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 in connection with all new engineering and design applications and for repetitive use shall be made from this
 document when applicable)

AMSC N/A

REVIEWER ACTIVITIES:
 ARMY-AR
 NAVY-SH
 AIR FORCE-99
 DLA-IS

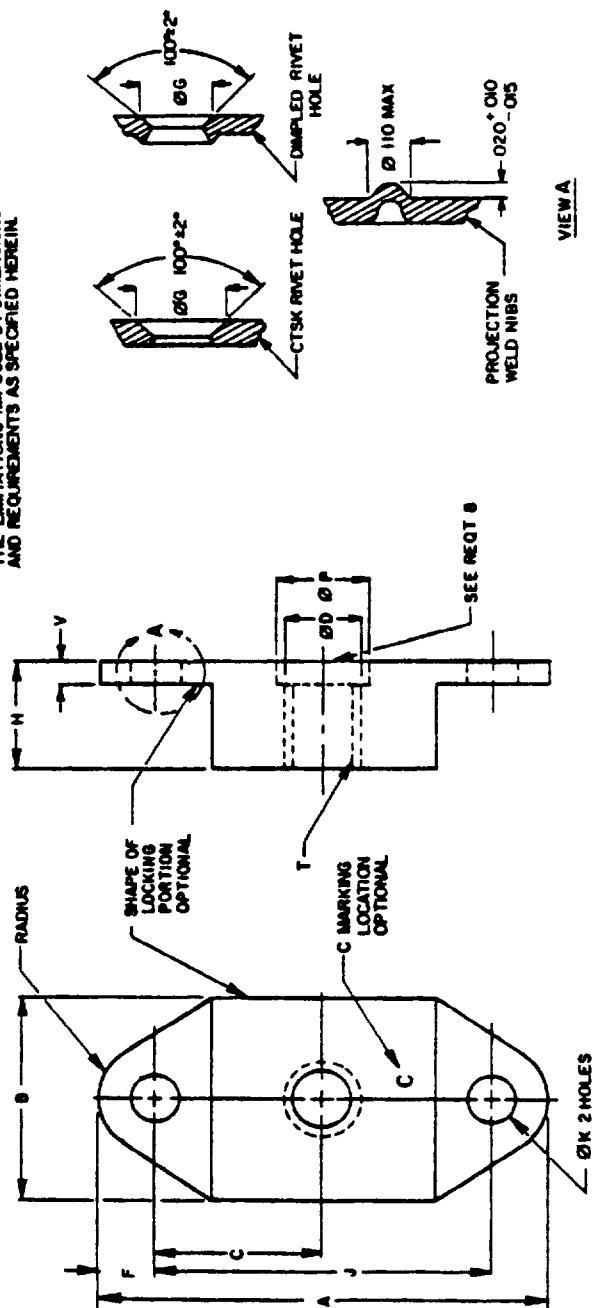
USER ACTIVITIES
 ARMY-CR,MI
 NAVY-OS

PA NAVY-AS Other Cost ARMY-AV AIR FORCE-II	INTERNATIONAL INTEREST	TITLE NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, LOW HEIGHT, CRES, 125 KSI FTU, 450° F & 800° F	MILITARY STANDARD MS 21060
PROCUREMENT SPECIFICATION MIL-N-25027	SUPERSEDES NAS 686, NAS 1031 (IN PART)	PAGE 1 OF 3	

DD FORM 672-1 (COORDINATED)

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5310-1570



CONFIGURATION OF NUT OPTIONAL WITHIN
 THE LIMITATIONS IMPOSED BY DIMENSIONS
 AND REQUIREMENTS AS SPECIFIED HEREIN.

