have not been characterized for these materials at lower or higher temperatures.
- ISF Tolerance is defined over a Proximitor, cable, and probe temperature range of 0°C to 45°C. ISF Tolerance does not account for changes in temperature of the target material

Specifications

At room temperature, all modifications in this mod family will perform to the specifications below:

Length	E-zero (Vdc)	@ mils	Start (mils)	Stop (mils)	Range (mils)	ASF (mV/mil)	ISF± (mV/mil)
9M	-3	20	10	90	80	200	18



imagination at work

Ordering Information

3300XL 5mm/8mm Proximator* Sensor
330180-AA-BB MOD 145004-CC

A: Total Length and Mounting

- X0 Modification, Panel Mount
- X1 Modification, DIN Mount
- X2 Modification, No Mounting HW

B: Agency Approval

Consult standard product datasheet;
all options are available

C: Target Material Calibration

Use dash option from Table 1 for appropriate material.

Table 1. Available Option Codes

Mod Number	Target Material	Target CT #	Job Number	Remarks
145004-01	17-4 PH COND 1150	CT-0070	0625672-03	156368-01, 157693-28
145004-02	ASTM A479 TYPE 410 CL2	CT-0077	0641015-00	157693-22
145004-03	X2CRNIMON22-5-3	CT-0624	0649430-00	IDP TANEYTOWN ONLY
145004-04	AISI 410	CT-0008	0661205-00	156302-01, 156368-10, 157693-11
145004-05	AISI 416	CT-0032	0661205-00	
145004-06	AISI 1020	CT-0033	0661205-00	156368-15, 157693-10
145004-07	SCM420	CT-0635	0672818-00	
145004-08	SUS420J1	CT-0166	0672818-00	156368-27, 157693-15
145004-09	ASTM A276 TYPE 410	CT-0061	0672818-00	156368-13
145004-10	KT5916S0	CT-0636	0661883-02	Hitachi - ONLY
145004-11	KT5034S0	CT-0637	0661883-02	Hitachi - ONLY
145004-12	SUS420J2	CT-0638	0673956-00	
145004-13	AISI 4320	CT-0001	0677695-00	157693-23, 156525-04
145004-14	AISI 1040	CT-0012	0677695-00	
145004-15	ASTM A182 F6NM	CT-0168	0683812-00	157693-20
145004-16	AISI 4130	CT-0002	0687579-00	157695-03
145004-17	BS970 080M40	CT-0598	0690883-00	
145004-18	AISI 1045	CT-0004	1367	
145004-19	ASTM A470 Class 4	CT-0048	1623	156302-10



145004-20	SUS 403	CT-0015	6030	156368-28, 157693-26
145004-21	KT5001B9S9	CT-0656	7915	
145004-22	KT5000DLS6	CT-0657	7915	
145004-23	SNC 415	CT-0540	8578	156302-09, 157695-04
145004-24	34 Cr Mo 4 with LW1-N30 coating	CT-0541	5807	
145004-25	AISI 1215	CT-0034	11266	157693-08
145004-26	17-4 PH with 0.005 in. coating of tungsten carbide	CT-0664	11159	
145004-27	4340 coated with 5mils Tungsten Carbide	CT-0659	15078	
145004-28	X20 Cr 13	CT-0464	17383	
145004-29	ASTM A293 CL5	CT-0116	26431	156302-03
145004-30	AISI 420	CT-0025	28948	157693-05
145004-31	X10 Cr13	CT-0662	29739	
145004-32	R-4	CT-0509	30905	156525-03
145004-33	ES237	CT-0675	32904	Ebara - ONLY
145004-34	ASTM A320 L43	CT-0672	34709	
145004-35	13% Cr Steel HCr Plating on 75um	CT-0680		Obsolete
145004-36	BS 970-PT-4 STEEL	CT-0118	36328	157693-30
145004-37	SNMCM 420H	CT-0192	41016	157695-08
145004-38	41CrAlMo7	CT-0516	36430	
145004-39	42 Cr Mo 4	CT-0014	48571	
145004-40	AISI 4135	CT-0585	48571	
145004-41	SF 590A 45C8	CT-0683	45816	
145004-42	AISI 9840	CT-0047	52566	
145004-43	SUS 405	CT-0570	54318	
145004-44	17-4PH TYPE 630 COND H1150	CT-0617	61290	
145004-45	BS970 150 M19	CT-0138	60875	157920-03
145004-46	KT5022D9S2	CT-0634	63571	Hitachi - ONLY
145004-47	SFNCM 880S	CT-0542	64144	156302-13, 157695-07
145004-48	ASTM A668 CLASS D	CT-0036	63985	156368-09
145004-49	ASTM A564 Type 630 - H1150M	CT-0644	64555	
145004-50	ASTM A 522 Type 1	CT-0689	65091	
145004-51	SUS 329 J1	CT-0676	69486	157693-32



3300 XL 5mm/8mm 9m Recalibration to Various Target Materials	No. 145004	Rev FR	Page 4 of 8
--	------------	--------	-------------

