



Standard Part

Hex Serrated Flange Bolts - Metric Coarse Thread Class - Pref & Non-Pref

STPB810

87305322

Rev R

Page 1 of 6

REFERENCE DOCUMENTS

| | |
|---------------------------|---|
| CNH STPA020 | Fastener Finishes and Material Specifications |
| ISO DIS 8102 | Metric heavy hexagon flange screws |
| ANSI / ASME B18.2.3.9M | Metric heavy hexagon flange screws |
| ISO 888 | Bolts screws and studs – Nominal lengths and thread lengths for general purpose bolts |
| ISO 898-1 | Mechanical properties of fasteners made of carbon steel and alloy steel |
| ISO 6157-3 | Fasteners - Surface Discontinuities |

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.

For cross-reference listing of company part numbers, go to [CNH Catalogue](#).

Typical part description for BOM's and CAD drawings
BOLT, SERRATED M16X80 SPL ZNM
BOLT, SERRATED M6X20 FULL SPL ZNM

To avoid hydrogen embrittlement, electroplating should be avoided. Use mechanical plating or other process and suitable hydrogen embrittlement relief immediately after coating. Do not use Material Class 10.9 or 12.9 with any anti-corrosion coating as they are highly susceptible to hydrogen assisted cracking.

Bolts and screws shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability (ISO 6157-3).

MATERIAL AND HEAT TREATMENT

Special property class 8.8 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 8.8 bolts per ISO 898/1 and heat treated by case hardening as follows:

Carbonitride per CNH Spec MAT4020, or
Carburize per CNH Spec MAT4030.

Case depth .08 - .18 mm for 9.5 mm and under, and
Case depth .18 - .30 mm for 11.1 mm min. dia. and greater.

Temper to a surface hardness of 79 to 86 HR15N.

Core hardness of 25 to 34 HRC

| AUTHOR | APPROVED BY | ECO | PART NUMBER |
|--------|-------------|----------|-----------------|
| A KHAN | 11NOV24 | A KHAN | 11NOV24 |
| | | 35502473 | 87305322 |

THE INFORMATION HEREON IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF CNH INDUSTRIAL AND/OR ITS SUBSIDIARIES OR DIVISIONS. ANY USE, EXCEPT THAT FOR WHICH IT MAY BE LOANED, IS PROHIBITED.



Standard Part

Hex Serrated Flange Bolts - Metric Coarse Thread Class - Pref & Non-Pref

STPB810

87305322

Rev R

Page 2 of 6

Head Size Issues.

At the time of the merger, Case was already using ISO standards as a basis for standard hardware parts, while New Holland was generally using DIN standards. CNH standard parts will be specified to ISO standards whenever available.

When we began to combine Case and New Holland standard parts there were systems issues preventing the use of the former Case alpha-numeric part numbers in the New Holland systems. To resolve this problem, it was determined to use the New Holland number as the surviving number whenever one was available. If an all numeric format number was not available, one was created.

Cross references, were based on overall dimensions and performance characteristics. In the case of hex head screws, bolts and nuts, some dimensional mismatches resulted; namely head dimensions as follows:

| Flange Head Bolts | | |
|------------------------|-----|----|
| Across Flats Dimension | | |
| Bolt Size | DIN | EN |
| M10 | 15 | 16 |
| M12 | 16 | 18 |
| M14 | 18 | 21 |
| M16 | 21 | 24 |
| M20 | 27 | 30 |

Bolts in this standard, which may have formerly been supplied to these old across flats dimensions must now be delivered with the current ISO dimensions, unless explicit engineering deviation to use bolts to the old dimensions has been granted.

It is important that all bolts of a given diameter on a product be to the same head size. Therefore, bolts to the old and current standard should not be mixed.



