1. SCOPE

The fasteners defined by this specification are preferred and non-preferred metric coarse thread Hex Serrated Flange Nuts.

When a standard is referenced in a drawing or specification, it is understood that the reference is to the latest revision of the standard, unless stated otherwise.

2. PART DESCRIPTION

Typical part description for BOM's and CAD drawings entered by Standards.

NUT, SERRATED M12 SPL ZNM

For cross-reference listing of company part numbers, go to CNH Catalogue.

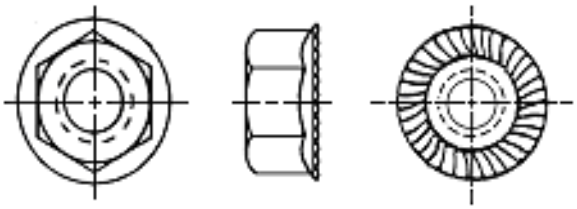
3. RELATED DOCUMENTS

3.1 REFERENCE STANDARDS

CNH STPA020 - Fastener Finishes and Material Specifications
CNH MAT0310 - Zinc Plating
SAE J122 - Surface Discontinuities on Nuts
SAE J995 - Mechanical and Material Requirements for Steel Nuts
ISO 4161 - Hexagon Nuts with Flange–Product grade A
ISO 898/2 - Mechanical properties of fasteners

3.2 REPLACED STANDARDS

Case EM-015 - Hex Serrated Flange Nuts Metric General Specification
Case EM-016 - Hex Serrated Flange Nuts Metric Preferred
NH FNHA-1-A-390.00 - Hex Flange Nuts Underserrated Coarse Threads ZND



4. REQUIREMENTS

4.1 MATERIAL

Material per CNH STPA020 and Table 1 below.

4.2 NUT IDENTIFICATION

Hex nuts of property classes equal to or higher than 8 shall be marked with the property class designation symbol per ISO 898/2.

4.3 SURFACE DISCONTINUITIES

All products under this specification shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability per SAE J122 (Surface Discontinuities on Nuts).

4.4 DIMENSIONS

All dimensions in this standard are in millimeters. All unspecified detail shall conform to the above listed standards.

Table 1. Hex Serrated Flange Nuts Material Specification

Special property class 8 modified, fully killed fine grain steel with the following composition limits	
Carbon:	.13 - .25%
Manganese:	.60 – 1.50%
Silicon:	.10 - .35%
Phosphorus:	.05% max
Sulfur:	.05% max
Alloying elements:	Optional
Boron:	Optional .0005 - .003% if present)
Suitable to meet the mechanical and performance requirements of class 8 nuts per ISO 898/2 and heat treated by case hardening as follows:	
Carbonitride per CNH MAT4020	
Case depth .08 - .18 mm for M10 and under, and Case depth .18 - .30 mm for M12 and greater	
Temper to a surface hardness of 79 to 86 HR15N	
Core hardness of 25 to 34 HRC	

Table 2. Hexagon Serrated Flange Nuts

Diameter	Pitch	Flange Diameter max.	Width Across Flats nom./max.	Width Across Corners Min.	Height max.	Part Numbers			
						Preferred	Non-Preferred		
						ZNM	ZNM	DAC	DOR
4	0.7	10.0	7		4.65		87301238		
5	0.8	11.8	8	7.78	5	43416			
6	1	14.2	10	9.78	6	86511444		90343479	
8	1.25	17.9	13	12.73	8	86505868		90343490	87344227
10	1.5	21.8	15	14.73	10	43435		90343498	
10	1.5	21.0	17		8.7		707704612		
12	1.75	26.0	18	17.73	12	43436			
16	2	34.5	24	23.67	16	86512380			
20	2.5	42.8	30	29.16	20		86512381		

Table 3. Hexagon Serrated Flange Nuts

Diameter	Pitch	Flange Diameter max.	Width Across Flats nom./max.	Width Across Corners Min.	Height max.	Part Numbers			
						Non-Preferred			
						ZN-NI-4			
4	0.7	10.0	7		4.65				
5	0.8	11.8	8	7.78	5				
6	1	14.2	10	9.78	6				
8	1.25	17.9	13	12.73	8	92305856			
10	1.5	21.8	15	14.73	10				
12	1.75	26.0	18	17.73	12				
16	2	34.5	24	23.67	16				
20	2.5	42.8	30	29.16	20				