

# WPC Wolverine Plating Corporation

## LIST OF SPECIFICATIONS PERFORMED (08/23/13)

GENERAL: Zinc Plating, Zinc-Nickel Alloy Plating, and Tin-Zinc Alloy Plating ó Barrel only

**Chromates:**

- Dichromate
- Clear Chromate
- Olive Drab
- Black Chromate
- Yellow

*We are TS-16949*

*Registered*

**Trivalent Chromates:**

- Yellow, Clear, & Black

**Dyes:**

- Blue
- Black
- Red
- Green
- Orange
- Violet
- Yellow

- Baking for Hydrogen Embrittlement Relief
- Pickle & Oil
- Leachant/Sealant
- Seal
- Wax
- TorqueøN Tension Fluid
- Stripping of Zinc & Zinc-Nickel
- Certifications
- Salt Spray Reports & Adhesion Tests

**MAJOR AUTOMOTIVE SPECIFICATIONS:**

<u>CHRYSLER GROUP LLC:</u>	CS-9003	MS-4592	MS-4857 (After forming)
	PS-79	PS-77	PS-7187 (BASE COAT)
	PS-4220	PS-77 (After forming)	PS-8814
	PS-9295 (BASE COAT)	PS-1207	PS-8955 Ni
	PS-9500	PS-PLATING	PS-8956E

<u>FORD:</u>	S8	ESB-M1P1-A
	S9	ESE-M9G20-A
	S36 (&S36B)	ESE-M21P17-A (1 & 2)
	S40	ESF-4000 SERIES
	ESF-M1P3-6-A	S43 (&S43B)
	ESF-M1P41-A	S51
	ESS-M1P45-A	S304

# DOC

WSA-M1P87-A1 (acid process)  
S309 WSB-M10P10-A  
S414 WSD-M1P85-A  
S419 WSD-M13P7-A  
S421 WSD-M21P19-A (19&21)  
S434 WSS-M2P189  
S427 (BASE COAT) WSS-M21P25-A  
S440 (BASE COAT) WSS-M21P17-B1  
S446 WSS-M99A3-A  
ESS-M1P87-A2 WSS-M1P94-A  
WSS-M1P95-A WSS-M9G21-A  
WSS-M21P40-A1 WSS-M21P44  
WSS-M99P9999-A1 WS-48.01  
FNHA-2-H-500.xx WSE-M1P93-A  
WSS-M1P85-A WSS-M1P87-A2  
WSS-M1P87-B

GENERAL  
MOTORS:

GM4252M GME 00 252 Zinc & ZnNi  
GM4342M GM6184M (BASE COAT)  
GM6201 (After forming) GM6280M (ZnNi)  
GM4345M GM7113M (BASE COAT)  
GMW11 (After forming) GMW3044  
GMW3059 GMW4707 (BASE COAT)  
GMW4700 (ZnNi) GMW3200

AMERICAN  
MOTORS:

AM 12002  
AM 12003

BMW:

BMW S 600 00.0 (Zn, ZnNi, Zn OL, Zn SW)  
GS 90010 (ZnT, ZnNiV Si)

FIAT:

9.57404  
9.57409

HONDA:

H E S A 3010  
H E S D 2003

HYUNDAI-KIA:

MS 611-4  
MS 611-15

ISUZU:

ISC-B11-004H  
ISC-B00-001A

MAZDA:

MES CG 310  
MES CG 510

MERCEDES-BENZ

DBL 8451  
DBL 9440  
DBL 9441

# DOC

<u>  MITSUBISHI:</u>	ES-X71050 ES-X71054 Zn-Ni MES T025-01 MS 82-3701 MSF2-3701
<u>  NISSAN:</u>	NES M 4040 NES M 4060
<u>  SUZUKI:</u>	SES D 2211
<u>  TACOM:</u>	12469218
<u>  TESLA MOTORS:</u>	TM-0009F-M
<u>  TOYOTA:</u>	TSH5105G TSH6500G TSH6517G TSH6524G TSH6526 TSH6526G TSH6530G TSH6532G
<u>  VOLVO:</u>	STD 121-0004 STD 121-0003 STD 121-0006 STD 1271, 47 STD 4972, 105 STD 5700, 21 STD 5713, 102 STD 5732, 105
<u>  VOLKSWAGON:</u>	TL-244 TL-VW 137 50 TL-VW 217 TL-VW 521 32
<u>  YAMAHA:</u>	YKG-7-801

