

Wilson-Garner Company

Certificate of Conformance

Registered by DQS
ISO 9001:2015
IATF 16949:2016

PO#		Lot Number:	CF62619A
Qty Ordered:	Shipped:	Part Number:	HHM14200075-10P
Shipper Number:		Blueprint Number:	GM STD B100
Customer Pt. #:		Revision/Date:	JUNE 1996
		Part Name:	Hex Test Bolt
		Part Description:	M14 X 2.00-6g X 75mm
		Manufacture Date:	01-09-2023
		Inspection Date:	05-12-2023

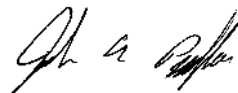
SAMPLING PLAN	ASQCZ1.4-1993	DIMENSIONAL	Meets the Requirements of
Non-Destructive	315	Blue Print/Spec.	GM STD B100
Destructive	5		
MATERIAL	GM500M 10.9	SURFACE FINISH	Zinc Phosphate
Grade	4037	Specification	GMW3179
Heat Number	W68108		Code 'A'
Supplier	Beta Steel	Post Treatment	Oil
		Salt Spray	ASTM-B117, 72 Hours

MECHANICAL TESTS GM500M 10.9
Core Hardness 36.0 - 37.3 RC
Surface Hardness 78.0 - 79.0 R15N
Proof Load Passed 830 MPA
Tensile 1,133 - 1,178 MPa
Discontinuities Visual OK

This is to certify that the above item was domestically manufactured in a mercury free environment. Documented evidence of these are on file and available for review for a minimum of ten (10) years. This certificate shall not be reproduced except in full and without prior written approval of the Wilson-Garner Company. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. This report contains data which were produced by a sub-contracted laboratory.

Country of Origin:
U.S.A

All inspections and tests performed conform to the standards and/or specifications requirements.


Signature: Joseph Pinchback
Title: Vice President
10/17/2023

Wilson-Garner Company ~ 40935 Production Drive ~ Harrison Township, MI 48045
Voice: 586-466-5880 ~ Fax: 586-465-4408 ~ E-Mail: ecerts@wilson Garner.com

CF62619A	Part Number	Part Name & Description			CF62619A	
	HHM14200075-10P	M14 X 2.00-6g X 75MM 10.9 HH PHOS TEST				
	Raw Material Size	Grade	Supplier	Heat Number		WG Tag #
	.533/.535 WIRE	4037	BETA	W68108		01947
Standard	Revision	Inspection Process	Lot Quantity	Quantity Inspected		
GM STD B100	JUNE 1996	ASQCZ1.4-1993	20000	315		

Final Dimensional Inspection Report

VISUAL INSPECTION					
CHARACTERISTIC	SPECIFICATION	GAGE TO USE	RESULTS	QTY	REJ
HEAD MARKINGS	WG & 10.9	VISUAL	Visual WG 10.9	315	0
DISCONTINUITIES	GM6102M	VISUAL	Visual OK	315	0
PHOSPHATE COATING	GMW3179 CODE A	VISUAL / CERT	Visual OK / Aactron Cert	315	0

THREAD INSPECTION (Meets System 22, ASM B1 3-2007)					
CHARACTERISTIC	SPECIFICATION	GAGE TO USE	RESULTS	QTY	REJ
GO GAGE	M14 X 2.00 6g	RING / ROLL # 375	OK to Go Ring	315	0
NO GO GAGE	M14 X 2.00 6g	RING / ROLL # 376	OK to NoGo Ring	315	0
PITCH DIAMETER	0.4922 - 0.4985	MICROMETER # 106	0.493 - 0.4945	315	0
MAJOR DIAMETER	13.682 - 13.962mm	MICROMETER # 100	13.830 - 13.845mm	315	0
GRIP LENGTH	41.0mm Max.	SCALE & RING ## 128	36mm Max.	315	0
BODY LENGTH	31.0mm Min.	SCALE # 128	32.6mm Min.	315	0

