



Carriage Bolts

A wide range of grades
& sizes for your most
demanding applications.

Designed with a smooth, large diameter head that resists pull-through in softer materials and a square neck that stops the bolt from turning when tightening the nut, Carriage Bolts offer easy installation and versatility when assembling a variety of building materials such as wood, plastic, or hardened steel. Earnest Machine stocks Carriage Bolts in a wide range of grades, sizes, and finishes, that can be used in high-stress plow as well as low-stress wood applications.



PRODUCT ATTRIBUTES

Low-profile head distributes clamping load over wider area
Square neck locks bolt in place during installation
Available in grade 8 for added strength & durability
Sizes range from 1/4" to 3/4" and M6 to M12

MARKETS FOR CARRIAGE BOLTS

Snow Plow Assembly
Mining & Quarry Applications
Construction Equipment
Wood Construction & Carpentry

THIS PRODUCT IS OFTEN CALLED...

Shaker Screen Bolt
Round Head Square Neck Bolt
Mushroom Head Square Neck Bolt
Cupped Head Bolt

ADDITIONAL CARRIAGE ASSEMBLY PRODUCTS WE SUPPLY

Plow Bolts
Ribbed Neck Carriage Bolts
Hex Nuts
Nylon Insert Lock Nuts
All Metal Lock Nuts

AVAILABLE VALUE ADDED SERVICES

Bulk, full & broken case quantities
Secondary & rework services available
Custom packaging services
Custom plating

BACKED BY THE EARNEST
Service
GUARANTEE

**The right part.
The right quantity.
On-time.
Everytime.**

GRADE 8 CARRIAGE BOLTS

Carriage Bolts are manufactured in accordance with the latest revision of the following industry standards:

- ASME B18.5** Dimensional Requirements
- SAE J429** Material and Strength Level
- ASME B1.1** Thread Requirements
- ASTM F788** Surface Discontinuities
- ASME B18.18** Inspection and Quality Assurance

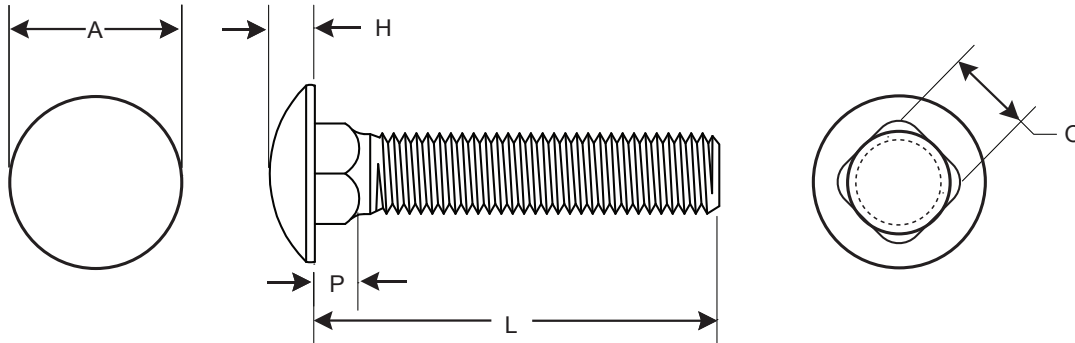
THREADS

Threads made to requirements of ASME B1.1 Unified Threads (UNC) Class 2A
Thread acceptance per ASME B1.3, System 21

PLATING

- Plain
- Phos and Oil
- Zinc Clear (RoHS compliant Cr3+)
- Zinc Yellow

DIMENSIONS FOR GRADE 8 CARRIAGE BOLTS

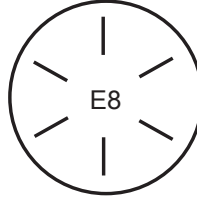


SIZE	HEAD DIAMETER (A)		HEAD HEIGHT (H)		SQUARE WIDTH (O)		SQUARE DEPTH (P)	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1/4	0.594	0.563	0.145	0.125	0.260	0.245	0.156	0.125
5/16	0.719	0.688	0.176	0.156	0.324	0.307	0.187	0.156
3/8	0.844	0.782	0.208	0.188	0.388	0.368	0.219	0.188
7/16	0.696	0.907	0.239	0.219	0.452	0.431	0.250	0.219
1/2	1.094	1.032	0.270	0.250	0.515	0.492	0.281	0.250
5/8	1.344	1.219	.344	0.313	0.642	0.616	0.344	0.313
3/4	1.594	1.469	.406	0.375	0.768	0.741	0.406	0.375

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MATERIAL AND PHYSICAL PROPERTIES

Grade 8



Chemical Composition:

CARBON (C)		PHOSPHORUS (P)	SULFUR (S)	BORON (B)
Max	Min	Max	Max	Max
0.55	0.25	0.025	0.025	0.003

Alloy

SAE J429 GRADE 8 (CONTAINING ONE OR MORE OF THE FOLLOWING)

Mn, Cr, Mo, Ni, V, B

Hardness

GRADE 8

HRC 33/39

Tensile Strength

GRADE 8

150,000 psi min

GRADE 5 & A CARRIAGE BOLTS

Carriage Bolts are manufactured in accordance with the latest revision of the following industry standards:

- ASME B18.5** Dimensional Requirements
- SAE J429** Material and Strength Level
- ASTM A307** Material and Strength Level
- ASME B1.1** Thread Requirements
- ASTM F788** Surface Discontinuities
- ASME B18.18** Inspection and Quality Assurance

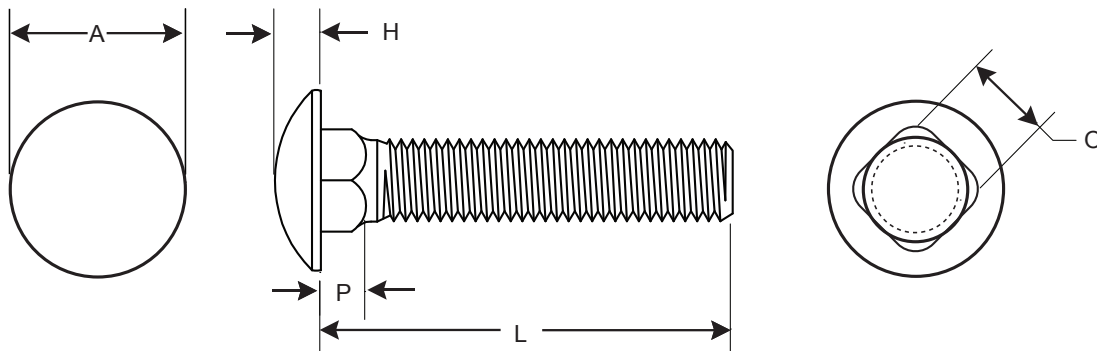
THREADS

Threads made to requirements of ASME B1.1
 Unified Threads (UNC) Class 2A
 Thread acceptance per ASME B1.3, System 21