## **GOVERNMENT SPECIFICATIONS:**

QQ-Z-325  
ASTM F 1941  
ASTM B 849  
ASTM B 242  
ASTM B633  
ASTM B 841  
ASTM B 850  
ASTM A 641  
ASTM A 591 (After forming)  
ASTM A 591M (After forming)  
ASTM A918-06 (2011)  
MIL-STD-171  
57-0-2C Classes GS, LS, RS

# DOC

## OTHER MISCELLANEOUS SPECIFICATIONS:

<u>AEROQUIP</u>	ACES 16P47, 52
	SBES 007
	SBES 063
<u>AGCO</u>	CPS 5039
	705 100 009
<u>AIRBUS</u>	AIPS 02-04-006
<u>AIRPAX</u>	905-0015-001
<u>AKEBONO (AMBRAKE)</u>	AES G 3201-04
	AES G 3501-U
<u>ALLIED AUTOMOTIVE</u>	ES-2799
<u>ALLIED SIGNAL</u>	BW-103-P
	IFP-013
<u>AM GENERAL</u>	P2
	6507599
<u>AMERICAN AXLE &amp; MFG.</u>	MS-2412
	MS-4052
	MS-4062
<u>AMERICAN ELECTRIC COMPONENTS</u>	PS 0030
<u>AMERICAN SHOWA</u>	STS S-00210
<u>A.O SMITH</u>	PS368-OA
<u>ARVIN MERITOR</u>	508
	510-B
	703
<u>ATWOOD AUTOMOTIVE</u>	AADPS-4
	AVPS-4
<u>AUSTRALIAN STANDARD</u>	AS 1897-1976
<u>AUTOMOTIVE CONTROLS</u>	ES-1275
<u>AUTOMOTIVE PRODUCTS</u>	DP 120
<u>AXLETECH</u>	STA 02-652
<u>BENDIX</u>	ES-2567
	BW-162-P
	BX-11
	BX-13
	BX-14
	BW-225-P
	BW-375-P
	K7
	Y151834
<u>BERGEN CABLE TECH.</u>	BW-P001
<u>BEST LOCK</u>	ER-6660
<u>B.H.M.A.</u>	Code 603, 604
<u>BLD</u>	25-179
<u>BOBCAT</u>	PS-P
<u>BOMBARDIER</u>	1827
<u>BOEING</u>	BAC5637

# DOC

## BORG-WARNER

01ES00004  
10-00-447-A02-B  
284-263  
284-270  
BWS 61003  
ES-10003  
S-848  
S-873  
S-941  
S-944  
S-954  
S-1104  
S-1105  
S-942  
S-1236

## BOSCH

10-00-447-A02-B  
0 204 Y24 533  
0 204 Y82 034  
0 204 Y82 120  
0 204 Y82 266  
5J0105  
ES-2567  
ES-3024  
F 00N 202 334  
LV 40 A-W  
MS-58  
N67F 821-06  
N67F 821 46  
N67F 822-06  
N67F 822-08  
N67F 826 10  
N67F 826 11  
N67F 826 12  
N67F 826 42  
N67F 826-45  
N67F 826 46  
PE-9714

## BOWMAN DIST. BRIGGS & STRATTON BROSE

B-10 E  
328K  
103  
590295-107  
590295-126  
ES-003320-000  
LV-40  
BS 6338  
M.S. No. 18  
E.S. 00014003  
E.S. 00014004  
1270 5364

## BRUNSWICK BSH HOME APPLIANCES BSI THE BUDD COMPANY BUNDY TUBING

CS-210  
9002PS  
S. O. P. No. QAP01

## BURROUGHS CORP. CTS CORP.

## CALIFORNIA INDUSTRIAL

# DOC

<u>CAPRO</u>	96-0024-XX
<u>CARTER CARBURETOR</u>	ACF C2.4
	B9. 4
	B9. 14
	B9. 19
	C2.4
<u>CASE</u>	MS 201
<u>CATERPILLAR</u>	1E0397
	1E1675
	1E2257
<u>CHAMPION LABORATORIES</u>	9957
<u>CITRÖEN</u>	B15 4102
<u>CLARK</u>	PS-P
	P and PR
<u>CLEVITE</u>	PS-180.0
<u>CNH</u>	MAT0310
<u>COLLINS &amp; AIKMAN</u>	ADS-133
<u>CONTINENTAL TEVES</u>	ATE N 106 36.21
	ATE N 106 61.00
	ATE N 522 61
	ATE N 553 81.03
	CN 425886
<u>CONTROL DATA CORP.</u>	64051200
<u>COUPLED PRODUCTS</u>	P-501
<u>CUMMINS</u>	74018
	74019
	74052
<u>CTS MEXICO</u>	CS-210
<u>CUTLER-HAMMER</u>	50-1251
	50-407
<u>DAEWOO</u>	EDS-M-3101
	EDS-M-3106
<u>DAIMLER</u>	49-00005
<u>DANA CORP.</u>	032-0099008
	032-0099011
	032-0099012
	032-0099032
	032-0099035
	032-0099085
	032-0099380
	2. 005. 302-D
	4001
	ES-PS-06192
	ES-PS-4001
	MES-724
	P-19
	P125
	P204
	P205
	P206
	P501
	P502

# DOC

DAVCO  
DAYCO  
DAYTON-WALTHER CORP.