DIMENSIONAL INSP					
CHARACTERISTIC	SPECIFICATION	GAGE TO USE	RESULTS	QTY	REJ
LENGTH U'HEAD	74.0 - 76.0mm	CALIPER # 138	75.09 - 75.27mm	315	0
HEAD HEIGHT	8.51 - 9.09mm	CALIPER # 138	8.54 - 8.75mm	315	0
ACROSS FLATS	20.67 - 21.00mm	CALIPER # 138	20.75 - 20.93mm	315	0
ACROSS CORNERS	23.35 - 24.25mm	CALIPER # 138	23.78 - 23.88mm	315	0
BODY DIAMETER	13.73 - 14.00mm	MICROMETER # 100	13.75 - 13.93mm	315	0
WASHER DIAMETER	19.6mm Min.	CALIPER # 138	19.6mm Min.	315	0
WASHER THICKNESS	0.30 - 0.60mm	OPT. COMPARATOR # 049	0.48 - 0.56mm	315	0
RADIUS U'HEAD	0.6mm Min.	OPT. COMPARATOR # 049	0.60mm Min.	315	0

Inspection Approval By QC Inspector: <i>Leonard Pittman</i>	Date: 05/12/2023
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WG Win X Inspection Report 1.01

Wilson-Garner Company

Certificate of Conformance

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IATF 16949:2016

CF62619A	Part Number	Part Name & Description			CF62619A
	HHM14200075-10P	M14 X 2.00-6g X 75MM 10.9 HH PHOS TEST			
	Raw Material Size	Grade	Supplier	Heat Number	WG Tag #
	.533/.535 WIRE	4037	BETA	W68108	01947
Standard	Revision	Inspection Process	Lot Quantity	Quantity Inspected	
GM STD B100	JUNE 1996	ASQCZ1.4-1993	20000	5	

Final Mechanical Inspection Report

MATERIAL INSPECTION					
CHARACTERISTIC	SPECIFICATION	GAGE TO USE	RESULTS	QTY	REJ
ALLOY	GM500M 10.9	SUPPLIER CERT.	4037 Mat'l / BETA CERT	1	0

MECHANICAL INSPECTION					
CHARACTERISTIC	SPECIFICATION	GAGE TO USE	RESULTS	QTY	REJ
CORE HARDNESS	33 - 39 RC	ROCKWELL C TEST	36.0 - 37.3 RC	5	0
SURFACE HARDNESS	80.0 MAX R15N	ROCKWELL 15N TEST	78.0 - 79.0 R15N	5	0
PROOF LOAD	830 MPA	AXIAL PROOF TEST	Passed 830 MPA	5	0
TENSILE STRENGTH	1040 MPA MIN	10° WEDGE TEST	1,133 - 1,178 MPa	5	0

Inspection Approval By QC Inspector: <i>Leonard Pittman</i>	Date: 05/12/2023
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WG Win X Inspection Report 1.01

Wilson-Garner Company

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 ISO 9001:2015
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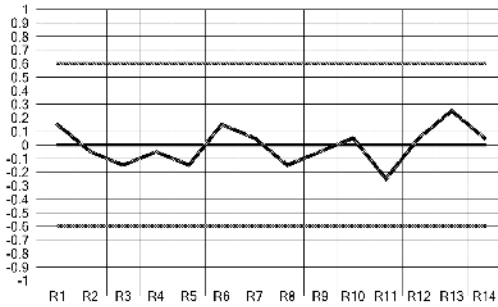
Wilson-Garner Company - Short Run SPC

Part Number: HHM14200075-10P	Part Description: M14 X 2.00 6g	Base Reading: .493
Machine: #40 Auto	Spec High: 0.4985	Allowance: 0.0
Operator: Eric	Spec Low: 0.4922	