PLATING

- Plain
- Phos and Oil
- Zinc Clear (RoHS compliant Cr3+)
- Zinc Yellow

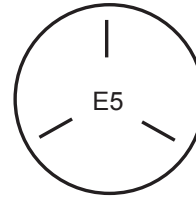
DIMENSIONS FOR GRADE 5 & A CARRIAGE BOLTS



SIZE	HEAD DIAMETER (A)		HEAD HEIGHT (H)		SQUARE WIDTH (O)		SQUARE DEPTH (P)	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1/4	0.594	0.563	0.145	0.125	0.260	0.245	0.156	0.125
5/16	0.719	0.688	0.176	0.156	0.324	0.307	0.187	0.156
3/8	0.844	0.782	0.208	0.188	0.388	0.368	0.219	0.188
7/16	0.696	0.907	0.239	0.219	0.452	0.431	0.250	0.219
1/2	1.094	1.032	0.270	0.250	0.515	0.492	0.281	0.250
5/8	1.344	1.219	.344	0.313	0.642	0.616	0.344	0.313
3/4	1.594	1.469	.406	0.375	0.768	0.741	0.406	0.375

MATERIAL AND PHYSICAL PROPERTIES

Grade 5



Grade A



Grade 5 Chemical Composition:

CARBON (C)		PHOSPHORUS (P)	SULFUR (S)	BORON (B)
Max	Min	Max	Max	Max
0.55	0.15	0.025	0.025	0.003

Grade A Chemical Composition:

CARBON (C)	MANGANESE (Mn)	PHOSPHORUS (P)	SULFUR (S)
Max	Max	Max	Max
0.29	1.20	0.04	0.15

Hardness

GRADE 5	GRADE A
HRC 25/34	HRB 69/100

Tensile Strength

GRADE 5	GRADE A
120,000 psi min	60,000 psi min

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METRIC CLASS 8.8 CARRIAGE BOLTS

Carriage Bolts are manufactured in accordance with the latest revision of the following industry standards:

DIN 603	Dimensional Requirements
ISO 898-1	Material and Strength Level
ISO 261	Thread Requirements
ISO 6157-1	Surface Discontinuities
ISO 3269	Inspection and Quality Assurance

THREADS

Threads made to requirements of ISO 261

ISO 965-2 Class 6g

Thread acceptance per ISO 1502

PLATING

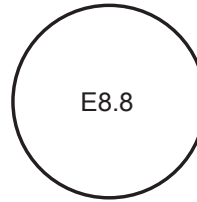
Plain

Zinc Clear (RoHS compliant Cr3+)

Zinc Yellow

MATERIAL AND PHYSICAL PROPERTIES

Property Class 8.8



Chemical Composition:

CARBON (C)		PHOSPHORUS (P)	SULFUR (S)	BORON (B)
Max	Min	Max	Max	Max
0.55	0.25	0.035	0.035	0.003

Hardness

CLASS 8.8

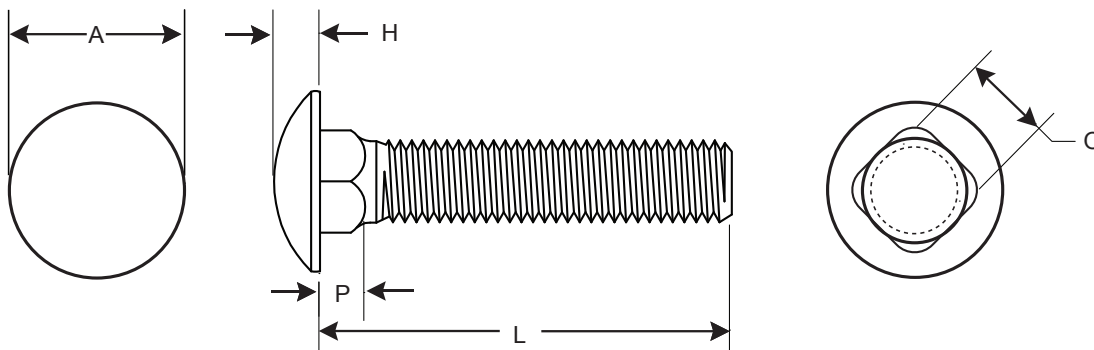
HRC 22/34

Tensile Strength

CLASS 8.8

800 MPa min

DIMENSIONS FOR METRIC CLASS 8.8 CARRIAGE BOLTS



SIZE	HEAD DIAMETER (A)		HEAD HEIGHT (H)		SQUARE WIDTH (O)		SQUARE DEPTH (P)	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
M6	16.55	15.45	3.88	3.12	6.48	5.52	4.6	3.4
M8	20.65	19.35	4.88	4.12	8.58	7.42	5.6	4.4
M10	24.65	23.35	5.38	4.62	10.58	9.42	6.6	5.4
M12	30.65	29.35	6.95	6.05	12.7	11.3	8.75	7.25
M16	38.80	37.20	8.95	8.05	16.7	15.3	12.9	11.1

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Carriage Bolts - Inch

Grade 8

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
1/4-20x1	GR 8	Full	Coarse	Plain Finish	215058
1/4-20x1	GR 8	Full	Coarse	Zinc Clear	215057T
1/4-20x1 1/4	GR 8	Full	Coarse	Plain Finish	215068
1/4-20x1 1/4	GR 8	Full	Coarse	Zinc Clear	215067T
1/4-20x1 1/2	GR 8	Full	Coarse	Plain Finish	215098
1/4-20x1 1/2	GR 8	Full	Coarse	Zinc Clear	215097T
1/4-20x1 3/4	GR 8	Full	Coarse	Plain Finish	215118
1/4-20x1 3/4	GR 8	Full	Coarse	Zinc Clear	215117T
1/4-20x2	GR 8	Full	Coarse	Plain Finish	215138
1/4-20x2	GR 8	Full	Coarse	Zinc Clear	215137T
1/4-20x2 1/2	GR 8	Full	Coarse	Plain Finish	215158
1/4-20x2 1/2	GR 8	Full	Coarse	Zinc Clear	215157T
1/4-20x3/4	GR 8	Full	Coarse	Plain Finish	215038
1/4-20x3/4	GR 8	Full	Coarse	Zinc Clear	215037T
1/4-20x3/4	GR 8	Full	Coarse	Zinc Yellow	215039

