



HEAD MARKING SHALL BE DEPRESSED (.010 MAX) AND ARRANGED AS FOLLOWS:

- MARK WITH BASIC PART NUMBER ("PSC" OPTIONAL) EXCEPT MARK .1120-40 SIZE WITH "4", .1380-32 SIZE WITH "6", .1640-32 SIZE WITH "8", AND OPTIONAL .1900-32 SIZE WITH "10". THESE SIZES ALSO TO BE MARKED "C" FOR A286.
- MARK WITH MANUFACTURER'S SYMBOL OR TRADEMARK (SYMBOL LOCATION OPTIONAL IN ANY SECTOR) LENGTH DASH NUMBER AND "L" OR "P" WHEN APPLICABLE. (SEE NOTE 11)
"L" IDENTIFIES SCREWS WITH OPTIONAL LOCKING ELEMENT.
"P" IDENTIFIES SCREWS WITH PATCH TYPE LOCKING ELEMENT ONLY.
- MARK WITH RECESS DASH NUMBER, ENCIRCLED. RECESS NUMBER SHOULD BE APPROXIMATELY 25% LARGER THAN OTHER NUMERALS IN HEAD MARKING.

TABLE I DIMENSIONS

Ø DASH NUMBER	THREAD SIZE	(3) MAX. ØA	(3) ABSOLUTE MIN. ØA'	(3) MAX. B	MAX. ØD	MAX. E	(8) F	H GAGE (4) PROTRUSION		(9) J	RADIUS R	MAX. U	+.0002 -.0000 ØW GAGE	RECESS SIZE			
								NOM.	TOL.								
−04	.1120−40	.226	.193	.044	.112	.010	.125	.0202	±.0010	.075	.012 .002	.031	.1740	1			
−06	.1380−32	.280	.246	.061	.138	.010	.156	.0232	±.0011	.094		.020 .010	.039	.2208	2		
−08	.1640−32	.331	.296	.072	.164	.012		.0186	±.0012		.0210 ±.0013			.107		.045	.2830
−3	.1900−32	.381	.338	.082	.190	.015											
−4	.2500−28	.508	.456	.111	.250	.018	.178	.0299	±.0015	.107		.045	.4318	3			
−5	.3125−24	.635	.575	.138	.312	.021	.208	.0354	±.0017	.125	.025 .010 .030 .015	.052	.5449	4S			
−6	.3750−24	.763	.692	.166	.375	.025			.0414				±.0019		.6580		

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TITLE: **SCREW, 100° HEAD, FULL THREAD
ACR[®] RIBBED PHILLIPS[®] RECESS, A286 CRES
SELF-LOCKING AND NONLOCKING**

DRAWN:
S. GUARINO

DATE:
09-14-79

DRAWING NUMBER

PSC-738

CHECKED:
G. LaMONICA

DATE:
04-22-04

SHEET 1 OF 4

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TABLE II - RECESS DIMENSIONS

Ø DASH NUMBER	THREAD SIZE	RECESS SIZE	ØM	T	GAGE PENETRATION		TORQUE IN-LBS MIN(10)	RAISED METAL MAX(10)	TENSILE STRENGTH LBS.
					MAX.	MIN.			
-04	.1120-40	1	.117 .104	.078 .062	.071	.055	13	.005	830
-06	.1380-32	2	.154 .141	.086 .063	.075	.052	25	.005	1,260
-08	.1640-32	2	.169 .156	.101 .078	.090	.067	35	.005	1,950
-3	.1900-32	2	.184 .171	.116 .093	.105	.082	50	.005	2,860
-4	.2500-28	3	.247 .234	.135 .112	.118	.095	125	.005	5,820
-5	.3125-24	4S	.317 .304	.168 .146	.148	.126	230	.005	9,260
-6	.3750-24	4S	.341 .328	.193 .171	.173	.151	300	.006	14,000

TABLE III

	(2) (2) (2) DASH NUMBER FOR PREFERRED LENGTH																						
DASH NO.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34 TO 96
LENGTH	.19	.25	.31	.38	.44	.50	.56	.62	.69	.75	.81	.88	.94	1.00	1.12	1.25	1.38	1.50	1.62	1.75	1.88	2.00	2.12 TO 6.00
LENGTH TOL.	+.00 -.03														+.00 -.06							+.00 -.09	

MATERIAL: A286 CORROSION RESISTANT STEEL WITH COMPOSITION PER AMS 5731 OR AMS 5737.
LOCKING ELEMENT- PLASTIC PER MIL-F-18240 AND QPL-18240.

HEAT TREAT: 160 KSI MINIMUM ULTIMATE TENSILE.