Standard Part

Hex Serrated Flange Bolts - Metric Coarse Thread Class - Pref & Non-Pref

STPB810

87305322

Rev R

Page 3 of 6

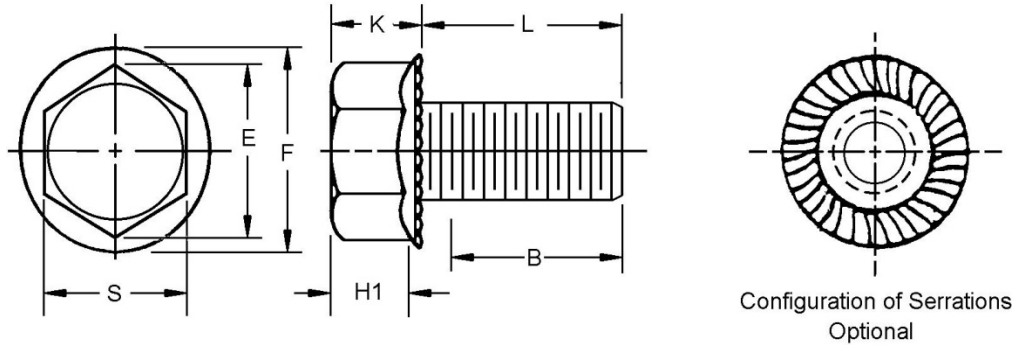


Table 1. General Specifications

| Diameter | | M5 | M6 | M8 | M10 | M12 | M16 | M20 | |
|------------------------------|-----------------------|--------------|------|-------|-------|-------|-------|-------|-------|
| Pitch – Metric coarse thread | | .8 | 1 | 1.25 | 1.5 | 1.75 | 2 | 2.5 | |
| B | Nominal thread length | $L \leq 125$ | 16 | 18 | 22 | 26 | 30 | 38 | 46 |
| D | Body diameter | Maximum | 5.00 | 6.00 | 8.00 | 10.00 | 12.00 | 16.00 | 20.00 |
| | | Minimum | 4.82 | 5.82 | 7.78 | 9.78 | 11.73 | 15.73 | 19.67 |
| S | Width across flats | Maximum | 8.00 | 10.00 | 13.00 | 15.00 | 18.00 | 24.00 | 30.00 |
| | | Minimum | 7.78 | 9.78 | 12.73 | 14.73 | 17.57 | 23.16 | 29.16 |
| E | Width across corners | Minimum | 8.71 | 10.95 | 14.26 | 16.5 | 19.68 | 25.94 | 32.66 |
| F | Flange diameter | Maximum | 11.8 | 14.2 | 18.0 | 22.3 | 26.6 | 35 | 43 |
| H1 | Wrench height | Minimum | | 2.5 | 3.2 | 3.6 | 4.6 | 6.2 | 7.9 |
| K | Head height | Maximum | 5.4 | 6.6 | 8.1 | 9.2 | 11.5 | 14.4 | 17.1 |



Standard Part

Hex Serrated Flange Bolts - Metric Coarse Thread Class - Pref & Non-Pref

STPB810

87305322

Rev R

Page 4 of 6

Table 2. Hex Serrated Flange Bolts Finish ZNM- Preferred

| Length | 6 | 8 | 10 | 12 | 16 |
|--------|----------|----------|----------|----------|----------|
| 10 | 86512252 | | | | |
| 12 | 86511893 | | | | |
| 16 | 86511892 | 86511478 | | | |
| 20 | 86511442 | 86511479 | 274249 | | |
| 25 | 86511953 | 86512253 | 274251 | 86512258 | |
| 30 | 86050281 | 86511480 | 9840672 | 274255 | 86512262 |
| 35 | | 44344 | 274254 | 86512259 | 86512263 |
| 40 | 86528586 | 87017621 | 9846918 | 274257 | 86509867 |
| 45 | | | 47478716 | | |
| 50 | | 87015928 | 86512257 | 86512260 | 86512264 |
| 60 | | 86512254 | 44331 | 86512261 | 86512265 |
| 70 | | | | 86531025 | |
| 80 | | | | 86508604 | |

Table 3. Hex Serrated Flange Bolts – Non-Preferred

| Diameter | Length | Thread Length | Finish | Part Number |
|----------|--------|---------------|--------|-------------|
| 5 | 10 | FULL | ZNM | 44006 |
| 5 | 12 | FULL | ZNM | 86507068 |
| **5 | 14 | FULL | PLN | 84263399 |
| 5 | 16 | FULL | ZNM | 86511477 |
| 5 | 20 | FULL | ZNM | 86050284 |
| 6 | 14 | | ZNM | 47520568 |
| @6 | 16 | | ZNM | 48064185 |
| 8 | 12 | FULL | ZNM | 51026 |
| 8 | 12 | FULL | DOR | 87342186 |
| 8 | 16 | FULL | DOR | 87342187 |
| 8 | 20 | FULL | PLN | 395627 |
| 8 | 25 | | DAC | 90357935 |
| 8 | 30 | | BZN | 87015927 |
| 8 | 100 | | ZNM | 86512255 |