5/16-18x3/4	GR 8	Full	Coarse	Plain Finish	215238
5/16-18x3/4	GR 8	Full	Coarse	Zinc Clear	215237T
5/16-18x1	GR 8	Full	Coarse	Plain Finish	215258
5/16-18x1	GR 8	Full	Coarse	Zinc Clear	215257T
5/16-18x1	GR 8	Full	Coarse	Zinc Yellow	215259
5/16-18x1 1/4	GR 8	Full	Coarse	Plain Finish	215278
5/16-18x1 1/4	GR 8	Full	Coarse	Zinc Clear	215277T
5/16-18x1 1/2	GR 8	Full	Coarse	Plain Finish	215298
5/16-18x1 1/2	GR 8	Full	Coarse	Zinc Clear	215297T
5/16-18x1 1/2	GR 8	Full	Coarse	Plain Finish	237098
5/16-18x1 3/4	GR 8	Full	Coarse	Plain Finish	215318
5/16-18x1 3/4	GR 8	Full	Coarse	Zinc Clear	215316T
5/16-18x2	GR 8	Full	Coarse	Plain Finish	215338
5/16-18x2	GR 8	Full	Coarse	Zinc Clear	215337T
5/16-18x2	GR 8	Full	Coarse	Zinc Yellow	215339
5/16-18x2 1/2	GR 8	Full	Coarse	Plain Finish	215358
5/16-18x2 1/2	GR 8	Full	Coarse	Zinc Clear	215357T

3/8-16x3/4	GR 8	Full	Coarse	Plain Finish	215438
3/8-16x3/4	GR 8	Full	Coarse	Zinc Clear	215437T
3/8-16x1	GR 8	Full	Coarse	Plain Finish	215458
3/8-16x1	GR 8	Full	Coarse	Phos & Oil	215456
3/8-16x1	GR 8	Full	Coarse	Zinc Clear	215457T
3/8-16x1	GR 8	Full	Coarse	Zinc Yellow	215459
3/8-16x1 1/4	GR 8	Full	Coarse	Plain Finish	238078
3/8-16x1 1/4	GR 8	Full	Coarse	Zinc Clear	238077T

Grade 8

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
3/8-16x1 1/4	GR 8	Full	Coarse	Zinc Yellow	238079
3/8-16x1 1/2	GR 8	Full	Coarse	Plain Finish	215498
3/8-16x1 1/2	GR 8	Full	Coarse	Black Oxide	215496
3/8-16x1 1/2	GR 8	Full	Coarse	Zinc Clear	215499T
3/8-16x1 1/2	GR 8	Full	Coarse	Zinc Yellow	215497
3/8-16x1 3/4	GR 8	Full	Coarse	Plain Finish	215518
3/8-16x1 3/4	GR 8	Full	Coarse	Zinc Clear	215517T
3/8-16x1 3/4	GR 8	Full	Coarse	Zinc Yellow	238117
3/8-16x2	GR 8	Full	Coarse	Plain Finish	215538
3/8-16x2	GR 8	Full	Coarse	Zinc Clear	215539T
3/8-16x2	GR 8	Full	Coarse	Zinc Yellow	215537
3/8-16x2 1/2	GR 8	Full	Coarse	Plain Finish	215558
3/8-16x2 1/2	GR 8	Full	Coarse	Zinc Clear	215557T
3/8-16x2 1/2	GR 8	Full	Coarse	Zinc Yellow	215556
3/8-16x2 3/4	GR 8	Full	Coarse	Zinc Yellow	238167
3/8-16x3	GR 8	Full	Coarse	Plain Finish	215578
3/8-16x3	GR 8	Full	Coarse	Zinc Clear	215577T
3/8-16x4	GR 8	Full	Coarse	Plain Finish	215618
3/8-16x4	GR 8	Full	Coarse	Zinc Clear	215617T
3/8-16x5	GR 8	Full	Coarse	Plain Finish	215658
3/8-16x5	GR 8	Full	Coarse	Zinc Clear	215657T
3/8-16x5	GR 8	Full	Coarse	Zinc Yellow	215659

1/2-13x1 1/4	GR 8	Full	Coarse	Plain Finish	216078
1/2-13x1 1/4	GR 8	Full	Coarse	Zinc Clear	216079T
1/2-13x1 1/4	GR 8	Full	Coarse	Zinc Yellow	216080
1/2-13x1 1/2	GR 8	Full	Coarse	Plain Finish	216098
1/2-13x1 1/2	GR 8	Full	Coarse	Zinc Clear	216097T
1/2-13x1 1/2	GR 8	Full	Coarse	Zinc Yellow	216099
1/2-13x1 3/4	GR 8	Full	Coarse	Plain Finish	216118
1/2-13x1 3/4	GR 8	Full	Coarse	Zinc Clear	216116T
1/2-13x1 3/4	GR 8	Full	Coarse	Zinc Yellow	216117
1/2-13x2	GR 8	Full	Coarse	Plain Finish	216138
1/2-13x2	GR 8	Full	Coarse	Zinc Clear	216137T
1/2-13x2	GR 8	Full	Coarse	Zinc Yellow	216136
1/2-13x2 1/2	GR 8	Full	Coarse	Plain Finish	216158
1/2-13x2 1/2	GR 8	Full	Coarse	Zinc Clear	216157T
1/2-13x2 1/2	GR 8	Full	Coarse	Zinc Yellow	216156
1/2-13x3	GR 8	Full	Coarse	Plain Finish	216178
1/2-13x3	GR 8	Full	Coarse	Zinc Clear	216177T
1/2-13x3	GR 8	Full	Coarse	Zinc Yellow	216179
1/2-13x3 1/2	GR 8	Full	Coarse	Plain Finish	216198

Carriage Bolts - Inch

Grade 8

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
1/2-13x3 1/2	GR 8	Full	Coarse	Zinc Clear	216199T
1/2-13x4	GR 8	Full	Coarse	Plain Finish	216218
1/2-13x4	GR 8	Full	Coarse	Zinc Clear	216217T
1/2-13x4	GR 8	Full	Coarse	Zinc Yellow	216219
1/2-13x4 1/2	GR 8	Full	Coarse	Plain Finish	216238
1/2-13x4 1/2	GR 8	Full	Coarse	Zinc Clear	216239T
1/2-13x5	GR 8	Full	Coarse	Plain Finish	216258
1/2-13x5	GR 8	Full	Coarse	Zinc Clear	216257T
1/2-13x5 1/2	GR 8	Full	Coarse	Plain Finish	216278
1/2-13x5 1/2	GR 8	Full	Coarse	Zinc Clear	216280T
1/2-13x5 3/4	GR 8	Full	Coarse	Plain Finish	216288
1/2-13x6	GR 8	Full	Coarse	Plain Finish	216298
1/2-13x6	GR 8	Full	Coarse	Zinc Clear	216297T
1/2-13x8	GR 8	Full	Coarse	Plain Finish	216378
1/2-13x8	GR 8	Full	Coarse	Zinc Clear	216377T