VIEW A

TABLE 1 DIMENSIONS AND DIMENSIONS

CABLE SPECIFICATIONS										CABLE PROPERTIES										CABLE PERFORMANCE										CABLE HISTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
CABLE TYPE					CABLE SIZE					CABLE WEIGHT					CABLE STRENGTH					CABLE ELONGATION					CABLE RESISTANCE					CABLE CORROSION					CABLE WEAR					CABLE DAMAGE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN	WELDED	PLAIN

12446

FED SUP CLASS
5 310

REQUIREMENTS:

1. **MATERIAL:** CORROSION RESISTANT STEEL, TYPE A286, (UNS S46286) IN ACCORDANCE WITH AMS5525, AMS732 OR AMS737.
2. **FINISH:** ONLY 800°F NUTS: SILVER PLATE ALL THREADED SURFACES OF NUT ELEMENT IN ACCORDANCE WITH AMS 2410. THREADS SHALL SHOW COMPLETE COVERAGE. SILVER PLATING ON ALL OTHER SURFACES OPTIONAL. TARNISHING OR DISCOLORATION OF SILVER NOT CAUSE FOR REJECTION.
3. **LUBRICANT:** ONLY 450°F NUTS: DRY FILM LUBRICANT IN ACCORDANCE WITH MIL-N-25027.
4. **DIMENSIONING AND TOLERANCING:** DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M.
5. **HARDNESS:** 49HRC, MAX.
6. **THREADS:** THREADS BEFORE LUBRICATION IN ACCORDANCE WITH MIL-S-8879.
7. **SURFACE TEXTURE:** SURFACE TEXTURE, UNLESS OTHERWISE SPECIFIED, SHALL NOT EXCEED 125 MICROINCHES, IN ACCORDANCE WITH ANSI B46.1.
8. **COUNTERSINK/COUNTERBORE:** ON SIZE .164 AND LARGER, THREAD RELIEF SHALL BE .062 MINIMUM; ON SIZE .138 AND SMALLER, COUNTERSINK OR RADIUS WITHIN "P" DIAMETER.
9. **PERFORMANCE:** SEE PROCUREMENT SPECIFICATION, EXCEPT 450°F DRY FILM LUBRICATED NUTS LIMITED TO FIVE REUSE CYCLES.
10. **FLOAT OF NUT PORTION:** FLOAT OF NUT PORTION OF ASSEMBLY SHALL NOT BE LESS THAN .030 RADially FROM CENTERED POSITION. NUT ELEMENT SHALL BE CAPABLE OF ENGAGEMENT WITH BOLT IN THE MAXIMUM MISALIGNED POSITION.
11. **PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I.

EXAMPLE: MS21060LAK

DASH NUMBER

BASIC MS NUMBER

MS21060LAK INDICATES: NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, LOW HEIGHT, CRES; 125 KSI FTU, 450°F; DRY FILM LUBRICANT; .250-28 UNF-3B; COUNTERSINK OR DIMPLED HOLES.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.
3. REFERENCED GOVERNMENT (OR NON-GOVERNMENT) DOCUMENTS OF THE ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN.
4. DESIGN AND USAGE LIMITATIONS: THESE NUTS ARE DESIGNED TO DEVELOP THE TENSILE STRENGTH OF BOLTS AND SCREWS WITH AN ULTIMATE TENSILE STRENGTH OF 125 KSI BASED ON THE CROSS SECTION AREA AT THE BASIC ROOT DIAMETER OF THE THREADS. THESE NUTS ARE DESIGNED TO BE USED ON 3A EXTERNAL THREADS. THESE NUTS SHALL BE USED IN ACCORDANCE WITH THE LIMITATIONS OF MS3388. ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON QPL 25027 SHALL BE USED.