145004-52	MF416L5	CT-0696	71451	
145004-53	A576 GR1020	CT-0596	74307	156302-14
145004-54	ASTM A668 CLE	CT-0477	75969	
145004-55	17-4PH COATED w/ 86%WC+10%Co+4%Cr	CT-0701	77974	
145004-56	XC42 H1	CT-0702	84190	
145004-57	UNS S32760	CT-0703	84190	
145004-58	AISI 1035	CT-0045	84060	156302-06, 157695-06
145004-59	ST 52-3N	CT-0042	89764	
145004-60	25NiCrMoV 11-6	CT-0712	101526	
145004-61	AISI 1025	CT-0525	107069	
145004-62	ASTM A536-72 GR. 80-55-6	CT-0170	109759	157693-13
145004-63	13Cr-3.8Ni	CT-0716	111192	
145004-64	SNC 815	CT-0666	112413	
145004-65	5 mils Tungsten Carbide coating on 4140	CT-0693	116874	
145004-66	S35C	CT-0030	119695	156368-11, 157693-16
145004-67	17CrNiMo6	CT-0176	121918	157693-14, 156368-18
145004-68	ASTM A668 GRC	CT-0437	126273	156368-14
145004-69	JIS SCSITI W/0.1 MM CHROME PLATING	CT-0567	132047	156368-24
145004-70	ASTM A276 GRADE 420	CT-0513	136474	
145004-71	26NiCrMoV11.5	CT-0511	137647	156368-21
145004-72	14 Ni Cr 14	CT-0175	20091472	157693-24
145004-73	15-5 PH	CT-0060	143716	156368-07
145004-74	A276 416SS	CT-0594	147700	156368-26
145004-75	A276 UNS S42000	CT-0595	147700	156368-25
145004-76	ASTM A479 GR S32550	CT-0517	148493	
145004-77	SNCM 420	CT-0043	150121	157695-05, 156302-15
145004-78	1.4405	CT-0565	152131	
145004-79	KT5036S0	CT-0731	162285	Hitachi - ONLY
145004-80	AISI 2330	CT-0732	162431	
145004-81	SNCM 439	CT-0733	162285	Hitachi - ONLY
145004-82	Ni-Cr-Mo-V	CT-0069	162282	156302-11
145004-83	17-4 PH	CT-0439	167749	157693-01
145004-84	4142 W/LINDE LW-15 COATING	CT-0104	168222	156368-05
145004-85	DIN 17200-C35N	CT-0577	167469	



145004-86	BS970 655M13	CT-0620	167469	
145004-87	X30 CR 13	CT-0736	176450	
145004-88	BS970 070M55	CT-0618	180536	157693-25
145004-89	S45C	CT-0193	183889	
145004-90	ASTM A434 Grade 4140 Class BC	CT-0062	185221	
145004-91	ASTM A564 Type 630	CT-0122	195657	
145004-92	BS 970 420 S29	CT-0149	200334	157693-27
145004-93	AISI 4145	CT-0003	201436	
145004-94	AISI 4340	CT-0009	201436	
145004-95	SUS 630	CT-0085	210247 and 210250	
145004-96	SNC815H	CT-0745	215543	
145004-97	Duplex UNS31803	CT-0661	218094	
145004-98	34CrNiMo6 coated w/ 86%WC,10%Co,4%Cr	CT-0706	217776	
Mod Number	Target Material	Target CT #	Inquiry Number	OTR Number
145004-99	ASTM A470 Class 8	CT-0115	6523464	11847774
145004-100	13% Cr Steel	CT-0735	6751367	13212664
145004-101	KT5037ESO	CT-0749	6848440	14589159
145004-102	ASTM A470 Class 7	CT-0479	6964649	14617004
145004-103	SUS420J2 w/Cr	CT-0755	7571396	21461373
145004-104	AISI E4340H	CT-0758	7609882	21652576
145004-105	AISI 9310 H VD	CT-0759	7609882	21652576
145004-106	AISI 4145M	CT-0760	7609882	21652576
145004-107	40XH	CT-0537	7844369	25296339
145004-108	BS 970 EN 19T	CT-0757	7411111	25430400
145004-109	ASTM A350 (LF-2)	CT-0050	8195105	25715246
145004-110	SFCM930S	CT-0772	8384068	28830984
145004-111	SNCM 625	CT-0547	8691714	31246038
145004-112	AISI 1018	CT-0039	8735354	34802841
145004-113	ASTM A469 CL7	CT-0117	8629353	32324996
145004-114	FV535	CT-0774	7659257	32999474
145004-115	SUS410J1	CT-0779	8853241	34438231
145004-116	10325GP	CT-0778	8636008	35420433
145004-117	AMS 6038	CT-0780	9041610	37911106
145004-118	HMC3	CT-0781	9041610	37911106
145004-119	FV 520B	CT-0522	9497137	39279001
145004-120	22 NCDV 12.07	CT-0786	8056154	42864599
145004-121	ASTM A479M UNS	CT-0788	10077255	46090654