5/8-11x1 1/4	GR 8	Full	Coarse	Plain Finish	242078
5/8-11x1 1/2	GR 8	Full	Coarse	Plain Finish	217098
5/8-11x1 1/2	GR 8	Full	Coarse	Zinc Clear	217097T
5/8-11x1 3/4	GR 8	Full	Coarse	Phos & Oil	217119
5/8-11x1 3/4	GR 8	Full	Coarse	Plain Finish	217118
5/8-11x1 3/4	GR 8	Full	Coarse	Zinc Yellow	217117
5/8-11x2	GR 8	Full	Coarse	Plain Finish	217138
5/8-11x2	GR 8	Full	Coarse	Zinc Clear	217137T
5/8-11x2	GR 8	Full	Coarse	Zinc Yellow	217130
5/8-11x2	GR 8	Full	Coarse	Zinc Yellow	217130T
5/8-11x2 1/4	GR 8	Full	Coarse	Plain Finish	217148
5/8-11x2 1/4	GR 8	Full	Coarse	Zinc Clear	217147T
5/8-11x2 1/2	GR 8	Full	Coarse	Plain Finish	217158
5/8-11x2 1/2	GR 8	Full	Coarse	Zinc Clear	217157T
5/8-11x2 1/2	GR 8	Full	Coarse	Zinc Yellow	217160
5/8-11x2 3/4	GR 8	Full	Coarse	Plain Finish	217168
5/8-11x2 3/4	GR 8	Full	Coarse	Zinc Clear	217167T
5/8-11x3	GR 8	Full	Coarse	Plain Finish	217178
5/8-11x3	GR 8	Full	Coarse	Zinc Clear	217177T
5/8-11x3 1/4	GR 8	Full	Coarse	Zinc Yellow	217189
5/8-11x3 1/4	GR 8	Full	Coarse	Zinc Yellow	217189T
5/8-11x3 1/2	GR 8	Full	Coarse	Plain Finish	217198
5/8-11x3 1/2	GR 8	Full	Coarse	Zinc Clear	217197T
5/8-11x4	GR 8	Full	Coarse	Plain Finish	217218
5/8-11x4	GR 8	Full	Coarse	Zinc Clear	217220T

Grade 8

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
5/8-11x4 1/2	GR 8	Full	Coarse	Plain Finish	217238
5/8-11x4 1/2	GR 8	Full	Coarse	Zinc Clear	217237T
5/8-11x5	GR 8	Full	Coarse	Plain Finish	217258
5/8-11x5	GR 8	Full	Coarse	Zinc Clear	217257T
5/8-11x6	GR 8	Full	Coarse	Plain Finish	217298
5/8-11x6	GR 8	Full	Coarse	Zinc Clear	217299T
5/8-11x8	GR 8	Full	Coarse	Plain Finish	217378
5/8-11x8	GR 8	Full	Coarse	Zinc Clear	217377T
5/8-11x9	GR 8	Full	Coarse	Plain Finish	217418
5/8-11x9	GR 8	Full	Coarse	Zinc Clear	217417T
5/8-11x10	GR 8	Full	Coarse	Plain Finish	217458
5/8-11x10	GR 8	Full	Coarse	Zinc Clear	217457T

3/4-10x2	GR 8	Full	Coarse	Plain Finish	218138
3/4-10x2	GR 8	Full	Coarse	Zinc Clear	218137T
3/4-10x2	GR 8	Full	Coarse	Zinc Yellow	218139
3/4-10x2 1/4	GR 8	Full	Coarse	Plain Finish	218148
3/4-10x2 1/4	GR 8	Full	Coarse	Zinc Yellow	218149
3/4-10x2 1/2	GR 8	Full	Coarse	Plain Finish	218158
3/4-10x2 1/2	GR 8	Full	Coarse	Zinc Clear	218159T
3/4-10x2 1/2	GR 8	Full	Coarse	Zinc Yellow	218157
3/4-10x2 3/4	GR 8	Full	Coarse	Plain Finish	218168
3/4-10x2 3/4	GR 8	Full	Coarse	Zinc Clear	218167T
3/4-10x3	GR 8	Full	Coarse	Plain Finish	218178
3/4-10x3	GR 8	Full	Coarse	Zinc Clear	218177T
3/4-10x3 1/2	GR 8	Full	Coarse	Plain Finish	218198
3/4-10x3 1/2	GR 8	Full	Coarse	Zinc Clear	218197T
3/4-10x4	GR 8	Full	Coarse	Plain Finish	218218
3/4-10x4	GR 8	Full	Coarse	Zinc Clear	218217T
3/4-10x4 1/2	GR 8	Full	Coarse	Plain Finish	218238
3/4-10x4 1/2	GR 8	Full	Coarse	Zinc Clear	218237T
3/4-10x5	GR 8	Full	Coarse	Plain Finish	218258
3/4-10x5	GR 8	Full	Coarse	Zinc Clear	218257T
3/4-10x5	GR 8	Full	Coarse	Zinc Yellow	218256
3/4-10x5 1/2	GR 8	Full	Coarse	Plain Finish	218278
3/4-10x5 1/2	GR 8	Full	Coarse	Zinc Clear	218277
3/4-10x6	GR 8	Full	Coarse	Zinc Clear	218297T
3/4-10x7	GR 8	Full	Coarse	Plain Finish	218338
3/4-10x7	GR 8	Full	Coarse	Zinc Clear	218337T
3/4-10x8	GR 8	Full	Coarse	Plain Finish	218378
3/4-10x8	GR 8	Full	Coarse	Zinc Clear	218377T

Carriage Bolts - Inch

Grade 8

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
3/4-10x9	GR 8	Full	Coarse	Plain Finish	218418
3/4-10x9	GR 8	Full	Coarse	Zinc Clear	218417T
3/4-10x10	GR 8	Full	Coarse	Plain Finish	218458
3/4-10x10	GR 8	Full	Coarse	Zinc Clear	218457T