DELPHI STEERING  
DENSO  
DELCO REMY

DELPHI AUTOMOTIVE

DE STA CO  
DEXTER AXLE  
DEUTSCHE NORMEN

DHB-CA  
DRAW-TITE

EATON

ELASTIC STOP NUT (ESNA)

ELECTROLUX

EMERSON ELECTRIC

P503  
P.S. #225  
PS-1095  
SP-0013 THRU SP-0023  
4397005  
DES-F002  
PL-Z-1  
PL-Z-3  
26008641  
DDS 6700-002  
P-10  
P-44  
DX550085  
DX550073  
DX550100  
DX550200  
DX551200  
DX551300  
DCM 5184  
DCM 5200  
10949004  
ES-103  
ES1018  
590295-102  
DIN 267 part 9  
DIN 50961  
DIN 50962  
DIN 50979  
DIN EN 12329  
DIN ISO 4042  
GAL ZN 210X  
BT.387/88  
ZINC PLATING  
00924-002  
50-1251  
50-407  
11002  
ES-2751  
ES-10003  
GS-128  
P222A  
PS-168  
PS-186  
SBES 063  
TES-144  
83246FB  
302  
304  
534  
1043-C  
F-10  
3-1407

# DOC

<u>EMHART</u>	TF:224
<u>ENGINE BOOSTING SYSTEMS</u>	IFP-008
<u>EUCLID INDUSTRIES. LLC.</u>	EES 700
<u>EUROPOWER</u>	HSP-5390
<u>E-Z-GO</u>	GS-726
<u>FABORY USA LTD</u>	MS203
<u>FALCON LOCK</u>	302
<u>FEDERAL MOGUL</u>	PS-104
<u>FIAMM</u>	FI-1000
<u>FINDLEX</u>	MFZn-Ni
<u>FIRESTONE</u>	NCD-3113-26-6
<u>FISHER GUIDE</u>	ES-1009
	MG-3518
<u>FLEXALLOY</u>	GS-726
<u>FLEXITECH</u>	NMR 01001
<u>FMC</u>	12365897
<u>FMVSS</u>	209
<u>FREIGHTLINER</u>	49-00005
<u>FRIGIDAIRE</u>	1043-C
	F-10
<u>FRUEHAUF</u>	F.E.S. NO. 5
<u>FTE AUTOMOTIVE</u>	DP 120
	FTE-TL085
<u>FUJI HEAVY</u>	TS430-1-33
<u>FURNAS</u>	D79060
<u>GARRETT</u>	IFP 008
<u>GENERAL DYNAMICS</u>	G1922M
	G1931M
<u>GENERAL ELECTRIC</u>	F50LE7
	F70B1
	F70B3
	F70B4
	F70B5
	F70B6
	F70B7
	F70B11
	F70B12
	F70B13
	F70B17
	F70B21
	P16D10
	SI-10559
	VGS 6.2.10
<u>GIRLING</u>	TS2-21-01 to 10
<u>GITS MFG CO</u>	ES0276
<u>GKN</u>	M 7011
	P 1002
<u>GRACO</u>	4.0450
<u>GREENVILLE PRODUCTS CO.</u>	1043-C
<u>GRESEN</u>	2.005.203
<u>GROTE</u>	36-0801-01
	36-0801-02