APPROVED 23 JUL 64 REVISED (F) FOR CHANGES SEE PAGES 1, 2 AND 3

PA NAVY-AS	INTERNATIONAL INTEREST	TITLE	MILITARY STANDARD
Other: Galt ARMY-AV		NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, LOW HEIGHT, CRES, 125 KSI FTU, 450°F & 800°F	MS21060
AIR FORCE-11			PAGE 2 OF 3
PROCUREMENT SPECIFICATION	SUPERSEDES		
MIL-N-25027		NAS 686, NAS 1031 (IN PART)	

DD FORM 672-1 (COORDINATED)

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USER ACTIVITIES
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NAVY-OSREVIEWER ACTIVITIES
ARMY-SH
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DLA-IS

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FED SUP CLASS
5310INTERCHANGEABILITY RELATIONSHIP

MS21060 NUTS CAN UNIVERSALLY REPLACE NAS686 AND NAS1031 NUTS OF LIKE MATERIAL, THREAD SIZE, LUBRICANT (DRY FILM OR SILVER PLATE) RIVET SPACING AND FASTENING METHOD (PLAIN RIVET HOLES, DIMPED OR COUNTERSUNK RIVET HOLES OR PROJECTION WELDING), BUT THESE NAS686 AND NAS1031 NUTS CANNOT UNIVERSALLY REPLACE MS21060 NUTS.

INTERCHANGEABILITY TABLE

CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER	CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER	CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER	CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER
NAS686C04	MS21060-04	—	MS21060-3W	NAS1031C04	MS21060-04	NAS1031C0W	MS21060-0W
NAS686C04K	MS21060-04K	NAS686C3M	MS21060L3	NAS1031C04K	MS21060-04K	NAS1031C5	MS21060-5
—	MS21060-04W	NAS686C3MK	MS21060L3K	NAS1031C04W	MS21060-04W	NAS1031C5K	MS21060-5K
NAS686C04M	MS21060L04	—	MS21060L3W	NAS1031C06	MS21060-06	NAS1031C5W	MS21060-5W
NAS686C04MK	MS21060L04K	NAS686C4	MS21060-4	NAS1031C06K	MS21060-06K	NAS1031C6	MS21060-6
—	MS21060L04W	NAS686C4K	MS21060-4K	NAS1031C06W	MS21060-06W	NAS1031C6W	MS21060-6W
NAS686C06	MS21060-06	—	MS21060-4W	NAS1031C08	MS21060-08	NAS1031C7	MS21060-7
NAS686C06K	MS21060-06K	NAS686C6M	MS21060L4	NAS1031C08K	MS21060-08K	NAS1031C7W	MS21060-7W
—	MS21060-06W	NAS686C6MK	MS21060L4K	NAS1031C08W	MS21060-08W	NAS1031C8	MS21060-8
NAS686C06M	MS21060L06	—	MS21060L4W	NAS1031C3	MS21060-3	NAS1031C8W	MS21060-8W
NAS686C06MK	MS21060L06K	NAS686C5	MS21060-5	—	—	—	—
—	MS21060L06W	NAS686C5K	MS21060-5K	NAS1031C3K	MS21060-3K	—	—
NAS686C08	MS21060-08	—	MS21060-5W	NAS1031C3W	MS21060-3W	—	—
NAS686C08K	MS21060-08K	NAS686C5M	MS21060L5	NAS1031C4	MS21060-4	—	—
—	MS21060-08W	NAS686C5MK	MS21060L5K	NAS1031C4K	MS21060-4K	—	—
NAS686C08M	MS21060L08	—	MS21060L5W	—	—	—	—
NAS686C08MK	MS21060L08K	NAS686C6	MS21060-6	—	—	—	—
—	MS21060L08W	—	MS21060-6W	—	—	—	—
NAS686C3	MS21060-3	NAS686C6M	MS21060L6	—	—	—	—
NAS686C3K	MS21060-3K	—	MS21060L6W	—	—	—	—

USER ACTIVITIES
ARMY - CR, MI
NAVY - OS

REVIEWER ACTIVITIES
ARMY - AR
NAVY - SH
AIR FORCE - 99
DLA - IS

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PROCUREMENT SPECIFICATION MIL-N-25027	SUPERSEDES NAS 686, NAS 1031 (IN PART)		PAGE 3 OF 3

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