Grade 5

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
1/4-20x5/8	GR 5	Full	Coarse	Zinc Clear	236024T
1/4-20x3/4	GR 5	Full	Coarse	Plain Finish	236035
1/4-20x3/4	GR 5	Full	Coarse	Zinc Clear	236034T
1/4-20x1	GR 5	Full	Coarse	Plain Finish	236055
1/4-20x1	GR 5	Full	Coarse	Zinc Clear	236054T
1/4-20x1	GR 5	Full	Coarse	Zinc Yellow	236053
1/4-20x1 1/4	GR 5	Full	Coarse	Plain Finish	239015
1/4-20x1 1/4	GR 5	Full	Coarse	Plain Finish	236075
1/4-20x1 1/4	GR 5	Full	Coarse	Zinc Clear	239014T
1/4-20x1 1/2	GR 5	Full	Coarse	Plain Finish	236095
1/4-20x1 1/2	GR 5	Full	Coarse	Zinc Clear	236094T
1/4-20x1 3/4	GR 5	Full	Coarse	Plain Finish	236115
1/4-20x1 3/4	GR 5	Full	Coarse	Zinc Clear	239034T
1/4-20x2	GR 5	Full	Coarse	Plain Finish	236135
1/4-20x2	GR 5	Full	Coarse	Zinc Clear	236134T
1/4-20x2 1/4	GR 5	Full	Coarse	Plain Finish	239055
1/4-20x2 1/4	GR 5	Full	Coarse	Zinc Clear	239054T
1/4-20x2 1/2	GR 5	Full	Coarse	Plain Finish	239065
1/4-20x3	GR 5	Full	Coarse	Plain Finish	239085
1/4-20x3	GR 5	Full	Coarse	Zinc Clear	239084T
1/4-20x3 1/2	GR 5	Full	Coarse	Plain Finish	239095
1/4-20x3 1/2	GR 5	Full	Coarse	Zinc Clear	239094T

5/16-18x5/8	GR 5	Full	Coarse	Plain Finish	237025
5/16-18x5/8	GR 5	Full	Coarse	Zinc Clear	237024T
5/16-18x5/8	GR 5	Full	Coarse	Zinc Yellow	237023
5/16-18x3/4	GR 5	Full	Coarse	Zinc Yellow	237030
5/16-18x3/4	GR 5	Full	Coarse	Zinc Clear	237034T
5/16-18x3/4	GR 5	Full	Coarse	Plain Finish	237035
5/16-18x7/8	GR 5	Full	Coarse	Plain Finish	237045
5/16-18x1	GR 5	Full	Coarse	Plain Finish	237055
5/16-18x1	GR 5	Full	Coarse	Zinc Clear	237054T
5/16-18x1 1/4	GR 5	Full	Coarse	Plain Finish	237075
5/16-18x1 1/4	GR 5	Full	Coarse	Zinc Clear	237074T

Grade 5

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
5/16-18x1 1/2	GR 5	Full	Coarse	Plain Finish	237095
5/16-18x1 1/2	GR 5	Full	Coarse	Zinc Clear	237094T
5/16-18x1 1/2	GR 5	Full	Coarse	Zinc Yellow	237093
5/16-18x1 3/4	GR 5	Full	Coarse	Plain Finish	239235
5/16-18x1 3/4	GR 5	Full	Coarse	Zinc Clear	237114T
5/16-18x2	GR 5	Full	Coarse	Plain Finish	237135
5/16-18x2	GR 5	Full	Coarse	Zinc Clear	237134T
5/16-18x2 1/4	GR 5	Full	Coarse	Plain Finish	239255
5/16-18x2 1/4	GR 5	Full	Coarse	Zinc Clear	239254T
5/16-18x2 1/2	GR 5	Full	Coarse	Plain Finish	239265
5/16-18x2 1/2	GR 5	Full	Coarse	Zinc Clear	239264T
5/16-18x3	GR 5	Full	Coarse	Zinc Clear	237173T
5/16-18x3 1/2	GR 5	Full	Coarse	Plain Finish	239305
5/16-18x3 1/2	GR 5	Full	Coarse	Zinc Clear	239304T
5/16-18x4	GR 5	Full	Coarse	Plain Finish	239325
5/16-18x4 1/2	GR 5	Full	Coarse	Plain Finish	239335
5/16-18x7	GR 5	Partial	Coarse	Zinc Clear	237334

3/8-16x3/4	GR 5	Full	Coarse	Plain Finish	238035
3/8-16x3/4	GR 5	Full	Coarse	Zinc Clear	238034T
3/8-16x1	GR 5	Full	Coarse	Plain Finish	238055
3/8-16x1	GR 5	Full	Coarse	Zinc Clear	238054T
3/8-16x1	GR 5	Full	Coarse	Zinc Yellow	238050
3/8-16x1 1/4	GR 5	Full	Coarse	Plain Finish	238075
3/8-16x1 1/4	GR 5	Full	Coarse	Zinc Clear	238074T
3/8-16x1 1/2	GR 5	Full	Coarse	Plain Finish	238095
3/8-16x1 1/2	GR 5	Full	Coarse	Zinc Clear	238094T
3/8-16x1 1/2	GR 5	Full	Coarse	Zinc Yellow	238090
3/8-16x1 3/4	GR 5	Full	Coarse	Plain Finish	238115
3/8-16x1 3/4	GR 5	Full	Coarse	Zinc Clear	239434T
3/8-16x2	GR 5	Full	Coarse	Plain Finish	238135
3/8-16x2	GR 5	Full	Coarse	Zinc Clear	238133T
3/8-16x2 1/4	GR 5	Full	Coarse	Plain Finish	238145
3/8-16x2 1/4	GR 5	Full	Coarse	Zinc Clear	215544T
3/8-16x2 1/2	GR 5	Full	Coarse	Plain Finish	239465
3/8-16x2 1/2	GR 5	Full	Coarse	Zinc Clear	238154T
3/8-16x2 1/2	GR 5	Full	Coarse	Zinc Yellow	238156
3/8-16x2 3/4	GR 5	Full	Coarse	Plain Finish	239475
3/8-16x3	GR 5	Full	Coarse	Plain Finish	238175
3/8-16x3	GR 5	Full	Coarse	Zinc Clear	238174T

Carriage Bolts - Inch

Grade 5

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
3/8-16x3 1/2	GR 5	Full	Coarse	Plain Finish	238195
3/8-16x3 1/2	GR 5	Full	Coarse	Zinc Clear	238194T
3/8-16x4	GR 5	Full	Coarse	Plain Finish	238215
3/8-16x4	GR 5	Full	Coarse	Zinc Clear	238214T
3/8-16x4 1/2	GR 5	Full	Coarse	Plain Finish	238235
3/8-16x5 1/2	GR 5	Partial	Coarse	Plain Finish	238275