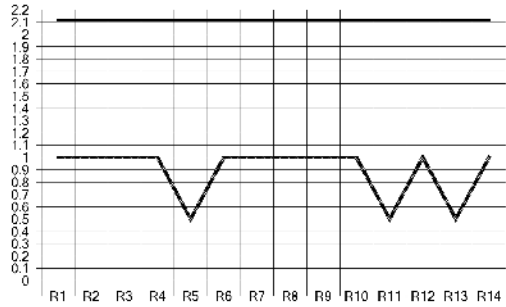
Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Time	05:47	05:47	05:01	05:01	05:07	05:07	05:07	05:07	05:07	05:07	05:03	05:03	05:03	05:03
	08:58	10:58	12:58	14:00	08:30	10:30	12:30	14:30	16:30	08:30	10:30	12:30	14:30	16:30
IntReadings	0.0005	0.0002	0.0005	0.0001	0.0002	0.0002	0.0005	0.0002	0.0001	0.0001	0.0005	0.0005	0.0002	0.0005
IntReadings	0.0007	0.0001	0.0001	0.0007	0.0007	0.0003	0.0005	0.0001	0.0003	0.0003	0.0007	0.0007	0.0001	0.0001
IntReadings	0.0007	0.0007	0.0001	0.0007	0.0007	0.0003	0.0001	0.0001	0.0003	0.0001	0.0007	0.0007	0.0007	0.0003
IntReadings	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0002	0.0001	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002
IntReadings	0.0005	0.0005	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0001
Total	0.0011	0.0000	0.0008	0.0005	0.0008	0.0011	0.0010	0.0008	0.0008	0.0010	0.0007	0.0010	0.0017	0.0018
Average	0.00022	0.00018	0.00013	0.00018	0.00018	0.00022	0.00020	0.00013	0.00018	0.00020	0.00014	0.00020	0.00024	0.00029
Range	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0001	0.0002
Target	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019
Target R	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020
StdTarget	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
StdPoint	0.15000	-0.05000	-0.15000	-0.05000	-0.15000	0.15000	0.05000	-0.15000	-0.05000	0.05000	-0.25000	0.05000	0.25000	0.05000
RTargetR	0.00000	0.00000	1.00000	1.00000	0.50000	0.00000	0.00000	1.00000	1.00000	1.00000	0.50000	1.00000	0.50000	1.00000

WG Lot#	
CF62619A	
03/03/23	
RDblBar	0.00018
DividedBy	2.326
StdDeviation	0.000077
Tolerance	0.0063
CP=To/BSStdDev	13.676880
XDblBar	0.493189
Z Upper	69.184544
Z Lower	12.876736
Z Min	12.876736
Cpk	4.292245

Short Run X-Bar Chart



Short Run R Chart



HWS Short Run SPC V2.02 - 0516 09-16-2007

EMERALD STEEL PROCESSING

MADISON HEIGHTS, MI 48071
PHONE NUMBER (248)-616-3935
FAX NUMBER (248)-616-3963

Customer: WILSON-GARNER COMPANY
40935 PRODUCTION DR.
HARRISON TOWNSHIP, MI 48046

Test Date: 04/22/2023
Page: 1

Grade: 4037 Description: WG6 W.GARNER 4037CHQ.534SAP
Size: 5/8 Cert Description:
Heat Number: W68106 4037 SAP
Draw Size: .534

Material Conforms to Spec # ASTM F2282 Rev. 18 Date 09/01/2018

Lot: E218657	Production Card#: 0256321
Production Plant: SSP	Furnace: 1
Customer Order#: 012460	Customer Part#:
Annealed Coils: 3	Shipped Weight: 12,169

Annealing Certification

Batch#	Tray#	Coil ID#	FP Inches	TAAD Decarb Inches	Sph Rating	Tensile	HRB	Approved Inspected By
	HL6030	0051A	.0005	.0005	90%	PSI	0	RBG
	HL6031	0021B	.0000	.0000	%	PSI	0	RBG
	HR6031	0101B	.0000	.0000	%	PSI	0	RBG
	Tensile Strength (PSI)		77987					
0101B		77,987PSI		PSI	0	0	0	RBG
	* - Coil for certification reference only							
The above annealing results were used to release the following coils based on our sampling plan:								
0021B, 0051A, 0101B								

We hereby certify that the following data supplied is a true copy as furnished by our supplier or by certified chemical or metallurgical laboratory.

