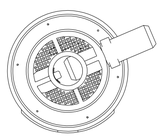
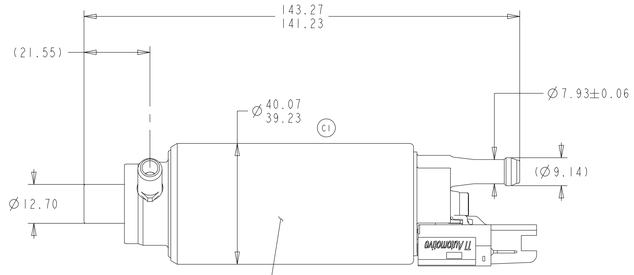
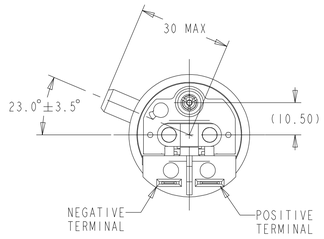
REVISIONS						
ZONE	LTR	DESCRIPTION	CHANGE No	DATE	BY	APPR'D
		INITIAL RELEASE	69324	18MAY04	DRG	DC
3-D	A	A1 ADDED MADE IN USA	70124	29SEP05	RMB	MMc
4-D	B	B1 REM'D PATENT #'S	71352	28FEB08	DRG	BM
4-F	C	C1 DBTC0031 MAGNETS WERE 184-31	C3'3985	17MAY23	JTK	MLM

PRODUCT VALIDATION (PV)	CONTINUING CONFORMANCE (IP)	PF 8687 SECTION NO.	DESCRIPTION	TEST VALUE/ REQUIREMENT
		1.3.1	"SYSTEM" PRESSURE (kPa)	338
		1.3.2	"BOOST" PRESSURE (kPa)	0.0
		2.3.3.2	PUMP NOISE (PV ONLY): SETTINGS: 12.0V @ 338 kPa IN MS-4957 CAL. FLUID (>24 HOURS) SETTINGS: 14.0V @ 338 kPa IN MS-4957 CAL. FLUID (>24 HOURS) PUMP NOISE: (IP ONLY): PRODUCTION SETTINGS: 13.0V @ 338 kPa IN MS-4957 CAL. FLUID (0 HOURS)	N/A
SC		2.4.1.1	MINIMUM FLOW (LPH): MAXIMUM FLOW (LPH): SETTINGS: 12.0V @ 338 kPa IN MS-4957 CAL. FLUID (>24 HOURS)	94 180
SC	SC	2.4.1.2	MINIMUM PRESSURE (kPa): MAXIMUM PRESSURE (kPa): SETTINGS: 12.0V @ SHUTOFF kPa IN MS-4957 CAL. FLUID (>24 HOURS) PRODUCTION SETTINGS: 15.0V @ SHUTOFF kPa IN MS-4957 CAL. FLUID (0 HOURS)	550 950
		2.4.1.3	PUMP PERFORMANCE AT 12.0±0.1 VOLTS:	SEE FIG. 1
		2.4.1.4	MINIMUM FLOW (LPH): SETTINGS: 12.0V @ 338 kPa IN MS-8004 UNLEADED GASOLINE (>24 HOURS)	77
SC	SC	2.4.1.5	MINIMUM FLOW (LPH): MAXIMUM FLOW (LPH): PRODUCTION SETTINGS: 13.0V @ 338 kPa IN MS-4957 CAL. FLUID (0 HOURS)	94 180
		2.4.2.1	MINIMUM FLOW (LPH): SETTINGS: 8.0V @ 338 kPa IN MS-4957 CAL. FLUID (>24 HOURS)	14.5
SC		2.4.3.1	MAXIMUM CURRENT DRAW (AMPS): SETTINGS: 12.0V @ 338 kPa IN MS-4957 CAL. FLUID (>24 HOURS)	9.0
SC	SC	2.4.3.2	MAXIMUM CURRENT DRAW (AMPS): PRODUCTION SETTINGS: 13.0V @ 338 kPa IN MS-4957 CAL. FLUID (0 HOURS)	9.0
SC		2.4.5.1	MAXIMUM CHECK VALVE LEAKAGE (ml/hr): (PV ONLY) LIQUID METHOD SETTINGS: MS-4957 CAL. FLUID @ 338 kPa	1.0
	SC		MAXIMUM CHECK VALVE LEAKAGE (cc.m): (IP ONLY) PRODUCTION SETTINGS: AIR DECAY @ 103.4 kPa	6.0
		2.4.6	HIGH TEMPERATURE MINIMUM FLOW (LPH): SETTINGS: 12.0V @ 338 kPa IN MS-8004 UNLEADED GASOLINE (>24 HOURS)	77
SC	SC	2.4.8	MINIMUM ASPIRATOR FLOW (LPH): PRODUCTION SETTINGS: ASPIRATOR @ 338 kPa IN MS-4957 CAL. FLUID (0 HOURS)	104
		2.5.7.3	TEST TO WORST CASE DESIGN LEVEL: HIGHEST SPEED COPPER COMMUTATOR ARMATURE HIGHEST SPEED CARBON COMMUTATOR ARMATURE SLOWEST SPEED COPPER COMMUTATOR ARMATURE SLOWEST SPEED CARBON COMMUTATOR ARMATURE	N/A
		4.1	PRODUCT CHANGE:	PPAP MANUAL THIRD EDITION (AIAG STANDARD)