7/16-14x1	GR 5	Full	Coarse	Plain Finish	240055
7/16-14x1	GR 5	Full	Coarse	Zinc Clear	240054T
7/16-14x1 1/4	GR 5	Full	Coarse	Plain Finish	240075
7/16-14x1 1/4	GR 5	Full	Coarse	Zinc Clear	240074T
7/16-14x1 1/4	GR 5	Full	Coarse	Zinc Yellow	240076
7/16-14x1 1/2	GR 5	Full	Coarse	Plain Finish	240095
7/16-14x1 1/2	GR 5	Full	Coarse	Zinc Clear	240094T
7/16-14x1 1/2	GR 5	Full	Coarse	Zinc Yellow	240096
7/16-14x1 3/4	GR 5	Full	Coarse	Plain Finish	240115
7/16-14x1 3/4	GR 5	Full	Coarse	Zinc Clear	240114T
7/16-14x2	GR 5	Full	Coarse	Plain Finish	240135
7/16-14x2	GR 5	Full	Coarse	Zinc Clear	240134T
7/16-14x2 1/4	GR 5	Full	Coarse	Plain Finish	240145
7/16-14x2 1/4	GR 5	Full	Coarse	Zinc Clear	240144T
7/16-14x2 1/2	GR 5	Full	Coarse	Plain Finish	240155
7/16-14x2 1/2	GR 5	Full	Coarse	Zinc Clear	239664T
7/16-14x2 3/4	GR 5	Full	Coarse	Plain Finish	239675
7/16-14x2 3/4	GR 5	Full	Coarse	Zinc Clear	239674T
7/16-14x3	GR 5	Full	Coarse	Plain Finish	240175
7/16-14x3	GR 5	Full	Coarse	Zinc Clear	240174T
7/16-14x3 1/2	GR 5	Full	Coarse	Plain Finish	240195
7/16-14x3 1/2	GR 5	Full	Coarse	Zinc Clear	240194T
7/16-14x4	GR 5	Full	Coarse	Plain Finish	240215
7/16-14x4	GR 5	Full	Coarse	Zinc Clear	240214T

1/2-13x1	GR 5	Full	Coarse	Plain Finish	241055
1/2-13x1	GR 5	Full	Coarse	Zinc Clear	241054T
1/2-13x1	GR 5	Full	Coarse	Zinc Yellow	241056
1/2-13x1 1/4	GR 5	Full	Coarse	Plain Finish	216075
1/2-13x1 1/4	GR 5	Full	Coarse	Zinc Clear	216074T
1/2-13x1 1/2	GR 5	Full	Coarse	Plain Finish	216095
1/2-13x1 1/2	GR 5	Full	Coarse	Zinc Clear	216094T
1/2-13x1 1/2	GR 5	Full	Coarse	Zinc Yellow	241100
1/2-13x1 3/4	GR 5	Full	Coarse	Plain Finish	216115

Grade 5

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
1/2-13x1 3/4	GR 5	Full	Coarse	Zinc Clear	216114T
1/2-13x2	GR 5	Full	Coarse	Plain Finish	216135
1/2-13x2	GR 5	Full	Coarse	Zinc Clear	216134T
1/2-13x2 1/4	GR 5	Full	Coarse	Plain Finish	216145
1/2-13x2 1/4	GR 5	Full	Coarse	Zinc Clear	241144T
1/2-13x2 1/4	GR 5	Full	Coarse	Zinc Yellow	216143
1/2-13x2 1/2	GR 5	Full	Coarse	Plain Finish	216155
1/2-13x2 1/2	GR 5	Full	Coarse	Zinc Clear	216154
1/2-13x2 1/2	GR 5	Partial	Coarse	Zinc Clear	241154T
1/2-13x2 1/2	GR 5	Full	Coarse	Zinc Clear	216154T
1/2-13x2 1/2	GR 5	Full	Coarse	Zinc Yellow	216153
1/2-13x2 3/4	GR 5	Full	Coarse	Plain Finish	216165
1/2-13x3	GR 5	Full	Coarse	Plain Finish	216175
1/2-13x3	GR 5	Full	Coarse	Zinc Clear	216174T
1/2-13x3 1/4	GR 5	Full	Coarse	Plain Finish	216185
1/2-13x3 1/2	GR 5	Full	Coarse	Plain Finish	216195
1/2-13x3 1/2	GR 5	Full	Coarse	Zinc Clear	216194T
1/2-13x4	GR 5	Full	Coarse	Plain Finish	216215
1/2-13x4	GR 5	Full	Coarse	Zinc Clear	216214T
1/2-13x4 1/2	GR 5	Full	Coarse	Plain Finish	216235
1/2-13x4 1/2	GR 5	Full	Coarse	Zinc Clear	216234T
1/2-13x5	GR 5	Full	Coarse	Plain Finish	216255
1/2-13x5	GR 5	Full	Coarse	Zinc Clear	216254T
1/2-13x5 1/2	GR 5	Full	Coarse	Plain Finish	216275
1/2-13x5 1/2	GR 5	Full	Coarse	Zinc Clear	216274T
1/2-13x5 1/2	GR 5	Full	Coarse	Zinc Yellow	216276
1/2-13x6	GR 5	Full	Coarse	Plain Finish	216295
1/2-13x6	GR 5	Full	Coarse	Zinc Clear	216294T
1/2-13x6 1/2	GR 5	Full	Coarse	Plain Finish	216305
1/2-13x7	GR 5	Full	Coarse	Plain Finish	216335
1/2-13x7	GR 5	Full	Coarse	Zinc Clear	216334T
1/2-13x8	GR 5	Full	Coarse	Plain Finish	216375
1/2-13x8	GR 5	Full	Coarse	Zinc Clear	216374T

5/8-11x1 1/2	GR 5	Full	Coarse	Plain Finish	242095
5/8-11x1 1/2	GR 5	Full	Coarse	Zinc Clear	242094T
5/8-11x1 3/4	GR 5	Full	Coarse	Plain Finish	242115
5/8-11x1 3/4	GR 5	Full	Coarse	Zinc Clear	242114T
5/8-11x2	GR 5	Full	Coarse	Plain Finish	217135
5/8-11x2	GR 5	Full	Coarse	Zinc Clear	217134T
5/8-11x2 1/4	GR 5	Full	Coarse	Plain Finish	217145