FINISH: UNPLATED SCREWS - PASSIVATE TO MEET REQUIREMENTS OF NAS4003.
PLATED SCREWS - CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2. EMBRITTLEMENT TEST PER QQ-P-416 DOES NOT APPLY. CADMIUM PLATED A286 CRES SCREWS SHALL BE IDENTIFIED WITH GREEN DYE OR PAINT ON THE THREAD END. MAXIMUM COVERAGE MAY INCLUDE THE CHAMFER PLUS ONE COMPLETE THREAD.
COATED SCREWS - ALUMINUM COATING PER NAS4006.

CODE: BASIC PART NUMBER = NON-LOCKING, PLATED SCREW. SEE TABLE II AND III.
FIRST DASH NUMBER INDICATES DIAMETER. SEE TABLE II.
SECOND DASH NUMBER INDICATES LENGTH IN .0625 INCREMENTS (ROUNDED TO TWO DECIMAL PLACES). SEE TABLE III FOR TABULATIONS OF LENGTH DIMENSIONS. USE OF .25 INCH INCREMENTS IS RECOMMENDED FOR SCREWS OVER 3 INCHES LONG. INTERMEDIATE OR LONGER LENGTHS MAY BE SPECIFIED BY USE OF WHOLE DASH NUMBER ONLY.
ADD "A" AFTER DIAMETER DASH NUMBER FOR ALUMINUM COATED SCREWS. MAY BE USED WITH "L" OR "P" CODE.
ADD "L" AFTER DIAMETER DASH NUMBER FOR SELF-LOCKING SCREWS, OPTIONAL CONFIGURATION. DO NOT USE WITH "P" CODE.
ADD "U" AFTER DIAMETER DASH NUMBER FOR UNPLATED SCREWS. MAY BE USED WITH "L" OR "P" CODE.
ADD "P" AFTER DIAMETER DASH NUMBER FOR SELF-LOCKING SCREWS WITH PATCH TYPE LOCKING ELEMENT. DO NOT USE WITH "L" CODE.
WHEN MULTIPLE LETTER CODES ARE USED, SEQUENCE MUST BE IN ALPHABETICAL ORDER.

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EXAMPLE OF PART NUMBER:

PSC738-3-10 = SCREW, .1900-32 THREAD, .62 LENGTH, NON-LOCKING, PLATED.
PSC738-3A10 = SCREW, .1900-32 THREAD, .62 LENGTH, NON-LOCKING, ALUMINUM COATED.
PSC738-3L10 = SCREW, .1900-32 THREAD, .62 LENGTH, SELF-LOCKING, OPTIONAL CONFIGURATION, PLATED.
PSC738-3LU10 = SCREW, .1900-32 THREAD, .62 LENGTH, SELF-LOCKING, OPTIONAL CONFIGURATION, UNPLATED.
PSC738-3PU10 = SCREW, .1900-32 THREAD, .62 LENGTH, SELF-LOCKING, PATCH TYPE, UNPLATED.

NOTES:

- (1) DIAMETER OF UNTHREADED PORTION OF SCREW SHALL NOT BE LESS THAN MINIMUM PITCH DIAMETER NOR MORE THAN MAXIMUM MAJOR DIAMETER OF THREAD.
- (2) DASH 3 LENGTH IS NOT PRACTICAL FOR SIZE .1900-32 AND LARGER. DASH 4 IS NOT PRACTICAL FOR SIZE .2500-28 AND LARGER. DASH 5 LENGTH IS NOT PRACTICAL FOR SIZES .3125-24 AND .3750-24.
- (3) DIMENSIONS A, A', AND B ARE INCLUDED FOR ENGINEERING REFERENCE ONLY AND ARE NOT TO BE USED FOR INSPECTION. VALUES A, A', AND B ARE CALCULATED LIMITS RESULTING FROM TOLERANCES ON W, H, E, AND HEAD ANGLE.
- (4) DIMENSIONS FOR H GAGE PROTRUSION SHALL BE INSPECTED PER NAS527.
- (5) SCREWS LESS THAN 2 DIAMETERS IN LENGTH - COMPLETE THREADS SHALL EXTEND TO WITHIN 2 PITCHES OF BEARING SURFACE OF HEAD AND INCOMPLETE THREADS MAY EXTEND UP TO BEARING SURFACE.
SCREWS 2 DIAMETERS THRU 2 INCHES IN LENGTH - COMPLETE THREADS SHALL EXTEND TO WITHIN 2 PITCHES OF TANGENCY OF "R" AND INCOMPLETE THREADS MAY EXTEND UP TO "R" FILLET AREA.
SCREWS LONGER THAN 2 INCHES - COMPLETE THREADS SHALL EXTEND A MINIMUM OF 1.75 INCHES FROM END OF SCREW AND INCOMPLETE THREADS MAY EXTEND UP TO "R" FILLET AREA.
INCOMPLETE THREADS - SEE NAS4003.
- (6) CONCENTRICITY: CONICAL SURFACE OF HEAD TO THREAD PITCH DIAMETER WITHIN .005 FIM.
- (7) PROTRUSION OF LOCKING ELEMENTS SHALL BE CONTROLLED SO THAT IT WILL PASS FREELY OR WITH FINGER PRESSURE THROUGH A RING GAGE WITH DIAMETER OF .010 (+.001, -.000) GREATER THAN MAXIMUM MAJOR DIAMETER OF SCREW THREAD.
- (8) "F" MINIMUM (5 THREAD PITCHES) = REGION OF MINIMUM ENGAGEMENT WITH FEMALE THREAD REQUIRED TO MEET MIL-F-18240 REQUIREMENTS. LOCKING ELEMENT WITHIN "F" REGION MUST DEVELOP REQUIRED TORQUE WHEN TESTED PER MIL-F-18240.
- (9) FOR EASE OF STARTING, LOCKING ELEMENT SHALL NOT BE EFFECTIVE IN "J" AREA (3 THREAD PITCHES) .
- (10) MINIMUM TORQUE VALUES (TABLE II) WHICH RECESS MUST DEVELOP IN REMOVAL DIRECTION WITH APPROPRIATE DRIVERS PER PSC-1201 THROUGH PSC-1204 AND 5 POUND MAXIMUM END LOAD. PARTS ARE ACCEPTABLE IF RAISED METAL AT EDGE OF RECESS DOES NOT EXCEED TABULATED VALUES.
- (11) "A", ALUMINUM COATED, "H", DRILLED HEAD, AND "U", UNPLATED CODES NEED NOT APPEAR ON THE HEAD OF THE SCREW.
- (12) MAGNETIC PERMEABILITY SHALL BE LESS THAN 2.0 (AIR = 1.0) FOR FIELD STRENGTH H = 200 OERSTEDS USING A MAGNETIC PERMEABILITY INDICATOR PER MIL-I-17214 OR EQUIVALENT.
- (13) DIMENSIONS TO BE MET AFTER PLATING.
- (14) DIMENSIONS ARE IN INCHES.