NOTES: THE FLOW RATE CONVERSION OF MS-4957 TEST FLUID AT 23.5°C IS 1.0 LITER/HOUR = 0.789 kg/hr.
ALL FUEL MIXTURE PERCENTAGES ARE ON A VOLUME BASIS.







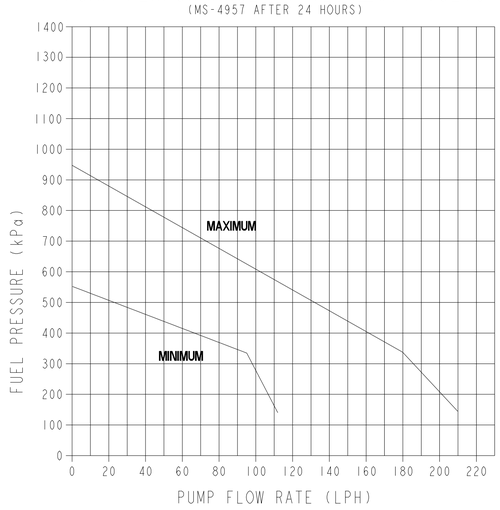
STAMPING INFORMATION:
STAMP ON SHELL, (3.2 HIGH LETTERS)

WALBRO F20000176 (A)
(JULIAN DATE MFG.) MADE IN USA

(B)

FIGURE 1

PUMP PERFORMANCE AT 12.0±0.1 VOLTS
(MS-4957 AFTER 24 HOURS)



MAXIMUM CURVE	
FLOW RATE (LPH)	PRESSURE (kPa)
0	950
180	338
209	140

MINIMUM CURVE	
FLOW RATE (LPH)	PRESSURE (kPa)
0	550
94	338
112	140

NOTE:

1) PUMPS SHALL BE SUITABLY PACKAGED TO PREVENT ENTRY OF FOREIGN MATERIAL

KEY PRODUCT CHARACTERISTICS

REFER TO TI AUTOMOTIVE GLOBAL ADVANCED QUALITY PLANNING DOCUMENT CW-4-ALL-411 FOR THE CLASSIFICATION AND CONTROL OF KEY PRODUCT CHARACTERISTICS

TYPE OF CHARACTERISTIC	SAFETY	REGULATORY	FUNCTION	FUNCTION PROCESS
	SC	SSV	SSV	SSV
NUMBER PER EACH CHARACTERISTIC	--	--	12	--
TOTAL NUMBER OF CHARACTERISTICS	12			

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METRIC
ALL DIMENSIONS ARE IN MILLIMETERS

DO NOT SCALE
DECIMAL TOLERANCES UNLESS OTHERWISE SPECIFIED
ONE PLACE ±0.25 TWO PLACE ±0.13 ANGLES ±1°

THIRD ANGLE PROJECTION

DIMENSIONS IN ACCORDANCE WITH ASME Y14.5 - 2009

TI Automotive
630 COLUMBIA ST.
CARO, MI 48723
+1 989.673.7727

ENGINEER:	DC	18MAY04	MATERIAL/SPECIFICATION: SEE NOTES
DESIGNER:	DRG	18MAY04	
CAD SYSTEM: PRO/E	SCALE: 1:1		SHEET NO. 1 OF 1
REFERENCE ID/REV.: HJPQ0029		2D PLM REFERENCE/REV.: AR3105338/AA	
REFERENCE ID/REV.: 000008142/AD		3D PLM REFERENCE/REV.: 000008143/AC	

DRAWING NAME: FUEL PUMP OUTLINE

SIZE: A1 DRAWING NUMBER: F20000176