Carriage Bolts - Inch

Grade 5

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
5/8-11x2 1/4	GR 5	Full	Coarse	Zinc Clear	217144T
5/8-11x2 1/2	GR 5	Full	Coarse	Plain Finish	217155
5/8-11x2 1/2	GR 5	Full	Coarse	Zinc Clear	217154T
5/8-11x2 3/4	GR 5	Full	Coarse	Plain Finish	217165
5/8-11x2 3/4	GR 5	Full	Coarse	Zinc Clear	217164T
5/8-11x3	GR 5	Full	Coarse	Plain Finish	217175
5/8-11x3	GR 5	Full	Coarse	Zinc Clear	217174T
5/8-11x3	GR 5	Full	Coarse	Zinc Yellow	217173
5/8-11x3 1/2	GR 5	Full	Coarse	Plain Finish	217195
5/8-11x3 1/2	GR 5	Full	Coarse	Zinc Clear	217194
5/8-11x4	GR 5	Full	Coarse	Plain Finish	217215
5/8-11x4	GR 5	Full	Coarse	Zinc Clear	217214T
5/8-11x4 1/2	GR 5	Full	Coarse	Plain Finish	217235
5/8-11x4 1/2	GR 5	Full	Coarse	Zinc Clear	217234T
5/8-11x5	GR 5	Full	Coarse	Plain Finish	217255
5/8-11x5	GR 5	Full	Coarse	Zinc Clear	217254T
5/8-11x5 1/2	GR 5	Full	Coarse	Plain Finish	217275
5/8-11x5 1/2	GR 5	Full	Coarse	Zinc Clear	217274T
5/8-11x6	GR 5	Full	Coarse	Plain Finish	217295
5/8-11x6	GR 5	Full	Coarse	Zinc Clear	217294T
5/8-11x6 1/2	GR 5	Full	Coarse	Plain Finish	217315
5/8-11x6 1/2	GR 5	Full	Coarse	Zinc Clear	217314T
5/8-11x7	GR 5	Full	Coarse	Plain Finish	217335
5/8-11x7	GR 5	Full	Coarse	Zinc Clear	217334T
5/8-11x8	GR 5	Full	Coarse	Plain Finish	217375
5/8-11x8	GR 5	Full	Coarse	Zinc Clear	217374T
5/8-11x8 1/2	GR 5	Full	Coarse	Plain Finish	217416
5/8-11x8 1/2	GR 5	Full	Coarse	Zinc Clear	217416T
5/8-11x9	GR 5	Full	Coarse	Plain Finish	217415

3/4-10x1 1/2	GR 5	Full	Coarse	Plain Finish	243092
3/4-10x1 1/2	GR 5	Full	Coarse	Zinc Clear	243094T
3/4-10x2	GR 5	Full	Coarse	Plain Finish	218135
3/4-10x2 1/2	GR 5	Full	Coarse	Plain Finish	218155
3/4-10x2 3/4	GR 5	Full	Coarse	Plain Finish	218165
3/4-10x3	GR 5	Full	Coarse	Plain Finish	218175
3/4-10x3	GR 5	Full	Coarse	Zinc Clear	218174T
3/4-10x3	GR 5	Full	Coarse	Zinc Yellow	218173
3/4-10x3 1/2	GR 5	Full	Coarse	Plain Finish	218195
3/4-10x3 1/2	GR 5	Full	Coarse	Zinc Clear	218194T
3/4-10x3 3/4	GR 5	Full	Coarse	Plain Finish	218205

Grade 5

SIZE	GRADE	THREAD	PITCH	FINISH	PART #
3/4-10x3 3/4	GR 5	Full	Coarse	Zinc Clear	243184T
3/4-10x4	GR 5	Full	Coarse	Plain Finish	218215
3/4-10x4	GR 5	Full	Coarse	Zinc Clear	218214T
3/4-10x4 1/2	GR 5	Full	Coarse	Plain Finish	218235
3/4-10x4 1/2	GR 5	Full	Coarse	Zinc Clear	218234T
3/4-10x5	GR 5	Full	Coarse	Plain Finish	218255
3/4-10x5	GR 5	Full	Coarse	Zinc Clear	218254T
3/4-10x5 1/2	GR 5	Full	Coarse	Plain Finish	218275
3/4-10x5 1/2	GR 5	Full	Coarse	Zinc Clear	218274T
3/4-10x6	GR 5	Full	Coarse	Plain Finish	218295
3/4-10x6	GR 5	Full	Coarse	Zinc Clear	218294T
3/4-10x6 1/2	GR 5	Full	Coarse	Plain Finish	218315
3/4-10x7	GR 5	Full	Coarse	Plain Finish	218335
3/4-10x7	GR 5	Full	Coarse	Zinc Clear	218334T
3/4-10x8	GR 5	Full	Coarse	Plain Finish	218375
3/4-10x8	GR 5	Full	Coarse	Zinc Clear	218374T
3/4-10x9	GR 5	Full	Coarse	Plain Finish	218415
3/4-10x9	GR 5	Full	Coarse	Zinc Clear	218414T
3/4-10x10	GR 5	Full	Coarse	Plain Finish	218455
3/4-10x10	GR 5	Full	Coarse	Zinc Clear	218454T

Grade A

1/2-20x1 1/2	GR A	Full	Fine	Zinc Clear	216091T
3/4-10x16	GR A	Partial	Coarse	Plain Finish	218462
3/4-10x16	GR A	Partial	Coarse	Zinc Clear	218461T

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SIZE	GRADE	THREAD	PITCH	FINISH	PART #
M6-1x12	ISO 8.8	Full	Coarse	Plain Finish	476045
M6-1x12	ISO 8.8	Full	Coarse	Zinc Clear	476047T
M6-1x16	ISO 8.8	Full	Coarse	Plain Finish	476055
M6-1x16	ISO 8.8	Full	Coarse	Zinc Clear	476057T
M6-1x20	ISO 8.8	Full	Coarse	Zinc Clear	476067T
M6-1x20	ISO 8.8	Full	Coarse	Plain Finish	476065
M6-1x25	ISO 8.8	Full	Coarse	Zinc Clear	476077T
M6-1x25	ISO 8.8	Full	Coarse	Plain Finish	476075
M6-1x30	ISO 8.8	Full	Coarse	Plain Finish	476085
M6-1x30	ISO 8.8	Full	Coarse	Zinc Clear	476087T
M6-1x35	ISO 8.8	Partial	Coarse	Plain Finish	476095
M6-1x35	ISO 8.8	Partial	Coarse	Zinc Clear	476097T
M6-1x40	ISO 8.8	Partial	Coarse	Zinc Clear	476107T
M6-1x40	ISO 8.8	Partial	Coarse	Plain Finish	476105
M6-1x50	ISO 8.8	Partial	Coarse	Plain Finish	476125
M6-1x60	ISO 8.8	Partial	Coarse	Plain Finish	476145