# DOC

<u>GUNITE</u>	36-0802-01
<u>HALDEX</u>	36-0802-02
	36-0802-10
	ES 240
	ESF-3008
	ESF-3011
	ESF-3025
<u>HARLEY-DAVIDSON</u>	ES805-43250
	43250
	43251
	805-050
<u>HAWORTH</u>	ES-1045
<u>HAYES LEMMERZ</u>	MS018
	MS58
	81145
<u>HB PERFORMANCE SYSTEMS</u>	65-001
<u>HELLA-NORM</u>	N47102-07
<u>HELI-COIL</u>	SH 211
<u>HENDRICKSON MFG.</u>	AA-26408 (H2)
	HTES-1011
	HTES-1044
<u>HERMAN MILLER</u>	SI-179
<u>HILL-ROM</u>	90363
<u>HINO</u>	HTSH6524
<u>HOLLEY CARB.</u>	S-205
	S-704
	S-873
	S-848
	S-880
	S-942
	S-944
	S-950005
<u>HONEYWELL</u>	IFP-008
	IFP-024
<u>HUSCO INTERNATIONAL</u>	603-101 to 108
<u>IBM</u>	ZINC 90
	ZINC 92
<u>IDEAL</u>	PS-168
	PS-170
	XPS-171
<u>IMPERIAL EASTMAN</u>	E.S. 322
<u>INLAND</u>	M-1880
	M-2163
<u>INTERNATIONAL HARVESTER</u>	G-20
<u>INTERNATIONAL TRUCK AND ENGINE</u>	CEMS G-20
	TMS-4113
	MX551200
<u>INTEVA</u>	ES-10645
<u>INVENSYS</u>	ISO 2081
<u>ISO</u>	ISO 4042
	ISO 4520
	ISO 15726

# DOC

<u>ITT AUTOMOTIVE</u>	ATE N 106 36
	ATE N 627 01
<u>ITRON</u>	FS 1050
<u>JACOBSEN</u>	4050
	4051
<u>JAPANESE STDS. ASSN.</u>	JIS B 1044
	JIS D 0201 (MFZn)
	JIS H 0404 (Ep-Fe / Zn)
	JIS H 0404
	JIS H 8610
	JIS H 8625
<u>JC BAMFORD</u>	STD00017
<u>JIFFY-TITE</u>	JT3016M
<u>JLG</u>	4150174
	4150176
<u>JOHN DEERE</u>	JDM F15
	JDM F19
	JDM F15X1
	JDM F21
	JDS 117
	DTW 765
	LaN 930-11.3
<u>JOHNSON CONTROLS</u>	03-23-8
<u>KAWASAKI</u>	H-001-1
<u>KJS</u>	L1-101
<u>KELSEY HAYES</u>	B-4117
	S-00411701
	S-12650101
<u>KENWORTH</u>	R026-198-19
<u>KNORR</u>	N10199
<u>KOHLER</u>	Z-107
	Z-111
	Z-280
<u>KOYO</u>	ELL-107
<u>KYSOR</u>	A-34793
<u>LEMFORDER</u>	LMN 50 GAL ZN & ZN-NI
<u>LINCOLN GLOBAL</u>	E4265
<u>LUCAS VARITY</u>	S-00411701
	S-12650101
<u>LuK</u>	0 812 980 25
<u>MACK TRUCKS, INC.</u>	817 GS 13
<u>MAGNETI MARELLI USA</u>	B-9.5009
<u>MAHLE</u>	M4101
	WNA 2130
<u>MANITOWOC</u>	6829009181
<u>MARK IV</u>	8292-02
	P206
	RQ0002
<u>MARVEL-SCHEBLER / TILLOTSCH</u>	284-263
<u>MASTER PNEUMATIC</u>	PS #5
<u>MASTER-REEVES</u>	300.010
	337.010

# DOC

<u>MAYTAG</u>	3 SPC-001
	3 SPC-010
<u>McMASTERS KOSS</u>	510
	525
<u>MERCURY MARINE</u>	M221P ZnNi
<u>MERITOR</u>	RG. 610 001 006
<u>METTLER TOLEDO</u>	145129R
<u>MGM BRAKES</u>	ES 1011-A
	ES-1026
<u>MICRO SWITCH</u>	PS 005 009
<u>MIDLAND ROSS</u>	ESF 3008
<u>MISHAWAKA</u>	MES-724
<u>MOTOROLA</u>	12G80966E88
<u>MP</u>	BS 1706
	BS 6338
<u>MTU</u>	MTV5025
<u>NATIONAL CRANE</u>	MS-130
<u>NAVISTAR</u>	CEMS G-20
	CEMS G-22
	TMS-4106
<u>NEW HOLLAND</u>	FNHA-1-A-010.00
	FNHA-2-H-500.00
	FNHA-2-H-500.25
<u>NEXTEER</u>	33001800
	33002583
<u>NIPPONDENSO</u>	DDS 6700-2
	DS 67
<u>NISSHINBO</u>	MF ZN 1C
<u>NISSIN KOGYO</u>	Zinc Nickel Spec
<u>OLYMPIC</u>	ST90-004
<u>ORSCHLN</u>	PT-2
<u>OTIS ENGINEERING</u>	0182
<u>PACCAR</u>	26DJ
<u>PARKER-HANNIFIN</u>	CMT0250
	AES 5000
	FC-F01
	CDS 2751
	PZ1
<u>PARKER HYDRAULICS</u>	DS3006-002
	MP-47
	2.005.302
	S-8
<u>PAULIN</u>	P232-C
	P262-H
	PS 101
<u>PBR AUTOMOTIVE</u>	MS1123
	MS1139
<u>PETERBILT</u>	MPS 9303.001
	MPS 9303.003
<u>PEUGOT-CITRÖEN</u>	B15 4102
<u>PDD</u>	80-100
<u>PIERBURG</u>	8.25904.00