	S32750-MOD			
145004-122	ST52-3	CT-0790	10093437	48906012
145004-123	AISI 420 w/ Chrome	CT-0792	10595253	55722010
145004-124	31CrMoV9	CT-0734	11488996	67087988
145004-125	SF490A	CT-0806	11652988	69889922
145004-126	SS400	CT-0809	11913711	73373864
145004-127	AISI 4140 W/ 25mil TAFA 1274	CT-0804	11295108	76394486
145004-128	C45	CT-0723	12188150	79530935
145004-129	BS970 709M40T	CT-0615	12299473	80860005
145004-130	AISI 1045	CT-0088	12760208	90210908
145004-132	SCM440H	CT-0741	13267549	99084721
145004-133	KT5038SO	CT-0818	13262510	99337938
145004-134	AISI 9310	CT-0010	13414010	100961863
145004-135	AISI 1030	CT-0005	13495876	103468769
145004-136	AISI 1050	CT-0821	13354896	105097301
145004-137	ASTM A572 GR50	CT-0603	13523586	107672599
145004-138	KT5033SO	CT-0823	13765711	110274571
145004-139	JIS SF540A	CT-0729	14003784	115703254
145004-140	MONEL 400 (ASTM B164 UNS NO400)	CT-0828	13985545	116357496
145004-141	18CRNiMo7-6	CT-0812	14094378	118681332
145004-142	Ys655N/mm2	CT-0829	14046992	119597042
145004-143	UNS S42400 (F6NM)	CT-0830	14105083	120707806
145004-144	ASTM A473 S41500	CT-0841	01757149	139019118
145004-145	SNCM 439	CT-0293	14130799	123984672
145004-146	SUS431	CT-0838	01691981	139451095
145004-147	AISI 1524	CT-0775	01894435	142135231
145004-148	ASTM 543 (HY80)	CT-0483	02117618	146639039
145004-149	EN 1.4313.09	CT-0705	02130792	146987227
145004-150	10325UD	CT-0854	02182152	148687925
145004-151	EN 1.4313.09	CT-0705	02279029	151485641
145004-152	TUNGSTEN CARBIDE(CW) [0.15mm/5.9mil] Plated AISI 4140	CT-0855	02155968	153257784
145004-153	S45C w/ Chrome Coating	CT-0865	02653999	159860725
145004-154	CrMoV Forged Steel	CT-0866	02670882	159958463
145004-155	SFCM830S	CT-0864	02682254	160133643
145004-156	MTR10A	CT-0867	02637698	161554246
145004-157	34CrNi3Mo	CT-0869	02767989	162112738
145004-158	ASTM A355 Class A	CT-0871	02783492	162828848
145004-159	27NiCrMoV15-6	CT-0868	02744766	163313339



Manufacturer Specific Information

1. Modification Material

145004-XX, where -XX corresponds to the dash option ordered per Table 1.

2. Reference

118M9634	SPECIFICATION PROX/XMTR CAL MASTER
287927	3300 XL PROXIMATOR AND SIMILAR TOP LABEL
146249	3300 XL CUSTOM PROX LABELING

3. Assembly Instructions

- 3.1. This Proximator is built using a combination of the following BOMs:
 - 3.1.1. **330180**, per the ordering options.
 - 3.1.2. BOM 145004-XX, where -XX corresponds to the dash option ordered per Table 1.
- 3.2. Build the Proximator per standard procedure, except for the following:
 - 3.2.1. Make the component changes to the PWA as required by the BOM indicated in paragraph 3.1.2.
 - 3.2.2. Prepare the Proximator for calibration.
- 3.3. Identify per standard procedure, except for the following:
 - 3.3.1. Ensure that the information specified in section *Labeling Information* is on the label.
 - 3.3.2. Label placement is to be done per the applicable Custom Proximator labeling drawing (287927).
- 3.4. Print one copy of document 145004 and ship with order.

4. Test

- 4.1. Test and calibrate per standard procedure, except for the following:
 - 4.1.1. Assemble a Proximator Sensor *Primary Working Standard System* and verify its operation per the applicable Test & Acceptance Specification.
 - 4.1.2. Replace the Working Standard Proximator Sensor with the Proximator under test.
 - 4.1.3. Replace the 4140 target with the appropriate target (see Table 1).
 - 4.1.4. Calibrate the Proximator to meet the acceptance criteria of the Test & Acceptance Specification.

5. Labeling Information

Verify the following is on the label:

- PART NUMBER: 330180-X†-0†
- MOD: 145004-††
- OUTPUT: 7.87 V/mm (200 mV/mil)
- LINEAR RANGE: 10-90 mils
- SYSTEM: 3300 XL 5mm/8mm 9m
- ELEC ZERO: -3.0 Vdc @ 20mils
- OBSERVED MATERIAL: †††



imagination at work

3300 XL 5mm/8mm 9m Recalibration to Various Target Materials	No. 145004	Rev FR	Page 8 of 8
--	------------	--------	-------------

† Appropriate option for the catalog material as ordered

†† Appropriate option for the mod as ordered

††† For the mod as ordered, fill in the appropriate Target Material as listed in Table 1.



imagination at work