SURFACE TEXTURE:

(AA MAX PER ANSI B46.1) BEARING SURFACE OF THE HEAD, THREAD FLANKS AND THREAD ROOT 32;
OTHER SURFACES 125.

PROCUREMENT SPECIFICATION:

NAS4003, EXCEPT AS NOTED. COLD WORKING OF HEAD TO SHANK FILLET IS NOT REQUIRED.
LOCKING ELEMENT FOR SELF-LOCKING SCREWS: PER MS15981 AND MIL-F-18240. ANY TYPE OF CONFIGURATION IS OPTIONAL WHEN "L" CODE IS SPECIFIED. PATCH TYPE LOCKING ELEMENT (WITH NO METAL REMOVED) IS REQUIRED WHEN "P" CODE IS SPECIFIED. LOCKING ELEMENT MUST BE SUPPLIED BY A QUALIFIED SOURCE LISTED IN QPL18240. SHIPPING NOTICE SHOULD IDENTIFY THE SUPPLIER OF SCREW AND LOCKING ELEMENT SEPARATELY. RECESS TORQUE VALUES SHALL NOT APPLY.

PREPARED FOR ROLLS-ROYCE TO REPLACE NAS5700-5706.

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ROLLS-ROYCE APPROVED SOURCES OF ACR[®] PHILLIPS[®] PSC-738 BOLTS

(ADDITIONAL SOURCES FOR OTHER END USERS AVAILABLE FROM PHILLIPS SCREW COMPANY UPON REQUEST)

APPROVED SOURCES OF SUPPLY	ADDRESS	IDENTITY CODE
A F FASTENERS, LTD	UNIT 14-15 GLOSSOP BROOK BUSINESS PARK GLOSSOP DERBYSHIRE SK13 7AJ ENGLAND	J
AHG ATELIERS DE LA HAUTE-GARONNE	26 ROUTE DE LASBORDES BP73103 31131 FLOURENS CEDEX FRANCE	4b
PILGRIM SCREW CORPORATION	120 SPRAGUE STREET PROVIDENCE, RI 02907	P
SPS TECHNOLOGIES, LTD T. J. BROOKS DIV.	191 BARKBY ROAD TROON INDUSTRIAL AREA LEICESTER LE4 9HX ENGLAND	TBJ
BLANC AERO INDUSTRIES	15 RUE LASSON 75012 PARIS FRANCE	P
HEARTLAND PRECISION FASTENERS	301 PRAIRIE VILLAGE DRIVE NEW CENTURY KANSAS 66031	♥
MAC FASTENERS	1110 ENTERPRISE STREET OTTAWA KANSAS 66067	O1DO
LINREAD AIRCRAFT PRODUCTS DIVISION	P. O. BOX 28 CROSSGATE ROAD PARK FARM REDDITCH WORCESTERSHIRE B98 7TD ENGLAND	L

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