# DOC

<u>POLLAK</u>	8.25905.00
<u>POSITRONIC</u>	S-00411701-H
<u>POWER PACKER</u>	18
	PPE-PS-014
	PS-001
<u>PRESTOLITE</u>	#341
	#350
	12S40460 (ON ZINC)
	10S8556
	P966106021
<u>RACOR</u>	RPS-144
<u>RENAULT</u>	47-01-003
<u>ROBERT SHAW</u>	ES-00371000
	ES-00408000
<u>ROCKWELL INTERNATIONAL</u>	510
	516
	525
	530
	RG. 610 001 006
<u>ROMEO RIM</u>	10180400
	10180500
<u>SACHS</u>	WN 62/5
<u>SAE</u>	AMS 2402
	AMS 2417
	AMS 2434C
	AMS 2759/9C
	USCAR-5
<u>SAIA-BURGESS</u>	ES-572
<u>SAIC</u>	SMTC 5 100 003
<u>SCHLAGE</u>	MFC-13 604
<u>SCHNEIDER ELECTRIC</u>	FTR00025
<u>SEDCO, INC.</u>	999-0134
<u>SHELL</u>	ES 313
<u>SIEBE FLUID SYSTEMS</u>	FS809 Ni
<u>SIEMENS</u>	FIN-005
	MPS No. 5002
	MPS No. 5028
	MPS No. 5032
	MPS No. 5033
	MPS No. 5053
	MPS No. 5066
	MPS No. 5077
	SN 25886
<u>SIMPSON STRONG-TIE</u>	DCLB3R
	DTHQ3R
<u>SPIROL</u>	FPS-001000
	FPS-001012
	FPS-001013
<u>SPX CORP</u>	DSD04-04
<u>SQUARE D</u>	40004-017-01
	830794-509
	A48057-003

# DOC

STABILUS  
STEELCASE  
STEERING SYSTEMS ENG.  
STIHL

STONERIDGE  
STS  
TELEFLEX  
TECUMSEH PRODUCTS  
TELEDYNE  
THOMPSON PRODUCTS  
TI AUTOMOTIVE

TICO  
TIS  
TOKAI RIKA  
TOLEDO SCALE  
TORO  
TOYODA  
TRATECH  
TRELLEBORG

TREMEC  
TRICO  
TRW

TURBO TECHNOLOGIES  
TUTHILL

TYCO

A48057-001-01  
A48953-001  
S30793-501  
S30782-520  
S30794-501  
KDS-258-129  
KDS-258-18  
KDS-258-136  
FN4943  
STAB-SPEC 10133806  
ES 1-02-01H  
ELL-107  
SWN 33012-01  
SWN 33013-01  
S-00411701  
S-00210  
ESDP-0400  
H-43  
MHS-123  
TP-545  
SPC 200 000 0001  
NW 93-11-286  
STSH6524G  
TIS S3512  
TRES-D6622  
145129R  
M-300  
GIP-HS-506  
GS-104  
TES-1203  
TES-1204  
TES-1205  
ET-T-52  
TZ-3.5  
MP-47  
047603  
045622  
S0000041  
S-14171201  
TPS-P-20,037-A, B, C, D  
TPS-P-20, 141  
TPS-P-20, 316  
TRWPS00005  
TS2-21-02 THRU TS2-21-10  
TS2-21-079  
TS2-21-108  
TS2-59-20  
TRWPS00005  
IFP-024  
11-18-92  
8-15-95  
112-78

# DOC

UNISTRUT

VALEO

VARGA

VELVAC

VETCOGRAY

VICKERS

WABCO

WEBB WHEEL

WHIRLPOOL

WHITE MOTOR CORP.

YA AMERICA

ZENITH

FS 103  
FS 103-1  
FS 143  
2 548 064  
NVA.40.001  
NV-9410110  
EFZ00002  
VGS 6.2.10  
VS 2-3-2-33  
JED 256  
JED 257  
ES-203  
F-1  
F-12  
PS-68404  
WM-3101  
MS-0041  
MS-0042  
YES018  
YES025  
ES 209