

METRIC CONVERSIONS

Article Text

1991 Volkswagen Passat
For Volkswagen Technical Site
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Wednesday, August 25, 1999 08:54PM

ARTICLE BEGINNING

GENERAL INFORMATION

METRIC CONVERSIONS

METRIC CONVERSIONS

Metric conversions are making life more difficult for the mechanic. In addition to doubling the number of tools required, metric-dimensioned nuts and bolts are used alongside English components in many new vehicles. The mechanic has to decide which tool to use, slowing down the job. The tool problem can be solved by trial and error, but some metric conversions aren't so simple. Converting temperature, lengths or volumes requires a calculator and conversion charts, or else a very nimble mind. Conversion charts are only part of the answer though, because they don't help you "think" metric, or "visualize" what you are converting. The following examples are intended to help you "see" metric sizes:

LENGTH

Meters are the standard unit of length in the metric system. The smaller units are 10ths (decimeter), 100ths (centimeter), and 1000ths (millimeter) of a meter. These common examples might help you to visualize the metric units:

- * A meter is slightly longer than a yard (about 40 inches).
- * An aspirin tablet is about one centimeter across (.4inches).
- * A millimeter is about the thickness of a dime.

VOLUME

Cubic meters and centimeters are used to measure volume, just as we normally think of cubic feet and inches. Liquid volume measurements include the liter and milliliter, like the English quarts or ounces.

- * One teaspoon is about 4 cubic centimeters.
- * A liter is about one quart.
- * A liter is about 61 cubic inches.

WEIGHT

The metric weight system is based on the gram, with the most common unit being the kilogram (1000 grams). Our comparable units are ounces and pounds:

- * A kilogram is about 2.2 pounds.
- * An ounce is about 28 grams.

TO CONVERT	TO	MULTIPLY BY	

LENGTH			
Millimeters (mm)	Inches	. 03937	
Inches	Millimeters	25. 4	
Meters (M)	Feet	3. 28084	
Feet	Meters	. 3048	
Kilometers (Km)	Miles	. 62137	

AREA			
Square Centimeters (cm ²)	Square Inches	. 155	
Square Inches	Square Centimeters	6. 45159	

UAAA						μ
³ INCHES		DECIMALS				³ mm
AA						'
³						³
³ 1/64016	397	³
³ 1/32031	794	³
³ 3/64047	1.191	³
³ 1/16063	1.588	³
³ 5/64078	1.984	³
³ 3/32094	2.381	³
³ 7/64109	2.778	³
³ 1/8125	3.175	³
³ 9/64141	3.572	³
³ 5/32156	3.969	³
³ 11/64172	4.366	³
³ 3/16188	4.763	³
³ 13/64203	5.159	³
³ 7/32219	5.556	³
³ 15/64234	5.953	³

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³ 1/4 250	6. 350	³
³ 17/64 266	6. 747	³
³ 9/32 281	7. 144	³
³ 19/64 297	7. 541	³
³ 5/16 313	7. 938	³
³ 21/64	.....	. 328	.....	8. 334	³
³ 11/32	.....	. 344	.....	8. 731	³
³ 23/64	.....	. 359	.....	9. 128	³
³ 3/8	.....	. 375	.....	9. 525	³
³ 25/64	.....	. 391	.....	9. 992	³
³ 13/32	.....	. 406	.....	10. 319	³
³ 27/64	.....	. 422	.....	10. 716	³
³ 7/16	.....	. 438	.....	11. 113	³
³ 29/64	.....	. 453	.....	11. 509	³
³ 15/32	.....	. 469	.....	11. 906	³
³ 31/64	.....	. 484	.....	12. 303	³
³ 1/2	.....	. 500	.....	12. 700	³
³ 33/64	.....	. 516	.....	13. 097	³
³ 17/32	.....	. 531	.....	13. 494	³
³ 35/64	.....	. 547	.....	13. 891	³
³ 9/16	.....	. 563	.....	14. 288	³
³ 37/64	.....	. 578	.....	14. 684	³
³ 19/32	.....	. 594	.....	15. 081	³
³ 39/64	.....	. 609	.....	15. 478	³
³ 5/8	.....	. 625	.....	15. 875	³
³ 41/64	.....	. 641	.....	16. 272	³
³ 21/32	.....	. 656	.....	16. 669	³
³ 43/64	.....	. 672	.....	17. 066	³
³ 11/16	.....	. 687	.....	17. 463	³
³ 45/64	.....	. 703	.....	17. 859	³
³ 23/32	.....	. 719	.....	18. 256	³
³ 47/64	.....	. 734	.....	18. 653	³
³ 3/4	.....	. 750	.....	19. 050	³
³ 49/64	.....	. 766	.....	19. 447	³
³ 25/32	.....	. 781	.....	19. 844	³
³ 51/64	.....	. 797	.....	20. 241	³
³ 13/16	.....	. 813	.....	20. 638	³
³ 53/64	.....	. 828	.....	21. 034	³
³ 27/32	.....	. 844	.....	21. 431	³
³ 55/64	.....	. 859	.....	21. 828	³
³ 7/8	.....	. 875	.....	22. 225	³
³ 57/64	.....	. 891	.....	22. 622	³
³ 29/32	.....	. 906	.....	23. 019	³
³ 59/64	.....	. 922	.....	23. 416	³
³ 15/16 938	23. 813	³
³ 61/64 953	24. 209	³
³ 31/32 969	24. 606	³
³ 63/64 984	25. 003	³
³ 1 1. 000	25. 400	³

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END OF ARTICLE