| Diameter | Length | Thread Length | Finish | Part Number |
|----------|--------|---------------|--------|-------------|
| 10 | 12 | FULL | ZNM | 86512256 |
| 10 | 16 | FULL | PLN | 382359 |
| 10 | 16 | FULL | ZNM | 274247 |
| 10 | 20 | FULL | PLN | 440408 |
| 10 | 20 | FULL | ZNM | #920019628 |
| 10 | 25 | FULL | PLN | 539603 |
| 10 | 35 | FULL | DOR | 87342182 |
| 10 | 70 | | DOR | 86509504 |
| 12 | 20 | FULL | ZNM | 86507087 |
| 12 | 35 | FULL | PLN | 556721 |
| 20 | 50 | | ZNM | 86512266 |
| %20 | 58 | 46 | DAC | #82020153 |
| 20 | 60 | | ZNM | 86512267 |
| %20 | 90 | | DAC | #92646657 |

** Use Material – Stainless Steel 316L

Material Class 12.9 – Do not use on new design after “01 MAY 2015”

% DIN 6921 across flats 27mm

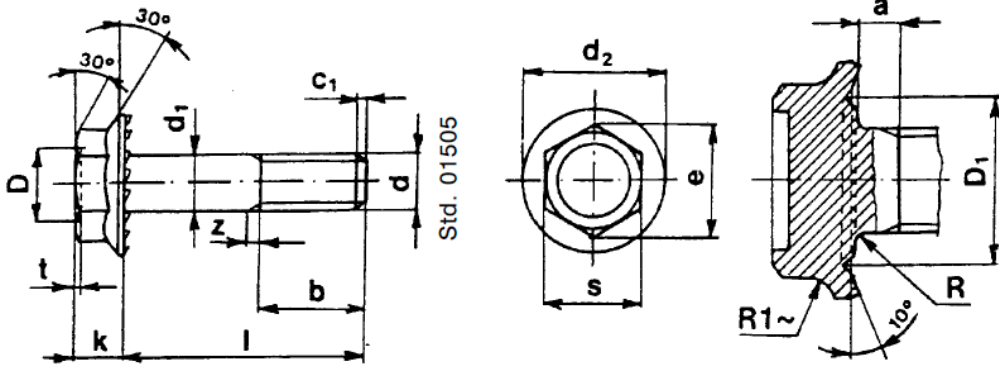
@ Left Hand Thread

Table 4. Hex Serrated Flange Bolts – General Specification – Fiat 10364

Material:

R50 IND: Steel per 52605/02

8.8 Steel per 52605/01



| | nom. | 5 | 6 | 8 |
|-----------------|----------------|--------|--------|--------|
| d1 | nom. | 5 | 6 | 8 |
| | devtn. limit | 0 | | 0 |
| d | 6g | M5 | M6 | M8 |
| b | | 16 | 18 | 22 |
| k | max | 4.3 | 5.5 | 7.0 |
| | min | 4 | 5.1 | 6.6 |
| t | max | 0.8 | 1.0 | 1.3 |
| | min | 0.6 | 0.7 | 0.8 |
| s | nom | 8 | 10 | 13 |
| | devtn. limit | 0 | 0 | 0 |
| | | -0.150 | -0.220 | -0.270 |
| e | min | 8.87 | 11.05 | 14.38 |
| d2 | max | 11.2 | 14.25 | 18.25 |
| | min | 10.8 | 13.75 | 17.75 |
| D | max | 6.80 | 8.50 | 11 |
| | min | 6 | 8 | 10 |
| D1 | ±0.15 | 8 | 10 | 13 |
| R | min | 0.2 | 0.3 | 0.3 |
| c1 | max | 1.5 | 1.8 | 2.2 |
| Z | max | 2 | 2.5 | 3.1 |
| a max | short series | 1.6 | 2 | 2.5 |
| | regular series | 2 | 2.5 | 3.1 |



Standard Part

Hex Serrated Flange Bolts - Metric Coarse Thread Class - Pref & Non-Pref

STPB810

87305322

Rev R

Page 6 of 6

Table 5. Hex Serrated Flange Bolts – Non-Preferred – Fiat 10364

| Diameter | Length | Thread Length | Material | Finish | Part Number |
|----------|--------|---------------|----------|--------|-------------|
| M6 | 12 | FULL | 8.8 | DAC | 13836024 |
| M6 | 16 | FULL | 8.8 | DAC | 13836424 |
| M8 | 18 | FULL | R50 IND | ZND | 13839011 |
| M8 | 35 | 22 | R50 IND | ZND | 13839611 |
| | | | | | |