Mill: CHARTER MPG CO - CHARTER STEEL Country of Origin: CANADA Killed: SK Grain Practice: FG
Quality Designation: CHQ

C	MN	P	S	SI	CU	NI	CR	B	MO	SN	AL
.3989	.8000	.0090	.0030	.2200	.0200	.0600	.0500	.0002	.2600	.0020	.0449
N	V	TI	NB	CO	CB						
.0060	.0090	.0000	.0000	.0000	.0000						

Processed in the USA

Approved By:

[Signature]
Quality Manager

LB101 06/30/2015

Testing was performed in accordance with the latest version of the following procedures and/or standards:
SSP Annealing Sampling Plan Form# LS-004, SSP Control Plan, ASTM F2282 and customer specification (when provided).



**HEAT TREAT
INSPECTION
REPORT**

AJAX METAL PROCESSING
4600 BELLEVUE AVE.
DETROIT, MI 48207
(313) 267-2100 (PH)
htlab@ajaxmetal.com

CUSTOMER WILSON-GARNER CO.
40935 PRODUCTION DRIVE
HARRISON TWP, MI
48045

DATE 3/12/2023
TECH Bill Ballew

PART # HHM1420007510P / GM 500M / 10.9 / 4037
CUST LOT # CF62619A
AJAX LOT # 2306937-000

CUST HEAT # W68108
WEIGHT (LB) 4,607

TESTS COVERED BY THE SCOPE OF A2LA ACCREDITATION

	<u>LSL</u>	<u>USL</u>	<u>PCS CHECKED</u>	<u>TEST METHOD</u>
CORE HARDNESS HRC TEST DATA (MIN/MAX)	34 36.5 - 37.7	39	6	ASTM E-18
SURFACE HARDNESS 15N TEST DATA (MIN/MAX)	77 78.2 - 79.7	80	6	ASTM E-18
WEDGE TENSILE MPa @6 DEG TEST DATA (MIN/MAX)	1,040 1,120 - 1,156		6	ASTM F-606/F-606M
PROOF LOAD (Load @SEC)	830 MPa @ 15 SEC		2	ASTM F-606/F-606M
WASHER HARDNESS HRC TEST DATA (MIN/MAX)	-			
CASE DEPTH IN. TEST DATA (MIN/MAX)	-			
MIN. DECARBURIZATION-FREE DEPTH TEST DATA	0.780 MM			ASTM E-1077

TESTS NOT COVERED BY THE SCOPE OF A2LA ACCREDITATION

BEND TEST	
SERRATION TEST	
TEMPERED MARTENSITE & FREE OF CARBIDE	MICROSCOPIC EVAL.
CUSTOMER-SPECIFIC TEST INSTRUCTIONS:	CUSTOMER-SPECIFIC TEST RESULTS:



Notes: This report shall not be reproduced, unless in full, without the prior written consent of Ajax Laboratory Services. Information and data in this report is correct and reliable to the best of our knowledge and relates only to the samples tested. Test methods are performed using the latest revisions in effect on the date of analysis.