M8-1.25x16	ISO 8.8	Full	Coarse	Plain Finish	476255
M8-1.25x16	ISO 8.8	Full	Coarse	Zinc Clear	476257T
M8-1.25x16	ISO 8.8	Full	Coarse	Zinc Yellow	476254
M8-1.25x20	ISO 8.8	Full	Coarse	Plain Finish	476265
M8-1.25x20	ISO 8.8	Full	Coarse	Zinc Clear	476267T
M8-1.25x25	ISO 8.8	Full	Coarse	Plain Finish	476275
M8-1.25x25	ISO 8.8	Full	Coarse	Zinc Clear	476277T
M8-1.25x25	ISO 8.8	Full	Coarse	Zinc Yellow	476276
M8-1.25x30	ISO 8.8	Full	Coarse	Plain Finish	476285
M8-1.25x30	ISO 8.8	Full	Coarse	Zinc Clear	476287T
M8-1.25x35	ISO 8.8	Full	Coarse	Plain Finish	476295
M8-1.25x35	ISO 8.8	Full	Coarse	Zinc Clear	476297T
M8-1.25x35	ISO 8.8	Full	Coarse	Zinc Yellow	476296
M8-1.25x40	ISO 8.8	Partial	Coarse	Plain Finish	476305
M8-1.25x40	ISO 8.8	Partial	Coarse	Zinc Clear	476307T
M8-1.25x40	ISO 8.8	Partial	Coarse	Zinc Yellow	476306
M8-1.25x45	ISO 8.8	Partial	Coarse	Plain Finish	476315
M8-1.25x45	ISO 8.8	Partial	Coarse	Zinc Clear	476317T
M8-1.25x50	ISO 8.8	Partial	Coarse	Plain Finish	476325
M8-1.25x50	ISO 8.8	Partial	Coarse	Zinc Clear	476324T
M8-1.25x50	ISO 8.8	Partial	Coarse	Zinc Yellow	476327
M8-1.25x55	ISO 8.8	Partial	Coarse	Plain Finish	476335
M8-1.25x55	ISO 8.8	Partial	Coarse	Zinc Clear	476337T
M8-1.25x60	ISO 8.8	Partial	Coarse	Plain Finish	476345

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SIZE	GRADE	THREAD	PITCH	FINISH	PART #
M8-1.25x60	ISO 8.8	Partial	Coarse	Zinc Clear	476347T
M8-1.25x70	ISO 8.8	Partial	Coarse	Plain Finish	476365

M10-1.5x20	ISO 8.8	Full	Coarse	Plain Finish	476465
M10-1.5x20	ISO 8.8	Full	Coarse	Zinc Clear	476467T
M10-1.5x25	ISO 8.8	Full	Coarse	Plain Finish	476475
M10-1.5x25	ISO 8.8	Full	Coarse	Zinc Clear	476477T
M10-1.5x30	ISO 8.8	Full	Coarse	Plain Finish	476485
M10-1.5x30	ISO 8.8	Full	Coarse	Zinc Clear	476486T
M10-1.5x35	ISO 8.8	Full	Coarse	Plain Finish	476495
M10-1.5x35	ISO 8.8	Full	Coarse	Zinc Clear	476496T
M10-1.5x40	ISO 8.8	Full	Coarse	Plain Finish	476505
M10-1.5x40	ISO 8.8	Full	Coarse	Zinc Clear	476507T
M10-1.5x45	ISO 8.8	Full	Coarse	Plain Finish	476515
M10-1.5x45	ISO 8.8	Full	Coarse	Zinc Clear	476517T
M10-1.5x50	ISO 8.8	Partial	Coarse	Plain Finish	476525
M10-1.5x50	ISO 8.8	Partial	Coarse	Zinc Clear	476527T
M10-1.5x60	ISO 8.8	Partial	Coarse	Plain Finish	476545
M10-1.5x60	ISO 8.8	Partial	Coarse	Zinc Clear	476546T
M10-1.5x70	ISO 8.8	Partial	Coarse	Plain Finish	476565
M10-1.5x70	ISO 8.8	Partial	Coarse	Zinc Clear	476566T
M10-1.5x80	ISO 8.8	Partial	Coarse	Plain Finish	476585
M10-1.5x90	ISO 8.8	Partial	Coarse	Plain Finish	476605
M10-1.5x90	ISO 8.8	Partial	Coarse	Zinc Clear	476604T

M12-1.75x25	ISO 8.8	Full	Coarse	Plain Finish	476675
M12-1.75x25	ISO 8.8	Full	Coarse	Zinc Clear	476677T
M12-1.75x30	ISO 8.8	Full	Coarse	Plain Finish	476685
M12-1.75x30	ISO 8.8	Full	Coarse	Zinc Clear	476687T
M12-1.75x35	ISO 8.8	Full	Coarse	Plain Finish	476695
M12-1.75x35	ISO 8.8	Full	Coarse	Zinc Clear	476697T
M12-1.75x40	ISO 8.8	Full	Coarse	Plain Finish	476705
M12-1.75x40	ISO 8.8	Full	Coarse	Zinc Clear	476707T
M12-1.75x45	ISO 8.8	Full	Coarse	Plain Finish	476715
M12-1.75x45	ISO 8.8	Full	Coarse	Zinc Clear	476717T
M12-1.75x50	ISO 8.8	Full	Coarse	Zinc Clear	476724T
M12-1.75x60	ISO 8.8	Partial	Coarse	Plain Finish	476745
M12-1.75x60	ISO 8.8	Partial	Coarse	Zinc Clear	476747T
M12-1.75x70	ISO 8.8	Partial	Coarse	Plain Finish	476765
M12-1.75x70	ISO 8.8	Partial	Coarse	Zinc Clear	476767T
M12-1.75x70	ISO 8.8	Partial	Coarse	Zinc Yellow	476763

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SIZE	GRADE	THREAD	PITCH	FINISH	PART #
M12-1.75x80	ISO 8.8	Partial	Coarse	Plain Finish	476785
M12-1.75x80	ISO 8.8	Partial	Coarse	Zinc Clear	476787T
M12-1.75x90	ISO 8.8	Partial	Coarse	Plain Finish	476805
M12-1.75x100	ISO 8.8	Partial	Coarse	Plain Finish	476815