A2LA ACCREDITATION EXPIRES: 7/31/23 1 of 1

Wilson-Garner Company

Certificate of Conformance

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ISO 9001:2015
IATF 16949:2016



Wilson-Garner Company

Hardness Test Report

WG Lot #
CF62619A

Test Specification: ASTM-E18 and GM500M
Part Number: HHM14200075-10P
Part Name: Metric Hex Test Bolt
Part Description: M14 X 2.00-6g X 75mm
Prop. Class: 10.9
Tolerance Specification: 33-39 RC Core
 80.0 Max R15N Surface

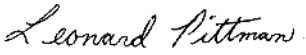
Test Quantity: 5
ID Marking: WG 10.9


CORE HARDNESS				
Rockwell Hardness Tester				
Model Number 8BLP, Serial # 177				
Item #	Readings			Average
1	37	37	37	37.0
2	37	37	37	37.0
3	37	38	37	37.3
4	37	38	36	37.0
5	36	36	36	36.0
All 5 Samples Passed				

SURFACE HARDNESS				
Rockwell Superficial Hardness Tester				
Model Number 8SBLP, Serial # 312				
Item #	Readings			Average
1	79	79	78	78.7
2	78	78	78	78.0
3	79	79	79	79.0
4	79	78	79	78.7
5	78	78	78	78.0
All 5 Samples Passed				

Tests listed on this report have been performed in accordance with ASTM-E18 and GM500M. All samples conform to specification requirements.

This report shall not be reproduced except in full and without prior written approval of the Wilson-Garner Company. This report does not contain data which were produced by a subcontracted laboratory.

Test Conducted By:

 Leonard Pittman 03/16/2023
 Inspector Date

Signatory Sign Off:

 Joseph Pinchback 03/16/2023
 Vice President Date

This test is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ANAB# L1107-1.

 Wilson-Garner Company - 40935 Production Drive - Harrison Township, MI 48045 - Voice: 586-466-5880 - Fax: 586-465-4408 

htw-wx.pjt:htw.crp-20180420



Wilson-Garner Company

Proof Load / Tensile Strength Test Report

WG Lot #
CF62619A

Test Specification: ASTM-E8M and GM500M
Part Number: HHM14200075-10P **Test Quantity:** 5
Part Name: Metric Hex Test Bolt **ID Marking:**
Part Description: M14 X 2.00-6g X 75mm **WG 10.9**
Prop. Class: 10.9
Tolerance Specification: 95900 Newtons / 830 MPa Proof Load
 120100 Newtons / 1,040 MPa Minimum Tensile

Axial Proof Test		
Baldwin/Satec Model MK III		
Retrofit 200BTE-472085		
Item #	Difference in Length	Pass / Fail
1	0.0000	Pass
2	0.0000	Pass
3	0.0000	Pass
4	0.0000	Pass
5	0.0000	Pass
All 5 Samples Passed		

10° Wedge Tensile Test		
Baldwin/Satec Model MK III		
Retrofit 200BTE-472085		
Item #	Newtons	MPa
1	130,800	1,133
2	136,000	1,178
3	131,400	1,138
4	134,000	1,161
5	134,500	1,165
All 5 Samples Passed		

All samples conform to specification requirements. Tests listed on this report have been performed in accordance with ASTM-E8M and GM500M.

To meet the proof load requirements the length of the fastener after loading shall be the same as the initial length within a tolerance of ± 0.0005 .

This report shall not be reproduced except in full and without prior written approval of the Wilson-Garner Company. This report does not contain data which were produced by a subcontracted laboratory.

Test Conducted By:
Leonard Pittman
Leonard Pittman 03/16/2023
Inspector Date

Signatory Sign Off:
Joseph Pinchback
Joseph Pinchback 03/16/2023
Vice President Date

This test is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ANAB# L1107-1.

Wilson-Garner Company - 40935 Production Drive - Harrison Township, MI 48045 - Voice: 586-466-5880 - Fax: 586-465-4408

htr:pgj:ittr1.crp-20180420

Aactron, Inc.

29306 Stephenson Hwy.
Madison Heights, MI 48071
Phone: (248) 543-6740 Fax: (248) 543-6847
Fax (248) 543-6847

March 22nd, 2023

CERTIFICATE OF COMPLIANCE

We hereby certify that all articles furnished in the quantities stated, as called for, are in conformance with all applicable drawings, specifications and requirements.

Customer Name.....: WILSON-GARNER CO.
Customer Address.....: P.O. BOX 1167
City, State Zip.....: MT. CLEMENS, MI 48046
Telephone.....: (586) 466-5880
Fax.....: (586) 465-4408

Purchase Order No.....: CF62619A
PO/Cust.Ref.No.....:
Cust. Ship. No.....: CF62619A
Cust. Job No.....:

Lot No.....:

Date Shipped.....: 03/22/23

Part No. & Desc.....: HHM14200075-10P
 : M14 X 2.00-6G X 75MM 10.9 HH PHOS T

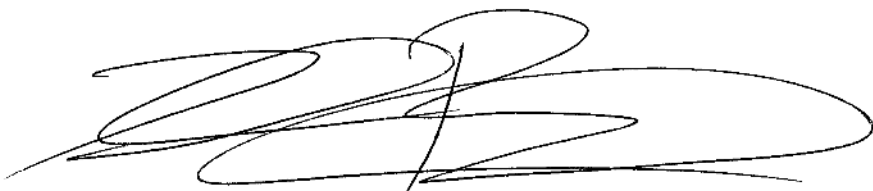
Shipping Order No.....: 86027

Quantity Shipped.....: 16014

Weight Shipped.....: 3670

Specification.....: PHOS AND OIL PER GMW3179 CODE A

Notes.....:



Authorized Signature

Wilson-Garner Company

Certificate of Conformance

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ISO 9001:2015
IATF 16949:2016

EMERALD STEEL PROCESSING



31624 STEPHENSON HIGHWAY
MADISON HEIGHTS, MI 48071
PHONE NUMBER (248)-616-3935
FAX NUMBER (248)-616-3963

Customer: WILSON-GARNER COMPANY
40935 PRODUCTION DR.
HARRISON TOWNSHIP, MI 48045

Test Date: 04/22/2022
Page: 1

Grade: 4037 Description: WGS W.GARNER 4037CHQ.5346A1P
Size: 5/8 Cart Description: 4037 SA1P
Heat Number: W68108
Draw Size: .534

Material Conforms to Spec # ASTM F2282 Rev. 1B Date 09/01/2016

Lot: 6618697	Production Cart#: 0256321
Production Plant: SSP	Furnace: 1
Customer Order#: 012450	Customer Part#:
Annealed Coils: 3	Shipped Weight: 12,153

Annealing Certification

Batch#	Tray#	Coil ID#	FF Inches	TAAD Decarb Inches	Sph Rating	Tensile	HRB	Approved Inspected By
	HL6030	0051A	.0008	.0005	208	PSI	0	RBC
	HL6031	0021B	.0005	.0000	8	PSI	0	RBC
	HR6031	0101B	.0000	.0000	8	PSI	0	RBC
	Tensile Strength (PSI)		77987					
0101B		77,987PSI	PSI		0		0	RBC
- Coil for certification reference only								
The above annealing results were used to release the following coils based on our sampling plan:								
0021B, 0051A, 0101B								

We hereby certify that the following data supplied is a true copy as furnished by our supplier or by a certified chemical or metallurgical laboratory.

Mfg: CHARTER MFG CO - CHARTER STEEL Country of Origin: CANADA Killed: SK Grain Practice: FC
Quality Designation: CHQ

C	MN	P	S	SI	CU	NI	CR	B	MO	SN	AL
.3900	.8000	.0090	.0030	.2200	.0200	.0500	.0500	.0002	.2600	.0020	.0460
N	V	TI	WB	CO	CB						
.0060	.0090	.0000	.0000	.0000	.0000						

Processed in the USA

Approved By:

[Signature]
Quality Manager

LR1B1 06/30/2015

Testing was performed in accordance with the latest version of the following procedures and/or standards:
RBC Annealing Sampling Plan Form# LR-009, RBC Control Plan, ASTM F2282 and customer specification (when provided).